

Growth, destruction, and preservation of Earth's continental crust

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Abstract

From the scant Hadean records of the Jack Hills to Cenozoic supervolcanoes, the continental crust provides a synoptic view deep into Earth history. However, the information is fragmented, as large volumes of continental crust have been recycled back into the mantle by a variety of processes. The preserved crustal record is the balance between the volume of crust generated by magmatic processes and the volume destroyed through return to the mantle by tectonic erosion and lower crustal delamination. At present-day, the Earth has reached near-equilibrium between the amount of crust being generated and that being returned to the mantle. However, multiple lines of evidence support secular change in crustal processes through time. Though a variety of isotopic proxies are used to estimate crustal growth through time, none of those currently utilized are able to quantify the volumes of crust recycled back into the mantle. This implies the estimates of preserved continental crust and growth curves derived therefrom represent only a minimum of total crustal growth. We posit that from the Neoproterozoic, the probable onset of modern-day style plate tectonics, there has been no net crustal growth (and perhaps even a net loss) of the

continental crust. Deciphering changes from this equilibrium state through geologic time remains a continual pursuit of crustal evolution studies.

Keywords: Continental crust; Tectonic erosion; Crustal recycling; Secular change; Earth history

1. Introduction

The processes and rates governing the formation of Earth's continental crust have been key questions in Earth science and remain debated today (e.g. Armstrong, 1981; Taylor and McLennan, 1985; Rudnick, 1995; Cawood et al., 2013). Continual development in measuring new isotopic systems and the application of new minerals with greater spatial and analytical resolution have fuelled the debate surrounding these questions (e.g. DePaolo, 1980; Condie, 1998; Kemp et al., 2007; Condie and Aster, 2013; Dhuime et al., 2015). The debate over general crust-forming processes have continued despite the availability of tools to look at the intricacies of crust formation in varying settings, as against the fewer techniques with poor resolution available in the past (e.g. Harrison, 2009; Reimink et al., 2014; Johnson et al., 2016; Santosh et al., 2016). Lessons from Phanerozoic plate tectonics have also informed us about the destruction and recycling of crust (e.g. Kay and Kay, 1991; Huene and Scholl, 1991; Stern, 2011; Vannucchi et al., 2016), but this aspect of Earth's evolution has seen less studied when referring to deep time, and remains a keystone in understanding the volume of Earth's continental crust through time. Recently, contributions that bias in the geological record has made our archive of continental crust to sharp focus (Hawkesworth et al., 2009; Spencer et al., 2015), although quantification is still lacking.

In this overview, we attempt to cover processes governing the formation, destruction and preservation of Earth's continental crust, focussing on the evolution of these processes through Earth history.

2. Nature and loci of modern crustal growth

The Earth is currently comprised of two major silicate reservoirs that are defined broadly by igneous differentiation. The mantle is generally defined as having undergone no (or minimal) igneous differentiation and is ultramafic in composition, whereas the crust has undergone varying degrees of differentiation and is mafic to felsic in composition. For the purposes of this paper we consider herein the transfer of melt products from the mantle to the crust as 'growth'. Growth of the continental crust currently takes place primarily by arc, hotspot, rift-related, and spreading-ridge magmatism (Scholl and von Huene, 2007, 2009; Clift et al., 2009; Stern, 2011; Cawood et al., 2013). On the modern globe, the composition of the crust exposed at the surface is broadly bimodal (and corresponds with topography) in that the oceanic crust is predominately mafic and the continental crust is predominantly intermediate and felsic in composition (Cawood et al., 2013). The largest volume of magma produced in the crust occurs at mid-ocean ridges (Jicha and Jagoutz, 2015). As oceanic plates diverge, decompression melting of the upper mantle produces new mafic oceanic crust. This results in between ~ 230 and $325 \text{ km}^3 \text{ km}^{-1} \text{ Myr}^{-1}$ or $\sim 155,000,000$ to $220,000,000 \text{ km}^3$ of ocean crust per Myr (after Jicha and Jagoutz, 2015). This newly formed oceanic crust is subsequently hydrothermally altered by continued mid-ocean ridge magmatism and is hydrated. Within at most ~ 200 Myr, the oceanic crust is consumed at subduction zones where recycling of the oceanic crust into the mantle is driven by negative buoyancy. During subduction of oceanic crust, the flux of water and other volatiles from the subducting slab causes melting in the mantle wedge above the subducting slab along with minor contributions from the subducting slab and sediments (Coats, 1962; Plank and Langmuir, 1993; Currie et al., 2007; Spencer et al., in review). The resulting magma rises through the mantle and is emplaced into the overlying crust where it forms a magmatic arc marking the birth of continental crust. Ocean-margin arc magmatism produces the largest volume of newly formed continental crust (Scholl and von Huene, 2009 and references therein).

Estimates of global additions to the continental crust vary among different workers. It is estimated that arc magmatism accounts for $\sim 60\%$ to 80% of continental additions (Clift et al., 2009; Stern and Scholl, 2010; Cawood et al., 2013) with oceanic and continental large igneous provinces and hotspot/rift-related magmatism accounting for the remainder. Stern and Scholl (2010) further distinguish the balance of continental crust produced to be $\sim 30\%$ higher in oceanic arcs than in continental arcs. From a suite of representative oceanic arcs,

Jicha and Jagoutz (2015), estimate arc productivity between 157 and $290 \text{ km}^3 \text{ km}^{-1} \text{ Myr}^{-1}$ or $\sim 5,000,000$ to $10,500,000 \text{ km}^3$ per Myr (assuming oceanic arc length of $17,449$; Bird, 2003). In contrast, arc productivity in the Andes since $\sim 20 \text{ Ma}$ is estimated at $\sim 35 \text{ km}^3 \text{ km}^{-1} \text{ Myr}^{-1}$ or $\sim 280,000 \text{ km}^3$ per Myr (Haschke and Gunther, 2003 and assuming 8000 km arc length). If the magma production during this time in the Andes is broadly representative of continental arcs globally, this equates to $\sim 1,200,000 \text{ km}^3$ per Myr or less than a quarter of the magma volumes produced in oceanic arcs (Fig. 1).

3. Nature and loci of modern crustal destruction

In an ironic balancing act, the subduction zone not only is the loci of dominant continental growth, but also acts as the primary driver for continent destruction. As stated previously, the magmatic transfer from the mantle to the crust is herein considered 'growth' and the converse is 'destruction'. In this context, destruction can be misleading as several lines of evidence support the preservation of crustal reservoirs in the mantle and likely along the mantle transition zone (Kawai et al., 2013) or the core/mantle boundary (Lay and Garnero, 2011; Zhao et al., 2015; Ma et al., 2016; Garnero et al., 2016). For the purposes of this paper, we simply use the term destruction to represent vertical transportation of crust into the mantle. The vast majority of oceanic crust returns to the mantle via subduction processes with ophiolite and oceanic asperity obduction transferring minor volumes of oceanic crust onto the continent ($\ll 1\%$; see Dilek and Furnes, 2011; Furnes and Dilek, 2017). A number of mechanisms are responsible for the removal of continental crust in subduction zones. We use the catch-all term 'tectonic erosion' to refer to these processes. Tectonic erosion generally removes the continental crust through bottom-up processes (e.g. basal erosion and delamination) however, sediment deposited in the accretionary prism or grabens in the ocean crust can be incorporated into the subduction channel. Due to changes in the subducting slab angle, basal erosion can remove large volumes of the subcontinental mantle lithosphere as well as the continental lithosphere (Kay and Mpodozis, 2002; Yamamoto et al., 2009; Chapman et al., 2016). Basal erosion can also occur due to extension in the

subducting oceanic crust wherein horst structures form asperities at the subduction interface which 'bulldozes' continental material from the upper plate into grabens that are subsequently subducted (Ballance et al., 1989; von Huene et al., 1999; Wells et al., 2003; Azuma et al., 2016). As the continental crust along a subduction margin thickens, it is theorized that the root of the arc can gravitationally founder and delaminate into the mantle (Kay and Kay, 1993; Kay et al., 1994; DeCelles et al., 2009). This is likely due to the transition of the lower crust to eclogite, which is denser than peridotite (Kay and Kay, 1991; Ducea, 2002; Lee et al., 2006).

The Andean orogeny is one place on the planet where the balance of magmatism and tectonic erosion is clear. Modern volcanism in the Andes is located between 200-400 kilometers from the trench (Götze et al., 2006). Several studies have shown the clear eastward migration of the magmatic arc through time (Ramos, 1988; Stern, 1989; Stern, 1991; Scheuber and Reutter, 1992; Atherton and Petford, 1996; Yáñez et al., 2001; Kay et al., 2005; Ramos and Folguera, 2005). Currently there is late-Paleozoic and early-Mesozoic mélangé exposed within ~50 km of the present coastline of the western continental margin (Kato, 1985; Bell, 1987; Rebolledo and Charrier, 1994; Willner et al. 2004; Godoy and Lara, 2005; Kato and Godoy, 2015) implying a significant amount of continental lithosphere has been removed from the continental margin (Scholl and von Huene, 2007).

The buoyancy differential between the continental crust and mantle is traditionally thought to prevent the deep subduction of continental material, However, the discovery of ultra-high pressure mineral phases (e.g. coesite and diamond) in metapelitic lithologies confirms the subduction of continental material to depths greater than 200 km (Chopin and Sobolev, 1995; Ye et al., 2000a; Ye et al., 2000b). Furthermore, the chemical composition of many intraplate hotspot magmas carries isotopic signatures akin to continental material (Dupre and Allegre, 1983; Loubet et al., 1988; Eiler et al., 1995). Despite these empirical constraints of deep subduction of continental material, the theory controlling the subduction of large continental masses was established by Molnar and Gray (1979). It was postulated that the gravitational force of the subducting oceanic lithosphere (and its subsequent eclogitization) might also exert a force on the leading edge of the attached continental lithosphere. Evidence supporting this hypothesis is seen along the northern margin of Australia where

over 200 km length of continental crust has been subducted beneath the Banda Arc. This is constrained by palinspastic reconstructions of Australian-derived sediments (see Spencer et al., 2015b; Zimmerman and Hall, 2016), which are found imbricated on the southern margin of Timor (Harris, 2011; Spakman and Hall, 2010; Tate et al., 2015). Assuming a continental crustal thickness of 30 km tapering to 10 km, 200 km of continental length, and 1700 km arc length from the apex of the Banda arc to where it intersects with the Northwest Shelf of Australia, this equates to the subduction of $1,100,000 \text{ km}^3 \text{ Myr}^{-1}$ for the past 7 Myr (the timing of initial collision) (Fig. 2). A similar situation is observed in the Indo-Asian collision where it is estimated that 50% of the pre-collisional continental crust cannot be accounted for in the preserved crustal volume and therefore is hypothesized that this continental crust has been eclogitized and recycled into the mantle (Ingalls et al., 2016).

Although the Australian example provides a mechanism to consume large volumes of continental crust into the mantle, it has been argued by some that the ultimate fate of 90% of subducted crust is 'relaminated' to the base of the continents (Hacker et al., 2011; Behn et al., 2011; Kelemen and Behn, 2016; Santosh et al., 2017). As crustal growth models most often assume that material subducted is a net loss in the continental volume (e.g. Scholl and von Hunen, 2007; Hawkesworth et al., 2013) the concept of relamination implies that although large volumes of continental crust may be subducted, the vast majority of said crust is merely redistributed rather than removed. This has significant implications for how we assess and contrast the extant total volume of continental crust and the area of crust currently exposed at the surface. The quantification of rates and volumes of relaminated material through time remains one of the largely unconstrained variables in rates of continental growth, and should be a focus of future studies.

Further support for the return of continental material from a subducting slab is found in the presence and character of zircon in lithologies that were sourced from the upper mantle. The presence of zircon and other crustal minerals (kyanite, coesite, quartz, etc.) have been reported in ophiolites from various localities around the world (Yang et al., 2007; Belousova et al., 2015; McGowan et al., 2015; Robinson et al., 2015). It is surmised by Robinson et al. (2015) that continental material is carried into the mantle on subducting oceanic crust and is subsequently transferred into mafic melt channels that rise through the mantle wedge and

coming to reside at the base of a supra-subduction ophiolite. Furthermore, Re-Os isotopes of Os-Ir-Ru sulphides in Tibetan chromitites imply the survival of zircon that was subducted to the mantle transition zone (~400 km) and subsequently returned to the near surface in an ophiolite (McGowan et al., 2015).

4. Crustal growth and destruction in magmatic arcs

As noted above, oceanic and continental arcs are the loci in which the bulk of continental crust is formed and destroyed (see also Stern and Scholl, 2010). The apparent balance between growth and destruction from modern estimates implies no long-term net growth. However, several variables control the potential of long-term preservation of arc magmatism, including the thickness of the arc edifice and long-term vector of trench migration.

Oceanic arc crust that is less than ~25 km thick is likely to be subducted during near-orthogonal arc-arc collision due to negative buoyancy compared to the overriding continental crust (Fig. 3; Yamamoto et al., 2009; Condie and Kröner, 2011). Accretion of arc terrains in subduction zones appears predominantly in arc settings with either thickened crust (>35 km) or when the arc-arc collision occurs along parallel margins (Yamamoto et al., 2009). The vast majority of the recent oceanic arcs are located in the western Pacific (Yamamoto et al., 2009), and given that the majority of the outboard oceanic arcs (those nearest to the continental margin) sit at an oblique angle to the oceanward arcs, it is likely that much of the arc magmatism of the western Pacific will not be preserved in the geologic record. As noted above, the volume of crust currently forming in oceanic arcs is ~30% higher than that of continental arcs, this questions how representative arc magmatism preserved in the continental crust is with relation to global arc magmatism.

Continental arc magmatism can broadly be classified into retreating and advancing subduction zones (see Doglioni et al., 2007; Cawood et al., 2009 for reviews). Retreating subduction occurs during slab rollback when the sinking rate is faster than convergence rate.

Conversely, advancing subduction results in a convergence rate that is faster or equal to the sinking rate. Importantly, an advancing subduction zone like that generalized by the Andean Orogen exhibits vastly different crustal growth histories than a retreating subduction zone, as is typified by the Tasmanide Orogen that effectively continues into the present in the form of the New Zealand/Tonga/Kermadec subduction system (Fig. 4). As discussed previously, the subduction zone of the Andes forms a loci of both crustal generation and destruction due to the advancing nature of the trench with respect to the upper plate. In contrast, the Tasmanide Orogen records ~300 Myr of crustal growth in a retreating arc system. This comprises magmatism alternating between the oceanic and continental domains as the arc front retreats from the continental margin (Collins, 2002; Collins and Richards, 2008). It is possible to track nearly continuous magmatism in the Tasmanides from ~450 Ma to ~250 Ma, which has continued to retreat outboard from Australia for the past ~250 Ma to its present location (McDougall et al., 1994; Collins, 2002; Schellart et al., 2006; Tulloch et al., 2009; Cluzel et al., 2011). This retreating subduction system has resulted in the formation and preservation of nearly one third of the Australian continent in ~300 Myr. In contrast, estimates for the Andes range from zero to only minor net growth since ~360 Ma (Bahlburg and Hervé, 1997; Cawood and Buchan, 2007; Boekhout et al., 2015; Pepper et al., 2016). Several other regions share similar features with the Tasmanides (e.g. the southern margin of Paleoproterozoic Laurentia, Condie, 1986; Whitmeyer and Karlstrom, 2007; the southwestern margin of Mesoproterozoic Baltica, Roberts and Slagstad, 2015; the western margin of Mesoproterozoic Kalahari craton; Jacobs et al., 2008, and the Neoproterozoic Arabian Nubian Shield; Johnson et al., 2011), in that large volumes of subduction-related magmatism was generated in a relatively small duration of time and was preserved in the geologic record. Although the aforementioned regions have traditionally been associated with terrane accretion, we posit that crustal growth within dominantly retreating subduction systems featuring 'accordion tectonics' (aka 'tectonic switching', Collins, 2002, 2011) provides a more cohesive hypothesis. An outstanding question with regards to advancing or retreating subduction systems, is how these are preserved in the geological record, and thus how these should be accounted for in crustal growth models.

5. Cratons are not forever

Tectonic erosion is generally associated with advancing subduction zones; however, a similar process is hypothesized beneath retreating subduction zones driven by slab rollback, as seen most clearly in the North China Craton (Santosh, 2010; Zhu et al., 2011; Zhu et al., 2012), which also share similarities with the Amazonian and Wyoming Cratons (Kusky et al., 2014; Dave and Li, 2016; Wang et al., 2016; Snyder et al., 2017). Kusky et al. (2014) outlines the preconditions for tectonic erosion during slab rollback (Fig. 5). The first step requires the hydro-weakening of the mantle wedge above a subducting slab from the transition zone (~600 km to the base of the continent). Dehydration of various hydrous phases (including lawsonite, serpentinite, β -phase olivine above the transition zone resulting melt weakening in the upper mantle (see also Bercovici and Karato, 2003; Maruyama and Okamoto, 2007). Following melt weakening of the upper mantle; slab rollback causes an influx of fertile mantle material causing the removal of the weakened upper mantle above the subducting slab (Zheng et al., 2015). It is hypothesized this process has been responsible for the removal of the thick lithospheric root of the North China Craton and thinning of the lithosphere from ~200 km to less than ~100 km, Evidence also supports a similar process removing large volumes of the mantle and lower crustal lithosphere from the Wyoming, Amazonian, and North Atlantic cratons (Kusky et al., 2014; Hughes et al., 2014; Dave and Li, 2016).

The craton removal mechanism, also termed 'decratonization' or 'demantling' has been addressed in the North China Craton through a combination of data from geophysical and geological techniques (Santosh, 2010). Interpretation of seismic cross sections suggests thick slab debris sinking to various depths in the mantle, and the presence of a thick (ca. 200 km) lithospheric root under the western part beneath the Ordos Block. This has been variably eroded towards the east, thinning down to almost 60 km. Santosh (2010) speculated that the present day lithosphere-asthenosphere boundary beneath the NCC probably marks the 'erosional plane' along which decratonization occurred through subduction-erosion from the east and thermal and material erosion by upwelling asthenosphere from below, resulting in differential destruction of the cratonic root and its thinning towards the east. The asthenosphere below the Eastern Block of the NCC shows younger and thinner slab debris, in the absence of any prominent thick high velocity layers, with westward polarity, and

mimic a mega-scale duplex formed by underplating through Pacific plate subduction from the east (Santosh, 2010). The loss of the Archean keel and its replacement by a more fertile lithospheric mantle in the eastern part of the NCC has also been evidenced in several petrologic, geochemical, isotopic and geophysical studies (e.g. Gao et al., 2002; Yang et al., 2008; Chen et al., 2008). The Eastern Block witnessed extensive magmatism with post-Jurassic intrusions and Cretaceous volcanism. The available tomographic data also suggest that the lithospheric architecture in this region has been complexly altered.

While decratonization is primarily a 'bottom-up' process, the influence of decratonization on the surface geology is likely to be significant as the removal large volumes of lower lithospheric material results in significant uplift and erosion (Wallner and Schmeling, 2010; Liao and Gerya, 2014). In the case of tectonic erosion beneath cratons that are adjacent to subduction zones, such as the North China Craton in the late Paleozoic and Mesozoic Eons, material that is eroded from the interior of the craton experiencing basal decratonization is likely to be funneled to the subduction zone wherein it can be recycled into the mantle. Further work is needed to understand the uplift, erosion, sedimentation, and eventual subduction erosion of cratonic material that is driven by the processes of decratonization.

6. Preservation of continental lithosphere

6.1 Bias in the geologic record

Some facets of geological science, palaeontology in particular, have long paid attention to the fact that the geological record is no doubt biased in several ways (e.g. Signor and Lipps, 1982; Smith et al., 2001), and have made some inroads to understanding these biases (Benton et al., 2000; Peters and Foote, 2002; Dunhill et al., 2014). In the study of the continental crust and the deep time archive that it provides, there has been much less attention to such processes, even though they are critical to our understanding of these archives. Hawkesworth et al. (2009) provide the first high profile case for such potential bias. In their paper, these authors describe a model whereby rocks formed in the latest stages of subduction and the collisional stage are shielded in the cratonic interior and shielded from tectonic erosion along convergent margins. If preservation can explain some of the

episodicity we see in many geological records, then there is perhaps a critical misinterpretation in our understanding of the evolution of Earth system processes. The model of increased preservation of continental crust during periods of supercontinent formation has subsequently been advocated by Lancaster et al., (2011), Roberts (2012) and Condie et al. (2011). The latter authors suggest that both juvenile and reworked crust are captured during continental collision associated with supercontinent formation, and thus that periods of supercontinent formation are not associated with increased crustal growth rates.

However, there are contrary opinions to this model. Some propose that age peaks in the zircon record do not reflect selective preservation, but reflect episodic and enhanced plume driven subduction (Rino et al., 2004; Arndt and Davaille, 2013; Condie et al., 2017). Importantly, the plumes themselves did not generate crust, but enhanced the rate of plate tectonics and associated subduction related magmatism. This model is built on research spanning over two decades which favour episodic mantle activity as the underlying cause of episodicity in crustal growth, and which remains a tenet of Earth evolution favoured by some (e.g. Stein and Hofmann, 1994; Albarède, 1998; Condie, 1998; Parman, 2007; see section 9).

Few studies have attempted to understand the potential preservational bias of the continental crust in detail, and none have successfully quantified such processes. Spencer et al. (2015) present a study of the Grenville Orogeny in Laurentia, they find that detrital zircon age spectra from sedimentary successions deposited during the subduction phase (~1.8 Ga to ~1.2 Ga) display dramatically different age populations than those from post-collisional (<1 Ga) sedimentary successions. The subduction phase age spectra are characterized by broad peaks with no defined troughs. This is contrasted by the post-collisional age spectra which is characterized by a single large age peak centered on the age of continental collision. These shifting patterns are hypothesized to represent the balance between steady state zircon production during subduction, and subduction erosion removing earlier phases of subduction zone magmatism prior to the continental collision (idealized in Fig. 6). Spencer et al. (2015) also argue the zircon of the dominant age peak have a chemical signature akin to collisional-related magmatism.

Roberts (2013) presents a similar finding for the equivalent Sveconorwegian orogen in Baltica, even though this orogeny may have been fundamentally different in style (Slagstad et al., 2013). A major implication of these studies is that peaks in zircon abundance do not accurately reflect the volume of crust created at anyone time, and after a period of major orogenesis and crustal reworking, will be significantly biased. Such dramatic bias between the crustal volumes and the zircon record derived from a region of continental crust is demonstrated by the modern Amazon river where the zircon load is controlled primarily by the erosion rate of zircon-bearing crust as opposed to the zircon fertility of said crust. In this scenario, the zircon load can be broadly ascribed into two main crustal reservoirs, viz. the Andean Orogen and the Amazonian Craton. Spencer et al. (in review) highlight that despite having higher Zr concentration, the zircon yield from the Amazonian Craton is over an order of magnitude less zircon than the Andean Orogen given its high erosion rate (Fig. 7). Additionally, Cao et al. (2017) constrain a correlation between the surface area and length of recent continental arc systems with the global detrital zircon age spectra (<750 Ma).

Although direct correlation between a measured zircon population and volumes of magmatism is fraught with uncertainty, in particular when applied beyond the Phanerozoic where the geologic record is exceedingly sparse, many studies still use the data in this way (e.g. Lee et al., 2016; McKenzie et al., 2016; Cao et al., 2017). A review of volumes of magmatism in Cordilleran arcs and the associated detrital zircon record shows they are remarkably similar in some regions and significantly different in others (Kirsch et al., 2016). With specific regard to regions where there is an apparent mismatch between the igneous and detrital records, these workers argue that detrital zircon age spectra cannot be used to quantitatively evaluate the volume of magmatic rocks, but provide a useful qualitative indicator of magmatic arc activity. Thus, there are many cases where the correlation between magmatic volume, crustal growth, and preserved detrital zircon peak are poor. The implications of the aforementioned studies are simply that the zircon record is controlled by an array of geologic process, many of which we are just now coming to more fully understand and that preservation and generation biases are an issue at all scales, from individual catchments and basins to global supercontinent cycles. Future work is imperative to not only understand the biases that are inherent to the geologic record, but perhaps

more importantly to quantify the degrees to which the proxies used to explain geological phenomena account for the biases present not only in the most recent geologic eon, but also throughout geologic time.

Facets that require further quantification include the bias between different lithologies, for example mafic versus felsic crust, and that of lower versus upper crust during continental collision along with greater constraints on the secular variation of Zr concentrations between various lithologies (e.g. Spencer et al., in review). Also, the preservation potential during the evolution of ocean-facing accretionary orogens, which can host soft collision, terrane-collisions, plateau accretions, for example, has not been quantified. Once we have a better handle the nature of these biases, we can understand what parts of the geological record may be missing.

6.2 Crustal destruction and mineral deposits

Lithospheric destruction has been identified as a viable mechanism that promotes the formation of world-class mineral deposits through the addition of both juvenile and recycled components into the thinned crust as clearly illustrated in the case of the North China Craton (e.g., Li and Santosh, 2014; Goldfarb and Santosh, 2014; Li et al., 2014; Yang et al., 2014; among others). The formation of voluminous Jurassic granitoids and Cretaceous intrusions carrying gold, molybdenum, copper, lead and zinc deposits in the eastern part of the NCC has been correlated to lithosphere thinning associated with the westward subduction of the Pacific plate with the peak of large-scale destruction in the Cretaceous. Most of the major late Mesozoic gold deposits in this region occur along craton margins, as well as within the cratonic interior in reactivated paleo-sutures, where extensive lithospheric destruction has been detected. He et al. (2016) present geophysical evidence through an analysis of receiver function and tomography that suggests mantle upwelling accompanied by lower crustal or lithospheric delamination along these zones.

That lithospheric destruction is not restricted to craton margins is well illustrated in a recent study by Yin et al. (2016) from the Hengshan-Wutai-Fuping region within the Trans-North China Orogen at the central part of the North China Craton. This corridor preserves the records of both Precambrian basement and Phanerozoic magmatic and metallogenic events.

The 2-D and 3-D inversion models of magnetotelluric data presented by Yin et al. (2016) reveal a near-horizontal high-conductivity layer at lower crustal and upper mantle depths of ~ 35–45 km, offering direct evidence for crust–mantle decoupling and magmatic underplating. They traced a west-dipping slab-shaped conductor corresponding to westward oceanic subduction between the Wutai and Fuping Complexes, with subsequent collision associated with the formation of the Trans-North China Orogen in the Paleoproterozoic. The interconnected fluid/melt transport channels probably played an important role for the Mesozoic tectonic–magmatic and metallogenic events, as well as the Cenozoic basaltic volcanism, and were also traced from crustal and upper mantle conductors in the Hengshan–Wutai–Fuping region. This integrated study provides evidence for lithospheric construction, destruction and metallogeny.

6.3 Crustal preservation and mineral deposits

Another facet pertinent to the preservation of continental crust is the temporal distribution of Cu±Au porphyries and epithermal Au-Ag deposits (Groves et al., 2005; Wilkinson and Kesler, 2007). All of the epithermal Au-Ag deposits and 97% of porphyry copper deposits are found in the Phanerozoic Eon, with age modes at ~3 and 11 Ma, respectively (Wilkinson and Kesler, 2007). These deposits are nearly exclusively often formed in convergent margins above subduction zones with the vast majority found within active subduction regimes. While the erosion of upper level deposits such as epithermal Au-Ag play a dominant role in their long-term preservation, subduction erosion likely plays a major role in the long-term preservation of Cu±Au porphyry deposits, as the subduction processes associated with the formation of Cu±Au porphyry deposits has been continuous for at least throughout the Phanerozoic Eon (Cawood and Hawkesworth, 2015). Importantly the Cu±Au deposits that are not located along a recent subduction zones (e.g. those in Tibet and the Central Asian Orogenic Belt) have subsequently been isolated by arc accretions and/or continental collisions (Bierlein et al., 2009).

7. Secular change in geodynamics

Uniformitarianism implies that our current view of plate tectonics can be applied to Earth history, however, two facts confound this issue: firstly, there is strong evidence that the mantle has cooled through time (e.g. Herzberg et al., 2010), which would have a profound effect on melt volumes and lithospheric strength; and secondly, there is consensus that the earliest part of Earth history featured a planet covered in a magma ocean. These observations lead us to a key question: when did plate tectonics develop? This question has plagued Earth Scientists since the inception of the plate tectonic paradigm, and remains hotly debated today. There are a wealth of reviews on this topic, so here we provide only a brief summary, focusing on the views that dominate consensus.

7.1 Hadean-Archaean tectonics

Our only physical record of the Hadean is that of detrital zircon from the Jack Hills in Australia (for reviews see Harrison, 2009; Nebel et al., 2014; Wilde, 2015). Linking elemental, isotopic and inclusion compositions from these zircon to the surrounding geodynamic environment has been fraught with debate (e.g. Roberts and Spencer, 2015 for review; Kenny et al., 2016; Harrison et al., 2016). In general, some researchers favour tectonic and geodynamic processes similar to today, i.e. dominated by horizontal plate tectonics and hosting water in the environment (e.g. Mojzsis et al., 2001; Harrison et al., 2005; Hopkins et al., 2008, 2010; Maruyama and Santosh, 2017 and references therein). Others favour vertical tectonics, with or without mantle overturn events (e.g. Shirey et al., 2008; Kemp et al., 2010; Griffin et al., 2014; Nebel et al., 2014; Zeh et al., 2014; Bedard, 2017). Some models feature aspects of horizontal tectonics, but with different crust generation processes to those today; based on the concept that the Earth-Moon system had many features in common during the birth stage, it has been postulated that primordial continents with komatiite might have formed through the consolidation of a terrestrial magma ocean at 4.53 Ga, where the upper crust was composed of fractionated gabbros and the middle felsic crust dominated by anorthosite (Santosh et al., 2016). These primordial continents will have contained the final residue of the dry Hadean magma ocean. It has been suggested that volatiles such as water were brought to Earth by meteorite bombardment at 4.37-4.2 Ga (Maruyama and Ebisuzaki, 2016; Maruyama and Santosh, 2017 and references therein). These volatiles are necessary for plate tectonics to begin; it is suggested that the introduction of water enabled the

eclogitization of lower crust, and thus increased the effect of slab pull at lithospheric junctions (Maruyama et al., 2016), providing a driving force for the onset of subduction.

Tectonic settings of continent formation throughout the Archean have been debated for every craton. It is considered by many that vertical and/or plume tectonics were certainly active, and probably dominant in the Eoarchean, and perhaps into the Mesoarchean (see Van Kranendonk, 2010; Van Kranendonk et al., 2015). Dome and keel geometries in several cratons provide evidence for this. Arc settings, presumed to develop above subducting slabs, are advocated for some Eo- to Palaeoarchean terranes (Nutman et al., 2007, 2015; Komiya et al., 2015), and are prevalent by the Mesoarchean (e.g. Smithies et al., 2005; Mints et al., 2010; Van Kranendonk 2010; Shirey and Richardson, 2011; Santosh et al., 2015). Some workers consider that early styles of subduction would have featured shallower subduction (e.g. Smithies, 2000; Martin et al., 2005; Nutman et al., 2015).

7.2 Insight from numerical modelling

Today, the Earth is actively losing heat through tectonic and magmatic processes. The initial source of this heat is from a combination of radioactive decay and energy imparted via planetary accretion (Stevenson, 1989; Wetherill, 1990; Jaupart et al., 2015). Geoneutrino experiments indicate that the current heat flux is currently nearly balanced equally between these two sources (Gando et al., 2011; Dye, 2012). From the formation of the Earth the total heat flux has been dissipating despite input from radiogenic decay. This is visualized using the secular change of non-arc basalt formation temperatures through geologic time (Herzberg et al., 2010; Korenaga, 2013; Figure 8a). From these data it is surmised that mantle potential temperatures were substantially higher in the geologic past than they are today. It can therefore be postulated that with elevated mantle potential temperatures, heat flux to the lithosphere would have also been higher meaning more melt and weaker lithosphere (e.g. Chardon et al., 2009).

From the paleo-mantle temperatures, it has been suggested that early in Earth history the geodynamic regime was dominated by what is variably referred to as 'plume-lid', vertical tectonics, or sagduction (e.g. Van Kranendonk et al., 2004; Sizova et al., 2010; Johnson et al.,

2013; 2016; Fischer and Gerya, 2016). In these models, vigorous mantle convection and density-driven dripping, delamination and translation of the continental crust would have provided an effective mechanism for destruction of continental crust, as well as its creation (see Johnson et al., 2013; Fischer and Gerya, 2016). Both 2D and 3D numerical models predict a pre-subduction regime in the Hadean and early Archean that would feature unstable lithosphere with delamination and dripping of the lower crust into the mantle, localised thickening of the crust, and small-scale overturns of the lower to upper crust (Sizova et al., 2010; Fischer and Gerya, 2016). These models are compatible with the keel and dome structures typical of some Archean cratons (e.g. Van Kranendonk et al., 2015). 3D modelling predicts that by 3 Ga, a transitional period whereby both dripping subduction and dripping lithosphere are active processes. In this period, where the mantle potential temperature is 150 to 200°C hotter than today, subduction zones would be active, but different to today in that they would be unstable, with the subducting slab necking and breaking off rapidly after subduction (Fischer and Gerya, 2016). Earlier and shallower slab break-off is also predicted in collisional orogenies that are active in periods with a hotter mantle (van Hunen and Allen, 2011; Sizova et al., 2014). In the Proterozoic and late Archean, 3D modelling predicts that subduction may look more similar to today, but that greater dripping episodicity would be likely (Fischer and Gerya, 2016). Numerical models predict that continental growth mechanisms would have transitioned from a pre-subduction regime dominated by plume-lid and vertical tectonics and the transitional regime of dripping subduction to finally arrive at the modern subduction regime in the last 1 Gyr of Earth history (Fig. 8b; Sizova et al., 2010; Fischer and Gerya, 2016).

7.3 A Neoarchean superevent?

The extant geologic record of Earth history prior to 2.9 Ga is extremely sparse. This changes dramatically during the remainder of the Archean (2.9-2.5 Ga) wherein rocks of this age are far more abundant than those prior to 2.9 Ga (see review by Bradley et al., 2011). It is during this time where there is an increase in passive margins (Bradley et al., 2008), zircon frequency in both modern rivers and sedimentary successions (Campbell and Allen, 2008; Rino et al., 2008; Voice et al., 2011), greenstone belts (Condie, 1994), eclogites (Brown,

2007), granulites (Brown, 2007), granites (Condie et al., 2009), carbonatites (Woolley and Kjarsgaard, 2008), large igneous provinces (Prokoph et al., 2004), komatiites (Isley and Abbott, 1999), orogenic gold deposits (Goldfarb et al., 2001), banded iron formation (Bekker et al., 2010), and glaciations (Hoffman, 2009). While the secular change in the geologic record at this time is quite stark, the increase in zircon and granite frequency are particularly informative to the growth of continental crust. These proxies implies rapid crustal growth occurred during the last ~300 Myr of the eon (Condie, 2005). The O isotopic signature of zircon during this time frame carries subdued crustal signatures (Spencer et al., 2014a; Payne et al., 2015), implying that crustal reworking was at a minimum. Therefore if we have the majority of the continental crust growing during the Neoproterozoic that carries predominantly a mantle signature, then it is implied this crustal growth episode was dominated by magmatism derived predominantly from the mantle either within oceanic arc environments, associated with mantle plumes (Condie et al., 2001; Condie, 2004; Eriksson et al., 2002; Condie et al., 2009; Condie and Kröner, 2008; Zhai and Santosh, 2011), and/or mantle overturn events (Stein and Hofmann, 1994; Breuer and Spohn, 1995; Bédard and Harris, 2014; Griffin et al., 2014). The geodynamic environment of the Late Archean Eon has been compared to the modern Western Pacific region, being dominated by oceanic arcs within an oceanic realm (Santosh et al., 2009; Sawada et al., 2016). Arc-arc collisions created composite arcs, and bundles of these were incorporated into proto-continentals that subsequently grew through both vertical and lateral accretion into larger continental masses (see also Hollings et al., 1999; Van Kranendonk et al., 2007; Wyman and Kerrich, 2009; Mohan et al., 2012; Sawada et al., 2016). The formation of Archean cratons through the assembly of microcontinental blocks built through arc magmatism has also been demonstrated in a recent study from the North China Craton (Yang and Santosh, 2017).

7.4 Neoproterozoic tectonic transition

In a similar fashion to the Neoproterozoic Era, the Neoproterozoic Era was a period of great change in the geologic record. It is at this time when the nature of subduction is argued to have changed to more closely resemble that which we see on the modern Earth (Hamilton, 1998; Stern, 2005, 2007). This is signaled by the first recorded exhumation of blueschist (Brown, 2007) and ultrahigh pressure metamorphic assemblages (Jahn et al., 2001), along

with an accompanying increase in the number ophiolite occurrences in the geologic record (Dilek, 2003). Although the appearance of blueschist has been argued to be purely a function of the changing composition of the oceanic crust driven by secular cooling (Palin and White, 2015), there is mounting evidence that secular cooling indeed has changed the nature of subduction systems (Sizova et al., 2010; Brown, 2014).

8. Supercontinent cycle and continental growth

The evolution of the continental crust is dominated by the existence of supercontinents. The cycle of formation and breakup of supercontinents has been a long-standing paradigm of plate tectonics, with the recognition of Pangea dating back to the early 20th century (Wegener, 1912, 1920). The supercontinents of Earth history as proposed in various studies include the hypothetical assembly are Ur (3.0 Ga), Superia (Kenorland or Sclavia) (2.7-2.5 Ga), Nuna/Columbia (1.8-1.9 Ga), Rodinia (1.1 Ga), Gondwana (0.54 Ga) and Pangea (0.25 Ga) (see Nance et al., 2014 and references therein). The formation of supercontinents primarily involves the assembly of continental fragments during near-orthogonal orogenesis following subduction along multiple convergent margins (Cawood and Buchan, 2007; Whitmeyer et al., 2007). The 'supercontinent cycle' has been central to the discussions on the growth, preservation, and destruction of continental crust, given the apparent episodicity seen in the geological record (e.g. accessory phases (primarily zircon) U-Pb ages (Gastil, 1960), granites and basalts (Stein and Hofmann, 1994; Condie, 1998), greenstone belts (Condie, 1995), large igneous provinces (Anderson, 1994; Storey, 1995), and passive margins (Bradley et al., 2008)).

8.1 Supercontinents and the zircon record

From the initial pioneering study of Gastil (1960) who recognized clusters of mineral ages from a global database, the persistent presence of distinct global age populations, particularly of zircon, are correlated to supercontinents. The addition of Lu-Hf isotopes of zircon provided the ability to evaluate not only the crystallization age of the zircon (with U-Pb) but also the average mantle extraction age (with Lu-Hf) (see Vervoort and Kemp, 2016). This technique has emerged as one of the most popular proxies to evaluate continental

growth and its link with supercontinent cycles. A landmark study by Kemp et al. (2006) showed discrete pulses of crystallization and mantle extraction ages from detrital zircon related to the assembly of Gondwana, from which the authors argued for episodic generation of the continental crust. Following on from this, many studies have used detrital zircon to address continental growth using combined U-Pb and Hf model ages (e.g. Iizuka et al., 2009; 2013; Yang et al., 2009; Wang et al., 2009; 2011), or U-Pb ages alone (Rino et al., 2008; Safonova et al., 2010). Condie and Aster (2010) identified five major peak age clusters in granitoid zircon over the world which they tied to supercontinent formation at 2700, 1870, 1000, 600, and 300 Ma. The minima in age spectra were considered to represent supercontinent stasis or breakup (2200–2100, 1300–1200, 750–650, and ≤ 200 Ma).

Roberts (2012) assessed $\epsilon_{\text{Hf}(t)}$ -time space relations of a global zircon database in relation to supercontinents (Fig 9a). He showed that there is an apparent increase in the amount of isotopically depleted continent formed between the periods of supercontinent amalgamation, and inferred that more continental crust was lost during supercontinent amalgamation. According to Roberts (2012), the global balance between addition and loss of continental crust is controlled by various factors including: (1) the proportion of internal orogens versus exterior orogens, with the latter favouring continental addition, and 2) the balance between exterior orogens in retreating mode versus those in advancing mode, with the latter favouring continental loss. During supercontinent disruption, a greater balance of continental addition versus loss is expected because of the magmatic flux in retreating accretionary orogens. In contrast, increased continental loss would occur when supercontinents amalgamate through extensive tectonic erosion along convergent margins (c.f. Collins et al., 2011). Gardiner et al. (2016) reassessed this trend with respect to deviation from the depleted mantle using the large database of Roberts and Spencer (2015) and found the same result (Fig 9b), but added that the amplitude of the Hf trend is increasing with time, peaking with Gondwana assembly.

As discussed in Section 6, the peaks in global zircon age spectra that correlate with the timing of supercontinent amalgamation (Fig. 9f) may actually correspond to the preferential preservation of continental crust (Hawkesworth et al., 2009; Roberts, 2012; Spencer et al., 2015). While preferential preservation has been directly tested during the Rodinian

supercontinent cycle (Spencer et al., 2015), this positive result may be contrasted with the geologic record both before the formation of Nuna/Columbia, which is argued to be the first supercontinent (Hoffman, 1989; Mitchell et al., in review) and following the assembly of Gondwana/Pangea. Before the assembly of Nuna/Columbia, a prominent zircon age peak is seen globally between ~2.9 and ~2.7 Ga (Voice et al., 2011); however, zircon prior to ~2.5 Ga display an oxygen isotopic signature unique to this time interval, in that $\delta^{18}\text{O}$ values do not extend beyond ~8‰ (Valley et al., 2005; Spencer et al., 2014a) with a dramatic rise of $\delta^{18}\text{O}$ in zircon seen afterwards, indicating greater incorporation of supracrustal material and appears to oscillate with the assembly and dispersal of supercontinents (See Fig. 9c). As discussed in section 8.2, this may be representative of a geodynamic regime before and after ~2.5 Ga. Likewise, it is poignant to note that studies claiming to have disproved the preservation in the zircon record are restricted to the past 750 Ma (McKenzie et al., 2016; Cao et al., 2017; Fig. 9d & 9e). Perhaps, just as the change in the pre- and post-Archean $\delta^{18}\text{O}$ zircon record may be a signal for shifting geodynamic regime, this discrepancy carries similar weight. This would be supported by the Neoproterozoic tectonic shift discussed in section 8.4.

8.2 The evolving supercontinent cycle

The supercontinent cycle is used to explain many of the episodic feature of the geological record, but preservation bias has likely played a major role at some point (if not throughout) Earth history. The evidence for Archean supercontinents are not clear (Bleeker, 2003; Meert, 2012). The assembly of Nuna/Columbia at 2.2-1.8 Ga features clear evidence in the form of collisional orogenesis on most continental blocks (Zhao et al., 2002; Reddy and Evans, 2009; Zhang et al., 2012), as well as strong paleomagnetic evidence (Evans and Mitchell, 2011; Zhang et al., 2012; Pehrsson et al., 2016). Additionally, the external margin of Nuna/Columbia was the locus of dramatic crustal growth along the 'Great Proterozoic Orogenic Belt' (Condie, 2013; Condie et al., 2015; Roberts, 2013). The breakup of Nuna/Columbia is uncertain with many postulated magmatic episodes relating to its breakup (see Roberts, 2013), and may have initiated at ~1.5 Ga (Ernst et al., 2008; Wingate et al., 2009) and continued until ~1.2 Ga (LeCheminant and Heaman, 1989; Zhao et al., 2004; Evans and Mitchell, 2011).

Interestingly, the assembly of the subsequent supercontinent of Rodinia began prior to the final breakup of Nuna/Columbia, starting first with the ~1.3 Ga Albany-Fraser Orogeny and continuing to ~0.9 Ga with the terminal Qaidam-Qilian Orogeny (Fig. 10; Li et al., 2008; Condie et al., 2015; Condie et al., 2017).

It is important to highlight the protracted nature of both supercontinent assembly and breakup. Just as Nuna/Columbia, the rifting of Rodinia is protracted in that the earliest rifting started at ~0.8 Ga in western North America (Cawood et al., 2001; Li et al., 2002; Harlan, 2003; Spencer et al., 2012) and continued until ~0.55 Ga (McCausland and Hodych, 1998; Cawood et al., 2001; McClellan and Gazel, 2014; Spencer et al., 2014b). Similar to the transition of Nuna/Columbia to Rodinia, the rifting of the core of Rodinia continued until after the initial amalgamation of Gondwana during the Brasiliano Orogeny (~0.65 Ga; Trompette, 1997; de Brito Neves and Fuck, 2014). This further implies a continuum of supercontinent assembly and breakup as opposed to discrete global collision and breakup events (Fig. 10).

In the context of global orogenesis through geologic time, it has been proposed that the orogenic events associated with the assembly of Rodinia formed a 'climax' of orogenesis and continental reworking (Van Kranendonk and Kirkland, 2013). This is postulated based upon an apparent peak of $\delta^{18}\text{O}$ in zircon along with Zr and Th concentrations in granitoids. However, analysis of a more comprehensive set of isotopic and geochemical data highlights that $\delta^{18}\text{O}$ in zircon and concentration of incompatible elements such as Th and Zr have increased through geologic time with the maximum values currently found in relatively recent lithologies (Fig. 11; $\delta^{18}\text{O}$: Spencer et al., 2014a; Payne et al., 2015; Th and Zr: EarthChem database accessed November 2016 and supplemented by data from Van Kranendonk and Kirkland, 2013). This implies the chemical evolution of the Earth tied to the thermal evolution of the Earth and the concept of an orogenic 'climax' is unlikely.

With regards to the future supercontinent, three possible scenarios have been proposed based upon the geodynamic configurations of previous supercontinents. These are classified as introversion, extroversion, and orthoversion (Nance et al., 1988; Hartnady, 1991; Veevers et al., 1997; Evans, 2003; Maruyama et al., 2007; Mitchell et al., 2012; Yoshida, 2016). These geodynamic configurations predict the next supercontinent will form by closing either the

rifted margins of the Atlantic Ocean (introversion), convergent margins of the Pacific Ocean (extroversion), or the Arctic Ocean (orthoversion). It has been proposed that the introversion and extroversion tectonic models predict specific isotopic signatures (Collins et al., 2011; Spencer et al., 2013), however the specific isotopic signature associated with orthoversion remains untested. While the geodynamics of the supercontinent cycle are widely debated, the assembly, evolution, and breakup of continental fragments exert important influence on mantle dynamics, surface processes and life evolution and therefore supercontinent tectonics has been a topic of wide interest (Nance et al., 2014). It is important to note that supercontinent cycles are an end-member model used to describe the motion of the Earth's plates. Each cycle shows some differences, indicating the chaotic nature of Earth's evolution. The supercontinent cycle features changes in the abundance of subduction zones, continent-continent collision, and rift zones, and thus directly affects the global rates of formation and destruction of continental crust. Since continental collision zones are currently favoured to be the loci of crustal preservation, supercontinents also affect the preservation of the continental crust.

8.3 Role of mantle dynamics in supercontinents

There is increasing evidence that both the assembly and disassembly of supercontinents are coupled to large-scale up- and downwellings in the mantle (see Li and Zhong, 2009 for review). The aforementioned authors argue tight anticorrelation between the formation of large localized clusters mantle plumes, termed 'superplumes' and supercontinents. Following the assembly of both Pangea and Rodinia, a >6000 km wide superplume is theorized to have formed beneath the supercontinent 20-120 Myr following the final supercontinent assembly, which resulted in superplume related magmatism for ~100 Ma and led to the weakening and eventual breakup of the supercontinent (Li and Zhong, 2009). Additional evidence for mantle dynamics playing a role in continent amalgamation is also seen in the more recent Circum-Pacific and Tethyan subduction realms. Based on the topology of this region, Santosh et al. (2009) proposed that the rapid amalgamation of continental fragments into a close-packed supercontinent assembly is aided by 'super downwelling' along multiple subduction zones. This has subsequently been supported by global dynamic numerical models (Yoshida and Hamano, 2015). Geophysical evaluations and

numerical modelling have provided more realistic scenarios of the mechanisms and triggers behind the episodic assembly and dispersal of supercontinents. The thermal insulation effect produced by the process of assembly of supercontinents leads to temperature increase and eventually to a planetary-scale reorganization of mantle flow leading to longest-wavelength thermal heterogeneity in the mantle termed as degree-one convection in three-dimensional spherical geometry (Yoshida and Santosh, 2011). Episodic emergence of degree-one convection is considered as the major factor promoting supercontinent cycles. Supercontinent breakup occurs in response to temperature increase through upwelling plumes originating from the deeper lower mantle or the core-mantle boundary (CMB). Numerical modelling of mobile, deformable continents, including oceanic plates have helped in reconstructing continental rifting and drifting with processes and timescales similar to those envisaged in the Wilson Cycle (Yoshida and Santosh, 2011).

Li and Zhong (2009) note that the connection of superplume and 'super downwelling' events to the assembly and rifting of supercontinents carries with it significant geodynamic implications. For example, this implies the position of the superplume is linked (and indeed controls) the position of the supercontinent along with driving the assembly and breakup of the supercontinent. This also implies the timescale of supercontinent assembly and breakup are also controlled by the size and lifespan of a superplume. Further work in numerical modelling of the global Earth mantle-crust system and increasing tomographic imaging of the crust and mantle will allow for advancing our understanding of the coupled nature of Earth's crust and mantle.

9. Crustal growth rate

Crustal growth rates remain another topic that has been revisited time after time for many decades. There are few exceptions where authors consider both the role of crustal destruction and crustal preservation in their crustal growth models (e.g. Roberts and Spencer, 2015; Sawada et al., 2016), and since both of these are lacking in robust quantification, there is a clear need to revisit these models as we gather more knowledge on aspects of crustal mass balance. Models can be loosely grouped into three categories, those that favour increasing crustal growth rates through time, those that favour decreasing or

steady-state growth rate for much of Earth history, and those that favour episodic crustal growth. The latter is generally considered a secondary effect on top of increasing or decreasing growth rates. Data on the surface area ages of the continents shows that we have a near-exponential increasing record of continental crust through time (e.g. Hurley & Rand, 1969; Goodwin, 1981; Veizer and Jansen, 1985). Isotope data from sediments (e.g. Allegre & Rousseau, 1984; Taylor and McLennan, 1985), granitoids (Condie, 1998; Condie and Aster, 2010), zircon (e.g. Condie et al., 2005; Rino et al., 2008; Izuka et al., 2010; Kemp et al., 2007; Belousova et al., 2010; Dhuime et al., 2012), and more recently monazite (e.g. Itano et al., 2016) have been used to try and model crustal growth, accounting for the reworking of continental crust. In general, most of these proxy models for continental growth feature increasing growth during the Archean, and decreasing growth during the Phanerozoic. The major flaw in these models is that they provide records of the continents preserved today, and even if the models can see through reworking processes (e.g. Belousova et al., 2010; Dhuime et al., 2012), they do not record the continental crust that has been destroyed. For this reason, crustal growth models derived from extant geologic proxies (e.g. the zircon record) are 'minimum' records (Roberts and Spencer, 2015).

In 1981, Armstrong and Harmon proposed that isotopic proxies that are used in the continental crust to constrain rock ages and mantle residence times are not diagnostic of continental growth or reworking (Armstrong and Harmon, 1981; Armstrong, 1991). Rather he argued the current volume of continental crust was reached very early in Earth history and is a product of planetary differentiation. Although this model has been deemed outdated and even inflammatory in the current scientific community, evidence is mounting that at least at in recent geologic history argues the balance of crustal growth and destruction have reached equilibrium (e.g. the 'Yin and Yang' model of Stern and Scholl, 2010). An outstanding question is how far back in geologic time is this applicable and how might we identify and decipher the appropriate proxies. If plate tectonics as we define them today are responsible for this state of equilibrium, it could be argued that there has been no net continental growth for the past 700 million years. Alternatively, if merely the process of recycling continental material into the mantle via subduction processes would produce such an equilibrium, it could be argued there has been no net growth from the onset of subductive transfer of continental material to the mantle. To this end, we present a

hypothesised crustal growth model based on inference from geological, geophysical and numerical modelling observations, rather than a particular geological record obtainable today (i.e. the zircon record). This is because to our knowledge there is not a record or proxy that can determine the volumes of crust destroyed in deep time.

In figure 12, we outline the theoretical framework underpinning our newly proposed continental growth model. As the mantle (and in turn the core) form the primary thermal engine for crustal growth processes (Korenaga, 2008; Herzberg et al., 2010; Mitchell et al., in review), any proposed model must account for the secular evolution of this thermal reservoir (Fig. 8a). Numerical modelling using a variety of petrological and thermomechanical parameters highlight the interdependence of tectono-metamorphic and magmatic regimes at convergent plate margins and have defined first-order transitions from pre-subduction regimes through to a scenario akin to modern plate tectonics (Fig. 8b; see Sizova et al., 2010; Fischer & Gerya, 2016). These models imply that the bulk of continental growth was dominated by non-arc (i.e. plume-lid and sagduction) processes during early Earth, decreasing by ca. 3 Ga, and that arc processes, although probably different to modern-day, were dominant by ca. 3.0 Ga (Fig. 12a; see also Scholl and von Huene, 2007, 2009; Clift et al., 2009; Stern, 2011; Cawood et al., 2013 for estimates of continental volume additions). During the pre-subduction regime with elevated mantle temperatures, the preservation potential of crustal material would have been at an all time low (Fig. 12b). Due to significant resurfacing of the Earth's surface in both large-scale mantle overturns and small-scale crustal overturns, it is theorized that crustal destruction would have occurred more readily through the processes of vertical tectonics and/or 'sagduction' (Van Thienen et al., 2004; O'Neill et al., 2007; Van Hunen and Van den Berg, 2008; Kamber, 2015; Fischer and Gerya, 2016). The relative dearth of rocks prior to 3.5 Ga attest to this low preservation and high destruction potential (Goodwin, 1996). However, as subductive processes began, episodically at first and more steady state later on (Davies, 2008; O'Neill et al., 2007; Sizova et al., 2015; Fischer and Gerya, 2016), the potential for preserving continental crust would have increased (Sawada et al., 2016), and the volumes of crustal destruction would have decreased (Fig. 12b). The balance between crustal destruction and generation would have been met once a plate tectonic regime dominated by subduction was reached, i.e. after ca. 2.5 Ga.

The crustal volume after ca. 2.5 Ga is more stable, with variations caused by the successive formation of supercontinents and the intervening arc-dominated periods. As discussed in section 8.1, Roberts (2012) predicts that greater crustal growth would occur during supercontinent break-up. However, detrital zircon age peaks coincide with the timing of supercontinent assembly and not final amalgamation or supercontinent tenure prior to breakup (Condie et al., 2017), and thus it is hypothesised that preservation during continental orogenesis controls the crustal volume over time, with the hypothesized peaks in crustal volume correlating to the recorded peaks in global zircon U-Pb age populations. It is important to note that the detrital zircon age peaks strictly coincide with the timing of supercontinent assembly and not final amalgamation or supercontinent tenure prior to breakup (Fig. 10; Condie et al., 2017). This is not surprising as the orogenic process thought to be responsible for the formation of Proterozoic zircon age peaks occur prior to the final assembly of the supercontinent, viz. continental collisions resulting in cratonic amalgamation as evidenced by isotopic excursions prior to final supercontinent assembly (Spencer et al., 2014a). Furthermore, the duration of time between major amalgamation events decreases through time implying a direct link between the thermal evolution of the Earth and the formation of supercontinents (Fig. 12b; Condie et al., 2015).

The continental growth curve in Figure 12c can be summarised by the following points:

- 1) ca. 4.55 to 4.0 Ga - a high crustal growth rate (albeit predominately not continental *sensu stricto*; Polat, 2012; Reimink et al., 2014; Reimink et al., 2016), matched by high crustal destruction and low preservation potential in a period dominated by plume-lid tectonics and non-arc settings.
- 2) ca. 4.0 to 3.0 Ga - exponentially increasing crustal growth (with increasing amount of continental crust; Smithies et al., 2003; Van Kranendonk et al., 2007) as preservation potential slowly increases with thickening of continental crust. Continental generation through magmatic arc processes dominated by oceanic arc systems (Smithies et al., 2005; Polat, 2012; Condie and Kröner, 2013; Sawada et al., 2016), and the role of vertical (plume-lid) processes decreases.
- 3) ca. 3.0 to 2.5 Ga - an apparent peak in continental growth rate and a turning point in Earth history. Continental crust is thick enough to accrete into large continental masses (Sawada

et al., 2016), hindering crustal destruction, and enabling crustal preservation to rapidly increase. Mantle overturns may still contribute to crustal growth, adding to this climax in crustal growth and possibly volume.

4) ca. 2.5 to 0 Ga - a balance is reached between crustal generation and destruction, as the loci of both of these is dominated by subduction zones which are now the dominant geodynamic process affecting Earth's crust. The supercontinent cycle has an intrinsic effect on growth, destruction and preservation of continental crust. We posit that once subduction was the primary driver of continental growth, the proportion of oceanic and continental arcs (and the biased preservation of the latter) would have waxed and waned through Earth history. This hypothesis is built upon compiled zircon Hf data that show a rise and fall of data density near the depleted mantle (Roberts, 2012; Roberts and Spencer, 2015). At periods of enhanced growth in oceanic arcs, data density increases near the depleted mantle (i.e. less continental signature in arc magmas) and visa versa with continental arcs, much of which is recycled back into the mantle. Furthermore, as interior oceans close during supercontinent amalgamation, arc systems are pushed outboard to form oceanic arcs peripheral to the supercontinent (Nance and Murphy, 1994; Murphy and Nance, 2013; Keppie, 2015). The long-term thermal evolution (and cooling) of the Earth results in decreasing vigour and volume of arc magmatism.

10. Summary

While the loci of continental growth primarily takes place along subduction zones, it is also along convergent margins where large volumes of the continental crust are consumed. There is currently a near-bipolar nature of magmatic arcs where subduction zone magmatism occurs. Oceanic arcs make up over 50% of the total length of magmatic arcs on the Earth today (Bird, 2003; Cao et al., 2017). Together oceanic arcs form over 10 million cubic kilometers of continental crust per million years (Jicha and Jagoutz, 2015). Despite this, the likelihood these oceanic arcs will be preserved in the geologic record beyond tens to a hundred million years is very low as the majority of oceanic arcs are thin enough to be subducted as is currently happening in the western Pacific (Yamamoto et al., 2009). On the other hand, continental arcs are generally far thicker (and thus more buoyant) than oceanic

arcs and are therefore more likely to be preserved deeper in geologic time. Nevertheless, subduction erosion along an advancing subduction system like the modern-day Andes adds an additional complexity as a poorly constrain, but presumed substantial volume of magmatism is recycled back into the mantle.

The balance between continental formation and destruction has resulted in the extant geologic with no clear indication of how much continental crust has been subducted. Models for continental crustal growth can be used to estimate the volumes of continental crust that has been reworked from older crustal reservoirs compared to the amount of new crust derived from the upper mantle. The processes of associated with crustal destruction carry significant implications for the preservation of economically mineral deposits and dramatically shape the ways through which we reconstruct the positions of continental masses through geologic time.

The supercontinent cycle has apparently had a significant influence on the extant geologic record. A myriad of evidences have been amassed over the past 100+ years supporting the concept of cyclical assembly and breakup of Earth's continental masses. Many of proxies for continental growth display an episodic frequencies. Whether this is a primary signal of enhanced continental growth or whether an aspect of biased preservation plays a role is hotly debated.

As the science of crustal evolution moves forward, it is important that we first understand not only the nature of continental growth but also the destruction of continental crust and the biases inherent to tectonics. It is only through further constraining and quantifying the preservation bias that we will be able to construct crustal growth models that provide more than simply a minimum for crustal growth through time.

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Figure Captions

Fig. 1. Schematic cross sections of Aleutian and Andean subduction zones (modified from Scholl and von Huene, 2009). In these two scenarios, the age of magmatism increases from the trench toward the foreland. This implies the volume of arc crust between the oldest magmatic rocks and the paleotrench has been removed. This can be approximated by assuming the long-term average angle of subduction remained relatively constant and that the preserved arc crust thickness at present is comparable to the arc crust thickness during earlier stages of magmatism.

Fig. 2. A. Regional setting of the Banda Arc and northern margin of Australia. A-A' line of section in Fig. 2B. B. Schematic cross section of the subduction of the northern margin of the Australian continent beneath the Banda Arc. Figures modified from Tate et al. (2015).

Fig. 3. Visualizing the subductibility of arcs based upon crustal thickness modified from Condie and Kröner, (2011). Sources includes Miller and Christensen (1994); Fliedner and Klempner (2000), Holbrook et al. (1999), Tatsumi et al. (2008), Yamamoto et al., 2009; Condie (2011), and Hughes and Mahood (2011). Arcs that are less than ~20 km are unlikely to be preserved in the geologic record (Yamamoto et al., 2009; Condie and Kröner, 2011).

Fig. 4. a. Schematic scaled model of the Tasmanides/SW Pacific (during the late Cretaceous Period) retreating subduction zone (SZ) (after Schellart et al., 2006) with the timing of subduction zone magmatism colour coded along a spectrum from violet to red. Magmatic ages of SW Pacific from McDougall et al. (1994), Tulloch et al. (2009), and Cluzel et al., (2011). LO: Lachlan Orogen, NEO: New England Orogen, DR: Dampier Ridge, LWR: Lord Howe Rise, NR: Norfolk Ridge. b. Schematic model of the Andes advancing subduction zone with the timing of subduction zone magmatism colour coded similar to Fig. 3b (after Scholl and von Huene, 2009).

Fig. 5. Model for cratonic destruction through flat slab dehydration, slab rollback, mantle influx, melt-generation, and erosion of the sub-continental lithospheric mantle (SCLM) (after Kusky et al., 2014).

Fig. 6. Idealized zircon age spectra during the early-subduction phase displays the age peak associated with the previous supercontinent cycle along with a broad plateau of ages representing steady-state zircon growth during subduction-related magmatism. Subduction

erosion continually removes the oldest zircons associated with the late-subduction phase of the orogenic cycle. Continental collision (and supercontinent assembly) completes the near complete removal of subduction age magmatism due to subduction erosion (after Spencer et al., 2015).

Fig. 7. a) Catchment of the Amazon River overlain on a generalized crustal provinces and respective ages (after Pepper et al., 2016 and references therein). b) Detrital zircon age spectra of modern sediment samples from the main trunk of the Amazon river (Mapes, 2009). c) The proportion of the spatial extent of the various crustal provinces compared with the proportion of detrital zircon ascribed to the same. d) Zircon yield as a function of Zr content and erosion rate of Amazonia compared with that of the Andes. e) Range of zircon yield based on erosion rate and range of Zr content of igneous rocks in Amazonia and the Andes. Figure modified from Spencer et al. (in review).

Fig. 8. a) Thermal models for Earth's mantle potential temperatures through time based upon non-arc basalts and Urey ratios of 0.34 and 0.38 (after Herzberg et al., 2010). b) Secular change of geodynamic regimes based upon numerical simulations of Sizova et al. (2010) and Fischer and Gerya (2016). Numerical modelling argues for non-subduction geodynamics was dominant until post ~2.0 Ga with modern subduction regime existing post-1.6 Ga (Sizova et al., 2010) and post-1.0 Ga (Fischer and Gerya, 2016).

Fig. 9: a) Relative mantle input relative to the running mean (thick black line) and the interquartile range (thin black lines) of Roberts (2012). Roberts (2012) argues that the positive and negative excursions of this curve represents increased continental addition and continental loss respectively. b) The 95th and 50th percentile moving mean timeseries of compiled ϵ_{Hf} zircon data as a function of deviation from the depleted mantle from Gardiner et al. (2017). c) Running mean of zircon $\delta^{18}\text{O}$ normalized to average sediment composition (Spencer et al., 2014). d) Surface area addition rate of global continental arcs (400 Myr correction model of Cao et al., 2017). e) Average length of global continental arcs (Cao et al., 2017). f) Compilation of detrital zircon ages from modern rivers (data from Campbell and Allen, 2008; Wang et al., 2009; Condie and Aster, 2010; Ilzuka et al., 2010; Condie et al., 2011; Wang et al., 2011; Ilzuka et al., 2013). Kernel density estimation constructed using densityplotter (Vermeesch, 2012).

Fig. 10. a) Zircon U-Pb age spectra of modern rivers (see Fig. 9f caption for data sources) trimmed between 1500 Ma and 600 Ma. b) Timeline of Nuna breakup, global orogenesis associated with Rodinia assembly, and Rodinia breakup, and initial assembly of Gondwana.

It is key to note that assembly of Rodinia commenced while the breakup of Nuna was still underway. Likewise Rodinia began to breakup while some peripheral blocks had yet to assemble. The timing of Nuna breakup after LeCheminant and Heaman (1989), Zhao et al. (2004), Ernst et al. (2008), Wingate et al. (2009), Evans and Mitchell (2011); breakup of Rodinia after McCausland and Hodych (1998), Cawood et al. (2001), Li et al. (2002), Harlan (2003), Spencer et al. (2012), McClellan and Gazel (2014), Spencer et al. (2014b). Timing of Rodinian orogenesis after Condie et al. (2015).

Fig. 11. a) Compiled zircon $\delta^{18}\text{O}$ (‰) database (see supplementary materials for references). Red line is a running mean and blue line represents a homogeneity test (both Pettitt and Buishand tests) showing a step change from 5.8‰ to 6.8‰ at 2125 Ma. b) Compiled Zr concentrations (ppm) in igneous rocks from Earthchem and augmented with data from Van Kranendonk and Kirkland (2013). c) Compiled Th concentrations (ppm) in igneous rocks from Earthchem and augmented with data from Van Kranendonk and Kirkland (2013). Importantly the databases in b and c display a general pattern of increasing trace element concentrations through time and do not show a decrease in Zr or Th concentrations at ~1.0 Ga as purported by Van Kranendonk and Kirkland (2013).

Fig. 12. a) Interpretive framework of crustal growth loci. ~3.0 Ga represented a general transition from crustal growth from non-arc settings to arc settings. This shift likely coincides with the onset of subduction (Dhuime et al., 2012). b) Crustal destruction was maximized during the early Earth with higher mantle potential temperature and correspondingly increased mantle convection vigor. Crustal preservation was also limited during the early Earth due to these conditions. As potential mantle temperatures began to decrease at ~3.0 Ga, crustal preservation increased during cratonic amalgamation (the 'Neoproterozoic supercontinent event' discussed in section 7.3 and assembly of supercontinents (sections 8) through time) and decreased during periods of post-3.0 Ga arc magmatism (the balance of crustal formation and destruction discussed in section 4). Additionally, the duration of time between major amalgamation events decreases through time (Condie et al., 2015) likely also associated with the secular cooling of the Earth. c) The lowest (purple) curve is the distribution of extant continental crust (Goodwin, 1996). Using the proportion of juvenile granitoid ages, Condie and Aster (2010) estimate the growth of juvenile continental crust (green curve). Using isotopic proxies (O and Hf of zircon) Dhuime et al. (2012) argue for significant early continental growth. However, as discussed in section 9, this growth curve represents a minimum estimate for continental volumes generated as it does not account for continental crust recycled into the mantle (section 4). We posit a continental growth curve that takes biased preservation and secular cooling into account the lies above the minimum

growth curve of Dhuime et al. (2012). We further hypothesize an oscillation of absolute crustal growth associated with the assembly of supercratons/continents which control the balance of continental versus oceanic arcs.

References

- Albarède, F., 1998. The growth of continental crust. *Tectonophysics* 296, 1–14.
- Allègre, C.J., Rousseau, D., 1984. The growth of the continent through geological time studied by Nd isotope analysis of shales. *Earth Planet. Sci. Lett.* 67, 19–34. doi:10.1016/0012-821X(84)90035-9
- Anderson, D.L., 1994. Superplumes or supercontinents? *Geology* 22, 39–42.
- Armstrong, R.L., Harmon, R.S., 1981. Radiogenic Isotopes: The Case for Crustal Recycling on a Near-Steady-State No-Continental-Growth Earth [and Discussion]. *Philos. Trans. R. Soc. A Math. Phys. Eng. Sci.* 301, 443–472. doi:10.1098/rsta.1981.0122
- Armstrong, R.L., 1991. The persistent myth of crustal growth. *Aust. J. Earth Sci.* 38, 613–630.
- Arndt, N., Davaille, A., 2013. Episodic earth evolution. *Tectonophysics* 609, 661–674.
- Atherton, M.P., Petford, N., 1996. Plutonism and the growth of Andean crust at 9 S from 100 to 3 Ma. *J. South Am. Earth Sci.* 9, 1–9.
- Azuma, S., Yamamoto, S., Ichikawa, H., Maruyama, S., 2016. Why primordial continents were recycled to the deep: Role of subduction erosion. *Geosci. Front.*
- Bahlburg, H., Hervé, F., 1997. Geodynamic evolution and tectonostratigraphic terranes of northwestern Argentina and northern Chile. *Geol. Soc. Am. Bull.* 109, 869–884.
- Ballance, P.F., Scholl, D.W., Vallier, T.L., Stevenson, A.J., Ryan, H., Herzer, R.H., 1989. Subduction of a Late Cretaceous seamount of the Louisville Ridge at the Tonga Trench: A model of normal and accelerated tectonic erosion. *Tectonics* 8, 953–962.
- Bédard, J.H., 2017. Stagnant lids and mantle overturns: Implications for Archaean tectonics, magmagenesis, crustal growth, mantle evolution, and the start of plate tectonics. *Geosci. Front.*
- Bédard, J.H., Harris, L.B., 2014. Neoproterozoic disaggregation and reassembly of the Superior craton. *Geology* 42, 951–954.

- Behn, M.D., Kelemen, P.B., Hirth, G., Hacker, B.R., Massonne, H.-J., 2011. Diapirs as the source of the sediment signature in arc lavas. *Nat. Geosci.* 4, 641–646.
- Bekker, A., Slack, J.F., Planavsky, N., Krapež, B., Hofmann, A., Konhauser, K.O., Rouxel, O.J., 2010. Iron formation: the sedimentary product of a complex interplay among mantle, tectonic, oceanic, and biospheric processes. *Econ. Geol.* 105, 467–508.
- Bell, C.M., 1987. The late Paleozoic evolution of the Gondwanaland continental margin in northern Chile. *Gondwana six Struct. tectonics, Geophys.* 261–270.
- Belousova, E.A., Kostitsyn, Y.A., Griffin, W.L., Begg, G.C., O'Reilly, S.Y., Pearson, N.J., 2010. The growth of the continental crust: constraints from zircon Hf-isotope data. *Lithos* 119, 457–466.
- Belousova, E.A., Jiménez, J.M.G., Graham, I., Griffin, W.L., O'Reilly, S.Y., Pearson, N., Martin, L., Craven, S., Talavera, C., 2015. The enigma of crustal zircons in upper-mantle rocks: Clues from the Tumut ophiolite, southeast Australia. *Geology* 43, 119–122.
- Benton, M.J., Wills, M.A., Hitchin, R., 2000. Quality of the fossil record through time. *Nature* 403, 534–537.
- Bercovici, D., Karato, S., 2003. Whole-mantle convection and the transition-zone water filter. *Nature* 425, 39–44.
- Bierlein, F.P., Groves, D.I., Cawood, P.A., 2009. Metallogeny of accretionary orogens—the connection between lithospheric processes and metal endowment. *Ore Geol. Rev.* 36, 282–292.
- Bird, P., 2003. An updated digital model of plate boundaries. *Geochemistry, Geophys. Geosystems* 4.
- Bleeker, W., 2003. The late Archean record: a puzzle in ca. 35 pieces. *Lithos* 71, 99–134.
- Boekhout, F., Roberts, N.M.W., Gerdes, A., Schaltegger, U., 2015. A Hf-isotope perspective on continent formation in the south Peruvian Andes. *Geol. Soc. London, Spec. Publ.* 389, 305–321.
- Bradley, D.C., 2011. Secular trends in the geologic record and the supercontinent cycle. *Earth-Science Rev.* 108, 16–33.
- Bradley, D.C., 2008. Passive margins through earth history. *Earth-Science Rev.* 91, 1–26.
- Breuer, D., Spohn, T., 1995. Possible flush instability in mantle convection at the Archaean-Proterozoic transition. *Nature* 378, 608.
- Brown, M., 2014. The contribution of metamorphic petrology to understanding

lithosphere evolution and geodynamics. *Geosci. Front.* 5, 553–569.

Brown, M., 2007. Metamorphism, plate tectonics, and the supercontinent cycle. *Earth Sci. Front.* 14, 1–18.

Campbell, I.H., Allen, C.M., 2008. Formation of supercontinents linked to increases in atmospheric oxygen. *Nat. Geosci.* 1, 554–558.

Cao, W., Lee, C.-T.A., Lackey, J.S., 2017. Episodic nature of continental arc activity since 750 Ma: A global compilation. *Earth Planet. Sci. Lett.* 461, 85–95.

Cawood, P.A., Buchan, C., 2007. Linking accretionary orogenesis with supercontinent assembly. *Earth-Science Rev.* 82, 217–256.

Cawood, P.A., Hawkesworth, C.J., 2015. Temporal relations between mineral deposits and global tectonic cycles. *Geol. Soc. London, Spec. Publ.* 393, 9–21.

Cawood, P.A., Kröner, A., Collins, W.J., Kusky, T.M., Mooney, W.D., Windley, B.F., 2009. Accretionary orogens through Earth history. *Geol. Soc. London, Spec. Publ.* 318, 1–36.

Cawood, P.A., McCausland, P.J.A., Dunning, G.R., 2001. Opening Iapetus: constraints from the Laurentian margin in Newfoundland. *Geol. Soc. Am. Bull.* 113, 443–453.

Cawood, P.A., Hawkesworth, C.J., Dhuime, B., 2013. The continental record and the generation of continental crust. *Geol. Soc. Am. Bull.* 125, 14–32.

Chapman, A.D., Jacobson, C.E., Ernst, W.G., Grove, M., Dumitru, T., Hourigan, J., Ducea, M.N., 2016. Assembling the world's type shallow subduction complex: Detrital zircon geochronologic constraints on the origin of the Nacimiento block, central California Coast Ranges. *Geosphere* 12, 533–557.

Chardon, D., Gapais, D., Cagnard, F., 2009. Flow of ultra-hot orogens: a view from the Precambrian, clues for the Phanerozoic. *Tectonophysics* 477, 105–118.

Chen, L., Tao, W., Zhao, L., Zheng, T., 2008. Distinct lateral variation of lithospheric thickness in the Northeastern North China Craton. *Earth Planet. Sci. Lett.* 267, 56–68.

Chopin, C., Sobolev, N. V., 1995. Principal mineralogic indicators of UHP in crustal rocks. *Ultrahigh-pressure Metamorph.* 96–133.

Clift, P.D., Vannucchi, P., Morgan, J.P., 2009. Crustal redistribution, crust–mantle recycling and Phanerozoic evolution of the continental crust. *Earth-Science Rev.* 97, 80–104.

Cluzel, D., Adams, C.J., Maurizot, P., Meffre, S., 2011. Detrital zircon records of Late Cretaceous syn-rift sedimentary sequences of New Caledonia: An Australian provenance questioned. *Tectonophysics* 501, 17–27.

Coats, R.R., 1962. Magma type and crustal structure in the Aleutian arc. The crust of the Pacific Basin 92–109.

Collins, W.J., 2002. Hot orogens, tectonic switching, and creation of continental crust. *Geology* 30, 535–538.

Collins, W.J., Richards, S.W., 2008. Geodynamic significance of S-type granites in circum-Pacific orogens. *Geology* 36, 559–562.

Collins, W.J., Belousova, E.A., Kemp, A.I.S., Murphy, J.B., 2011. Two contrasting Phanerozoic orogenic systems revealed by hafnium isotope data. *Nat. Geosci.* 4, 333–337.

Condie, K.C., 2004. Supercontinents and superplume events: distinguishing signals in the geologic record. *Phys. Earth Planet. Inter.* 146, 319–332.

Condie, K.C., 1998. Episodic continental growth and supercontinents: a mantle avalanche connection? *Earth Planet. Sci. Lett.* 163, 97–108.

Condie, K.C., 1994. Greenstones through time. *Dev. Precambrian Geol.* 11, 85–120.

Condie, K.C., 1995. Episodic ages of greenstones: a key to mantle dynamics? *Geophys. Res. Lett.* 22, 2215–2218.

Condie, K.C., 1986. Geochemistry and tectonic setting of early Proterozoic supracrustal rocks in the southwestern United States. *J. Geol.* 94, 845–864.

Condie, K.C., 2013. Preservation and recycling of crust during accretionary and collisional phases of Proterozoic orogens: A bumpy road from Nuna to Rodinia. *Geosciences* 3, 240–261.

Condie, K.C., Arndt, N., Davaille, A., Puetz, S.J., 2017. Zircon age peaks: Production or preservation of continental crust? *Geosphere* GES01361-1.

Condie, K.C., Aster, R.C., 2010. Episodic zircon age spectra of orogenic granitoids: the supercontinent connection and continental growth. *Precambrian Res.* 180, 227–236.

Condie, K.C., Aster, R.C., 2013. Refinement of the supercontinent cycle with Hf, Nd and Sr isotopes. *Geosci. Front.* 4, 667–680.

Condie, K.C., Aster, R.C., 2009. Zircon age episodicity and growth of continental crust. *Eos, Trans. Am. Geophys. Union* 90, 364.

Condie, K.C., Beyer, E., Belousova, E., Griffin, W.L., O'Reilly, S.Y., 2005. U–Pb isotopic ages and Hf isotopic composition of single zircons: the search for juvenile Precambrian continental crust. *Precambrian Res.* 139, 42–100.

Condie, K.C., Beyer, E., Belousova, E., Griffin, W.L., O'Reilly, S.Y., 2005. U–Pb isotopic ages and Hf isotopic composition of single zircons: the search for juvenile Precambrian continental crust. *Precambrian Res.* 139, 42–100.

Condie, K.C., Bickford, M.E., Aster, R.C., Belousova, E., Scholl, D.W., 2011. Episodic zircon ages, Hf isotopic composition, and the preservation rate of continental crust. *Geol. Soc. Am. Bull.* 123, 951–957.

Condie, K.C., Davaille, A., Aster, R.C., Arndt, N., 2015. Upstairs-downstairs: supercontinents and large igneous provinces, are they related? *Int. Geol. Rev.* 57, 1341–1348.

Condie, K.C., Des Marais, D.J., Abbott, D., 2001. Precambrian superplumes and supercontinents: a record in black shales, carbon isotopes, and paleoclimates? *Precambrian Res.* 106, 239–260.

Condie, K.C., Kröner, A., 2013. The building blocks of continental crust: evidence for a major change in the tectonic setting of continental growth at the end of the Archean. *Gondwana Res.* 23, 394–402.

Condie, K.C., Kröner, A., 2008. When did plate tectonics begin? Evidence from the geologic record. *Geol. Soc. Am. Spec. Pap.* 440, 281–294.

Condie, K.C., Kröner, A., 2013. The building blocks of continental crust: Evidence for a major change in the tectonic setting of continental growth at the end of the Archean. *Gondwana Res.* 23, 394–402. doi:<http://dx.doi.org/10.1016/j.gr.2011.09.011>

Currie, C.A., Beaumont, C., Huisman, R.S., 2007. The fate of subducted sediments: a case for backarc intrusion and underplating. *Geology* 35, 1111–1114.

Dave, R., Li, A., 2016. Destruction of the Wyoming craton: Seismic evidence and geodynamic processes. *Geology* 44, 883–886.

Davies, G.F., 2008. Episodic layering of the early mantle by the “basalt barrier” mechanism. *Earth Planet. Sci. Lett.* 275, 382–392.

DeCelles, P.G., Ducea, M.N., Kapp, P., Zandt, G., 2009. Cyclicity in Cordilleran orogenic systems. *Nat. Geosci.* 2, 251–257.

DePaolo, D.J., 1980. Crustal growth and mantle evolution: inferences from models of element transport and Nd and Sr isotopes. *Geochim. Cosmochim. Acta* 44, 1185–1196.

Dhuime, B., Hawkesworth, C.J., Cawood, P.A., Storey, C.D., 2012. A change in the geodynamics of continental growth 3 billion years ago. *Science* (80-.). 335, 1334–1336.

Dhuime, B., Wuestefeld, A., Hawkesworth, C.J., 2015. Emergence of modern continental

- crust about 3 billion years ago. *Nat. Geosci.* 8, 552–555. doi:10.1038/ngeo2466
- Dilek, Y., Furnes, H., 2011. Ophiolite genesis and global tectonics: geochemical and tectonic fingerprinting of ancient oceanic lithosphere. *Geol. Soc. Am. Bull.* 123, 387–411.
- Dilek, Y., 2003. Ophiolite pulses, mantle plumes and orogeny.
- Doglioni, C., Carminati, E., Cuffaro, M., Scrocca, D., 2007. Subduction kinematics and dynamic constraints. *Earth-Science Rev.* 83, 125–175.
- Ducea, M.N., 2002. Constraints on the bulk composition and root foundering rates of continental arcs: A California arc perspective. *J. Geophys. Res. Solid Earth* 107.
- Dunhill, A.M., Hannisdal, B., Benton, M.J., 2014. Disentangling rock record bias and common-cause from redundancy in the British fossil record. *Nat. Commun.* 5.
- Dupré, B., Allègre, C.J., 1983. Pb–Sr isotope variation in Indian Ocean basalts and mixing phenomena.
- Dye, S.T., 2012. Geoneutrinos and the radioactive power of the Earth. *Rev. Geophys.* 50.
- Eiler, J.M., Farley, K.A., Valley, J.W., Stolper, E.M., 1995. Oxygen isotope evidence against bulk recycled sediment in the mantle sources of Pitcairn Island lavas. *Nature* 377, 138.
- Eriksson, P.G., Condie, K.C., Van der Westhuizen, W., Van der Merwe, R., De Bruijn, H., Nelson, D.R., Altermann, W., Catuneanu, O., Bumby, A.J., Lindsay, J., 2002. Late Archaean superplume events: a Kaapvaal–Pilbara perspective. *J. Geodyn.* 34, 207–247.
- Ernst, R.E., Wingate, M.T.D., Buchan, K.L., Li, Z.-X., 2008. Global record of 1600–700Ma Large Igneous Provinces (LIPs): implications for the reconstruction of the proposed Nuna (Columbia) and Rodinia supercontinents. *Precambrian Res.* 160, 159–178.
- Evans, D.A.D., 2003. True polar wander and supercontinents. *Tectonophysics* 362, 303–320.
- Evans, D.A.D., Mitchell, R.N., 2011. Assembly and breakup of the core of Paleoproterozoic–Mesoproterozoic supercontinent Nuna. *Geology* 39, 443–446.
- Fischer, R., Gerya, T., 2016. Early Earth plume-lid tectonics: A high-resolution 3D numerical modelling approach. *J. Geodyn.* 100, 198–214.
- Furnes, H., Dilek, Y., 2017. Geochemical characterization and petrogenesis of intermediate to silicic rocks in ophiolites: A global synthesis. *Earth-Science Rev.* 166, 1–37. doi:<http://dx.doi.org/10.1016/j.earscirev.2017.01.001>
- Gando, a., Gando, Y., Ichimura, K., Ikeda, H., Inoue, K., Kibe, Y., Kishimoto, Y., Koga, M.,

- Minekawa, Y., Mitsui, T., Morikawa, T., Nagai, N., Nakajima, K., Nakamura, K., Narita, K., Shimizu, I., Shimizu, Y., Shirai, J., Suekane, F., Suzuki, A., Takahashi, H., Takahashi, N., Takemoto, Y., Tamae, K., Watanabe, H., Xu, B.D., Yabumoto, H., Yoshida, H., Yoshida, S., Enomoto, S., Kozlov, A., Murayama, H., Grant, C., Keefer, G., Piepke, A., Banks, T.I., Bloxham, T., Detwiler, J. a., Freedman, S.J., Fujikawa, B.K., Han, K., Kadel, R., O'Donnell, T., Steiner, H.M., Dwyer, D. a., McKeown, R.D., Zhang, C., Berger, B.E., Lane, C.E., Maricic, J., Miletic, T., Batygov, M., Learned, J.G., Matsuno, S., Sakai, M., Horton-Smith, G. a., Downum, K.E., Gratta, G., Tolich, K., Efremenko, Y., Perevozchikov, O., Karwowski, H.J., Markoff, D.M., Tornow, W., Heeger, K.M., Decowski, M.P., 2011. Partial radiogenic heat model for Earth revealed by geoneutrino measurements. *Nat. Geosci.* 4, 647–651. doi:10.1038/ngeo1205
- Gao, S., Rudnick, R.L., Carlson, R.W., McDonough, W.F., Liu, Y.-S., 2002. Re–Os evidence for replacement of ancient mantle lithosphere beneath the North China craton. *Earth Planet. Sci. Lett.* 198, 307–322.
- Gardiner, N.J., Searle, M.P., Morley, C.K., Whitehouse, M.P., Spencer, C.J., Robb, L.J., 2016. The closure of Palaeo-Tethys in Eastern Myanmar and Northern Thailand: new insights from zircon U–Pb and Hf isotope data. *Gondwana Res.* 39, 401–422.
- Garnero, E.J., McNamara, A.K., Shim, S.-H., 2016. Continent-sized anomalous zones with low seismic velocity at the base of Earth's mantle. *Nat. Geosci.*
- Gastil, R.G., 1960. The distribution of mineral dates in time and space. *Am. J. Sci.* 258, 1–35.
- Godoy, E., and Lara P., L. 2005, Hoja El Salvador Occidental, Región de Atacama, Carta Geológica de Chile, 1:250000 scale, No. 90: 1-72
- Goldfarb, R.J., Groves, D.I., Gardoll, S., 2001. Orogenic gold and geologic time: a global synthesis. *Ore Geol. Rev.* 18, 1–75.
- Goldfarb, R.J., Santosh, M., 2014. The dilemma of the Jiaodong gold deposits: Are they unique? *Geosci. Front.* 5, 139–153.
- Goodwin, A.M., 1981. Archaean plates and greenstone belts. *Dev. Precambrian Geol.* 4, 105–135.
- Goodwin, A.M., 1996. *Principles of Precambrian geology.* Academic Press.
- Gotze, H., Alten, M., Burger, H., Goni, P., Melnick, D., Mohr, S., Munier, K., Ott, N., Reutter, K., Schmidt, S., 2006. Data management of the SFB 267 for the Andes/from Ink and paper to digital databases. The Andes: Active subduction orogeny. In: Onken, et al. (Ed.), *Frontiers in Earth Sciences.* Springer, pp. 539–556.

- Griffin, W.L., Belousova, E.A., O'Neill, C., O'Reilly, S.Y., Malkovets, V., Pearson, N.J., Spetsius, S., Wilde, S.A., 2014. The world turns over: Hadean–Archean crust–mantle evolution. *Lithos* 189, 2–15.
- Groves, D.I., Vielreicher, R.M., Goldfarb, R.J., Condie, K.C., 2005. Controls on the heterogeneous distribution of mineral deposits through time. *Geol. Soc. London, Spec. Publ.* 248, 71–101.
- Hacker, B.R., Kelemen, P.B., Behn, M.D., 2011. Differentiation of the continental crust by relamination. *Earth Planet. Sci. Lett.* 307, 501–516.
- Hamilton, W.B., 1998. Archean magmatism and deformation were not products of plate tectonics. *Precambrian Res.* 91, 143–179.
- Harlan, S.S., Heaman, L., LeCheminant, A.N., Premo, W.R., 2003. Gunbarrel mafic magmatic event: A key 780 Ma time marker for Rodinia plate reconstructions. *Geology* 31, 1053–1056.
- Harris, R., 2011. The nature of the Banda Arc–continent collision in the Timor region, in: *Arc-Continent Collision*. Springer, pp. 163–211.
- Harrison, T.M., Blichert-Toft, J., Müller, W., Albarede, F., Holden, P., Mojzsis, S.J., 2005. Heterogeneous Hadean hafnium: evidence of continental crust at 4.4 to 4.5 Ga. *Science* (80-). 310, 1947–1950.
- Harrison, T.M., Wielicki, M.M., 2016. From the Hadean to the Himalaya: 4.4 Ga of felsic terrestrial magmatism. *Am. Mineral.* 101, 1348–1359.
- Harrison, T.M., 2009. The Hadean Crust: Evidence from >4 Ga Zircons. *Annu. Rev. Earth Planet. Sci.* 37, 479–505. doi:10.1146/annurev.earth.031208.100151
- Hartnady, C.J.H., 1991. About turn for supercontinents. *Nature* 352, 476–478.
- Haschke, M., Günther, A., 2003. Balancing crustal thickening in arcs by tectonic vs. magmatic means. *Geology* 31, 933–936.
- Hawkesworth, C., Cawood, P., Dhuime, B., 2013. Continental growth and the crustal record. *Tectonophysics* 609, 651–660.
- Hawkesworth, C., Cawood, P., Kemp, T., Storey, C., Dhuime, B., 2009. Geochemistry: A matter of preservation. *Science* (80-). 323, 49–50.
- Herzberg, C., Condie, K., Korenaga, J., 2010. Thermal history of the Earth and its petrological expression. *Earth Planet. Sci. Lett.* 292, 79–88.
- Hoffman, P.F., 1989. Speculations on Laurentia's first gigayear (2.0 to 1.0 Ga). *Geology* 17,

135–138.

Hoffman, P.F., 2009. Pan-glacial—a third state in the climate system. *Geol. Today* 25, 100–107.

Hollings, P., Wyman, D., Kerrich, R., 1999. Komatiite–basalt–rhyolite volcanic associations in Northern Superior Province greenstone belts: significance of plume-arc interaction in the generation of the proto continental Superior Province. *Lithos* 46, 137–161.

Hopkins, M., Harrison, T.M., Manning, C.E., 2008. Low heat flow inferred from > 4 Gyr zircons suggests Hadean plate boundary interactions. *Nature* 456, 493–496.

Hopkins, M.D., Harrison, T.M., Manning, C.E., 2010. Constraints on Hadean geodynamics from mineral inclusions in > 4Ga zircons. *Earth Planet. Sci. Lett.* 298, 367–376.

Huene, R., Scholl, D.W., 1991. Observations at convergent margins concerning sediment subduction, subduction erosion, and the growth of continental crust. *Rev. Geophys.* 29, 279–316.

Hughes, H.S.R., McDonald, I., Goodenough, K.M., Ciborowski, T.J.R., Kerr, A.C., Davies, J.H.F.L., Selby, D., 2014. Enriched lithospheric mantle keel below the Scottish margin of the North Atlantic Craton: Evidence from the Palaeoproterozoic Scourie Dyke Swarm and mantle xenoliths. *Precambrian Res.* 250, 97–126.

Hurley, P.M., Rand, J.R., 1969. Pre-drift continental nuclei. *Science* (80-). 164, 1229–1242.

Iizuka, T., Campbell, I.H., Allen, C.M., Gill, J.B., Maruyama, S., Makoka, F., 2013. Evolution of the African continental crust as recorded by U–Pb, Lu–Hf and O isotopes in detrital zircons from modern rivers. *Geochim. Cosmochim. Acta* 107, 96–120.

Iizuka, T., Komiya, T., Rino, S., Maruyama, S., Hirata, T., 2010. Detrital zircon evidence for Hf isotopic evolution of granitoid crust and continental growth. *Geochim. Cosmochim. Acta* 74, 2450–2472.

Iizuka, T., Komiya, T., Rino, S., Maruyama, S., Hirata, T., 2010. Detrital zircon evidence for Hf isotopic evolution of granitoid crust and continental growth. *Geochim. Cosmochim. Acta* 74, 2450–2472.

Ingalls, M., Rowley, D.B., Currie, B., Colman, A.S., 2016. Large-scale subduction of continental crust implied by India-Asia mass-balance calculation. *Nat. Geosci.* 9, 848–853.

Isley, A.E., Abbott, D.H., 1999. Plume-related mafic volcanism and the deposition of banded iron formation. *J. Geophys. Res. Solid Earth* 104, 15461–15477.

Itano, K., Iizuka, T., Chang, Q., Kimura, J.-I., Maruyama, S., 2016. U–Pb chronology and

- geochemistry of detrital monazites from major African rivers: Constraints on the timing and nature of the Pan-African Orogeny. *Precambrian Res.* 282, 139–156.
- Jacobs, J., Pisarevsky, S., Thomas, R.J., Becker, T., 2008. The Kalahari Craton during the assembly and dispersal of Rodinia. *Precambrian Res.* 160, 142–158.
- Jahn, B., Caby, R., Monie, P., 2001. The oldest UHP eclogites of the World: age of UHP metamorphism, nature of protoliths and tectonic implications. *Chem. Geol.* 178, 143–158.
- Jaupart, C., Mareschal, J.-C., 2015. Post-orogenic thermal evolution of newborn Archean continents. *Earth Planet. Sci. Lett.* 432, 36–45.
- Jicha, B.R., Jagoutz, O., 2015. Magma production rates for intraoceanic arcs. *Elements* 11, 105–111.
- Johnson, T.E., Brown, M., Goodenough, K.M., Clark, C., Kinny, P.D., White, R.W., 2016. Subduction or sagduction? Ambiguity in constraining the origin of ultramafic–mafic bodies in the Archean crust of NW Scotland. *Precambrian Res.* 283, 89–105.
- Johnson, T.E., Fischer, S., White, R.W., 2013. Field and petrographic evidence for partial melting of TTG gneisses from the central region of the mainland Lewisian complex, NW Scotland. *J. Geol. Soc. London.* 170, 319–326.
- Johnson, T.E., White, R.W., 2011. Phase equilibrium constraints on conditions of granulite-facies metamorphism at Scourie, NW Scotland. *J. Geol. Soc. London.* 168, 147–158.
- Kamber, B.S., 2015. The evolving nature of terrestrial crust from the Hadean, through the Archaean, into the Proterozoic. *Precambrian Res.* 258, 48–82.
- Kato, T.T., Godoy, E., 2015. Middle to Late Triassic mélangé exhumation along a pre-Andean transpressional fault system: coastal Chile (26–42 S). *Int. Geol. Rev.* 57, 606–628.
- Kato, T.T., 1985. Pre-Andean orogenesis in the Coast Ranges of central Chile. *Geol. Soc. Am. Bull.* 96, 918–924.
- Kawai, K., Yamamoto, S., Tsuchiya, T., Maruyama, S., 2013. The second continent: existence of granitic continental materials around the bottom of the mantle transition zone. *Geosci. Front.* 4, 1–6.
- Kay, R.W., Mahlburg-Kay, S., 1991. Creation and destruction of lower continental crust. *Geol. Rundschau* 80, 259–278.
- Kay, R.W., Mahlburg Kay, S., 1993. Delamination and delamination magmatism. *Tectonophysics* 219, 177–189. doi:10.1016/0040-1951(93)90295-U
- Kay, S.M., Mpodozis, C., 2002. Magmatism as a probe to the Neogene shallowing of the

- Nazca plate beneath the modern Chilean flat-slab. *J. South Am. Earth Sci.* 15, 39–57.
- Kay, S.M., Coira, B., Viramonte, J., 1994. Young mafic back arc volcanic rocks as indicators of continental lithospheric delamination beneath the Argentine Puna plateau, central Andes. *J. Geophys. Res. Solid Earth* 99, 24323–24339.
- Kay, S.M., Godoy, E., Kurtz, A., 2005. Episodic arc migration, crustal thickening, subduction erosion, and magmatism in the south-central Andes. *Geol. Soc. Am. Bull.* 117, 67–88.
- Kelemen, P.B., Behn, M.D., 2016. Formation of lower continental crust by relamination of buoyant arc lavas and plutons. *Nat. Geosci.*
- Kemp, A.I.S., Hawkesworth, C.J., Paterson, B.A., Kinny, P.D., 2006. Episodic growth of the Gondwana supercontinent from hafnium and oxygen isotopes in zircon. *Nature* 439, 580–583.
- Kemp, A.I.S., Hawkesworth, C.J., Foster, G.L., Paterson, B.A., Woodhead, J.D., Hergt, J.M., Gray, C.M., Whitehouse, M.J., 2007. Magmatic and Crustal Differentiation History of Granitic Rocks from Hf-O Isotopes in Zircon. *Sci.* 315, 980–983.
- Kemp, A.I.S., Wilde, S.A., Hawkesworth, C.J., Coath, C.D., Nemchin, A., Pidgeon, R.T., Vervoort, J.D., DuFrane, S.A., 2010. Hadean crustal evolution revisited: new constraints from Pb–Hf isotope systematics of the Jack Hills zircons. *Earth Planet. Sci. Lett.* 296, 45–56.
- Keppie, F., 2016. How subduction broke up Pangaea with implications for the supercontinent cycle. *Geol. Soc. London, Spec. Publ.* 424, 265–288.
- Kirsch, M., Paterson, S.R., Wobbe, F., Ardila, A.M.M., Clausen, B.L., Alasino, P.H., 2016. Temporal histories of Cordilleran continental arcs: Testing models for magmatic episodicity. *Am. Mineral.* 101, 2133–2154.
- Komiya, T., Yamamoto, S., Aoki, S., Sawaki, Y., Ishikawa, A., Tashiro, T., Koshida, K., Shimojo, M., Aoki, K., Collerson, K.D., 2015. Geology of the Eoarchean, > 3.95 Ga, Nulliak supracrustal rocks in the Saglek Block, northern Labrador, Canada: The oldest geological evidence for plate tectonics. *Tectonophysics* 662, 40–66.
- Korenaga, J., 2008. Urey ratio and the structure and evolution of Earth's mantle. *Rev. Geophys.* 46.
- Korenaga, J., 2013. Initiation and evolution of plate tectonics on Earth: theories and observations. *Annu. Rev. Earth Planet. Sci.* 41, 117–151.
- Kusky, T.M., Windley, B.F., Wang, L., Wang, Z., Li, X., Zhu, P., 2014. Flat slab subduction, trench suction, and craton destruction: Comparison of the North China, Wyoming, and

Brazilian cratons. *Tectonophysics* 630, 208–221.

Lancaster, P.J., Storey, C.D., Hawkesworth, C.J., Dhuime, B., 2011. Understanding the roles of crustal growth and preservation in the detrital zircon record. *Earth Planet. Sci. Lett.* 305, 405–412.

Lay, T., Garnero, E.J., 2011. Deep mantle seismic modeling and imaging. *Annu. Rev. Earth Planet. Sci.* 39, 91–123.

LeCheminant, A.N., Heaman, L.M., 1989. Mackenzie igneous events, Canada: Middle Proterozoic hotspot magmatism associated with ocean opening. *Earth Planet. Sci. Lett.* 96, 38–48.

Lee, C.-T.A., Yeung, L.Y., McKenzie, N.R., Yokoyama, Y., Ozaki, K., Lenardic, A., 2016. Two-step rise of atmospheric oxygen linked to the growth of continents. *Nat. Geosci.* 9, 417–424.

Lee, C.-T.A., Cheng, X., Horodyskyj, U., 2006. The development and refinement of continental arcs by primary basaltic magmatism, garnet pyroxenite accumulation, basaltic recharge and delamination: insights from the Sierra Nevada, California. *Contrib. to Mineral. Petrol.* 151, 222–242.

Li, S.-R., Santosh, M., 2014. Metallogeny and craton destruction: records from the North China Craton. *Ore Geol. Rev.* 56, 376–414.

Li, Z.-X., Zhong, S., 2009. Supercontinent–superplume coupling, true polar wander and plume mobility: plate dominance in whole-mantle tectonics. *Phys. Earth Planet. Inter.* 176, 143–156.

Li, X., Li, Z.-X., Zhou, H., Liu, Y., Kinny, P.D., 2002. U–Pb zircon geochronology, geochemistry and Nd isotopic study of Neoproterozoic bimodal volcanic rocks in the Kangdian Rift of South China: implications for the initial rifting of Rodinia. *Precambrian Res.* 113, 135–154.

Li, Z.-X., Bogdanova, S. V, Collins, A.S., Davidson, A., De Waele, B., Ernst, R.E., Fitzsimons, I.C.W., Fuck, R.A., Gladkochub, D.P., Jacobs, J., 2008. Assembly, configuration, and break-up history of Rodinia: a synthesis. *Precambrian Res.* 160, 179–210.

Li, S.-R., Santosh, M., Zhang, H.-F., Luo, J.-Y., Zhang, J.-Q., Li, C.-L., Song, J.-Y., Zhang, X.-B., 2014. Metallogeny in response to lithospheric thinning and craton destruction: geochemistry and U–Pb zircon chronology of the Yixingzhai gold deposit, central North China Craton. *Ore Geol. Rev.* 56, 457–471.

Liao, J., Gerya, T., 2014. Influence of lithospheric mantle stratification on craton extension: Insight from two-dimensional thermo-mechanical modeling. *Tectonophysics* 631, 50–64.

Loubet, M., Sassi, R., Di Donato, G., 1988. Mantle heterogeneities: a combined isotope and trace element approach and evidence for recycled continental crust materials in some OIB sources. *Earth Planet. Sci. Lett.* 89, 299–315.

Ma, X., Sun, X., Wiens, D.A., Wen, L., Nyblade, A., Anandakrishnan, S., Aster, R., Huerta, A., Wilson, T., 2016. Strong seismic scatterers near the core–mantle boundary north of the Pacific Anomaly. *Phys. Earth Planet. Inter.* 253, 21–30.

Martin, H., Smithies, R.H., Rapp, R., Moyen, J.-F., Champion, D., 2005. An overview of adakite, tonalite–trondhjemite–granodiorite (TTG), and sanukitoid: relationships and some implications for crustal evolution. *Lithos* 79, 1–24.

Maruyama, S., Ebisuzaki, T., 2016. Origin of the Earth: A proposal of new model called ABEL. *Geosci. Front.*

Maruyama, S., Okamoto, K., 2007. Water transportation from the subducting slab into the mantle transition zone. *Gondwana Res.* 11, 148–165.

Maruyama, S., Santosh, M., 2016. *Frontiers in Early Earth History and Primordial Life-Part I.*

Maruyama, S., Santosh, M., Zhao, D., 2007. Superplume, supercontinent, and post-perovskite: mantle dynamics and anti-plate tectonics on the core–mantle boundary. *Gondwana Res.* 11, 7–37.

Maruyama, S., Santosh, M., Azuma, S., 2016. Initiation of plate tectonics in the Hadean: Eclogitization triggered by the ABEL Bombardment. *Geosci. Front.*

McCausland, P.J.A., Hodych, J.P., 1998. Paleomagnetism of the 550 Ma Skinner Cove volcanics of western Newfoundland and the opening of the Iapetus Ocean. *Earth Planet. Sci. Lett.* 163, 15–29.

McClellan, E., Gazel, E., 2014. The Cryogenian intra-continental rifting of Rodinia: Evidence from the Laurentian margin in eastern North America. *Lithos* 206, 321–337.

McDougall, I., Maboko, M.A.H., Symonds, P.A., McCulloch, M.T., Williams, I.S., Kudrass, H.R., 1994. Dampier Ridge, Tasman Sea, as a stranded continental fragment*. *Aust. J. Earth Sci.* 41, 395–406.

McGowan, N.M., Griffin, W.L., González-Jiménez, J.M., Belousova, E., Afonso, J.C., Shi, R., McCammon, C.A., Pearson, N.J., O'Reilly, S.Y., 2015. Tibetan chromitites: Excavating the slab graveyard. *Geology* 43, 179–182.

McKenzie, N.R., Horton, B.K., Loomis, S.E., Stockli, D.F., Planavsky, N.J., Lee, C.-T.A., 2016. Continental arc volcanism as the principal driver of icehouse-greenhouse variability.

Science (80-). 352, 444–447.

Meert, J.G., 2012. What's in a name? The Columbia (Paleopangaea/Nuna) supercontinent. *Gondwana Res.* 21, 987–993.

Mints, M. V, Belousova, E.A., Konilov, A.N., Natapov, L.M., Shchipansky, A.A., Griffin, W.L., O'Reilly, S.Y., Dokukina, K.A., Kaulina, T. V, 2010. Mesoarchean subduction processes: 2.87 Ga eclogites from the Kola Peninsula, Russia. *Geology* 38, 739–742.

Mitchell, R.N., Kilian, T.M., Evans, D.A.D., 2012. Supercontinent cycles and the calculation of absolute palaeolongitude in deep time. *Nature* 482, 208–211.

Mitchell, R.N., Cox, G.M., Li, Z-X, Spencer, C.J., Asimow, P., Zhang, N., Kirscher, U., Birth of the supercontinent cycle and a Proterozoic planetary state shift. Submitted to *Science*.

Mohan, M.R., Singh, S.P., Santosh, M., Siddiqui, M.A., Balaram, V., 2012. TTG suite from the Bundelkhand Craton, Central India: Geochemistry, petrogenesis and implications for Archean crustal evolution. *J. Asian Earth Sci.* 58, 38–50.

Mojzsis, S.J., Harrison, T.M., Pidgeon, R.T., 2001. Oxygen-isotope evidence from ancient zircons for liquid water at the Earth's surface 4,300 Myr ago. *Nature* 409, 178–181.

Molnar, P., Gray, D., 1979. Subduction of continental lithosphere: Some constraints and uncertainties. *Geology* 7, 58–62.

Murphy, J.B., Nance, R.D., 2013. Speculations on the mechanisms for the formation and breakup of supercontinents. *Geosci. Front.* 4, 185–194.

Nance, R.D., Murphy, J.B., 1994. Contrasting basement isotopic signatures and the palinspastic restoration of peripheral orogens: Example from the Neoproterozoic Avalonian-Cadomian belt. *Geology* 22, 617–620.

Nebel, O., Campbell, I.H., Sossi, P.A., Van Kranendonk, M.J., 2014. Hafnium and iron isotopes in early Archean komatiites record a plume-driven convection cycle in the Hadean Earth. *Earth Planet. Sci. Lett.* 397, 111–120.

de Brito Neves, B.B., Fuck, R.A., 2014. The basement of the South American platform: Half Laurentian (N-NW)+ half Gondwanan (E-SE) domains. *Precambrian Res.* 244, 75–86.

Nutman, A.P., Christiansen, O., Friend, C.R.L., 2007. 2635Ma amphibolite facies gold mineralisation near a terrane boundary (suture?) on Storø, Nuuk region, southern West Greenland. *Precambrian Res.* 159, 19–32.

Nutman, A.P., Bennett, V.C., Friend, C.R.L., 2015. The emergence of the Eoarchean proto-arc: evolution of a c. 3700 Ma convergent plate boundary at Isua, southern West Greenland. *Geol. Soc. London, Spec. Publ.* 389, 113–133.

- O'Neill, C., Lenardic, A., Moresi, L., Torsvik, T.H., Lee, C.-T., 2007. Episodic precambrian subduction. *Earth Planet. Sci. Lett.* 262, 552–562.
- Palin, R.M., White, R.W., 2015. Emergence of blueschists on Earth linked to secular changes in oceanic crust composition. *Nat. Geosci.*
- Parman, S.W., 2007. Helium isotopic evidence for episodic mantle melting and crustal growth. *Nature* 446, 900–903.
- Payne, J.L., Hand, M., Pearson, N.J., Barovich, K.M., McInerney, D.J., 2015. Crustal thickening and clay: Controls on O isotope variation in global magmatism and siliciclastic sedimentary rocks. *Earth Planet. Sci. Lett.* 412, 70–76. doi:10.1016/j.epsl.2014.12.037
- Pehrsson, S.J., Eglinton, B.M., Evans, D.A.D., Huston, D., Reddy, S.M., 2016. Metallogeny and its link to orogenic style during the Nuna supercontinent cycle. *Geol. Soc. London, Spec. Publ.* 424, 83–94.
- Pepper, M., Gehrels, G., Pullen, A., Ibanez-Mejia, M., Ward, K.M., Kapp, P., 2016. Magmatic history and crustal genesis of western South America: Constraints from U-Pb ages and Hf isotopes of detrital zircons in modern rivers. *Geosphere* 12, 1532–1555.
- Peters, S.E., Foote, M., 2002. Determinants of extinction in the fossil record. *Nature* 416, 420–424.
- Plank, T., Langmuir, C.H., 1993. Tracing trace elements from sediment input to volcanic output at subduction zones. *Nature* 362, 739–743. doi:10.1038/362739a0
- Polat, A., 2012. Growth of Archean continental crust in oceanic island arcs. *Geology* 40, 383–384.
- Prokoph, A., Ernst, R.E., Buchan, K.L., 2004. Time-series analysis of large igneous provinces: 3500 Ma to present. *J. Geol.* 112, 1–22.
- Ramos, V.A., Folguera, A., 2005. Tectonic evolution of the Andes of Neuquén: constraints derived from the magmatic arc and foreland deformation. *Geol. Soc. London, Spec. Publ.* 252, 15–35.
- Ramos, V.A., 1988. Late Proterozoic-early Paleozoic of South America—a collisional history. *Episodes* 11, 168–174.
- Rebolledo, S., Charrier, R., 1994. Evolución del basamento paleozoico en el área de Punta Claditas, Región de Coquimbo, Chile (31–32 S). *Andean Geol.* 21, 55–69.
- Reddy, S., Evans, D.A.D., 2009. Palaeoproterozoic supercontinents and global evolution: correlations from core to atmosphere. *Geol. Soc. London, Spec. Publ.* 323, 1–26.

Reimink, J.R., Chacko, T., Stern, R.A., Heaman, L.M., 2014. Earth's earliest evolved crust generated in an Iceland-like setting. *Nat. Geosci.* 7, 529–533.

Reimink, J.R., Davies, J., Chacko, T., Stern, R.A., Heaman, L.M., Sarkar, C., Schaltegger, U., Creaser, R.A., Pearson, D.G., 2016. No evidence for Hadean continental crust within Earth's oldest evolved rock unit. *Nat. Geosci.*

Rino, S., Komiya, T., Windley, B.F., Katayama, I., Motoki, A., Hirata, T., 2004. Major episodic increases of continental crustal growth determined from zircon ages of river sands; implications for mantle overturns in the Early Precambrian. *Phys. Earth Planet. Inter.* 146, 369–394.

Rino, S., Kon, Y., Sato, W., Maruyama, S., Santosh, M., Zhao, D., 2008. The Grenvillian and Pan-African orogens: world's largest orogenies through geologic time, and their implications on the origin of superplume. *Gondwana Res.* 14, 51–72.

Roberts, N.M.W., 2012. Increased loss of continental crust during supercontinent amalgamation. *Gondwana Res.* 21, 994–1000.

Roberts, N.M.W., Spencer, C.J., 2015. The zircon archive of continent formation through time. *Geol. Soc. London, Spec. Publ.* 389, 197–225.

Roberts, N.M.W., Slagstad, T., 2015. Continental growth and reworking on the edge of the Columbia and Rodinia supercontinents; 1.86–0.9 Ga accretionary orogeny in southwest Fennoscandia. *Int. Geol. Rev.* 57, 1582–1606.

Roberts, N.M.W., 2013. The boring billion?—Lid tectonics, continental growth and environmental change associated with the Columbia supercontinent. *Geosci. Front.* 4, 681–691.

Robinson, P.T., Trumbull, R.B., Schmitt, A., Yang, J.-S., Li, J.-W., Zhou, M.-F., Erzinger, J., Dare, S., Xiong, F., 2015. The origin and significance of crustal minerals in ophiolitic chromitites and peridotites. *Gondwana Res.* 27, 486–506.

Rudnick, R.L., Fountain, D.M., 1995. Nature and composition of the continental crust: A lower crustal perspective. *Rev. Geophys.* 33, 267. doi:10.1029/95RG01302

Safonova, I., Maruyama, S., Hirata, T., Kon, Y., Rino, S., 2010. LA ICP MS U–Pb ages of detrital zircons from Russia largest rivers: implications for major granitoid events in Eurasia and global episodes of supercontinent formation. *J. Geodyn.* 50, 134–153.

Santosh, M., Maruyama, S., Yamamoto, S., 2009. The making and breaking of supercontinents: some speculations based on superplumes, super downwelling and the role of tectosphere. *Gondwana Res.* 15, 324–341.

Santosh, M., Yang, Q.-Y., Shaji, E., Tsunogae, T., Mohan, M.R., Satyanarayanan, M., 2015. An exotic Mesoarchean microcontinent: the Coorg Block, southern India. *Gondwana Res.* 27, 165–195.

Santosh, M., Teng, X.-M., He, X.-F., Tang, L., Yang, Q.-Y., 2016. Discovery of Neoproterozoic suprasubduction zone ophiolite suite from Yishui Complex in the North China Craton. *Gondwana Res.* 38, 1–27.

Santosh, M., Hu, C.-N., He, X.-F., Li, S.-S., Tsunogae, T., Shaji, E., Indu, G., 2017. Neoproterozoic arc magmatism in the southern Madurai Block, India: Subduction, relamination, continental outbuilding, and the growth of Gondwana. *Gondwana Res.* 45, 1–42.

Santosh, M., 2010. Assembling North China Craton within the Columbia supercontinent: the role of double-sided subduction. *Precambrian Res.* 178, 149–167.

Sawada, H., Maruyama, S., Sakata, S., Hirata, T., 2016. Detrital zircon geochronology by LA-ICP-MS of the Neoproterozoic Manjeri Formation in the Archean Zimbabwe craton—the disappearance of Eoarchean crust by 2.7 Ga? *J. African Earth Sci.* 113, 1–11.

Schellart, W.P., Lister, G.S., Toy, V.G., 2006. A Late Cretaceous and Cenozoic reconstruction of the Southwest Pacific region: tectonics controlled by subduction and slab rollback processes. *Earth-Science Rev.* 76, 191–233.

Scheuber, E., Reutter, K.-J., 1992. Magmatic arc tectonics in the Central Andes between 21 and 25 S. *Tectonophysics* 205, 127–140.

Scholl, D.W., von Huene, R., 2007. Crustal recycling at modern subduction zones applied to the past—Issues of growth and preservation of continental basement crust, mantle geochemistry, and supercontinent reconstruction. *Geol. Soc. Am. Mem.* 200, 9–32.

Scholl, D.W., von Huene, R., 2009. Implications of estimated magmatic additions and recycling losses at the subduction zones of accretionary (non-collisional) and collisional (suturing) orogens. *Geol. Soc. London, Spec. Publ.* 318, 105–125. doi:10.1144/SP318.4

Shirey, S.B., Richardson, S.H., 2011. Start of the Wilson cycle at 3 Ga shown by diamonds from subcontinental mantle. *Science* 333, 434–6. doi:10.1126/science.1206275

Shirey, S.B., Kamber, B.S., Whitehouse, M.J., Mueller, P.A., Basu, A.R., 2008. A review of the isotopic and trace element evidence for mantle and crustal processes in the Hadean and Archean: Implications for the onset of plate tectonic subduction. *Geol. Soc. Am. Spec. Pap.* 440, 1–29.

Signor, P.W., Lipps, J.H., 1982. Sampling bias, gradual extinction patterns and catastrophes in the fossil record. *Geol. Soc. Am. Spec. Pap.* 190, 291–296.

Sizova, E., Gerya, T., Brown, M., Perchuk, L.L., 2010. Subduction styles in the Precambrian: insight from numerical experiments. *Lithos* 116, 209–229.

Sizova, E., Gerya, T., Brown, M., 2014. Contrasting styles of Phanerozoic and Precambrian continental collision. *Gondwana Res.* 25, 522–545.

Sizova, E., Gerya, T., Stüwe, K., Brown, M., 2015. Generation of felsic crust in the Archean: A geodynamic modeling perspective. *Precambrian Res.* 271, 198–224.

Slagstad, T., Roberts, N.M.W., Marker, M., Røhr, T.S., Schiellerup, H., 2013. A non-collisional, accretionary Sveconorwegian orogen. *Terra Nov.* 25, 30–37.

Smith, A.B., Gale, A.S., Monks, N.E.A., 2001. Sea-level change and rock-record bias in the Cretaceous: a problem for extinction and biodiversity studies. *Paleobiology* 27, 241–253.

Smithies, R.H., Champion, D.C., Cassidy, K.F., 2003. Formation of Earth's early Archaean continental crust. *Precambrian Res.* 127, 89–101.

Smithies, R.H., Champion, D.C., Van Kranendonk, M.J., Howard, H.M., Hickman, A.H., 2005. Modern-style subduction processes in the Mesoarchaean: geochemical evidence from the 3.12 Ga Whundo intra-oceanic arc. *Earth Planet. Sci. Lett.* 231, 221–237.

Smithies, R.H., 2000. The Archaean tonalite–trondhjemite–granodiorite (TTG) series is not an analogue of Cenozoic adakite. *Earth Planet. Sci. Lett.* 182, 115–125.

Snyder, D.B., Humphreys, E., Pearson, D.G., 2017. Construction and destruction of some North American cratons. *Tectonophysics* 694, 464–485.
doi:<http://dx.doi.org/10.1016/j.tecto.2016.11.032>

Spakman, W., Hall, R., 2010. Surface deformation and slab–mantle interaction during Banda arc subduction rollback. *Nat. Geosci.* 3, 562–566.

Spencer, C.J., Hoiland, C.W., Harris, R.A., Link, P.K., Balgord, E.A., 2012. Constraining the timing and provenance of the Neoproterozoic Little Willow and Big Cottonwood Formations, Utah: Expanding the sedimentary record for early rifting of Rodinia. *Precambrian Res.* 204, 57–65.

Spencer, C.J., Hawkesworth, C., Cawood, P.A., Dhuime, B., 2013. Not all supercontinents are created equal: Gondwana-Rodinia case study. *Geology* 41, 795–798.

Spencer, C.J., Cawood, P. a., Hawkesworth, C.J., Raub, T.D., Prave, a. R., Roberts, N.M.W., 2014. Proterozoic onset of crustal reworking and collisional tectonics: Reappraisal of the zircon oxygen isotope record. *Geology* 42, 451–454. doi:10.1130/G35363.1

Spencer, C.J., Prave, A.R., Cawood, P.A., Roberts, N.M.W., 2014. Detrital zircon geochronology of the Grenville/Llano foreland and basal Sauk Sequence in west Texas,

USA. Geol. Soc. Am. Bull. 126, 1117–1128.

Spencer, C.J., Cawood, P.A., Hawkesworth, C.J., Prave, A.R., Roberts, N.M.W., Horstwood, M.S.A., Whitehouse, M.J., 2015. Generation and preservation of continental crust in the Grenville Orogeny. *Geosci. Front.* 6, 357–372.

Spencer, C.J., Kirkland, C.L., Roberts, N.M.W., Zircon fertility and bias in the geologic record. In review in *Geology*.

Stein, M., Hofmann, A.W., 1994. Mantle plumes and episodic crustal growth. *Nature* 372, 63–68.

Stern, R.J., Scholl, D.W., 2010. Yin and yang of continental crust creation and destruction by plate tectonic processes. *Int. Geol. Rev.* 52, 1–31.

Stern, C.R., 1989. Pliocene to present migration of the volcanic front, Andean Southern Volcanic Zone. *Andean Geol.* 16, 145–162.

Stern, C.R., 1991. Isotopic composition of Late Jurassic and Early Cretaceous mafic igneous rocks from the southernmost Andes: implications for Sub-Andean mantle. *Andean Geol.* 18, 15–23.

Stern, R.J., 2005. Evidence from ophiolites, blueschists, and ultrahigh-pressure metamorphic terranes that the modern episode of subduction tectonics began in Neoproterozoic time. *Geology* 33, 557. doi:10.1130/G21365.1

Stern, R.J., 2007. When and how did plate tectonics begin? Theoretical and empirical considerations. *Chinese Sci. Bull.* 52, 578–591.

Stern, C.R., 2011. Subduction erosion: rates, mechanisms, and its role in arc magmatism and the evolution of the continental crust and mantle. *Gondwana Res.* 20, 284–308.

Stevenson, D.J., 1989. Formation and early evolution of the Earth.

Storey, B.C., 1995. The role of mantle plumes in continental breakup: case histories from Gondwanaland. *Nature* 377, 301.

Tate, G.W., McQuarrie, N., van Hinsbergen, D.J.J., Bakker, R.R., Harris, R., Jiang, H., 2015. Australia going down under: Quantifying continental subduction during arc-continent accretion in Timor-Leste. *Geosphere* 11, 1860–1883.

Taylor, S.R., McLennan, S.M., 1985. The continental crust: its composition and evolution.

Trompette, R., 1997. Neoproterozoic (~ 600 Ma) aggregation of Western Gondwana: a tentative scenario. *Precambrian Res.* 82, 101–112.

- Tulloch, A.J., Ramezani, J., Mortimer, N., Mortensen, J., van den Bogaard, P., Maas, R., 2009. Cretaceous felsic volcanism in New Zealand and Lord Howe Rise (Zealandia) as a precursor to final Gondwana break-up. *Geol. Soc. London, Spec. Publ.* 321, 89–118.
- Valley, J.W., Lackey, J.S., Cavosie, A.J., Clechenko, C.C., Spicuzza, M.J., Basei, M.A.S., Bindeman, I.N., Ferreira, V.P., Sial, A.N., King, E.M., 2005. 4.4 billion years of crustal maturation: oxygen isotope ratios of magmatic zircon. *Contrib. to Mineral. Petrol.* 150, 561–580.
- van Hunen, J., Allen, M.B., 2011. Continental collision and slab break-off: A comparison of 3-D numerical models with observations. *Earth Planet. Sci. Lett.* 302, 27–37.
- van Hunen, J., van den Berg, A.P., 2008. Plate tectonics on the early Earth: Limitations imposed by strength and buoyancy of subducted lithosphere. *Lithos* 103, 217–235. doi:10.1016/j.lithos.2007.09.016
- Van Kranendonk, M.J., Kirkland, C.L., 2013. Orogenic climax of Earth: The 1.2–1.1 Ga Grenvillian superevent. *Geology* 41, 735–738. doi:10.1130/G34243.1
- Van Kranendonk, M.J., Collins, W.J., Hickman, A., Pawley, M.J., 2004. Critical tests of vertical vs. horizontal tectonic models for the Archaean East Pilbara granite–greenstone terrane, Pilbara craton, western Australia. *Precambrian Res.* 131, 173–211.
- Van Kranendonk, M.J., Hugh Smithies, R., Hickman, A.H., Champion, D.C., 2007. Review: secular tectonic evolution of Archean continental crust: interplay between horizontal and vertical processes in the formation of the Pilbara Craton, Australia. *Terra Nov.* 19, 1–38.
- Van Kranendonk, M.J., Smithies, R.H., Griffin, W.L., Huston, D.L., Hickman, A.H., Champion, D.C., Anhaeusser, C.R., Pirajno, F., 2015. Making it thick: a volcanic plateau origin of Palaeoarchean continental lithosphere of the Pilbara and Kaapvaal cratons. *Geol. Soc. London, Spec. Publ.* 389, 83–111.
- Van Kranendonk, M.J., 2010. Two types of Archean continental crust: Plume and plate tectonics on early Earth. *Am. J. Sci.* 310, 1187–1209.
- Van Thienen, P., Van den Berg, A.P., Vlaar, N.J., 2004. Production and recycling of oceanic crust in the early Earth. *Tectonophysics* 386, 41–65.
- Vannucchi, P., Morgan, J.P., Balestrieri, M.L., 2016. Subduction erosion, and the deconstruction of continental crust: The Central America case and its global implications. *Gondwana Res.* 40, 184–198.
- Veevers, J.J., Walter, M.R., Scheibner, E., 1997. Neoproterozoic tectonics of Australia–Antarctica and Laurentia and the 560 Ma birth of the Pacific Ocean reflect the 400 myr Pangean supercycle. *J. Geol.* 105, 225–242.

- Veizer, J., Jansen, S.L., 1985. Basement and sedimentary recycling-2: Time dimension to global tectonics. *J. Geol.* 93, 625–643.
- Vermeesch, P., 2012. On the visualisation of detrital age distributions. *Chem. Geol.* 312–313, 190–194. doi:10.1016/j.chemgeo.2012.04.021
- Voice, P.J., Kowalewski, M., Eriksson, K.A., 2011. Quantifying the timing and rate of crustal evolution: global compilation of radiometrically dated detrital zircon grains. *J. Geol.* 119, 109–126.
- Von Huene, R., Weinrebe, W., Heeren, F., 1999. Subduction erosion along the North Chile margin. *J. Geodyn.* 27, 345–358.
- Wallner, H., Schmeling, H., 2010. Rift induced delamination of mantle lithosphere and crustal uplift: a new mechanism for explaining Rwenzori Mountains' extreme elevation? *Int. J. Earth Sci.* 99, 1511–1524.
- Wang, C.Y., Campbell, I.H., Allen, C.M., Williams, I.S., Eggins, S.M., 2009. Rate of growth of the preserved North American continental crust: evidence from Hf and O isotopes in Mississippi detrital zircons. *Geochim. Cosmochim. Acta* 73, 712–728.
- Wang, C.Y., Campbell, I.H., Stepanov, A.S., Allen, C.M., Burtsev, I.N., Wang, C.Y., Campbell, I.H., Stepanov, A.S., Allen, C.M., Burtsev, I.N., 2011. Growth rate of the preserved continental crust: II. Constraints from Hf and O isotopes in detrital zircons from Greater Russian Rivers. *Geochim. Cosmochim. Acta* 75, 1308–1345. doi:10.1016/j.gca.2010.12.010
- Wang, Z., Kusky, T.M., Fu, J., Yuan, Y., Zhu, P., 2016. Review of Lithospheric Destruction in the North China, North Atlantic, and Tanzanian Cratons. *J. Geol.* 124, 699–721.
- Wegener, A., 1912. Die entstehung der kontinente. *Geol. Rundschau* 3, 276–292.
- Wegener, A., 1920. Die entstehung der kontinente und ozeane. Рипол Классик.
- Wells, R.E., Blakely, R.J., Sugiyama, Y., Scholl, D.W., Dinterman, P.A., 2003. Basin-centered asperities in great subduction zone earthquakes: A link between slip, subsidence, and subduction erosion? *J. Geophys. Res. Solid Earth* 108.
- Wetherill, G.W., 1990. Formation of the Earth. *Annu. Rev. Earth Planet. Sci.* 18, 205–256.
- Whitmeyer, S.J., Karlstrom, K.E., 2007. Tectonic model for the Proterozoic growth of North America. *Geosphere* 3, 220–259.
- Whitmeyer, S.J., Fichter, L.S., Pyle, E.J., 2007. New directions in Wilson cycle concepts: Supercontinent and tectonic rock cycles. *Geosphere* 3, 511–526.
- Wilde, S.A., 2015. Final amalgamation of the Central Asian Orogenic Belt in NE China:

- Paleo-Asian Ocean closure versus Paleo-Pacific plate subduction—A review of the evidence. *Tectonophysics* 662, 345–362.
- Wilkinson, B.H., Kesler, S.E., 2007. Tectonism and exhumation in convergent margin orogens: Insights from ore deposits. *J. Geol.* 115, 611–627.
- Willner, A.P., Glodny, J., Gerya, T. V, Godoy, E., Massonne, H.-J., 2004. A counterclockwise P-T-t path of high-pressure/low-temperature rocks from the Coastal Cordillera accretionary complex of south-central Chile: constraints for the earliest stage of subduction mass flow. *Lithos* 75, 283–310.
- Wingate, M.T.D., Pisarevsky, S.A., Gladkochub, D.P., Donskaya, T. V, Konstantinov, K.M., Mazukabzov, A.M., Stanevich, A.M., 2009. Geochronology and paleomagnetism of mafic igneous rocks in the Olenek Uplift, northern Siberia: Implications for Mesoproterozoic supercontinents and paleogeography. *Precambrian Res.* 170, 256–266.
doi:<http://dx.doi.org/10.1016/j.precamres.2009.01.004>
- Woolley, A.R., Kjarsgaard, B.A., 2008. Carbonatite occurrences of the world: map and database. Geological Survey of Canada Open File 5796, 1 CD-ROM + 1 map.
- Wyman, D., Kerrich, R., 2009. Plume and arc magmatism in the Abitibi subprovince: Implications for the origin of Archean continental lithospheric mantle. *Precambrian Res.* 168, 4–22. doi:<http://dx.doi.org/10.1016/j.precamres.2008.07.008>
- Yamamoto, S., Senshu, H., Rino, S., Omori, S., Maruyama, S., 2009. Granite subduction: Arc subduction, tectonic erosion and sediment subduction. *Gondwana Res.* 15, 443–453. doi:<http://dx.doi.org/10.1016/j.gr.2008.12.009>
- Yáñez, G.A., Ranero, C.R., Huene, R., Díaz, J., 2001. Magnetic anomaly interpretation across the southern central Andes (32–34 S): The role of the Juan Fernández Ridge in the late Tertiary evolution of the margin. *J. Geophys. Res. Solid Earth* 106, 6325–6345.
- Yang, Q.-Y., Santosh, M., 2017. The building of an Archean microcontinent: Evidence from the North China Craton. *Gondwana Res.*
- Yang, J.-S., Dobrzhinetskaya, L., Bai, W.-J., Fang, Q.-S., Robinson, P.T., Zhang, J., Green, H.W., 2007. Diamond-and coesite-bearing chromitites from the Luobusa ophiolite, Tibet. *Geology* 35, 875–878.
- Yang, J.-H., Wu, F.-Y., Wilde, S.A., Belousova, E., Griffin, W.L., 2008. Mesozoic decratonization of the North China block. *Geology* 36, 467–470.
- Yang, J., Gao, S., Chen, C., Tang, Y., Yuan, H., Gong, H., Xie, S., Wang, J., 2009. Episodic crustal growth of North China as revealed by U–Pb age and Hf isotopes of detrital zircons from modern rivers. *Geochim. Cosmochim. Acta* 73, 2660–2673.

doi:<http://dx.doi.org/10.1016/j.gca.2009.02.007>

Yang, Y.-Z., Chen, F., Siebel, W., Zhang, H., Long, Q., He, J.-F., Hou, Z.-H., Zhu, X.-Y., 2014. Age and composition of Cu–Au related rocks from the lower Yangtze River belt: Constraints on paleo-Pacific slab roll-back beneath eastern China. *Lithos* 202, 331–346.

Ye, K., Yao, Y., Katayama, I., Cong, B., Wang, Q., Maruyama, S., 2000. Large areal extent of ultrahigh-pressure metamorphism in the Sulu ultrahigh-pressure terrane of East China: new implications from coesite and omphacite inclusions in zircon of granitic gneiss. *Lithos* 52, 157–164.

Ye, K., Cong, B., Ye, D., 2000. The possible subduction of continental material to depths greater than 200 km. *Nature* 407, 734–736.

Yin, Y., Jin, S., Wei, W., Santosh, M., Dong, H., Xie, C., 2016. Construction and destruction of the North China Craton with implications for metallogeny: Magnetotelluric evidence from the Hengshan–Wutai–Fuping region within Trans-North China Orogen. *Gondwana Res.* 40, 21–42.

Yoshida, M., Hamano, Y., 2015. Pangea breakup and northward drift of the Indian subcontinent reproduced by a numerical model of mantle convection. *Sci. Rep.* 5, 8407.

Yoshida, M., Santosh, M., 2011. Supercontinents, mantle dynamics and plate tectonics: A perspective based on conceptual vs. numerical models. *Earth-Science Rev.* 105, 1–24.

Yoshida, M., 2016. Formation of a future supercontinent through plate motion–driven flow coupled with mantle downwelling flow. *Geology* 44, 755–758.

Zeh, A., Stern, R.A., Gerdes, A., 2014. The oldest zircons of Africa—Their U–Pb–Hf–O isotope and trace element systematics, and implications for Hadean to Archean crust–mantle evolution. *Precambrian Res.* 241, 203–230.

Zhai, M.-G., Santosh, M., 2011. The early Precambrian odyssey of the North China Craton: a synoptic overview. *Gondwana Res.* 20, 6–25.

Zhang, S., Li, Z.-X., Evans, D.A.D., Wu, H., Li, H., Dong, J., 2012. Pre-Rodinia supercontinent Nuna shaping up: a global synthesis with new paleomagnetic results from North China. *Earth Planet. Sci. Lett.* 353, 145–155.

Zhao, G., Cawood, P.A., Wilde, S.A., Sun, M., 2002. Review of global 2.1–1.8 Ga orogens: implications for a pre-Rodinia supercontinent. *Earth-Science Rev.* 59, 125–162.

Zhao, G., Sun, M., Wilde, S.A., Li, S., 2004. A Paleo-Mesoproterozoic supercontinent: assembly, growth and breakup. *Earth-Science Rev.* 67, 91–123.

Zhao, C., Garnero, E.J., McNamara, A.K., Schmerr, N., Carlson, R.W., 2015. Seismic

evidence for a chemically distinct thermochemical reservoir in Earth's deep mantle beneath Hawaii. *Earth Planet. Sci. Lett.* 426, 143–153.

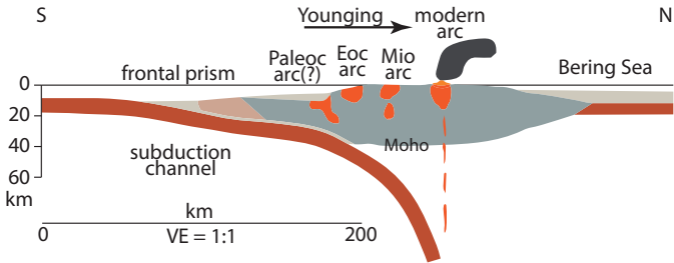
Zheng, Y., Chen, Y., Dai, L., Zhao, Z., 2015. Developing plate tectonics theory from oceanic subduction zones to collisional orogens. *Sci. China Earth Sci.* 58, 1045–1069.

Zhu, R., Chen, L., Wu, F., Liu, J., 2011. Timing, scale and mechanism of the destruction of the North China Craton. *Sci. China Earth Sci.* 54, 789–797.

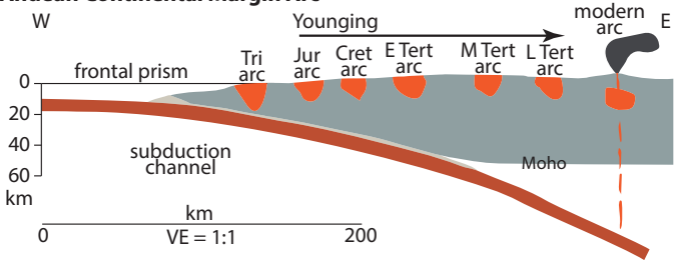
Zhu, G., Jiang, D., Zhang, B., Chen, Y., 2012. Destruction of the eastern North China Craton in a backarc setting: Evidence from crustal deformation kinematics. *Gondwana Res.* 22, 86–103.

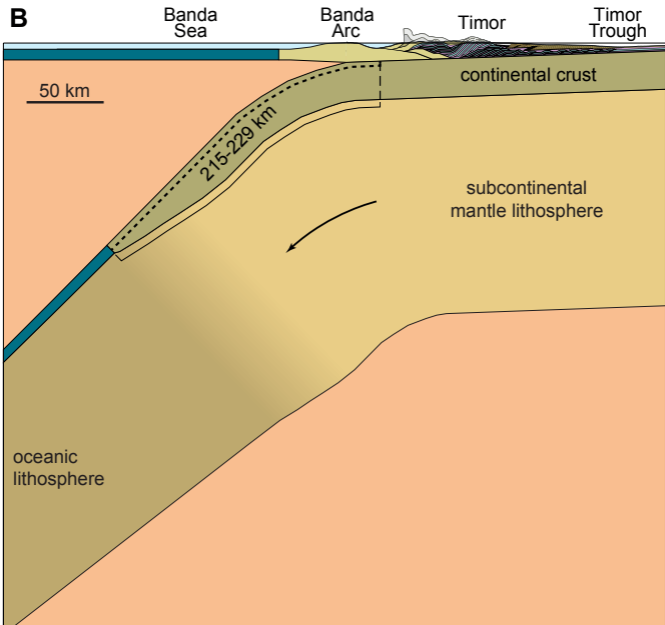
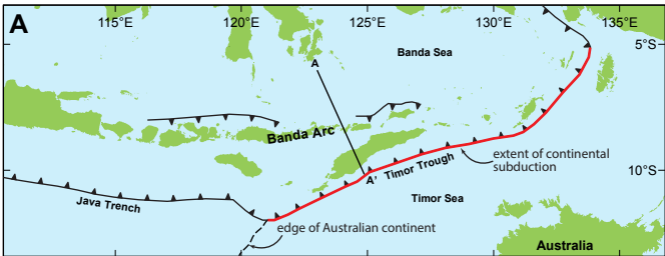
Zimmermann, S., Hall, R., 2016. Provenance of Triassic and Jurassic sandstones in the Banda Arc: Petrography, heavy minerals and zircon geochronology. *Gondwana Res.* 37, 1–19.

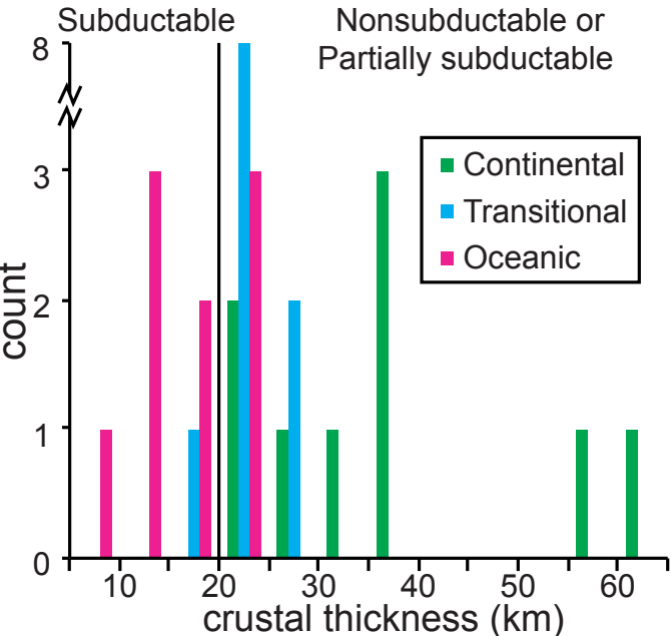
Aluetian Intra-oceanic Arc



Andean Continental Margin Arc



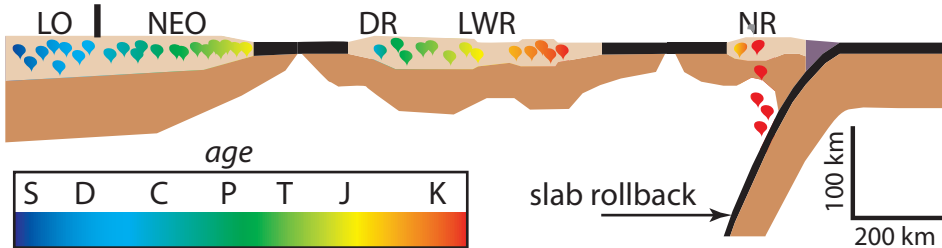




a.**Tasmanide/SW Pacific retreating SZ**

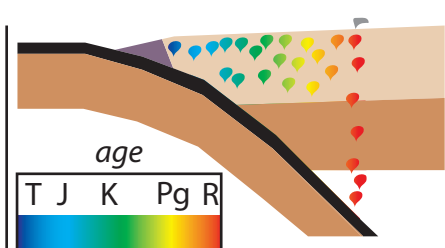
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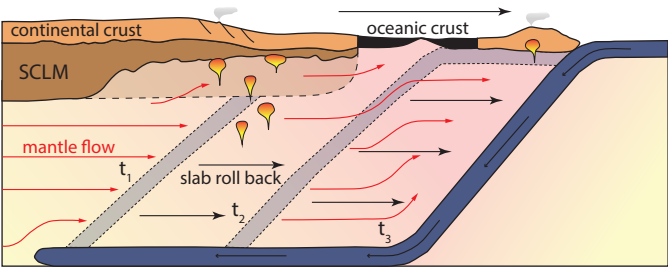
Younging →

**b.****Andean advancing SZ**

Younging →

E





Collision
related
magmatism

Subduction
related
magmatism

Peak from previous
supercontinent cycle

Steady state
zircon production

subduction
initiation

early-subduction
phase

Steady state
zircon production

recycling by
subduction
erosion

late-subduction
phase

Depositional age

collisional
phase

biased zircon
preservation

+300
+200
+100

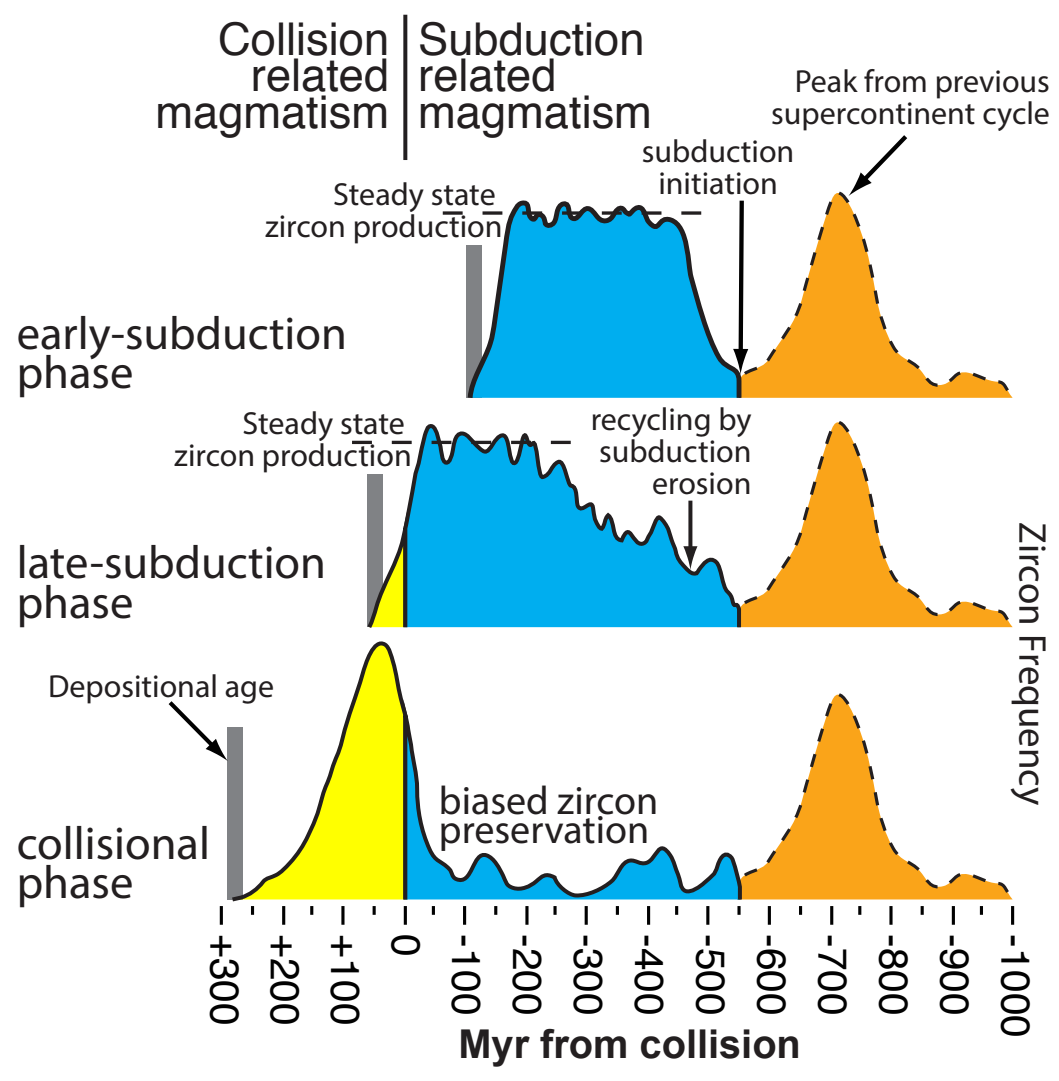
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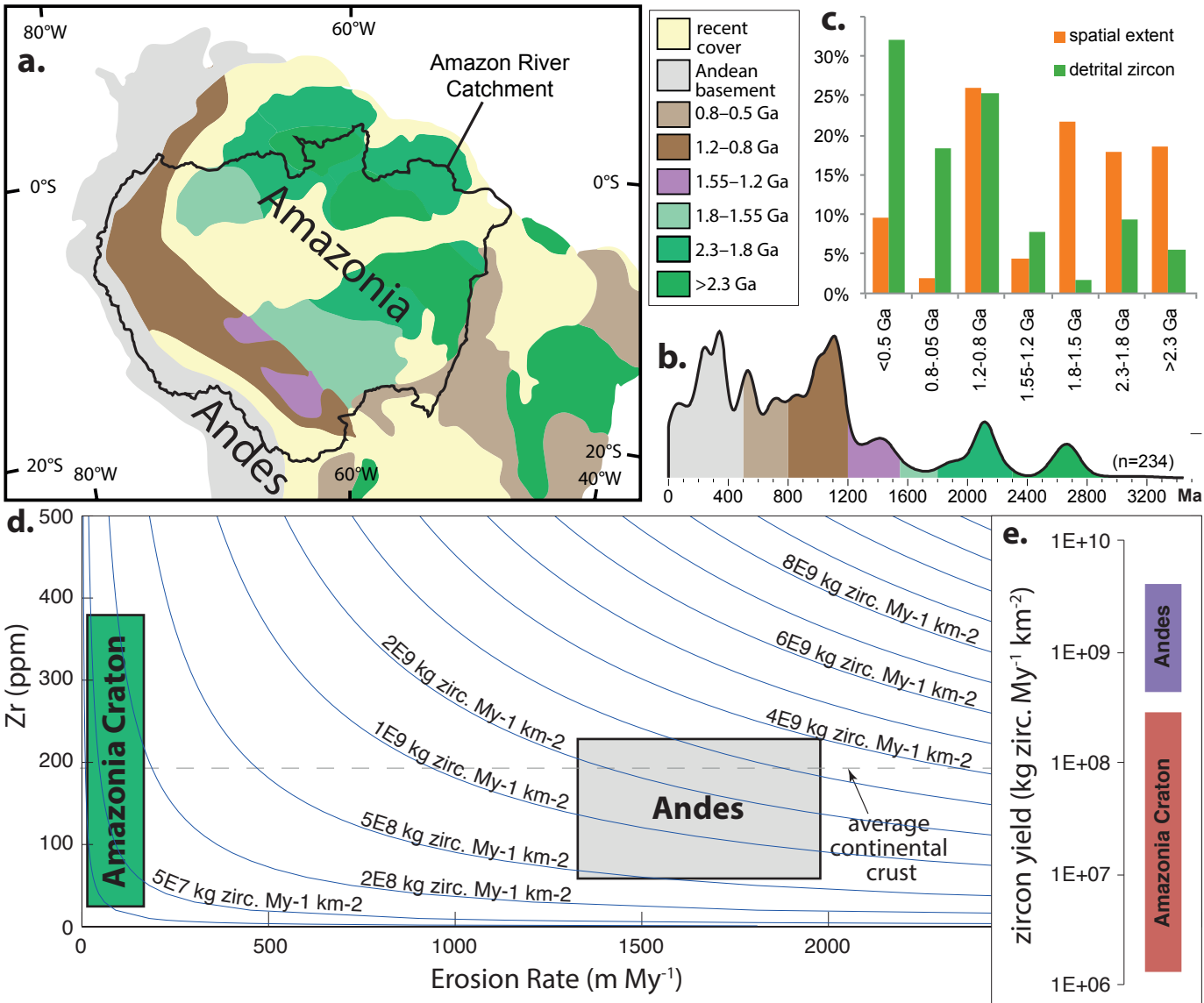
Myr from collision

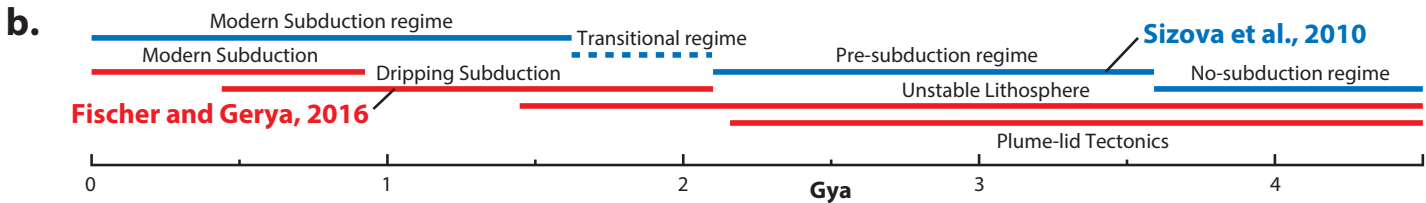
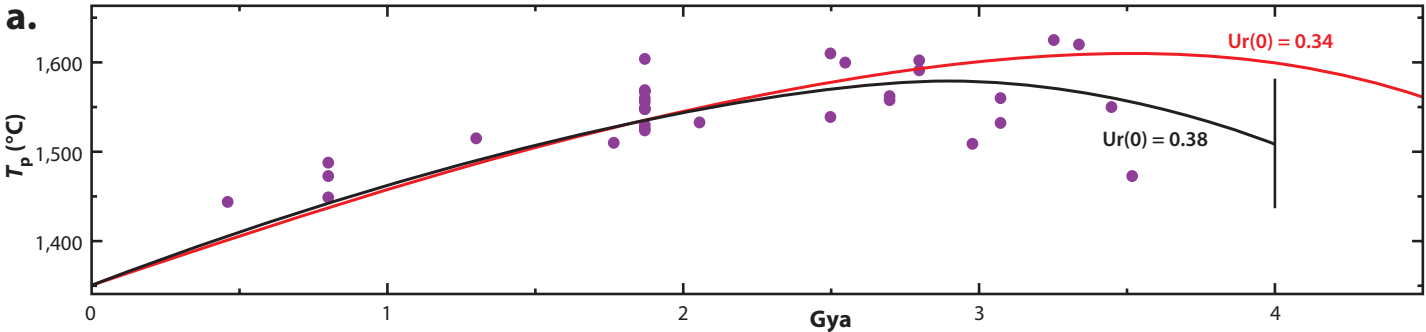
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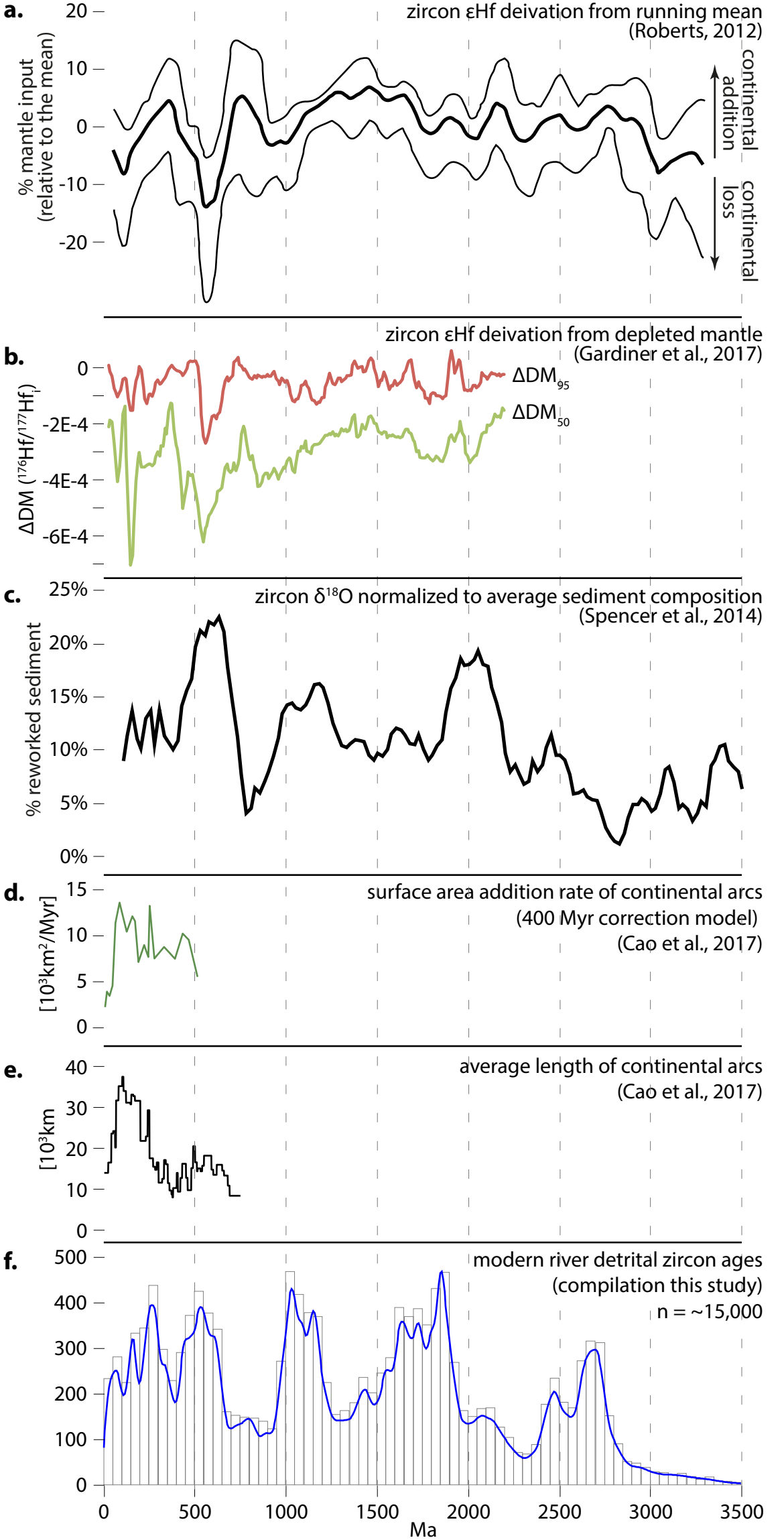
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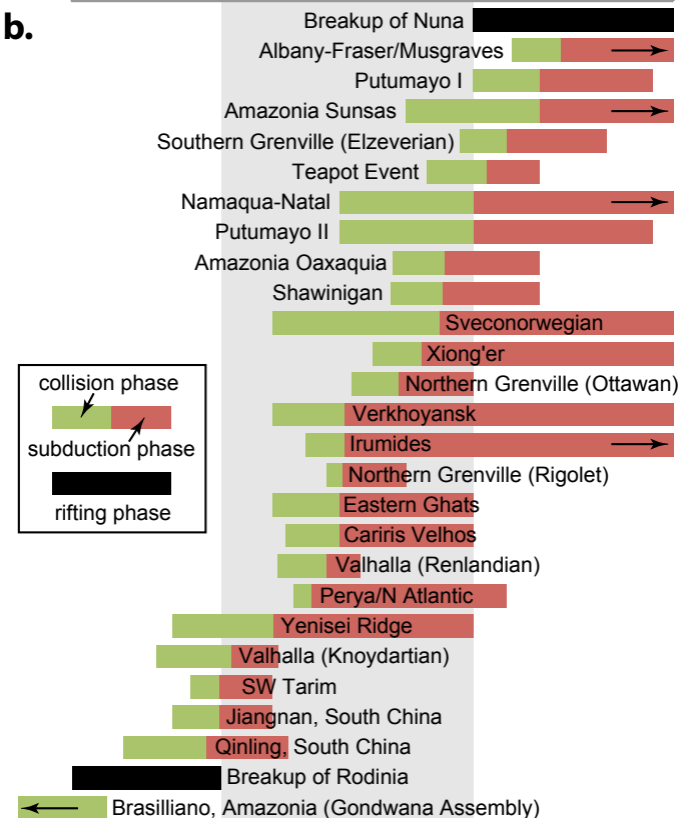
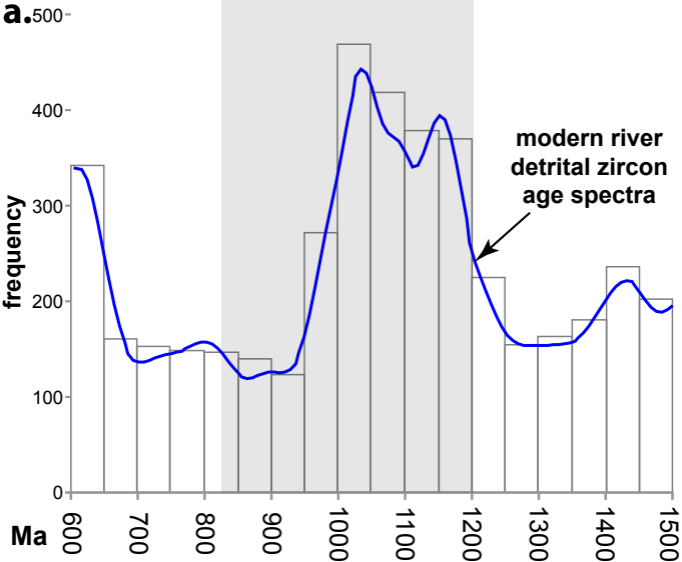
Zircon Frequency

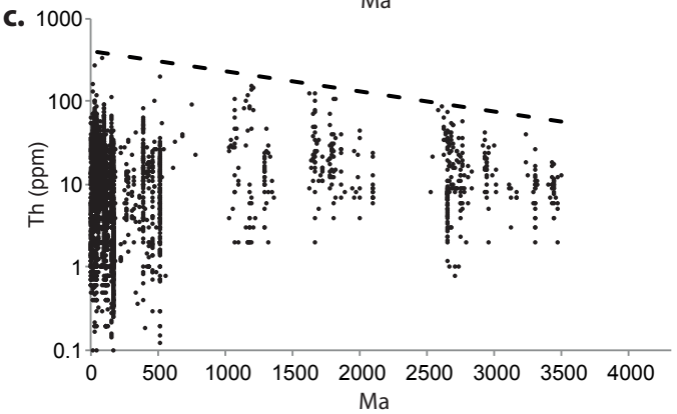
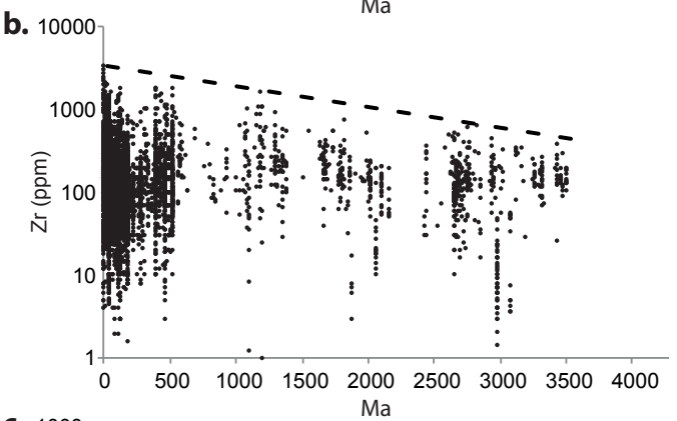
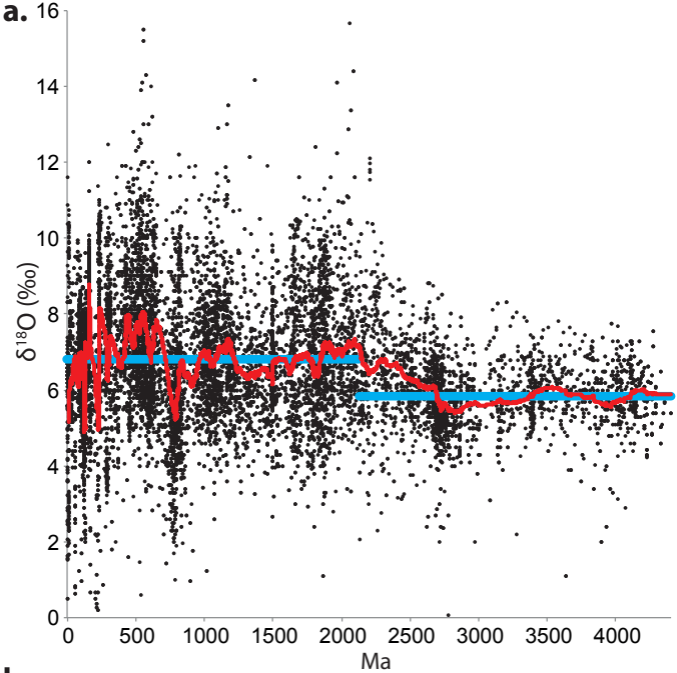












Abstract for Growth, destruction, and preservation of Earth's continental crust:

From the scant Hadean records of the Jack Hills to Cenozoic supervolcanoes, the continental crust provides a synoptic view deep into Earth history. However, the information is fragmented, as large volumes of continental crust have been recycled back into the mantle by a variety of processes. The preserved crustal record is the balance between the volume of crust generated by magmatic processes and the volume destroyed through return to the mantle by tectonic erosion and lower crustal delamination. At present-day, the Earth has reached near-equilibrium between the amount of crust being generated and that being returned to the mantle. However, multiple lines of evidence support secular change in crustal processes through time. Though a variety of isotopic proxies are used to estimate crustal growth through time, none of those currently utilized are able to quantify the volumes of crust recycled back into the mantle. This implies the estimates of preserved continental crust and growth curves derived therefrom represent only a minimum of total crustal growth. We posit that from the Neoproterozoic, the probable onset of modern-day style plate tectonics, there has been no net crustal growth (and perhaps even a net loss) of the continental crust. Deciphering changes from this equilibrium state through geologic time remains a continual pursuit of crustal evolution studies.

Source	Analysis_Name	Age	d180	2SD
71	DG220		0.01	10.37
2		5.4	0.109	2.06
2		5.4	0.109	2.06
2		5.4	0.11	2.83
2		5.4	0.11	2.83
2		5.4	0.115	2.52
2		5.4	0.115	2.52
2		5.4	0.15	2.46
2		5.4	0.15	2.46
2		5.4	0.15	4.8
2		5.4	0.15	4.8
2		5.4	0.17	2.88
2		5.4	0.17	2.88
2		5.4	0.177	4.97
2		5.4	0.177	4.97
2		5.4	0.177	5.53
2		5.4	0.177	5.53
2		5.4	0.198	1.54
2		5.4	0.198	1.54
2		5.4	0.484	3.22
2		5.4	0.484	3.22
2		5.4	0.486	-0.02
2		5.4	0.486	-0.02
2		5.4	0.5	1.57
2		5.4	0.5	1.57
2		5.4	0.5	2.56
2		5.4	0.5	2.56
2		5.4	0.516	0.49
2		5.4	0.516	0.49
2		5.4	0.6	4.16
2		5.4	0.6	4.16
2		5.4	0.62	3.9
2		5.4	0.62	3.9
3		5.3	0.76	5.59
3		5.3	0.76	5.59
3		5.3	0.76	5.83
3		5.3	0.76	5.83
3		5.3	0.76	5.94
3		5.3	0.76	5.94
3		5.3	0.76	5.94
3		5.3	0.76	5.94
2		5.4	0.82	3.6
2		5.4	0.82	3.6
2		5.4	0.945	3.97

2	5.4	0.945	3.97
2	5.4	0.945	4.18
2	5.4	0.945	4.18
58 DDH	508-232	0.99	6.4
58 DDH	508-232	0.99	6.4
58 DDH	508-232	0.99	6.6
58 DDH	508-232	0.99	6.6
58 DDH	508-232	1	6.6
58 DDH	508-232	1	6.6
58 DDH	508-232	1.04	6.2
58 DDH	508-232	1.04	6.2
58 DDH	508-232	1.04	6.6
58 DDH	508-232	1.04	6.6
58 DDH	508-366	1.06	6.4
58 DDH	508-366	1.06	6.4
58 DDH	508-232	1.06	6.6
58 DDH	508-232	1.06	6.6
58 DDH	508-232	1.06	8.3
58 DDH	508-232	1.06	8.3
58 DDH	508-232	1.07	5.6
58 DDH	508-232	1.07	5.6
58 DDH	508-366	1.07	7.3
58 DDH	508-366	1.07	7.3
58 DDH	508-232	1.08	5
58 DDH	508-232	1.08	5
58 DDH	508-366	1.08	6.3
58 DDH	508-366	1.08	6.3
58 DDH	508-366	1.1	5.6
58 DDH	508-366	1.1	5.6
58 DDH	508-366	1.1	6.4
58 DDH	508-366	1.1	6.4
58 DDH	508-366	1.1	6.6
58 DDH	508-366	1.1	6.6
58 DDH	508-366	1.1	6.7
58 DDH	508-366	1.1	6.7
58 DDH	508-232	1.11	6.5
58 DDH	508-232	1.11	6.5
58 DDH	508-232	1.11	7
58 DDH	508-232	1.11	7
58 DDH	508-232	1.11	7.1
58 DDH	508-232	1.11	7.1
58 DDH	508-232	1.12	6.5
58 DDH	508-232	1.12	6.5
58 DDH	508-366	1.13	5.5
58 DDH	508-366	1.13	5.5

58 DDH 508-366	1. 13	6. 4
58 DDH 508-366	1. 13	6. 4
58 DDH 508-232	1. 14	6. 2
58 DDH 508-232	1. 14	6. 2
58 DDH 508-232	1. 14	6. 2
58 DDH 508-232	1. 14	6. 2
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 3
58 DDH 508-232	1. 14	6. 4
58 DDH 508-232	1. 14	6. 4
58 DDH 508-232	1. 14	6. 5
58 DDH 508-232	1. 14	6. 5
58 DDH 508-232	1. 14	7
58 DDH 508-232	1. 14	7
2 5. 4	1. 15	3. 84
2 5. 4	1. 15	3. 84
58 DDH 508-232	1. 16	6. 6
58 DDH 508-232	1. 16	6. 6
58 DDH 508-232	1. 16	6. 6
58 DDH 508-232	1. 16	6. 6
58 DDH 508-232	1. 16	6. 7
58 DDH 508-232	1. 16	6. 7
58 DDH 508-232	1. 16	7. 2
58 DDH 508-232	1. 16	7. 2
58 DDH 508-232	1. 16	7. 2
58 DDH 508-232	1. 16	7. 2
58 DDH 508-232	1. 17	5. 9
58 DDH 508-232	1. 17	5. 9
58 DDH 508-232	1. 17	6. 1
58 DDH 508-232	1. 17	6. 1
58 DDH 508-232	1. 17	6. 6
58 DDH 508-232	1. 17	6. 6
58 DDH 508-366	1. 17	8. 3
58 DDH 508-366	1. 17	8. 3
58 DDH 508-366	1. 19	6. 6
58 DDH 508-366	1. 19	6. 6
58 DDH 508-366	1. 19	6. 9
58 DDH 508-366	1. 19	6. 9
2 5. 4	1. 2	3. 58
2 5. 4	1. 2	3. 58
58 DDH 508-232	1. 22	6. 4

58 DDH 508-232		1.22	6.4
58 DDH 508-232		1.22	6.5
58 DDH 508-232		1.22	6.5
58 DDH 508-232		1.22	6.5
58 DDH 508-232		1.22	6.5
58 DDH 508-232		1.23	6.3
58 DDH 508-232		1.23	6.3
58 DDH 508-232		1.23	6.9
58 DDH 508-232		1.23	6.9
58 DDH 508-232		1.23	7.4
58 DDH 508-232		1.23	7.4
2	5.4	1.293	3.62
2	5.4	1.293	3.62
58 DDH 508-232		1.3	6.4
58 DDH 508-232		1.3	6.4
58 DDH 508-366		1.37	6.7
58 DDH 508-366		1.37	6.7
58 DDH 508-232		1.48	6
58 DDH 508-232		1.48	6
58 DDH 508-232		1.48	6.5
58 DDH 508-232		1.48	6.5
58 DDH 508-366		1.48	6.6
58 DDH 508-366		1.48	6.6
58 DDH 508-232		1.48	6.9
58 DDH 508-232		1.48	6.9
58 DDH 508-232		1.5	5.6
58 DDH 508-232		1.5	5.6
58 DDH 508-366		1.5	6.3
58 DDH 508-366		1.5	6.3
2	5.4	1.76	1.62
2	5.4	1.76	1.62
2	5.4	1.8	1.9
2	5.4	1.8	1.9
2	5.4	2	5.17
2	5.4	2	5.17
2	5.4	2	5.57
2	5.4	2	5.57
89 TT91		4.5	4.39
89 TT94		5	4.99
71 DG264		5.5	8.46
89 TT101		6.4	4.62
89 TT90		6.4	4.73
89 TT102		6.4	4.96
71 DG23		6.5	11.6
89 TT150		6.6	4.71

71 DG135		7.2	9.02	
71 DG314		7.2	9.66	
71 DG236		7.2	10.89	
71 DG05-1		7.3	6.76	
71 DG259		8	9.28	
4	5.2	11.3	4.4	
4	5.2	11.3	4.4	
4	5.2	11.3	4.42	
4	5.2	11.3	4.42	
4	5.2	11.5	6.5	
4	5.2	11.5	6.5	
4	5.2	11.5	6.6	
4	5.2	11.5	6.6	
4	5.2	12	4.4	
4	5.2	12	4.4	
4	5.2	12.7	5.8	
4	5.2	12.7	5.8	
4	5.2	12.7	5.9	
4	5.2	12.7	5.9	
4	5.2	12.8	6.8	
4	5.2	12.8	6.8	
4	5.2	12.8	6.93	
4	5.2	12.8	6.93	
70 E0-28-19	(2)	16.5	1.65	0.14
70 E0-28-19	(1)	16.5	1.65	0.16
70 E0-74-46	(3)	16.5	1.95	0.24
70 E0-28-36	(1)	16.5	1.97	0.16
70 E0-74-46	(1)	16.5	2.03	0.16
70 E0-28-32	(1)	16.5	2.28	0.16
70 E0-28-21	(1)	16.5	2.29	0.16
70 E0-74-49	(1)	16.5	2.29	0.16
70 E0-28-28	(1)	16.5	2.31	0.16
70 E0-28-14	(1)	16.5	2.31	0.17
70 E0-28-30	(1)	16.5	2.35	0.18
70 E0-28-34	(1)	16.5	2.41	0.18
70 E0-28-16	(1)	16.5	2.45	0.17
70 E0-28-17	(1)	16.5	2.48	0.17
70 E0-28-22	(2)	16.5	2.49	0.15
70 E0-74-46	(2)	16.5	2.58	0.17
70 E0-74-11	(1)	16.5	2.6	0.16
70 E0-28-27	(1)	16.5	2.66	0.19
70 E0-74-49	(2)	16.5	2.68	0.15
70 E0-74-25	(1)	16.5	2.75	0.16
70 E0-74-49	(3)	16.5	2.75	0.18
70 E0-28-11	(1)	16.5	2.77	0.18

70 E0-28-14 (2)	16.5	2.78	0.15
70 E0-28-16 (2)	16.5	2.78	0.15
70 E0-74-10 (1)	16.5	2.86	0.17
70 E0-74-14 (1)	16.5	2.9	0.17
70 E0-74-30 (1)	16.5	2.9	0.17
70 E0-74-12 (1)	16.5	2.91	0.15
70 E0-74-44 (2)	16.5	2.91	0.17
70 E0-74-35 (1)	16.5	3.04	0.19
70 E0-74-32 (1)	16.5	3.06	0.19
70 E0-74-14 (2)	16.5	3.09	0.18
70 E0-74-30 (2)	16.5	3.12	0.18
70 E0-74-44 (1)	16.5	3.15	0.23
70 E0-74-9 (1)	16.5	3.2	0.16
70 E0-74-35 (2)	16.5	3.21	0.18
70 E0-74-19 (1)	16.5	3.28	0.21
70 E0-74-41 (1)	16.5	3.32	0.16
70 E0-31-4 (1)	16.5	5.07	0.17
70 E0-31-22 (2)	16.5	5.15	0.18
70 E0-31-4 (2)	16.5	5.22	0.17
70 E0-31-34 (1)	16.5	5.28	0.16
70 E0-31-16 (2)	16.5	5.29	0.16
70 E0-31-22 (1)	16.5	5.3	0.17
70 E0-31-12 (2)	16.5	5.31	0.16
70 E0-31-36 (2)	16.5	5.31	0.19
70 E0-31-17 (1)	16.5	5.36	0.17
70 E0-31-5 (1)	16.5	5.38	0.16
70 E0-17-25 (2)	16.5	5.4	0.18
70 E0-31-27 (1)	16.5	5.4	0.19
70 E0-17-32 (1)	16.5	5.43	0.15
70 E0-17-9 (2)	16.5	5.43	0.18
70 E0-31-17 (2)	16.5	5.44	0.15
70 E0-31-23 (1)	16.5	5.44	0.17
70 E0-17-26 (2)	16.5	5.46	0.18
70 E0-31-19 (1)	16.5	5.46	0.2
70 E0-31-30 (2)	16.5	5.47	0.15
70 E0-17-29 (2)	16.5	5.51	0.16
70 E0-17-20 (1)	16.5	5.52	0.16
70 E0-17-33 (1)	16.5	5.54	0.17
70 E0-31-30 (1)	16.5	5.54	0.18
70 E0-17-25 (1)	16.5	5.56	0.16
70 E0-31-27 (2)	16.5	5.56	0.19
70 E0-17-15 (1)	16.5	5.57	0.17
70 E0-17-26 (1)	16.5	5.58	0.15
70 E0-31-12 (1)	16.5	5.58	0.15
70 E0-17-11 (1)	16.5	5.58	0.18

70 EO-17-45 (1)	16.5	5.6	0.15
70 EO-17-9 (1)	16.5	5.6	0.17
70 EO-17-46 (1)	16.5	5.61	0.15
70 EO-17-6 (1)	16.5	5.61	0.15
70 EO-17-29 (1)	16.5	5.62	0.16
70 EO-17-43 (1)	16.5	5.63	0.17
70 EO-17-32 (2)	16.5	5.64	0.16
70 EO-17-45 (2)	16.5	5.64	0.16
70 EO-31-16 (1)	16.5	5.67	0.18
70 EO-17-46 (2)	16.5	5.69	0.17
70 EO-17-36 (1)	16.5	5.71	0.17
70 EO-31-34 (2)	16.5	5.71	0.19
70 EO-17-43 (2)	16.5	5.72	0.17
70 EO-17-36 (2)	16.5	5.73	0.16
70 EO-31-36 (3)	16.5	5.83	0.16
70 EO-17-49 (1)	16.5	6	0.15
70 EO-17-49 (2)	16.5	6.17	0.18
70 EO-31-36 (1)	16.5	6.29	0.17
70 EO-17-48 (1)	16.5	6.42	0.16
70 EO-17-48 (3)	16.5	6.64	0.19
70 EO-17-44 (2)	16.5	6.65	0.18
70 EO-17-48 (4)	16.5	6.8	0.18
70 EO-10-16 (1)	16.5	8.7	0.18
70 EO-10-3 (1)	16.5	8.85	0.17
70 EO-10-11 (1)	16.5	8.94	0.17
70 EO-10-13 (1)	16.5	9.12	0.17
70 EO-10-10 (2)	16.5	9.49	0.18
70 EO-10-5 (1)	16.5	9.49	0.19
70 EO-14-28 (2)	16.5	9.51	0.15
70 EO-10-14 (1)	16.5	9.53	0.16
70 EO-10-7 (1)	16.5	9.53	0.19
70 EO-10-12 (1)	16.5	9.56	0.2
70 EO-14-28 (1)	16.5	9.62	0.17
70 EO-10-8 (2)	16.5	9.67	0.16
70 EO-14-30 (2)	16.5	9.68	0.16
70 EO-10-10 (1)	16.5	9.72	0.16
70 EO-14-30 (1)	16.5	9.73	0.15
70 EO-14-5 (1)	16.5	9.88	0.15
70 EO-14-22 (1)	16.5	9.88	0.19
70 EO-10-8 (1)	16.5	9.89	0.19
70 EO-14-11 (2)	16.5	9.92	0.18
70 EO-14-20 (1)	16.5	10	0.16
70 EO-14-9 (1)	16.5	10.03	0.18
70 EO-14-24 (2)	16.5	10.16	0.19
70 EO-14-25 (1)	16.5	10.22	0.17

70 EO-14-18 (1)	16.5	10.27	0.18
70 EO-14-7 (1)	16.5	10.29	0.19
70 EO-14-34 (1)	16.5	10.32	0.16
70 EO-14-34 (2)	16.5	10.32	0.16
70 EO-14-24 (1)	16.5	10.33	0.16
70 EO-14-2 (1)	16.5	10.33	0.17
70 EO-14-1 (1)	16.5	10.4	0.17
70 EO-14-13 (1)	16.5	10.61	0.19
70 EO-14-11 (1)	16.5	10.76	0.17
10 1746-07	25	8.3	0.8
10 1746-07	25	8.3	0.8
65 BB-81 11	26	7.2	0.28
65 BB-81 11	26	7.2	0.28
65 BB-81 5	26	7.24	0.3
65 BB-81 5	26	7.24	0.3
65 BB-86 19	26	7.34	0.24
65 BB-86 19	26	7.34	0.24
65 BB-86 18	26	7.42	0.22
65 BB-86 18	26	7.42	0.22
65 BB-86 15	26	7.44	0.41
65 BB-86 15	26	7.44	0.41
65 BB-86 14	26	7.51	0.33
65 BB-86 14	26	7.51	0.33
65 BB-81 8	26	7.55	0.36
65 BB-81 8	26	7.55	0.36
65 BB-86 22	26	7.68	0.31
65 BB-86 22	26	7.68	0.31
65 BB-86 4	26	7.69	0.3
65 BB-86 4	26	7.69	0.3
65 BB-81 9	26	7.7	0.23
65 BB-81 9	26	7.7	0.23
65 BB-86 1	26	7.76	0.22
65 BB-86 1	26	7.76	0.22
65 BB-86 6	26	7.81	0.28
65 BB-86 6	26	7.81	0.28
65 BB-81 2	26	7.83	0.24
65 BB-81 2	26	7.83	0.24
65 BB-81 4	26	7.83	0.25
65 BB-81 4	26	7.83	0.25
65 BB-86 12	26	7.88	0.35
65 BB-86 12	26	7.88	0.35
65 BB-81 7	26	8.03	0.15
65 BB-81 7	26	8.03	0.15
65 BB-81 1	26	8.04	0.28
65 BB-81 1	26	8.04	0.28

65 BB-81 3	26	8.08	0.23
65 BB-81 3	26	8.08	0.23
65 BB-86 17	26	8.36	0.37
65 BB-86 17	26	8.36	0.37
65 BB-86 3	26	8.83	0.2
65 BB-86 3	26	8.83	0.2
111 BB-86	26	7.79	
111 BB-81	26	7.8	
26 96BR-017	27	7.89	
26 96BR-017	27	7.89	
26 LC-2	28	5.47	
26 LC-2	28	5.47	
26 FCT	28	5.61	
26 FCT	28	5.61	
26 LC-5	28	5.82	
26 LC-5	28	5.82	
26 LC-33	28	5.96	
26 LC-33	28	5.96	
26 LC-34	28	6.01	
26 LC-9	28	6.01	
26 LC-34	28	6.01	
26 LC-9	28	6.01	
26 LC-15	28	6.14	
26 LC-15	28	6.14	
97 Jun-15	28.2	5.74	0.38
97 May-20	28.7	5.55	0.36
97 May-28	28.9	5.3	0.28
26 96BR-108	29	4.94	
26 96BR-108	29	4.94	
26 96BR-110	29	5.16	
26 96BR-110	29	5.16	
26 BULL-1	29	5.25	
26 BULL-1	29	5.25	
26 RM20	29	5.34	
26 RM20	29	5.34	
26 96BR-119	29	5.52	
26 96BR-119	29	5.52	
26 96BR-109	29	5.6	
26 96BR-109	29	5.6	
26 96BR-101	29	5.74	
26 96BR-101	29	5.74	
26 96BR-112	29	5.8	
26 96BR-112	29	5.8	
26 96BR-105	29	5.82	
26 96BR-105	29	5.82	

26 96BR-114	29	5.95	
26 HIL-1	29	5.95	
26 96BR-114	29	5.95	
26 HIL-1	29	5.95	
26 RM5	29	5.98	
26 RM5	29	5.98	
26 HIL-10	29	6.5	
26 HIL-10	29	6.5	
26 96BR-107	29	6.55	
26 96BR-107	29	6.55	
26 RM15	29	8.05	
26 RM15	29	8.05	
97 May-41	30.4	5.3	0.21
97 C914F	30.6	5.2	0.18
65 BB-86 21	31	6.68	0.29
65 BB-86 21	31	6.68	0.29
65 BB-86 10	31	7.9	0.32
65 BB-86 10	31	7.9	0.32
97 GG4	31.8	5.47	0.21
26 95BR-130	32	7.06	
26 95BR-130	32	7.06	
26 95BR-132	33	6.78	
26 95BR-132	33	6.78	
65 BB-81 14	33	8.54	0.42
65 BB-81 14	33	8.54	0.42
26 RM7	35	6.28	
26 RM7	35	6.28	
26 RM8	36	5.88	
26 RM8	36	5.88	
26 RM6	36	7.68	
26 RM6	36	7.68	
26 95BR-141	37	5.17	
26 95BR-141	37	5.17	
26 95BR-145	37	5.92	
26 95BR-145	37	5.92	
26 95BR-140	37	5.98	
26 95BR-140	37	5.98	
26 95BR-143	37	6.11	
26 95BR-143	37	6.11	
26 95BR-142	37	6.15	
26 95BR-142	37	6.15	
26 95BR-144	37	6.22	
26 95BR-152	37	6.22	
26 95BR-144	37	6.22	
26 95BR-152	37	6.22	

26 95BR-146	37	6.86	
26 95BR-146	37	6.86	
26 RM13	38	5.42	
26 RM13	38	5.42	
26 RM19	40	5.76	
26 RM19	40	5.76	
26 95BR-131	40	6.78	
26 95BR-131	40	6.78	
26 97BR-102	40	7.76	
26 97BR-102	40	7.76	
26 97BR-101	40	8.07	
26 97BR-101	40	8.07	
26 97BR-103	40	8.53	
26 97BR-103	40	8.53	
65 BB-86 8	40	8.8	0.17
65 BB-86 8	40	8.8	0.17
59 M0-960	43	6.2	0.3
59 M0-960	43	6.2	0.3
10 1774-83a	44	4.3	0.6
10 1774-83a	44	4.3	0.6
10 1774-83b	44	4.4	0.6
10 1774-83b	44	4.4	0.6
22 98IB-1	45	3.95	
22 98IB-1	45	3.95	
22 98IB-22	45	7.11	
22 98IB-22	45	7.11	
22 98IB-61	45	7.34	
22 98IB-61	45	7.34	
22 98IB-59	45	7.42	
22 98IB-59	45	7.42	
59 M0-1284	52	9.2	0.2
59 M0-1284	52	9.2	0.2
22 98IB-13	54	6.84	
22 98IB-13	54	6.84	
22 98IB-7	54	6.93	
22 98IB-7	54	6.93	
59 M0-1089	54	5.8	0.4
59 M0-1089	54	5.8	0.4
79 98IB-13	54	6.84	0.03
79 98IB-7	54	6.93	0.04
22 98IB-24	55	7.26	
22 98IB-24	55	7.26	
59 M0-911	55	9.5	0.2
59 M0-911	55	9.5	0.2
14 94SK32	58	1.9	

14 94SK32	58	1.9
14 94SK33	58	3.97
14 94SK33	58	3.97
14 95SK5	58	4.14
14 95SK5	58	4.14
14 95SK12	58	4.21
14 95SK12	58	4.21
14 95SK10	58	4.38
14 95SK10	58	4.38
40 98-SK32	58	0.64
40 98-SK32	58	0.64
40 97-SK18	58	0.8
40 97-SK18	58	0.8
40 98-SK1	58	0.83
40 98-SK1	58	0.83
40 98-SK6	58	1.74
40 98-SK6	58	1.74
40 SC1/2	58	2.5
40 SC1/2	58	2.5
40 97-SK23	58	2.61
40 97SK 22	58	2.61
40 97-SK23	58	2.61
40 97SK 22	58	2.61
40 98-SK13	58	2.91
40 98-SK13	58	2.91
40 98-SK24	58	2.95
40 98-SK24	58	2.95
40 97SK4	58	3.2
40 97SK4	58	3.2
40 98-ML7	58	3.39
40 98-ML7	58	3.39
40 98-ML2	58	3.44
40 98-ML2	58	3.44
40 97SK7	58	3.46
40 97SK7	58	3.46
40 98-SK20	58	4.51
40 98-SK20	58	4.51
40 SR-677	58	4.63
40 SR-677	58	4.63
40 98-SK36	58	5.21
40 98-SK36	58	5.21
40 97SK14	58	5.27
40 97SK14	58	5.27
40 GP-422	58	5.35
40 GP-422	58	5.35

40 97AR18	58	5.36	
40 97AR18	58	5.36	
40 MLK3	58	5.91	
40 MLK3	58	5.91	
40 97AR5	58	7.02	
40 97AR5	58	7.02	
40 97AR9	58	7.06	
40 97AR9	58	7.06	
59 M0-1069	61	8.5	0.3
59 M0-1069	61	8.5	0.3
22 98IB-6	62	6.79	
22 98IB-6	62	6.79	
79 98IB-6	62	6.79	0.03
59 M0-1311	67	5.8	0.2
59 M0-1311	67	5.8	0.2
22 98IB-53	70	6.66	
22 98IB-53	70	6.66	
22 98IB-52	70	7.99	
22 98IB-52	70	7.99	
22 98IB-12	71	7.23	
22 98IB-12	71	7.23	
79 98IB-12	71	7.25	0.1
59 M0-975	72	6.8	0.2
59 M0-975	72	6.8	0.2
59 M0-1290	72	8.8	0.2
59 M0-1290	72	8.8	0.2
26 RM18	73	7.76	
26 RM18	73	7.76	
77 12LL14	73	7.35	
77 12LL18	73	7.39	
77 12HN13	73	7.51	
34 95BR053	74	6.54	
34 95BR053	74	6.54	
34 95BR052	74	6.86	
34 95BR052	74	6.86	
22 98IB-5	75	6.89	
22 98IB-5	75	6.89	
26 97TY-022	75	6.78	
26 97TY-022	75	6.78	
26 97TY-020	75	7.94	
26 97TY-020	75	7.94	
26 97TY-019	75	8.01	
26 97TY-019	75	8.01	
26 97TY-021	75	8.91	
26 97TY-021	75	8.91	

26 97TY-017	75	9.44	
26 97TY-017	75	9.44	
26 97TY-016	75	9.52	
26 97TY-016	75	9.52	
26 97TY-014	75	9.63	
26 97TY-014	75	9.63	
26 97TY-013	75	9.96	
26 97TY-013	75	9.96	
79 98IB-5	75	6.89	0.06
26 96BR-115	76	6.49	
26 96BR-115	76	6.49	
59 MO-1079	76	5.8	0.2
59 MO-1079	76	5.8	0.2
112 BB-55	78	6.76	
22 98IB-56	80	5.31	
22 98IB-56	80	5.31	
26 96BS11.2	80	5.7	
26 96BS11.2	80	5.7	
26 96BS11.1	80	5.76	
26 96BS11.1	80	5.76	
26 96BS11.4	80	5.79	
26 96BS11.4	80	5.79	
26 96BS11.5	80	5.8	
26 96BS11.5	80	5.8	
26 96BS11.3	80	5.81	
26 96BS11.3	80	5.81	
26 RM4	80	9.89	
26 RM4	80	9.89	
79 98IB-56	80	5.31	0.01
79 98IB-53	80	6.66	0.07
79 98IB-24	80	7.26	0.03
79 98IB-52	80	7.99	0.05
31 94TH485	81	9.06	
31 94TH485	81	9.06	
34 1S114	81	6.21	
34 1S114	81	6.21	
34 1S115	81	6.51	
34 1S115	81	6.51	
34 L94-7	81	6.96	
34 L94-7	81	6.96	
31 IS 2000	83	7.95	
31 IS 2000	83	7.95	
31 WHIT	84	5.67	
31 WHIT	84	5.67	
34 A95-10	84	5.89	

34 A95-10	84	5.89	
22 98IB-68	85	7.82	
22 98IB-68	85	7.82	
31 IS 1450	85	8.21	
31 IS 1450	85	8.21	
34 3S36	85	5.7	
34 3S36	85	5.7	
34 OW39	85	6.41	
34 OW39	85	6.41	
5 TT6	86	1.24	
5 TT6	86	1.24	
26 96BR-018	86	7.79	
26 96BR-018	86	7.79	
26 97BR-107	86	7.94	
26 97BR-107	86	7.94	
26 97BR-105	86	8.05	
26 97BR-105	86	8.05	
26 97BR-108	86	8.1	
26 97BR-108	86	8.1	
26 96BR-019	86	8.18	
26 96BR-019	86	8.18	
26 97BR-106	86	8.34	
26 97BR-106	86	8.34	
33 3S37	86	8.39	
33 3S37	86	8.39	
34 1S124	86	6.11	
34 1S124	86	6.11	
34 1S120	86	6.17	
34 1S120	86	6.17	
34 1S138	86	6.5	
34 1S138	86	6.5	
34 1S136	86	6.52	
34 1S136	86	6.52	
34 1S137	86	6.68	
34 1S137	86	6.68	
92 PX10-175-5.1	86.862	3.47	0.05
92 PX10-175-3.1	86.862	6.08	0.06
92 PX10-175-3.2	86.862	6.27	0.02
92 PX10-175-4.1	86.862	6.27	0.06
92 PX10-175-8.1	86.862	6.46	0.04
92 PX10-175-1.1	86.862	6.79	0.04
92 PX10-175-7.1	86.862	6.91	0.05
92 PX10-175-2.1	86.862	6.99	0.05
92 PX10-175-5.2	86.862	7.04	0.05
92 PX10-175-6.1	86.862	7.24	0.04

92 PX10-175-4.2	86.862	7.66	0.04
92 PX10-221-4.1	87.872	6.23	0.05
92 PX10-221-5.2	87.872	6.37	0.04
92 PX10-221-4.2	87.872	6.41	0.04
92 PX10-221-2.1	87.872	6.45	0.06
92 PX10-221-7.2	87.872	6.63	0.05
92 PX10-221-6.1	87.872	6.68	0.03
92 PX10-221-8.2	87.872	6.68	0.07
92 PX10-221-8.1	87.872	6.84	0.05
92 PX10-221-1.1	87.872	6.89	0.06
92 PX10-221-9.1	87.872	6.97	0.06
92 PX10-221-5.1	87.872	6.98	0.07
92 PX10-221-7.1	87.872	7.09	0.03
92 PX10-221-3.1	87.872	7.12	0.12
92 PX10-221-10.1	87.872	7.26	0.06
31 LEG 91-536	88	5.99	
31 LEG 91-536	88	5.99	
34 68M15	88	5.9	
34 68M15	88	5.9	
79 98IB-68	88	7.82	0.06
34 M95-79	88.1	6.3	
34 M95-79	88.1	6.3	
34 1S117	88.1	6.31	
34 M95-81	88.1	6.31	
34 1S117	88.1	6.31	
34 M95-81	88.1	6.31	
34 M95-28	88.1	6.34	
34 M95-28	88.1	6.34	
34 M95-40	88.1	6.39	
34 M95-40	88.1	6.39	
34 1S113	88.1	6.43	
34 1S113	88.1	6.43	
34 1S101	88.1	6.49	
34 1S101	88.1	6.49	
34 1S112	88.1	6.51	
34 1S112	88.1	6.51	
32 99LV655	89	6.43	
32 99LV655	89	6.43	
34 KC14	89	5.33	
34 KC14	89	5.33	
34 KC14-2	89	5.47	
34 KC14-2	89	5.47	
34 1S121	89	6.19	
34 1S121	89	6.19	
34 1S123	89	6.32	

34 1S123	89	6.32	
92 PX10-86-4.1	89.183	6.24	0.07
92 PX10-86-3.1	89.183	6.65	0.05
92 PX10-86-9.1	89.183	6.71	0.07
92 PX10-86-8.1	89.183	6.72	0.06
92 PX10-86-5.1	89.183	6.86	0.05
92 PX10-86-2.1	89.183	6.94	0.06
92 PX10-86-7.1	89.183	7.05	0.03
92 PX10-86-7.2	89.183	7.17	0.05
92 PX10-86-6.1	89.183	7.35	0.05
92 PX10-86-4.2	89.183	7.46	0.06
92 PX10-86-1.2	89.183	7.71	0.06
22 98IB-40	90	7.41	
22 98IB-40	90	7.41	
22 98IB-34	90	7.61	
22 98IB-34	90	7.61	
22 98IB-39	90	7.63	
22 98IB-39	90	7.63	
26 95BS-E	90	6	
26 95BS-E	90	6	
26 95BS-C	90	6.09	
26 95BS-C	90	6.09	
26 95BS-D	90	6.22	
26 95BS-D	90	6.22	
26 95BS-A	90	6.25	
26 95BS-A	90	6.25	
26 95BS-B	90	6.67	
26 95BS-B	90	6.67	
31 IS703	90	7.66	
31 IS703	90	7.66	
31 91TH181	90	7.91	
31 91TH181	90	7.91	
31 TC27	90	9.41	
31 TC27	90	9.41	
33 1S67	90	7.5	
33 1S67	90	7.5	
33 1S52	90	7.51	
33 1S52	90	7.51	
33 1S53	90	7.53	
33 1S53	90	7.53	
33 1S77	90	7.63	
33 1S77	90	7.63	
33 1S79	90	7.67	
33 1S79	90	7.67	
33 1S80	90	7.72	

33 1S80	90	7.72
33 1S82	90	7.73
33 1S82	90	7.73
33 1S51	90	7.76
33 1S81	90	7.76
33 1S51	90	7.76
33 1S81	90	7.76
33 1S58	90	7.77
33 1S58	90	7.77
33 1S54	90	7.81
33 1S54	90	7.81
33 3S51	90	8.02
33 3S51	90	8.02
34 1S87	90	5.52
34 1S87	90	5.52
34 1S131	90	5.78
34 1S131	90	5.78
34 1S86	90	6.14
34 1S86	90	6.14
34 F3	90	6.25
34 F3	90	6.25
34 95BR066	90	6.38
34 95BR066	90	6.38
34 96-14	90	6.49
34 96-14	90	6.49
34 96-15	90	6.51
34 96-15	90	6.51
34 95BR067	90	6.55
34 95BR067	90	6.55
34 K2	90	6.56
34 K2	90	6.56
34 95BR056	90	6.57
34 95BR056	90	6.57
34 96-13	90	6.63
34 96-13	90	6.63
34 96-10	90	6.64
34 96-10	90	6.64
34 96-17	90	6.65
34 F4	90	6.65
34 96-17	90	6.65
34 F4	90	6.65
34 96-16	90	6.68
34 96-16	90	6.68
34 96-11	90	6.76
34 96-11	90	6.76

34 95BR068	90	6.78	
34 95BR068	90	6.78	
34 97WM064	90	6.82	
34 97WM064	90	6.82	
34 97WM065	90	6.92	
34 97WM065	90	6.92	
34 97WM066	90	6.95	
34 97WM066	90	6.95	
34 95BR055	90	7.03	
34 95BR055	90	7.03	
34 F7f	90	7.06	
34 F7f	90	7.06	
34 96-18	90	7.07	
34 96-18	90	7.07	
34 95-18	90	7.18	
34 95-18	90	7.18	
34 96-12	90	7.2	
34 96-12	90	7.2	
34 1S84	90	7.36	
34 F6	90	7.36	
34 1S84	90	7.36	
34 F6	90	7.36	
34 95BR054	90	7.48	
34 95BR054	90	7.48	
34 3S48	90	7.54	
34 3S48	90	7.54	
34 95-9	90	8.25	
34 95-9	90	8.25	
92 PX10-76-7.1	90.345	6.23	0.08
92 PX10-76-4.1	90.345	6.31	0.08
92 PX10-76-6.1	90.345	6.49	0.04
92 PX10-76-9.1	90.345	6.59	0.04
92 PX10-76-5.1	90.345	6.6	0.06
92 PX10-76-10.1	90.345	6.6	0.09
92 PX10-76-1.1	90.345	6.67	0.06
92 PX10-76-8.1	90.345	6.76	0.1
92 PX10-76-2.1	90.345	6.99	0.04
92 PX10-76-3.1	90.345	7.05	0.09
92 PX10-76-11.1	90.345	7.06	0.06
34 1S110	90.7	6.3	
34 1S110	90.7	6.3	
34 1S116	90.7	6.38	
34 1S116	90.7	6.38	
34 1S109	90.7	6.51	
34 1S109	90.7	6.51	

34 SQ67	91	5.83	
34 SQ67	91	5.83	
34 1S135	91	6.17	
34 1S135	91	6.17	
34 1S139	91	6.44	
34 1S139	91	6.44	
92 MAF-1-2.1	91.755	6.32	0.06
92 MAF-1-4.1	91.755	6.4	0.05
92 MAF-1-2.2	91.755	6.45	0.05
92 MAF-1-6.1	91.755	6.5	0.04
92 MAF-1-1.1	91.755	6.5	0.05
92 MAF-1-7.1	91.755	6.56	0.06
92 MAF-1-5.1	91.755	6.65	0.09
92 MAF-1-3.1	91.755	6.89	0.06
26 97TY-024	92	7.36	
26 97TY-024	92	7.36	
26 97TY-023	92	7.37	
26 97TY-023	92	7.37	
34 1S130	92	5.84	
34 1S88	92	5.84	
34 1S130	92	5.84	
34 1S88	92	5.84	
34 K1	92	6.46	
34 K1	92	6.46	
34 1S105	92.9	6.13	
34 1S105	92.9	6.13	
34 1S111	92.9	6.17	
34 1S111	92.9	6.17	
34 1S104	92.9	6.27	
34 1S104	92.9	6.27	
34 1S118	92.9	6.3	
34 1S118	92.9	6.3	
34 Y3	92.9	6.41	
34 Y3	92.9	6.41	
34 Y4	92.9	6.45	
34 Y4	92.9	6.45	
34 Y2	92.9	6.56	
34 Y2	92.9	6.56	
31 94TH473A	93	8.56	
31 94TH473A	93	8.56	
34 95BR073	93	5.55	
34 95BR073	93	5.55	
34 1S129	93	5.65	
34 1S129	93	5.65	
34 95BR035	93	5.98	

34 95BR035	93	5.98	
34 95BR075	93	6.01	
34 95BR075	93	6.01	
34 95BR077	93	6.07	
34 95BR077	93	6.07	
34 1S41	93	7.4	
34 1S41	93	7.4	
34 1S119	93.1	6.2	
34 1S119	93.1	6.2	
34 95-5	93.1	6.23	
34 95-5	93.1	6.23	
34 1S107	93.1	6.29	
34 1S107	93.1	6.29	
34 1S108	93.1	6.35	
34 1S108	93.1	6.35	
34 1S106	93.1	6.39	
34 1S106	93.1	6.39	
5 TT6	94	3.34	
5 TT6	94	3.34	
22 98IB-11	94	7.53	
22 98IB-11	94	7.53	
79 98IB-11	94	7.53	0.15
31 88SS1	95	8.18	
31 88SS1	95	8.18	
31 94TH486	95	8.61	
31 94TH486	95	8.61	
34 6-124	95	4.65	
34 6-124	95	4.65	
10 2641-54	96	6.2	0.3
10 2641-54	96	6.2	0.3
26 97TY-027	96	7.7	
26 97TY-027	96	7.7	
26 97TY-029	96	7.73	
26 97TY-029	96	7.73	
26 97TY-028	96	7.84	
26 97TY-028	96	7.84	
26 97TY-026	96	7.89	
26 97TY-026	96	7.89	
26 97TY-025	96	7.93	
26 97TY-025	96	7.93	
31 93TH385	96	9.54	
31 93TH385	96	9.54	
33 1S66	96	7.62	
33 1S66	96	7.62	
34 95BR069	96	5.98	

34 95BR069	96	5.98	
34 95BR032	96	6.07	
34 95BR032	96	6.07	
34 95BR071	96	6.59	
34 95BR071	96	6.59	
34 95BR038	96	6.69	
34 95BR038	96	6.69	
34 95BR040	96	6.7	
34 95BR040	96	6.7	
34 95BR037	96	6.75	
34 95BR037	96	6.75	
59 MO-1033	96	6.1	0.3
59 MO-1033	96	6.1	0.3
5 RNZ49	97	5.97	
5 RNZ49	97	5.97	
31 TC15	97	7.37	
31 TC15	97	7.37	
31 93TH254	97	7.95	
31 93TH254	97	7.95	
31 TC40	97	8.42	
31 TC40	97	8.42	
34 KC15	97	5.99	
34 KC15	97	5.99	
34 KC2	97	6.1	
34 KC2	97	6.1	
34 3S28	97	6.28	
34 3S28	97	6.28	
34 K4	97	6.5	
34 K4	97	6.5	
34 SQ22	97	6.75	
34 SQ22	97	6.75	
34 SQ13	97	6.8	
34 SQ13	97	6.8	
34 SQ5	97	7.42	
34 SQ5	97	7.42	
31 TC42	98	7.36	
31 TC42	98	7.36	
31 IS711	98	7.8	
31 IS711	98	7.8	
31 82SS17	98	8.88	
31 82SS17	98	8.88	
33 1S23	98	7.86	
33 1S23	98	7.86	
33 1S18	98	7.87	
33 1S18	98	7.87	

33 1S30	98	7.97
33 1S30	98	7.97
33 1S20	98	8.02
33 1S20	98	8.02
33 1S24	98	8.03
33 1S24	98	8.03
33 1S19	98	8.29
33 1S21	98	8.29
33 1S19	98	8.29
33 1S21	98	8.29
33 1S28	98	8.44
33 1S28	98	8.44
33 1S29	98	8.51
33 1S29	98	8.51
33 1S27	98	8.97
33 1S27	98	8.97
34 SQ46	98	6.62
34 SQ46	98	6.62
34 SQ48	98	6.69
34 SQ48	98	6.69
34 SQ12	98	6.73
34 SQ12	98	6.73
34 W34	98	7.11
34 W34	98	7.11
34 95-15	98	7.4
34 95-15	98	7.4
34 3S34	98	7.53
34 3S34	98	7.53
63 98KQ05	98	4.01
63 98KQ05	98	4.01
63 98KQ03	98	4.39
63 98KQ03	98	4.39
63 98KQ27	98	4.49
63 98KQ27	98	4.49
63 98KQ21	98	4.65
63 98KQ21	98	4.65
69 08JH324	98	5.74
31 ISP 182	99	6.66
31 ISP 182	99	6.66
33 1S5	99	7.15
33 1S5	99	7.15
34 1S134	99	5.78
34 1S134	99	5.78
34 1S133	99	5.89
34 1S133	99	5.89

34 KC5	99	7.38	
34 KC5	99	7.38	
34 KC18	99	7.44	
34 KC18	99	7.44	
34 SQ15	99	7.48	
34 SQ15	99	7.48	
34 3S27	99	8.25	
34 3S27	99	8.25	
22 98IB-22	100	5.72	
22 98IB-22	100	5.72	
22 98IB-31	100	5.78	
22 98IB-31	100	5.78	
22 98IB-33	100	6.33	
22 98IB-33	100	6.33	
31 CM22b	100	7.71	
31 CM22b	100	7.71	
31 CM9	100	7.77	
31 CM9	100	7.77	
31 CM26	100	7.83	
31 CM26	100	7.83	
31 82SS18	100	9.21	
31 82SS18	100	9.21	
34 SQ61	100	6.75	
34 SQ61	100	6.75	
34 SQ57	100	7.04	
34 W21	100	7.04	
34 SQ57	100	7.04	
34 W21	100	7.04	
34 3S29	100	7.07	
34 3S29	100	7.07	
34 SQ75	100	7.12	
34 SQ75	100	7.12	
34 SQ9	100	7.18	
34 SQ9	100	7.18	
34 W4 (mag)	100	7.77	
34 W4 (mag)	100	7.77	
79 01IB-22	100	5.72	0.03
79 01IB-18	100	5.75	0.01
79 98IB-31	100	5.78	
79 98IB-33	100	6.33	0.05
79 01IB-15	100	6.42	0.03
79 01IB-5	100	6.62	0.07
79 01IB-16	100	6.7	
79 98IB-40	100	7.41	0.04
79 01IB-3	100	7.62	0.03

79 01IB-1	100	7.66	0.01
79 98IB-39	100	7.67	0.03
79 98IB-34	100	7.75	0.11
79 01IB-6	100	7.76	0.01
79 01IB-8	100	8.34	0.01
80 01IB-22	100	5.72	
80 01IB-22	100	5.72	
80 01IB-18	100	5.75	
80 01IB-18	100	5.75	
80 01IB-15	100	6.42	
80 01IB-15	100	6.42	
80 01IB-5	100	6.62	
80 01IB-5	100	6.62	
80 01IB-16	100	6.7	
80 01IB-16	100	6.7	
80 01IB-3	100	7.62	
80 01IB-3	100	7.62	
80 01IB-1	100	7.66	
80 01IB-1	100	7.66	
80 01IB-6	100	7.76	
80 01IB-6	100	7.76	
80 01IB-8	100	8.34	
80 01IB-8	100	8.34	
5 TT6	101	1.69	
5 TT6	101	1.69	
10 2606-53	101	5.3	0.4
10 2606-53	101	5.3	0.4
10 2606-29	101	6.2	0.4
10 2606-29	101	6.2	0.4
31 CM25	101	7.28	
31 CM25	101	7.28	
31 GV3	101	7.45	
31 GV3	101	7.45	
31 IS1400	101	7.94	
31 IS1400	101	7.94	
31 94TH453	101	7.99	
31 94TH453	101	7.99	
34 W18	101	6.82	
34 W18	101	6.82	
10 2606-10	102	5.6	0.4
10 2606-10	102	5.6	0.4
31 L5P334A	102	5.07	
31 L5P334A	102	5.07	
31 82CNK107A	102	5.55	
31 82CNK107A	102	5.55	

31 WR 21 Z	102	6. 17
31 WR 21 Z	102	6. 17
31 WR86	102	6. 98
31 WR86	102	6. 98
31 WR84a	102	7. 11
31 WR84a	102	7. 11
31 TL197	102	7. 15
31 TL197	102	7. 15
31 82JB2	102	7. 38
31 82JB2	102	7. 38
34 F8	102	6. 56
34 F8	102	6. 56
34 95-14	102	6. 59
34 95-14	102	6. 59
34 1S90	102	6. 64
34 95-13	102	6. 64
34 1S90	102	6. 64
34 95-13	102	6. 64
34 95-1	102	6. 75
34 95-1	102	6. 75
34 95-12	102	6. 76
34 95-12	102	6. 76
34 95-11	102	6. 83
34 95-11	102	6. 83
34 95-10	102	6. 9
34 95-10	102	6. 9
34 YOS - 206	102	6. 97
34 YOS - 206	102	6. 97
34 F9	102	7. 03
34 F9	102	7. 03
34 SQ7	102	7. 05
34 SQ7	102	7. 05
34 96-24	102	7. 08
34 96-24	102	7. 08
34 96-9	102	7. 28
34 96-9	102	7. 28
34 95-17	102	7. 32
34 95-17	102	7. 32
34 95-16	102	7. 35
34 95-16	102	7. 35
34 96-6	102	7. 42
34 96-6	102	7. 42
34 F9. 5	102	7. 43
34 W19	102	7. 43
34 F9. 5	102	7. 43

34 W19	102	7.43	
34 96-5	102	7.44	
34 96-5	102	7.44	
34 96-8	102	7.49	
34 96-8	102	7.49	
34 95-2	102	7.58	
34 96-7	102	7.58	
34 95-2	102	7.58	
34 96-7	102	7.58	
10 2606-09	103	5	0.4
10 2606-09	103	5	0.4
31 82CNK108A	103	7.41	
31 82CNK108A	103	7.41	
34 OW4	103	5.15	
34 OW4	103	5.15	
34 OW34	103	5.33	
34 OW34	103	5.33	
34 YOS - 1	103	6.54	
34 YOS - 1	103	6.54	
34 96-21	103	6.62	
34 96-21	103	6.62	
34 YOS - 104	103	6.68	
34 YOS - 104	103	6.68	
34 96-19	103	6.73	
34 96-20	103	6.73	
34 96-19	103	6.73	
34 96-20	103	6.73	
34 95-6	103	7.01	
34 95-6	103	7.01	
34 96-4	103	7.28	
34 96-4	103	7.28	
34 96-3	103	7.59	
34 96-3	103	7.59	
34 96-2	103	7.65	
34 96-2	103	7.65	
69 08JH318	103	5.68	
69 08JH326	103	5.81	
69 08JH328	103	5.84	
5 RNZ49	104	7.86	
5 RNZ49	104	7.86	
10 2606-08	104	4.5	0.4
10 2606-08	104	4.5	0.4
34 YOS - 180	104	5.43	
34 YOS - 180	104	5.43	
34 1S103	104	6.46	

34 1S103	104	6.46	
34 W32	104	7.13	
34 W32	104	7.13	
10 2606-49	105	4.9	0.4
10 2606-49	105	4.9	0.4
10 2606-33b	105	5.3	0.4
10 2606-33b	105	5.3	0.4
31 L5P333A	105	4.97	
31 L5P333A	105	4.97	
31 L4P236A	105	5.4	
31 L4P236A	105	5.4	
31 GV1A	105	6.67	
31 GV1A	105	6.67	
31 89KK2	105	7.21	
31 89KK2	105	7.21	
31 89KK4	105	7.34	
31 89KK4	105	7.34	
31 82JB1	105	7.74	
31 82JB1	105	7.74	
31 91TH125B	105	7.77	
31 91TH125B	105	7.77	
31 IS93	105	8.5	
31 IS93	105	8.5	
34 1S127	105	6.02	
34 1S127	105	6.02	
34 W36	105	7.15	
34 W36	105	7.15	
59 M0-1034	105	7.2	0.2
59 M0-1034	105	7.2	0.2
26 Kdp	106	5.55	
26 Kdp	106	5.55	
26 Kdp	106	5.55	
26 Kdp	106	5.55	
31 82JB 004	106	7.32	
31 82JB 004	106	7.32	
5 RNZ49	107	5.9	
5 RNZ49	107	5.9	
10 2606-26	107	4.9	0.4
10 2606-26	107	4.9	0.4
10 2606-33a	107	5.4	0.4
10 2606-33a	107	5.4	0.4
5 RNZ20	108	2.07	
5 RNZ20	108	2.07	
10 2606-17	108	4	0.4
10 2606-17	108	4	0.4

10 2606-25	108	5.2	0.5
10 2606-25	108	5.2	0.5
10 2606-45	108	5.3	0.4
10 2606-45	108	5.3	0.4
34 W31	108	7.08	
34 W31	108	7.08	
34 KC16	108	7.1	
34 KC16	108	7.1	
5 TT6	109	0.97	
5 TT6	109	0.97	
5 RNZ83	110	5.15	
5 RNZ83	110	5.15	
5 RNZ83	110	5.19	
5 RNZ83	110	5.19	
10 2606-48	110	5.1	0.4
10 2606-48	110	5.1	0.4
31 I 14	110	5.47	
31 I 14	110	5.47	
31 PC35	110	7.79	
31 PC35	110	7.79	
33 1S2	110	7.64	
33 1S2	110	7.64	
33 1S3	110	7.89	
33 1S3	110	7.89	
33 1S1	110	7.93	
33 1S1	110	7.93	
33 1S4	110	8.25	
33 1S4	110	8.25	
34 KC11	110	7.64	
34 KC11	110	7.64	
34 KC6	110	7.67	
34 KC6	110	7.67	
34 F11	110	7.7	
34 F11	110	7.7	
5 NF3	111	3.77	
5 NF3	111	3.77	
5 RNZ49	111	5.33	
5 RNZ49	111	5.33	
33 1SG04	111	8.68	
33 1SG04	111	8.68	
34 W22	111	5.85	
34 W22	111	5.85	
34 W24	111	7.32	
34 W24	111	7.32	
34 SQ8	111	7.6	

34 SQ8	111	7.6	
10 2606-15	112	4.6	0.4
10 2606-15	112	4.6	0.4
26 Klm	112	5.46	
26 Klm	112	5.46	
26 Kcs	112	5.49	
26 Kcs	112	5.49	
26 Krs	112	5.59	
26 Krs	112	5.59	
26 Ktc	112	5.68	
26 Ktc	112	5.68	
26 Kbk	112	6.09	
26 Kbk	112	6.09	
26 Jungo Sill	112	6.99	
26 Jungo Sill	112	6.99	
26 Jhqdz	112	7.46	
26 Jhqdz	112	7.46	
26 Kas	112	7.68	
26 Kas	112	7.68	
31 PC36	112	7.9	
31 PC36	112	7.9	
34 OW7	112	4.61	
34 OW7	112	4.61	
34 W30	112	6.9	
34 W30	112	6.9	
34 1S94	112	8.08	
34 1S94	112	8.08	
5 RNZ20	113	5.31	
5 RNZ20	113	5.31	
5 RNZ49	113	5.41	
5 RNZ49	113	5.41	
5 RNZ20	113	5.92	
5 RNZ20	113	5.92	
10 2606-46	113	3.7	0.4
10 2606-46	113	3.7	0.4
10 2606-06	113	5.2	0.8
10 2606-06	113	5.2	0.8
31 WR91a	113	6.32	
31 WR91a	113	6.32	
31 WR39	113	7.43	
31 WR39	113	7.43	
31 PC32	113	8.03	
31 PC32	113	8.03	
88 CHW-1	113.6	5.78	
5 RNZ49	114	4.61	

5 RNZ49	114	4.61	
5 RNZ87	114	5.55	
5 RNZ87	114	5.55	
5 RNZ20	114	5.56	
5 RNZ20	114	5.56	
31 PC31	114	7.92	
31 PC31	114	7.92	
34 95-7	114	6.27	
34 95-7	114	6.27	
34 W2-H	114	6.35	
34 W2-H	114	6.35	
34 1S100	114	6.71	
34 1S100	114	6.71	
34 W3-H	114	6.9	
34 W3-H	114	6.9	
34 W1-H	114	6.96	
34 W1-H	114	6.96	
34 95-4	114	7	
34 95-4	114	7	
34 1S99	114	7.24	
34 1S99	114	7.24	
34 1S91	114	7.3	
34 1S91	114	7.3	
34 1S98	114	7.79	
34 1S98	114	7.79	
34 1S40	114	7.91	
34 1S40	114	7.91	
34 1S97	114	8.7	
34 1S97	114	8.7	
5 RNZ87	115	4.78	
5 RNZ87	115	4.78	
5 RNZ87	115	5.65	
5 RNZ87	115	5.65	
10 2606-27	115	4.7	0.4
10 2606-27	115	4.7	0.4
31 89KK5	115	5.7	
31 89KK5	115	5.7	
31 PC129	115	6.63	
31 PC129	115	6.63	
31 WR 9	115	6.76	
31 WR 9	115	6.76	
31 WR171	115	6.77	
31 WR171	115	6.77	
31 WR30/2	115	6.78	
31 WR30/2	115	6.78	

31 CM630	115	7.67	
31 CM630	115	7.67	
31 PC37	115	7.88	
31 PC37	115	7.88	
33 1S92	115	6.7	
33 1S92	115	6.7	
33 1S93	115	8.1	
33 1S93	115	8.1	
34 W26	115	6.46	
34 W26	115	6.46	
63 97SHG37	115	4.07	
63 97SHG37	115	4.07	
63 97SHG46	115	4.8	
63 97SHG46	115	4.8	
63 96SH03	115	4.83	
63 96SH03	115	4.83	
63 97SHG50	115	4.9	
63 97SHG50	115	4.9	
63 97SHG18	115	5.14	
63 97SHG18	115	5.14	
63 96SH02	115	5.39	
63 96SH02	115	5.39	
86 HLS-1	115.4	5.8	
5 RNZ87	116	4.81	
5 RNZ87	116	4.81	
5 WF01	116	5.25	
5 WF01	116	5.25	
5 RNZ49	116	6.06	
5 RNZ49	116	6.06	
33 1S96	116	8.68	
33 1S96	116	8.68	
33 1S95	116	8.72	
33 1S95	116	8.72	
34 W29	116	6.34	
34 W29	116	6.34	
5 RNZ20	117	5.54	
5 RNZ20	117	5.54	
5 RNZ87	117	5.73	
5 RNZ87	117	5.73	
10 2606-16	117	5.6	0.5
10 2606-16	117	5.6	0.5
31 PC34	117	6.99	
31 PC34	117	6.99	
31 WR643	117	7.85	
31 WR643	117	7.85	

31 WR40	117	7.89	
31 WR40	117	7.89	
31 TC12a	117	7.9	
31 TC12a	117	7.9	
84 DD-8	117.4	6.57	
84 BLZK15502-48	117.5	6.63	
5 SF2A	118	4.9	
5 SF2A	118	4.9	
5 RNZ83	118	5.22	
5 RNZ83	118	5.22	
5 RNZ87	118	5.96	
5 RNZ87	118	5.96	
31 SL 58	118	5.58	
31 SL 58	118	5.58	
84 BLZK17103-36	118.4	6.66	
84 BLZK17103-33	118.5	6.54	
84 BLZK15502-55	118.5	6.56	
84 BLZK17103-46	118.6	6.5	
5 WF01	119	4.12	
5 WF01	119	4.12	
5 NF3	119	5.04	
5 NF3	119	5.04	
5 RNZ87	119	5.13	
5 RNZ87	119	5.13	
5 RNZ49	119	5.98	
5 RNZ49	119	5.98	
9 09DB100 6	119	4.5	0.2
9 09DB100 6	119	4.5	0.2
10 2606-31b	119	4.9	0.4
10 2606-31b	119	4.9	0.4
34 W16	119	5.82	
34 W16	119	5.82	
5 RNZ83	120	2.26	
5 RNZ83	120	2.26	
5 NF3	120	3.96	
5 NF3	120	3.96	
5 NF3	120	4.61	
5 NF3	120	4.61	
5 SF2A	120	5.16	
5 SF2A	120	5.16	
9 09DB100 1	120	4.4	0.2
9 09DB100 1	120	4.4	0.2
31 RH53	120	5.6	
31 RH53	120	5.6	
31 CM20	120	5.64	

31 CM20	120	5.64
63 95LS05	120	4.83
63 95LS05	120	4.83
63 95LS06	120	4.95
63 95LS06	120	4.95
63 95LS03	120	4.97
63 95LS03	120	4.97
63 95LS04	120	5.03
63 95LS04	120	5.03
63 95LS01	120	5.09
63 95LS08	120	5.09
63 95LS01	120	5.09
63 95LS08	120	5.09
63 95LS02	120	5.19
63 95LS02	120	5.19
63 95LS07	120	5.33
63 95LS07	120	5.33
63 95LS09	120	5.46
63 95LS09	120	5.46
64 01SKS02	120	4.48
64 01SKS02	120	4.48
64 01HP06	120	4.51
64 01HP06	120	4.51
64 01HP04	120	4.55
64 01HP04	120	4.55
64 01MS01	120	4.6
64 01MS01	120	4.6
64 01MDS02	120	4.61
64 01MDS02	120	4.61
64 01HP05	120	4.62
64 01SCH02	120	4.62
64 01HP05	120	4.62
64 01SCH02	120	4.62
64 01SKS01	120	4.63
64 01SKS01	120	4.63
64 01TTZ03	120	4.68
64 01TTZ03	120	4.68
64 01FQZ01	120	4.74
64 01HP02	120	4.74
64 01FQZ01	120	4.74
64 01HP02	120	4.74
64 01ZBY03	120	4.78
64 01ZBY03	120	4.78
64 01ZBY04	120	4.85
64 01ZBY04	120	4.85

64 01MDS01	120	4.87
64 01MDS01	120	4.87
64 01XD02	120	4.96
64 01XD02	120	4.96
64 01MS02	120	5.09
64 01MS02	120	5.09
64 01ZBY05	120	5.12
64 01ZBY05	120	5.12
64 01XD01	120	5.18
64 01XD01	120	5.18
64 01JJZ03	120	5.27
64 01ZBY06	120	5.27
64 01JJZ03	120	5.27
64 01ZBY06	120	5.27
64 01TTZ01	120	5.31
64 01TTZ01	120	5.31
64 01BMJ03	120	5.33
64 01BMJ03	120	5.33
64 01BMJ06	120	5.34
64 01BMJ06	120	5.34
64 01TTZ05	120	5.35
64 01TTZ05	120	5.35
64 01BMJ14	120	5.36
64 01BMJ14	120	5.36
64 01BMJ08	120	5.41
64 01BMJ08	120	5.41
64 01TTZ06	120	5.42
64 01TTZ06	120	5.42
64 01BMJ13	120	5.44
64 01BMJ13	120	5.44
64 01GB02	120	5.48
64 01GB02	120	5.48
64 01BMJ11	120	5.53
64 01GB03	120	5.53
64 01BMJ11	120	5.53
64 01GB03	120	5.53
64 01JJZ01	120	5.79
64 01JJZ01	120	5.79
64 01MC03	120	5.94
64 01MC03	120	5.94
64 01MC04	120	5.97
64 01MC04	120	5.97
64 01MC02	120	6
64 01MC02	120	6
64 01SCH01	120	6.08

64 01SCH01	120	6.08	
5 TT6	121	3.25	
5 TT6	121	3.25	
5 RNZ83	121	4.78	
5 RNZ83	121	4.78	
10 2606-31a	121	5.2	0.4
10 2606-31a	121	5.2	0.4
5 WF01	122	3.66	
5 WF01	122	3.66	
5 WF01	122	5.75	
5 WF01	122	5.75	
5 RNZ20	122	5.84	
5 RNZ20	122	5.84	
10 2606-01	122	4.6	0.3
10 2606-01	122	4.6	0.3
63 97Nzs11	122	3.1	
63 97Nzs11	122	3.1	
63 97Nzs32	122	3.37	
63 97Nzs32	122	3.37	
63 97Nzs05	122	3.52	
63 97Nzs05	122	3.52	
63 97Nzs19	122	3.58	
63 97Nzs19	122	3.58	
63 97Nzs53	122	4.02	
63 97Nzs53	122	4.02	
63 97Nzs08	122	4.06	
63 97Nzs08	122	4.06	
63 97Nzs07	122	4.1	
63 97Nzs07	122	4.1	
63 97Nzs45	122	4.17	
63 97Nzs45	122	4.17	
18 NIL-anu-zrn-l	122.782554	4.66833084	0.92508392
18 NIL-anu-zrn-l	122.782554	4.66833084	0.92508392
5 TT6	123	3.1	
5 TT6	123	3.1	
5 NF3	123	3.24	
5 NF3	123	3.24	
5 WF01	123	4.68	
5 WF01	123	4.68	
5 NF3	123	4.93	
5 NF3	123	4.93	
5 WF01	123	5.34	
5 WF01	123	5.34	
5 WF01	123	5.42	
5 WF01	123	5.42	

31 A131	123	6.29	
31 A131	123	6.29	
5 NF3	124	4.27	
5 NF3	124	4.27	
5 NF3	124	4.37	
5 NF3	124	4.37	
5 NF3	124	4.83	
5 NF3	124	4.83	
5 WF01	124	4.98	
5 WF01	124	4.98	
9 09DB100 14	124	4.3	0.2
9 09DB100 14	124	4.3	0.2
9 09DB97 8	124	5.6	0.2
9 09DB97 8	124	5.6	0.2
10 2606-13	124	2.7	0.4
10 2606-13	124	2.7	0.4
5 SF2A	125	3.61	
5 SF2A	125	3.61	
5 SF2A	125	3.85	
5 SF2A	125	3.85	
5 SF2A	125	5.08	
5 SF2A	125	5.08	
5 WF01	125	6.07	
5 WF01	125	6.07	
9 09ZJP01 2	125	2.9	0.2
9 09ZJP01 2	125	2.9	0.2
9 09ZJP01 15	125	4.5	0.2
9 09ZJP01 15	125	4.5	0.2
9 09ZJP01 10	125	4.9	0.3
9 09ZJP01 10	125	4.9	0.3
9 09DB97 5	125	5.9	0.2
9 09DB97 5	125	5.9	0.2
9 09DB100 9	125	7	0.2
9 09DB100 9	125	7	0.2
62 DMC-1. S02	125	6.6	0.2
62 DMC-1. S02	125	6.6	0.2
5 NF3	126	3.53	
5 NF3	126	3.53	
5 SF2A	126	4.92	
5 SF2A	126	4.92	
5 WF01	126	5.87	
5 WF01	126	5.87	
9 09DB100 2	126	4.2	0.2
9 09DB100 2	126	4.2	0.2
9 09DB100 11	126	4.3	0.2

9 09DB100 11	126	4.3	0.2
9 09DB100 2	126	4.5	0.1
9 09DB100 2	126	4.5	0.1
9 09ZJP01 3	126	4.6	0.1
9 09ZJP01 3	126	4.6	0.1
9 09ZJP01 5	126	4.7	0.1
9 09ZJP01 5	126	4.7	0.1
9 09ZJP01 8	126	4.8	0.2
9 09ZJP01 8	126	4.8	0.2
9 09DB97 17	126	5.8	0.3
9 09DB97 17	126	5.8	0.3
9 09DB97 6	126	6.3	0.2
9 09DB97 6	126	6.3	0.2
34 W6	126	8.03	
34 W6	126	8.03	
62 DMC-1. S15	126	6.3	0.3
62 DMC-1. S23	126	6.3	0.3
62 DMC-1. S15	126	6.3	0.3
62 DMC-1. S23	126	6.3	0.3
63 96SZ69	126	4.79	
63 96SZ69	126	4.79	
63 96SZ52	126	4.81	
63 96SZ52	126	4.81	
63 96SZ05	126	4.86	
63 96SZ05	126	4.86	
63 96SZ33	126	4.88	
63 96SZ33	126	4.88	
63 96SZ17	126	4.93	
63 96SZ17	126	4.93	
63 96SZ22	126	4.96	
63 96SZ22	126	4.96	
63 96SZ45	126	4.98	
63 96SZ83	126	4.98	
63 96SZ45	126	4.98	
63 96SZ83	126	4.98	
63 96SZ28	126	4.99	
63 96SZ28	126	4.99	
63 96SZ54	126	5.03	
63 96SZ81	126	5.03	
63 96SZ54	126	5.03	
63 96SZ81	126	5.03	
63 S-2	126	5.05	
63 S-2	126	5.05	
63 96SZ91	126	5.06	
63 96SZ91	126	5.06	

63 S-1	126	5.13	
63 S-1	126	5.13	
9 09ZJP01 5	127	4.1	0.2
9 09ZJP01 5	127	4.1	0.2
9 09DB100 10	127	4.3	0.3
9 09DB100 7	127	4.3	0.3
9 09DB100 10	127	4.3	0.3
9 09DB100 7	127	4.3	0.3
9 09ZJP01 12	127	4.5	0.2
9 09ZJP01 12	127	4.5	0.2
9 09DB100 16	127	4.6	0.2
9 09ZJP01 1	127	4.6	0.2
9 09DB100 16	127	4.6	0.2
9 09ZJP01 1	127	4.6	0.2
9 09ZJP01 13	127	4.6	0.3
9 09ZJP01 13	127	4.6	0.3
9 09DB100 11	127	4.9	0.2
9 09DB100 11	127	4.9	0.2
9 09DB97 15	127	5.5	0.2
9 09DB97 15	127	5.5	0.2
9 09DSC04 14	127	5.7	0.2
9 09DSC04 6	127	5.7	0.2
9 09DSC04 14	127	5.7	0.2
9 09DSC04 6	127	5.7	0.2
9 09DB97 12	127	6.2	0.2
9 09DSC04 3	127	6.2	0.2
9 09DB97 12	127	6.2	0.2
9 09DSC04 3	127	6.2	0.2
62 FJZ-1. FS07	127	5.7	0.3
62 FJZ-1. FS07	127	5.7	0.3
62 DMC-1. S07	127	5.8	0.2
62 DMC-1. S07	127	5.8	0.2
62 DMC-1. S20	127	5.8	0.3
62 FJZ-1. S13	127	5.8	0.3
62 DMC-1. S20	127	5.8	0.3
62 FJZ-1. S13	127	5.8	0.3
62 DMC-1. S22	127	5.9	0.3
62 DMC-1. S22	127	5.9	0.3
5 TT6	128	3.48	
5 TT6	128	3.48	
5 NF3	128	4.11	
5 NF3	128	4.11	
5 NF3	128	4.19	
5 NF3	128	4.19	
9 09ZJP01 1	128	4.1	0.2

9 09ZJP01 1	128	4.1	0.2
9 09DB100 14	128	4.5	0.3
9 09DB100 14	128	4.5	0.3
9 09DB100 6	128	4.6	0.2
9 09DB100 6	128	4.6	0.2
9 09ZJP01 8	128	5.1	0.2
9 09ZJP01 8	128	5.1	0.2
9 09DSC04 12	128	5.5	0.2
9 09DSC04 12	128	5.5	0.2
9 09DB97 2	128	5.6	0.3
9 09DB97 2	128	5.6	0.3
9 09DSC04 16	128	5.9	0.2
9 09DSC04 16	128	5.9	0.2
9 09DSC04 18	128	6	0.2
9 09DSC04 18	128	6	0.2
9 09DSC04 12	128	6.1	0.2
9 09DSC04 12	128	6.1	0.2
9 09DSC04 3	128	6.3	0.2
9 09DSC04 3	128	6.3	0.2
9 09DSC04 9	128	6.7	0.3
9 09DSC04 9	128	6.7	0.3
62 DMC-1. S05	128	6.5	0.3
62 DMC-1. S05	128	6.5	0.3
9 09ZJP01 2	129	2.5	0.3
9 09ZJP01 2	129	2.5	0.3
9 09DB100 10	129	4	0.2
9 09DB100 10	129	4	0.2
9 09ZJP01 15	129	4.2	0.3
9 09ZJP01 15	129	4.2	0.3
9 09DB100 17	129	4.8	0.2
9 09DB100 17	129	4.8	0.2
9 09DB97 15	129	6	0.2
9 09DB97 15	129	6	0.2
62 FJZ-1. S10	129	5.9	0.2
62 FJZ-1. S10	129	5.9	0.2
62 QTJ-2. S07	129	6	0.3
62 QTJ-2. S07	129	6	0.3
62 DMC-1. S04	129	6.2	0.3
62 DMC-1. S04	129	6.2	0.3
62 WS02-1	129	7.94	0.36
62 WS02-1	129	7.94	0.36
9 09ZJP01 4	130	2	0.2
9 09ZJP01 4	130	2	0.2
9 09ZJP01 11	130	2.1	0.2
9 09ZJP01 11	130	2.1	0.2

9 09ZJP01 14	130	2.2	0.2
9 09ZJP01 14	130	2.2	0.2
9 09DB100 13	130	4.4	0.2
9 09ZJP01 3	130	4.4	0.2
9 09DB100 13	130	4.4	0.2
9 09ZJP01 3	130	4.4	0.2
9 09DSC04 14	130	5.5	0.2
9 09DSC04 14	130	5.5	0.2
9 09DB97 5	130	5.7	0.2
9 09DB97 5	130	5.7	0.2
9 09DB97 12	130	5.8	0.2
9 09DB97 12	130	5.8	0.2
9 09DSC04 9	130	5.9	0.3
9 09DSC04 9	130	5.9	0.3
9 09DB97 6	130	7.3	0.3
9 09DB97 6	130	7.3	0.3
62 DMC-1. S17	130	5.7	0.2
62 DMC-1. S17	130	5.7	0.2
62 QTJ-2. S12	130	6	0.4
62 QTJ-2. S12	130	6	0.4
62 DMC-1. S06	130	6.5	0.2
62 DMC-1. S06	130	6.5	0.2
62 FJZ-1. S02	130	6.5	0.3
62 FJZ-1. S02	130	6.5	0.3
62 DMC-1. S01	130	6.7	0.3
62 DMC-1. S01	130	6.7	0.3
5 RNZ87	131	4.45	
5 RNZ87	131	4.45	
5 TT6	131	8.98	
5 TT6	131	8.98	
9 09ZJP01 4	131	2.3	0.2
9 09ZJP01 4	131	2.3	0.2
9 09DB97 4	131	5.5	0.2
9 09DB97 4	131	5.5	0.2
9 09DB97 17	131	5.6	0.2
9 09DB97 17	131	5.6	0.2
9 09DSC04 6	131	5.7	0.2
9 09DSC04 6	131	5.7	0.2
9 09DSC04 18	131	6	0.3
9 09DSC04 18	131	6	0.3
9 09DSC04 16	131	6.4	0.2
9 09DSC04 16	131	6.4	0.2
62 DMC-1. S18	131	6.1	0.2
62 DMC-1. S18	131	6.1	0.2
62 FJZ-1. S05	131	6.2	0.3

62 FJZ-1. S05	131	6.2	0.3
62 DMC-1. S03	131	6.3	0.2
62 DMC-1. S03	131	6.3	0.2
62 FJZ-1. S03	131	6.4	0.3
62 FJZ-1. S03	131	6.4	0.3
62 TLS01-14	131	7.42	0.33
62 TLS01-14	131	7.42	0.33
9 09DB97 2	132	5.2	0.2
9 09DB97 2	132	5.2	0.2
9 09DSC04 1	132	5.9	0.2
9 09DSC04 1	132	5.9	0.2
62 FJZ-1. S12	132	5.6	0.3
62 FJZ-1. S12	132	5.6	0.3
62 DMC-1. S21	132	5.9	0.1
62 DMC-1. S21	132	5.9	0.1
62 DMC-1. S16	132	6	0.2
62 DMC-1. S16	132	6	0.2
62 DMC-1. S14	132	6.1	0.2
62 DMC-1. S14	132	6.1	0.2
62 DMC-1. S11	132	6.1	0.3
62 DMC-1. S11	132	6.1	0.3
62 TGS-7-1. S02	132	6.6	0.3
62 TGS-7-1. S02	132	6.6	0.3
5 SF2A	133	4.11	
5 SF2A	133	4.11	
5 RNZ20	133	5.76	
5 RNZ20	133	5.76	
9 09ZJP01 14	133	2.5	0.3
9 09ZJP01 14	133	2.5	0.3
53 08FS09 22	133	4.84730201	0.2577174
53 08FS09 22	133	4.84730201	0.2577174
53 08FS09 26	133	5.68001197	0.2742206
53 08FS09 26	133	5.68001197	0.2742206
53 08FS10 25	133	6.1555755	0.2892558
53 08FS10 25	133	6.1555755	0.2892558
53 08FS09 24	133	6.20202972	0.19348678
53 08FS09 24	133	6.20202972	0.19348678
53 08FS07 13	133	6.27237183	0.326706
53 08FS07 13	133	6.27237183	0.326706
53 08FS07 03	133	6.28353655	0.3832
53 08FS07 03	133	6.28353655	0.3832
53 08FS13 02	133	6.31641981	0.3511386
53 08FS13 02	133	6.31641981	0.3511386
53 08FS09 23	133	6.34553162	0.3686444
53 08FS09 23	133	6.34553162	0.3686444

53 08FS10 18	133	6. 35006982	0. 3118762
53 08FS10 18	133	6. 35006982	0. 3118762
53 08FS08 02	133	6. 36314208	0. 1841542
53 08FS08 02	133	6. 36314208	0. 1841542
53 08FS13 03	133	6. 38807102	0. 3547044
53 08FS13 03	133	6. 38807102	0. 3547044
53 08FS02 34	133	6. 41151007	0. 2385816
53 08FS02 34	133	6. 41151007	0. 2385816
53 08FS10 27	133	6. 42476312	0. 2733212
53 08FS10 27	133	6. 42476312	0. 2733212
53 08FS09 16	133	6. 43145821	0. 2425708
53 08FS09 16	133	6. 43145821	0. 2425708
53 08FS13 07	133	6. 43285458	0. 2885338
53 08FS13 07	133	6. 43285458	0. 2885338
53 08FS09 07	133	6. 44891283	0. 255796
53 08FS09 07	133	6. 44891283	0. 255796
53 08FS13 11	133	6. 45380012	0. 3091376
53 08FS13 11	133	6. 45380012	0. 3091376
53 08FS07 02	133	6. 45689208	0. 326657
53 08FS07 02	133	6. 45689208	0. 326657
53 08FS09 20	133	6. 46447237	0. 2608648
53 08FS09 20	133	6. 46447237	0. 2608648
53 08FS10 06	133	6. 47775925	0. 4017354
53 08FS10 06	133	6. 47775925	0. 4017354
53 08FS10 11	133	6. 49938161	0. 3722778
53 08FS10 11	133	6. 49938161	0. 3722778
53 08FS09 30	133	6. 49963096	0. 2477706
53 08FS09 30	133	6. 49963096	0. 2477706
53 08FS09 31	133	6. 50071148	0. 3381344
53 08FS09 31	133	6. 50071148	0. 3381344
53 08FS09 06	133	6. 50623878	0. 2088252
53 08FS09 06	133	6. 50623878	0. 2088252
53 08FS10 24	133	6. 52491522	0. 2698096
53 08FS10 24	133	6. 52491522	0. 2698096
53 08FS10 19	133	6. 52691003	0. 3393394
53 08FS10 19	133	6. 52691003	0. 3393394
53 08FS09 04	133	6. 54089866	0. 17562444
53 08FS09 04	133	6. 54089866	0. 17562444
53 08FS13 05	133	6. 56939956	0. 4000032
53 08FS13 05	133	6. 56939956	0. 4000032
53 08FS09 14	133	6. 57928923	0. 294142
53 08FS09 14	133	6. 57928923	0. 294142
53 08FS09 18	133	6. 58525833	0. 2419212
53 08FS09 18	133	6. 58525833	0. 2419212
53 08FS10 04	133	6. 60268445	0. 2378182

53 08FS10 04	133	6. 60268445	0. 2378182
53 08FS07 19	133	6. 62582558	0. 3981622
53 08FS07 19	133	6. 62582558	0. 3981622
53 08FS13 10	133	6. 63323359	0. 2974994
53 08FS13 10	133	6. 63323359	0. 2974994
53 08FS09 05	133	6. 63577698	0. 3181654
53 08FS09 05	133	6. 63577698	0. 3181654
53 08FS07 05	133	6. 64481598	0. 3414846
53 08FS07 05	133	6. 64481598	0. 3414846
53 08FS13 09	133	6. 65288251	0. 3050348
53 08FS13 09	133	6. 65288251	0. 3050348
53 08FS07 17	133	6. 65461437	0. 3359564
53 08FS07 17	133	6. 65461437	0. 3359564
53 08FS07 04	133	6. 66364203	0. 296618
53 08FS07 04	133	6. 66364203	0. 296618
53 08FS07 01	133	6. 66475165	0. 2453144
53 08FS07 01	133	6. 66475165	0. 2453144
53 08FS09 19	133	6. 67841612	0. 2697734
53 08FS09 19	133	6. 67841612	0. 2697734
53 08FS08 16	133	6. 67897716	0. 221661
53 08FS08 16	133	6. 67897716	0. 221661
53 08FS09 27	133	6. 68190704	0. 286237
53 08FS09 27	133	6. 68190704	0. 286237
53 08FS10 22	133	6. 68410134	0. 3118518
53 08FS10 22	133	6. 68410134	0. 3118518
53 08FS07 12	133	6. 684999	0. 3645108
53 08FS07 12	133	6. 684999	0. 3645108
53 08FS10 08	133	6. 68764213	0. 3154242
53 08FS10 08	133	6. 68764213	0. 3154242
53 08FS08 09	133	6. 70933573	0. 19783804
53 08FS08 09	133	6. 70933573	0. 19783804
53 08FS08 06	133	6. 70997692	0. 2050104
53 08FS08 06	133	6. 70997692	0. 2050104
53 08FS07 16	133	6. 71241862	0. 3083148
53 08FS07 16	133	6. 71241862	0. 3083148
53 08FS07 18	133	6. 71250929	0. 3000534
53 08FS07 18	133	6. 71250929	0. 3000534
53 08FS07 09	133	6. 7256932	0. 324051
53 08FS07 09	133	6. 7256932	0. 324051
53 08FS02 06	133	6. 72815045	0. 2376524
53 08FS02 06	133	6. 72815045	0. 2376524
53 08FS09 02	133	6. 73501895	0. 2093326
53 08FS09 02	133	6. 73501895	0. 2093326
53 08FS10 09	133	6. 73847425	0. 2484574
53 08FS10 09	133	6. 73847425	0. 2484574

53 08FS13 08	133	6. 75082785	0. 2642226
53 08FS13 08	133	6. 75082785	0. 2642226
53 08FS10 10	133	6. 75087059	0. 2104052
53 08FS10 10	133	6. 75087059	0. 2104052
53 08FS08 01	133	6. 75100863	0. 2342022
53 08FS08 01	133	6. 75100863	0. 2342022
53 08FS13 12	133	6. 75132655	0. 2930912
53 08FS13 12	133	6. 75132655	0. 2930912
53 08FS09 21	133	6. 76120088	0. 243208
53 08FS09 21	133	6. 76120088	0. 243208
53 08FS08 08	133	6. 79475649	0. 3121512
53 08FS08 08	133	6. 79475649	0. 3121512
53 08FS13 04	133	6. 79491323	0. 2936536
53 08FS13 04	133	6. 79491323	0. 2936536
53 08FS07 08	133	6. 82214243	0. 3427322
53 08FS07 08	133	6. 82214243	0. 3427322
53 08FS08 03	133	6. 82391283	0. 16209992
53 08FS08 03	133	6. 82391283	0. 16209992
53 08FS02 33	133	6. 83121883	0. 4243344
53 08FS02 33	133	6. 83121883	0. 4243344
53 08FS01 24	133	6. 83969679	0. 3423864
53 08FS01 24	133	6. 83969679	0. 3423864
53 08FS09 08	133	6. 84608019	0. 2760194
53 08FS09 08	133	6. 84608019	0. 2760194
53 08FS10 15	133	6. 84950974	0. 2229276
53 08FS10 15	133	6. 84950974	0. 2229276
53 08FS10 07	133	6. 86322134	0. 2114892
53 08FS10 07	133	6. 86322134	0. 2114892
53 08FS02 32	133	6. 88517854	0. 417362
53 08FS02 32	133	6. 88517854	0. 417362
53 08FS07 15	133	6. 88542335	0. 2320012
53 08FS07 15	133	6. 88542335	0. 2320012
53 08FS09 01	133	6. 89447935	0. 2843354
53 08FS09 01	133	6. 89447935	0. 2843354
53 08FS02 22	133	6. 90213445	0. 2136164
53 08FS02 22	133	6. 90213445	0. 2136164
53 08FS09 25	133	6. 912308	0. 2888494
53 08FS09 25	133	6. 912308	0. 2888494
53 08FS13 13	133	6. 91420307	0. 3866584
53 08FS13 13	133	6. 91420307	0. 3866584
53 08FS10 03	133	6. 91928985	0. 3362002
53 08FS10 03	133	6. 91928985	0. 3362002
53 08FS09 03	133	6. 92165869	0. 3469486
53 08FS09 03	133	6. 92165869	0. 3469486
53 08FS13 06	133	6. 92238181	0. 3626524

53 08FS13 06	133	6. 92238181	0. 3626524
53 08FS07 14	133	6. 9299621	0. 3549824
53 08FS07 14	133	6. 9299621	0. 3549824
53 08FS08 07	133	6. 93275484	0. 30304
53 08FS08 07	133	6. 93275484	0. 30304
53 08FS13 14	133	6. 93345302	0. 2655744
53 08FS13 14	133	6. 93345302	0. 2655744
53 08FS09 15	133	6. 9425371	0. 2495482
53 08FS09 15	133	6. 9425371	0. 2495482
53 08FS10 26	133	6. 9494614	0. 2808572
53 08FS10 26	133	6. 9494614	0. 2808572
53 08FS08 04	133	6. 95484027	0. 2365928
53 08FS08 04	133	6. 95484027	0. 2365928
53 08FS02 25	133	6. 96009002	0. 2745126
53 08FS02 25	133	6. 96009002	0. 2745126
53 08FS13 01	133	6. 97177838	0. 3303842
53 08FS13 01	133	6. 97177838	0. 3303842
53 08FS08 27	133	6. 9834231	0. 2575122
53 08FS08 27	133	6. 9834231	0. 2575122
53 08FS09 09	133	6. 98641532	0. 18870638
53 08FS09 09	133	6. 98641532	0. 18870638
53 08FS10 05	133	7. 00182525	0. 3141102
53 08FS10 05	133	7. 00182525	0. 3141102
53 08FS10 02	133	7. 00207461	0. 2306014
53 08FS10 02	133	7. 00207461	0. 2306014
53 08FS10 20	133	7. 01045282	0. 4164558
53 08FS10 20	133	7. 01045282	0. 4164558
53 08FS01 13	133	7. 02887991	0. 19731694
53 08FS01 13	133	7. 02887991	0. 19731694
53 08FS02 07	133	7. 03012667	0. 18596552
53 08FS02 07	133	7. 03012667	0. 18596552
53 08FS10 23	133	7. 03189707	0. 371249
53 08FS10 23	133	7. 03189707	0. 371249
53 08FS01 11	133	7. 03834394	0. 2803088
53 08FS01 11	133	7. 03834394	0. 2803088
53 08FS02 21	133	7. 04236984	0. 3035502
53 08FS02 21	133	7. 04236984	0. 3035502
53 08FS01 07	133	7. 05390859	0. 2420286
53 08FS01 07	133	7. 05390859	0. 2420286
53 08FS09 33	133	7. 0585176	0. 295237
53 08FS09 33	133	7. 0585176	0. 295237
53 08FS13 15	133	7. 06461201	0. 420225
53 08FS13 15	133	7. 06461201	0. 420225
53 08FS02 08	133	7. 07862557	0. 2185608
53 08FS02 08	133	7. 07862557	0. 2185608

53 08FS08 05	133	7. 09782565	0. 3085002
53 08FS08 05	133	7. 09782565	0. 3085002
53 08FS08 17	133	7. 10795317	0. 3005674
53 08FS08 17	133	7. 10795317	0. 3005674
53 08FS02 27	133	7. 13345178	0. 3756372
53 08FS02 27	133	7. 13345178	0. 3756372
53 08FS10 16	133	7. 13498545	0. 291944
53 08FS10 16	133	7. 13498545	0. 291944
53 08FS08 26	133	7. 15427887	0. 3466316
53 08FS08 26	133	7. 15427887	0. 3466316
53 08FS09 12	133	7. 16527528	0. 2085362
53 08FS09 12	133	7. 16527528	0. 2085362
53 08FS02 19	133	7. 17133453	0. 3069864
53 08FS02 19	133	7. 17133453	0. 3069864
53 08FS08 10	133	7. 17327235	0. 3125244
53 08FS08 10	133	7. 17327235	0. 3125244
53 08FS10 21	133	7. 18280471	0. 320845
53 08FS10 21	133	7. 18280471	0. 320845
53 08FS09 13	133	7. 20397275	0. 2477654
53 08FS09 13	133	7. 20397275	0. 2477654
53 08FS01 15	133	7. 20916118	0. 2782082
53 08FS01 15	133	7. 20916118	0. 2782082
53 08FS01 12	133	7. 21420489	0. 3142738
53 08FS01 12	133	7. 21420489	0. 3142738
53 08FS02 31	133	7. 23107919	0. 3106984
53 08FS02 31	133	7. 23107919	0. 3106984
53 08FS02 24	133	7. 23407141	0. 343336
53 08FS02 24	133	7. 23407141	0. 343336
53 08FS10 13	133	7. 23443202	0. 3409302
53 08FS10 13	133	7. 23443202	0. 3409302
53 08FS02 12	133	7. 24070417	0. 2493702
53 08FS02 12	133	7. 24070417	0. 2493702
53 08FS08 14	133	7. 24764446	0. 13733888
53 08FS08 14	133	7. 24764446	0. 13733888
53 08FS01 08	133	7. 25697437	0. 3012858
53 08FS01 08	133	7. 25697437	0. 3012858
53 08FS10 14	133	7. 26147708	0. 2923262
53 08FS10 14	133	7. 26147708	0. 2923262
53 08FS08 15_1	133	7. 26154581	0. 16817436
53 08FS08 15_1	133	7. 26154581	0. 16817436
53 08FS08 18	133	7. 2626663	0. 3532882
53 08FS08 18	133	7. 2626663	0. 3532882
53 08FS02 20	133	7. 27745861	0. 3159516
53 08FS02 20	133	7. 27745861	0. 3159516
53 08FS13 17	133	7. 28094953	0. 3731724

53 08FS13 17	133	7. 28094953	0. 3731724
53 08FS10 17	133	7. 28827919	0. 3327406
53 08FS10 17	133	7. 28827919	0. 3327406
53 08FS01 06	133	7. 2940881	0. 277213
53 08FS01 06	133	7. 2940881	0. 277213
53 08FS08 20	133	7. 29770596	0. 2261644
53 08FS08 20	133	7. 29770596	0. 2261644
53 08FS02 05	133	7. 31099868	0. 2799272
53 08FS02 05	133	7. 31099868	0. 2799272
53 08FS02 23	133	7. 31147018	0. 3628272
53 08FS02 23	133	7. 31147018	0. 3628272
53 08FS02 35	133	7. 32383802	0. 4474562
53 08FS02 35	133	7. 32383802	0. 4474562
53 08FS09 10	133	7. 32610712	0. 19297074
53 08FS09 10	133	7. 32610712	0. 19297074
53 08FS02 26	133	7. 3584605	0. 2813702
53 08FS02 26	133	7. 3584605	0. 2813702
53 08FS09 11	133	7. 37485538	0. 2018596
53 08FS09 11	133	7. 37485538	0. 2018596
53 08FS13 19	133	7. 38381891	0. 351778
53 08FS13 19	133	7. 38381891	0. 351778
53 08FS02 18	133	7. 38637542	0. 3159218
53 08FS02 18	133	7. 38637542	0. 3159218
53 08FS07 20	133	7. 39337541	0. 3196928
53 08FS07 20	133	7. 39337541	0. 3196928
53 08FS01 05	133	7. 3955969	0. 2676672
53 08FS01 05	133	7. 3955969	0. 2676672
53 08FS02 11	133	7. 40552563	0. 17087464
53 08FS02 11	133	7. 40552563	0. 17087464
53 08FS13 20	133	7. 42544752	0. 273931
53 08FS13 20	133	7. 42544752	0. 273931
53 08FS10 01	133	7. 4444245	0. 16617376
53 08FS10 01	133	7. 4444245	0. 16617376
53 08FS01 14	133	7. 45365051	0. 2512878
53 08FS01 14	133	7. 45365051	0. 2512878
53 08FS02 29	133	7. 45858767	0. 2514514
53 08FS02 29	133	7. 45858767	0. 2514514
53 08FS01 04	133	7. 46759153	0. 1640006
53 08FS01 04	133	7. 46759153	0. 1640006
53 08FS07 11	133	7. 47015759	0. 2763732
53 08FS07 11	133	7. 47015759	0. 2763732
53 08FS07 07	133	7. 4716537	0. 2693284
53 08FS07 07	133	7. 4716537	0. 2693284
53 08FS13 16	133	7. 47474566	0. 2985166
53 08FS13 16	133	7. 47474566	0. 2985166

53 08FS08 11	133	7. 4767571	0. 19143152
53 08FS08 11	133	7. 4767571	0. 19143152
53 08FS02 28	133	7. 48993118	0. 3517354
53 08FS02 28	133	7. 48993118	0. 3517354
53 08FS08 22	133	7. 50297227	0. 3613578
53 08FS08 22	133	7. 50297227	0. 3613578
53 08FS08 28	133	7. 51274686	0. 289836
53 08FS08 28	133	7. 51274686	0. 289836
53 08FS08 13	133	7. 51453388	0. 221083
53 08FS08 13	133	7. 51453388	0. 221083
53 08FS07 10	133	7. 51843208	0. 3532182
53 08FS07 10	133	7. 51843208	0. 3532182
53 08FS07 06	133	7. 53060667	0. 312277
53 08FS07 06	133	7. 53060667	0. 312277
53 08FS02 13	133	7. 54167165	0. 2002768
53 08FS02 13	133	7. 54167165	0. 2002768
53 08FS08 23	133	7. 54576102	0. 2177954
53 08FS08 23	133	7. 54576102	0. 2177954
53 08FS08 19	133	7. 55452286	0. 3044256
53 08FS08 19	133	7. 55452286	0. 3044256
53 08FS01 16	133	7. 56639684	0. 4311896
53 08FS01 16	133	7. 56639684	0. 4311896
53 08FS01 09	133	7. 5830952	0. 327764
53 08FS01 09	133	7. 5830952	0. 327764
53 08FS09 17	133	7. 61867145	0. 2968944
53 08FS09 17	133	7. 61867145	0. 2968944
53 08FS01 19	133	7. 65906643	0. 3923744
53 08FS01 19	133	7. 65906643	0. 3923744
53 08FS01 03	133	7. 66782975	0. 2582444
53 08FS01 03	133	7. 66782975	0. 2582444
53 08FS08 24	133	7. 69597048	0. 220488
53 08FS08 24	133	7. 69597048	0. 220488
53 08FS02 15	133	7. 69926192	0. 2754592
53 08FS02 15	133	7. 69926192	0. 2754592
53 08FS02 36	133	7. 73546778	0. 3578088
53 08FS02 36	133	7. 73546778	0. 3578088
53 08FS08 21	133	7. 74344704	0. 2885238
53 08FS08 21	133	7. 74344704	0. 2885238
53 08FS02 04	133	7. 79161272	0. 3485648
53 08FS02 04	133	7. 79161272	0. 3485648
53 08FS02 16	133	7. 80897666	0. 3326586
53 08FS02 16	133	7. 80897666	0. 3326586
53 08FS02 17	133	7. 81336525	0. 4130014
53 08FS02 17	133	7. 81336525	0. 4130014
53 08FS01 23	133	7. 84548175	0. 4155502

53 08FS01 23	133	7.84548175	0.4155502
53 08FS08 25	133	7.85774985	0.393347
53 08FS08 25	133	7.85774985	0.393347
53 08FS01 02	133	7.8651085	0.259932
53 08FS01 02	133	7.8651085	0.259932
53 08FS01 18	133	7.86708873	0.3654224
53 08FS01 18	133	7.86708873	0.3654224
53 08FS02 30	133	7.9235787	0.3531232
53 08FS02 30	133	7.9235787	0.3531232
53 08FS02 09	133	7.96295133	0.19646408
53 08FS02 09	133	7.96295133	0.19646408
53 08FS08 12	133	8.00432293	0.2460088
53 08FS08 12	133	8.00432293	0.2460088
53 08FS02 10	133	8.05309196	0.3334052
53 08FS02 10	133	8.05309196	0.3334052
53 08FS01 17	133	8.14512898	0.4408712
53 08FS01 17	133	8.14512898	0.4408712
53 08FS13 18	133	8.29351686	0.5975032
53 08FS13 18	133	8.29351686	0.5975032
62 QTJ-2. S15	133	5.6	0.2
62 QTJ-2. S15	133	5.6	0.2
62 QTJ-2. S11	133	5.8	0.3
62 QTJ-2. S11	133	5.8	0.3
62 QTJ-2. S02	133	6	0.2
62 QTJ-2. S02	133	6	0.2
62 TGS-7-2. S23	133	6.7	0.3
62 TGS-7-2. S23	133	6.7	0.3
62 WS02-15	133	7.05	0.27
62 WS02-15	133	7.05	0.27
62 TGS-7-2. S08	133	9.6	0.6
62 TGS-7-2. S08	133	9.6	0.6
31 TMG X184 A	134	5.15	
31 TMG X184 A	134	5.15	
62 FJZ-1. S09	134	5.6	0.3
62 FJZ-1. S09	134	5.6	0.3
62 FJZ-1. S11	134	5.7	0.3
62 FJZ-1. S11	134	5.7	0.3
62 FJZ-1. S15	134	5.8	0.2
62 FJZ-1. S15	134	5.8	0.2
62 FJZ-1. S06	134	5.9	0.3
62 FJZ-1. S06	134	5.9	0.3
62 DMC-1. S10	134	6	0.2
62 DMC-1. S10	134	6	0.2
62 DMC-1. S12	134	6.2	0.2
62 DMC-1. S12	134	6.2	0.2

62 FJZ-1. S01	134	6.2	0.4
62 FJZ-1. S01	134	6.2	0.4
62 TGS-7-1. S15	134	6.5	0.2
62 TGS-7-1. S15	134	6.5	0.2
62 TGS-7-2. S20	134	7.1	0.3
62 TGS-7-2. S20	134	7.1	0.3
62 TGS-7-2. S14	134	7.4	0.2
62 TGS-7-2. S14	134	7.4	0.2
10 2606-32	135	5.4	0.3
10 2606-32	135	5.4	0.3
62 QTJ-2. S06	135	5.8	0.2
62 QTJ-2. S06	135	5.8	0.2
10 2606-50	136	4.6	0.4
10 2606-50	136	4.6	0.4
62 QTJ-2. S03	136	6	0.3
62 QTJ-2. S08	136	6	0.3
62 QTJ-2. S03	136	6	0.3
62 QTJ-2. S08	136	6	0.3
62 QTJ-2. S01	136	6.1	0.3
62 QTJ-2. S01	136	6.1	0.3
62 FJZ-1. S04	136	6.2	0.4
62 FJZ-1. S04	136	6.2	0.4
62 DMC-1. S13	136	6.4	0.2
62 DMC-1. S13	136	6.4	0.2
62 TLS01-3	136	7.1	0.31
62 TLS01-3	136	7.1	0.31
5 TT6	137	2.64	
5 TT6	137	2.64	
62 QTJ-2. S05	137	6	0.3
62 QTJ-2. S09	137	6	0.3
62 QTJ-2. S05	137	6	0.3
62 QTJ-2. S09	137	6	0.3
62 DMC-1. S09	137	6.1	0.2
62 DMC-1. S19	137	6.1	0.2
62 FJZ-1. S14	137	6.1	0.2
62 DMC-1. S09	137	6.1	0.2
62 DMC-1. S19	137	6.1	0.2
62 FJZ-1. S14	137	6.1	0.2
62 TGS-7-2. S05	137	6.5	0.2
62 TGS-7-2. S05	137	6.5	0.2
62 TLS01-9	137	6.83	0.28
62 TLS01-9	137	6.83	0.28
62 TGS-7-2. S09	137	7.1	0.3
62 TGS-7-2. S09	137	7.1	0.3
62 TGS-7-2. S16	137	8.4	0.3

62 TGS-7-2. S16	137	8.4	0.3
62 FJZ-1. S08	138	5.8	0.3
62 FJZ-1. S08	138	5.8	0.3
62 QTJ-2. S18	138	6.1	0.2
62 QTJ-2. S18	138	6.1	0.2
62 DMC-1. S08	138	6.3	0.2
62 DMC-1. S08	138	6.3	0.2
62 TGS-7-2. S06	138	7	0.3
62 TGS-7-2. S06	138	7	0.3
62 TGS-7-2. S12	138	7.5	0.2
62 TGS-7-2. S12	138	7.5	0.2
62 TGS-7-2. S13	138	8.5	0.3
62 TGS-7-2. S13	138	8.5	0.3
62 TGS-7-1. S12	139	6.4	0.4
62 TGS-7-1. S12	139	6.4	0.4
62 WS02-9	139	6.76	0.39
62 WS02-9	139	6.76	0.39
62 FS07-4	139	7.4	0.27
62 FS07-4	139	7.4	0.27
62 TLS01-8	139	7.71	0.22
62 TLS01-8	139	7.71	0.22
31 FR21	140	5.9	
31 FR21	140	5.9	
31 FR20	140	6	
31 FR20	140	6	
62 QTJ-2. S04	140	6.2	0.3
62 QTJ-2. S04	140	6.2	0.3
62 TLS01-1	140	6.96	0.37
62 TLS01-1	140	6.96	0.37
62 TGS-7-2. S03	140	8	0.3
62 TGS-7-2. S03	140	8	0.3
62 TLS01-6	141	7.01	0.28
62 TLS01-6	141	7.01	0.28
62 WS02-4	141	7.47	0.37
62 WS02-4	141	7.47	0.37
26 97TY-005	142	8.42	
26 97TY-005	142	8.42	
26 97TY-006	142	8.52	
26 97TY-006	142	8.52	
26 97TY-004	142	8.54	
26 97TY-004	142	8.54	
26 97TY-012A	142	8.55	
26 97TY-012A	142	8.55	
26 97TY-007	142	8.57	
26 97TY-010	142	8.57	

26 97TY-012B	142	8.57	
26 97TY-007	142	8.57	
26 97TY-010	142	8.57	
26 97TY-012B	142	8.57	
26 97TY-002	142	8.58	
26 97TY-002	142	8.58	
26 97TY-008	142	8.62	
26 97TY-008	142	8.62	
26 97TY-001	142	9.12	
26 97TY-001	142	9.12	
62 TGS-7-1. S19	142	6.6	0.3
62 TGS-7-1. S19	142	6.6	0.3
62 FS07-14	142	7.39	0.23
62 FS07-14	142	7.39	0.23
62 FS07-3	142	7.75	0.27
62 FS07-3	142	7.75	0.27
62 FS07-11	142	7.8	0.22
62 FS07-11	142	7.8	0.22
18 NGR1-anu-zrn-	142.036706	5.70709221	0.59508835
18 NGR1-anu-zrn-	142.036706	5.70709221	0.59508835
31 CP1	143	4.75	
31 CP1	143	4.75	
59 M0-1293	143	5.9	0.1
59 M0-1293	143	5.9	0.1
62 TGS-7-1. S06	143	5.8	0.2
62 TGS-7-1. S06	143	5.8	0.2
62 TGS-7-1. S22	143	7	0.3
62 TGS-7-1. S22	143	7	0.3
62 TLS01-11	143	7.15	0.24
62 TLS01-11	143	7.15	0.24
62 WS02-11	143	7.17	0.44
62 WS02-11	143	7.17	0.44
62 WS02-13	143	7.19	0.25
62 WS02-13	143	7.19	0.25
62 WS02-7	143	7.59	0.17
62 WS02-7	143	7.59	0.17
62 WS02-2	143	7.7	0.32
62 WS02-2	143	7.7	0.32
62 WS02-14	143	7.74	0.32
62 WS02-14	143	7.74	0.32
5 SF2A	144	4.72	
5 SF2A	144	4.72	
62 TLS01-4	144	7.09	0.36
62 TLS01-4	144	7.09	0.36
62 TLS01-7	144	7.15	0.27

62 TLS01-7	144	7.15	0.27
62 TLS01-2	144	7.82	0.24
62 TLS01-2	144	7.82	0.24
34 W5	145	6.1	
34 W5	145	6.1	
62 TGS-7-1. S05	146	6.1	0.2
62 TGS-7-1. S05	146	6.1	0.2
62 WS02-12	146	7.26	0.28
62 WS02-12	146	7.26	0.28
18 NIL-anu-zrn-l	146.477248	5.05413735	0.93555678
18 NIL-anu-zrn-l	146.477248	5.05413735	0.93555678
34 5-27-3	148	5.44	
34 5-27-3	148	5.44	
34 5-27-8	148	5.48	
34 5-27-8	148	5.48	
34 MA7	148	6.9	
34 MA7	148	6.9	
62 TGS-7-1. S08	148	4.7	0.3
62 TGS-7-1. S08	148	4.7	0.3
62 WS02-8	148	7.32	0.39
62 WS02-8	148	7.32	0.39
19 08LL06 6	149	5.87	0.42
19 08LL06 6	149	5.87	0.42
19 08LL06 41	149	6.09	0.18
19 08LL06 41	149	6.09	0.18
19 08LL06 3	149	6.27	0.35
19 08LL06 3	149	6.27	0.35
19 08LL06 24	149	6.45	0.42
19 08LL06 24	149	6.45	0.42
19 08LL06 30	149	6.49	0.2
19 08LL06 30	149	6.49	0.2
19 08LL06 8	149	6.5	0.3
19 08LL06 8	149	6.5	0.3
19 08LL06 42	149	6.53	0.21
19 08LL06 42	149	6.53	0.21
19 08LL06 45	149	6.55	0.17
19 08LL06 45	149	6.55	0.17
19 08LL06 14	149	6.7	0.32
19 08LL06 14	149	6.7	0.32
19 08LL06 36	149	6.77	0.44
19 08LL06 36	149	6.77	0.44
19 08LL06 43	149	6.8	0.31
19 08LL06 43	149	6.8	0.31
19 08LL06 54	149	6.86	0.23
19 08LL06 54	149	6.86	0.23

19 08LL06 53	149	6.9	0.19
19 08LL06 53	149	6.9	0.19
19 08LL06 52	149	6.95	0.22
19 08LL06 52	149	6.95	0.22
19 08LL06 15	149	6.95	0.41
19 08LL06 15	149	6.95	0.41
19 08LL06 26	149	6.99	0.24
19 08LL06 26	149	6.99	0.24
19 08LL06 22	149	7.24	0.29
19 08LL06 22	149	7.24	0.29
19 08LL06 58	149	7.74	0.26
19 08LL06 58	149	7.74	0.26
19 08LL06 1	149	8.02	0.34
19 08LL06 1	149	8.02	0.34
62 FS07-13	149	8.08	0.27
62 FS07-13	149	8.08	0.27
19 08LS01 13	150	7.08	0.31
19 08LS01 13	150	7.08	0.31
19 08LS01 5	150	7.12	0.31
19 08LS01 5	150	7.12	0.31
19 08LS01 19	150	7.14	0.35
19 08LS01 19	150	7.14	0.35
19 08LS01 8	150	7.43	0.31
19 08LS01 8	150	7.43	0.31
19 08LS01 12	150	7.46	0.37
19 08LS01 12	150	7.46	0.37
19 08LS01 9	150	7.47	0.28
19 08LS01 9	150	7.47	0.28
19 08LS01 3	150	7.5	0.22
19 08LS01 3	150	7.5	0.22
19 08LS01 22	150	7.67	0.31
19 08LS01 22	150	7.67	0.31
19 08LS01 20	150	7.88	0.35
19 08LS01 20	150	7.88	0.35
19 08LS01 7	150	7.9	0.39
19 08LS01 7	150	7.9	0.39
19 08LS01 23	150	7.92	0.32
19 08LS01 23	150	7.92	0.32
19 08LS01 16	150	8.16	0.21
19 08LS01 16	150	8.16	0.21
19 08LS01 2	150	8.27	0.27
19 08LS01 2	150	8.27	0.27
19 08LS01 17	150	8.32	0.42
19 08LS01 17	150	8.32	0.42
19 08LS01 21	150	8.42	0.28

19 08LS01 21	150	8.42	0.28
19 08LS01 14	150	8.45	0.31
19 08LS01 14	150	8.45	0.31
62 TLS01-10	150	6.98	0.44
62 TLS01-10	150	6.98	0.44
62 FS07-8	150	7.91	0.39
62 FS07-8	150	7.91	0.39
62 WS02-5	151	7.59	0.2
62 WS02-5	151	7.59	0.2
5 SF2A	152	4.33	
5 SF2A	152	4.33	
34 5-27-9	152	6.68	
34 5-27-9	152	6.68	
76 XY18-1	152.4	9.11	
5 SF2A	153	3.73	
5 SF2A	153	3.73	
34 8-38a	153	7.37	
34 8-38a	153	7.37	
76 XY17-6	154	8.98	
60 p11-104	155	4.6	0.4
60 p11-104	155	4.6	0.4
18 NGR1-anu-zrn-	155.166165	6.54797975	0.59880561
18 NGR1-anu-zrn-	155.166165	6.54797975	0.59880561
19 08LL02 7	156	6.76	0.28
19 08LL02 7	156	6.76	0.28
19 08LL02 6	156	6.9	0.24
19 08LL02 6	156	6.9	0.24
19 08LL02 24	156	7.3	0.28
19 08LL02 24	156	7.3	0.28
19 08LL02 1	156	7.37	0.3
19 08LL02 1	156	7.37	0.3
19 08LL02 21	156	7.54	0.23
19 08LL02 21	156	7.54	0.23
19 08LL02 9	156	7.59	0.33
19 08LL02 9	156	7.59	0.33
19 08LL02 26	156	7.61	0.24
19 08LL02 26	156	7.61	0.24
19 08LL02 10	156	7.71	0.28
19 08LL02 10	156	7.71	0.28
19 08LL02 12	156	7.74	0.38
19 08LL02 12	156	7.74	0.38
19 08LL02 4	156	7.79	0.36
19 08LL02 4	156	7.79	0.36
19 08LL02 23	156	7.86	0.35
19 08LL02 23	156	7.86	0.35

19 08LL02 11	156	8.1	0.4
19 08LL02 11	156	8.1	0.4
19 08LL02 16	156	8.22	0.37
19 08LL02 16	156	8.22	0.37
19 08LL02 3	156	8.29	0.28
19 08LL02 3	156	8.29	0.28
19 08LL02 17	156	8.31	0.18
19 08LL02 17	156	8.31	0.18
19 08LL02 15	156	8.31	0.35
19 08LL02 15	156	8.31	0.35
19 08LL02 5	156	8.34	0.35
19 08LL02 5	156	8.34	0.35
19 08LL02 14	156	8.55	0.36
19 08LL02 14	156	8.55	0.36
19 08LL02 18	156	8.78	0.23
19 08LL02 18	156	8.78	0.23
34 19937	156	6.29	
34 19937	156	6.29	
59 M0-1274	157	5.3	0.1
59 M0-1274	157	5.3	0.1
15 XHS-37@5	158	6.93	0.31
15 XHS-37@5	158	6.93	0.31
15 XHS-37@8	158	7.45	0.28
15 XHS-37@8	158	7.45	0.28
15 XHS-37@4	158	7.47	0.31
15 XHS-37@4	158	7.47	0.31
15 XHS-37@3	158	8.19	0.37
15 XHS-37@3	158	8.19	0.37
15 XHS-37@12	158	8.2	0.41
15 XHS-37@12	158	8.2	0.41
15 XHS-37@15	158	8.24	0.3
15 XHS-37@15	158	8.24	0.3
15 XHS-37@11	158	8.79	0.24
15 XHS-37@11	158	8.79	0.24
15 XHS-37@16	158	8.96	0.3
15 XHS-37@16	158	8.96	0.3
15 XHS-37@1	158	9.02	0.48
15 XHS-37@1	158	9.02	0.48
15 XHS-37@30	158	9.03	0.17
15 XHS-37@30	158	9.03	0.17
15 XHS-37@35	158	9.14	0.34
15 XHS-37@35	158	9.14	0.34
15 XHS-37@22	158	9.15	0.39
15 XHS-37@22	158	9.15	0.39
15 XHS-37@32	158	9.16	0.27

15 XHS-37@32	158	9.16	0.27
15 XHS-37@34	158	9.21	0.26
15 XHS-37@34	158	9.21	0.26
15 XHS-37@6	158	9.24	0.29
15 XHS-37@6	158	9.24	0.29
15 XHS-37@13	158	9.29	0.22
15 XHS-37@13	158	9.29	0.22
15 XHS-37@27	158	9.29	0.29
15 XHS-37@27	158	9.29	0.29
15 XHS-37@17	158	9.31	0.31
15 XHS-37@17	158	9.31	0.31
15 XHS-37@24	158	9.33	0.32
15 XHS-37@24	158	9.33	0.32
15 XHS-37@21	158	9.35	0.4
15 XHS-37@21	158	9.35	0.4
15 XHS-37@26	158	9.41	0.38
15 XHS-37@26	158	9.41	0.38
15 XHS-37@25	158	9.43	0.2
15 XHS-37@25	158	9.43	0.2
15 XHS-37@28	158	9.44	0.26
15 XHS-37@28	158	9.44	0.26
15 XHS-37@23	158	9.49	0.28
15 XHS-37@23	158	9.49	0.28
15 XHS-37@29	158	9.5	0.22
15 XHS-37@29	158	9.5	0.22
15 XHS-37@33	158	9.5	0.36
15 XHS-37@33	158	9.5	0.36
15 XHS-37@31	158	9.55	0.19
15 XHS-37@31	158	9.55	0.19
15 XHS-37@20	158	9.57	0.37
15 XHS-37@20	158	9.57	0.37
15 XHS-37@10	158	9.58	0.16
15 XHS-37@10	158	9.58	0.16
15 XHS-37@14	158	9.66	0.25
15 XHS-37@14	158	9.66	0.25
15 XHS-37@18	158	9.67	0.21
15 XHS-37@18	158	9.67	0.21
15 XHS-37@19	158	9.67	0.24
15 XHS-37@19	158	9.67	0.24
15 XHS-37@7	158	9.74	0.22
15 XHS-37@7	158	9.74	0.22
15 XHS-37@2	158	9.95	0.27
15 XHS-37@2	158	9.95	0.27
15 XHS-37@9	158	11.23	0.16
15 XHS-37@9	158	11.23	0.16

15 XHS-4@20	159	7.85	0.28
15 XHS-4@7	159	7.85	0.28
15 XHS-4@20	159	7.85	0.28
15 XHS-4@7	159	7.85	0.28
15 XHS-4@18	159	7.89	0.34
15 XHS-4@18	159	7.89	0.34
15 XHS-15@2	159	7.92	0.25
15 XHS-15@2	159	7.92	0.25
15 XHS-15@17	159	8.06	0.28
15 XHS-15@17	159	8.06	0.28
15 XHS-15@27	159	8.09	0.24
15 XHS-15@27	159	8.09	0.24
15 XHS-15@28	159	8.27	0.35
15 XHS-15@28	159	8.27	0.35
15 XHS-4@25	159	8.31	0.3
15 XHS-4@25	159	8.31	0.3
15 XHS-4@24	159	8.32	0.12
15 XHS-4@24	159	8.32	0.12
15 XHS-4@15	159	8.44	0.27
15 XHS-4@15	159	8.44	0.27
15 XHS-15@16	159	8.46	0.25
15 XHS-15@16	159	8.46	0.25
15 XHS-15@26	159	8.54	0.21
15 XHS-15@26	159	8.54	0.21
15 XHS-15@29	159	8.56	0.3
15 XHS-15@29	159	8.56	0.3
15 XHS-4@9	159	8.59	0.33
15 XHS-4@9	159	8.59	0.33
15 XHS-15@18	159	8.61	0.17
15 XHS-15@18	159	8.61	0.17
15 XHS-4@21	159	8.61	0.21
15 XHS-4@21	159	8.61	0.21
15 XHS-15@1	159	8.61	0.4
15 XHS-15@1	159	8.61	0.4
15 XHS-4@19	159	8.65	0.24
15 XHS-4@19	159	8.65	0.24
15 XHS-15@25	159	8.66	0.28
15 XHS-15@25	159	8.66	0.28
15 XHS-4@6	159	8.74	0.22
15 XHS-4@6	159	8.74	0.22
15 XHS-15@9	159	8.79	0.2
15 XHS-15@9	159	8.79	0.2
15 XHS-4@14	159	8.79	0.52
15 XHS-4@14	159	8.79	0.52
15 XHS-4@26	159	8.81	0.33

15 XHS-4@26	159	8.81	0.33
15 XHS-4@10	159	8.84	0.26
15 XHS-4@10	159	8.84	0.26
15 XHS-4@33	159	8.86	0.11
15 XHS-4@33	159	8.86	0.11
15 XHS-15@22	159	8.92	0.21
15 XHS-15@22	159	8.92	0.21
15 XHS-4@3	159	9	0.32
15 XHS-4@3	159	9	0.32
15 XHS-15@20	159	9.06	0.29
15 XHS-15@20	159	9.06	0.29
15 XHS-4@30	159	9.11	0.17
15 XHS-4@30	159	9.11	0.17
15 XHS-15@14	159	9.12	0.31
15 XHS-15@14	159	9.12	0.31
15 XHS-15@5	159	9.16	0.39
15 XHS-15@5	159	9.16	0.39
15 XHS-15@6	159	9.17	0.35
15 XHS-15@6	159	9.17	0.35
15 XHS-15@4	159	9.18	0.23
15 XHS-15@4	159	9.18	0.23
15 XHS-15@21	159	9.19	0.29
15 XHS-15@21	159	9.19	0.29
15 XHS-4@4	159	9.2	0.26
15 XHS-4@4	159	9.2	0.26
15 XHS-4@28	159	9.21	0.28
15 XHS-4@28	159	9.21	0.28
15 XHS-4@29	159	9.23	0.21
15 XHS-4@29	159	9.23	0.21
15 XHS-15@15	159	9.27	0.27
15 XHS-15@15	159	9.27	0.27
15 XHS-15@12	159	9.28	0.23
15 XHS-15@12	159	9.28	0.23
15 XHS-15@19	159	9.29	0.19
15 XHS-15@19	159	9.29	0.19
15 XHS-15@3	159	9.29	0.43
15 XHS-15@3	159	9.29	0.43
15 XHS-4@12	159	9.31	0.25
15 XHS-4@12	159	9.31	0.25
15 XHS-15@10	159	9.32	0.35
15 XHS-15@10	159	9.32	0.35
15 XHS-15@8	159	9.34	0.43
15 XHS-15@8	159	9.34	0.43
15 XHS-4@17	159	9.35	0.22
15 XHS-4@17	159	9.35	0.22

15 XHS-15@11	159	9.35	0.3
15 XHS-15@11	159	9.35	0.3
15 XHS-15@23	159	9.36	0.14
15 XHS-15@23	159	9.36	0.14
15 XHS-4@11	159	9.39	0.32
15 XHS-4@11	159	9.39	0.32
15 XHS-15@13	159	9.42	0.31
15 XHS-15@13	159	9.42	0.31
15 XHS-4@16	159	9.48	0.32
15 XHS-4@16	159	9.48	0.32
15 XHS-15@24	159	9.52	0.21
15 XHS-15@24	159	9.52	0.21
15 XHS-4@13	159	9.54	0.44
15 XHS-4@13	159	9.54	0.44
15 XHS-4@23	159	9.56	0.27
15 XHS-4@23	159	9.56	0.27
15 XHS-4@27	159	9.64	0.2
15 XHS-4@27	159	9.64	0.2
15 XHS-15@7	159	9.67	0.2
15 XHS-15@7	159	9.67	0.2
15 XHS-4@1	159	9.68	0.29
15 XHS-4@1	159	9.68	0.29
15 XHS-4@32	159	9.7	0.2
15 XHS-4@32	159	9.7	0.2
15 XHS-4@5	159	9.77	0.2
15 XHS-4@5	159	9.77	0.2
15 XHS-4@8	159	9.86	0.69
15 XHS-4@8	159	9.86	0.69
15 XHS-4@22	159	9.91	0.22
15 XHS-4@22	159	9.91	0.22
15 XHS-4@2	159	9.94	0.27
15 XHS-4@2	159	9.94	0.27
15 XHS-4@31	159	9.94	0.36
15 XHS-4@31	159	9.94	0.36
34 77-7	159	5.6	
34 77-7	159	5.6	
26 95BR-133	160	7.8	
26 95BR-133	160	7.8	
34 41109	160	5.51	
34 41109	160	5.51	
62 TGS-7-1. S04	160	6.3	0.4
62 TGS-7-1. S04	160	6.3	0.4
62 FS07-6	160	8.26	0.29
62 FS07-6	160	8.26	0.29
72 XHS-4	160.4	9.07	

15 XHS-22@12	161	6.98	0.5
15 XHS-22@12	161	6.98	0.5
15 XHS-22@17	161	7.14	0.32
15 XHS-22@17	161	7.14	0.32
15 XHS-22@14	161	7.15	0.28
15 XHS-22@14	161	7.15	0.28
15 XHS-22@1	161	7.22	0.34
15 XHS-22@1	161	7.22	0.34
15 XHS-22@13	161	7.32	0.33
15 XHS-22@13	161	7.32	0.33
15 XHS-22@7	161	7.52	0.25
15 XHS-22@7	161	7.52	0.25
15 XHS-22@16	161	7.53	0.16
15 XHS-22@16	161	7.53	0.16
15 XHS-22@9	161	7.62	0.24
15 XHS-22@9	161	7.62	0.24
15 XHS-22@4	161	8.38	0.28
15 XHS-22@4	161	8.38	0.28
15 XHS-22@20	161	8.39	0.27
15 XHS-22@20	161	8.39	0.27
15 XHS-22@5	161	8.57	0.3
15 XHS-22@5	161	8.57	0.3
15 XHS-22@2	161	8.69	0.18
15 XHS-22@2	161	8.69	0.18
15 XHS-22@19	161	8.78	0.27
15 XHS-22@19	161	8.78	0.27
15 XHS-22@6	161	8.92	0.24
15 XHS-22@6	161	8.92	0.24
15 XHS-22@18	161	9.15	0.36
15 XHS-22@18	161	9.15	0.36
15 XHS-22@3	161	9.18	0.2
15 XHS-22@3	161	9.18	0.2
15 XHS-22@11	161	10.07	0.24
15 XHS-22@11	161	10.07	0.24
34 95BR042	161	6.83	
34 95BR042	161	6.83	
34 MA9	161	7.35	
34 MA9	161	7.35	
31 89KK1a	162	5.81	
31 89KK1a	162	5.81	
72 XHS-15	162.3	8.95	
83 ALP3-6.1	162.8	4.92	
19 08LL07 11	163	3.94	0.28
19 08LL07 11	163	3.94	0.28
19 08LL07 38	163	4.48	0.41

19 08LL07 38	163	4.48	0.41
19 08LL07 41	163	4.64	0.33
19 08LL07 41	163	4.64	0.33
19 08LL07 36	163	6.2	0.3
19 08LL07 36	163	6.2	0.3
19 08LL07 24	163	6.23	0.37
19 08LL07 24	163	6.23	0.37
19 08LL07 31	163	6.32	0.43
19 08LL07 31	163	6.32	0.43
19 08LL07 65	163	6.38	0.5
19 08LL07 65	163	6.38	0.5
19 08LL07 43	163	6.47	0.23
19 08LL07 43	163	6.47	0.23
19 08LL07 45	163	6.57	0.39
19 08LL07 45	163	6.57	0.39
19 08LL07 64	163	6.66	0.34
19 08LL07 64	163	6.66	0.34
19 08LL07 48	163	6.71	0.3
19 08LL07 48	163	6.71	0.3
19 08LL07 10	163	6.72	0.19
19 08LL07 10	163	6.72	0.19
19 08LL07 54	163	6.8	0.26
19 08LL07 54	163	6.8	0.26
19 08LL07 23	163	6.82	0.24
19 08LL07 23	163	6.82	0.24
19 08LL07 52	163	6.82	0.34
19 08LL07 52	163	6.82	0.34
19 08LL07 15	163	6.9	0.25
19 08LL07 15	163	6.9	0.25
19 08LL07 58	163	6.94	0.45
19 08LL07 58	163	6.94	0.45
19 08LL07 22	163	7	0.31
19 08LL07 22	163	7	0.31
19 08LL07 21	163	7.14	0.23
19 08LL07 21	163	7.14	0.23
19 08LL07 6	163	7.89	0.33
19 08LL07 6	163	7.89	0.33
34 OW19	163	6.76	
34 OW19	163	6.76	
59 MO-1109	163	12	0.4
59 MO-1109	163	12	0.4
31 L4P235A	164	6.41	
31 L4P235A	164	6.41	
34 1S125	164	6.75	
34 1S125	164	6.75	

34 1S126	164	6.82	
34 1S126	164	6.82	
26 Y-818	165	5.76	
26 Y-818	165	5.76	
26 95BR-136	165	6.24	
26 95BR-136	165	6.24	
26 95BR-135	165	7.82	
26 95BR-135	165	7.82	
31 L4P054A	165	6.34	
31 L4P054A	165	6.34	
33 1S128	165	7.89	
33 1S128	165	7.89	
34 95BR061	165	7.56	
34 95BR061	165	7.56	
34 95BR062	165	7.61	
34 95BR062	165	7.61	
34 95BR064	165	7.63	
34 95BR064	165	7.63	
19 08LL05 15	166	0.67	0.26
19 08LL05 15	166	0.67	0.26
19 08LL04 8	166	1.38	0.32
19 08LL04 8	166	1.38	0.32
19 08LL04 12	166	2.29	0.42
19 08LL04 12	166	2.29	0.42
19 08LL04 59	166	2.36	0.33
19 08LL04 59	166	2.36	0.33
19 08LL04 11	166	4.11	0.32
19 08LL04 11	166	4.11	0.32
19 08LL04 55	166	4.31	0.4
19 08LL04 55	166	4.31	0.4
19 08LL05 37	166	4.35	0.17
19 08LL05 37	166	4.35	0.17
19 08LL04 36	166	4.5	0.26
19 08LL04 36	166	4.5	0.26
19 08LL04 28	166	4.5	0.31
19 08LL04 28	166	4.5	0.31
19 08LL04 40	166	4.65	0.21
19 08LL04 40	166	4.65	0.21
19 08LL05 33	166	4.72	0.23
19 08LL05 33	166	4.72	0.23
19 08LL05 16	166	4.94	0.35
19 08LL05 16	166	4.94	0.35
19 08LL05 40	166	5.01	0.25
19 08LL05 40	166	5.01	0.25
19 08LL05 6	166	5.01	0.31

19 08LL05 6	166	5.01	0.31
19 08LL05 32	166	5.19	0.26
19 08LL05 32	166	5.19	0.26
19 08LL05 39	166	5.24	0.29
19 08LL05 39	166	5.24	0.29
19 08LL05 42	166	5.34	0.26
19 08LL05 42	166	5.34	0.26
19 08LL04 52	166	5.41	0.36
19 08LL04 52	166	5.41	0.36
19 08LL04 57	166	5.44	0.36
19 08LL04 57	166	5.44	0.36
19 08LL04 42	166	6.29	0.44
19 08LL04 42	166	6.29	0.44
72 XHS-22	166.3	8.15	
83 ALP3-6.3	166.4	5.42	
31 L4P124A	167	6.33	
31 L4P124A	167	6.33	
34 95BR036	168	7.01	
34 95BR036	168	7.01	
18 NGR1-anu-zrn-	168.353992	5.89461425	0.59655482
18 NGR1-anu-zrn-	168.353992	5.89461425	0.59655482
26 Y-781	169	5.14	
26 Y-781	169	5.14	
26 Y-767	169	5.6	
26 Y-767	169	5.6	
26 95BR-006	169	7.11	
26 95BR-006	169	7.11	
26 95BR-007	169	7.21	
26 95BR-007	169	7.21	
26 NP-1	169	7.22	
26 NP-1	169	7.22	
26 95BR-014	169	7.25	
26 95BR-014	169	7.25	
26 95BR-012	169	7.33	
26 95BR-012	169	7.33	
26 95BR-008	169	7.38	
26 95BR-008	169	7.38	
26 95BR-016	169	7.41	
26 95BR-016	169	7.41	
26 95BR-015	169	7.42	
26 95BR-015	169	7.42	
26 95BR-010	169	7.44	
26 95BR-010	169	7.44	
26 95BR-009	169	7.45	
26 95BR-009	169	7.45	

26 95BR-013	169	7.53	
26 95BR-013	169	7.53	
26 Jep	170	5.85	
26 Jep	170	5.85	
26 BK-38	172	5.41	
26 BK-38	172	5.41	
86 09D64	172	5.47	
10 1746-19b	173	8.6	0.6
10 1746-19b	173	8.6	0.6
50 UB95	173	7.07	
50 UB95	173	7.07	
60 p11-135	173	3.9	0.2
60 p11-135	173	3.9	0.2
86 09D45	174	5.46	
34 F1-57	175	6.44	
34 F1-57	175	6.44	
34 40965	175	6.99	
34 40965	175	6.99	
34 95BR063	175	7.26	
34 95BR063	175	7.26	
86 09D52	175	5.36	
26 Javp	180	5.36	
26 Javp	180	5.36	
26 Jbz	180	5.64	
26 Jbz	180	5.64	
26 Jbd	180	5.78	
26 Jbd	180	5.78	
26 Jnyp	180	5.85	
26 Jnyp	180	5.85	
59 M0-1340	180	4.6	0.1
59 M0-1340	180	4.6	0.1
59 M0-1233	180	5.5	0.1
59 M0-1233	180	5.5	0.1
56 Lechner Dike	183	6.09	
56 Lechner Dike	183	6.09	
26 Jt	185	6.39	
26 Jt	185	6.39	
18 NGR1-anu-zrn-	188.264825	6.2254262	0.59206324
18 NGR1-anu-zrn-	188.264825	6.2254262	0.59206324
59 M0-998	189	6.4	0.3
59 M0-998	189	6.4	0.3
59 M0-1271	191	4.9	0.2
59 M0-1271	191	4.9	0.2
10 2606-22b	193	6	0.4
10 2606-22b	193	6	0.4

10 2606-22a	194	5.6	0.4
10 2606-22a	194	5.6	0.4
19 08LL04 13	197	-1.14	0.28
19 08LL04 13	197	-1.14	0.28
19 08LL04 34	200	4.14	0.25
19 08LL04 34	200	4.14	0.25
26 Jbc	201	5.45	
26 Jbc	201	5.45	
34 1S132	201	5.48	
34 1S132	201	5.48	
34 MA5	201	7.4	
34 MA5	201	7.4	
19 08LL04 39	202	0.5	0.32
19 08LL04 39	202	0.5	0.32
19 08LL04 33	202	4.66	0.18
19 08LL04 33	202	4.66	0.18
18 NIL-anu-zrn-l	202.301797	5.08264321	0.932465
18 NIL-anu-zrn-l	202.301797	5.08264321	0.932465
59 M0-1357	203	4.3	0.2
59 M0-1357	203	4.3	0.2
34 OW2	204	7.45	
34 OW2	204	7.45	
19 08LL04 6	206	0.66	0.26
19 08LL04 6	206	0.66	0.26
56 AB-23	206	7.9	
56 AB-23	206	7.9	
19 08LL05 12	207	-0.6	0.33
19 08LL05 12	207	-0.6	0.33
19 08LL05 11	208	-4.43	0.36
19 08LL05 11	208	-4.43	0.36
19 08LS01 11	208	2.21	0.28
19 08LS01 11	208	2.21	0.28
19 08LL07 66	209	6.35	0.41
19 08LL07 66	209	6.35	0.41
19 08LL04 45	210	4.33	0.25
19 08LL04 45	210	4.33	0.25
34 95BR031	210	6.06	
34 95BR031	210	6.06	
34 95BR029	210	6.2	
34 95BR029	210	6.2	
34 95BR078	210	6.24	
34 95BR078	210	6.24	
34 95BR080	210	6.67	
34 95BR080	210	6.67	
19 08LL05 23	211	-2.4	0.32

19 08LL05 23	211	-2.4	0.32
19 08LL05 36	211	5.08	0.2
19 08LL05 36	211	5.08	0.2
19 08LL07 1	211	6.27	0.3
19 08LL07 1	211	6.27	0.3
19 08LL05 27	212	0.26	0.41
19 08LL05 27	212	0.26	0.41
19 08LL05 19	215	5.43	0.34
19 08LL05 19	215	5.43	0.34
10 2606-07	216	5.2	0.4
10 2606-07	216	5.2	0.4
19 08LL05 35	216	1.13	0.29
19 08LL05 35	216	1.13	0.29
19 08LL04 24	216	2.16	0.27
19 08LL04 24	216	2.16	0.27
19 08LL04 32	216	3.11	0.32
19 08LL04 32	216	3.11	0.32
59 M0-1350	216	5.9	0.2
59 M0-1350	216	5.9	0.2
62 WS02-10	216	7.02	0.36
62 WS02-10	216	7.02	0.36
34 MA2	217	6.63	
34 MA2	217	6.63	
34 95BR050	217	6.81	
34 95BR050	217	6.81	
34 1S122	217	7.01	
34 1S122	217	7.01	
34 95BR041	217	7.06	
34 95BR041	217	7.06	
34 95BR051	217	7.44	
34 95BR051	217	7.44	
34 95BR048	217	7.96	
34 95BR048	217	7.96	
60 p11-120	217	7.9	0.4
60 p11-120	217	7.9	0.4
120 EW-1-16*	218	4.33	0.38
19 08LL05 24	220	0.36	0.41
19 08LL05 24	220	0.36	0.41
19 08LL04 4	220	3.16	0.25
19 08LL04 4	220	3.16	0.25
19 08LL05 28	220	3.22	0.31
19 08LL05 28	220	3.22	0.31
19 08LL05 17	221	3.62	0.3
19 08LL05 17	221	3.62	0.3
19 08LL04 17	221	4.04	0.45

19 08LL04 17		221	4.04	0.45
19 08LL07 5		221	4.05	0.28
19 08LL07 5		221	4.05	0.28
59 M0-921		221	5.5	0.2
59 M0-921		221	5.5	0.2
75 17, 1		221	6.66	0.46
104 08JF107		221	6.3	
34 SBL-1		222	6.22	
34 SBL-1		222	6.22	
121 24	222	9.96	0.18	
19 08LL04 38		223	0.19	0.28
19 08LL04 38		223	0.19	0.28
19 08LL04 20		223	0.68	0.28
19 08LL04 20		223	0.68	0.28
104 08JF162		223	6.11	
104 08JF160		223	6.69	
19 08LL04 27		224	2.2	0.43
19 08LL04 27		224	2.2	0.43
104 08JF109		224	5.83	
121 4	224	10.38	0.26	
19 08LL05 21		225	-2	0.33
19 08LL05 21		225	-2	0.33
104 08JF150		225	6.41	
121 22	225	8.85	0.24	
121 7	225	9.45	0.24	
121 12	225	9.58	0.26	
121 1	225	9.62	0.24	
121 3	225	11.37	0.16	
19 08LL04 21		226	-2.22	0.33
19 08LL04 21		226	-2.22	0.33
19 08LL05 9		226	2.03	0.28
19 08LL05 9		226	2.03	0.28
19 08LL07 44		226	5.96	0.39
19 08LL07 44		226	5.96	0.39
121 15	226	9.39	0.28	
19 08LL05 38		227	3.24	0.23
19 08LL05 38		227	3.24	0.23
19 08LL07 40		227	3.48	0.28
19 08LL07 40		227	3.48	0.28
19 08LL04 35		227	3.73	0.27
19 08LL04 35		227	3.73	0.27
104 08JF111		227	6.24	
19 08LL05 3		228	-3.42	0.27
19 08LL05 3		228	-3.42	0.27
19 08LL04 56		228	4.44	0.41

19 08LL04 56		228	4.44	0.41
121 8	228	9.86	0.19	
121 12	228	10.13	0.22	
19 08LL05 25		229	-2.75	0.3
19 08LL05 25		229	-2.75	0.3
19 08LL04 44		229	3.35	0.26
19 08LL04 44		229	3.35	0.26
121 30	230	10.89	0.20	
19 08LL06 25		231	2.92	0.33
19 08LL06 25		231	2.92	0.33
27 LuN02@14		231	7.5	0.4
27 LuN02@14		231	7.5	0.4
27 LuN01@6		231	7.6	0.3
27 LuN01@6		231	7.6	0.3
27 LuN02@15		231	7.6	0.4
27 LuN02@15		231	7.6	0.4
27 LuN01@11		231	7.7	0.4
27 LuN02@7		231	7.7	0.4
27 LuN01@11		231	7.7	0.4
27 LuN02@7		231	7.7	0.4
27 LuN02@4		231	7.8	0.4
27 LuN02@4		231	7.8	0.4
27 LuN02@16		231	7.9	0.3
27 LuN02@19		231	7.9	0.3
27 LuN02@20		231	7.9	0.3
27 LuN02@16		231	7.9	0.3
27 LuN02@19		231	7.9	0.3
27 LuN02@20		231	7.9	0.3
27 LuN02@12		231	7.9	0.4
27 LuN02@12		231	7.9	0.4
27 LuN02@10		231	8	0.3
27 LuN02@13		231	8	0.3
27 LuN02@17		231	8	0.3
27 LuN02@6		231	8	0.3
27 LuN02@10		231	8	0.3
27 LuN02@13		231	8	0.3
27 LuN02@17		231	8	0.3
27 LuN02@6		231	8	0.3
27 LuN01@3		231	8	0.4
27 LuN01@3		231	8	0.4
27 LuN02@2		231	8.1	0.3
27 LuN02@9		231	8.1	0.3
27 LuN02@2		231	8.1	0.3
27 LuN02@9		231	8.1	0.3
27 LuN01@8		231	8.2	0.2

27 LuN01@8	231	8.2	0.2
27 LuN01@1	231	8.2	0.3
27 LuN01@7	231	8.2	0.3
27 LuN02@18	231	8.2	0.3
27 LuN01@1	231	8.2	0.3
27 LuN01@7	231	8.2	0.3
27 LuN02@18	231	8.2	0.3
27 LuN01@14	231	8.2	0.4
27 LuN01@20	231	8.2	0.4
27 LuN01@9	231	8.2	0.4
27 LuN01@14	231	8.2	0.4
27 LuN01@20	231	8.2	0.4
27 LuN01@9	231	8.2	0.4
27 LuN01@13	231	8.3	0.3
27 LuN01@17	231	8.3	0.3
27 LuN01@2	231	8.3	0.3
27 LuN01@4	231	8.3	0.3
27 LuN02@11	231	8.3	0.3
27 LuN02@21	231	8.3	0.3
27 LuN02@3	231	8.3	0.3
27 LuN01@13	231	8.3	0.3
27 LuN01@17	231	8.3	0.3
27 LuN01@2	231	8.3	0.3
27 LuN01@4	231	8.3	0.3
27 LuN02@11	231	8.3	0.3
27 LuN02@21	231	8.3	0.3
27 LuN02@3	231	8.3	0.3
27 LuN01@12	231	8.4	0.2
27 LuN01@19	231	8.4	0.2
27 LuN01@12	231	8.4	0.2
27 LuN01@19	231	8.4	0.2
27 LuN01@10	231	8.4	0.3
27 LuN01@18	231	8.4	0.3
27 LuN02@8	231	8.4	0.3
27 LuN01@10	231	8.4	0.3
27 LuN01@18	231	8.4	0.3
27 LuN02@8	231	8.4	0.3
27 LuN01@5	231	8.4	0.4
27 LuN01@5	231	8.4	0.4
27 LuN01@15	231	8.5	0.4
27 LuN01@15	231	8.5	0.4
27 LuN02@1	231	8.6	0.3
27 LuN02@5	231	8.6	0.3
27 LuN02@1	231	8.6	0.3
27 LuN02@5	231	8.6	0.3

27 LuN01@16		231	8.7	0.3
27 LuN01@16		231	8.7	0.3
27 LuN01@21		231	8.9	0.3
27 LuN01@21		231	8.9	0.3
121 13	231	9.32	0.20	
121 14	231	9.89	0.14	
121 21	231	10.04	0.22	
121 8	231	10.57	0.21	
10 1774-72		232	7.2	0.7
10 1774-72		232	7.2	0.7
10 1746-27		232	7.7	0.4
10 1746-27		232	7.7	0.4
19 08LL06 7		232	7.53	0.35
19 08LL06 7		232	7.53	0.35
26 Y-1		232	6.43	
26 Y-1		232	6.43	
104 08JF192		232	5.94	
121 29	232	9.11	0.29	
121 17	232	9.12	0.22	
121 2	232	9.61	0.18	
121 12	232	10.23	0.22	
121 16	232	10.30	0.18	
121 2	232	10.63	0.12	
113 Lun-2		232.3	8.16	
19 08LL05 34		233	2.83	0.3
19 08LL05 34		233	2.83	0.3
26 W-35		233	6.32	
26 W-35		233	6.32	
27 LiN01@20		233	7.3	0.4
27 LiN01@20		233	7.3	0.4
27 LiN02@14		233	7.3	0.5
27 LiN02@14		233	7.3	0.5
27 LiN02@20		233	7.4	0.3
27 LiN02@20		233	7.4	0.3
27 LiN02@1		233	7.6	0.2
27 LiN02@1		233	7.6	0.2
27 LiN01@11		233	7.6	0.3
27 LiN01@3		233	7.6	0.3
27 LiN02@19		233	7.6	0.3
27 LiN01@11		233	7.6	0.3
27 LiN01@3		233	7.6	0.3
27 LiN02@19		233	7.6	0.3
27 LiN02@18		233	7.7	0.3
27 LiN02@18		233	7.7	0.3
27 LiN01@7		233	7.8	0.2

27 LiN01@7	233	7.8	0.2
27 LiN01@15	233	7.8	0.3
27 LiN01@5	233	7.8	0.3
27 LiN02@2	233	7.8	0.3
27 LiN01@15	233	7.8	0.3
27 LiN01@5	233	7.8	0.3
27 LiN02@2	233	7.8	0.3
27 LiN01@4	233	7.9	0.3
27 LiN02@4	233	7.9	0.3
27 LiN01@4	233	7.9	0.3
27 LiN02@4	233	7.9	0.3
27 LiN01@6	233	7.9	0.4
27 LiN01@6	233	7.9	0.4
27 LiN01@14	233	8	0.3
27 LiN01@16	233	8	0.3
27 LiN02@15	233	8	0.3
27 LiN01@14	233	8	0.3
27 LiN01@16	233	8	0.3
27 LiN02@15	233	8	0.3
27 LiN01@1	233	8	0.4
27 LiN02@3	233	8	0.4
27 LiN01@1	233	8	0.4
27 LiN02@3	233	8	0.4
27 LiN01@10	233	8.1	0.3
27 LiN02@17	233	8.1	0.3
27 LiN01@10	233	8.1	0.3
27 LiN02@17	233	8.1	0.3
27 LiN01@2	233	8.1	0.4
27 LiN02@12	233	8.1	0.4
27 LiN01@2	233	8.1	0.4
27 LiN02@12	233	8.1	0.4
27 LiN01@13	233	8.2	0.3
27 LiN01@13	233	8.2	0.3
27 LiN01@8	233	8.2	0.4
27 LiN02@11	233	8.2	0.4
27 LiN01@8	233	8.2	0.4
27 LiN02@11	233	8.2	0.4
27 LiN01@19	233	8.3	0.3
27 LiN01@9	233	8.3	0.3
27 LiN02@5	233	8.3	0.3
27 LiN02@8	233	8.3	0.3
27 LiN02@9	233	8.3	0.3
27 LiN01@19	233	8.3	0.3
27 LiN01@9	233	8.3	0.3
27 LiN02@5	233	8.3	0.3

27 LiN02@8		233	8.3	0.3
27 LiN02@9		233	8.3	0.3
27 LiN01@18		233	8.4	0.3
27 LiN01@18		233	8.4	0.3
27 LiN02@16		233	8.4	0.4
27 LiN02@16		233	8.4	0.4
27 LiN02@10		233	8.5	0.3
27 LiN02@13		233	8.5	0.3
27 LiN02@6		233	8.5	0.3
27 LiN02@10		233	8.5	0.3
27 LiN02@13		233	8.5	0.3
27 LiN02@6		233	8.5	0.3
27 LiN01@12		233	8.6	0.3
27 LiN01@12		233	8.6	0.3
27 LiN02@7		233	8.8	0.3
27 LiN02@7		233	8.8	0.3
27 LiN01@17		233	8.9	0.4
27 LiN01@17		233	8.9	0.4
56 NA379		233	5.51	
56 NA379		233	5.51	
121 18	233	8.77	0.22	
121 14	233	9.38	0.36	
121 5	233	9.55	0.20	
121 3	233	9.57	0.27	
121 8	233	9.72	0.30	
121 1	233	10.01	0.24	
121 9	233	10.04	0.10	
121 6	233	10.20	0.24	
121 7	233	10.26	0.32	
121 4	233	10.58	0.32	
113 Lin-2	233.7		8.17	
27 BW0902@19	234		7.3	0.2
27 BW0902@4	234		7.3	0.2
27 BW0902@19	234		7.3	0.2
27 BW0902@4	234		7.3	0.2
27 BW0902@18	234		7.3	0.3
27 BW0902@18	234		7.3	0.3
27 BW0901@2	234		7.4	0.2
27 BW0901@2	234		7.4	0.2
27 BW0902@20	234		7.4	0.3
27 BW0902@20	234		7.4	0.3
27 BW0901@3	234		7.5	0.3
27 BW0902@11	234		7.5	0.3
27 BW0902@13	234		7.5	0.3
27 BW0901@3	234		7.5	0.3

27 BW0902@11	234	7.5	0.3
27 BW0902@13	234	7.5	0.3
27 BW0901@4	234	7.6	0.2
27 BW0901@6	234	7.6	0.2
27 BW0901@4	234	7.6	0.2
27 BW0901@6	234	7.6	0.2
27 BW0902@2	234	7.6	0.3
27 BW0902@2	234	7.6	0.3
27 BW0901@1	234	7.7	0.2
27 BW0902@12	234	7.7	0.2
27 BW0901@1	234	7.7	0.2
27 BW0902@12	234	7.7	0.2
27 BW0902@10	234	7.7	0.4
27 BW0902@10	234	7.7	0.4
27 BW0902@1	234	7.8	0.3
27 BW0902@7	234	7.8	0.3
27 BW0902@1	234	7.8	0.3
27 BW0902@7	234	7.8	0.3
27 BW0901@14	234	7.8	0.4
27 BW0902@8	234	7.8	0.4
27 BW0901@14	234	7.8	0.4
27 BW0902@8	234	7.8	0.4
27 BW0902@5	234	7.9	0.2
27 BW0902@5	234	7.9	0.2
27 BW0901@16	234	7.9	0.3
27 BW0901@8	234	7.9	0.3
27 BW0901@9	234	7.9	0.3
27 BW0902@14	234	7.9	0.3
27 BW0902@15	234	7.9	0.3
27 BW0902@17	234	7.9	0.3
27 BW0902@6	234	7.9	0.3
27 BW0901@16	234	7.9	0.3
27 BW0901@8	234	7.9	0.3
27 BW0901@9	234	7.9	0.3
27 BW0902@14	234	7.9	0.3
27 BW0902@15	234	7.9	0.3
27 BW0902@17	234	7.9	0.3
27 BW0902@6	234	7.9	0.3
27 BW0901@17	234	8	0.2
27 BW0901@18	234	8	0.2
27 BW0901@17	234	8	0.2
27 BW0901@18	234	8	0.2
27 BW0902@3	234	8	0.4
27 BW0902@3	234	8	0.4
27 BW0901@10	234	8.1	0.3

27 BW0901@19		234	8.1	0.3
27 BW0901@10		234	8.1	0.3
27 BW0901@19		234	8.1	0.3
27 BW0901@5		234	8.2	0.2
27 BW0901@5		234	8.2	0.2
27 BW0901@7		234	8.2	0.4
27 BW0901@7		234	8.2	0.4
27 BW0901@11		234	8.3	0.2
27 BW0901@15		234	8.3	0.2
27 BW0901@11		234	8.3	0.2
27 BW0901@15		234	8.3	0.2
27 BW0901@20		234	8.4	0.2
27 BW0901@20		234	8.4	0.2
27 BW0902@16		234	8.4	0.3
27 BW0902@16		234	8.4	0.3
27 BW0901@12		234	8.7	0.2
27 BW0901@12		234	8.7	0.2
27 BW0902@9		234	8.9	0.3
27 BW0902@9		234	8.9	0.3
27 BW0901@13		234	9.3	0.3
27 BW0901@13		234	9.3	0.3
121 21	234	9.42	0.36	
121 24	234	9.86	0.27	
121 20	234	9.95	0.18	
121 17	235	10.11	0.22	
121 2	235	10.21	0.19	
121 22	235	10.45	0.20	
10 2346-32		236	6.2	0.5
10 2346-32		236	6.2	0.5
10 1746-09		236	6.3	0.8
10 1746-09		236	6.3	0.8
19 08LL04 37		236	-0.23	0.38
19 08LL04 37		236	-0.23	0.38
121 13	236	8.88	0.30	
121 20	236	10.07	0.18	
121 10	236	10.20	0.38	
121 8	236	10.30	0.12	
121 3	236	10.33	0.20	
121 5	236	10.37	0.14	
121 11	236	10.47	0.22	
121 21	236	11.02	0.19	
19 08LL07 47		237	3.69	0.41
19 08LL07 47		237	3.69	0.41
19 08LL04 60		237	5.68	0.32
19 08LL04 60		237	5.68	0.32

121 9		237	9.74	0.36	
121 17		237	10.01	0.20	
121 15		237	10.05	0.16	
121 14		237	10.10	0.26	
121 19		237	10.12	0.10	
121 23		237	10.17	0.29	
121 19		237	10.22	0.26	
121 12		237	10.32	0.32	
121 24		237	10.38	0.21	
121 9		237	10.49	0.16	
121 1		237	10.51	0.18	
121 16		237	10.94	0.35	
121 20		237	11.00	0.33	
115	21. 1	237. 29	8. 6		
10 2346-44		238	7. 3	0. 4	
10 2346-44		238	7. 3	0. 4	
121 11		238	9.74	0.20	
121 11		238	9.92	0.24	
19 08LL04 41		239	4. 89	0. 18	
19 08LL04 41		239	4. 89	0. 18	
121 23		239	9.49	0.31	
121 2		239	10.27	0.20	
121 13		239	10.70	0.27	
121 20		240	8.89	0.28	
121 6		240	9.49	0.22	
10 1746-48a		241	5. 7	0. 4	
10 1746-48a		241	5. 7	0. 4	
10 1746-12		241	6	0. 8	
10 1746-12		241	6	0. 8	
121 18		241	9.90	0.24	
121 1		241	10.35	0.26	
121 15		241	10.53	0.32	
10 2606-18		242	6. 7	0. 4	
10 2606-18		242	6. 7	0. 4	
10 2346-14		242	6. 8	0. 4	
10 2346-14		242	6. 8	0. 4	
10 2346-21		242	7. 5	0. 5	
10 2346-21		242	7. 5	0. 5	
121 6		242	10.62	0.25	
10 1746-14		243	6. 5	0. 8	
10 1746-14		243	6. 5	0. 8	
19 08LL05 13		243	1. 77	0. 23	
19 08LL05 13		243	1. 77	0. 23	
121 7		243	9.37	0.20	
121 8		243	9.58	0.10	

121 3	243	10.24	0.12	
10 2346-11		245	5.8	0.5
10 2346-11		245	5.8	0.5
10 2346-27		245	6.6	0.5
10 2346-27		245	6.6	0.5
10 2346-25		245	8.1	0.5
10 2346-25		245	8.1	0.5
65 BB-86 16		245	7.7	0.3
65 BB-86 16		245	7.7	0.3
19 08LL07 34		246	4.49	0.39
19 08LL07 34		246	4.49	0.39
10 1746-48b		247	5.7	0.5
10 1746-48b		247	5.7	0.5
10 1746-23		247	6.1	0.6
10 1746-23		247	6.1	0.6
10 2606-28		247	7.7	0.4
10 2606-28		247	7.7	0.4
121 12	247	10.20	0.28	
10 2346-37		248	7.1	0.4
10 2346-37		248	7.1	0.4
10 1746-03		248	7.2	0.8
10 1746-03		248	7.2	0.8
90 VAL009		249	6.48	
114 SJ143		249	9.31	
121 14	249	10.40	0.16	
119	10.1	250	7	0.4939
75	16	251	6.56	0.44
75	70	251	7.51	0.5
100 PY		251.4	6.64	
19 08LL04 47		253	-3.07	0.34
19 08LL04 47		253	-3.07	0.34
114 SJ133		253	8.68	
19 08LL05 45		255	4.94	0.26
19 08LL05 45		255	4.94	0.26
37 07SC49@91		256	6	0.35
37 07SC49@91		256	6	0.35
75	34	256	7.75	0.47
37 07SC51-1@02		259	6.74	0.46
37 07SC51-1@02		259	6.74	0.46
19 08LL05 43		260	0.86	0.26
19 08LL05 43		260	0.86	0.26
100 XWL-V		260.7	6.14	
37 07SC51-1@44		261	6.17	0.53
37 07SC51-1@44		261	6.17	0.53
19 08LL05 44		262	-7.02	0.35

19 08LL05 44	262	-7.02	0.35
60 p11-116	263	5.3	0.3
60 p11-116	263	5.3	0.3
119 33.1	264	7	0.5388
37 07SC51-1@92	265	7.82	0.18
37 07SC51-1@92	265	7.82	0.18
37 07SC51-1@35	266	7.99	0.22
37 07SC51-1@35	266	7.99	0.22
60 p11-140	266	7.4	0.4
60 p11-140	266	7.4	0.4
119 3.1	266	6	0.6671
119 8.1	266	7	0.2975
19 08LL04 30	267	3.93	0.26
19 08LL04 30	267	3.93	0.26
18 CNG2-anu-zrn-	267.61937	6.92841865	0.61406368
18 CNG2-anu-zrn-	267.61937	6.92841865	0.61406368
119 32.1	268	6	0.5397
119 45.1	270	6	0.517
18 CNG2-anu-zrn-	270.467222	7.57088058	0.59277547
18 CNG2-anu-zrn-	270.467222	7.57088058	0.59277547
119 45.1	271	5	0.3102
37 07SC49@35	273	6.19	0.34
37 07SC49@35	273	6.19	0.34
119 52.1	273	7	0.3194
119 59.1	273	9	0.5227
56 NA3	275	6.24	
56 NA3	275	6.24	
75 4.1	275.8	7.04	0.45
75 9	276	6.65	0.45
75 11.1	276	6.71	0.52
119 35.1	277	6	0.5384
110 SN10-2/01	278	4.64	0.26
18 CNG2-anu-zrn-	278.095108	6.91608405	0.56290253
18 CNG2-anu-zrn-	278.095108	6.91608405	0.56290253
100 XSTiFe-V	278.6	6.73	
37 07SC49@23	279	7.27	0.35
37 07SC49@23	279	7.27	0.35
75 15	279	6.29	0.47
75 70	279	6.67	0.39
75 42	279	8.78	0.36
99 HSS6	279.1	6.43	
100 HSS6	279.1	6.42	
100 BJS6	279.2	7.01	
75 1.1	279.7	6.71	0.46
99 HSS12	279.7	7.68	

100 HSS12		279.7	7.68	
10 2346-08		280	4.4	0.4
10 2346-08		280	4.4	0.4
37 07SC65@27		280	8.39	0.31
37 07SC65@27		280	8.39	0.31
60 VGt-563		280	9.8	0.3
60 VGt-563		280	9.8	0.3
75	7	280	7.02	0.44
100 TY-V		280	5.86	
75	15.1	280.5	7.53	0.5
75	11	281	7.99	0.47
110 SN10-3/01		281	3.85	0.38
75	13.1	281.3	7.47	0.45
19 08LL07 57		282	7.43	0.46
19 08LL07 57		282	7.43	0.46
75	4	282	10.82	0.4
110 SN10-2/13		282	3.88	0.29
115	11.1	282.04	10	
75	5.1	282.5	6.56	0.5
37 07SC49@36		283	6.12	0.31
37 07SC49@36		283	6.12	0.31
37 07SC49@62		283	6.29	0.46
37 07SC49@62		283	6.29	0.46
75	31	283	7.25	0.42
110 SN10-3/13		283	2.41	0.2
110 SN10-2/12		283	3.71	0.32
110 SN10-9/02		283	4.11	0.34
119	25.1	283	6	0.5404
75	8.1	283.3	6.65	0.5
100 HS-V		283.8	5.93	
10 2346-42		284	5	0.4
10 2346-42		284	5	0.4
10 2346-17		284	8.7	0.5
10 2346-17		284	8.7	0.5
37 07SC49@07		284	7.22	0.32
37 07SC49@07		284	7.22	0.32
75	23	284	5.21	0.55
100 PSZK1-2-650		284	7.45	
119	25.1	284	6	0.5028
75	7.1	284.2	7.09	0.49
115	9.1	284.64	8.1	
37 07SC49@56		285	9.26	0.47
37 07SC49@56		285	9.26	0.47
75	2	285	6.35	0.48
100 XSCuNi-V		285	4.87	

110	SN10-9/01	285	3.53	0.21
110	SN10-3/06	285	3.86	0.19
110	SN10-12/09	285	3.9	0.31
110	SN10-9/03	285	3.98	0.24
110	SN10-12/01	285	4.01	0.25
119	55.1	285	7	0.3873
75	12.1	285.6	6.98	0.48
115	3.1	285.61	8.4	
37	07SC65@68	286	7.31	0.55
37	07SC65@68	286	7.31	0.55
75	22	286	6.55	0.41
75	8	286	7.87	0.45
110	SN10-2/07	286	3.36	0.22
110	SN10-3/12	286	3.54	0.22
110	SN10-12/15	286	3.82	0.28
110	SN10-2/11	286	3.92	0.31
115	14.1	286.08	10	
75	16.1	286.4	7.43	0.5
100	HS139	286.4	6.05	
75	28	287	6.88	0.35
75	36	287	7.29	0.47
110	SN10-3/10	287	3.59	0.19
110	SN10-2/02	287	3.71	0.23
110	SN10-9/15	287	4.33	0.21
75	3.2	287.3	6.78	0.48
115	10.1	287.84	8.4	
75	31	288	6.14	0.36
110	SN10-12/08	288	3.39	0.41
110	SN10-12/07	288	3.41	0.25
110	SN10-12/02	288	3.67	0.36
110	SN10-9/05	288	3.95	0.25
110	SN10-2/10	288	4.13	0.23
110	SN10-12/12	288	4.49	0.3
110	SN10-9/11	288	4.72	0.28
119	26.1	288	8	0.6737
37	07SC49@43	289	6.78	0.3
37	07SC49@43	289	6.78	0.3
60	vgt-083	289	5.5	0.2
60	vgt-083	289	5.5	0.2
110	SN10-3/15	289	3.42	0.33
110	SN10-3/07	289	3.65	0.29
110	SN10-3/08	289	3.69	0.22
110	SN10-3/04	289	4.06	0.27
115	24.1	289.32	9.2	
115	11.1	289.72	9.9	

75	9.1	289.8	6.92	0.51
115	7.1	289.97	9.9	
37 07SC65@98		290	5.65	0.37
37 07SC65@98		290	5.65	0.37
75	15	290	7.39	0.34
75	9	290	8.55	0.47
110 SN10-12/13		290	3.03	0.3
110 SN10-3/16		290	3.42	0.19
110 SN10-9/14		290	3.88	0.39
115	5.1	290.06	8	
115	6.1	290.31	8.1	
115	13.1	290.44	8.3	
115	6.1	290.51	7.5	
75	28	291	8.4	0.49
110 SN10-12/06		291	3.22	0.33
110 SN10-9/04		291	3.61	0.26
110 SN10-3/03		291	3.76	0.25
110 SN10-2/03		291	3.8	0.27
110 SN10-9/10		291	3.82	0.25
110 SN10-3/11		291	3.91	0.25
115	1.1	291.19	8.3	
115	8.1	291.67	8.5	
115	10.1	291.84	8.1	
115	4.1	291.9	8.1	
115	2.1	291.93	7.7	
115	22.1	291.98	7.1	
110 SN10-2/15		292	3.55	0.28
110 SN10-2/09		292	3.59	0.29
110 SN10-2/04		292	3.7	0.17
110 SN10-9/08		292	3.88	0.17
110 SN10-9/07		292	3.88	0.28
110 SN10-2/05		292	4.18	0.18
115	6.1	292.04	7.9	
115	11.1	292.25	8.7	
115	8.1	292.36	8.2	
115	5.1	292.46	8.1	
115	4.1	292.56	9.1	
115	1.1	292.62	8.1	
115	3.1	292.97	7.7	
75	3	293	6.71	0.42
75	67	293	7.14	0.47
75	24	293	7.31	0.44
110 SN10-9/09		293	3.55	0.22
110 SN10-3/09		293	3.65	0.27
110 SN10-3/14		293	3.9	0.26

110	SN10-3/05	293	4.06	0.36
110	SN10-9/06	293	4.38	0.29
115	25.1	293.17	8	
115	4.1	293.6	8.1	
115	12.1	293.66	8.1	
37	07SC65@74	294	10.81	0.43
37	07SC65@74	294	10.81	0.43
75	43	294	7.1	0.47
75	6	294	8.25	0.35
110	SN10-12/05	294	3.88	0.23
110	SN10-2/14	294	4.46	0.23
115	13.1	294.18	9.3	
115	6.1	294.51	8.5	
115	14.1	294.8	9.4	
115	2.1	294.95	8.1	
75	67	295	7.56	0.39
75	50	295	7.93	0.4
75	12	295	8.93	0.39
110	SN10-9/13	295	3.5	0.28
110	SN10-9/16	295	3.93	0.24
115	7.1	295.01	7.8	
115	13.1	295.04	9.4	
115	10.1	295.06	7.7	
115	2.1	295.15	7.3	
115	7.1	295.3	7.8	
115	9.1	295.36	7.9	
115	18.1	295.88	8.5	
115	9.1	295.92	7.9	
75	62	296	7.47	0.37
119	22.1	296	5	0.4916
115	7.1	296.01	7.7	
115	12.1	296.22	9.5	
115	10.1	296.25	8.3	
115	23.1	296.28	9	
115	31.1	296.78	8.7	
115	4.1	296.87	8	
37	07SC65@23	297	6.36	0.25
37	07SC65@23	297	6.36	0.25
37	07SC49@63	297	10.15	0.35
37	07SC49@63	297	10.15	0.35
115	35.2	297.07	8.4	
115	18.1	297.15	9.4	
115	11.1	297.19	8.2	
115	1.1	297.48	8.5	
115	27.1	297.63	9.8	

115	24.1	297.81	7.1	
37 07SC65@84		298	8.67	0.42
37 07SC65@84		298	8.67	0.42
60 vgt-137		298	6.5	0.2
60 vgt-137		298	6.5	0.2
75	40	298	7.48	0.44
119	2.1	298	4	0.5482
119	1.1	298	6	0.4312
119	15.1	298	7	0.5333
119	17.1	298	8	0.2988
115	2.1	298.41	9.1	
115	22.1	298.7	7.6	
115	6.2	298.87	7.9	
19 08LL04 1		299	-6.1	0.33
19 08LL04 1		299	-6.1	0.33
110 SN10-12/14		299	3.31	0.24
117		299.1	7.306834	0.0911
117		299.1	7.387827	0.109277
117		299.1	7.453585	0.095843
117		299.1	7.574255	0.115928
117		299.1	7.731239	0.091464
117		299.1	7.748664	0.100803
117		299.1	7.916776	0.100579
117		299.1	8.007387	0.096509
117		299.1	8.071531	0.110576
117		299.1	8.078473	0.094037
117		299.1	8.685504	0.105144
115	8.1	299.26	8.5	
110 SN10-2/06		300	3.69	0.26
119	54.1	300	7	0.519
115	20.1	300.24	7.7	
115	3.1	300.73	8.4	
115	8.1	300.99	7.9	
37 07SC49@75		301	10.28	0.47
37 07SC49@75		301	10.28	0.47
110 SN10-9/12		301	3.65	0.26
110 SN10-12/10		301	3.94	0.15
119	29.1	301	5	0.4978
18 NIL-anu-zrn-l		301.00634	3.68247002	0.93659033
18 NIL-anu-zrn-l		301.00634	3.68247002	0.93659033
115	19.1	301.24	9.9	
115	17.1	301.25	7.2	
115	25.1	301.35	8.2	
115	16.1	301.91	8.3	
75	35	302	6.81	0.38

75	30	302	7.76	0.44
75	30	302	12.46	0.43
115	28.1	302.26	7.8	
115	5.1	302.3	9.1	
115	35.1	302.51	8.9	
10 1774-76		303	6.5	0.7
10 1774-76		303	6.5	0.7
37 07SC49@95		303	6	0.39
37 07SC49@95		303	6	0.39
75	23	303	6.74	0.4
115	9.1	303.18	7.3	
115	23.1	303.27	8.2	
115	5.1	303.29	7.9	
115	33.1	303.32	7.7	
115	3.1	303.7	8.7	
10 2346-33		304	5.8	0.5
10 2346-33		304	5.8	0.5
75	45	304	5.92	0.4
75	22	304	6.87	0.44
115	19.1	304.05	8.1	
115	21.2	304.12	8.5	
115	21.1	304.31	9.1	
115	29.1	304.8	8.2	
10 2346-34		305	4.2	0.5
10 2346-34		305	4.2	0.5
37 07SC65@45		305	10.54	0.6
37 07SC65@45		305	10.54	0.6
75	61	305	4.33	0.44
117		305.9	6.412233	0.094392
117		305.9	6.69127	0.128521
117		305.9	6.871818	0.103499
117		305.9	6.885695	0.119368
117		305.9	7.020125	0.089857
117		305.9	7.147068	0.101298
117		305.9	7.181716	0.108076
117		305.9	7.272032	0.101633
117		305.9	7.587496	0.079751
117		305.9	7.667317	0.106106
117		305.9	7.667573	0.095946
117		305.9	7.80313	0.106893
117		305.9	8.035598	0.106105
117		305.9	8.132351	0.087643
117		305.9	8.21708	0.109542
117		305.9	8.240114	0.108953
60 p11-131		306	8.3	0.4

60 p11-131		306	8.3	0.4
75	3	306	6	0.4
115	1.1	306.01	7.8	
115	32.1	306.04	10	
117		306.1	6.389578	0.16267
117		306.1	6.456883	0.097376
117		306.1	6.838953	0.090415
117		306.1	6.848995	0.11683
117		306.1	6.923618	0.109824
117		306.1	6.928895	0.113995
117		306.1	7.037148	0.080536
117		306.1	7.046135	0.11407
117		306.1	7.200417	0.088812
117		306.1	7.203871	0.104633
117		306.1	7.248569	0.09117
117		306.1	7.365644	0.079194
117		306.1	7.464527	0.121799
117		306.1	7.537047	0.07894
117		306.1	7.565666	0.160437
117		306.1	7.573685	0.072381
117		306.1	7.620396	0.086547
117		306.1	7.679799	0.100347
117		306.1	7.71989	0.102947
117		306.1	7.837153	0.099527
117		306.1	7.863837	0.066688
117		306.1	8.009612	0.104018
117		306.1	8.017317	0.107554
18 CNG2-anu-zrn-		306.200953	6.77877263	0.59572438
18 CNG2-anu-zrn-		306.200953	6.77877263	0.59572438
115	17.1	306.54	8.3	
75	24	307	8.3	0.42
117		307.3	6.948956	0.101637
117		307.3	7.298439	0.100915
117		307.3	7.305089	0.120696
117		307.3	7.449666	0.099181
117		307.3	7.45672	0.110486
117		307.3	7.618892	0.107345
117		307.3	7.64306	0.121005
117		307.3	7.757505	0.10487
117		307.3	7.806946	0.096666
117		307.3	7.945576	0.09344
117		307.3	8.234559	0.113242
117		307.3	8.370979	0.096318
117		307.3	8.379054	0.115739
117		307.3	8.418136	0.084557

117		307.3	8.496656	0.109679
117		307.3	8.511655	0.108293
117		307.8	6.623643	0.110094
117		307.8	6.872598	0.135702
117		307.8	7.619005	0.120987
117		307.8	7.683028	0.163548
117		307.8	7.717082	0.15264
117		307.8	7.753935	0.141833
117		307.8	7.810441	0.144241
117		307.8	7.937007	0.113556
117		307.8	8.109316	0.142047
117		307.8	8.207974	0.090565
117		307.8	8.365116	0.157589
117		307.8	8.430598	0.179737
117		307.8	8.800379	0.125621
	10 2346-01a	308	6.4	0.5
	10 2346-01a	308	6.4	0.5
	10 2346-23	308	7	0.5
	10 2346-23	308	7	0.5
	37 07SC65@46	308	10.08	0.28
	37 07SC65@46	308	10.08	0.28
115	9.2	308.05	7.9	
115	28.1	308.37	9.2	
	10 1746-18	309	4.7	0.6
	10 1746-18	309	4.7	0.6
	10 1774-82a	309	6.2	0.6
	10 1774-82a	309	6.2	0.6
115	16.1	309.19	7.6	
117		309.7	7.748023	0.101286
117		309.7	7.808506	0.104239
117		309.7	7.812294	0.132592
117		309.7	7.915846	0.099819
117		309.7	7.99912	0.117823
117		309.7	8.005643	0.087084
117		309.7	8.025623	0.108895
117		309.7	8.054824	0.087325
117		309.7	8.082386	0.106904
117		309.7	8.090844	0.110669
117		309.7	8.112167	0.087103
117		309.7	8.245542	0.088663
117		309.7	8.324017	0.109577
117		309.7	8.392022	0.121795
117		309.7	8.914273	0.082269
	10 2346-24	310	7	0.5
	10 2346-24	310	7	0.5

56	52	310	6.17	
56	52	310	6.17	
75	20	310	5.28	0.37
75	66	311	6.65	0.4
10 1774-82b		312	6	0.6
10 1774-82b		312	6	0.6
115	30.1	312.02	7.6	
10 1746-65		313	5.6	0.4
10 1746-65		313	5.6	0.4
10 2346-10		313	6.9	0.4
10 2346-10		313	6.9	0.4
10 2346-28		313	7.7	0.8
10 2346-28		313	7.7	0.8
10 2346-15		313	7.8	0.4
10 2346-15		313	7.8	0.4
10 2346-07		314	7.3	0.4
10 2346-07		314	7.3	0.4
62 WS02-6		314	7.49	0.28
62 WS02-6		314	7.49	0.28
10 1774-78		316	5.7	0.6
10 1774-78		316	5.7	0.6
56 NA4		316	7.79	
56 NA4		316	7.79	
10 2346-01b		317	6	0.4
10 2346-01b		317	6	0.4
119	14.1	317	6	0.4969
117		318.9	7.694688	0.143214
117		318.9	7.757816	0.157301
117		318.9	7.8214	0.150905
117		318.9	7.825026	0.140997
117		318.9	7.915717	0.12645
117		318.9	7.920306	0.130861
117		318.9	7.935337	0.115526
117		318.9	7.983211	0.148857
117		318.9	8.018291	0.155706
117		318.9	8.038585	0.135416
117		318.9	8.083476	0.132208
117		318.9	8.125838	0.180769
117		318.9	8.125992	0.130217
117		318.9	8.299722	0.129257
117		318.9	8.339121	0.142285
117		318.9	8.582965	0.138285
117		318.9	8.797194	0.128042
117		318.9	8.804571	0.138551
117		318.9	8.924065	0.131609

117		318.9	9.226255	0.149908
60 vgt-104		319	5.5	0.2
60 vgt-104		319	5.5	0.2
10 1746-22		320	6	0.6
10 1746-22		320	6	0.6
115	34.1	320.16	8.1	
117		320.5	6.863104	0.126999
117		320.5	7.277504	0.123101
117		320.5	7.366006	0.140091
117		320.5	7.409071	0.099115
117		320.5	7.734943	0.118355
117		320.5	7.78031	0.154749
117		320.5	7.972104	0.118853
117		320.5	7.985477	0.144321
117		320.5	8.208077	0.112266
117		320.5	8.251339	0.128415
117		320.5	8.409354	0.133531
117		320.5	8.436025	0.085126
117		320.5	8.539886	0.141377
117		320.5	9.282704	0.119733
117		320.5	9.393911	0.139815
117		320.5	9.594177	0.104488
117		320.5	9.974062	0.124841
10 2346-46		321	5.3	0.4
10 2346-46		321	5.3	0.4
10 1774-65a		321	6.2	0.7
10 1774-65a		321	6.2	0.7
115	14.1	321.37	10.4	
10 2346-06		322	6.6	0.4
10 2346-06		322	6.6	0.4
10 2346-36		323	6.7	0.4
10 2346-36		323	6.7	0.4
19 08LL05 31		323	1.8	0.3
19 08LL05 31		323	1.8	0.3
75	39.1	323	9.28	0.29
19 08LL06 21		324	2.52	0.36
19 08LL06 21		324	2.52	0.36
75	41	324	5.69	0.43
10 1774-65b		325	5.8	0.7
10 1774-65b		325	5.8	0.7
75	32.1	329	6.83	0.33
10 2346-45		330	4.5	0.4
10 2346-45		330	4.5	0.4
19 08LL07 51		330	4.96	0.44
19 08LL07 51		330	4.96	0.44

75	48	330	5.01	0.43
10 2346-03		331	4.5	0.5
10 2346-03		331	4.5	0.5
75	56	331	5.87	0.35
119	53.1	331	6	0.509
10 2346-04		332	5.8	0.4
10 2346-04		332	5.8	0.4
65 BB-86 5		332	5.71	0.26
65 BB-86 5		332	5.71	0.26
75	6.1	333	10.1	0.33
10 2641-31		334	7.2	0.6
10 2641-31		334	7.2	0.6
10 2346-35		335	4.7	0.4
10 2346-35		335	4.7	0.4
10 2346-22		335	5.5	0.5
10 2346-22		335	5.5	0.5
18 CNG2-anu-zrn-	335.371742	5.76614898	0.59684719	
18 CNG2-anu-zrn-	335.371742	5.76614898	0.59684719	
10 1774-84		337	6.4	0.7
10 1774-84		337	6.4	0.7
75	12	337	4.14	0.28
19 08LL05 46		338	4.65	0.31
19 08LL05 46		338	4.65	0.31
60 vgt-143		340	5.9	0.2
60 vgt-143		340	5.9	0.2
60 VGt-550		341	8.1	0.4
60 VGt-550		341	8.1	0.4
10 2346-20		342	5.5	0.5
10 2346-20		342	5.5	0.5
19 08LL07 35		343	5.96	0.3
19 08LL07 35		343	5.96	0.3
60 VGt-353		343	6.9	0.2
60 VGt-353		343	6.9	0.2
75	58.1	344	8.43	0.35
115	15.1	344.23	8.9	
10 1746-02		345	6	0.8
10 1746-02		345	6	0.8
60 vgt-090		345	4	0.2
60 vgt-090		345	4	0.2
60 VGt-439		345	6.3	0.4
60 VGt-439		345	6.3	0.4
60 vgt-141		345	8	0.2
60 vgt-141		345	8	0.2
75	24	345	8.77	0.27
75	20	345	9.84	0.28

19 08LL07 26		346	5.98	0.38
19 08LL07 26		346	5.98	0.38
56 AB-123		346	5.48	
56 AB-123		346	5.48	
60 VGt-489		347	5.5	0.4
60 VGt-489		347	5.5	0.4
119	47.1	347	6	0.3848
75	21.1	348	5.49	0.31
10 1746-15		349	6	0.7
10 1746-15		349	6	0.7
60 VGt-436		349	5.4	0.4
60 VGt-436		349	5.4	0.4
75	31.1	349	7.76	0.36
75	14	349	8.74	0.4
10 2346-09		351	7.2	0.4
10 2346-09		351	7.2	0.4
60 VGt-399		351	5.4	0.4
60 VGt-399		351	5.4	0.4
60 VGt-507		351	6.6	0.2
60 VGt-507		351	6.6	0.2
75	16	351	5.55	0.4
60 vgt-089		352	6.5	0.2
60 vgt-089		352	6.5	0.2
60 vgt-079		352	6.6	0.2
60 vgt-079		352	6.6	0.2
119	44.1	352	2	0.4822
60 vgt-092		353	6	0.2
60 vgt-092		353	6	0.2
75	54	353	6.15	0.48
60 vgt-084		354	5.2	0.2
60 vgt-084		354	5.2	0.2
60 VGt-543		354	5.2	0.4
60 VGt-543		354	5.2	0.4
65 BB-86 20		354	5.45	0.2
65 BB-86 20		354	5.45	0.2
75	26	354	8.5	0.43
75	56	354	8.75	0.5
75	60	354	11.17	0.51
60 vgt-139		355	7.8	0.2
60 vgt-139		355	7.8	0.2
10 1774-26		356	6.4	0.6
10 1774-26		356	6.4	0.6
60 vgt-103		357	5.6	0.2
60 vgt-103		357	5.6	0.2
60 VGt-470		357	6.3	0.4

60 VGt-470		357	6.3	0.4
100 TLG-V2		357.5	5	
60 VGt-516		359	7	0.2
60 VGt-516		359	7	0.2
37 07SC65@8		360	7.46	0.29
37 07SC65@8		360	7.46	0.29
37 07SC49@32		360	9.94	0.27
37 07SC49@32		360	9.94	0.27
60 vgt-107		360	3.3	0.3
60 vgt-107		360	3.3	0.3
37 07SC65@89		361	5.78	0.35
37 07SC65@89		361	5.78	0.35
37 07SC49@20		361	10.88	0.34
37 07SC49@20		361	10.88	0.34
59 M0-1252		361	6.2	0.1
59 M0-1252		361	6.2	0.1
59 M0-1118		362	7.7	0.3
59 M0-1118		362	7.7	0.3
75	21	364	8.55	0.39
37 07SC65@24		365	6.92	0.28
37 07SC65@24		365	6.92	0.28
37 07SC65@25		365	7.33	0.32
37 07SC65@25		365	7.33	0.32
75	5	365	9.07	0.4
10 2641-04		366	6.5	0.5
10 2641-04		366	6.5	0.5
37 07SC65@66		367	5.57	0.45
37 07SC65@66		367	5.57	0.45
75	45	367	11.61	0.46
37 07SC65@70		368	7.37	0.46
37 07SC65@70		368	7.37	0.46
75	14.1	368.8	7.68	0.28
75	37	369	8.15	0.51
119	5.1	369	6	0.3109
37 07SC65@75		370	7	0.49
37 07SC65@75		370	7	0.49
62 WS02-3		370	8.21	0.23
62 WS02-3		370	8.21	0.23
10 2346-39		371	9	0.4
10 2346-39		371	9	0.4
37 07SC65@14		371	6.59	0.41
37 07SC65@14		371	6.59	0.41
37 07SC65@94		371	7.59	0.36
37 07SC65@94		371	7.59	0.36
37 07SC49@28		371	9.79	0.3

37 07SC49@28	371	9.79	0.3
37 07SC65@1	371	10.78	0.54
37 07SC65@1	371	10.78	0.54
59 M0-1300	371	9.1	0.2
59 M0-1300	371	9.1	0.2
75 38	371	7.36	0.46
10 1746-53	372	6.1	0.4
10 1746-53	372	6.1	0.4
37 07SC65@55	372	5.99	0.24
37 07SC65@55	372	5.99	0.24
37 07SC65@73	372	6.67	0.28
37 07SC65@73	372	6.67	0.28
37 07SC65@93	372	7.45	0.4
37 07SC65@93	372	7.45	0.4
59 M0-1055	372	6.7	0.4
59 M0-1055	372	6.7	0.4
10 2346-16	373	7	0.4
10 2346-16	373	7	0.4
37 07SC65@85	373	5.48	0.36
37 07SC65@85	373	5.48	0.36
37 07SC65@42	373	6.58	0.32
37 07SC65@42	373	6.58	0.32
75 18	374	7.43	0.4
10 2346-02	375	4.1	0.4
10 2346-02	375	4.1	0.4
21	375	3.9655633	0.30808242
21	375	3.9655633	0.30808242
21	375	4.14993326	0.44743394
21	375	4.14993326	0.44743394
21	375	4.20554485	0.33649381
21	375	4.20554485	0.33649381
21	375	4.46907365	0.43443142
21	375	4.46907365	0.43443142
21	375	4.90494828	0.32827517
21	375	4.90494828	0.32827517
21	375	4.91847542	0.38122682
21	375	4.91847542	0.38122682
21	375	4.93350558	0.33496899
21	375	4.93350558	0.33496899
21	375	4.9350086	0.40779471
21	375	4.9350086	0.40779471
21	375	5.0201795	0.44255863
21	375	5.0201795	0.44255863
21	375	5.08230416	0.35494531
21	375	5.08230416	0.35494531

21		375	5.26266608	0.34282159
21		375	5.26266608	0.34282159
21		375	5.80375182	0.36257598
21		375	5.80375182	0.36257598
37	07SC65@51	378	5.57	0.43
37	07SC65@51	378	5.57	0.43
37	07SC65@67	378	10.91	0.26
37	07SC65@67	378	10.91	0.26
75	12.1	380.9	6.88	0.29
75	17	381	7.46	0.38
10	2346-13	383	6.9	0.5
10	2346-13	383	6.9	0.5
37	07SC65@61	383	6.53	0.32
37	07SC65@61	383	6.53	0.32
119	39.1	384	9	0.333
75	37	386	6.93	0.42
75	13.1	387.5	7.51	0.29
10	2346-31	388	7	0.5
10	2346-31	388	7	0.5
75	9.1	388.4	7.06	0.29
75	11.1	388.6	7.77	0.3
75	13	389	9.42	0.42
78	TKB11	390	6.36	
78	TKB1	390	6.41	
78	TKB5	390	6.65	
75	15.1	391.5	7.74	0.31
10	2346-05	392	10.6	0.4
10	2346-05	392	10.6	0.4
37	07SC49@88	392	6.46	0.46
37	07SC49@88	392	6.46	0.46
75	57	392	7.07	0.35
10	2641-52	393	9.1	0.6
10	2641-52	393	9.1	0.6
75	43	393	9.42	0.4
75	1.1	393.5	6.72	0.31
75	8.1	393.9	7.58	0.29
10	2641-05	394	7.8	0.6
10	2641-05	394	7.8	0.6
10	2606-23	395	6.1	0.4
10	2606-23	395	6.1	0.4
19	08LL07 53	395	5.98	0.42
19	08LL07 53	395	5.98	0.42
75	5.1	395	8.31	0.3
10	2346-12	397	7.7	0.4
10	2346-12	397	7.7	0.4

75	64	397	7.3	0.41
100 SH-11		397.5	4.64	
121 9	398		9.91	0.18
75	6.1	398.1	7.8	0.29
19 08LL07 49		399	6.09	0.39
19 08LL07 49		399	6.09	0.39
75	41	399	10.01	0.4
10 2346-41		400	6.5	0.4
10 2346-41		400	6.5	0.4
10 2641-11		400	7.3	0.5
10 2641-11		400	7.3	0.5
37 07SC65@15		400	8.53	0.39
37 07SC65@15		400	8.53	0.39
37 07SC65@90		400	9	0.34
37 07SC65@90		400	9	0.34
56 PAM-07		400	9.11	
56 PAM-07		400	9.11	
78 TKB-15		400	6.91	
78 TKB17		400	8.06	
78 TKB100		400	8.12	
10 1774-10b		401	11.9	0.6
10 1774-10b		401	11.9	0.6
18 CNG2-anu-zrn-	401.589066	6.46943526	0.59802899	
18 CNG2-anu-zrn-	401.589066	6.46943526	0.59802899	
75	4.2	401.6	7	0.29
10 2606-04		402	6.7	0.4
10 2606-04		402	6.7	0.4
10 2641-25		402	8.1	0.7
10 2641-25		402	8.1	0.7
119	56.1	403	8	0.6088
75	4.1	403.2	7.28	0.29
10 2641-16		405	9.1	0.9
10 2641-16		405	9.1	0.9
59 M0-1240		405	3.1	0.2
59 M0-1240		405	3.1	0.2
121 3	406		10.33	0.35
59 M0-906		407	6.5	0.2
59 M0-906		407	6.5	0.2
75	20	408	7.27	0.35
10 1746-11		409	9.4	0.8
10 1746-11		409	9.4	0.8
75	39	411	8.73	0.41
10 2641-58		412	5.5	0.9
10 2641-58		412	5.5	0.9
10 2606-02		414	8	0.4

10 2606-02	414	8	0.4
21	414	6.2604936	0.38376089
21	414	6.2604936	0.38376089
21	414	6.36926423	0.25153733
21	414	6.36926423	0.25153733
21	414	6.4348488	0.33132582
21	414	6.4348488	0.33132582
21	414	6.43763492	0.30992682
21	414	6.43763492	0.30992682
21	414	6.49287745	0.2789991
21	414	6.49287745	0.2789991
21	414	6.50967489	0.32441281
21	414	6.50967489	0.32441281
21	414	6.51915286	0.4512376
21	414	6.51915286	0.4512376
21	414	6.52663547	0.32593774
21	414	6.52663547	0.32593774
21	414	6.54092146	0.33814322
21	414	6.54092146	0.33814322
21	414	6.5966025	0.40521061
21	414	6.5966025	0.40521061
21	414	6.631392	0.2696962
21	414	6.631392	0.2696962
21	414	6.63288852	0.29741711
21	414	6.63288852	0.29741711
21	414	6.64902047	0.30894421
21	414	6.64902047	0.30894421
21	414	6.66753743	0.45446182
21	414	6.66753743	0.45446182
21	414	6.68872102	0.28438341
21	414	6.68872102	0.28438341
21	414	6.69356126	0.42085622
21	414	6.69356126	0.42085622
21	414	6.70407089	0.46905267
21	414	6.70407089	0.46905267
21	414	6.72567287	0.30851561
21	414	6.72567287	0.30851561
21	414	6.73151242	0.34749992
21	414	6.73151242	0.34749992
21	414	6.73553173	0.17703752
21	414	6.73553173	0.17703752
21	414	6.75011306	0.25650929
21	414	6.75011306	0.25650929
21	414	6.76796606	0.22534287
21	414	6.76796606	0.22534287

21	414	6.78403722	0.36175295
21	414	6.78403722	0.36175295
21	414	6.79665569	0.34351659
21	414	6.79665569	0.34351659
21	414	6.80115982	0.25820331
21	414	6.80115982	0.25820331
21	414	6.80548737	0.19795209
21	414	6.80548737	0.19795209
21	414	6.82568228	0.30323995
21	414	6.82568228	0.30323995
21	414	6.82584885	0.325843
21	414	6.82584885	0.325843
21	414	6.82743635	0.24211378
21	414	6.82743635	0.24211378
21	414	6.84018038	0.31121769
21	414	6.84018038	0.31121769
21	414	6.84319832	0.33062864
21	414	6.84319832	0.33062864
21	414	6.84689113	0.30050005
21	414	6.84689113	0.30050005
21	414	6.84880238	0.42689305
21	414	6.84880238	0.42689305
21	414	6.86135751	0.35060253
21	414	6.86135751	0.35060253
21	414	6.8912165	0.23424093
21	414	6.8912165	0.23424093
21	414	6.89477983	0.30150518
21	414	6.89477983	0.30150518
21	414	6.90319225	0.20199333
21	414	6.90319225	0.20199333
21	414	6.90874737	0.49239062
21	414	6.90874737	0.49239062
21	414	6.91616598	0.51270701
21	414	6.91616598	0.51270701
21	414	6.95508717	0.3207353
21	414	6.95508717	0.3207353
21	414	6.95563838	0.33170441
21	414	6.95563838	0.33170441
21	414	6.96207302	0.33809527
21	414	6.96207302	0.33809527
21	414	6.96606494	0.25505693
21	414	6.96606494	0.25505693
21	414	6.98452756	0.35253453
21	414	6.98452756	0.35253453
21	414	6.99592109	0.36402312

21	414	6.99592109	0.36402312
21	414	7.00112296	0.3970807
21	414	7.00112296	0.3970807
21	414	7.03036976	0.46999083
21	414	7.03036976	0.46999083
21	414	7.03787663	0.36492611
21	414	7.03787663	0.36492611
21	414	7.05438611	0.23483346
21	414	7.05438611	0.23483346
21	414	7.06402636	0.34767838
21	414	7.06402636	0.34767838
21	414	7.08341835	0.30301844
21	414	7.08341835	0.30301844
21	414	7.10877598	0.33998051
21	414	7.10877598	0.33998051
21	414	7.12095272	0.39896267
21	414	7.12095272	0.39896267
21	414	7.15331878	0.33571008
21	414	7.15331878	0.33571008
21	414	7.15468302	0.38208502
21	414	7.15468302	0.38208502
21	414	7.19973611	0.25274476
21	414	7.19973611	0.25274476
21	414	7.23455678	0.3899004
21	414	7.23455678	0.3899004
21	414	7.237427	0.35746431
21	414	7.237427	0.35746431
21	414	7.24280267	0.44997344
21	414	7.24280267	0.44997344
21	414	7.24380422	0.32690997
21	414	7.24380422	0.32690997
21	414	7.24881196	0.3972153
21	414	7.24881196	0.3972153
21	414	7.26217831	0.26382826
21	414	7.26217831	0.26382826
21	414	7.27539521	0.24131587
21	414	7.27539521	0.24131587
21	414	7.27793346	0.35130297
21	414	7.27793346	0.35130297
21	414	7.3193496	0.33579416
21	414	7.3193496	0.33579416
21	414	7.33132535	0.35945218
21	414	7.33132535	0.35945218
21	414	7.34380009	0.46104496
21	414	7.34380009	0.46104496

21		414	7. 35937334	0. 25847754
21		414	7. 35937334	0. 25847754
21		414	7. 41515561	0. 25755056
21		414	7. 41515561	0. 25755056
21		414	7. 42413742	0. 3825802
21		414	7. 42413742	0. 3825802
21		414	7. 42912732	0. 36749498
21		414	7. 42912732	0. 36749498
21		414	7. 44559398	0. 31273083
21		414	7. 44559398	0. 31273083
21		414	7. 46954548	0. 17852445
21		414	7. 46954548	0. 17852445
21		414	7. 47503436	0. 20283378
21		414	7. 47503436	0. 20283378
21		414	7. 489251	0. 30591244
21		414	7. 489251	0. 30591244
21		414	7. 54439392	0. 20425005
21		414	7. 54439392	0. 20425005
21		414	7. 57133936	0. 4117936
21		414	7. 57133936	0. 4117936
21		414	7. 64069892	0. 27373433
21		414	7. 64069892	0. 27373433
21		414	7. 64568882	0. 25767843
21		414	7. 64568882	0. 25767843
21		414	7. 65496421	0. 37862289
21		414	7. 65496421	0. 37862289
21		414	7. 67300267	0. 4026361
21		414	7. 67300267	0. 4026361
21		414	7. 78012524	0. 21302627
21		414	7. 78012524	0. 21302627
21		414	7. 85722444	0. 3507418
21		414	7. 85722444	0. 3507418
21		414	7. 87374569	0. 65755792
21		414	7. 87374569	0. 65755792
21		414	7. 88565314	0. 31066841
21		414	7. 88565314	0. 31066841
75	41	414	4. 06	0. 34
78 B4-28		415	6. 69	
78 KK4		415	7. 03	
78 KK2		415	7. 62	
105 10GD25		415	8. 15	
57 Temora-1		417	7. 93	
57 Temora-1		417	7. 93	
57 Temora-2		417	8. 2	
57 Temora-2		417	8. 2	

115	26. 1	417. 75	9. 2	
10 2606-12		418	7. 4	0. 4
10 2606-12		418	7. 4	0. 4
10 2606-19		419	8. 2	0. 4
10 2606-19		419	8. 2	0. 4
57 R33		419	5. 55	
57 R33		419	5. 55	
75	32	419	7. 21	0. 54
19 08LL06 31		420	7. 31	0. 42
19 08LL06 31		420	7. 31	0. 42
37 07SC49@80		420	5. 93	0. 34
37 07SC49@80		420	5. 93	0. 34
37 07SC49@31		420	8. 14	0. 34
37 07SC49@31		420	8. 14	0. 34
75	34	421	8. 43	0. 39
100 HSX		423. 7	5. 55	
115	29. 1	425. 87	8. 1	
60 VGt-560		426	11. 9	0. 2
60 VGt-560		426	11. 9	0. 2
37 07SC49@41		427	9. 11	0. 24
37 07SC49@41		427	9. 11	0. 24
21		428	8. 81042908	0. 77467442
21		428	8. 81042908	0. 77467442
21		428	9. 07963529	0. 51885864
21		428	9. 07963529	0. 51885864
21		428	9. 10470105	0. 5483811
21		428	9. 10470105	0. 5483811
21		428	9. 15132335	0. 79126582
21		428	9. 15132335	0. 79126582
21		428	9. 17254279	0. 6705866
21		428	9. 17254279	0. 6705866
21		428	9. 19744434	0. 574029
21		428	9. 19744434	0. 574029
21		428	9. 22672435	0. 66027523
21		428	9. 22672435	0. 66027523
21		428	9. 22852588	0. 80465855
21		428	9. 22852588	0. 80465855
21		428	9. 27338068	0. 39299334
21		428	9. 27338068	0. 39299334
21		428	9. 50374787	0. 61190502
21		428	9. 50374787	0. 61190502
21		428	9. 80553957	0. 42595281
21		428	9. 80553957	0. 42595281
21		428	9. 81406193	0. 73889998
21		428	9. 81406193	0. 73889998

21		428	10.3239008	0.60556524
21		428	10.3239008	0.60556524
21		428	10.8953155	0.41719416
21		428	10.8953155	0.41719416
121 5	428	9.07		0.18
21		430	7.41074557	0.47617245
21		430	7.41074557	0.47617245
21		430	7.85867361	0.63
21		430	7.85867361	0.63
21		430	7.94843832	0.5891645
21		430	7.94843832	0.5891645
21		430	7.94849649	0.79984961
21		430	7.94849649	0.79984961
21		430	7.97091569	0.65320768
21		430	7.97091569	0.65320768
21		430	7.98175521	0.65281149
21		430	7.98175521	0.65281149
21		430	8.01835121	0.56656142
21		430	8.01835121	0.56656142
21		430	8.02010626	0.60367145
21		430	8.02010626	0.60367145
21		430	8.04221487	0.36121621
21		430	8.04221487	0.36121621
21		430	8.07531247	0.47459372
21		430	8.07531247	0.47459372
21		430	8.08335127	0.41509188
21		430	8.08335127	0.41509188
21		430	8.7069836	0.7153921
21		430	8.7069836	0.7153921
21		430	8.70717584	0.25812649
21		430	8.70717584	0.25812649
21		430	8.74578971	0.51041311
21		430	8.74578971	0.51041311
21		430	8.79761837	0.57295762
21		430	8.79761837	0.57295762
21		430	8.80270389	0.39483448
21		430	8.80270389	0.39483448
21		430	8.82301705	0.61977016
21		430	8.82301705	0.61977016
21		430	8.84630699	0.44065679
21		430	8.84630699	0.44065679
21		430	8.85306069	0.29906355
21		430	8.85306069	0.29906355
21		430	8.93051125	0.61620996
21		430	8.93051125	0.61620996

21		430	9.01439691	0.67822327
21		430	9.01439691	0.67822327
21		430	9.03599622	0.788178
21		430	9.03599622	0.788178
21		430	9.05299213	0.24060462
21		430	9.05299213	0.24060462
21		430	9.13394654	0.65587739
21		430	9.13394654	0.65587739
21		430	9.1585165	0.46463354
21		430	9.1585165	0.46463354
21		430	9.21166357	0.48837728
21		430	9.21166357	0.48837728
21		430	9.30726903	0.29790785
21		430	9.30726903	0.29790785
21		430	9.32281485	0.47494475
21		430	9.32281485	0.47494475
21		430	9.36180404	0.78245468
21		430	9.36180404	0.78245468
21		430	9.47927987	0.31473197
21		430	9.47927987	0.31473197
21		430	9.54332865	0.72662024
21		430	9.54332865	0.72662024
21		430	9.54383096	0.40319451
21		430	9.54383096	0.40319451
21		430	9.87334589	0.60290016
21		430	9.87334589	0.60290016
21		430	9.96878467	0.73365156
21		430	9.96878467	0.73365156
60	VGt-531	430	8.4	0.4
60	VGt-531	430	8.4	0.4
75	64	430	8.1	0.35
10	2641-61	431	6.8	0.3
10	2641-61	431	6.8	0.3
10	1746-08	431	8.2	0.8
10	1746-08	431	8.2	0.8
56	SAZ-0	431	8.61	
56	SAZ-0	431	8.61	
119	7.1	431	7	0.3004
19	08LL07 32	433	5.66	0.28
19	08LL07 32	433	5.66	0.28
75	20	433	5.56	0.4
121	4	433	9.21	0.16
37	07SC49@86	435	5.46	0.52
37	07SC49@86	435	5.46	0.52
75	5	436	8.04	0.39

115	27.1	436.94	8.1	
19 08LL07 4		437	3.61	0.28
19 08LL07 4		437	3.61	0.28
37 07SC49@67		437	7.75	0.36
37 07SC49@67		437	7.75	0.36
75	21	438	11.34	0.34
105 10GD23?1		438	8.24	
37 07SC49@45		439	5.47	0.31
37 07SC49@45		439	5.47	0.31
37 07SC49@34		439	5.67	0.27
37 07SC49@34		439	5.67	0.27
37 07SC49@09		439	7.06	0.35
37 07SC49@09		439	7.06	0.35
37 07SC49@47		440	6.58	0.31
37 07SC49@47		440	6.58	0.31
60 sey-70		440	7.3	0.6
60 sey-70		440	7.3	0.6
19 08LL05 48		441	6.27	0.3
19 08LL05 48		441	6.27	0.3
37 07SC65@87		441	7.82	0.26
37 07SC65@87		441	7.82	0.26
121 14	441	9.05	0.25	
20 BB6. 10		442	7	0.3
20 BB6. 10		442	7	0.3
20 BB6. 10		442	7	0.3
20 KK1. 4		442	8.8	0.5
20 KK1. 4		442	8.8	0.5
20 KK1. 4		442	8.8	0.5
37 07SC49@78		442	6.72	0.48
37 07SC49@78		442	6.72	0.48
37 07SC49@25		443	5.95	0.29
37 07SC49@25		443	5.95	0.29
37 07SC49@61		443	6.76	0.31
37 07SC49@61		443	6.76	0.31
75	49	443	7.36	0.49
75	60	443	11.46	0.36
20 BB6. 18		444	7.5	0.5
20 BB6. 18		444	7.5	0.5
20 BB6. 18		444	7.5	0.5
60 sey-21		444	5.1	0.6
60 sey-21		444	5.1	0.6
75	36.1	444	9.65	0.27
115	15.1	444.75	8.9	
19 08LL04 48		445	1.6	0.5
19 08LL04 48		445	1.6	0.5

37 07SC49@04		446	5.63	0.38
37 07SC49@04		446	5.63	0.38
37 07SC49@51		446	6.24	0.45
37 07SC49@51		446	6.24	0.45
121 7	446	9.49	0.18	
37 07SC49@48		447	5.59	0.4
37 07SC49@48		447	5.59	0.4
62 FS07-9		447	7.92	0.32
62 FS07-9		447	7.92	0.32
37 07SC49@73		448	6.59	0.42
37 07SC49@73		448	6.59	0.42
56 AB-27		448	8.44	
56 AB-27		448	8.44	
20 KK1.23		449	7.4	0.3
20 KK1.23		449	7.4	0.3
20 KK1.23		449	7.4	0.3
37 07SC49@29		449	6.98	0.28
37 07SC49@29		449	6.98	0.28
20 BB1.8		450	8.1	0.7
20 BB1.8		450	8.1	0.7
20 BB1.8		450	8.1	0.7
60 sey-69		450	9.7	0.6
60 sey-69		450	9.7	0.6
107 IT/12_6		450	6.18	0.19
60 VGt-441		451	4.8	0.4
60 VGt-441		451	4.8	0.4
75	51	451	7.43	0.36
107 IT/12_9		451	5.94	0.13
121 16	451	9.17	0.25	
18 ZMB2-anu-zrn-	451.106128	6.57347803	0.59632365	
18 ZMB2-anu-zrn-	451.106128	6.57347803	0.59632365	
60 sey-54		452	7.3	0.6
60 sey-54		452	7.3	0.6
75	2.1	452	7.16	0.3
60 sey-05		454	7	0.6
60 sey-05		454	7	0.6
107 IT/12_11		454	6.16	0.2
119	18.1	454	8	0.2943
75	37.1	455	11.25	0.34
20 KK1.6		456	5.8	0.4
20 KK1.6		456	5.8	0.4
20 KK1.6		456	5.8	0.4
107 IT/12_7		456	6.2	0.23
19 08LL06 9		457	4.69	0.26
19 08LL06 9		457	4.69	0.26

21		457	4. 66090353	0. 27237284
21		457	4. 66090353	0. 27237284
21		457	4. 89173268	0. 36686367
21		457	4. 89173268	0. 36686367
21		457	4. 98504321	0. 2733633
21		457	4. 98504321	0. 2733633
21		457	4. 99253873	0. 29499688
21		457	4. 99253873	0. 29499688
21		457	4. 99953454	0. 28270762
21		457	4. 99953454	0. 28270762
21		457	5. 03412728	0. 30088853
21		457	5. 03412728	0. 30088853
21		457	5. 0641051	0. 28320422
21		457	5. 0641051	0. 28320422
21		457	5. 06899297	0. 22995445
21		457	5. 06899297	0. 22995445
21		457	5. 09097981	0. 2811412
21		457	5. 09097981	0. 2811412
21		457	5. 1485426	0. 26668654
21		457	5. 1485426	0. 26668654
21		457	5. 20990864	0. 42887079
21		457	5. 20990864	0. 42887079
21		457	5. 21998972	0. 38105294
21		457	5. 21998972	0. 38105294
21		457	5. 26987275	0. 2344501
21		457	5. 26987275	0. 2344501
21		457	5. 27944571	0. 23003958
21		457	5. 27944571	0. 23003958
21		457	5. 39885733	0. 21703646
21		457	5. 39885733	0. 21703646
21		457	5. 45276329	0. 32496115
21		457	5. 45276329	0. 32496115
21		457	5. 45326299	0. 24529822
21		457	5. 45326299	0. 24529822
21		457	5. 558739	0. 24439824
21		457	5. 558739	0. 24439824
21		457	5. 58621866	0. 25965002
21		457	5. 58621866	0. 25965002
21		457	5. 89150072	0. 22881297
21		457	5. 89150072	0. 22881297
60 sey-71		457	11	0. 6
60 sey-71		457	11	0. 6
75	62	457	7. 12	0. 35
75	48. 1	457	8. 72	0. 28
75	65. 1	457	11. 35	0. 39

10 2436-74		458	7.9	0.4
10 2436-74		458	7.9	0.4
75	2	459	6.69	0.28
75	59.1	459	8.62	0.35
107 IT/18_16		459	6.39	0.18
107 IT/17_3		459	6.84	0.23
20 BB3. 3. 14		460	9	0.5
20 BB3. 3. 14		460	9	0.5
20 BB3. 3. 14		460	9	0.5
75	39	460	7.3	0.28
75	49.1	460	8.16	0.36
107 IT/12_2		460	6.65	0.23
75	53	461	7.32	0.38
119	25.1	461	9	0.2927
37 07SC51-1@51		462	6.64	0.25
37 07SC51-1@51		462	6.64	0.25
75	65	462	9.37	0.38
75	45	462	11.83	0.35
107 IT/12_8		462	6.38	0.23
5 RNZ20		463	7.51	
5 RNZ20		463	7.51	
107 IT/12_5		463	6.08	0.19
119	38.1	463	8	0.5922
18 ZMB2-anu-zrn-	463.756006	463.756006	7.64870654	0.55603199
18 ZMB2-anu-zrn-	463.756006	463.756006	7.64870654	0.55603199
10 1774-62		464	7.7	0.7
10 1774-62		464	7.7	0.7
10 2606-21		464	8.4	0.4
10 2606-21		464	8.4	0.4
37 07SC65@54		464	7.76	0.43
37 07SC65@54		464	7.76	0.43
75	46	464	7.64	0.4
75	41.1	464	10.63	0.29
75	12.1	464	10.73	0.31
37 07SC49@72		465	5.25	0.33
37 07SC49@72		465	5.25	0.33
75	28.1	465	8.22	0.32
75	1	465	9.1	0.29
107 IT/12_10		465	5.93	0.2
107 IT/18_13		465	6.69	0.2
115	3.2	465.11	8.9	
59 M0-1202		466	5.7	0.1
59 M0-1202		466	5.7	0.1
107 IT/18_15		466	6.36	0.09
119	12.1	466	5	0.4285

121	10	466	9.96	0.16
10	2606-14	467	8	0.4
10	2606-14	467	8	0.4
75	49	467	8.54	0.4
10	1746-17	468	7.5	0.6
10	1746-17	468	7.5	0.6
37	07SC49@76	468	5.23	0.27
37	07SC49@76	468	5.23	0.27
75	64	468	7.41	0.39
37	07SC65@69	469	5.14	0.21
37	07SC65@69	469	5.14	0.21
75	48	469	6.35	0.35
75	34	469	8.1	0.28
75	44.1	469	8.96	0.32
107	IT/12_13	469	6.24	0.15
20	BB3. 3. 12	470	8.6	0.4
20	BB3. 3. 12	470	8.6	0.4
20	BB3. 3. 12	470	8.6	0.4
37	07SC65@33	470	6.01	0.43
37	07SC65@33	470	6.01	0.43
75	63	470	9.29	0.37
75	26	470	9.43	0.4
75	39	470	9.81	0.35
10	2641-17	471	10.9	1.4
10	2641-17	471	10.9	1.4
75	6	471	6.93	0.4
75	14	471	7.15	0.29
75	39.1	471	10.96	0.35
115	7.2	471.01	8.3	
75	21	472	8.81	0.28
75	43.1	472	11.2	0.36
10	2641-48	473	9.3	0.4
10	2641-48	473	9.3	0.4
20	KK1. 3a	473	9.4	0.4
20	KK1. 3a	473	9.4	0.4
20	KK1. 3a	473	9.4	0.4
20	KK1. 3b	473	10.5	0.4
20	KK1. 3b	473	10.5	0.4
20	KK1. 3b	473	10.5	0.4
37	07SC49@19	473	5.5	0.43
37	07SC49@19	473	5.5	0.43
75	9	473	7.86	0.28
119	17.1	473	10	0.3012
10	2606-39	474	5.3	0.4
10	2606-39	474	5.3	0.4

75	70.1	474	7.28	0.36
75	18	474	9.79	0.31
107 IT/18_2		474	6.9	0.13
120 EW-1-3*		474	5.13	0.37
10 2436-32		475	6.9	0.4
10 2436-32		475	6.9	0.4
10 2641-56		475	8.7	0.3
10 2641-56		475	8.7	0.3
10 2641-35		475	9.1	0.6
10 2641-35		475	9.1	0.6
75	1	475	8.23	0.34
107 IT/18_20		475	6.43	0.26
10 2641-18		476	10	0.4
10 2641-18		476	10	0.4
10 2641-03		477	6.8	0.5
10 2641-03		477	6.8	0.5
10 1774-12		477	8	0.5
10 1774-12		477	8	0.5
75	7	477	8.13	0.27
107 IT/18_23		477	6.45	0.2
37 07SC49@92		479	4.97	0.41
37 07SC49@92		479	4.97	0.41
121 9	479	8.59	0.29	
10 2641-47		480	8.7	0.3
10 2641-47		480	8.7	0.3
19 08LL07 50		480	6.6	0.51
19 08LL07 50		480	6.6	0.51
26 95BR-157		480	4.94	
26 95BR-157		480	4.94	
75	30	480	7.05	0.39
107 IT/18_14		480	6.33	0.14
119	31.1	480	8	0.5019
120 EW-1-4*		480	3.18	0.37
20 BB6. 1a		481	7.1	0.5
20 BB6. 1a		481	7.1	0.5
20 BB6. 1a		481	7.1	0.5
75	40	481	7.7	0.4
107 IT/17_13		481	7	0.19
119	51.1	481	11.2068	0.2996
18 ZMB2-anu-zrn-	481.082451	12.8157515	0.55185071	
18 ZMB2-anu-zrn-	481.082451	12.8157515	0.55185071	
10 2641-01		482	6.6	0.5
10 2641-01		482	6.6	0.5
10 1774-100		482	9.6	0.5
10 1774-100		482	9.6	0.5

10 2436-45a		482	11.4	0.3
10 2436-45a		482	11.4	0.3
60 sey-01		482	5	0.6
60 sey-01		482	5	0.6
75	9	482	6.9	0.35
107 IT/18_19		482	6.48	0.17
59 M0-1074		483	4.3	0.4
59 M0-1074		483	4.3	0.4
60 sey-03		483	6.8	0.6
60 sey-03		483	6.8	0.6
106 10GD48-23		483	9.23	0.24
107 IT/12_12		483	6.08	0.2
107 IT/17_6		483	6.58	0.21
107 IT/17_5		483	6.62	0.17
107 IT/18_12		483	6.87	0.17
18 ZMB2-anu-zrn-	483.189729	5.8022294	0.59351706	
18 ZMB2-anu-zrn-	483.189729	5.8022294	0.59351706	
107 IT/12_14		484	6	0.15
107 IT/18_18		484	6.31	0.18
119	60.1	484	10.35	0.4044
75	13.1	485	11.57	0.34
107 IT/17_24		485	6.36	0.23
107 IT/18_24		485	6.39	0.25
107 IT/17_4		485	6.68	0.18
119	39.1	485	9.0153	0.5289
75	26.1	486	11.53	0.36
18 ORG2-anu-zrn-	486.115286	5.49201651	0.56435216	
18 ORG2-anu-zrn-	486.115286	5.49201651	0.56435216	
18 ZMB2-anu-zrn-	486.445911	6.48820812	0.59897478	
18 ZMB2-anu-zrn-	486.445911	6.48820812	0.59897478	
107 IT/18_17		487	6.02	0.19
107 IT/17_1		487	7.02	0.24
107 IT/17_18		487	7.07	0.25
10 1774-64		488	8.4	0.7
10 1774-64		488	8.4	0.7
10 1746-16		489	6	0.6
10 1746-16		489	6	0.6
10 2436-29a		489	7	0.6
10 2436-29a		489	7	0.6
10 2436-01		489	8.2	0.4
10 2436-01		489	8.2	0.4
60 sey-15		489	4.4	0.6
60 sey-15		489	4.4	0.6
107 IT/18_22		489	5.89	0.19
107 IT/18_11		489	6.36	0.19

18 CNG2-anu-zrn-	489. 584658	6. 7274675	0. 59108642	
18 CNG2-anu-zrn-	489. 584658	6. 7274675	0. 59108642	
18 ZMB2-anu-zrn-	489. 711682	7. 16984912	0. 5949874	
18 ZMB2-anu-zrn-	489. 711682	7. 16984912	0. 5949874	
20 CM1. 16	490	5. 6	0. 4	
20 CM1. 16	490	5. 6	0. 4	
20 CM1. 16	490	5. 6	0. 4	
107 IT/17_2	490	7. 03	0. 22	
18 ZMB2-anu-zrn-	490. 873693	7. 93057611	0. 59523899	
18 ZMB2-anu-zrn-	490. 873693	7. 93057611	0. 59523899	
20 BB6. 20	491	8. 2	0. 3	
20 BB6. 20	491	8. 2	0. 3	
20 BB6. 20	491	8. 2	0. 3	
107 IT/18_21	491	6. 35	0. 24	
107 IT/17_16	491	7. 1	0. 28	
10 1746-37	492	8. 9	0. 4	
10 1746-37	492	8. 9	0. 4	
20 CM1. 20	492	7. 5	0. 4	
20 CM1. 20	492	7. 5	0. 4	
20 CM1. 20	492	7. 5	0. 4	
75	36	492	9. 77	0. 4
107 IT/17_19	492	6. 97	0. 19	
18 CNG2-anu-zrn-	492. 767267	7. 93973227	0. 57919688	
18 CNG2-anu-zrn-	492. 767267	7. 93973227	0. 57919688	
10 1774-37	493	8. 4	0. 5	
10 1774-37	493	8. 4	0. 5	
10 2436-20	493	10. 7	0. 6	
10 2436-20	493	10. 7	0. 6	
119	29. 1	493	8. 1176	0. 4925
18 ZMB2-anu-zrn-	493. 568473	6. 72176983	0. 6132756	
18 ZMB2-anu-zrn-	493. 568473	6. 72176983	0. 6132756	
75	4. 1	494	9. 87	0. 39
18 ORG2-anu-zrn-	494. 170982	7. 8285048	0. 55370674	
18 ORG2-anu-zrn-	494. 170982	7. 8285048	0. 55370674	
20 HV1. 18	495	8. 3	0. 6	
20 HV1. 18	495	8. 3	0. 6	
20 HV1. 18	495	8. 3	0. 6	
20 BB6. 21	495	9. 6	0. 4	
20 BB6. 21	495	9. 6	0. 4	
20 BB6. 21	495	9. 6	0. 4	
75	51	495	7. 6	0. 47
75	4	495	9. 18	0. 28
106 10GD48-103	495	7. 92	0. 26	
10 2436-29b	496	6. 1	0. 6	
10 2436-29b	496	6. 1	0. 6	

107 IT/18_3		496	6.7	0.14
119	4.1	496	9	0.3001
10 1746-51		497	6.5	0.5
10 1746-51		497	6.5	0.5
107 IT/17_11		498	6.78	0.31
107 IT/5_20		498	6.93	0.27
18 ORG2-anu-zrn-	498.348131	10.6532495	0.55660469	
18 ORG2-anu-zrn-	498.348131	10.6532495	0.55660469	
10 1774-86		500	5.1	0.5
10 1774-86		500	5.1	0.5
20 CM1. L8. 1		500	6.7	0.4
20 CM1. L8. 1		500	6.7	0.4
20 CM1. L8. 1		500	6.7	0.4
56 GCZ-1		500	8.59	
56 GCZ-1		500	8.59	
106 10GD49-4		500	5.88	0.34
107 IT/18_8		500	6.71	0.2
107 IT/17_14		500	6.76	0.23
107 IT/17_12		500	7.09	0.17
20 CM1. 13		501	9.6	0.7
20 CM1. 13		501	9.6	0.7
20 CM1. 13		501	9.6	0.7
59 MO-1203		501	6.8	0.2
59 MO-1203		501	6.8	0.2
18 ZMB2-anu-zrn-	501.034164	5.02276114	0.5945009	
18 ZMB2-anu-zrn-	501.034164	5.02276114	0.5945009	
10 1774-51		503	9.7	0.5
10 1774-51		503	9.7	0.5
10 2436-62		503	12.3	0.4
10 2436-62		503	12.3	0.4
75	17	503	7.35	0.35
107 IT/17_10		503	6.49	0.26
20 BB3. 3. 1		504	9.8	0.4
20 BB3. 3. 1		504	9.8	0.4
20 BB3. 3. 1		504	9.8	0.4
75	12.1	504	8.47	0.33
107 IT/17_22		504	6.59	0.19
107 IT/17_15		504	6.88	0.13
119	29.1	504	7	0.3199
119	29.1	504	7	0.3211
119	1.1	504	7.8648	0.5057
119	29.2	504	8	0.4111
119	61.1	504	8.4488	0.5114
18 ORG2-anu-zrn-	504.740468	6.27125764	0.56819572	
18 ORG2-anu-zrn-	504.740468	6.27125764	0.56819572	

20	BB3. 3. 25	506	9. 4	0. 6
20	BB3. 3. 25	506	9. 4	0. 6
20	BB3. 3. 25	506	9. 4	0. 6
75	45. 1	506	10. 53	0. 37
119	3. 1	506	7	0. 3309
18	CNG2-anu-zrn-	506. 572342	11. 580566	0. 55444806
18	CNG2-anu-zrn-	506. 572342	11. 580566	0. 55444806
10	1774-56	507	7. 2	0. 7
10	1774-56	507	7. 2	0. 7
10	2346-38	507	7. 5	0. 4
10	2346-38	507	7. 5	0. 4
10	2436-25	507	10. 9	0. 5
10	2436-25	507	10. 9	0. 5
75	11. 1	508	9. 95	0. 41
119	5. 1	508	9	0. 3766
10	2641-43	509	7. 8	0. 6
10	2641-43	509	7. 8	0. 6
10	2436-41	509	8. 8	0. 4
10	2436-41	509	8. 8	0. 4
20	BB1. 5	509	7. 9	0. 2
20	BB1. 5	509	7. 9	0. 2
20	BB1. 5	509	7. 9	0. 2
119	11. 1	509	9	0. 5061
18	ORG2-anu-zrn-	509. 982435	7. 68649979	0. 55189227
18	ORG2-anu-zrn-	509. 982435	7. 68649979	0. 55189227
21		510	6. 83887569	0. 22869549
21		510	6. 83887569	0. 22869549
21		510	6. 8628081	0. 25455878
21		510	6. 8628081	0. 25455878
21		510	6. 88474614	0. 38856155
21		510	6. 88474614	0. 38856155
21		510	6. 88923347	0. 38657612
21		510	6. 88923347	0. 38657612
21		510	7. 0093941	0. 20911885
21		510	7. 0093941	0. 20911885
21		510	7. 16445615	0. 24821027
21		510	7. 16445615	0. 24821027
21		510	7. 16744771	0. 27892656
21		510	7. 16744771	0. 27892656
21		510	7. 21531252	0. 30001642
21		510	7. 21531252	0. 30001642
21		510	7. 22628154	0. 25129313
21		510	7. 22628154	0. 25129313
21		510	7. 36239711	0. 18566897
21		510	7. 36239711	0. 18566897

21		510	7.37386472	0.3497742
21		510	7.37386472	0.3497742
21		510	7.37984782	0.3105777
21		510	7.37984782	0.3105777
21		510	7.39829572	0.35914717
21		510	7.39829572	0.35914717
21		510	7.39979149	0.24616977
21		510	7.39979149	0.24616977
21		510	7.54189016	0.29174944
21		510	7.54189016	0.29174944
21		510	7.97666223	0.30274765
21		510	7.97666223	0.30274765
21		510	8.10779188	0.27248151
21		510	8.10779188	0.27248151
56	32712 URPR 30	510	8.52	
56	32712 URPR 30	510	8.52	
107	IT/17_25	510	6.6	0.23
107	IT/17_27	510	6.63	0.17
107	IT/17_9	510	6.79	0.2
119	10.1	510	7	0.5091
18	ORG2-anu-zrn-	510.472246	10.1091649	0.55335358
18	ORG2-anu-zrn-	510.472246	10.1091649	0.55335358
10	1774-28b	511	5.4	0.6
10	1774-28b	511	5.4	0.6
10	1774-69a	511	6.8	0.6
10	1774-69a	511	6.8	0.6
10	2436-46	511	8.4	0.3
10	2436-46	511	8.4	0.3
10	1774-46	511	10.8	0.6
10	1774-46	511	10.8	0.6
10	2606-43	512	5.8	0.4
10	2606-43	512	5.8	0.4
10	1746-24	512	6	0.6
10	1746-24	512	6	0.6
10	1774-95	512	8.6	0.5
10	1774-97	512	8.6	0.5
10	1774-95	512	8.6	0.5
10	1774-97	512	8.6	0.5
10	1774-18	512	8.8	0.6
10	1774-18	512	8.8	0.6
47	PMOG-233_33-	512	9.2	0.3
47	PMOG-233_33-	512	9.2	0.3
107	IT/17_7	512	6.72	0.18
10	1774-69b	513	7	0.7
10	1774-69b	513	7	0.7

107 IT/17_21		513	6.69	0.21
18 NIL-anu-zrn-l	513.927768		8.48124204	0.54396885
18 NIL-anu-zrn-l	513.927768		8.48124204	0.54396885
20 KK1.21a		514	7.3	0.6
20 KK1.21a		514	7.3	0.6
20 KK1.21a		514	7.3	0.6
20 KK1.21b		514	7.4	0.6
20 KK1.21b		514	7.4	0.6
20 KK1.21b		514	7.4	0.6
37 07SC65@76		514	6.79	0.19
37 07SC65@76		514	6.79	0.19
60 sey-52		514	6.5	0.6
60 sey-52		514	6.5	0.6
75	22.1	514	9.84	0.41
119	62.1	514	6	0.668
119	14.1	514	9	0.3056
18 ORG2-anu-zrn-	514.064429		6.90565528	0.55917664
18 ORG2-anu-zrn-	514.064429		6.90565528	0.55917664
18 CNG2-anu-zrn-	514.147433		10.9713374	0.58268684
18 CNG2-anu-zrn-	514.147433		10.9713374	0.58268684
18 ORG2-anu-zrn-	514.941856		9.10157205	0.95291401
18 ORG2-anu-zrn-	514.941856		9.10157205	0.95291401
21		515	5.79003885	0.36807248
21		515	5.79003885	0.36807248
21		515	5.80898276	0.25793723
21		515	5.80898276	0.25793723
21		515	6.07469603	0.17896351
21		515	6.07469603	0.17896351
21		515	6.11009124	0.32097057
21		515	6.11009124	0.32097057
21		515	6.13584598	0.26861582
21		515	6.13584598	0.26861582
21		515	6.19733293	0.22741921
21		515	6.19733293	0.22741921
21		515	6.26762481	0.39798753
21		515	6.26762481	0.39798753
21		515	6.36633255	0.31662848
21		515	6.36633255	0.31662848
21		515	6.40771004	0.22520194
21		515	6.40771004	0.22520194
21		515	6.41568642	0.22446028
21		515	6.41568642	0.22446028
21		515	6.45407277	0.27749145
21		515	6.45407277	0.27749145
21		515	6.57820524	0.38485184

21		515	6.57820524	0.38485184
21		515	6.58468605	0.20047569
21		515	6.58468605	0.20047569
21		515	6.66644398	0.29220736
21		515	6.66644398	0.29220736
21		515	6.67840855	0.2501172
21		515	6.67840855	0.2501172
21		515	6.71180966	0.28414967
21		515	6.71180966	0.28414967
21		515	6.76116353	0.37468286
21		515	6.76116353	0.37468286
21		515	6.95259673	0.29133412
21		515	6.95259673	0.29133412
21		515	7.16945465	0.19583965
21		515	7.16945465	0.19583965
21		515	7.20185871	0.23139431
21		515	7.20185871	0.23139431
75	59	515	5.95	0.4
75	34	515	10.88	0.34
10	2436-44	516	8.1	0.3
10	2436-44	516	8.1	0.3
10	2436-33	517	8.7	0.4
10	2436-33	517	8.7	0.4
10	1774-98	517	9.6	0.6
10	1774-98	517	9.6	0.6
60	sey-11	517	5.6	0.6
60	sey-11	517	5.6	0.6
107	IT/18_5	517	6.66	0.15
119	49.1	517	9	0.3344
18	CNG2-anu-zrn-	517.860165	6.00022397	0.57704264
18	CNG2-anu-zrn-	517.860165	6.00022397	0.57704264
10	1746-32	518	6.9	0.5
10	1746-32	518	6.9	0.5
10	2436-02	518	8	0.6
10	2436-02	518	8	0.6
119	36.1	518	8.7916	0.3064
10	1774-87	519	8.2	0.5
10	1774-87	519	8.2	0.5
107	IT/18_9	519	6.67	0.17
10	2606-05a	520	8	0.4
10	2606-05a	520	8	0.4
10	2606-34	520	9	0.4
10	2606-34	520	9	0.4
47	PMOG-233_33-;	520	10.6	0.3
47	PMOG-233_33-;	520	10.6	0.3

107	IT/5_3		520	6.64	0.27
119	33.1		520	9.1784	0.3983
18	ZMB2-anu-zrn-	520.689047		8.17175939	0.96888131
18	ZMB2-anu-zrn-	520.689047		8.17175939	0.96888131
10	1774-90		521	7.6	0.5
10	1774-90		521	7.6	0.5
60	VGt-512		521	6.6	0.2
60	VGt-512		521	6.6	0.2
75	27		521	8.14	0.29
119	13.1		521	7	0.5252
18	ORG2-anu-zrn-	521.799745		7.32032447	0.54501323
18	ORG2-anu-zrn-	521.799745		7.32032447	0.54501323
18	NIL-anu-zrn-l	521.805576		6.5347658	0.54989047
18	NIL-anu-zrn-l	521.805576		6.5347658	0.54989047
10	1774-30		522	6	0.6
10	1774-30		522	6	0.6
10	1746-28		522	6.3	0.5
10	1746-28		522	6.3	0.5
10	1774-52		522	6.5	0.7
10	1774-52		522	6.5	0.7
10	1774-88		522	6.9	0.5
10	1774-88		522	6.9	0.5
10	2641-27		522	7.2	0.7
10	2641-27		522	7.2	0.7
10	2436-34		522	7.5	0.4
10	2436-34		522	7.5	0.4
10	1774-05		522	9.5	0.7
10	1774-05		522	9.5	0.7
10	2436-40		522	12.4	0.4
10	2436-40		522	12.4	0.4
19	08LL06 57		522	4.47	0.31
19	08LL06 57		522	4.47	0.31
75	19		522	10.28	0.39
10	1746-46		523	6.2	0.4
10	1746-46		523	6.2	0.4
10	2436-06		523	7.9	0.4
10	2436-06		523	7.9	0.4
19	08LL07 14		523	5.86	0.33
19	08LL07 14		523	5.86	0.33
47	PMOG-233_33-:		523	9.3	0.3
47	PMOG-233_33-:		523	9.3	0.3
119	25.1		523	9.4526	0.5141
18	NIL-anu-zrn-l	523.495491		8.20216989	0.93038652
18	NIL-anu-zrn-l	523.495491		8.20216989	0.93038652
10	2606-37a		524	9.8	0.7

10 2606-37a		524	9.8	0.7
10 1774-58		524	11.8	0.7
10 1774-58		524	11.8	0.7
75	23	524	10.72	0.29
119	63.1	524	8.7067	0.5249
119	2.1	524	9.8339	0.2989
10 1774-96		525	9.5	0.5
10 1774-96		525	9.5	0.5
10 1774-09		525	10.2	0.7
10 1774-09		525	10.2	0.7
107 IT/17_17		525	6.67	0.3
119	34.1	525	10	0.3291
18 ZMB2-anu-zrn-	525.593701	11.3031415	0.61434849	
18 ZMB2-anu-zrn-	525.593701	11.3031415	0.61434849	
75	28	526	6.28	0.39
107 IT/18_6		526	6.48	0.18
107 IT/17_8		526	6.61	0.2
107 IT/18_7		526	6.63	0.15
119	69.1	526	7	0.3406
119	50.1	526	9	0.2878
10 1746-25		527	5.7	0.6
10 1746-25		527	5.7	0.6
10 2606-35		527	5.8	0.4
10 2606-35		527	5.8	0.4
10 2436-18		527	6.2	0.7
10 2436-18		527	6.2	0.7
10 2641-53		527	7.4	0.5
10 2641-53		527	7.4	0.5
10 1774-53		527	8.1	0.7
10 1774-53		527	8.1	0.7
10 1774-60		527	8.6	0.6
10 1774-60		527	8.6	0.6
90 VAL010		527	10.13	
116 DA13-077-01		527	1.47	0.29
116 DA13-077-36		527	2.81	0.29
10 1746-40		528	6	0.4
10 1746-40		528	6	0.4
10 1774-42		528	7.3	0.5
10 1774-42		528	7.3	0.5
10 1774-99		528	8.2	0.5
10 1774-99		528	8.2	0.5
18 CNG2-anu-zrn-	528.497556	7.89501482	0.6012185	
18 CNG2-anu-zrn-	528.497556	7.89501482	0.6012185	
10 2436-87b		529	4.2	0.4
10 2436-87b		529	4.2	0.4

10 1746-59		529	7.1	0.5
10 1746-59		529	7.1	0.5
10 1774-39		529	7.6	0.6
10 1774-39		529	7.6	0.6
119	16.1	529	8.0367	0.2988
119	42.1	529	8.5797	0.3373
119	40.1	529	9.413	0.4865
10 2436-87a		530	4	0.4
10 2436-87a		530	4	0.4
10 2641-21		530	7	0.5
10 2641-21		530	7	0.5
10 1774-94b		530	7.6	0.5
10 1774-94b		530	7.6	0.5
10 1774-101		530	7.7	0.5
10 1774-101		530	7.7	0.5
47 PMOG-233_33-:		530	10	0.3
47 PMOG-233_33-:		530	10	0.3
119	36.1	530	9.7233	0.3304
18 ORG2-anu-zrn-	530.822663	530.822663	8.69547827	0.5540952
18 ORG2-anu-zrn-	530.822663	530.822663	8.69547827	0.5540952
10 2641-12a		531	10.1	0.5
10 2641-12a		531	10.1	0.5
10 1774-22		531	10.8	0.6
10 1774-22		531	10.8	0.6
75	17	531	9.47	0.39
119	45.1	531	9.9894	0.4915
10 1746-57		532	4.8	0.6
10 1746-57		532	4.8	0.6
10 1746-26		532	10	0.4
10 1746-26		532	10	0.4
10 1774-07b		532	11	0.6
10 1774-07b		532	11	0.6
10 1774-08		532	12.6	0.6
10 1774-08		532	12.6	0.6
119	6.1	532	7.004	0.5051
119	48.1	532	8.5336	0.3489
119	44.1	532	10.3872	0.527
18 CNG2-anu-zrn-	532.585615	532.585615	9.13093681	0.58214926
18 CNG2-anu-zrn-	532.585615	532.585615	9.13093681	0.58214926
10 1774-68		533	5.8	0.7
10 1774-68		533	5.8	0.7
10 1774-55		533	7.6	0.6
10 1774-55		533	7.6	0.6
10 1774-67		533	7.7	0.6
10 1774-67		533	7.7	0.6

10 1774-92		533	8.2	0.6
10 1774-92		533	8.2	0.6
119	12.1	533	10.786	0.5378
18 CNG2-anu-zrn-	533.733496	533.733496	8.50289025	0.69728428
18 CNG2-anu-zrn-	533.733496	533.733496	8.50289025	0.69728428
10 2641-13		534	6.4	0.4
10 2641-13		534	6.4	0.4
10 2436-68		534	8	0.4
10 2436-68		534	8	0.4
10 1774-29		534	8	0.6
10 1774-29		534	8	0.6
20 KK1.1		534	10.2	0.5
20 KK1.1		534	10.2	0.5
20 KK1.1		534	10.2	0.5
47 PMOG-233_33-		534	8.9	0.3
47 PMOG-233_33-		534	8.9	0.3
56 URPR 4A		534	8.78	
56 URPR 4A		534	8.78	
10 2641-08		535	8	0.5
10 2641-08		535	8	0.5
10 1774-15		535	13.9	0.6
10 1774-15		535	13.9	0.6
10 2606-05b		536	8	0.3
10 2606-05b		536	8	0.3
10 2436-60		536	8.7	0.4
10 2436-60		536	8.7	0.4
10 2641-12b		536	10.2	0.4
10 2641-12b		536	10.2	0.4
59 MO-1004		536	5.8	0.3
59 MO-1004		536	5.8	0.3
119	55.1	536	10	0.5506
10 1774-81		537	7.6	0.7
10 1774-81		537	7.6	0.7
10 1746-50		538	5.3	0.6
10 1746-50		538	5.3	0.6
10 1774-35		538	6	0.5
10 1774-35		538	6	0.5
10 1746-35		538	6.2	0.5
10 1746-35		538	6.2	0.5
10 1746-13		538	7.4	0.8
10 1746-13		538	7.4	0.8
10 1774-01		538	8.8	0.7
10 1774-01		538	8.8	0.7
18 CNG2-anu-zrn-	538.68406	538.68406	9.69987994	0.56042193
18 CNG2-anu-zrn-	538.68406	538.68406	9.69987994	0.56042193

10 2436-69b		539	6.1	0.4
10 2436-69b		539	6.1	0.4
10 2606-38		539	9	0.4
10 2606-38		539	9	0.4
10 1774-31		539	10.5	0.6
10 1774-31		539	10.5	0.6
47 PMOG-233_33-:		539	7.7	0.3
47 PMOG-233_33-:		539	7.7	0.3
75	25	539	9.42	0.4
119	23.1	539	11	0.5108
120 EW3-1*		539	6.34	0.39
122 n4737-22		539.1	6.35	0.14
18 NIL-anu-zrn-l	539.991617	6.46841547	0.55878675	
18 NIL-anu-zrn-l	539.991617	6.46841547	0.55878675	
10 1774-28a		540	5	0.7
10 1774-28a		540	5	0.7
10 1746-45		540	8.5	0.4
10 1746-45		540	8.5	0.4
56 FÁBRICA		540	6.36	
56 FÁBRICA		540	6.36	
116 DA14-133-13		540	5.78	0.52
116 DA13-076-65		540	9.21	0.3
116 DA13-076-71		540	9.29	0.32
116 DA13-076-64		540	9.73	0.32
119	4.1	540	9	0.5122
10 1774-61		541	5.5	0.7
10 1774-61		541	5.5	0.7
10 1774-45		541	7.5	0.5
10 1774-45		541	7.5	0.5
116 DA13-017-29		541	0.61	0.27
116 DA13-017-70		541	5.26	0.25
116 DA13-017-72		541	6.05	0.25
10 2436-73		542	5.9	0.4
10 2436-73		542	5.9	0.4
10 1774-13c		542	9.1	0.6
10 1774-13c		542	9.1	0.6
10 2641-60		542	9.6	0.7
10 2641-60		542	9.6	0.7
10 1746-31		542	11.1	0.5
10 1746-31		542	11.1	0.5
20 BB3. 3. 18		542	5.5	0.6
20 BB3. 3. 18		542	5.5	0.6
20 BB3. 3. 18		542	5.5	0.6
75	56	542	11.06	0.4
18 ORG2-anu-zrn-	542.237481	10.3447161	0.76331744	

18	ORG2-anu-zrn-	542.237481	10.3447161	0.76331744
10	1746-58	543	6.8	0.4
10	1746-58	543	6.8	0.4
10	2436-15	543	8.1	0.6
10	2436-15	543	8.1	0.6
10	1774-41	543	8.9	0.5
10	1774-41	543	8.9	0.5
10	1746-33	543	12.5	0.4
10	1746-33	543	12.5	0.4
106	10GD48-7	543	11.94	0.13
18	ORG2-anu-zrn-	543.503833	7.8383403	0.55270641
18	ORG2-anu-zrn-	543.503833	7.8383403	0.55270641
10	2606-51	544	5.3	0.4
10	2606-51	544	5.3	0.4
10	2436-82	544	5.9	0.4
10	2436-82	544	5.9	0.4
10	2436-11	544	6.2	0.4
10	2436-11	544	6.2	0.4
10	2606-55b	544	6.6	0.4
10	2606-55b	544	6.6	0.4
10	2436-58	544	9.1	0.4
10	2436-58	544	9.1	0.4
47	PMOG-233_33-	544	8.6	0.3
47	PMOG-233_33-	544	8.6	0.3
47	PMOG-233_33-	544	10.1	0.3
47	PMOG-233_33-	544	10.1	0.3
119	42.1	544	8	0.3238
122	n4737-03	544.7	6.53	0.14
10	1774-06	545	7.1	0.8
10	1774-06	545	7.1	0.8
119	16.1	545	9	0.4945
18	ORG2-anu-zrn-	545.043801	6.224715	0.5592407
18	ORG2-anu-zrn-	545.043801	6.224715	0.5592407
18	ZMB2-anu-zrn-	545.574504	6.94411798	0.59764558
18	ZMB2-anu-zrn-	545.574504	6.94411798	0.59764558
18	NGR1-anu-zrn-	545.971095	9.83940257	0.59551602
18	NGR1-anu-zrn-	545.971095	9.83940257	0.59551602
10	1774-57	546	5.6	0.7
10	1774-57	546	5.6	0.7
20	BB6.17	546	9.2	0.4
20	BB6.17	546	9.2	0.4
20	BB6.17	546	9.2	0.4
119	40.1	546	8	0.5077
10	2436-61	547	7.6	0.4
10	2436-61	547	7.6	0.4

10 2606-44		547	8.5	0.4
10 2606-44		547	8.5	0.4
57 G168		547	10.93	
57 G168		547	10.93	
116 DA13-083-63		547	5.62	0.3
119	37.1	547	7	0.4044
119	59.1	547	10	0.557
10 2641-57		548	5.2	0.3
10 2641-57		548	5.2	0.3
10 2346-26		548	8.8	0.5
10 2346-26		548	8.8	0.5
10 1774-04		548	9	0.7
10 1774-04		548	9	0.7
10 1774-11		548	10.4	0.5
10 1774-11		548	10.4	0.5
18 NGR1-anu-zrn-	548.372909	6.77101691	0.5913468	
18 NGR1-anu-zrn-	548.372909	6.77101691	0.5913468	
18 NIL-anu-zrn-l	548.557926	7.69210424	0.57518023	
18 NIL-anu-zrn-l	548.557926	7.69210424	0.57518023	
10 2436-13b		549	7.2	0.6
10 2436-13b		549	7.2	0.6
122 n4737-15		549.4	6.34	0.14
18 CNG2-anu-zrn-	549.514344	7.13704005	0.57918543	
18 CNG2-anu-zrn-	549.514344	7.13704005	0.57918543	
10 2436-83		550	5.9	0.4
10 2436-83		550	5.9	0.4
10 2436-65		550	6	0.4
10 2436-65		550	6	0.4
10 2606-42		550	7.5	0.4
10 2606-42		550	7.5	0.4
10 2641-39		550	14.1	0.6
10 2641-39		550	14.1	0.6
56 PAM-10		550	5.19	
56 PAM-10		550	5.19	
119	2.1	550	6	0.3094
18 NIL-anu-zrn-l	550.058978	6.69485723	0.57004905	
18 NIL-anu-zrn-l	550.058978	6.69485723	0.57004905	
122 n4737-20		550.7	5.26	0.14
10 2606-41		551	7	0.5
10 2606-41		551	7	0.5
10 1774-94a		551	7.3	0.5
10 1774-94a		551	7.3	0.5
10 2606-30b		551	7.4	0.4
10 2606-30b		551	7.4	0.4
10 1746-66		551	7.5	0.6

10 1746-66	551	7.5	0.6
47 PMOG-233_33-	551	9.2	0.3
47 PMOG-233_33-	551	9.2	0.3
59 MO-1125	551	5.9	0.4
59 MO-1125	551	5.9	0.4
119 50.1	551	9	0.3028
18 CNG2-anu-zrn-	551.579178	7.57740579	0.58284922
18 CNG2-anu-zrn-	551.579178	7.57740579	0.58284922
10 1774-13a	552	8.5	0.6
10 1774-13a	552	8.5	0.6
10 1774-89	552	10.7	0.5
10 1774-89	552	10.7	0.5
10 2436-80	552	11	0.4
10 2436-80	552	11	0.4
10 1774-07a	552	12	0.7
10 1774-07a	552	12	0.7
20 KK1.22	552	7.9	0.6
20 KK1.22	552	7.9	0.6
20 KK1.22	552	7.9	0.6
116 DA14-146-36	552	5.62	0.54
116 DA14-146-32	552	6	0.55
116 DA14-146-38	552	6.16	0.53
116 DA14-146-01	552	6.4	0.53
116 DA14-146-08	552	6.4	0.55
116 DA14-146-40	552	6.81	0.54
116 DA14-146-25	552	8.05	0.54
10 1746-44	553	8.4	0.4
10 1746-44	553	8.4	0.4
10 2436-57	553	10	0.4
10 2436-57	553	10	0.4
20 BB1.7	553	6.6	0.4
20 BB1.7	553	6.6	0.4
20 BB1.7	553	6.6	0.4
119 12.1	553	7	0.3523
18 ZMB2-anu-zrn-	553.445805	5.54453357	0.56601004
18 ZMB2-anu-zrn-	553.445805	5.54453357	0.56601004
18 ZMB2-anu-zrn-	553.548228	6.63449307	0.59050686
18 ZMB2-anu-zrn-	553.548228	6.63449307	0.59050686
18 ORG2-anu-zrn-	553.72852	8.44798834	1.02868395
18 ORG2-anu-zrn-	553.72852	8.44798834	1.02868395
10 2436-54b	554	7	0.4
10 2436-54b	554	7	0.4
18 CNG2-anu-zrn-	554.188086	9.41765449	0.58778035
18 CNG2-anu-zrn-	554.188086	9.41765449	0.58778035
122 n4734-13	554.6	5.91	0.14

10 2641-34	555	6.2	0.6	
10 2641-34	555	6.2	0.6	
10 1746-05a	555	7.1	0.9	
10 1746-05a	555	7.1	0.9	
10 2436-54a	555	7.2	0.4	
10 2436-54a	555	7.2	0.4	
10 1774-21	555	8.8	0.6	
10 1774-21	555	8.8	0.6	
18 NGR1-anu-zrn-	555.097939	7.88180266	0.59640784	
18 NGR1-anu-zrn-	555.097939	7.88180266	0.59640784	
122 n4735-19	555.5	6.02	0.14	
10 1746-38	556	6	0.5	
10 1746-38	556	6	0.5	
10 1746-21	556	7.1	0.7	
10 1746-21	556	7.1	0.7	
10 1774-14	556	7.5	0.6	
10 1774-14	556	7.5	0.6	
10 1774-19	556	8.8	0.6	
10 1774-19	556	8.8	0.6	
10 1774-20a	556	15.5	0.7	
10 1774-20a	556	15.5	0.7	
20 CM1.1	556	8.2	0.3	
20 CM1.1	556	8.2	0.3	
20 CM1.1	556	8.2	0.3	
122 n4735-18	556.3	6.1	0.15	
18 ZMB2-anu-zrn-	556.774538	8.93526836	0.96081605	
18 ZMB2-anu-zrn-	556.774538	8.93526836	0.96081605	
122 n4735-01	556.9	5.7	0.17	
10 1774-54	557	9	0.7	
10 1774-54	557	9	0.7	
20 BB6.16	557	7	0.7	
20 BB6.16	557	7	0.7	
20 BB6.16	557	7	0.7	
18 CNG2-anu-zrn-	557.2435	7.3117763	0.5732418	
18 CNG2-anu-zrn-	557.2435	7.3117763	0.5732418	
10 1774-38	558	7.7	0.5	
10 1774-38	558	7.7	0.5	
119	17.1	558	9.3441	0.3117
119	54.1	558	12	0.3554
122 n4735-23	558.3	6.02	0.14	
122 n4735-25	558.8	5.72	0.15	
10 2606-55a	559	7.3	0.4	
10 2606-55a	559	7.3	0.4	
10 2606-37b	559	10.6	0.4	
10 2606-37b	559	10.6	0.4	

18 ORG2-anu-zrn-	559.005549	6.4822608	0.5512369
18 ORG2-anu-zrn-	559.005549	6.4822608	0.5512369
18 ORG2-anu-zrn-	559.038175	8.61860287	0.55419863
18 ORG2-anu-zrn-	559.038175	8.61860287	0.55419863
18 ORG2-anu-zrn-	559.105612	8.85204641	0.74773668
18 ORG2-anu-zrn-	559.105612	8.85204641	0.74773668
18 NIL-anu-zrn-l	559.420576	8.37875018	0.97939502
18 NIL-anu-zrn-l	559.420576	8.37875018	0.97939502
18 CNG2-anu-zrn-	559.552003	10.0865495	0.56156586
18 CNG2-anu-zrn-	559.552003	10.0865495	0.56156586
10 2606-30a	560	7.4	0.4
10 2606-30a	560	7.4	0.4
10 1774-49	560	9.2	0.6
10 1774-49	560	9.2	0.6
56 SUBIDA	560	5.68	
56 SUBIDA	560	5.68	
56 APIUNA	560	5.81	
56 APIUNA	560	5.81	
18 NGR1-anu-zrn-	560.030941	7.50216916	0.58856405
18 NGR1-anu-zrn-	560.030941	7.50216916	0.58856405
122 n4737-27	560.2	6.57	0.15
122 n4735-16	560.5	5.59	0.14
115 12.1	560.7	7.4	
10 1746-39	561	5.6	0.4
10 1746-39	561	5.6	0.4
10 2346-29	561	6.8	1
10 2346-29	561	6.8	1
10 1774-13b	561	9.4	0.5
10 1774-13b	561	9.4	0.5
10 2641-59	561	13	0.8
10 2641-59	561	13	0.8
10 1774-20b	561	15.2	0.6
10 1774-20b	561	15.2	0.6
20 HV1. v7	561	6.6	0.2
20 HV1. v7	561	6.6	0.2
20 HV1. v7	561	6.6	0.2
18 CNG2-anu-zrn-	561.058832	9.49912409	0.58852663
18 CNG2-anu-zrn-	561.058832	9.49912409	0.58852663
10 2641-49	562	7.8	0.3
10 2641-49	562	7.8	0.3
10 2436-66	562	8.1	0.4
10 2436-66	562	8.1	0.4
10 1746-47	562	8.4	0.4
10 1746-47	562	8.4	0.4
10 1746-64	562	8.6	0.5

10 1746-64		562	8.6	0.5
10 1746-06		562	11.1	0.8
10 1746-06		562	11.1	0.8
119	21.1	562	8.0113	0.498
119	16.1	562	9	0.3214
18 NGR1-anu-zrn-	562.523082	562.523082	9.50697743	0.60004682
18 NGR1-anu-zrn-	562.523082	562.523082	9.50697743	0.60004682
122 n4736-24x		562.7	5.68	0.18
122 n4735-06		562.8	6.29	0.15
10 1746-34		563	5.1	0.4
10 1746-34		563	5.1	0.4
20 CM1.7		563	5.8	0.5
20 CM1.7		563	5.8	0.5
20 CM1.7		563	5.8	0.5
20 HV1.2		563	7.8	0.5
20 HV1.2		563	7.8	0.5
20 HV1.2		563	7.8	0.5
119	8.1	563	8.3353	0.4939
122 n4734-15		563.6	6.17	0.15
10 2436-51		564	8.4	0.3
10 2436-51		564	8.4	0.3
10 2436-14		564	9	0.6
10 2436-14		564	9	0.6
56 HP-41 A		564	7.98	
56 HP-41 A		564	7.98	
120 EW-1-6		564	3.59	0.37
18 NGR1-anu-zrn-	564.011359	564.011359	7.02368229	0.60051942
18 NGR1-anu-zrn-	564.011359	564.011359	7.02368229	0.60051942
122 n4735-04		564.2	5.92	0.15
18 CNG2-anu-zrn-	564.463265	564.463265	6.90002772	0.56913584
18 CNG2-anu-zrn-	564.463265	564.463265	6.90002772	0.56913584
18 NIL-anu-zrn-l	564.666592	564.666592	10.0451486	0.60292216
18 NIL-anu-zrn-l	564.666592	564.666592	10.0451486	0.60292216
10 1774-48		565	6.8	0.5
10 1774-48		565	6.8	0.5
10 2436-86		565	7.2	0.4
10 2436-86		565	7.2	0.4
10 1746-19a		565	9.4	0.7
10 1746-19a		565	9.4	0.7
18 NGR1-anu-zrn-	565.099073	565.099073	5.92805406	0.59523599
18 NGR1-anu-zrn-	565.099073	565.099073	5.92805406	0.59523599
122 n4735-03		565.1	5.74	0.14
122 n4735-08		565.1	5.94	0.15
122 n4735-05		565.1	6	0.15
10 1746-05b		566	6.9	0.8

10 1746-05b		566	6.9	0.8
10 1774-91		566	8.2	0.5
10 1774-91		566	8.2	0.5
75	16	566	11.16	0.27
122 n4736-2x		566.1	5.99	0.16
122 n4735-10		566.6	5.73	0.14
10 2641-42		567	6.4	0.6
10 2641-42		567	6.4	0.6
19 08LL06 34		567	-0.85	0.51
19 08LL06 34		567	-0.85	0.51
20 KK1. 18		567	5.8	0.5
20 KK1. 18		567	5.8	0.5
20 KK1. 18		567	5.8	0.5
56 WW-128		567	5.67	
56 WW-128		567	5.67	
122 n4737-08		567.8	5.9	0.15
10 1774-71		568	7.9	0.6
10 1774-71		568	7.9	0.6
20 BB1. 14		568	6.4	0.4
20 BB1. 14		568	6.4	0.4
20 BB1. 14		568	6.4	0.4
119	49.1	568	10	0.4477
18 NGR1-anu-zrn-	568.355484	7.87946116	0.59880212	
18 NGR1-anu-zrn-	568.355484	7.87946116	0.59880212	
10 1774-66		569	8.8	0.7
10 1774-66		569	8.8	0.7
119	20.1	569	12	0.4905
18 NGR1-anu-zrn-	569.796963	6.90109804	0.61888348	
18 NGR1-anu-zrn-	569.796963	6.90109804	0.61888348	
10 1774-24		570	6.2	0.6
10 1774-24		570	6.2	0.6
10 2436-50		570	6.5	0.3
10 2436-50		570	6.5	0.3
10 1774-02		570	9.4	0.7
10 1774-02		570	9.4	0.7
47 PMOG-233_33-		570	9	0.3
47 PMOG-233_33-		570	9	0.3
56 HP - 223		570	7.71	
56 HP - 223		570	7.71	
116 DA14-140-01		570	5.65	0.55
116 DA14-140-14		570	6.36	0.55
116 DA14-140-11		570	7.35	0.54
116 DA14-140-09		570	8.28	0.54
122 n4737-07		570.6	6.06	0.15
122 n4735-14		570.9	6.3	0.16

10 1774-44b	571	6.5	0.5
10 1774-44b	571	6.5	0.5
57 BR-231	571	9.81	
57 BR-231	571	9.81	
122 n4735-12	571.1	5.99	0.15
18 NGR1-anu-zrn-	571.635215	8.25932865	0.59224493
18 NGR1-anu-zrn-	571.635215	8.25932865	0.59224493
122 n4735-07	571.8	6.2	0.15
10 2436-69a	572	6.4	0.4
10 2436-69a	572	6.4	0.4
20 BB6.56	572	9.7	0.4
20 BB6.56	572	9.7	0.4
20 BB6.56	572	9.7	0.4
119 30.1	572	8	0.3665
18 NGR1-anu-zrn-	572.321296	8.61414251	0.59096916
18 NGR1-anu-zrn-	572.321296	8.61414251	0.59096916
122 n4736-9x	572.9	4.29	0.16
5 RNZ49	573	7.14	
5 RNZ49	573	7.14	
10 2641-45	573	4.8	0.6
10 2641-45	573	4.8	0.6
10 1774-79	573	6.3	0.6
10 1774-79	573	6.3	0.6
10 2436-67	573	6.5	0.4
10 2436-67	573	6.5	0.4
10 1774-36	573	7.4	0.6
10 1774-36	573	7.4	0.6
10 2436-70	573	8.7	0.4
10 2436-70	573	8.7	0.4
119 10.1	573	8	0.3545
120 EW5-5	573	6.26	0.35
18 NIL-anu-zrn-l	573.311754	5.07273764	0.60385104
18 NIL-anu-zrn-l	573.311754	5.07273764	0.60385104
122 n4737-13	574.3	6.43	0.15
18 NGR1-anu-zrn-	574.669709	6.93011745	0.59969069
18 NGR1-anu-zrn-	574.669709	6.93011745	0.59969069
10 1774-73a	575	5.5	0.6
10 1774-73a	575	5.5	0.6
10 1774-73b	575	6.1	0.6
10 1774-73b	575	6.1	0.6
10 2606-52b	575	6.5	0.4
10 2606-52b	575	6.5	0.4
10 2436-10	575	14.3	0.4
10 2436-10	575	14.3	0.4
20 BB1.30	575	7.6	0.4

20 BB1. 30	575	7.6	0.4
20 BB1. 30	575	7.6	0.4
119 32. 1	575	10.0086	0.4915
122 n4736-18x	575	5.08	0.16
10 2436-23	576	3.4	0.6
10 2436-23	576	3.4	0.6
10 1746-29	576	8.6	0.5
10 1746-54	576	8.6	0.5
10 1746-29	576	8.6	0.5
10 1746-54	576	8.6	0.5
119 30. 1	576	9	0.4979
10 2436-09	577	10.2	0.4
10 2436-09	577	10.2	0.4
119 26. 2	577	9	0.4986
10 2436-28	578	6.7	0.5
10 2436-28	578	6.7	0.5
19 08LL06 29	578	3.31	0.32
19 08LL06 29	578	3.31	0.32
20 BB1. 19	578	6.3	0.4
20 BB1. 19	578	6.3	0.4
20 BB1. 19	578	6.3	0.4
66 YS-503	578	7.07	0.1
119 19. 1	578	10	0.3725
122 n4737-19	578.3	6.59	0.14
122 n4734-19	578.5	5.51	0.14
122 n4735-02	578.5	6.01	0.15
18 NGR1-anu-zrn-	578.876831	6.36974279	0.61131845
18 NGR1-anu-zrn-	578.876831	6.36974279	0.61131845
10 2641-46	579	6.4	0.3
10 2641-46	579	6.4	0.3
10 2436-43	579	6.7	0.3
10 2436-43	579	6.7	0.3
18 NGR1-anu-zrn-	579.323895	8.09332276	0.60775088
18 NGR1-anu-zrn-	579.323895	8.09332276	0.60775088
10 2606-52a	580	6.1	0.4
10 2606-52a	580	6.1	0.4
10 1774-32b	580	8.5	0.6
10 1774-32b	580	8.5	0.6
47 PMOG-233_33-	580	8.8	0.3
47 PMOG-233_33-	580	8.8	0.3
56 ATURVO	580	5.81	
56 ATURVO	580	5.81	
56 FAXINAL	580	7.49	
56 FAXINAL	580	7.49	
56 BRAF-68	580	7.68	

56 BRAF-68		580	7.68	
120 EW-1-15		580	4	0.37
115	12.1	580.94	8.8	
10 2436-78		581	8	0.4
10 2436-78		581	8	0.4
54 camp. Grande		581	6.37	
54 camp. Grande		581	6.37	
56 K-34		581	8.01	
56 K-34		581	8.01	
119	63.1	581	10	0.4831
120 EW5-9		581	5.49	0.35
122 n4734-10		581	5.37	0.14
122 n4737-25		581.5	6.03	0.15
18 CNG2-anu-zrn-		581.918448	10.0718377	0.5841877
18 CNG2-anu-zrn-		581.918448	10.0718377	0.5841877
10 2436-47		582	7.8	0.3
10 2436-47		582	7.8	0.3
10 2641-19		582	9.3	0.4
10 2641-19		582	9.3	0.4
56 K-92		582	6.83	
56 K-92		582	6.83	
10 2641-10		583	7	0.5
10 2641-10		583	7	0.5
10 2436-27		583	8.3	0.5
10 2436-27		583	8.3	0.5
10 1774-32a		583	8.6	0.6
10 1774-32a		583	8.6	0.6
10 2436-75		583	8.9	0.4
10 2436-75		583	8.9	0.4
66 DV-82-87		583	5.82	0.06
119	43.1	583	10	0.5144
10 2436-76		584	7.1	0.4
10 2436-76		584	7.1	0.4
56 OM-691		584	5.05	
56 OM-691		584	5.05	
56 OM-473		584	5.52	
56 OM-473		584	5.52	
119	36.1	584	7	0.4113
18 NGR1-anu-zrn-		584.316924	8.77836084	0.59990458
18 NGR1-anu-zrn-		584.316924	8.77836084	0.59990458
10 2436-56		585	7.2	0.4
10 2436-56		585	7.2	0.4
54 ITA		585	7.88	
54 ITA		585	7.88	
18 NGR1-anu-zrn-		585.352551	5.85827932	0.59256574

18 NGR1-anu-zrn-	585.352551	5.85827932	0.59256574
18 ZMB2-anu-zrn-	585.522423	5.55914172	0.55190567
18 ZMB2-anu-zrn-	585.522423	5.55914172	0.55190567
10 2606-54	586	5	0.4
10 2606-54	586	5	0.4
10 1746-41	586	7.7	0.5
10 1746-41	586	7.7	0.5
66 S-4516	586	5.43	0.05
66 S-4403	586	5.46	0.01
66 S-4546	586	5.59	0.07
106 10GD48-105	586	9.43	0.26
119 28.1	586	10	0.3611
119 41.1	586	11	0.523
120 EW-1-14	586	5.09	0.4
122 n4734-17	586.2	6.48	0.15
18 CNG2-anu-zrn-	586.250599	5.35422876	0.60709357
18 CNG2-anu-zrn-	586.250599	5.35422876	0.60709357
18 ZMB2-anu-zrn-	586.447437	9.14377292	0.95674307
18 ZMB2-anu-zrn-	586.447437	9.14377292	0.95674307
10 2436-26	587	7.4	0.5
10 2436-26	587	7.4	0.5
10 2436-38	587	10.3	0.4
10 2436-38	587	10.3	0.4
20 BB1.26a	587	6.2	0.9
20 BB1.26a	587	6.2	0.9
20 BB1.26a	587	6.2	0.9
18 ZMB2-anu-zrn-	587.297421	7.28096847	0.57139541
18 ZMB2-anu-zrn-	587.297421	7.28096847	0.57139541
18 NIL-anu-zrn-l	587.690067	10.6002316	0.55584185
18 NIL-anu-zrn-l	587.690067	10.6002316	0.55584185
10 1774-85	588	9.7	0.6
10 1774-85	588	9.7	0.6
19 08LL07 37	588	5.91	0.39
19 08LL07 37	588	5.91	0.39
66 YE-99	588	6.23	0.1
122 n4737-04	588	6.39	0.15
18 NGR1-anu-zrn-	588.223506	7.44599331	0.60686518
18 NGR1-anu-zrn-	588.223506	7.44599331	0.60686518
18 ZMB2-anu-zrn-	588.523817	7.19880064	0.59859402
18 ZMB2-anu-zrn-	588.523817	7.19880064	0.59859402
18 CNG2-anu-zrn-	588.646548	6.05240006	0.5619135
18 CNG2-anu-zrn-	588.646548	6.05240006	0.5619135
10 2641-50	589	10.4	0.4
10 2641-50	589	10.4	0.4
10 1774-33	589	10.6	0.6

10 1774-33	589	10.6	0.6
10 2436-31	590	7.7	0.5
10 2436-31	590	7.7	0.5
10 2436-81	590	11.1	0.4
10 2436-81	590	11.1	0.4
56 K-44	590	6	
56 K-44	590	6	
56 K-17	590	6.4	
56 K-17	590	6.4	
66 IL-8	590	5.48	0.1
66 IL-149	590	5.49	0.1
66 IL-9	590	5.5	0.1
66 IL-84	590	5.66	0.1
66 A-197-1	590	6.45	0.1
66 YS-1QA	590	6.68	0.05
66 A-198	590	7.23	0.1
106 10GD48-25	590	5.83	0.26
56 MJ-132	591	4.68	
56 MJ-132	591	4.68	
56 HP-21	591	8.9	
56 HP-21	591	8.9	
66 S-3896	591	5.06	0
66 S-3968	591	5.34	0.11
10 2606-40b	592	13	0.4
10 2606-40b	592	13	0.4
56 MJ-659	592	5.31	
56 MJ-659	592	5.31	
56 MJ-659b	592	5.8	
56 MJ-659b	592	5.8	
66 S-2695	592	5.25	0.01
122 n4737-12	592.3	7.18	0.14
18 NIL-anu-zrn-l	592.58119	7.10879817	0.54658767
18 NIL-anu-zrn-l	592.58119	7.10879817	0.54658767
56 OM-589	593	4.65	
56 OM-589	593	4.65	
56 OM-589	593	4.65	
56 OM-589	593	4.65	
56 OM-691	593	5.05	
56 OM-691	593	5.05	
56 OM-473	593	5.52	
56 OM-473	593	5.52	
59 MO-1366	593	3.5	0.1
59 MO-1366	593	3.5	0.1
120 EW5-7	593	5.15	0.35
120 EW-1-7	593	5.75	0.36

18 CNG2-anu-zrn-	593.237301	5.31786691	0.58330033
18 CNG2-anu-zrn-	593.237301	5.31786691	0.58330033
18 CNG2-anu-zrn-	593.850424	5.49787503	0.57260713
18 CNG2-anu-zrn-	593.850424	5.49787503	0.57260713
10 2641-26	594	8	0.7
10 2641-26	594	8	0.7
10 1774-17	594	8.5	0.7
10 1774-17	594	8.5	0.7
56 MJ-163d	594	4.9	
56 MJ-165	594	4.9	
56 MJ-163d	594	4.9	
56 MJ-165	594	4.9	
56 MJ-640	594	5.64	
56 MJ-640	594	5.64	
66 S-1384	594	4.62	0.04
66 S-1351	594	4.88	0.01
66 S-1518	594	4.9	0
120 EW-1-9	594	4.07	0.4
120 EW-1-2	594	4.08	0.37
10 2436-63	595	7.5	0.4
10 2436-63	595	7.5	0.4
10 2436-13a	595	7.8	0.5
10 2436-13a	595	7.8	0.5
47 PMOG-233_33-!	595	7.6	0.3
47 PMOG-233_33-!	595	7.6	0.3
66 S-1805	595	4.49	0.1
66 A-149	595	6.36	0.1
66 A-52	595	6.49	0.1
106 10GD49-50	595	6.81	0.3
18 CNG2-anu-zrn-	595.727638	5.05548266	0.58109507
18 CNG2-anu-zrn-	595.727638	5.05548266	0.58109507
122 n4737-14	595.9	6.38	0.17
10 2436-49a	596	6.9	0.3
10 2436-49a	596	6.9	0.3
66 S-1885	596	5.01	0.1
66 S-1886	596	5.25	0.08
18 NGR1-anu-zrn-	596.143963	7.19007071	0.59782691
18 NGR1-anu-zrn-	596.143963	7.19007071	0.59782691
10 2436-42	597	8	0.3
10 2436-42	597	8	0.3
66 S-2199	597	6.1	0.02
66 S-2120	597	6.19	0.04
66 YS-400	597	8.04	0.1
56 MJ-415	598	6.01	
56 MJ-415	598	6.01	

56 K-20		598	7.38	
56 K-20		598	7.38	
106 10GD48-12		598	11.86	0.21
119	8.1	598	9	0.3606
119	38.1	598	11	0.4021
120 EW-1-8		598	5.58	0.36
18 ZMB2-anu-zrn-	598.173159	7.82079022	0.60063176	
18 ZMB2-anu-zrn-	598.173159	7.82079022	0.60063176	
18 NIL-anu-zrn-l	598.380425	5.46455749	0.60576279	
18 NIL-anu-zrn-l	598.380425	5.46455749	0.60576279	
20 BB1.1a		599	5.8	0.5
20 BB1.1a		599	5.8	0.5
20 BB1.1a		599	5.8	0.5
56 BRAF-23		599	7.94	
56 BRAF-23		599	7.94	
56 HP-04		599	8.13	
56 HP-04		599	8.13	
56 K-67		599	8.64	
56 K-67		599	8.64	
66 S-2839		599	5.89	0.1
120 EW-2-12		599	5.4	0.35
120 EW5-2		599	6.02	0.38
18 ORG2-anu-zrn-	599.946982	6.35223989	0.5539547	
18 ORG2-anu-zrn-	599.946982	6.35223989	0.5539547	
56 HP-17		600	8.92	
56 HP-17		600	8.92	
56 PAM-4		600	10.87	
56 PAM-4		600	10.87	
66 S-1588		600	5.16	0.1
66 S-1709		600	5.29	0.1
66 S-3010		600	5.65	0.02
66 YE-98		600	6.35	0.1
66 S-2364		600	6.5	0.1
120 EW-2-9		600	5.42	0.37
18 NIL-anu-zrn-l	600.021415	6.65410427	0.55324559	
18 NIL-anu-zrn-l	600.021415	6.65410427	0.55324559	
18 ZMB2-anu-zrn-	600.036154	10.4284186	0.55429655	
18 ZMB2-anu-zrn-	600.036154	10.4284186	0.55429655	
18 NIL-anu-zrn-l	600.627965	11.2705686	0.55873231	
18 NIL-anu-zrn-l	600.627965	11.2705686	0.55873231	
120 EW3-3		601	4.57	0.38
18 ORG2-anu-zrn-	601.671856	7.97843783	0.55602318	
18 ORG2-anu-zrn-	601.671856	7.97843783	0.55602318	
10 1774-59		602	6	0.7
10 1774-59		602	6	0.7

10 1746-36	602	9.2	0.4
10 1746-36	602	9.2	0.4
20 BB1. 13	602	5.6	0.5
20 BB1. 13	602	5.6	0.5
20 BB1. 13	602	5.6	0.5
66 AG-66	602	5.6	0.1
66 AG-64	602	5.68	0
66 AG-40	602	5.75	0.02
66 AG-77	602	5.89	0.01
120 EW-1-1	602	4.53	0.36
10 1774-23	603	9	0.6
10 1774-23	603	9	0.6
66 S-1561	603	5.3	0.14
66 AG-62	603	5.82	0.04
106 10GD48-20	603	8.94	0.15
18 CNG2-anu-zrn-	603.490828	8.23372458	0.59339187
18 CNG2-anu-zrn-	603.490828	8.23372458	0.59339187
18 NGR1-anu-zrn-	603.884	8.43378966	0.5955458
18 NGR1-anu-zrn-	603.884	8.43378966	0.5955458
10 2436-84	604	6.2	0.4
10 2436-84	604	6.2	0.4
56 MJ-376f	604	5.43	
56 MJ-376f	604	5.43	
56 MJ-376	604	5.52	
56 MJ-376	604	5.52	
66 S-1724	604	5.27	0.02
120 EW-2-8	604	8.98	0.57
18 CNG2-anu-zrn-	604.781972	7.64732833	0.55431049
18 CNG2-anu-zrn-	604.781972	7.64732833	0.55431049
56 OM-933	605	5.59	
56 OM-933	605	5.59	
56 OM-629	605	5.62	
56 OM-629	605	5.62	
56 OM-180	605	5.71	
56 OM-180	605	5.71	
56 MJ-AM-93	605	5.79	
56 MJ-AM-93	605	5.79	
66 AG-35	605	6.52	0.05
66 AG-81	605	6.6	0.04
66 S-4378	605	6.66	0.01
66 AG-36	605	6.76	0.1
66 S-4917	605	6.88	0.08
96 Yehoshafat-36	605	6.52	
96 Yehoshafat-81	605	6.6	0.04
96 Yehoshafat-36	605	6.76	

120 EW-2-14		605	5.31	0.36
10 1774-70		606	10.2	0.7
10 1774-70		606	10.2	0.7
20 KK1.25		606	7.9	0.4
20 KK1.25		606	7.9	0.4
20 KK1.25		606	7.9	0.4
56 K-11		606	7.18	
56 K-11		606	7.18	
66 AG-67		606	5.48	0.1
66 AG-63		606	5.52	0.02
66 AG-44		606	5.93	0
75	3	606	7.34	0.28
66 S-1737		607	5.03	0.03
66 S-1610		607	5.07	0.01
120 EW-2-6		607	5.99	0.37
10 2436-22		608	10.7	0.6
10 2436-22		608	10.7	0.6
66 S-1542		608	5.08	0.06
66 S-1810		608	5.08	0.14
66 S-3699		608	5.1	0.09
66 S-1600		608	5.17	0.02
66 S-1634		608	5.17	0.09
66 S-3704		608	5.24	0.01
106 10GD48-14		608	6.6	0.33
10 1746-63		609	7.2	0.5
10 1746-63		609	7.2	0.5
10 1746-10a		609	9.4	0.8
10 1746-10a		609	9.4	0.8
47 PMOG-233_33-1		609	7.3	0.3
47 PMOG-233_33-1		609	7.3	0.3
56 BRAF-37		609	6.63	
56 BRAF-37		609	6.63	
56 MJ-209c		609	7.15	
56 MJ-209c		609	7.15	
18 NIL-anu-zrn-l	609.135169	6.80179029		0.56406056
18 NIL-anu-zrn-l	609.135169	6.80179029		0.56406056
18 ORG2-anu-zrn-	609.450982	6.22293011		0.5523917
18 ORG2-anu-zrn-	609.450982	6.22293011		0.5523917
10 2436-49b	610	7.1		0.3
10 2436-49b	610	7.1		0.3
10 2436-79	610	9.5		0.4
10 2436-79	610	9.5		0.4
56 HP - 155	610	5.41		
56 HP - 155	610	5.41		
56 E-3	610	6.1		

56 E-3	610	6.1	
66 S-2609	610	5.59	0.07
66 S-1876	610	5.79	0.1
66 S-2911	610	6.49	0.04
66 S-2921	610	6.51	0.1
96 Timna-67	610	5.48	
96 Timna-63	610	5.52	0.03
96 Timna-66	610	5.6	
96 Timna-64	610	5.68	0
96 Timna-40	610	5.75	
96 Timna-62	610	5.82	0.04
96 Timna-77	610	5.89	0.01
96 Timna-44	610	5.93	
96 Timna-71	610	6.1	0.05
96 Timna-70	610	6.11	0.03
96 Timna-69	610	6.27	0.11
106 10GD49-19	610	8.61	0.27
10 2436-12	611	6.8	0.5
10 2436-12	611	6.8	0.5
66 S-2504	611	6.49	0.04
66 S-2491	611	6.75	0.04
66 S-826	611	6.87	0.1
18 NIL-anu-zrn-l	611.185204	7.14916742	0.55839292
18 NIL-anu-zrn-l	611.185204	7.14916742	0.55839292
18 ZMB2-anu-zrn-	611.526281	8.15116708	0.60893153
18 ZMB2-anu-zrn-	611.526281	8.15116708	0.60893153
18 ZMB2-anu-zrn-	611.91269	7.17815863	0.55231435
18 ZMB2-anu-zrn-	611.91269	7.17815863	0.55231435
20 HV1.6	612	6.2	0.3
20 HV1.6	612	6.2	0.3
20 HV1.6	612	6.2	0.3
20 BB6.7	612	10.1	0.3
20 BB6.7	612	10.1	0.3
20 BB6.7	612	10.1	0.3
56 BRAF-26	612	6.96	
56 BRAF-26	612	6.96	
56 K-3	612	7.97	
56 K-3	612	7.97	
18 NIL-anu-zrn-l	612.319492	9.16777619	0.57248307
18 NIL-anu-zrn-l	612.319492	9.16777619	0.57248307
18 CNG2-anu-zrn-	612.742116	8.75928133	0.57719201
18 CNG2-anu-zrn-	612.742116	8.75928133	0.57719201
56 MJ-649(OM-40)	613	6.26	
56 MJ-649(OM-40)	613	6.26	
56 BRAF-27B	613	8.02	

56 BRAF-27B	613	8.02	
56 BRAF-27 A	613	8.34	
56 BRAF-27 A	613	8.34	
10 1774-16	614	8.9	0.7
10 1774-16	614	8.9	0.7
20 CM1. L7. 1	614	9	0.4
20 CM1. L7. 1	614	9	0.4
20 CM1. L7. 1	614	9	0.4
56 MJ-206. 2	614	6.39	
56 MJ-206. 2	614	6.39	
56 MG-362	614	7.8	
56 MG-362	614	7.8	
18 NGR1-anu-zrn-	614.494837	8.06818786	0.59827877
18 NGR1-anu-zrn-	614.494837	8.06818786	0.59827877
18 ZMB2-anu-zrn-	614.50454	8.22115125	0.60888473
18 ZMB2-anu-zrn-	614.50454	8.22115125	0.60888473
10 2436-07	615	4.5	0.4
10 2436-07	615	4.5	0.4
10 2641-09	615	9.5	0.5
10 2641-09	615	9.5	0.5
19 08LL05 47	615	3.47	0.28
19 08LL05 47	615	3.47	0.28
47 PMOG-233_33-9	615	6.8	0.3
47 PMOG-233_33-9	615	6.8	0.3
56 AM-1	615	7.13	
56 AM-1	615	7.13	
56 MG-220	615	7.69	
56 MG-220	615	7.69	
119 56. 1	615	14	0.4811
18 NIL-anu-zrn-l	615.691525	7.29166555	0.60907401
18 NIL-anu-zrn-l	615.691525	7.29166555	0.60907401
18 NIL-anu-zrn-l	615.807775	7.90269981	0.58718174
18 NIL-anu-zrn-l	615.807775	7.90269981	0.58718174
18 CNG2-anu-zrn-	615.854211	6.32994642	0.5725519
18 CNG2-anu-zrn-	615.854211	6.32994642	0.5725519
56 K-5	616	7.75	
56 K-5	616	7.75	
106 10GD48-76	616	9.14	0.26
10 2436-85b	617	8.4	0.4
10 2436-85b	617	8.4	0.4
56 S. P. Alcantá	617	8.2	
56 S. P. Alcantá	617	8.2	
120 EW5-6	617	6.38	0.38
18 NIL-anu-zrn-l	617.188623	6.0637015	0.95901071
18 NIL-anu-zrn-l	617.188623	6.0637015	0.95901071

18 NGR1-anu-zrn-	617.832435	7.03225717	0.59837167	
18 NGR1-anu-zrn-	617.832435	7.03225717	0.59837167	
56 OM-1106	618	6.05		
56 OM-1106	618	6.05		
56 WW-46	618	6.36		
56 WW-46	618	6.36		
119	2.1	618	11	0.5173
18 NIL-anu-zrn-l	618.041517	7.40335975	0.59164318	
18 NIL-anu-zrn-l	618.041517	7.40335975	0.59164318	
18 NIL-anu-zrn-l	618.499946	7.74569251	0.56428594	
18 NIL-anu-zrn-l	618.499946	7.74569251	0.56428594	
18 NIL-anu-zrn-l	618.769633	6.81513548	1.00225579	
18 NIL-anu-zrn-l	618.769633	6.81513548	1.00225579	
18 NGR1-anu-zrn-	618.848153	6.04406178	0.59288665	
18 NGR1-anu-zrn-	618.848153	6.04406178	0.59288665	
19 08LL06 49	619	2.84	0.26	
19 08LL06 49	619	2.84	0.26	
56 WW-75	619	6.43		
56 WW-75	619	6.43		
66 S-2344	619	5.21	0.02	
66 S-2351	619	5.68	0.06	
18 CNG2-anu-zrn-	619.869458	10.1733263	0.57293323	
18 CNG2-anu-zrn-	619.869458	10.1733263	0.57293323	
10 1746-52	620	6.2	0.4	
10 1746-52	620	6.2	0.4	
10 1746-10b	620	9.4	0.8	
10 1746-10b	620	9.4	0.8	
56 HP - 188	620	5.51		
56 HP - 188	620	5.51		
56 YE8	620	6.67		
56 YE8	620	6.67		
56 HP - 165	620	6.78		
56 HP - 165	620	6.78		
56 BRAF-25	620	6.98		
56 BRAF-25	620	6.98		
56 LZ-42	620	7.25		
56 LZ-42	620	7.25		
56 YE2	620	8.03		
56 YE2	620	8.03		
56 YE12	620	8.08		
56 YE12	620	8.08		
56 K-68	620	8.41		
56 K-68	620	8.41		
116 DA13-017-68	620	4.18	0.25	
116 DA13-017-69	620	6.11	0.25	

116 DA13-017-18	620	8.03	0.25
119 20.1	620	12	0.2956
10 2436-39	621	9.5	0.4
10 2436-39	621	9.5	0.4
119 54.1	621	6	0.6826
18 CNG2-anu-zrn-	621.779208	8.85197071	0.60014446
18 CNG2-anu-zrn-	621.779208	8.85197071	0.60014446
66 S-3744	622	6.57	0.01
106 10GD48-50	622	6.49	0.15
18 NGR1-anu-zrn-	622.05944	5.42992605	0.60464525
18 NGR1-anu-zrn-	622.05944	5.42992605	0.60464525
37 07SC49@50	623	5.51	0.44
37 07SC49@50	623	5.51	0.44
18 CNG2-anu-zrn-	623.341602	8.52039002	0.62310018
18 CNG2-anu-zrn-	623.341602	8.52039002	0.62310018
10 1746-49	624	8.1	0.4
10 1746-49	624	8.1	0.4
120 EW-2-4	624	6.06	0.36
18 ORG2-anu-zrn-	624.478997	7.22390035	0.74810925
18 ORG2-anu-zrn-	624.478997	7.22390035	0.74810925
18 NIL-anu-zrn-l	624.966412	6.51446582	0.56543712
18 NIL-anu-zrn-l	624.966412	6.51446582	0.56543712
10 2606-40a	625	13.2	0.4
10 2606-40a	625	13.2	0.4
19 08LL07 27	625	7.1	0.29
19 08LL07 27	625	7.1	0.29
54 CJS-13/19	625	8.86	
54 CJS-13/19	625	8.86	
54 CJS-1	625	9.11	
54 CJS-1	625	9.11	
56 HP - 03	625	7.85	
56 HP - 03	625	7.85	
56 HP-02	625	7.86	
56 HP-02	625	7.86	
119 3.1	625	11	0.3237
120 EW5-8	625	6.08	0.37
106 10GD49-90	626	7.35	0.25
106 10GD49-53	626	11.48	0.28
120 EW3-6	626	5.08	0.36
120 EW3-13	626	5.74	0.36
120 EW5-3*	626	5.82	0.38
18 NIL-anu-zrn-l	626.215249	5.83226311	0.94214335
18 NIL-anu-zrn-l	626.215249	5.83226311	0.94214335
18 CNG2-anu-zrn-	626.923447	7.6928663	0.56207408
18 CNG2-anu-zrn-	626.923447	7.6928663	0.56207408

10 2436-85a		627	8.4	0.4
10 2436-85a		627	8.4	0.4
13 DSR-14		627	5.72	
13 DSR-14		627	5.72	
13 DSR-4		627	5.85	
13 DSR-4		627	5.85	
13 DSR-23		627	5.9	
13 DSR-23		627	5.9	
13 DSR-29		627	5.93	
13 DSR-29		627	5.93	
13 DSR-12		627	5.96	
13 DSR-12		627	5.96	
13 DSR-8		627	5.97	
13 DSR-8		627	5.97	
13 SR-P		627	6.04	
13 SR-P		627	6.04	
13 DSR-10		627	6.11	
13 DSR-10		627	6.11	
13 DSR-17		627	6.33	
13 DSR-17		627	6.33	
119	10.1	627	6	0.2958
18 NIL-anu-zrn-l	627.526062	627.526062	8.72333068	0.97717361
18 NIL-anu-zrn-l	627.526062	627.526062	8.72333068	0.97717361
75	25	628	7.99	0.28
18 NIL-anu-zrn-l	628.560311	628.560311	8.38382383	0.94006361
18 NIL-anu-zrn-l	628.560311	628.560311	8.38382383	0.94006361
18 NGR1-anu-zrn-l	628.812875	628.812875	10.5020635	0.59399659
18 NGR1-anu-zrn-l	628.812875	628.812875	10.5020635	0.59399659
10 2641-24		629	8.8	0.8
10 2641-24		629	8.8	0.8
47 PMOG-233_33-l		629	7	0.3
47 PMOG-233_33-l		629	7	0.3
66 S-4600		629	4.9	0.03
66 S-4557		629	5.39	0.07
66 S-3440		629	5.67	0.02
54 FL-13A		630	7.13	
54 FL-13A		630	7.13	
54 FL-12		630	7.38	
54 FL-12A		630	7.38	
54 FL-12		630	7.38	
54 FL-12A		630	7.38	
54 FL-9b		630	7.46	
54 FL-9b		630	7.46	
54 FL-02		630	7.58	
54 FL-02		630	7.58	

54 PM-2		630	9.16	
54 PM-2		630	9.16	
54 G norte		630	9.21	
54 G norte		630	9.21	
54 PM-3		630	9.26	
54 PM-3		630	9.26	
54 PM-1		630	9.29	
54 PM-1		630	9.29	
54 BQ-9		630	9.31	
54 BQ-9		630	9.31	
54 PM-10		630	9.34	
54 PM-10		630	9.34	
54 BQ-15		630	9.54	
54 BQ-15		630	9.54	
54 Bonfim		630	9.82	
54 Bonfim		630	9.82	
54 BV-V		630	9.97	
54 BV-V		630	9.97	
66 YE-34		630	6.36	0.03
119	29.1	630	8	0.3417
106 10GD49-57		631	6.69	0.32
47 PMOG-233_33-:		632	6.9	0.3
47 PMOG-233_33-:		632	6.9	0.3
56 CAN-13b		632	6.29	
56 CAN-13b		632	6.29	
66 S-3713		632	4.99	0.03
66 S-3807		632	5.43	0.11
66 AG-71		632	6.11	0.04
66 AG-70		632	6.12	0.02
66 AG-69		632	6.28	0.1
75	13	632	6.65	0.28
13 E - 02		633	9.59	
13 E - 02		633	9.59	
13 E - 68		633	9.91	
13 E - 68		633	9.91	
13 E - 42		633	10.01	
13 E - 42		633	10.01	
13 E - 102		633	10.05	
13 E - 102		633	10.05	
13 E - 49		633	10.06	
13 E - 49		633	10.06	
13 E - 92		633	10.19	
13 E - 92		633	10.19	
13 E - 95		633	10.21	
13 E - 95		633	10.21	

13 E - 63		633	10.3	
13 E - 63		633	10.3	
19 08LL07 12		633	5.79	0.21
19 08LL07 12		633	5.79	0.21
56 HP-07		633	7.66	
56 HP-07		633	7.66	
18 CNG2-anu-zrn-	633.535106		5.86970847	0.60163056
18 CNG2-anu-zrn-	633.535106		5.86970847	0.60163056
18 CNG2-anu-zrn-	633.990331		6.54103875	0.57519768
18 CNG2-anu-zrn-	633.990331		6.54103875	0.57519768
66 YE-61		634	6.7	0.1
66 YE-58		634	6.95	0.02
119	48.1	634	7	0.5535
18 NIL-anu-zrn-l	634.551513		7.71807501	0.58346587
18 NIL-anu-zrn-l	634.551513		7.71807501	0.58346587
54 C-LT		635	10	
54 C-LT		635	10	
120 EW-2-7		635	6.35	0.41
66 YE-1		636	6.18	0.01
66 YE-33		636	6.97	0.03
66 YE-11		636	7.15	0.03
18 ZMB2-anu-zrn-	636.258928		7.98187066	0.62047563
18 ZMB2-anu-zrn-	636.258928		7.98187066	0.62047563
18 NGR1-anu-zrn-	636.822595		6.72342956	0.59810213
18 NGR1-anu-zrn-	636.822595		6.72342956	0.59810213
10 2641-29		637	8.6	0.9
10 2641-29		637	8.6	0.9
54 rcc4/5		638	8.83	
54 rcc4/5		638	8.83	
54 rcc-02		638	9.73	
54 rcc-02		638	9.73	
56 VALSSUNGANA		638	7	
56 VALSSUNGANA		638	7	
18 CNG2-anu-zrn-	639.042037		6.34560184	0.59936505
18 CNG2-anu-zrn-	639.042037		6.34560184	0.59936505
19 08LL07 46		640	5.37	0.36
19 08LL07 46		640	5.37	0.36
47 PMOG-233_33-		640	7.2	0.3
47 PMOG-233_33-		640	7.2	0.3
56 Paulo Lopez		640	6.75	
56 Paulo Lopez		640	6.75	
66 AG-79		640	7.93	0.1
18 CNG2-anu-zrn-	640.665206		7.62202614	0.57517281
18 CNG2-anu-zrn-	640.665206		7.62202614	0.57517281
119	51.1	641	8	0.3534

18 NGR1-anu-zrn-	641.382719	7.33351235	0.59378817
18 NGR1-anu-zrn-	641.382719	7.33351235	0.59378817
10 1774-34	642	10.1	0.6
10 1774-34	642	10.1	0.6
47 PMOG-233_33-(	642	8	0.3
47 PMOG-233_33-(	642	8	0.3
54 FL-32A	643	8.2	
54 FL-32A	643	8.2	
54 FL-33	643	8.27	
54 FL-33	643	8.27	
54 FL-32	643	8.44	
54 FL-32	643	8.44	
106 10GD48-80	643	6.49	0.23
120 EW3-2	643	5.29	0.4
120 EW3-14	644	5.55	0.36
20 KK1.13	645	7.5	0.6
20 KK1.13	645	7.5	0.6
20 KK1.13	645	7.5	0.6
54 TX-V	645	7.59	
54 TX-V	645	7.59	
54 TX-1	645	7.68	
54 TX-1	645	7.68	
106 10GD49-77	645	11.72	0.22
18 CNG2-anu-zrn-	645.865905	7.66272206	0.58204283
18 CNG2-anu-zrn-	645.865905	7.66272206	0.58204283
19 08LL04 46	646	4.88	0.33
19 08LL04 46	646	4.88	0.33
18 NIL-anu-zrn-l	646.754324	10.3516279	0.57219909
18 NIL-anu-zrn-l	646.754324	10.3516279	0.57219909
18 NIL-anu-zrn-l	646.929756	8.34860924	0.96473747
18 NIL-anu-zrn-l	646.929756	8.34860924	0.96473747
10 2436-53	647	6.9	0.3
10 2436-53	647	6.9	0.3
10 1746-55	647	8.3	0.5
10 1746-55	647	8.3	0.5
18 NIL-anu-zrn-l	647.383618	8.34093032	0.56945128
18 NIL-anu-zrn-l	647.383618	8.34093032	0.56945128
20 BB6.25	648	5.8	0.3
20 BB6.25	648	5.8	0.3
20 BB6.25	648	5.8	0.3
106 10GD49-74	649	5.92	0.22
18 CNG2-anu-zrn-	649.469022	8.41684748	0.59653002
18 CNG2-anu-zrn-	649.469022	8.41684748	0.59653002
47 PMOG-233_33-'	650	8.2	0.3
47 PMOG-233_33-'	650	8.2	0.3

66 YE-5	650	7.24	0.02
66 YE-6	650	7.39	0.1
116 DA13-076-66	650	9.03	0.3
54 T-V	651	9	
54 T-V	651	9	
54 TV-14.1	651	9.08	
54 TV-14.1	651	9.08	
54 TV-20.8	651	9.09	
54 TV-48.1	651	9.09	
54 TV-20.8	651	9.09	
54 TV-48.1	651	9.09	
54 TV-11.1	651	9.13	
54 TV-11.1	651	9.13	
54 TV-13.1	651	9.14	
54 TV-13.1	651	9.14	
54 TV-51. a	651	9.2	
54 TV-51. a	651	9.2	
54 TV-45.1	651	9.33	
54 TV-45.1	651	9.33	
18 CNG2-anu-zrn-	651.97768	9.09018384	0.58173199
18 CNG2-anu-zrn-	651.97768	9.09018384	0.58173199
18 NIL-anu-zrn-l	652.816188	5.45198621	0.5880448
18 NIL-anu-zrn-l	652.816188	5.45198621	0.5880448
56 SPU-017	653	7.77	
56 SPU-017	653	7.77	
106 10GD48-48	653	6.46	0.3
119 22.1	653	8	0.5831
119 2.1	653	10	0.3323
120 EW3-4	653	4	0.35
120 EW3-11	653	5.75	0.36
18 CNG2-anu-zrn-	653.015323	10.3240744	0.57677898
18 CNG2-anu-zrn-	653.015323	10.3240744	0.57677898
10 1774-47	654	7.2	0.5
10 1774-47	654	7.2	0.5
18 CNG2-anu-zrn-	654.04886	5.93704736	0.56890245
18 CNG2-anu-zrn-	654.04886	5.93704736	0.56890245
18 NGR1-anu-zrn-	654.908319	5.62304557	0.60014346
18 NGR1-anu-zrn-	654.908319	5.62304557	0.60014346
119 6.1	655	7	0.3194
120 EW3-7	655	4.66	0.39
18 NIL-anu-zrn-l	655.613066	7.22342056	0.57116666
18 NIL-anu-zrn-l	655.613066	7.22342056	0.57116666
119 60.1	656	5.8209	0.5078
116 DA13-074-54	657	10.88	0.29
119 36.1	657	7	0.6238

18 CNG2-anu-zrn-	657. 832374	6. 98310192	0. 59337512	
18 CNG2-anu-zrn-	657. 832374	6. 98310192	0. 59337512	
10 1774-27	658	6. 4	0. 6	
10 1774-27	658	6. 4	0. 6	
10 2641-51	658	7. 8	0. 3	
10 2641-51	658	7. 8	0. 3	
18 NIL-anu-zrn-l	658. 917228	8. 3003767	0. 55401001	
18 NIL-anu-zrn-l	658. 917228	8. 3003767	0. 55401001	
119	23. 1	659	7	0. 3697
120 EW3-8	660	4. 88	0. 38	
47 PMOG-233_33-'	661	4. 1	0. 3	
47 PMOG-233_33-'	661	4. 1	0. 3	
75	69. 1	661	8. 5	0. 45
106 10GD49-106	662	6. 68	0. 22	
20 CM1. 8a	663	5. 4	0. 4	
20 CM1. 8a	663	5. 4	0. 4	
20 CM1. 8a	663	5. 4	0. 4	
106 10GD48-38	664	7. 66	0. 29	
18 CNG2-anu-zrn-	664. 348546	6. 7931808	0. 57026735	
18 CNG2-anu-zrn-	664. 348546	6. 7931808	0. 57026735	
18 CNG2-anu-zrn-	664. 700328	8. 07861887	0. 57876013	
18 CNG2-anu-zrn-	664. 700328	8. 07861887	0. 57876013	
106 10GD48-52	665	5. 1	0. 18	
19 08LL07 62	666	2. 97	0. 53	
19 08LL07 62	666	2. 97	0. 53	
119	23. 1	666	5	0. 3297
119	61. 1	666	7	0. 3905
18 NIL-anu-zrn-l	666. 208419	7. 0440666	0. 55200858	
18 NIL-anu-zrn-l	666. 208419	7. 0440666	0. 55200858	
18 NIL-anu-zrn-l	666. 534837	6. 20912651	0. 91191385	
18 NIL-anu-zrn-l	666. 534837	6. 20912651	0. 91191385	
18 NIL-anu-zrn-l	666. 672026	4. 78022362	0. 58349155	
18 NIL-anu-zrn-l	666. 672026	4. 78022362	0. 58349155	
106 10GD48-109	667	6. 53	0. 29	
18 NGR1-anu-zrn-	667. 295822	7. 25848257	0. 61673582	
18 NGR1-anu-zrn-	667. 295822	7. 25848257	0. 61673582	
106 10GD48-54	668	9. 49	0. 32	
120 EW3-5	668	5. 77	0. 37	
19 08LL06 39	670	4. 91	0. 47	
19 08LL06 39	670	4. 91	0. 47	
10 2641-41	672	8. 6	0. 6	
10 2641-41	672	8. 6	0. 6	
18 CNG2-anu-zrn-	672. 382706	8. 34906691	0. 56167374	
18 CNG2-anu-zrn-	672. 382706	8. 34906691	0. 56167374	
18 CNG2-anu-zrn-	672. 68742	5. 06367359	0. 56793799	

18 CNG2-anu-zrn-	672.68742	5.06367359	0.56793799
18 NIL-anu-zrn-l	672.982799	6.46103611	0.93679939
18 NIL-anu-zrn-l	672.982799	6.46103611	0.93679939
106 10GD49-113	673	7.07	0.31
120 EW5-11	674	6.25	0.4
47 PMOG-233_33-t	675	4.7	0.3
47 PMOG-233_33-t	675	4.7	0.3
10 1746-20a	676	7.3	0.6
10 1746-20a	676	7.3	0.6
20 BB6.24	676	5.4	0.4
20 BB6.24	676	5.4	0.4
20 BB6.24	676	5.4	0.4
106 10GD49-64	676	6.25	0.2
116 DA13-083-62	677	5.38	0.35
116 DA13-083-54	677	5.63	0.32
116 DA13-083-70	677	6.05	0.29
116 DA13-083-69	677	6.29	0.31
116 DA13-083-74	677	6.38	0.29
18 NIL-anu-zrn-l	677.811578	6.10402454	0.55124167
18 NIL-anu-zrn-l	677.811578	6.10402454	0.55124167
19 08LL06 20	678	3.43	0.45
19 08LL06 20	678	3.43	0.45
106 10GD49-5	679	6.43	0.4
119 57.1	679	7.2741	0.4115
56 WP13 200P	680	6.56	
56 WP13 200P	680	6.56	
19 08LL07 39	684	5.09	0.38
19 08LL07 39	684	5.09	0.38
37 07SC65@92	685	6.3	0.39
37 07SC65@92	685	6.3	0.39
18 NIL-anu-zrn-l	685.115052	6.52747103	0.54761305
18 NIL-anu-zrn-l	685.115052	6.52747103	0.54761305
18 CNG2-anu-zrn-	685.673873	8.74672469	0.56247265
18 CNG2-anu-zrn-	685.673873	8.74672469	0.56247265
56 STEWARTS 2, :	686	6.8	
56 STEWARTS 2, :	686	6.8	
20 BB1.27	688	9.1	0.4
20 BB1.27	688	9.1	0.4
20 BB1.27	688	9.1	0.4
18 CNG2-anu-zrn-	688.24458	5.96846593	0.5515715
18 CNG2-anu-zrn-	688.24458	5.96846593	0.5515715
18 NIL-anu-zrn-l	688.899222	7.61343874	0.5715732
18 NIL-anu-zrn-l	688.899222	7.61343874	0.5715732
18 NIL-anu-zrn-l	690.953702	5.43992225	0.55458046
18 NIL-anu-zrn-l	690.953702	5.43992225	0.55458046

120 EW-1-5	693	5.01	0.36
106 10GD49-99	695	5.77	0.22
19 08LL06 46	696	4.59	0.24
19 08LL06 46	696	4.59	0.24
19 08LL07 56	697	3.39	0.43
19 08LL07 56	697	3.39	0.43
19 08LL07 61	697	5.69	0.34
19 08LL07 61	697	5.69	0.34
20 KK1. 9a	697	7.5	0.4
20 KK1. 9a	697	7.5	0.4
20 KK1. 9a	697	7.5	0.4
106 10GD49-34	697	7.86	0.34
18 NIL-anu-zrn-l	697.348054	7.29980518	0.57734585
18 NIL-anu-zrn-l	697.348054	7.29980518	0.57734585
18 NIL-anu-zrn-l	697.418298	5.78340238	0.54696772
18 NIL-anu-zrn-l	697.418298	5.78340238	0.54696772
18 NIL-anu-zrn-l	697.948351	7.39240483	0.5846692
18 NIL-anu-zrn-l	697.948351	7.39240483	0.5846692
19 08LL07 33	698	4.12	0.22
19 08LL07 33	698	4.12	0.22
18 NGR1-anu-zrn-	698.19252	5.83834029	0.61062666
18 NGR1-anu-zrn-	698.19252	5.83834029	0.61062666
106 10GD49-88	699	7.51	0.33
10 1746-20b	701	7.2	0.6
10 1746-20b	701	7.2	0.6
121 11	701	9.85	0.26
18 CNG2-anu-zrn-	701.514377	2.67775227	0.59039863
18 CNG2-anu-zrn-	701.514377	2.67775227	0.59039863
18 NIL-anu-zrn-l	702.584404	5.21367578	0.92849015
18 NIL-anu-zrn-l	702.584404	5.21367578	0.92849015
19 08LL04 5	703	2.21	0.51
19 08LL04 5	703	2.21	0.51
18 CNG2-anu-zrn-	704.187641	6.49480692	0.57833788
18 CNG2-anu-zrn-	704.187641	6.49480692	0.57833788
106 10GD49-73	705	7	0.22
122 n4733-08	705.8	8.34	0.15
61 08SC11-12	707	6.7	0.21
61 08SC11-12	707	6.7	0.21
18 NIL-anu-zrn-l	707.19933	6.71509285	0.58001482
18 NIL-anu-zrn-l	707.19933	6.71509285	0.58001482
119 28.1	709	7	0.403
18 ZMB2-anu-zrn-	709.636465	4.07700343	0.59700308
18 ZMB2-anu-zrn-	709.636465	4.07700343	0.59700308
19 08LL07 9	710	5.88	0.32
19 08LL07 9	710	5.88	0.32

18 ZMB2-anu-zrn-	710.986301	4.42248766	0.55346354
18 ZMB2-anu-zrn-	710.986301	4.42248766	0.55346354
19 08LL06 51	711	4.1	0.25
19 08LL06 51	711	4.1	0.25
18 NIL-anu-zrn-l	711.111808	6.32892842	0.55863192
18 NIL-anu-zrn-l	711.111808	6.32892842	0.55863192
19 08LL07 55	713	6.25	0.38
19 08LL07 55	713	6.25	0.38
19 08LL04 15	714	4.79	0.36
19 08LL04 15	714	4.79	0.36
119	13.1	714	8.2948
119	68.1	715	6
119	30.1	715	6
20 HV1.27	716	5.1	0.3
20 HV1.27	716	5.1	0.3
20 HV1.27	716	5.1	0.3
47 PMOG_P-20.1	716	7.5	0.6
47 PMOG_P-20.1	716	7.5	0.6
19 08LL06 56	717	5.03	0.26
19 08LL06 56	717	5.03	0.26
106 10GD48-113	718	6.47	0.24
18 ORG2-anu-zrn-	718.303235	6.82334761	0.55675694
18 ORG2-anu-zrn-	718.303235	6.82334761	0.55675694
18 NIL-anu-zrn-l	718.3886	7.55973062	0.56017305
18 NIL-anu-zrn-l	718.3886	7.55973062	0.56017305
61 08SC11-8	719	5.6	0.29
61 08SC11-8	719	5.6	0.29
106 10GD48-45	719	10.47	0.19
61 08SC31-2	720	2.6	0.22
61 08SC31-2	720	2.6	0.22
18 ORG2-anu-zrn-	720.222435	9.97954918	0.54667446
18 ORG2-anu-zrn-	720.222435	9.97954918	0.54667446
18 ORG2-anu-zrn-	722.250153	1.4139621	0.73663203
18 ORG2-anu-zrn-	722.250153	1.4139621	0.73663203
61 08SC31-9	724	6	0.19
61 08SC31-9	724	6	0.19
18 NIL-anu-zrn-l	724.70632	5.69491458	0.55133329
18 NIL-anu-zrn-l	724.70632	5.69491458	0.55133329
19 08LL05 5	726	4.04	0.4
19 08LL05 5	726	4.04	0.4
19 08LL04 29	726	4.26	0.24
19 08LL04 29	726	4.26	0.24
18 NIL-anu-zrn-l	726.043754	5.05258849	0.57131513
18 NIL-anu-zrn-l	726.043754	5.05258849	0.57131513
10 2641-32	727	8.4	0.5

10 2641-32	727	8.4	0.5
19 08LL06 28	727	4.2	0.35
19 08LL06 28	727	4.2	0.35
119 33.1	727	6	0.4864
18 NIL-anu-zrn-l	727.063034	6.15917671	0.57503567
18 NIL-anu-zrn-l	727.063034	6.15917671	0.57503567
10 1746-60	728	8	0.5
10 1746-60	728	8	0.5
19 08LL04 50	728	5.27	0.28
19 08LL04 50	728	5.27	0.28
119 35.1	728	8	0.3395
19 08LL06 37	730	3.98	0.4
19 08LL06 37	730	3.98	0.4
61 08SC74-3	730	4.1	0.18
61 08SC74-3	730	4.1	0.18
18 NIL-anu-zrn-l	730.835603	4.88108946	0.55380354
18 NIL-anu-zrn-l	730.835603	4.88108946	0.55380354
10 1746-62	731	8.4	0.5
10 1746-62	731	8.4	0.5
19 08LL04 58	734	4.28	0.24
19 08LL04 58	734	4.28	0.24
119 30.1	734	6.1215	0.4838
18 ZMB2-anu-zrn-	734.338443	4.8143183	0.5585259
18 ZMB2-anu-zrn-	734.338443	4.8143183	0.5585259
18 NIL-anu-zrn-l	734.606764	7.02436433	0.55129158
18 NIL-anu-zrn-l	734.606764	7.02436433	0.55129158
19 08LL07 18	735	5.74	0.32
19 08LL07 18	735	5.74	0.32
47 PMOG-441_41-	735	7.3	0.3
47 PMOG-441_41-	735	7.3	0.3
61 08SC74-159	735	4.1	0.28
61 08SC74-159	735	4.1	0.28
61 08SC74-147	735	4.4	0.2
61 08SC74-147	735	4.4	0.2
61 08SC74-100	737	4.4	0.2
61 08SC74-100	737	4.4	0.2
19 08LL06 12	738	3.85	0.35
19 08LL06 12	738	3.85	0.35
75 13	739	5.43	0.41
18 CNG2-anu-zrn-	739.516918	6.09504645	0.56483824
18 CNG2-anu-zrn-	739.516918	6.09504645	0.56483824
19 08LL07 59	740	4.02	0.32
19 08LL07 59	740	4.02	0.32
19 08LL07 60	740	4.04	0.43
19 08LL07 60	740	4.04	0.43

61 08SC74-21	740	7.2	0.22
61 08SC74-21	740	7.2	0.22
66 YE-16	740	6.68	0.1
66 YE-24	740	7.23	0.1
47 PMOG_P-30.1	741	6	0.6
47 PMOG_P-30.1	741	6	0.6
61 08SC11-28	741	3.8	0.34
61 08SC11-28	741	3.8	0.34
18 NIL-anu-zrn-l	741.357822	6.70730585	0.66963461
18 NIL-anu-zrn-l	741.357822	6.70730585	0.66963461
18 NIL-anu-zrn-l	741.693846	5.83635119	0.55541682
18 NIL-anu-zrn-l	741.693846	5.83635119	0.55541682
19 08LL06 40	743	3.48	0.25
19 08LL06 40	743	3.48	0.25
10 2436-59	744	7.9	0.4
10 2436-59	744	7.9	0.4
47 PMOG_P-48.1	744	9.1	0.6
47 PMOG_P-48.1	744	9.1	0.6
61 08SC74-168	745	5.5	0.2
61 08SC74-168	745	5.5	0.2
18 NIL-anu-zrn-l	745.747828	6.42805607	0.55100667
18 NIL-anu-zrn-l	745.747828	6.42805607	0.55100667
18 ZMB2-anu-zrn-	745.8087	6.30455157	0.57012977
18 ZMB2-anu-zrn-	745.8087	6.30455157	0.57012977
10 1746-01	746	7.5	0.8
10 1746-01	746	7.5	0.8
121 4	747	5.06	0.28
18 ORG2-anu-zrn-	747.57512	6.96796392	0.56240447
18 ORG2-anu-zrn-	747.57512	6.96796392	0.56240447
56 RE90-7	748	5.82	
56 RE90-7	748	5.82	
61 08SC11-53	748	2.6	0.3
61 08SC11-53	748	2.6	0.3
61 08SC74-18	748	6.6	0.21
61 08SC74-18	748	6.6	0.21
119 12.1	748	7	0.2832
10 2436-45b	749	11.6	0.3
10 2436-45b	749	11.6	0.3
61 08SC74-110	749	5.5	0.18
61 08SC74-110	749	5.5	0.18
106 10GD48-70	749	6.97	0.25
18 NIL-anu-zrn-l	749.916101	5.13548364	0.58695028
18 NIL-anu-zrn-l	749.916101	5.13548364	0.58695028
61 08SC11-7	750	3	0.2
61 08SC11-7	750	3	0.2

61 08SC31-3	750	3.5	0.2
61 08SC31-3	750	3.5	0.2
61 08SC11-46	750	4.8	0.22
61 08SC11-46	750	4.8	0.22
64 01MC01	750	5.28	
64 01MC01	750	5.28	
19 08LL06 35	751	3.3	0.38
19 08LL06 35	751	3.3	0.38
106 10GD48-72	751	7.15	0.36
47 PMOG_P-61.1	753	7	0.6
47 PMOG_P-61.1	753	7	0.6
61 08SC74-57	753	5.9	0.31
61 08SC74-57	753	5.9	0.31
18 NIL-anu-zrn-l	753.413808	4.48222041	0.55834171
18 NIL-anu-zrn-l	753.413808	4.48222041	0.55834171
61 08SC11-32	754	5.5	0.24
61 08SC11-32	754	5.5	0.24
121 18	754	6.82	0.25
47 PMOG_P-42.1	755	8.1	0.6
47 PMOG_P-42.1	755	8.1	0.6
61 08SC74-84	755	5.8	0.25
61 08SC74-84	755	5.8	0.25
61 08SC74-24	755	6.2	0.22
61 08SC74-24	755	6.2	0.22
18 NIL-anu-zrn-l	755.076849	5.6147075	0.57779415
18 NIL-anu-zrn-l	755.076849	5.6147075	0.57779415
61 08SC11-9	756	2.3	0.21
61 08SC11-9	756	2.3	0.21
61 08SC74-71	756	4.9	0.17
61 08SC74-71	756	4.9	0.17
61 08SC31-18	756	7.5	0.28
61 08SC31-18	756	7.5	0.28
61 08SC74-14	758	6.1	0.16
61 08SC74-14	758	6.1	0.16
116 DA13-020-32	758	2.96	0.25
116 DA13-020-03	758	2.98	0.28
116 DA13-020-44	758	3.88	0.3
116 DA13-020-16	758	4.58	0.25
116 DA13-020-35	758	4.67	0.25
116 DA13-020-10	758	4.71	0.24
116 DA13-020-07	758	5.12	0.28
116 DA13-020-26	758	5.19	0.24
116 DA13-020-31	758	5.3	0.25
116 DA13-020-40	758	5.36	0.28
116 DA13-020-20	758	5.73	0.28

116 DA13-020-37	758	6.02	0.31
116 DA13-020-02	758	6.12	0.28
116 DA13-020-43	758	6.22	0.3
47 PMOG_P-41.1	759	9.1	0.6
47 PMOG_P-41.1	759	9.1	0.6
61 08SC74-77	759	5.7	0.26
61 08SC74-77	759	5.7	0.26
119 33.1	759	9	0.4531
47 PMOG_P-28.1	760	9.5	0.7
47 PMOG_P-28.1	760	9.5	0.7
61 08SC11-18	760	2.8	0.23
61 08SC11-18	760	2.8	0.23
61 08SC31-12	760	3.5	0.17
61 08SC31-12	760	3.5	0.17
61 08SC74-137	760	4.4	0.22
61 08SC74-137	760	4.4	0.22
61 08SC11-69	760	4.9	0.3
61 08SC11-69	760	4.9	0.3
61 08SC74-27	760	6.6	0.28
61 08SC74-27	760	6.6	0.28
47 PMOG_P-35.1	762	7.5	0.7
47 PMOG_P-35.1	762	7.5	0.7
61 08SC11-47	762	4.2	0.23
61 08SC11-47	762	4.2	0.23
61 08SC74-41	762	4.2	0.25
61 08SC74-41	762	4.2	0.25
61 08SC74-6	762	4.5	0.16
61 08SC74-6	762	4.5	0.16
61 08SC11-49	762	5.2	0.23
61 08SC11-49	762	5.2	0.23
61 08SC74-63	762	5.2	0.26
61 08SC74-63	762	5.2	0.26
61 08SC74-25	762	6.8	0.25
61 08SC74-25	762	6.8	0.25
47 PMOG_P-34.1	763	6.9	0.6
47 PMOG_P-34.1	763	6.9	0.6
61 08SC74-88	763	4.4	0.24
61 08SC74-88	763	4.4	0.24
61 08SC31-23	763	6.7	0.26
61 08SC31-23	763	6.7	0.26
61 08SC74-17	763	7.1	0.19
61 08SC74-17	763	7.1	0.19
18 NIL-anu-zrn-l	763.025467	6.20372551	0.94158979
18 NIL-anu-zrn-l	763.025467	6.20372551	0.94158979
61 08SC11-21	764	4.1	0.35

61 08SC11-21	764	4.1	0.35
116 BGS-TK64A-06	764	3.98	0.17
116 BGS-TK64A-18	764	4.99	0.15
116 BGS-TK64A-13	764	5.05	0.16
116 BGS-TK64A-07	764	5.4	0.16
116 BGS-TK64A-12	764	5.55	0.17
116 BGS-TK64A-16	764	5.75	0.17
116 BGS-TK64A-14	764	6.04	0.15
61 08SC11-68	765	3.4	0.26
61 08SC11-68	765	3.4	0.26
61 08SC74-22	765	5.5	0.3
61 08SC74-22	765	5.5	0.3
119 17.1	765	7	0.3231
122 n4733-19	765.8	7.87	0.14
47 PMOG_P-49.1	766	7.6	0.7
47 PMOG_P-49.1	766	7.6	0.7
61 08SC74-164	766	3.3	0.19
61 08SC74-164	766	3.3	0.19
61 08SC74-107	766	4.4	0.22
61 08SC74-107	766	4.4	0.22
61 08SC74-60	766	4.8	0.23
61 08SC74-60	766	4.8	0.23
121 16	766	7.89	0.26
47 PMOG-441_41-4	767	7.9	0.3
47 PMOG-441_41-4	767	7.9	0.3
61 08SC31-5	767	2.9	0.29
61 08SC31-5	767	2.9	0.29
47 PMOG-441_41-4	768	8.9	0.3
47 PMOG-441_41-4	768	8.9	0.3
61 08SC74-75	768	6.2	0.18
61 08SC74-75	768	6.2	0.18
116 BGS-RT07-32-0	768	6.39	0.38
61 08SC11-70	769	3.8	0.29
61 08SC11-70	769	3.8	0.29
9 09DB100 3	770	5.7	0.2
9 09DB100 3	770	5.7	0.2
61 08SC31-24	770	2.4	0.33
61 08SC31-24	770	2.4	0.33
61 08SC11-64	770	5.4	0.24
61 08SC11-64	770	5.4	0.24
61 08SC31-1	770	5.8	0.16
61 08SC31-1	770	5.8	0.16
116 DA14-140-04	770	5.7	0.54
116 DA14-140-12	770	6.6	0.56
116 DA14-140-30	770	7.12	0.54

116 DA14-140-06	770	7.13	0.52	
116 DA14-140-29	770	7.52	0.54	
116 DA14-140-17	770	7.75	0.52	
116 DA14-140-19	770	10.16	0.54	
116 DA14-140-16	770	10.24	0.55	
61 08SC74-48	771	5.6	0.19	
61 08SC74-48	771	5.6	0.19	
18 ZMB2-anu-zrn-	771.962495	4.89043169	0.5624039	
18 ZMB2-anu-zrn-	771.962495	4.89043169	0.5624039	
19 08LL06 38	772	4.7	0.34	
19 08LL06 38	772	4.7	0.34	
61 08SC31-10	772	2.5	0.19	
61 08SC31-10	772	2.5	0.19	
61 08SC11-57	772	3.7	0.31	
61 08SC11-57	772	3.7	0.31	
61 08SC11-5	772	4.3	0.21	
61 08SC11-5	772	4.3	0.21	
75	8	772	10.68	0.3
106 10GD48-79	772	8.95	0.27	
18 NIL-anu-zrn-l	772.31149	6.89992482	0.56753864	
18 NIL-anu-zrn-l	772.31149	6.89992482	0.56753864	
61 08SC31-11	773	2.3	0.25	
61 08SC31-11	773	2.3	0.25	
61 08SC31-15	773	3	0.22	
61 08SC31-15	773	3	0.22	
61 08SC74-39	773	6.1	0.22	
61 08SC74-39	773	6.1	0.22	
61 08SC07-47	773	6.1	0.26	
61 08SC07-47	773	6.1	0.26	
61 08SC11-20	774	2.1	0.2	
61 08SC11-20	774	2.1	0.2	
61 08SC31-7	774	2.1	0.25	
61 08SC31-7	774	2.1	0.25	
61 08SC31-6	774	3.1	0.2	
61 08SC31-6	774	3.1	0.2	
106 10GD48-110	774	6.79	0.26	
116 BGS-WB1451-1'	774	1.69	0.13	
116 BGS-WB1451-18	774	3.87	0.15	
116 BGS-WB1451-04	774	3.9	0.14	
116 BGS-WB1451-15	774	3.95	0.17	
116 BGS-WB1451-11	774	4.58	0.14	
116 BGS-WB1451-09	774	5.2	0.14	
116 DA14-146-07	774	5.7	0.53	
116 DA14-146-24	774	6.37	0.54	
116 DA14-146-03	774	6.45	0.55	

116 DA14-146-04	774	6.47	0.57
116 DA14-146-14	774	7.08	0.52
116 DA14-146-10	774	7.33	0.55
116 DA14-146-15	774	7.45	0.54
119 51.1	774	8	0.5557
18 ZMB2-anu-zrn-	775.515803	4.02751016	0.55798595
18 ZMB2-anu-zrn-	775.515803	4.02751016	0.55798595
61 08SC74-54	776	4.7	0.21
61 08SC74-54	776	4.7	0.21
61 08SC11-55	776	4.8	0.32
61 08SC11-55	776	4.8	0.32
122 n4733-29	776.2	8.86	0.14
47 PMOG-441_41-:	777	8.6	0.3
47 PMOG-441_41-:	777	8.6	0.3
47 PMOG-441_41-:	777	8.9	0.3
47 PMOG-441_41-:	777	8.9	0.3
61 08SC11-19	777	3.7	0.23
61 08SC11-19	777	3.7	0.23
61 08SC74-11	777	4.9	0.27
61 08SC74-11	777	4.9	0.27
61 08SC11-51	778	3.3	0.31
61 08SC11-51	778	3.3	0.31
61 08SC74-1	778	4.5	0.22
61 08SC74-1	778	4.5	0.22
61 08SC74-36	778	6.1	0.17
61 08SC74-36	778	6.1	0.17
47 PMOG-441_41-:	779	5	0.3
47 PMOG-441_41-:	779	5	0.3
61 08SC31-19	779	2.5	0.14
61 08SC31-19	779	2.5	0.14
61 08SC74-5	779	4.4	0.2
61 08SC74-5	779	4.4	0.2
61 08SC74-35	779	5.1	0.23
61 08SC74-35	779	5.1	0.23
61 08SC11-54	779	6.2	0.27
61 08SC11-54	779	6.2	0.27
61 08SC74-30	779	7.1	0.26
61 08SC74-30	779	7.1	0.26
61 08SC74-167	780	3.6	0.21
61 08SC74-167	780	3.6	0.21
61 08SC74-138	780	3.7	0.21
61 08SC74-138	780	3.7	0.21
61 08SC74-46	780	3.8	0.28
61 08SC74-46	780	3.8	0.28
61 08SC11-34	780	4.8	0.21

61 08SC11-34	780	4.8	0.21
61 08SC74-23	780	7.3	0.19
61 08SC74-23	780	7.3	0.19
61 08SC11-48	780	10	0.26
61 08SC11-48	780	10	0.26
66 YE-8	780	6.67	0.1
66 YE-9	780	7.09	0.1
66 YE-2	780	8.03	0.01
66 YE-12	780	8.08	0.1
66 YE-21	780	8.09	0.02
66 YE-14	780	8.32	0.04
116 DA13-055-33	780	4.38	0.33
116 DA13-055-32	780	5.21	0.16
116 DA13-055-31	780	5.39	0.17
116 DA13-055-36	780	5.52	0.13
116 DA13-055-40	780	5.54	0.16
116 DA13-055-44	780	5.61	0.15
116 DA13-055-45	780	5.66	0.16
116 DA13-055-35	780	5.67	0.15
116 DA13-055-41	780	5.85	0.16
119 54.1	780	6	0.5115
19 08LL07 42	781	4.8	0.29
19 08LL07 42	781	4.8	0.29
61 08SC11-22	781	2	0.26
61 08SC11-22	781	2	0.26
61 08SC74-98	781	5.2	0.2
61 08SC74-98	781	5.2	0.2
61 08SC74-101	781	5.6	0.18
61 08SC74-101	781	5.6	0.18
61 08SC31-8	782	2.9	0.27
61 08SC31-8	782	2.9	0.27
61 08SC11-23	782	4.3	0.26
61 08SC11-23	782	4.3	0.26
61 08SC11-11	782	5.1	0.31
61 08SC11-11	782	5.1	0.31
61 08SC11-29	782	5.2	0.29
61 08SC11-29	782	5.2	0.29
61 08SC11-50	782	6.2	0.26
61 08SC11-50	782	6.2	0.26
119 9.1	782	10	0.5547
18 CNG2-anu-zrn-	782.673873	5.84047372	0.56411705
18 CNG2-anu-zrn-	782.673873	5.84047372	0.56411705
61 08SC31-4	783	2.6	0.16
61 08SC31-4	783	2.6	0.16
61 08SC11-41	783	2.7	0.2

61 08SC11-41	783	2.7	0.2
61 08SC11-75	783	4.7	0.21
61 08SC11-75	783	4.7	0.21
61 08SC31-21	784	2.6	0.21
61 08SC31-21	784	2.6	0.21
61 08SC11-73	784	2.8	0.33
61 08SC11-73	784	2.8	0.33
61 08SC74-170	784	2.9	0.2
61 08SC74-170	784	2.9	0.2
61 08SC74-13	784	5	0.2
61 08SC74-13	784	5	0.2
61 08SC11-77	785	2.9	0.25
61 08SC11-77	785	2.9	0.25
61 08SC11-76	785	3.3	0.32
61 08SC11-76	785	3.3	0.32
61 08SC11-66	785	3.8	0.24
61 08SC11-66	785	3.8	0.24
61 08SC74-104	785	4.2	0.2
61 08SC74-104	785	4.2	0.2
61 08SC74-47	785	5.1	0.25
61 08SC74-47	785	5.1	0.25
61 08SC74-53	785	10	0.2
61 08SC74-53	785	10	0.2
119 7.1	785	1	0.5217
122 n4733-7x	785.7	8.76	0.14
61 08SC74-82	786	3.8	0.17
61 08SC74-82	786	3.8	0.17
61 08SC74-8	786	4.6	0.25
61 08SC74-8	786	4.6	0.25
122 n4737-18	786.3	8.61	0.16
19 08LL07 30	787	6.28	0.2
19 08LL07 30	787	6.28	0.2
37 07SC65@62	787	6.02	0.51
37 07SC65@62	787	6.02	0.51
47 PMOG-441_41-	787	7.7	0.3
47 PMOG-441_41-	787	7.7	0.3
61 08SC11-24	788	2.2	0.26
61 08SC11-24	788	2.2	0.26
61 08SC11-80	788	4.3	0.15
61 08SC11-80	788	4.3	0.15
122 n4737-17	788.3	8.14	0.14
10 2436-08	789	6.9	0.4
10 2436-08	789	6.9	0.4
61 08SC74-42	789	4.6	0.19
61 08SC74-42	789	4.6	0.19

61 08SC74-61	789	4.8	0.18
61 08SC74-61	789	4.8	0.18
61 08SC74-34	789	4.8	0.2
61 08SC74-34	789	4.8	0.2
61 08SC07-28	789	6.1	0.23
61 08SC07-28	789	6.1	0.23
61 08SC74-44	789	8.6	0.25
61 08SC74-44	789	8.6	0.25
61 08SC74-49	789	9.7	0.24
61 08SC74-49	789	9.7	0.24
106 10GD48-102	789	7.05	0.33
122 n4733-25	790.4	9.02	0.16
61 08SC11-45	791	5.8	0.16
61 08SC11-45	791	5.8	0.16
61 08SC11-42	791	5.8	0.23
61 08SC11-42	791	5.8	0.23
106 10GD48-104	791	7.58	0.26
106 10GD48-97	791	9.84	0.25
116 DA13-065-13	791	4.61	0.13
116 DA13-065-21	791	4.69	0.19
116 DA13-065-16	791	4.93	0.15
116 DA13-065-23	791	5.09	0.16
116 DA13-065-20	791	5.33	0.15
61 08SC11-59	792	4.3	0.33
61 08SC11-59	792	4.3	0.33
61 08SC74-32	792	4.7	0.14
61 08SC74-32	792	4.7	0.14
61 08SC31-20	792	6.6	0.16
61 08SC31-20	792	6.6	0.16
47 PMOG_P-69.1	793	7.6	0.7
47 PMOG_P-69.1	793	7.6	0.7
61 08SC31-22	793	2.9	0.23
61 08SC31-22	793	2.9	0.23
61 08SC74-124	793	4.1	0.22
61 08SC74-124	793	4.1	0.22
61 08SC74-16	793	4.2	0.24
61 08SC74-16	793	4.2	0.24
61 08SC11-60	793	5.8	0.22
61 08SC11-60	793	5.8	0.22
116 BGS-WB005-13	793	2.75	0.23
116 BGS-WB005-14	793	3.64	0.21
116 BGS-WB005-08	793	3.65	0.28
116 BGS-WB005-01	793	3.66	0.14
116 BGS-WB005-04	793	4.04	0.17
116 BGS-WB005-09	793	4.11	0.22

61 08SC74-182	794	4.1	0.21
61 08SC74-182	794	4.1	0.21
61 08SC11-3	794	6.7	0.3
61 08SC11-3	794	6.7	0.3
122 n4737-12c	794.5	4.87	0.15
122 n4733-11	794.6	9.64	0.16
122 n4733-30	794.7	8.7	0.14
10 2436-52	795	6.1	0.3
10 2436-52	795	6.1	0.3
61 08SC74-9	795	3.9	0.17
61 08SC74-9	795	3.9	0.17
61 08SC74-151	795	4.2	0.23
61 08SC74-151	795	4.2	0.23
61 08SC74-69	795	5.2	0.2
61 08SC74-69	795	5.2	0.2
116 DA13-083-53	795	5.36	0.3
116 DA13-083-72	795	5.42	0.32
116 DA13-083-55	795	5.86	0.29
116 DA13-083-52	795	5.94	0.29
116 DA13-083-57	795	6.12	0.31
116 DA13-083-59	795	6.15	0.29
116 DA13-083-48	795	6.19	0.29
116 DA13-083-51	795	6.22	0.31
116 DA13-083-56	795	6.28	0.3
116 DA13-083-73	795	6.34	0.34
116 DA13-083-49	795	6.43	0.29
116 DA13-083-68	795	6.5	0.29
116 DA13-083-66	795	6.75	0.29
19 08LL07 7	796	5.18	0.34
19 08LL07 7	796	5.18	0.34
47 PMOG-441_41-4	796	8.3	0.3
47 PMOG-441_41-4	796	8.3	0.3
61 08SC11-25	796	2.3	0.19
61 08SC11-25	796	2.3	0.19
61 08SC74-157	796	3.4	0.2
61 08SC74-157	796	3.4	0.2
61 08SC74-130	796	4.7	0.23
61 08SC74-130	796	4.7	0.23
61 08SC11-56	796	5.2	0.23
61 08SC11-56	796	5.2	0.23
61 08SC07-34	796	5.4	0.19
61 08SC07-34	796	5.4	0.19
61 08SC11-36	796	6.4	0.3
61 08SC11-36	796	6.4	0.3
116 BGS-RK06-349	796	4.79	0.13

116 BGS-RK06-349-	796	5.08	0.17
116 BGS-RK06-349-	796	5.37	0.16
116 BGS-RK06-349-	796	5.37	0.17
47 PMOG_P-11.1	797	7.4	0.6
47 PMOG_P-11.1	797	7.4	0.6
61 08SC07-42	797	4.9	0.34
61 08SC07-42	797	4.9	0.34
61 08SC07-39	797	6.1	0.24
61 08SC07-39	797	6.1	0.24
61 08SC74-105	798	3.9	0.26
61 08SC74-105	798	3.9	0.26
61 08SC74-160	798	4.7	0.3
61 08SC74-160	798	4.7	0.3
61 08SC74-94	798	4.8	0.21
61 08SC74-94	798	4.8	0.21
61 08SC07-27	798	5	0.19
61 08SC07-27	798	5	0.19
61 08SC74-70	798	5.7	0.32
61 08SC74-70	798	5.7	0.32
61 08SC74-89	798	7.9	0.24
61 08SC74-89	798	7.9	0.24
116 DA13-063-15	798	1.91	0.2
116 DA13-063-14	798	4.2	0.16
116 DA13-063-08	798	4.8	0.15
116 DA13-063-13	798	5.25	0.13
116 DA13-063-07	798	5.31	0.17
116 DA13-063-05	798	5.36	0.17
116 DA13-063-11	798	5.95	0.15
61 08SC74-173	799	4.6	0.29
61 08SC74-173	799	4.6	0.29
61 08SC07-48	799	4.9	0.26
61 08SC07-48	799	4.9	0.26
61 08SC74-95	799	5.1	0.18
61 08SC74-95	799	5.1	0.18
106 10GD48-71	799	7.29	0.3
36 HF-2.9@16	800	5.3	0.34
36 HF-2.9@16	800	5.3	0.34
36 HF-2.9@32	800	5.7	0.25
36 HF-2.9@32	800	5.7	0.25
36 HF-2.9@5	800	5.98	0.24
36 HF-2.9@5	800	5.98	0.24
36 HF-2.9@14	800	6.08	0.28
36 HF-2.9@14	800	6.08	0.28
36 HF-2.9@33	800	6.1	0.4
36 HF-2.9@33	800	6.1	0.4

36 HF-2. 9@31	800	6. 17	0. 3
36 HF-2. 9@31	800	6. 17	0. 3
36 HF-2. 9@7	800	6. 22	0. 31
36 HF-2. 9@7	800	6. 22	0. 31
36 HF-2. 9@12	800	6. 29	0. 37
36 HF-2. 9@12	800	6. 29	0. 37
36 HF-2. 9@29	800	6. 37	0. 21
36 HF-2. 9@29	800	6. 37	0. 21
36 HF-2. 9@1	800	6. 38	0. 28
36 HF-2. 9@1	800	6. 38	0. 28
36 HF-2. 9@19	800	6. 46	0. 3
36 HF-2. 9@19	800	6. 46	0. 3
36 HF-2. 9@10	800	6. 53	0. 32
36 HF-2. 9@10	800	6. 53	0. 32
36 HF-2. 9@26	800	6. 6	0. 21
36 HF-2. 9@26	800	6. 6	0. 21
36 HF-2. 9@2	800	6. 67	0. 29
36 HF-2. 9@2	800	6. 67	0. 29
36 HF-2. 9@34	800	6. 74	0. 26
36 HF-2. 9@34	800	6. 74	0. 26
36 HF-2. 9@13	800	6. 76	0. 24
36 HF-2. 9@13	800	6. 76	0. 24
36 HF-2. 9@8	800	6. 81	0. 54
36 HF-2. 9@8	800	6. 81	0. 54
36 HF-2. 9@35	800	6. 83	0. 35
36 HF-2. 9@35	800	6. 83	0. 35
36 HF-2. 9@27	800	6. 84	0. 36
36 HF-2. 9@27	800	6. 84	0. 36
36 HF-2. 9@17	800	6. 86	0. 4
36 HF-2. 9@17	800	6. 86	0. 4
36 HF-2. 9@23	800	6. 88	0. 32
36 HF-2. 9@23	800	6. 88	0. 32
36 HF-2. 9@22	800	6. 91	0. 33
36 HF-2. 9@22	800	6. 91	0. 33
36 HF-2. 9@30	800	6. 97	0. 22
36 HF-2. 9@30	800	6. 97	0. 22
36 HF-2. 9@21	800	6. 97	0. 39
36 HF-2. 9@21	800	6. 97	0. 39
36 HF-2. 9@15	800	6. 98	0. 37
36 HF-2. 9@9	800	6. 98	0. 37
36 HF-2. 9@15	800	6. 98	0. 37
36 HF-2. 9@9	800	6. 98	0. 37
36 HF-2. 9@28	800	6. 98	0. 41
36 HF-2. 9@28	800	6. 98	0. 41
36 HF-2. 9@24	800	7	0. 36

36 HF-2. 9@24	800	7	0.36
36 HF-2. 9@25	800	7.03	0.38
36 HF-2. 9@25	800	7.03	0.38
36 HF-2. 9@20	800	7.07	0.43
36 HF-2. 9@20	800	7.07	0.43
36 HF-2. 9@4	800	7.27	0.43
36 HF-2. 9@4	800	7.27	0.43
36 HF-2. 9@3	800	7.3	0.45
36 HF-2. 9@3	800	7.3	0.45
36 HF-2. 9@11	800	7.39	0.38
36 HF-2. 9@11	800	7.39	0.38
36 HF-2. 9@18	800	7.91	0.29
36 HF-2. 9@18	800	7.91	0.29
36 HF-2. 9@6	800	9.64	0.32
36 HF-2. 9@6	800	9.64	0.32
61 08SC74-154	800	2.3	0.24
61 08SC74-154	800	2.3	0.24
61 08SC74-15	800	6.5	0.22
61 08SC74-15	800	6.5	0.22
61 08SC11-39	800	6.8	0.21
61 08SC11-39	800	6.8	0.21
18 NIL-anu-zrn-l	800.623698	5.79096695	0.5793387
18 NIL-anu-zrn-l	800.623698	5.79096695	0.5793387
61 08SC07-40	801	4.3	0.27
61 08SC07-40	801	4.3	0.27
61 08SC74-10	801	7.7	0.2
61 08SC74-10	801	7.7	0.2
61 08SC74-112	801	10	0.19
61 08SC74-112	801	10	0.19
18 NIL-anu-zrn-l	801.597754	6.53952231	0.93635972
18 NIL-anu-zrn-l	801.597754	6.53952231	0.93635972
61 08SC07-25	802	4.7	0.23
61 08SC07-25	802	4.7	0.23
61 08SC07-11	802	5.5	0.26
61 08SC07-11	802	5.5	0.26
61 08SC74-19	802	9.9	0.21
61 08SC74-19	802	9.9	0.21
18 NIL-anu-zrn-l	802.552927	5.47984695	0.55122806
18 NIL-anu-zrn-l	802.552927	5.47984695	0.55122806
61 08SC74-172	803	4.5	0.31
61 08SC74-172	803	4.5	0.31
61 08SC07-41	803	4.9	0.22
61 08SC07-41	803	4.9	0.22
61 08SC74-85	803	5	0.21
61 08SC74-85	803	5	0.21

61 08SC74-79	803	5.2	0.2
61 08SC74-79	803	5.2	0.2
122 n4733-16c	803.2	7.75	0.15
18 ZMB2-anu-zrn-	803.703206	6.72645594	0.56078714
18 ZMB2-anu-zrn-	803.703206	6.72645594	0.56078714
61 08SC07-56	804	4.2	0.2
61 08SC07-56	804	4.2	0.2
61 08SC74-141	804	4.2	0.26
61 08SC74-141	804	4.2	0.26
61 08SC07-9	804	5	0.24
61 08SC07-9	804	5	0.24
61 08SC11-26	804	5.1	0.28
61 08SC11-26	804	5.1	0.28
61 08SC07-23	804	7.7	0.24
61 08SC07-23	804	7.7	0.24
61 08SC74-76	804	9.3	0.26
61 08SC74-76	804	9.3	0.26
18 NIL-anu-zrn-l	804.332708	5.70540586	0.55205601
18 NIL-anu-zrn-l	804.332708	5.70540586	0.55205601
61 08SC74-158	805	4.9	0.32
61 08SC74-158	805	4.9	0.32
61 08SC07-33	805	5.1	0.28
61 08SC07-33	805	5.1	0.28
61 08SC74-92	805	5.2	0.1
61 08SC74-92	805	5.2	0.1
61 08SC74-72	805	5.2	0.29
61 08SC74-72	805	5.2	0.29
61 08SC74-2	805	5.3	0.22
61 08SC74-2	805	5.3	0.22
61 08SC07-18	805	5.8	0.2
61 08SC07-18	805	5.8	0.2
61 08SC07-54	805	6.4	0.3
61 08SC07-54	805	6.4	0.3
61 08SC74-55	805	8.8	0.24
61 08SC74-55	805	8.8	0.24
106 10GD48-47	805	5.82	0.26
47 PMOG-441_41-:	806	8.3	0.3
47 PMOG-441_41-:	806	8.3	0.3
61 08SC07-51	806	4.9	0.25
61 08SC07-51	806	4.9	0.25
61 08SC07-35	806	5	0.28
61 08SC07-35	806	5	0.28
61 08SC74-31	806	6.9	0.22
61 08SC74-31	806	6.9	0.22
61 08SC74-28	806	7.2	0.17

61 08SC74-28	806	7.2	0.17	
61 08SC74-59	806	8.3	0.18	
61 08SC74-59	806	8.3	0.18	
18 ZMB2-anu-zrn-	806.355133	5.54883742	0.55561797	
18 ZMB2-anu-zrn-	806.355133	5.54883742	0.55561797	
61 08SC07-24	807	4.2	0.3	
61 08SC07-24	807	4.2	0.3	
61 08SC74-40	807	10.7	0.19	
61 08SC74-40	807	10.7	0.19	
75	9	807	5.76	0.39
61 08SC07-36	808	4.1	0.25	
61 08SC07-36	808	4.1	0.25	
61 08SC07-12	808	4.5	0.21	
61 08SC07-12	808	4.5	0.21	
61 08SC11-65	808	4.9	0.23	
61 08SC11-65	808	4.9	0.23	
61 08SC74-131	808	5.3	0.22	
61 08SC74-131	808	5.3	0.22	
61 08SC11-61	808	5.4	0.17	
61 08SC11-61	808	5.4	0.17	
61 08SC07-6	808	5.4	0.27	
61 08SC07-6	808	5.4	0.27	
61 08SC74-90	808	7.1	0.19	
61 08SC74-90	808	7.1	0.19	
61 08SC07-13	809	4.2	0.31	
61 08SC07-13	809	4.2	0.31	
61 08SC74-68	809	4.7	0.28	
61 08SC74-68	809	4.7	0.28	
61 08SC07-58	809	5.6	0.26	
61 08SC07-58	809	5.6	0.26	
61 08SC11-37	809	6	0.16	
61 08SC11-37	809	6	0.16	
61 08SC07-53	810	4.7	0.27	
61 08SC07-53	810	4.7	0.27	
18 ORG2-anu-zrn-	810.014148	9.65438459	0.93009253	
18 ORG2-anu-zrn-	810.014148	9.65438459	0.93009253	
61 08SC74-120	811	4.1	0.19	
61 08SC74-120	811	4.1	0.19	
61 08SC74-113	811	4.1	0.24	
61 08SC74-113	811	4.1	0.24	
61 08SC07-4	811	4.5	0.17	
61 08SC07-4	811	4.5	0.17	
61 08SC07-26	811	5.6	0.26	
61 08SC07-26	811	5.6	0.26	
61 08SC07-37	811	6	0.31	

61 08SC07-37	811	6	0.31
61 08SC74-45	811	6.9	0.23
61 08SC74-45	811	6.9	0.23
61 08SC74-64	811	9.3	0.21
61 08SC74-64	811	9.3	0.21
61 08SC07-44	812	4.5	0.35
61 08SC07-44	812	4.5	0.35
61 08SC74-135	812	5.7	0.22
61 08SC74-135	812	5.7	0.22
61 08SC74-52	812	7.2	0.24
61 08SC74-52	812	7.2	0.24
18 NIL-anu-zrn-l	812.144499	5.99924437	1.01560957
18 NIL-anu-zrn-l	812.144499	5.99924437	1.01560957
61 08SC07-20	813	5	0.2
61 08SC07-20	813	5	0.2
61 08SC74-180	813	5	0.23
61 08SC74-180	813	5	0.23
61 08SC74-83	813	5.2	0.23
61 08SC74-83	813	5.2	0.23
61 08SC07-46	813	5.7	0.21
61 08SC07-46	813	5.7	0.21
61 08SC11-14	813	6.5	0.18
61 08SC11-14	813	6.5	0.18
116 DA13-076-53	813	8.4	0.29
116 DA13-076-60	813	8.57	0.29
116 DA13-076-72	813	8.64	0.38
116 DA13-076-55	813	8.67	0.29
116 DA13-076-56	813	8.76	0.3
116 DA13-076-69	813	8.81	0.31
116 DA13-076-70	813	8.83	0.29
116 DA13-076-68	813	8.91	0.31
116 DA13-076-59	813	8.94	0.28
116 DA13-076-48	813	9.17	0.29
116 DA13-076-47	813	9.18	0.35
116 DA13-076-49	813	9.18	0.36
116 DA13-076-73	813	9.2	0.3
116 DA13-076-75	813	9.33	0.29
116 DA13-076-51	813	9.35	0.29
116 DA13-076-62	813	9.42	0.29
116 DA13-076-61	813	9.43	0.31
116 DA13-076-58	813	9.45	0.3
116 DA13-076-50	813	9.49	0.4
116 DA13-076-74	813	9.55	0.31
116 DA13-076-52	813	9.56	0.3
116 DA13-076-46	813	9.64	0.31

116 DA13-076-67	813	9.75	0.3
61 08SC07-15	814	5.9	0.23
61 08SC07-15	814	5.9	0.23
61 08SC07-29	814	6.5	0.21
61 08SC07-29	814	6.5	0.21
106 10GD48-106	814	5.89	0.38
116 BGS-RK395-20	814	4.23	0.16
116 BGS-RK395-08	814	5.76	0.15
116 BGS-RK395-05	814	6.07	0.16
116 BGS-RK395-21	814	6.24	0.14
116 BGS-RK395-16	814	6.29	0.15
116 BGS-RK395-06	814	7.06	0.44
116 BGS-RK395-17	814	7.1	0.18
119 14.1	814	9	0.3343
61 08SC07-50	815	4.2	0.23
61 08SC07-50	815	4.2	0.23
61 08SC74-134	815	4.3	0.26
61 08SC74-134	815	4.3	0.26
61 08SC74-142	815	4.5	0.24
61 08SC74-142	815	4.5	0.24
61 08SC74-67	815	8.4	0.27
61 08SC74-67	815	8.4	0.27
106 10GD49-28	815	7.7	0.36
18 NIL-anu-zrn-l	815.64344	6.21458237	0.56118853
18 NIL-anu-zrn-l	815.64344	6.21458237	0.56118853
61 08SC74-163	816	5.9	0.27
61 08SC74-163	816	5.9	0.27
61 08SC07-16	816	7	0.18
61 08SC07-16	816	7	0.18
61 08SC74-74	816	10.1	0.22
61 08SC74-74	816	10.1	0.22
19 08LL07 29	818	5.29	0.25
19 08LL07 29	818	5.29	0.25
47 PMOG-441_41-!	818	8.2	0.3
47 PMOG-441_41-!	818	8.2	0.3
61 08SC74-106	818	4.5	0.19
61 08SC74-106	818	4.5	0.19
61 08SC74-181	818	4.5	0.21
61 08SC74-181	818	4.5	0.21
61 08SC11-58	818	6.2	0.32
61 08SC11-58	818	6.2	0.32
61 08SC11-31	818	7.9	0.27
61 08SC11-31	818	7.9	0.27
61 08SC74-109	818	12.2	0.23
61 08SC74-109	818	12.2	0.23

18 ZMB2-anu-zrn-	818.62235	4.32497986	0.5615994
18 ZMB2-anu-zrn-	818.62235	4.32497986	0.5615994
116 DA13-064-20	819	4.11	0.17
116 DA13-064-60	819	4.5	0.15
116 DA13-064-22	819	4.51	0.31
116 DA13-064-53	819	4.7	0.2
116 DA13-064-30	819	4.74	0.16
116 DA13-064-11	819	5.03	0.14
116 BGS-PP156-06 ₁	819	6.18	0.33
116 BGS-PP156-18 ₁	819	7.71	0.34
116 BGS-PP156-03 ₁	819	8	0.35
116 BGS-PP156-04 ₁	819	8.92	0.34
116 BGS-PP156-12	819	9.43	0.36
61 08SC74-50	820	9.7	0.21
61 08SC74-50	820	9.7	0.21
61 08SC74-139	820	10.8	0.22
61 08SC74-139	820	10.8	0.22
61 08SC74-4	821	8.3	0.21
61 08SC74-4	821	8.3	0.21
106 10GD49-69	821	11.64	0.31
116 DA13-074-69	821	9.41	0.29
116 DA13-074-43	821	9.46	0.29
116 DA13-074-48	821	9.54	0.29
116 DA13-074-49	821	9.6	0.29
116 DA13-074-62	821	9.65	0.31
116 DA13-074-56	821	9.65	0.36
116 DA13-074-52	821	9.67	0.28
116 DA13-074-45	821	9.67	0.29
116 DA13-074-47	821	9.71	0.35
116 DA13-074-58	821	9.72	0.28
116 DA13-074-41	821	9.79	0.31
116 DA13-074-55	821	9.84	0.28
116 DA13-074-63	821	10.06	0.31
116 DA13-074-53	821	10.22	0.31
116 DA13-074-65	821	10.24	0.29
61 08SC07-52	822	6	0.29
61 08SC07-52	822	6	0.29
61 08SC74-119	823	4.5	0.26
61 08SC74-119	823	4.5	0.26
61 08SC74-126	823	5.6	0.21
61 08SC74-126	823	5.6	0.21
61 08SC07-45	823	5.7	0.22
61 08SC07-45	823	5.7	0.22
61 08SC07-17	823	5.9	0.2
61 08SC07-17	823	5.9	0.2

61 08SC74-136	823	6	0.27
61 08SC74-136	823	6	0.27
116 DA13-017-26	823	4.46	0.25
116 DA13-017-10	823	4.54	0.25
116 DA13-017-25	823	5.3	0.25
116 DA13-017-28	823	5.89	0.25
116 DA13-017-44	823	6	0.25
116 DA13-017-34	823	6.33	0.25
116 DA13-017-75	823	6.44	0.25
116 DA13-017-32	823	6.63	0.24
116 DA13-017-06	823	6.92	0.25
116 DA13-017-22	823	7.04	0.25
116 DA13-017-05	823	7.24	0.24
116 DA13-017-49	823	7.24	0.25
116 DA13-017-12	823	8.33	0.25
61 08SC07-31	824	3.9	0.25
61 08SC07-31	824	3.9	0.25
61 08SC74-121	824	5	0.31
61 08SC74-121	824	5	0.31
61 08SC74-161	824	5.1	0.27
61 08SC74-161	824	5.1	0.27
61 08SC07-55	824	5.8	0.26
61 08SC07-55	824	5.8	0.26
61 08SC74-86	824	10.3	0.24
61 08SC74-86	824	10.3	0.24
106 10GD49-48	824	6.18	0.17
106 10GD48-40	824	8.39	0.28
116 DA14-133-24	824	5.16	0.55
116 DA14-133-23	824	5.52	0.54
116 DA14-133-19	824	5.56	0.55
116 DA14-133-05	824	5.67	0.55
116 DA14-133-11	824	6	0.56
116 DA14-133-25	824	6.17	0.55
116 DA14-133-04	824	6.38	0.54
116 DA14-133-17	824	6.41	0.54
61 08SC07-14	825	4.1	0.2
61 08SC07-14	825	4.1	0.2
61 08SC74-125	825	5	0.24
61 08SC74-125	825	5	0.24
61 08SC74-175	825	5.2	0.32
61 08SC74-175	825	5.2	0.32
61 08SC74-7	825	5.5	0.17
61 08SC74-7	825	5.5	0.17
18 CNG2-anu-zrn-	825.492348	4.92987636	0.58143783
18 CNG2-anu-zrn-	825.492348	4.92987636	0.58143783

61 08SC74-56	827	10	0.18	
61 08SC74-56	827	10	0.18	
75	29	827	8.63	0.34
116 DA13-049-22	827	6.04	0.17	
116 DA13-049-24	827	7.02	0.15	
116 DA13-049-25	827	7.03	0.18	
116 DA13-049-27	827	7.45	0.16	
116 DA13-029-53	828	6.4	0.21	
116 DA13-029-58	828	6.84	0.15	
116 DA13-029-56	828	6.93	0.14	
116 DA13-029-60	828	7.03	0.19	
116 DA13-029-51	828	7.2	0.17	
116 DA13-029-52	828	7.48	0.17	
61 08SC74-146	829	4.6	0.23	
61 08SC74-146	829	4.6	0.23	
61 08SC07-38	829	6.9	0.26	
61 08SC07-38	829	6.9	0.26	
61 08SC74-29	829	9.2	0.23	
61 08SC74-29	829	9.2	0.23	
47 PMOG_P-58.1	830	8.2	1	
47 PMOG_P-58.1	830	8.2	1	
61 08SC74-171	830	2.7	0.27	
61 08SC74-171	830	2.7	0.27	
61 08SC07-10	830	4.6	0.16	
61 08SC07-10	830	4.6	0.16	
61 08SC74-150	830	5.4	0.26	
61 08SC74-150	830	5.4	0.26	
61 08SC74-37	830	6.5	0.19	
61 08SC74-37	830	6.5	0.19	
61 08SC11-13	830	9.2	0.2	
61 08SC11-13	830	9.2	0.2	
61 08SC74-73	830	9.4	0.2	
61 08SC74-73	830	9.4	0.2	
109 03HN64	830	4.86		
18 NIL-anu-zrn-l	830.149308	4.25179659	0.96821097	
18 NIL-anu-zrn-l	830.149308	4.25179659	0.96821097	
47 PMOG_P-22.1	832	7.9	0.7	
47 PMOG_P-22.1	832	7.9	0.7	
61 08SC07-3	833	2.4	0.39	
61 08SC07-3	833	2.4	0.39	
61 08SC74-91	833	3.9	0.17	
61 08SC74-91	833	3.9	0.17	
106 10GD49-103	833	6.52	0.27	
61 08SC74-152	834	5.5	0.28	
61 08SC74-152	834	5.5	0.28	

106 10GD49-97	834	7.78	0.22
106 10GD49-6	834	7.93	0.23
18 ZMB2-anu-zrn-	834.657842	5.70313718	1.00415351
18 ZMB2-anu-zrn-	834.657842	5.70313718	1.00415351
61 08SC74-140	835	3.7	0.18
61 08SC74-140	835	3.7	0.18
47 PMOG_P-54.1	836	5.4	0.6
47 PMOG_P-54.1	836	5.4	0.6
61 08SC07-5	837	7.7	0.23
61 08SC07-5	837	7.7	0.23
61 08SC07-49	837	9	0.29
61 08SC07-49	837	9	0.29
116 DA13-077-47	837	3.23	0.3
116 DA13-077-45	837	3.67	0.29
116 DA13-077-44	837	4.1	0.3
116 DA13-077-43	837	4.2	0.3
116 DA13-077-10	837	4.23	0.28
116 DA13-077-39	837	4.35	0.29
116 DA13-077-60	837	4.64	0.29
116 DA13-077-04	837	5.23	0.3
18 NGR1-anu-zrn-	837.615043	7.12222681	0.5926298
18 NGR1-anu-zrn-	837.615043	7.12222681	0.5926298
37 07SC49@89	838	10.31	0.31
37 07SC49@89	838	10.31	0.31
61 08SC11-38	838	5.3	0.2
61 08SC11-38	838	5.3	0.2
61 08SC07-19	838	9.3	0.25
61 08SC07-19	838	9.3	0.25
106 10GD48-62	839	5.98	0.26
61 08SC07-21	841	5.9	0.3
61 08SC07-21	841	5.9	0.3
116 BGS-WB37-05	842	1.95	0.16
116 BGS-WB37-04	842	4.2	0.14
116 BGS-WB37-06	842	5.61	0.21
116 BGS-WB37-08	842	5.68	0.14
116 BGS-WB37-07	842	5.8	0.2
116 BGS-WB37-09	842	6.69	0.32
61 08SC74-129	844	4.3	0.19
61 08SC74-129	844	4.3	0.19
61 08SC74-66	844	9.1	0.19
61 08SC74-66	844	9.1	0.19
61 08SC74-127	845	3.8	0.21
61 08SC74-127	845	3.8	0.21
61 08SC74-145	845	4.2	0.23
61 08SC74-145	845	4.2	0.23

61 08SC74-122	845	4.6	0.17
61 08SC74-122	845	4.6	0.17
61 08SC74-162	845	5	0.29
61 08SC74-162	845	5	0.29
61 08SC07-43	845	6.4	0.25
61 08SC07-43	845	6.4	0.25
61 08SC74-149	847	5.1	0.12
61 08SC74-149	847	5.1	0.12
119 40.1	847	7	0.8049
61 08SC74-179	848	3.9	0.25
61 08SC74-179	848	3.9	0.25
116 DA13-012-81	849	5.79	0.17
116 DA13-012-77	849	5.79	0.28
116 DA13-012-84	849	6.23	0.15
116 DA13-012-88	849	6.31	0.16
116 DA13-012-89	849	6.53	0.16
116 DA13-012-83	849	6.99	0.13
18 NIL-anu-zrn-l	849.941356	5.93173366	0.5943752
18 NIL-anu-zrn-l	849.941356	5.93173366	0.5943752
61 08SC74-108	850	3.7	0.25
61 08SC74-108	850	3.7	0.25
61 08SC74-78	850	6.5	0.22
61 08SC74-78	850	6.5	0.22
18 NIL-anu-zrn-l	851.250189	5.96419352	0.57385544
18 NIL-anu-zrn-l	851.250189	5.96419352	0.57385544
18 CNG2-anu-zrn-	851.582758	6.38425994	0.60809956
18 CNG2-anu-zrn-	851.582758	6.38425994	0.60809956
61 08SC74-165	852	4.3	0.29
61 08SC74-165	852	4.3	0.29
61 08SC11-71	852	5.5	0.21
61 08SC11-71	852	5.5	0.21
106 10GD48-57	852	9.01	0.15
65 BB-81 16	853	7.55	0.28
65 BB-81 16	853	7.55	0.28
61 08SC74-166	857	3.3	0.22
61 08SC74-166	857	3.3	0.22
61 08SC74-169	858	5	0.19
61 08SC74-169	858	5	0.19
51 CS12-17-6	858.061681	6.00514403	0.50485494
51 CS12-17-6	858.061681	6.00514403	0.50485494
61 08SC74-87	859	4.6	0.17
61 08SC74-87	859	4.6	0.17
106 10GD48-67	860	6.34	0.29
106 10GD48-93	860	6.96	0.3
61 08SC07-30	861	4	0.27

61 08SC07-30	861	4	0.27
37 07SC65@58	863	10.68	0.31
37 07SC65@58	863	10.68	0.31
106 10GD49-24	863	8.59	0.25
61 08SC07-7	865	3.4	0.31
61 08SC07-7	865	3.4	0.31
106 10GD48-73	866	7.77	0.25
37 07SC49@49	868	9.66	0.25
37 07SC49@49	868	9.66	0.25
61 08SC31-16	868	2.7	0.25
61 08SC31-16	868	2.7	0.25
119 49.1	868	11	0.5184
61 08SC74-178	870	4.6	0.22
61 08SC74-178	870	4.6	0.22
106 10GD49-59	870	9.02	0.16
61 08SC74-51	872	5.2	0.24
61 08SC74-51	872	5.2	0.24
106 10GD49-65	873	7.92	0.22
61 08SC74-20	874	7.2	0.24
61 08SC74-20	874	7.2	0.24
61 08SC11-30	875	4.4	0.3
61 08SC11-30	875	4.4	0.3
119 16.1	875	5	0.3487
18 CNG2-anu-zrn-	875.383215	5.0410259	0.56433996
18 CNG2-anu-zrn-	875.383215	5.0410259	0.56433996
10 2436-21	876	7.6	0.6
10 2436-21	876	7.6	0.6
121 19	877	6.18	0.22
106 10GD48-94	879	6.27	0.28
119 42.1	879	5.5826	0.401
54 Calen34/11	880	9.74	
54 Calen34/11	880	9.74	
18 CNG2-anu-zrn-	880.564558	10.098769	0.58472926
18 CNG2-anu-zrn-	880.564558	10.098769	0.58472926
18 CNG2-anu-zrn-	880.646651	5.68972857	0.56308661
18 CNG2-anu-zrn-	880.646651	5.68972857	0.56308661
37 07SC49@82	881	7.6	0.45
37 07SC49@82	881	7.6	0.45
61 08SC74-111	881	5.3	0.18
61 08SC74-111	881	5.3	0.18
61 08SC74-81	882	6.5	0.19
61 08SC74-81	882	6.5	0.19
37 07SC65@63	885	7.85	0.39
37 07SC65@63	885	7.85	0.39
106 10GD49-10	891	11.88	0.28

119	40.1	891	10	0.3349
51	CS12-17-7	892.348596	5.25668108	0.38256064
51	CS12-17-7	892.348596	5.25668108	0.38256064
106	10GD48-118	893	5.01	0.22
19	08LL06 48	895	2.49	0.24
19	08LL06 48	895	2.49	0.24
20	HV1.5	896	6.7	0.4
20	HV1.5	896	6.7	0.4
20	HV1.5	896	6.7	0.4
61	08SC07-2	897	5.5	0.23
61	08SC07-2	897	5.5	0.23
8	00W23	900	0.96	
8	00W23	900	0.96	
37	07SC65@29	900	8.6	0.39
37	07SC65@29	900	8.6	0.39
106	10GD49-110	900	8.03	0.28
10	2436-05	902	7.1	0.4
10	2436-05	902	7.1	0.4
18	NIL-anu-zrn-l	905.596509	6.20017601	0.56494957
18	NIL-anu-zrn-l	905.596509	6.20017601	0.56494957
121	22	906	7.23	0.20
19	08LL07 63	907	5.44	0.32
19	08LL07 63	907	5.44	0.32
61	08SC74-33	908	7.4	0.2
61	08SC74-33	908	7.4	0.2
119	31.1	909	3	0.585
47	PMOG_P-10.1	910	8.4	0.6
47	PMOG_P-10.1	910	8.4	0.6
106	10GD49-41	910	9.17	0.33
18	NIL-anu-zrn-l	912.293905	5.84319453	0.94508121
18	NIL-anu-zrn-l	912.293905	5.84319453	0.94508121
18	ZMB2-anu-zrn-	913.018916	7.44015192	0.59228864
18	ZMB2-anu-zrn-	913.018916	7.44015192	0.59228864
18	ORG2-anu-zrn-	917.493568	1.76092004	0.73902247
18	ORG2-anu-zrn-	917.493568	1.76092004	0.73902247
51	CS12-23-5	917.95282	6.3611261	0.52787258
51	CS12-23-5	917.95282	6.3611261	0.52787258
51	CS12-17-25	918.727638	6.75025784	0.53582483
51	CS12-17-25	918.727638	6.75025784	0.53582483
106	10GD49-54	919	5.22	0.2
106	10GD48-119	919	7.83	0.28
18	CNG2-anu-zrn-	919.101579	5.80546533	0.56694453
18	CNG2-anu-zrn-	919.101579	5.80546533	0.56694453
37	07SC49@15	920	9.12	0.43
37	07SC49@15	920	9.12	0.43

106 10GD49-45	920	9.82	0.15
106 10GD48-59	921	6.73	0.27
119 38.1	921	8	0.5083
18 NIL-anu-zrn-l	921.277346	6.10911208	0.5977839
18 NIL-anu-zrn-l	921.277346	6.10911208	0.5977839
10 1774-40	922	8.9	0.5
10 1774-40	922	8.9	0.5
106 10GD48-56	922	7	0.26
106 10GD48-116	922	7.87	0.19
51 CS12-17-12	922.620276	8.84727137	0.75410762
51 CS12-17-12	922.620276	8.84727137	0.75410762
18 ORG2-anu-zrn-	923.175166	7.42488638	0.55004429
18 ORG2-anu-zrn-	923.175166	7.42488638	0.55004429
51 CS12-17-23	923.300272	6.52611568	0.63196388
51 CS12-17-23	923.300272	6.52611568	0.63196388
106 10GD49-20	924	7.53	0.27
106 10GD49-72	925	11.6	0.34
18 NGR1-anu-zrn-	925.162269	5.61696052	0.59461053
18 NGR1-anu-zrn-	925.162269	5.61696052	0.59461053
18 NGR1-anu-zrn-	925.349223	5.98864375	0.61384588
18 NGR1-anu-zrn-	925.349223	5.98864375	0.61384588
10 2641-62	926	7	0.3
10 2641-62	926	7	0.3
18 ZMB2-anu-zrn-	926.068703	7.37382489	0.60189884
18 ZMB2-anu-zrn-	926.068703	7.37382489	0.60189884
51 CS11-1-26	928.374414	9.62335735	0.71625217
51 CS11-1-26	928.374414	9.62335735	0.71625217
61 08SC07-8	929	6.5	0.23
61 08SC07-8	929	6.5	0.23
51 CS12-23-13	929.367234	4.59779383	0.47082008
51 CS12-23-13	929.367234	4.59779383	0.47082008
51 CS12-23-10	929.367234	5.12076478	0.52437299
51 CS12-23-10	929.367234	5.12076478	0.52437299
119 17.1	930	6	0.4934
18 NGR1-anu-zrn-	930.539639	6.40179371	0.60950626
18 NGR1-anu-zrn-	930.539639	6.40179371	0.60950626
51 CS12-17-18	930.631688	6.6816624	0.73506193
51 CS12-17-18	930.631688	6.6816624	0.73506193
51 CS12-17-8	932.889392	7.6506683	0.81447763
51 CS12-17-8	932.889392	7.6506683	0.81447763
106 10GD49-17	933	11.9	0.21
106 10GD48-96	934	8.12	0.23
106 10GD49-39	934	9.66	0.24
18 NIL-anu-zrn-l	935.712776	4.9331828	0.94742329
18 NIL-anu-zrn-l	935.712776	4.9331828	0.94742329

51 CS12-17-43	935.786526	6.26340934	0.37778804
51 CS12-17-43	935.786526	6.26340934	0.37778804
47 PMOG-441_41-t	937	10	0.3
47 PMOG-441_41-t	937	10	0.3
106 10GD48-83	938	7.06	0.16
106 10GD48-60	939	5.97	0.23
20 HV1. v8	942	10	0.5
20 HV1. v8	942	10	0.5
20 HV1. v8	942	10	0.5
106 10GD48-31	942	6.89	0.22
18 NGR1-anu-zrn-	942.766117	5.38478233	0.59347938
18 NGR1-anu-zrn-	942.766117	5.38478233	0.59347938
106 10GD49-112	943	5.31	0.22
37 07SC49@60	944	6.13	0.4
37 07SC49@60	944	6.13	0.4
37 07SC49@69	944	7.79	0.43
37 07SC49@69	944	7.79	0.43
106 10GD49-102	944	5.39	0.32
106 10GD48-28	944	9.67	0.15
37 07SC65@48	945	9.77	0.39
37 07SC65@48	945	9.77	0.39
59 MO-997	945	6.3	0.2
59 MO-997	945	6.3	0.2
106 10GD48-49	945	7.98	0.25
51 CS12-17-16	945.072447	6.79682263	0.81135876
51 CS12-17-16	945.072447	6.79682263	0.81135876
18 NGR1-anu-zrn-	945.7812	6.01695956	0.59539694
18 NGR1-anu-zrn-	945.7812	6.01695956	0.59539694
106 10GD49-2	946	6.84	0.24
106 10GD49-101	946	9.33	0.36
51 BBF-11-36	946.17845	6.87766162	0.4418344
51 BBF-11-36	946.17845	6.87766162	0.4418344
20 KK1. 16	947	7.6	0.4
20 KK1. 16	947	7.6	0.4
20 KK1. 16	947	7.6	0.4
20 KK1. 16b	947	8.7	0.6
20 KK1. 16b	947	8.7	0.6
20 KK1. 16b	947	8.7	0.6
59 MO-996	947	9.3	0.3
59 MO-996	947	9.3	0.3
18 NIL-anu-zrn-l	947.103026	5.52335261	0.56805875
18 NIL-anu-zrn-l	947.103026	5.52335261	0.56805875
119 40.1	948	5	0.5119
37 07SC49@03	949	5.47	0.4
37 07SC49@03	949	5.47	0.4

18 ZMB2-anu-zrn-	949.142295	7.53055555	0.59716161
18 ZMB2-anu-zrn-	949.142295	7.53055555	0.59716161
10 2641-23	950	9.5	1
10 2641-23	950	9.5	1
37 07SC65@91	950	5.15	0.33
37 07SC65@91	950	5.15	0.33
119 14.1	950	5	0.3347
18 CNG2-anu-zrn-	950.593299	5.58937279	0.58673072
18 CNG2-anu-zrn-	950.593299	5.58937279	0.58673072
10 2641-33	951	9.1	0.5
10 2641-33	951	9.1	0.5
51 CS12-23-47	951.162343	7.43155542	0.66929031
51 CS12-23-47	951.162343	7.43155542	0.66929031
18 ZMB2-anu-zrn-	951.271023	8.15154117	0.92507126
18 ZMB2-anu-zrn-	951.271023	8.15154117	0.92507126
18 CNG2-anu-zrn-	952.435595	6.18264079	0.57599068
18 CNG2-anu-zrn-	952.435595	6.18264079	0.57599068
51 CS12-17-13	953.280274	6.71070639	0.71173179
51 CS12-17-13	953.280274	6.71070639	0.71173179
18 CNG2-anu-zrn-	953.535004	9.43683085	0.57037992
18 CNG2-anu-zrn-	953.535004	9.43683085	0.57037992
18 NIL-anu-zrn-l	953.841396	7.14386896	0.5523068
18 NIL-anu-zrn-l	953.841396	7.14386896	0.5523068
106 10GD49-56	954	6.01	0.23
51 CS12-24-22	954.779542	5.82477345	0.45350006
51 CS12-24-22	954.779542	5.82477345	0.45350006
106 10GD48-5	955	8.3	0.27
51 CS12-24-31	955.098994	6.4345707	0.68850038
51 CS12-24-31	955.098994	6.4345707	0.68850038
51 CS12-17-22	955.508196	5.17756965	0.43928113
51 CS12-17-22	955.508196	5.17756965	0.43928113
119 23.1	956	8	0.3249
51 CS12-23-52	957.600266	6.2734515	0.36823117
51 CS12-23-52	957.600266	6.2734515	0.36823117
106 10GD49-81	958	8.84	0.23
106 10GD49-115	959	5.59	0.27
106 10GD48-111	959	6.05	0.19
18 CNG2-anu-zrn-	959.014655	8.03071892	0.56762014
18 CNG2-anu-zrn-	959.014655	8.03071892	0.56762014
51 BBF-11-56	959.688485	5.34261942	0.58693288
51 BBF-11-56	959.688485	5.34261942	0.58693288
37 07SC49@71	961	6.16	0.33
37 07SC49@71	961	6.16	0.33
37 07SC65@78	962	7.75	0.3
37 07SC65@78	962	7.75	0.3

10 1774-44a	963	6.2	0.5
10 1774-44a	963	6.2	0.5
37 07SC65@4	963	7.96	0.17
37 07SC65@4	963	7.96	0.17
37 07SC49@87	963	8.32	0.39
37 07SC49@87	963	8.32	0.39
106 10GD49-23	963	4.66	0.26
119 24.1	963	11	0.5203
51 BBF-11-76	963.468356	4.06945981	0.29391066
51 BBF-11-76	963.468356	4.06945981	0.29391066
51 BBF-11-55	965.627373	4.8151583	0.49307849
51 BBF-11-55	965.627373	4.8151583	0.49307849
106 10GD48-2	967	7.49	0.31
18 ZMB2-anu-zrn-	967.587129	6.14892678	0.99654431
18 ZMB2-anu-zrn-	967.587129	6.14892678	0.99654431
20 HV1. v11	968	8.8	0.5
20 HV1. v11	968	8.8	0.5
20 HV1. v11	968	8.8	0.5
106 10GD49-18	968	7.56	0.28
18 ZMB2-anu-zrn-	968.232318	7.24063814	0.57858716
18 ZMB2-anu-zrn-	968.232318	7.24063814	0.57858716
18 ZMB2-anu-zrn-	968.362595	7.09943676	0.59209918
18 ZMB2-anu-zrn-	968.362595	7.09943676	0.59209918
37 07SC49@85	970	8.63	0.48
37 07SC49@85	970	8.63	0.48
18 ZMB2-anu-zrn-	970.424907	6.43940731	0.94550763
18 ZMB2-anu-zrn-	970.424907	6.43940731	0.94550763
51 BBF-11-101	970.681444	5.78831303	0.5927308
51 BBF-11-101	970.681444	5.78831303	0.5927308
51 CS12-24-41	970.942238	7.54686621	0.78840565
51 CS12-24-41	970.942238	7.54686621	0.78840565
30 n2539-rpt-42	971	9.38	0.29
30 n2539-rpt-42	971	9.38	0.29
18 NGR1-anu-zrn-	971.948542	5.58002688	0.59119979
18 NGR1-anu-zrn-	971.948542	5.58002688	0.59119979
106 10GD49-8	972	5.06	0.28
37 07SC49@30	973	8.39	0.3
37 07SC49@30	973	8.39	0.3
106 10GD48-120	973	8.89	0.23
121 18	973	7.81	0.20
51 CS11-13_37	973.37101	5.46252036	0.20201591
51 CS11-13_37	973.37101	5.46252036	0.20201591
119 38.1	975	5.4044	0.3319
18 ORG2-anu-zrn-	975.280242	5.04959496	0.73874368
18 ORG2-anu-zrn-	975.280242	5.04959496	0.73874368

51 CS11-13_42	975.747449	8.1588811	0.18782177
51 CS11-13_42	975.747449	8.1588811	0.18782177
51 CS12-24-42	975.910084	8.42425265	1.07784715
51 CS12-24-42	975.910084	8.42425265	1.07784715
51 CS12-25-52	977.454205	5.76822654	0.46360081
51 CS12-25-52	977.454205	5.76822654	0.46360081
18 CNG2-anu-zrn-	978.367219	5.95925753	0.58339071
18 CNG2-anu-zrn-	978.367219	5.95925753	0.58339071
20 BB6.8a	979	5	0.3
20 BB6.8a	979	5	0.3
20 BB6.8a	979	5	0.3
106 10GD48-3	979	7.79	0.17
121 6	979	6.88	0.24
106 10GD49-46	980	11.14	0.24
106 10GD48-1	981	6.34	0.23
106 10GD49-116	981	8.8	0.33
51 CS12-24-52	982.611719	6.18301639	0.47962705
51 CS12-24-52	982.611719	6.18301639	0.47962705
51 CS12-25-31	982.834001	4.59131277	0.47015641
51 CS12-25-31	982.834001	4.59131277	0.47015641
106 10GD49-21	983	5.75	0.28
51 CS11-18-8	983.572857	6.69937352	0.4766771
51 CS11-18-8	983.572857	6.69937352	0.4766771
106 10GD49-36	984	6.59	0.28
119 21.1	984	9	0.5022
18 NGR1-anu-zrn-	984.320302	5.83113855	0.59692246
18 NGR1-anu-zrn-	984.320302	5.83113855	0.59692246
51 CS11-19-29	985.013448	5.9097125	0.3763144
51 CS11-19-29	985.013448	5.9097125	0.3763144
51 CS12-17-29	985.576955	6.40377576	0.70084977
51 CS12-17-29	985.576955	6.40377576	0.70084977
30 n2539-rpt-a6:	986	7.65	0.32
30 n2539-rpt-a6:	986	7.65	0.32
30 n2539-rpt-35	986	8.38	0.28
30 n2539-rpt-35	986	8.38	0.28
47 PMOG-441_41-t	986	5.1	0.3
47 PMOG-441_41-t	986	5.1	0.3
10 2436-03	987	5.5	0.4
10 2436-03	987	5.5	0.4
51 CS11-18-46	987.544427	5.08680298	0.36900906
51 CS11-18-46	987.544427	5.08680298	0.36900906
51 CS12-24-39	987.678918	8.50870448	1.05691357
51 CS12-24-39	987.678918	8.50870448	1.05691357
60 VGt-457	988	5.8	0.4
60 VGt-457	988	5.8	0.4

106 10GD49-14		989	9.55	0.31
119	4.1	989	7.5202	0.2989
37 07SC65@60		990	5.32	0.27
37 07SC65@60		990	5.32	0.27
18 ZMB2-anu-zrn-	990.201163		7.16240799	0.59463853
18 ZMB2-anu-zrn-	990.201163		7.16240799	0.59463853
52 BBF-29-4	990.837109		3.42297009	0.21508183
52 BBF-29-4	990.837109		3.42297009	0.21508183
37 07SC65@50		991	8.2	0.36
37 07SC65@50		991	8.2	0.36
51 CS11-19-15	991.08579		6.51861199	0.88056024
51 CS11-19-15	991.08579		6.51861199	0.88056024
18 ZMB2-anu-zrn-	991.432891		6.83539593	0.60375039
18 ZMB2-anu-zrn-	991.432891		6.83539593	0.60375039
18 NIL-anu-zrn-l	991.446961		6.53838505	0.92210398
18 NIL-anu-zrn-l	991.446961		6.53838505	0.92210398
51 BBF-11-81	991.491135		6.33918589	0.56145036
51 BBF-11-81	991.491135		6.33918589	0.56145036
51 CS12-17-17	991.521463		6.92149609	0.67477846
51 CS12-17-17	991.521463		6.92149609	0.67477846
37 07SC65@88		992	5.93	0.17
37 07SC65@88		992	5.93	0.17
18 ZMB2-anu-zrn-	992.214229		8.17231068	0.59259691
18 ZMB2-anu-zrn-	992.214229		8.17231068	0.59259691
18 ZMB2-anu-zrn-	992.683996		6.67689447	0.60370315
18 ZMB2-anu-zrn-	992.683996		6.67689447	0.60370315
30 n2539-rpt-9		993	6.33	0.3
30 n2539-rpt-9		993	6.33	0.3
37 07SC65@40		993	7.62	0.42
37 07SC65@40		993	7.62	0.42
51 CS11-18-15	993.788844		6.60415403	0.73017588
51 CS11-18-15	993.788844		6.60415403	0.73017588
51 CS11-18-4	993.934746		6.08289788	0.46981051
51 CS11-18-4	993.934746		6.08289788	0.46981051
106 10GD48-99		994	7.9	0.21
106 10GD49-25		995	7.65	0.33
51 CS11-18-6	995.809906		6.48479985	0.45612628
51 CS11-18-6	995.809906		6.48479985	0.45612628
10 1746-42		996	9.5	0.5
10 1746-42		996	9.5	0.5
55 AC85-9		996	7.75	
55 AC85-9		996	7.75	
106 10GD48-24		996	5.35	0.28
37 07SC51-1@07		997	7.95	0.31
37 07SC51-1@07		997	7.95	0.31

106	10GD49-111	997	7.61	0.3
119	41.1	997	7	0.8516
	18 NIL-anu-zrn-l	997.292488	6.66263596	0.94234478
	18 NIL-anu-zrn-l	997.292488	6.66263596	0.94234478
	56 S-27-82 200P	998	7.83	
	56 S-27-82 200P	998	7.83	
	18 ZMB2-anu-zrn-	998.054412	7.14387976	0.60056958
	18 ZMB2-anu-zrn-	998.054412	7.14387976	0.60056958
	51 CS11-13_14	998.815758	8.11637542	0.21297077
	51 CS11-13_14	998.815758	8.11637542	0.21297077
	37 07SC49@46	999	9.31	0.36
	37 07SC49@46	999	9.31	0.36
	47 PMOG_P-45.1	999	7.9	0.7
	47 PMOG_P-45.1	999	7.9	0.7
	56 WP57	999	7.52	
	56 WP57	999	7.52	
106	10GD48-42	999	5.23	0.24
	18 CNG2-anu-zrn-	999.714468	7.74215739	0.5740822
	18 CNG2-anu-zrn-	999.714468	7.74215739	0.5740822
	56 VRMB	1000	7.46	
	56 VRMB	1000	7.46	
	56 UCUR-3	1000	8.4	
	56 UCUR-3	1000	8.4	
	18 ZMB2-anu-zrn-	1000.01129	7.08436763	0.5944486
	18 ZMB2-anu-zrn-	1000.01129	7.08436763	0.5944486
	18 NIL-anu-zrn-l	1000.31717	7.30779912	0.96552327
	18 NIL-anu-zrn-l	1000.31717	7.30779912	0.96552327
	59 M0-984	1001	6.5	0.2
	59 M0-984	1001	6.5	0.2
106	10GD48-98	1001	7.62	0.1
	18 NIL-anu-zrn-l	1001.49579	6.49811768	0.55482698
	18 NIL-anu-zrn-l	1001.49579	6.49811768	0.55482698
	51 CS11-13_26	1001.76811	7.25075961	0.19721779
	51 CS11-13_26	1001.76811	7.25075961	0.19721779
119	13.1	1002	6	0.345
	18 CNG2-anu-zrn-	1002.12116	6.74880814	0.5655572
	18 CNG2-anu-zrn-	1002.12116	6.74880814	0.5655572
	52 CP03-51-4	1002.21453	5.6687492	0.22929692
	52 CP03-51-4	1002.21453	5.6687492	0.22929692
	51 CS12-23-3	1002.68578	6.17744434	0.73185616
	51 CS12-23-3	1002.68578	6.17744434	0.73185616
	51 BBF-11-68	1002.70494	7.19360739	0.76507371
	51 BBF-11-68	1002.70494	7.19360739	0.76507371
106	10GD49-11	1003	5.91	0.2
	18 CNG2-anu-zrn-	1003.66318	7.31537705	0.58576515

18 CNG2-anu-zrn	1003.66318	7.31537705	0.58576515
20 KK1.3	1004	4	0.4
20 KK1.3	1004	4	0.4
20 KK1.3	1004	4	0.4
106 10GD49-58	1006	7.06	0.18
106 10GD48-51	1006	7.38	0.17
107 WPG90/4_37	1006	5.68	0.14
107 DL90/7_5	1006	7.79	0.21
51 CS12-24-54	1006.02546	8.18743207	0.87142406
51 CS12-24-54	1006.02546	8.18743207	0.87142406
51 CS12-17-39	1006.4941	7.85026638	0.80657437
51 CS12-17-39	1006.4941	7.85026638	0.80657437
18 ORG2-anu-zrn	1006.73118	7.01605152	0.74816929
18 ORG2-anu-zrn	1006.73118	7.01605152	0.74816929
37 07SC49@39	1007	5.84	0.28
37 07SC49@39	1007	5.84	0.28
56 Z7 200	1007	7.5	
56 Z7 200	1007	7.5	
106 10GD49-83	1007	6.16	0.31
51 CS11-18-39	1007.21564	7.87527867	0.77430047
51 CS11-18-39	1007.21564	7.87527867	0.77430047
107 WPG90/4_14	1008	6.37	0.21
18 ZMB2-anu-zrn	1008.36868	7.14762494	0.95635873
18 ZMB2-anu-zrn	1008.36868	7.14762494	0.95635873
56 SI64-1	1009	8.17	
56 SI64-1	1009	8.17	
59 M0-1288	1009	8.9	0.2
59 M0-1288	1009	8.9	0.2
75 55.1	1009	8.29	0.41
107 WPG90/4_26	1009	7.08	0.3
18 CNG2-anu-zrn	1009.87054	5.47065521	0.5876731
18 CNG2-anu-zrn	1009.87054	5.47065521	0.5876731
10 1774-80	1010	4.6	0.6
10 1774-80	1010	4.6	0.6
20 HV1.13	1010	6.4	0.6
20 HV1.13	1010	6.4	0.6
20 HV1.13	1010	6.4	0.6
56 Z5 200R	1010	6.67	
56 Z5 200R	1010	6.67	
56 Z5 200P	1010	8.05	
56 Z5 200P	1010	8.05	
119 9.1	1010	9	0.3393
51 CS11-20-5	1010.42046	5.45750979	0.31863172
51 CS11-20-5	1010.42046	5.45750979	0.31863172
37 07SC65@65	1011	6.24	0.35

37 07SC65@65	1011	6.24	0.35
56 S-23-82	1011	7.21	
56 S-23-82	1011	7.21	
106 10GD48-78	1011	10.55	0.31
107 IT/12_1	1011	6.75	0.14
119 49.1	1011	7.2499	0.511
18 ORG2-anu-zrn-	1011.21678	6.57676646	0.55621378
18 ORG2-anu-zrn-	1011.21678	6.57676646	0.55621378
18 CNG2-anu-zrn-	1013.23729	6.64963955	0.56675937
18 CNG2-anu-zrn-	1013.23729	6.64963955	0.56675937
18 ZMB2-anu-zrn-	1013.5996	7.06840188	0.59374535
18 ZMB2-anu-zrn-	1013.5996	7.06840188	0.59374535
18 ZMB2-anu-zrn-	1013.80899	7.66849127	0.60269947
18 ZMB2-anu-zrn-	1013.80899	7.66849127	0.60269947
18 CNG2-anu-zrn-	1013.896	7.45351447	0.55581739
18 CNG2-anu-zrn-	1013.896	7.45351447	0.55581739
51 BBF-11-105	1013.95366	4.93467033	0.36124524
51 BBF-11-105	1013.95366	4.93467033	0.36124524
18 ORG2-anu-zrn-	1014.56914	1.21565551	0.74919388
18 ORG2-anu-zrn-	1014.56914	1.21565551	0.74919388
52 CP04-45-26	1014.92219	5.35341274	0.21062033
52 CP04-45-26	1014.92219	5.35341274	0.21062033
10 2606-24	1015	7.1	0.4
10 2606-24	1015	7.1	0.4
51 CS12-17-58	1015.46523	5.7807494	0.60185087
51 CS12-17-58	1015.46523	5.7807494	0.60185087
5 RNZ49	1016	5.8	
5 RNZ49	1016	5.8	
61 08SC74-58	1016	10.8	0.14
61 08SC74-58	1016	10.8	0.14
18 ZMB2-anu-zrn-	1016.14035	8.55393095	0.96973704
18 ZMB2-anu-zrn-	1016.14035	8.55393095	0.96973704
51 CS11-20-30	1016.23061	5.59565845	0.52242351
51 CS11-20-30	1016.23061	5.59565845	0.52242351
51 CS12-17-24	1016.57789	9.79549488	0.88637588
51 CS12-17-24	1016.57789	9.79549488	0.88637588
18 ORG2-anu-zrn-	1017.1506	8.56833682	0.54866765
18 ORG2-anu-zrn-	1017.1506	8.56833682	0.54866765
10 2436-19	1018	10	0.6
10 2436-19	1018	10	0.6
47 PMOG-233_33-:	1018	6.8	0.3
47 PMOG-233_33-:	1018	6.8	0.3
106 10GD49-43	1018	6	0.42
18 ZMB2-anu-zrn-	1018.43458	6.57202805	0.58995258
18 ZMB2-anu-zrn-	1018.43458	6.57202805	0.58995258

18 ZMB2-anu-zrn-	1018.75662	6.25294201	0.54844379
18 ZMB2-anu-zrn-	1018.75662	6.25294201	0.54844379
51 CS11-20-32	1018.78186	6.99860338	0.61373073
51 CS11-20-32	1018.78186	6.99860338	0.61373073
51 CS11-13_07	1018.90016	6.58267022	0.21806674
51 CS11-13_07	1018.90016	6.58267022	0.21806674
56 Z10 200R	1019	7.33	
56 Z10 200R	1019	7.33	
119 32.1	1019	9	0.3804
52 BBF-29-24	1019.61828	4.89492508	0.50124671
52 BBF-29-24	1019.61828	4.89492508	0.50124671
37 07SC49@21	1020	6.89	0.25
37 07SC49@21	1020	6.89	0.25
10 2641-44	1021	5.2	0.6
10 2641-44	1021	5.2	0.6
56 S-25-82 200P	1021	5.73	
56 S-25-82 200P	1021	5.73	
106 10GD48-8	1021	9.34	0.24
52 CP03-51-58	1021.61	6.70663853	0.18966912
52 CP03-51-58	1021.61	6.70663853	0.18966912
18 NIL-anu-zrn-l	1021.80442	6.96676476	0.56511222
18 NIL-anu-zrn-l	1021.80442	6.96676476	0.56511222
49 MM26302 6	1022	5.47351509	0.64555346
49 MM26302 6	1022	5.47351509	0.64555346
49 MM26302 13	1022	5.8079909	0.71369917
49 MM26302 13	1022	5.8079909	0.71369917
49 MM26302 17	1022	5.98755876	0.70501652
49 MM26302 17	1022	5.98755876	0.70501652
49 MM26302 10	1022	6.5161507	0.62774739
49 MM26302 10	1022	6.5161507	0.62774739
49 MM26302 5	1022	6.64	0.68269604
49 MM26302 5	1022	6.64	0.68269604
49 MM26302 11	1022	6.76772521	0.63167685
49 MM26302 11	1022	6.76772521	0.63167685
49 MM26302 16	1022	6.78602957	0.74853678
49 MM26302 16	1022	6.78602957	0.74853678
49 MM26302 18	1022	6.78844841	0.66358763
49 MM26302 18	1022	6.78844841	0.66358763
49 MM26302 26	1022	6.87554976	0.66296427
49 MM26302 26	1022	6.87554976	0.66296427
49 MM26302 25	1022	6.99845669	0.6857737
49 MM26302 25	1022	6.99845669	0.6857737
49 MM26302 4	1022	7.01803639	0.6654693
49 MM26302 4	1022	7.01803639	0.6654693
49 MM26302 27	1022	7.787792	0.70107862

49 MM26302 27	1022	7.787792	0.70107862
106 10GD48-68	1022	8.29	0.3
10 1746-30	1023	7.3	0.4
10 1746-30	1023	7.3	0.4
10 2436-04	1023	9.5	0.4
10 2436-04	1023	9.5	0.4
37 07SC65@82	1023	7.44	0.39
37 07SC65@82	1023	7.44	0.39
106 10GD48-112	1023	5.08	0.31
106 10GD49-16	1023	5.97	0.14
106 10GD49-79	1023	7.56	0.18
119 46.1	1023	5	0.3976
18 CNG2-anu-zrn-	1023.18155	8.5480754	0.58084091
18 CNG2-anu-zrn-	1023.18155	8.5480754	0.58084091
51 CS11-20-23	1023.52884	5.64769688	0.45405932
51 CS11-20-23	1023.52884	5.64769688	0.45405932
18 CNG2-anu-zrn-	1023.79335	7.37175905	0.58150759
18 CNG2-anu-zrn-	1023.79335	7.37175905	0.58150759
18 ORG2-anu-zrn-	1023.88173	7.03651178	0.55433975
18 ORG2-anu-zrn-	1023.88173	7.03651178	0.55433975
51 CS11-13_84	1023.96538	5.52352852	0.18831873
51 CS11-13_84	1023.96538	5.52352852	0.18831873
106 10GD49-55	1024	7.53	0.3
56 Z1 200	1025	8.04	
56 Z1 200	1025	8.04	
18 ORG2-anu-zrn-	1025.77954	7.69147446	0.74496892
18 ORG2-anu-zrn-	1025.77954	7.69147446	0.74496892
106 10GD48-43	1026	5.99	0.37
119 32.1	1026	9.1763	0.347
18 NIL-anu-zrn-l	1026.62154	8.00670116	0.9465717
18 NIL-anu-zrn-l	1026.62154	8.00670116	0.9465717
106 10GD49-114	1027	6.94	0.31
18 CNG2-anu-zrn-	1027.1237	5.42544924	0.5788527
18 CNG2-anu-zrn-	1027.1237	5.42544924	0.5788527
18 ZMB2-anu-zrn-	1027.80806	7.46702108	0.55066202
18 ZMB2-anu-zrn-	1027.80806	7.46702108	0.55066202
51 CS12-17-15	1027.87355	6.4573503	0.55584653
51 CS12-17-15	1027.87355	6.4573503	0.55584653
10 1774-63	1028	6.1	0.6
10 1774-63	1028	6.1	0.6
56 Z6 200	1028	8.2	
56 Z6 200	1028	8.2	
119 47.1	1028	7.9666	0.4943
18 ORG2-anu-zrn-	1028.12528	7.30950223	0.54480204
18 ORG2-anu-zrn-	1028.12528	7.30950223	0.54480204

18 CNG2-anu-zrn-	1028.93268	7.55357308	0.57886837
18 CNG2-anu-zrn-	1028.93268	7.55357308	0.57886837
10 2641-36	1030	9.5	0.6
10 2641-36	1030	9.5	0.6
47 PMOG-441_41-	1030	4.3	0.3
47 PMOG-441_41-	1030	4.3	0.3
107 DL90/7_8	1030	6.9	0.31
52 CP04-27-70	1030.62227	6.34572555	0.230468
52 CP04-27-70	1030.62227	6.34572555	0.230468
60 vgt-146	1031	6.1	0.2
60 vgt-146	1031	6.1	0.2
106 10GD49-31	1031	4.94	0.32
119 65.1	1031	7.7443	0.3708
51 CS12-24-1	1031.13355	6.82926465	0.63508054
51 CS12-24-1	1031.13355	6.82926465	0.63508054
18 ZMB2-anu-zrn-	1031.82033	7.22201751	0.59936952
18 ZMB2-anu-zrn-	1031.82033	7.22201751	0.59936952
51 CS11-19-57b	1031.97625	7.20194779	0.59953188
51 CS11-19-57b	1031.97625	7.20194779	0.59953188
47 PMOG-441_41-	1032	8.8	0.3
47 PMOG-441_41-	1032	8.8	0.3
106 10GD48-88	1032	6.32	0.24
18 CNG2-anu-zrn-	1032.65315	6.09355016	0.56975412
18 CNG2-anu-zrn-	1032.65315	6.09355016	0.56975412
10 1774-03	1033	10.7	0.5
10 1774-03	1033	10.7	0.5
119 55.1	1033	6.9022	0.4888
56 PLPEG NM1	1034	6.58	
56 PLPEG NM1	1034	6.58	
106 10GD48-26	1034	11.04	0.24
18 ORG2-anu-zrn-	1034.10785	6.54386815	0.77054866
18 ORG2-anu-zrn-	1034.10785	6.54386815	0.77054866
18 NIL-anu-zrn-l	1034.23612	7.07011259	1.03045935
18 NIL-anu-zrn-l	1034.23612	7.07011259	1.03045935
18 ZMB2-anu-zrn-	1034.50935	8.59164289	0.56130982
18 ZMB2-anu-zrn-	1034.50935	8.59164289	0.56130982
18 ORG2-anu-zrn-	1034.77337	7.202436	0.54604056
18 ORG2-anu-zrn-	1034.77337	7.202436	0.54604056
49 MM2247 14	1035	4.66285417	0.94689213
49 MM2247 14	1035	4.66285417	0.94689213
49 MM2247 14	1035	4.71094991	0.92176611
49 MM2247 14	1035	4.71094991	0.92176611
49 MM2247 14	1035	5.12384666	0.94959934
49 MM2247 14	1035	5.12384666	0.94959934
49 MM2247 14	1035	5.48502007	0.92864998

49 MM2247 14	1035	5.48502007	0.92864998
49 MM2247 13	1035	5.78689491	1.07005827
49 MM2247 13	1035	5.78689491	1.07005827
49 MM2247 14	1035	6.00008058	0.96344071
49 MM2247 14	1035	6.00008058	0.96344071
49 MM2247 13	1035	6.53777126	1.15861401
49 MM2247 13	1035	6.53777126	1.15861401
49 MM2247 14	1035	7.58239803	1.16312289
49 MM2247 14	1035	7.58239803	1.16312289
106 10GD48-66	1035	7.85	0.22
107 WPG90/4_5	1035	7.13	0.2
18 NIL-anu-zrn-l	1035.51336	6.11239627	0.55366741
18 NIL-anu-zrn-l	1035.51336	6.11239627	0.55366741
51 CS12-17-54	1035.69077	6.65417861	0.75254758
51 CS12-17-54	1035.69077	6.65417861	0.75254758
106 10GD48-29	1036	5.52	0.18
51 CS12-23-55	1036.61503	5.4630933	0.66280418
51 CS12-23-55	1036.61503	5.4630933	0.66280418
47 PMOG-233_33- 4	1037	6.8	0.3
47 PMOG-233_33- 4	1037	6.8	0.3
49 SA3-01 10	1037	5.47531602	0.73808442
49 SA3-01 10	1037	5.47531602	0.73808442
49 SA3-01 18	1037	5.91080249	0.73053726
49 SA3-01 18	1037	5.91080249	0.73053726
49 SA3-01 4	1037	5.91562062	0.65580806
49 SA3-01 4	1037	5.91562062	0.65580806
49 SA3-01 5	1037	5.95858092	0.69668357
49 SA3-01 5	1037	5.95858092	0.69668357
49 SA3-01 45	1037	6.2788115	0.75267899
49 SA3-01 45	1037	6.2788115	0.75267899
49 SA3-01 13	1037	6.3903522	0.73306184
49 SA3-01 13	1037	6.3903522	0.73306184
49 SA3-01 17	1037	6.46222413	0.7150199
49 SA3-01 17	1037	6.46222413	0.7150199
49 SA3-01 24	1037	6.53860955	0.76967133
49 SA3-01 24	1037	6.53860955	0.76967133
49 SA3-01 33a	1037	6.5727301	0.74965768
49 SA3-01 33a	1037	6.5727301	0.74965768
49 SA3-01 19a	1037	6.61524242	0.77113552
49 SA3-01 19a	1037	6.61524242	0.77113552
49 SA3-01 15	1037	6.61692078	0.76859045
49 SA3-01 15	1037	6.61692078	0.76859045
49 SA3-01 16	1037	6.76157072	0.82893575
49 SA3-01 16	1037	6.76157072	0.82893575
49 SA3-01 7	1037	6.78254786	0.69789411

49 SA3-01 7	1037	6.78254786	0.69789411
49 SA3-01 33c	1037	6.82497251	0.70266194
49 SA3-01 33c	1037	6.82497251	0.70266194
49 SA3-01 12a	1037	6.83571494	0.74984756
49 SA3-01 12a	1037	6.83571494	0.74984756
49 SA3-01 38	1037	6.9008195	0.76912828
49 SA3-01 38	1037	6.9008195	0.76912828
49 SA3-01 12b	1037	6.93133074	0.74823948
49 SA3-01 12b	1037	6.93133074	0.74823948
49 SA3-01 22	1037	6.94346453	0.77378418
49 SA3-01 22	1037	6.94346453	0.77378418
49 SA3-01 33b	1037	7.06831998	0.70512846
49 SA3-01 33b	1037	7.06831998	0.70512846
49 SA3-01 19b	1037	7.15088387	0.72920634
49 SA3-01 19b	1037	7.15088387	0.72920634
18 ORG2-anu-zrn-	1037.30092	8.11132893	0.5504936
18 ORG2-anu-zrn-	1037.30092	8.11132893	0.5504936
18 CNG2-anu-zrn-	1037.31025	5.88760165	0.5655595
18 CNG2-anu-zrn-	1037.31025	5.88760165	0.5655595
60 vgt-100	1038	6.8	0.2
60 vgt-100	1038	6.8	0.2
106 10GD49-62	1039	7.28	0.3
59 M0-1100	1040	8.6	0.4
59 M0-1100	1040	8.6	0.4
52 CP04-2-51	1040.09702	5.42734012	0.1607801
52 CP04-2-51	1040.09702	5.42734012	0.1607801
106 10GD49-109	1041	5.41	0.29
106 10GD48-18	1041	9.88	0.33
18 ORG2-anu-zrn-	1041.12653	7.5041628	0.54946792
18 ORG2-anu-zrn-	1041.12653	7.5041628	0.54946792
51 CS12-23-28	1041.56901	5.37460187	0.46021529
51 CS12-23-28	1041.56901	5.37460187	0.46021529
51 CS11-19-41	1041.69473	5.2901869	0.36528642
51 CS11-19-41	1041.69473	5.2901869	0.36528642
106 10GD48-9	1042	6.8	0.2
119 41.1	1042	6	0.3522
49 ROG80 12	1043	4.8882245	0.96664219
49 ROG80 12	1043	4.8882245	0.96664219
49 ROG80 11	1043	5.30552755	0.95529237
49 ROG80 11	1043	5.30552755	0.95529237
49 ROG80 12	1043	5.34267864	0.94830207
49 ROG80 12	1043	5.34267864	0.94830207
49 ROG80 11	1043	5.94185508	0.95244728
49 ROG80 11	1043	5.94185508	0.95244728
49 ROG80 11	1043	5.98192938	0.9774903

49 ROG80 11	1043	5.98192938	0.9774903
49 ROG80 11	1043	5.99738136	1.03234315
49 ROG80 11	1043	5.99738136	1.03234315
49 ROG80 11	1043	6.32403361	0.96883319
49 ROG80 11	1043	6.32403361	0.96883319
49 ROG80 12	1043	6.40121436	1.2693912
49 ROG80 12	1043	6.40121436	1.2693912
49 ROG80 13	1043	7.05306375	1.03434144
49 ROG80 13	1043	7.05306375	1.03434144
60 p11-102	1043	7.2	0.4
60 p11-102	1043	7.2	0.4
119 4.1	1043	6	0.2854
18 NIL-anu-zrn-l	1043.54676	4.74027271	0.56216485
18 NIL-anu-zrn-l	1043.54676	4.74027271	0.56216485
51 CS11-6_31	1043.62884	10.1468981	0.22836012
51 CS11-6_31	1043.62884	10.1468981	0.22836012
106 10GD49-84	1044	6.24	0.2
51 CS11-13_79	1044.12647	6.80419986	0.2103785
51 CS11-13_79	1044.12647	6.80419986	0.2103785
60 VGt-434	1045	6.5	0.4
60 VGt-434	1045	6.5	0.4
51 CS12-24-45	1045.87776	5.11478227	0.52376037
51 CS12-24-45	1045.87776	5.11478227	0.52376037
60 vgt-071	1046	5.9	0.2
60 vgt-071	1046	5.9	0.2
18 CNG2-anu-zrn-	1046.52632	5.29703291	0.59508791
18 CNG2-anu-zrn-	1046.52632	5.29703291	0.59508791
119 20.1	1047	4.5495	0.5056
52 BBF-29-45	1047.01058	5.99135289	0.62817036
52 BBF-29-45	1047.01058	5.99135289	0.62817036
51 CS11-13_69	1047.72939	6.41714808	0.22901206
51 CS11-13_69	1047.72939	6.41714808	0.22901206
51 CS11-13_55	1047.78096	6.45365296	0.22203993
51 CS11-13_55	1047.78096	6.45365296	0.22203993
10 2436-35	1048	9.6	0.4
10 2436-35	1048	9.6	0.4
20 HV1.1a	1048	4.8	0.6
20 HV1.1a	1048	4.8	0.6
20 HV1.1a	1048	4.8	0.6
51 CS11-13_06	1048.1387	4.82943566	0.24385927
51 CS11-13_06	1048.1387	4.82943566	0.24385927
52 BBF-29-9	1048.49507	3.89385198	0.39873552
52 BBF-29-9	1048.49507	3.89385198	0.39873552
18 CNG2-anu-zrn-	1048.87274	6.84354963	0.5611852
18 CNG2-anu-zrn-	1048.87274	6.84354963	0.5611852

10 2436-17		1049	10.4	0.6
10 2436-17		1049	10.4	0.6
55 AM86-10		1049	8.48	
55 AM86-10		1049	8.48	
56 AM86-14		1049	5.63	
56 AM86-14		1049	5.63	
56 AM86-11		1049	7.48	
56 AM86-11		1049	7.48	
56 9-23-85-6		1049	8.01	
56 9-23-85-6		1049	8.01	
56 AM86-4		1049	9.14	
56 AM86-4		1049	9.14	
60 VGt-323		1049	5.4	0.4
60 VGt-323		1049	5.4	0.4
106 10GD48-15		1049	7.28	0.21
106 10GD49-68		1049	8.8	0.25
51 CS11-13_02	1049.60749	6.8792099	0.22747773	
51 CS11-13_02	1049.60749	6.8792099	0.22747773	
59 MO-1269	1050	5.6	0.1	
59 MO-1269	1050	5.6	0.1	
119	28.1	1050	6.4353	0.4964
121 16	1050	7.23	0.30	
51 CS11-19-60	1050.28626	5.80887313	0.46625789	
51 CS11-19-60	1050.28626	5.80887313	0.46625789	
51 CS12-25-33	1050.6852	6.60765575	0.65634688	
51 CS12-25-33	1050.6852	6.60765575	0.65634688	
35 07LSC5_25.1	1051	7.6	0.5	
35 07LSC5_25.1	1051	7.6	0.5	
59 MO-1017	1051	7.1	0.2	
59 MO-1017	1051	7.1	0.2	
119	28.1	1051	7	0.5414
44 AM86-7	1052	8.05		
44 AM86-7	1052	8.05		
56 WP12A 200P	1052	7.62		
56 WP12A 200P	1052	7.62		
18 ZMB2-anu-zrn-	1052.83046	8.30088054	0.56272693	
18 ZMB2-anu-zrn-	1052.83046	8.30088054	0.56272693	
51 CS12-24-57	1052.90459	5.91659791	0.6120202	
51 CS12-24-57	1052.90459	5.91659791	0.6120202	
35 07LSC6_11.1	1053	5.2	0.6	
35 07LSC6_11.1	1053	5.2	0.6	
106 10GD49-89	1053	6.95	0.26	
51 CS11-20-21	1053.11127	7.09573853	0.66598245	
51 CS11-20-21	1053.11127	7.09573853	0.66598245	
52 CP03-51-21	1053.17815	6.78216686	0.23758575	

52 CP03-51-21	1053.17815	6.78216686	0.23758575
106 10GD48-74	1054	6.8	0.24
107 IT/5_29	1054	7.8	0.11
56 PLG M10	1055	5.73	
56 PLG M10	1055	5.73	
59 M0-1086	1055	6.5	0.4
59 M0-1086	1055	6.5	0.4
18 ZMB2-anu-zrn-	1055.80471	6.76815164	0.54680359
18 ZMB2-anu-zrn-	1055.80471	6.76815164	0.54680359
56 S-26-82	1056	8.16	
56 S-26-82	1056	8.16	
107 IT/5_28	1056	6.52	0.3
52 CP04-2-60	1056.72431	5.92523951	0.16174644
52 CP04-2-60	1056.72431	5.92523951	0.16174644
106 10GD48-4	1057	7.26	0.12
107 IT/5_24	1057	6.52	0.23
18 ORG2-anu-zrn-	1058.34259	6.67164197	0.54675297
18 ORG2-anu-zrn-	1058.34259	6.67164197	0.54675297
106 10GD49-86	1059	7.88	0.28
18 CNG2-anu-zrn-	1059.75171	7.2645824	0.56698081
18 CNG2-anu-zrn-	1059.75171	7.2645824	0.56698081
60 VGt-565	1061	8.6	0.2
60 VGt-565	1061	8.6	0.2
106 10GD49-107	1061	6.59	0.31
107 IT/5_16	1061	7.86	0.14
51 CS11-20-66	1061.18716	7.81825065	0.96097399
51 CS11-20-66	1061.18716	7.81825065	0.96097399
18 CNG2-anu-zrn-	1061.84721	6.94424145	0.56246677
18 CNG2-anu-zrn-	1061.84721	6.94424145	0.56246677
10 2641-63	1062	6.5	0.8
10 2641-63	1062	6.5	0.8
20 HV1. v10	1062	7.7	0.3
20 HV1. v10	1062	7.7	0.3
20 HV1. v10	1062	7.7	0.3
106 10GD49-29	1062	7.33	0.18
107 DL90/7_7	1062	8.15	0.12
106 10GD49-42	1063	6.12	0.24
51 CS12-17-40	1063.3417	6.19047898	0.50338183
51 CS12-17-40	1063.3417	6.19047898	0.50338183
106 10GD49-63	1064	5.87	0.3
51 CS12-25-39	1064.99375	4.8933461	0.47620464
51 CS12-25-39	1064.99375	4.8933461	0.47620464
37 07SC49@13	1065	6.08	0.42
37 07SC49@13	1065	6.08	0.42
57 91500	1065	9.9	

57	91500	1065	9.9	
106	10GD48-63	1065	8.74	0.3
18	ZMB2-anu-zrn-	1065.81092	6.26507817	0.55008422
18	ZMB2-anu-zrn-	1065.81092	6.26507817	0.55008422
59	MO-1011	1066	8.1	0.2
59	MO-1011	1066	8.1	0.2
107	DL90/7_22	1066	6.52	0.23
18	ORG2-anu-zrn-	1066.23398	5.72006576	0.54717107
18	ORG2-anu-zrn-	1066.23398	5.72006576	0.54717107
30	n2539-rpt-23	1067	6.87	0.32
30	n2539-rpt-23	1067	6.87	0.32
106	10GD49-37	1067	5.77	0.23
106	10GD48-46	1067	6.42	0.21
106	10GD49-40	1067	7.25	0.24
51	CS12-24-40	1067.39055	5.60734215	0.57419915
51	CS12-24-40	1067.39055	5.60734215	0.57419915
51	CS12-17-20	1067.40553	5.15244065	0.49925929
51	CS12-17-20	1067.40553	5.15244065	0.49925929
10	2641-37	1068	6	0.7
10	2641-37	1068	6	0.7
10	2641-28	1068	10	1
10	2641-28	1068	10	1
106	10GD48-55	1068	5.14	0.17
106	10GD49-22	1068	9.64	0.29
107	WPG90/4_42	1068	5.69	0.19
51	CS11-13_52	1068.54238	5.98258994	0.19102307
51	CS11-13_52	1068.54238	5.98258994	0.19102307
51	CS12-17-38	1068.78837	6.6065579	0.84502308
51	CS12-17-38	1068.78837	6.6065579	0.84502308
51	CS12-17-14	1068.89852	10.9838062	1.49089282
51	CS12-17-14	1068.89852	10.9838062	1.49089282
106	10GD48-86	1069	6.33	0.24
106	10GD49-70	1069	6.55	0.26
107	IT/5_5	1069	8.01	0.25
51	CS12-24-60	1069.83976	6.77974032	0.73760512
51	CS12-24-60	1069.83976	6.77974032	0.73760512
18	NIL-anu-zrn-l	1069.84338	4.18525064	0.61462639
18	NIL-anu-zrn-l	1069.84338	4.18525064	0.61462639
51	CS12-23-35	1069.94984	3.25075365	0.29222574
51	CS12-23-35	1069.94984	3.25075365	0.29222574
18	ORG2-anu-zrn-	1070.2061	9.81091492	0.5531252
18	ORG2-anu-zrn-	1070.2061	9.81091492	0.5531252
52	CP04-27-13	1070.44496	2.60354592	0.29139937
52	CP04-27-13	1070.44496	2.60354592	0.29139937
52	CP03-51-44	1070.76274	5.36563549	0.1754623

52 CP03-51-44	1070.76274	5.36563549	0.1754623
51 CS12-23-21	1070.90353	6.96655879	0.7169418
51 CS12-23-21	1070.90353	6.96655879	0.7169418
30 n2539-rpt-21	1071	7.09	0.27
30 n2539-rpt-21	1071	7.09	0.27
119 7.1	1071	9	0.2863
119 31.1	1071	9	0.4266
18 CNG2-anu-zrn-	1071.22631	3.56029696	0.58861398
18 CNG2-anu-zrn-	1071.22631	3.56029696	0.58861398
18 ORG2-anu-zrn-	1071.30542	8.17746643	0.7455748
18 ORG2-anu-zrn-	1071.30542	8.17746643	0.7455748
51 CS12-23-12	1071.33678	5.29176482	0.54188362
51 CS12-23-12	1071.33678	5.29176482	0.54188362
52 CP04-2-8	1071.67589	4.62468303	0.20758945
52 CP04-2-8	1071.67589	4.62468303	0.20758945
51 CS12-23-11	1071.74145	6.08840058	0.58658747
51 CS12-23-11	1071.74145	6.08840058	0.58658747
20 CM1.19	1072	8.3	0.4
20 CM1.19	1072	8.3	0.4
20 CM1.19	1072	8.3	0.4
107 WPG90/4_41	1072	5.84	0.13
119 41.1	1072	8	0.3704
119 16.1	1072	11	0.3286
51 CS12-17-36	1072.49781	9.63625236	0.97627989
51 CS12-17-36	1072.49781	9.63625236	0.97627989
20 CM1.5	1073	5.4	0.7
20 CM1.5	1073	5.4	0.7
20 CM1.5	1073	5.4	0.7
55 AM87-8	1073	8.14	
55 AM87-8	1073	8.14	
51 BBF-11-106	1073.23799	5.77634801	0.59150557
51 BBF-11-106	1073.23799	5.77634801	0.59150557
18 ZMB2-anu-zrn-	1073.82782	7.47758331	0.55157982
18 ZMB2-anu-zrn-	1073.82782	7.47758331	0.55157982
51 CS11-13_71	1073.96007	9.14001237	0.18416987
51 CS11-13_71	1073.96007	9.14001237	0.18416987
37 07SC49@01	1074	5.25	0.21
37 07SC49@01	1074	5.25	0.21
106 10GD48-95	1074	5.88	0.23
107 WPG90/4_15	1074	6.22	0.26
51 CS11-13_09	1074.01394	6.49565858	0.2127575
51 CS11-13_09	1074.01394	6.49565858	0.2127575
18 ORG2-anu-zrn-	1074.43369	9.19196771	1.09127255
18 ORG2-anu-zrn-	1074.43369	9.19196771	1.09127255
106 10GD49-92	1075	7.89	0.26

106 10GD49-98	1075	8.63	0.21
56 LH86-7	1076	8.1	
56 LH86-7	1076	8.1	
107 DL90/7_12	1076	7.16	0.24
18 ORG2-anu-zrn-	1076.01521	8.0852256	0.54984605
18 ORG2-anu-zrn-	1076.01521	8.0852256	0.54984605
51 CS12-23-48	1076.21141	6.93451421	0.6008552
51 CS12-23-48	1076.21141	6.93451421	0.6008552
52 CP03-39-45	1076.45797	6.74163803	0.19732908
52 CP03-39-45	1076.45797	6.74163803	0.19732908
51 CS11-13_74	1076.54077	8.03936511	0.25173607
51 CS11-13_74	1076.54077	8.03936511	0.25173607
10 2346-18	1077	7.3	0.5
10 2346-18	1077	7.3	0.5
30 n2539-rpt-b68	1077	6.06	0.38
30 n2539-rpt-b68	1077	6.06	0.38
56 CQA809	1077	7.45	
56 CQA809	1077	7.45	
106 10GD49-33	1077	5.29	0.29
119 55.1	1077	6	0.3452
51 CS12-24-25	1077.20593	6.13904794	0.5648882
51 CS12-24-25	1077.20593	6.13904794	0.5648882
20 HV1. s19	1078	5.3	0.3
20 HV1. s19	1078	5.3	0.3
20 HV1. s19	1078	5.3	0.3
51 CS12-17-48	1078.30601	6.49640464	0.75372178
51 CS12-17-48	1078.30601	6.49640464	0.75372178
51 CS11-20-3	1078.44937	4.67866826	0.28184522
51 CS11-20-3	1078.44937	4.67866826	0.28184522
51 CS12-17-50	1078.92367	5.79125456	0.80943522
51 CS12-17-50	1078.92367	5.79125456	0.80943522
35 07LSC3_38.1	1079	4.6	0.5
35 07LSC3_38.1	1079	4.6	0.5
107 IT/5_2	1079	5.86	0.12
51 CS12-25-5	1079.39782	6.42987901	0.62069419
51 CS12-25-5	1079.39782	6.42987901	0.62069419
18 ORG2-anu-zrn-	1079.82398	8.9843838	0.5515366
18 ORG2-anu-zrn-	1079.82398	8.9843838	0.5515366
10 2436-64	1080	6.9	0.4
10 2436-64	1080	6.9	0.4
56 St. Urbain	1080	6.4	
56 St. Urbain	1080	6.4	
56 AM87-7	1080	8.77	
56 AM87-7	1080	8.77	
106 10GD49-3	1080	11.21	0.19

52 CP03-51-39	1080.58133	8.74390276	0.20139904
52 CP03-51-39	1080.58133	8.74390276	0.20139904
52 CP04-27-69	1080.62759	6.39624147	0.24260494
52 CP04-27-69	1080.62759	6.39624147	0.24260494
10 2346-30	1081	7.7	0.5
10 2346-30	1081	7.7	0.5
106 10GD48-92	1081	7.99	0.22
107 DL90/7_10	1081	7.79	0.25
51 CS11-19-34	1081.73001	5.63417738	0.51703178
51 CS11-19-34	1081.73001	5.63417738	0.51703178
37 07SC49@52	1082	5.88	0.46
37 07SC49@52	1082	5.88	0.46
55 AM87-10	1082	8.04	
55 AM87-10	1082	8.04	
56 PTG-8	1082	5.76	
56 PTG-8	1082	5.76	
51 CS12-23-31	1082.65306	6.22746892	0.6279855
51 CS12-23-31	1082.65306	6.22746892	0.6279855
106 10GD48-13	1083	7.14	0.29
18 ORG2-anu-zrn-	1083.13176	7.35711184	0.55131222
18 ORG2-anu-zrn-	1083.13176	7.35711184	0.55131222
18 ORG2-anu-zrn-	1083.84741	6.26175323	0.55593219
18 ORG2-anu-zrn-	1083.84741	6.26175323	0.55593219
43 AM86-8	1084	8.03	
43 AM86-8	1084	8.03	
107 DL90/7_20	1084	7.63	0.18
119 19.1	1084	5	0.4879
119 25.1	1084	5.5727	0.2792
52 BBF-29-68	1084.92409	5.25499702	0.42197907
52 BBF-29-68	1084.92409	5.25499702	0.42197907
37 07SC49@22	1085	9.34	0.26
37 07SC49@22	1085	9.34	0.26
55 AM87-9	1085	8.29	
55 AM87-9	1085	8.29	
59 MO-1244	1085	4.9	0.2
59 MO-1244	1085	4.9	0.2
106 10GD49-1	1085	4.8	0.25
106 10GD49-91	1085	7.08	0.19
59 MO-1248	1086	5.2	0.1
59 MO-1248	1086	5.2	0.1
106 10GD48-82	1086	7.14	0.24
18 ORG2-anu-zrn-	1086.75399	7.91355391	0.5470456
18 ORG2-anu-zrn-	1086.75399	7.91355391	0.5470456
30 n2539-rpt-b4'	1087	6.15	0.33
30 n2539-rpt-b4'	1087	6.15	0.33

47 PMOG-233_33-(	1087	5.5	0.3
47 PMOG-233_33-(	1087	5.5	0.3
52 CP03-39-19	1087.39383	8.74716024	0.24118999
52 CP03-39-19	1087.39383	8.74716024	0.24118999
10 1774-74	1088	6	0.6
10 1774-74	1088	6	0.6
62 FS07-1	1088	7.4	0.33
62 FS07-1	1088	7.4	0.33
106 10GD48-10	1088	8.59	0.28
18 ORG2-anu-zrn-	1088.18265	7.44954233	0.94552376
18 ORG2-anu-zrn-	1088.18265	7.44954233	0.94552376
51 CS12-23-44	1088.40028	4.59230986	0.47025852
51 CS12-23-44	1088.40028	4.59230986	0.47025852
10 1774-50	1089	7.8	0.5
10 1774-50	1089	7.8	0.5
107 IT/5_4	1090	7.29	0.1
52 CP03-51-45	1090.61615	5.36563549	0.1754623
52 CP03-51-45	1090.61615	5.36563549	0.1754623
51 BBF-11-61	1090.6823	5.69686523	0.52304408
51 BBF-11-61	1090.6823	5.69686523	0.52304408
106 10GD48-27	1091	9.55	0.28
18 ZMB2-anu-zrn-	1091.85594	7.72338067	0.55359119
18 ZMB2-anu-zrn-	1091.85594	7.72338067	0.55359119
18 ORG2-anu-zrn-	1092.58556	7.96949514	0.5497004
18 ORG2-anu-zrn-	1092.58556	7.96949514	0.5497004
51 CS11-19-60b	1092.59989	6.93796574	0.41794639
51 CS11-19-60b	1092.59989	6.93796574	0.41794639
106 10GD49-35	1093	8.05	0.34
106 10GD49-71	1093	9.84	0.24
107 WPG90/4_7	1093	4.86	0.26
52 CP03-39-14	1093.46807	4.02643104	0.26022753
52 CP03-39-14	1093.46807	4.02643104	0.26022753
107 DL90/7_9	1094	8.47	0.19
119 10.1	1094	10.5241	0.4855
51 BBF-11-70	1094.32673	11.7036498	1.35492825
51 BBF-11-70	1094.32673	11.7036498	1.35492825
52 CP04-2-1	1094.664	8.20431142	0.19672239
52 CP04-2-1	1094.664	8.20431142	0.19672239
51 CS12-23-33	1094.68582	5.48220801	0.56138525
51 CS12-23-33	1094.68582	5.48220801	0.56138525
35 07LSC6_24.1	1095	5.6	0.2
35 07LSC6_24.1	1095	5.6	0.2
55 9-23-85-5	1095	8.55	
55 9-23-85-5	1095	8.55	
106 10GD48-61	1095	5.69	0.28

121 15	1095	7.71	0.31
52 CP03-51-9	1095.37277	5.87932819	0.19057933
52 CP03-51-9	1095.37277	5.87932819	0.19057933
20 KK1. 10	1096	6.1	0.3
20 KK1. 10	1096	6.1	0.3
20 KK1. 10	1096	6.1	0.3
43 AM86-6	1096	7.75	
43 AM86-6	1096	7.75	
43 NOFO-1	1096	8.47	
43 NOFO-1	1096	8.47	
47 PMOG_P-21	1096	4.1	0.4
47 PMOG_P-21	1096	4.1	0.4
55 AM86-13	1096	8.24	
55 AM86-13	1096	8.24	
55 AM86-3	1096	8.83	
55 AM86-3	1096	8.83	
56 AM87-6	1096	6.48	
56 AM87-6	1096	6.48	
106 10GD49-105	1096	8.26	0.15
107 IT/5_19	1096	8.33	0.23
52 BBF-29-3	1096.02405	6.79508285	0.82661676
52 BBF-29-3	1096.02405	6.79508285	0.82661676
106 10GD49-96	1097	7.9	0.27
106 10GD49-9	1098	7.69	0.32
51 CS12-17-46	1098.33306	6.75175993	0.76998645
51 CS12-17-46	1098.33306	6.75175993	0.76998645
119 21.1	1099	9	0.3495
18 ORG2-anu-zrn-	1099.57913	8.59109333	0.5474635
18 ORG2-anu-zrn-	1099.57913	8.59109333	0.5474635
47 PMOG-233_33-	1100	10.3	0.3
47 PMOG-233_33-	1100	10.3	0.3
56 S-25-82 200R	1100	5.97	
56 S-25-82 200R	1100	5.97	
56 B-15	1100	7.48	
56 B-15	1100	7.48	
56 Z9 200	1100	7.49	
56 Z9 200	1100	7.49	
56 WP85 200	1100	7.56	
56 WP85 200	1100	7.56	
18 ORG2-anu-zrn-	1100.31548	8.14667812	0.92474863
18 ORG2-anu-zrn-	1100.31548	8.14667812	0.92474863
56 Z2b 200	1101	6.93	
56 Z2b 200	1101	6.93	
56 Z3 200	1101	7.6	
56 Z3 200	1101	7.6	

56 Z2a 200	1101	7.91	
56 Z2a 200	1101	7.91	
56 Z4 200	1101	8.14	
56 Z4 200	1101	8.14	
107 WPG90/4_16	1101	6.48	0.23
51 CS11-13_35	1102.2097	7.00222636	0.22823247
51 CS11-13_35	1102.2097	7.00222636	0.22823247
18 ORG2-anu-zrn-	1102.29227	8.36596514	0.56664443
18 ORG2-anu-zrn-	1102.29227	8.36596514	0.56664443
35 07LSC5_67.1	1103	6.4	0.3
35 07LSC5_67.1	1103	6.4	0.3
119 12.1	1103	11	0.5003
51 CS11-13_30	1103.32638	5.76056023	0.23121868
51 CS11-13_30	1103.32638	5.76056023	0.23121868
51 CS12-24-18	1103.70797	6.10588453	0.62525054
51 CS12-24-18	1103.70797	6.10588453	0.62525054
37 07SC65@7	1104	8.72	0.46
37 07SC65@7	1104	8.72	0.46
56 FFAN NM2	1104	7.97	
56 FFAN NM2	1104	7.97	
59 M0-959	1104	12.9	0.3
59 M0-959	1104	12.9	0.3
106 10GD48-32	1105	5.07	0.25
106 10GD49-47	1105	11.39	0.24
51 CS11-20-22	1105.44397	6.21249524	0.43104958
51 CS11-20-22	1105.44397	6.21249524	0.43104958
51 CS12-24-7	1106.8777	7.62959602	0.68133255
51 CS12-24-7	1106.8777	7.62959602	0.68133255
52 CP03-51-73	1106.93041	6.51206554	0.20104786
52 CP03-51-73	1106.93041	6.51206554	0.20104786
35 07LSC5_52.3	1107	8.7	0.2
35 07LSC5_52.3	1107	8.7	0.2
119 20.1	1107	6	0.6674
51 CS12-23-4	1107.10624	5.35308553	0.54816294
51 CS12-23-4	1107.10624	5.35308553	0.54816294
35 07LSC6_2.1	1108	4.2	0.3
35 07LSC6_2.1	1108	4.2	0.3
106 10GD48-11	1108	5.38	0.25
51 CS11-20-33	1108.75134	5.70969159	0.37500712
51 CS11-20-33	1108.75134	5.70969159	0.37500712
55 CGAB	1109	6.04	
55 CGAB	1109	6.04	
106 10GD49-108	1109	8.66	0.21
106 10GD48-16	1110	8.62	0.21
18 ZMB2-anu-zrn-	1110.18767	6.39107303	0.60093647

18 ZMB2-anu-zrn-	1110.18767	6.39107303	0.60093647
106 10GD49-66	1112	6.9	0.35
55 AC85-7	1113	8.36	
55 AC85-7	1113	8.36	
107 WPG90/4_22	1113	5.86	0.14
51 BBF-11-99	1113.21168	6.13921549	0.55428803
51 BBF-11-99	1113.21168	6.13921549	0.55428803
51 BBF-11-80	1114.3066	4.70597752	0.48189823
51 BBF-11-80	1114.3066	4.70597752	0.48189823
51 CS11-13_57	1114.3872	8.20238692	0.1965055
51 CS11-13_57	1114.3872	8.20238692	0.1965055
35 07LSC5_43.1	1115	7.6	0.3
35 07LSC5_43.1	1115	7.6	0.3
56 PMO 200	1115	7.46	
56 PMO 200	1115	7.46	
51 CS11-19-16	1115.72129	7.04216399	0.80317642
51 CS11-19-16	1115.72129	7.04216399	0.80317642
35 07LSC5_29.2	1116	8.1	0.3
35 07LSC5_29.2	1116	8.1	0.3
35 07LSC5_22.2	1117	6.2	0.2
35 07LSC5_22.2	1117	6.2	0.2
37 07SC65@9	1117	9.54	0.21
37 07SC65@9	1117	9.54	0.21
52 BBF-29-74	1117.73499	6.7567669	0.74347131
52 BBF-29-74	1117.73499	6.7567669	0.74347131
51 CS11-19-55b	1117.9082	5.69986308	0.41250769
51 CS11-19-55b	1117.9082	5.69986308	0.41250769
10 2436-71	1118	6.1	0.4
10 2436-71	1118	6.1	0.4
20 BB6.6	1118	7.6	0.2
20 BB6.6	1118	7.6	0.2
20 BB6.6	1118	7.6	0.2
52 BBF-29-19	1118.16532	5.17973629	0.3552512
52 BBF-29-19	1118.16532	5.17973629	0.3552512
51 BBF-11-43	1118.29315	6.76013097	0.55033657
51 BBF-11-43	1118.29315	6.76013097	0.55033657
52 CP04-2-65	1118.47847	3.84715942	0.16103045
52 CP04-2-65	1118.47847	3.84715942	0.16103045
56 2708	1119	8.32	
56 2708	1119	8.32	
60 vgt-096	1119	6.4	0.2
60 vgt-096	1119	6.4	0.2
119 19.1	1119	7	0.3758
51 CS11-19-48	1119.028	5.51760452	0.5650099
51 CS11-19-48	1119.028	5.51760452	0.5650099

10 1774-10a	1120	8.5	0.6
10 1774-10a	1120	8.5	0.6
51 CS11-20-46	1120.59944	5.77381002	0.48816203
51 CS11-20-46	1120.59944	5.77381002	0.48816203
51 CS11-19-10	1120.83578	6.05086591	0.53451896
51 CS11-19-10	1120.83578	6.05086591	0.53451896
56 2735	1121	7.57	
56 2735	1121	7.57	
107 IT/5_1	1121	7.34	0.17
119 2.1	1121	6.0189	0.4998
51 CS11-1-13	1121.51156	5.81124598	0.59507917
51 CS11-1-13	1121.51156	5.81124598	0.59507917
51 CS11-20-54	1121.69443	4.4292865	0.45356471
51 CS11-20-54	1121.69443	4.4292865	0.45356471
51 CS11-19-47b	1121.90521	5.8984909	0.60401316
51 CS11-19-47b	1121.90521	5.8984909	0.60401316
51 CS12-25-6	1122.55395	7.13905018	0.64417421
51 CS12-25-6	1122.55395	7.13905018	0.64417421
35 07LSC5_58.3	1124	7.2	0.4
35 07LSC5_58.3	1124	7.2	0.4
10 2346-40	1125	5.8	0.4
10 2346-40	1125	5.8	0.4
44 9-23-85-7	1125	8.19	
44 9-23-85-7	1125	8.19	
60 vgt-142	1125	7.3	0.2
60 vgt-142	1125	7.3	0.2
51 CS12-25-27	1125.08654	6.61948909	0.6291216
51 CS12-25-27	1125.08654	6.61948909	0.6291216
52 CP04-27-73	1125.4411	6.86338873	0.22179327
52 CP04-27-73	1125.4411	6.86338873	0.22179327
20 KK1.5	1126	9.9	0.4
20 KK1.5	1126	9.9	0.4
20 KK1.5	1126	9.9	0.4
52 CP04-2-62	1126.47073	5.42384083	0.16137595
52 CP04-2-62	1126.47073	5.42384083	0.16137595
10 2346-19	1127	6.8	0.5
10 2346-19	1127	6.8	0.5
107 IT/5_7	1127	7.64	0.27
56 AR77 -200	1128	7.04	
56 AR77 -200	1128	7.04	
56 P52 200	1128	7.4	
56 P52 200	1128	7.4	
51 CS11-18-7	1128.21014	6.48342941	0.47520486
51 CS11-18-7	1128.21014	6.48342941	0.47520486
106 10GD49-61	1129	8.31	0.2

65 BB-86 11	1130	5.63	0.24
65 BB-86 11	1130	5.63	0.24
52 BBF-29-28	1130.00183	6.08940249	0.5408182
52 BBF-29-28	1130.00183	6.08940249	0.5408182
51 CS11-19-2	1130.17312	5.1419988	0.30975648
51 CS11-19-2	1130.17312	5.1419988	0.30975648
10 1746-56	1131	6	0.5
10 1746-56	1131	6	0.5
51 CS11-1-18	1133.92086	7.13722962	0.69854806
51 CS11-1-18	1133.92086	7.13722962	0.69854806
55 AC85-6	1134	7.62	
55 AC85-6	1134	7.62	
52 CP04-27-25	1134.52819	4.25206557	0.21448987
52 CP04-27-25	1134.52819	4.25206557	0.21448987
47 PMOG_P-13	1135	8.2	0.4
47 PMOG_P-13	1135	8.2	0.4
55 AC85-10	1135	8.29	
55 AC85-10	1135	8.29	
107 DL90/7_14	1135	9.32	0.21
51 CS12-17-32	1135.17518	6.19979147	0.58373249
51 CS12-17-32	1135.17518	6.19979147	0.58373249
18 CNG2-anu-zrn-	1135.561	7.97296371	0.56487746
18 CNG2-anu-zrn-	1135.561	7.97296371	0.56487746
18 ORG2-anu-zrn-	1136.08837	9.30507	0.55202273
18 ORG2-anu-zrn-	1136.08837	9.30507	0.55202273
18 ORG2-anu-zrn-	1136.16075	9.31963827	0.76983475
18 ORG2-anu-zrn-	1136.16075	9.31963827	0.76983475
59 MO-1343	1137	6.9	0.2
59 MO-1343	1137	6.9	0.2
18 ORG2-anu-zrn-	1137.42446	9.48360997	0.74612214
18 ORG2-anu-zrn-	1137.42446	9.48360997	0.74612214
51 CS11-20-47	1138.3107	7.63971258	0.83995329
51 CS11-20-47	1138.3107	7.63971258	0.83995329
52 CP03-39-44	1138.72435	7.87643351	0.26892313
52 CP03-39-44	1138.72435	7.87643351	0.26892313
20 HV1. 14	1139	7.2	0.6
20 HV1. 14	1139	7.2	0.6
20 HV1. 14	1139	7.2	0.6
35 07LSC5_58.2	1139	6.9	0.4
35 07LSC5_58.2	1139	6.9	0.4
47 PMOG-441_41-!	1139	7.1	0.3
47 PMOG-441_41-!	1139	7.1	0.3
52 CP03-39-11	1139.05029	7.958955	0.25199533
52 CP03-39-11	1139.05029	7.958955	0.25199533
106 10GD49-100	1140	5.72	0.21

107 WPG90/4_34	1140	6.2	0.18
52 CP04-27-41	1140.99062	5.43943986	0.23274888
52 CP04-27-41	1140.99062	5.43943986	0.23274888
51 CS11-1-5	1142.13962	6.61520354	0.49092306
51 CS11-1-5	1142.13962	6.61520354	0.49092306
51 BBF-11-42	1142.59157	5.73120661	0.53706567
51 BBF-11-42	1142.59157	5.73120661	0.53706567
55 AC85-11	1143	7.69	
55 AC85-11	1143	7.69	
55 AC85-11	1143	7.71	
55 AC85-11	1143	7.71	
51 CS11-6_15	1143.36757	6.96386863	0.23190918
51 CS11-6_15	1143.36757	6.96386863	0.23190918
55 AM87-11	1144	6.79	
55 AM87-11	1144	6.79	
60 VGt-549	1144	8.1	0.4
60 VGt-549	1144	8.1	0.4
51 CS11-19-31	1144.97149	4.92243962	0.40087232
51 CS11-19-31	1144.97149	4.92243962	0.40087232
44 96MR21	1145	9.38	
44 96MR21	1145	9.38	
52 CP03-39-54	1145.11481	6.91218244	0.21150917
52 CP03-39-54	1145.11481	6.91218244	0.21150917
44 EC84-246	1146	9.65	
44 EC84-246	1146	9.65	
55 AC85-2	1146	8.59	
55 AC85-2	1146	8.59	
56 PTG-4	1146	5.54	
56 PTG-4	1146	5.54	
59 M0-990	1146	8.5	0.3
59 M0-990	1146	8.5	0.3
60 VGt-448	1146	5.1	0.4
60 VGt-448	1146	5.1	0.4
30 n2539-rpt-18	1147	8.76	0.3
30 n2539-rpt-18	1147	8.76	0.3
55 AM86-15	1147	8.73	
55 AM86-15	1147	8.73	
107 IT/5_15	1147	6.69	0.16
18 ORG2-anu-zrn-	1148.95093	7.28335345	0.928985
18 ORG2-anu-zrn-	1148.95093	7.28335345	0.928985
44 DF178	1149	8.34	
44 DF178	1149	8.34	
18 ORG2-anu-zrn-	1149.47176	6.72467583	0.73890942
18 ORG2-anu-zrn-	1149.47176	6.72467583	0.73890942
55 AM86-9	1150	7.67	

55 AM86-9	1150	7.67	
56 Pacoima src :	1150	5.33	
56 Pacoima src :	1150	5.33	
56 Pacoima	1150	5.74	
56 Pacoima	1150	5.74	
119 44.1	1150	11	0.4925
51 CS11-18-57	1150.17776	6.74663638	0.53976561
51 CS11-18-57	1150.17776	6.74663638	0.53976561
37 07SC65@79	1151	5.68	0.39
37 07SC65@79	1151	5.68	0.39
47 PMOG_P-44	1151	7.5	0.4
47 PMOG_P-44	1151	7.5	0.4
106 10GD48-65	1151	8.1	0.25
51 BBF-11-49	1151.87528	4.86599699	0.34288043
51 BBF-11-49	1151.87528	4.86599699	0.34288043
60 VGt-164	1152	8.5	0.6
60 VGt-164	1152	8.5	0.6
52 BBF-29-30	1152.25374	7.40907026	0.93168772
52 BBF-29-30	1152.25374	7.40907026	0.93168772
18 ORG2-anu-zrn-	1152.49236	-1.1895054	0.75406234
18 ORG2-anu-zrn-	1152.49236	-1.1895054	0.75406234
44 93DM152	1153	7.64	
44 93DM152	1153	7.64	
35 07LSC5_62.1	1154	5.8	0.2
35 07LSC5_62.1	1154	5.8	0.2
37 07SC49@97	1154	6.73	0.32
37 07SC49@97	1154	6.73	0.32
56 2800	1154	7.4	
56 2800	1154	7.4	
20 BB1.20	1155	4.3	0.8
20 BB1.20	1155	4.3	0.8
20 BB1.20	1155	4.3	0.8
39 01E1	1155	8.82	
39 01E1	1155	8.82	
39 01E3	1155	8.84	
39 01E4	1155	8.84	
39 01E3	1155	8.84	
39 01E4	1155	8.84	
39 01E2	1155	8.87	
39 01E2	1155	8.87	
43 98LB3	1155	8.22	
43 98LB3	1155	8.22	
43 98HA2	1155	10.84	
43 98HA2	1155	10.84	
55 AM86-1	1155	8.1	

55 AM86-1	1155	8.1	
51 CS11-6_10	1155.16307	7.10750534	0.2241491
51 CS11-6_10	1155.16307	7.10750534	0.2241491
44 94DM20	1156	6.8	
44 94DM20	1156	6.8	
51 CS11-20-36	1156.35092	5.64772234	0.34022151
51 CS11-20-36	1156.35092	5.64772234	0.34022151
51 CS12-17-30	1156.50477	7.04041934	0.65730736
51 CS12-17-30	1156.50477	7.04041934	0.65730736
52 CP04-27-45	1156.51335	11.6103851	0.2189359
52 CP04-27-45	1156.51335	11.6103851	0.2189359
44 93DM131a	1157	7.9	
44 93DM131a	1157	7.9	
55 AM86-17	1157	7.78	
55 AM86-17	1157	7.78	
106 10GD48-35	1157	5.06	0.27
51 BBF-11-35	1158.89117	9.63579238	0.77539406
51 BBF-11-35	1158.89117	9.63579238	0.77539406
51 CS12-24-2	1159.05657	5.42031105	0.49882845
51 CS12-24-2	1159.05657	5.42031105	0.49882845
35 07LSC5_58.1	1160	7.5	0.3
35 07LSC5_58.1	1160	7.5	0.3
44 94DM53	1160	11.86	
44 94DM53	1160	11.86	
60 vgt-080	1160	8.9	0.2
60 vgt-080	1160	8.9	0.2
51 CS11-20-24	1161.30483	7.02187235	0.57387865
51 CS11-20-24	1161.30483	7.02187235	0.57387865
51 CS12-23-24	1161.32085	6.36125037	0.57133791
51 CS12-23-24	1161.32085	6.36125037	0.57133791
10 2641-55	1162	6.1	0.3
10 2641-55	1162	6.1	0.3
30 n2539-rpt-b60	1162	4.79	0.29
30 n2539-rpt-b60	1162	4.79	0.29
37 07SC49@84	1162	7.53	0.26
37 07SC49@84	1162	7.53	0.26
44 93DM19	1162	7.96	
44 93DM19	1162	7.96	
44 86DM9c	1162	11.13	
44 86DM9c	1162	11.13	
56 V76 200	1162	6.58	
56 V76 200	1162	6.58	
107 IT/18_10	1162	7.16	0.1
52 CP04-45-34	1162.28126	7.13047292	0.25852815
52 CP04-45-34	1162.28126	7.13047292	0.25852815

51 BBF-11-103	1162.80309	6.02690561	0.74500842
51 BBF-11-103	1162.80309	6.02690561	0.74500842
10 2641-15	1163	6.2	0.5
10 2641-15	1163	6.2	0.5
37 07SC65@13	1164	5.56	0.43
37 07SC65@13	1164	5.56	0.43
44 CQA925B	1164	8.13	
44 CQA925B	1164	8.13	
44 CQA925A	1164	8.36	
44 CQA925A	1164	8.36	
44 AM87-5	1164	11.05	
44 AM87-5	1164	11.05	
107 WPG90/4_35	1164	8.32	0.14
51 CS11-20-15	1164.11444	4.08377647	0.34428353
51 CS11-20-15	1164.11444	4.08377647	0.34428353
51 CS11-19-49b	1164.24017	3.58926839	0.35598353
51 CS11-19-49b	1164.24017	3.58926839	0.35598353
51 CS11-13_10	1164.36051	8.09837301	0.21392737
51 CS11-13_10	1164.36051	8.09837301	0.21392737
52 CP03-39-49	1164.45745	7.00120562	0.19890868
52 CP03-39-49	1164.45745	7.00120562	0.19890868
52 CP03-51-66	1164.91218	4.85194279	0.17699852
52 CP03-51-66	1164.91218	4.85194279	0.17699852
44 CQA1427	1165	6.8	
44 CQA1427	1165	6.8	
44 96FN1	1165	8.19	
44 96FN1	1165	8.19	
44 96MR43	1165	8.39	
44 96MR43	1165	8.39	
44 CQA3565B	1165	8.86	
44 CQA3565B	1165	8.86	
44 CQA1085	1165	9.23	
44 CQA1085	1165	9.23	
44 LH86-63	1165	11.15	
44 LH86-63	1165	11.15	
51 CS12-25-43	1165.2099	6.16410148	0.45129856
51 CS12-25-43	1165.2099	6.16410148	0.45129856
52 CP03-39-2	1165.5899	4.02843156	0.31573283
52 CP03-39-2	1165.5899	4.02843156	0.31573283
35 07LSC6_13.1	1166	6.1	0.5
35 07LSC6_13.1	1166	6.1	0.5
44 LH87-31	1166	10.92	
44 LH87-31	1166	10.92	
44 LH87-64	1166	13.01	
44 LH87-64	1166	13.01	

52 CP04-2-2	1166.55822	5.99261424	0.19768459
52 CP04-2-2	1166.55822	5.99261424	0.19768459
51 CS11-20-10	1166.83131	7.04697209	0.76871329
51 CS11-20-10	1166.83131	7.04697209	0.76871329
44 CQA008	1167	7.43	
44 CQA008	1167	7.43	
52 CP04-27-42	1167.73078	6.79036571	0.2175394
52 CP04-27-42	1167.73078	6.79036571	0.2175394
59 MO-1062	1168	7	0.3
59 MO-1062	1168	7	0.3
51 CS11-19-56	1168.35484	6.45284836	0.49476097
51 CS11-19-56	1168.35484	6.45284836	0.49476097
18 ORG2-anu-zrn-	1169.10557	8.30502377	0.95033376
18 ORG2-anu-zrn-	1169.10557	8.30502377	0.95033376
52 CP03-39-62	1169.60782	6.28952031	0.19063514
52 CP03-39-62	1169.60782	6.28952031	0.19063514
51 CS12-23-22	1169.69092	5.43119879	0.45327398
51 CS12-23-22	1169.69092	5.43119879	0.45327398
51 CS12-24-13	1170.09612	6.25029576	0.5811856
51 CS12-24-13	1170.09612	6.25029576	0.5811856
52 CP03-39-43	1170.10386	7.87643351	0.26892313
52 CP03-39-43	1170.10386	7.87643351	0.26892313
52 CP03-39-13	1170.31858	6.46956719	0.24244238
52 CP03-39-13	1170.31858	6.46956719	0.24244238
51 CS12-17-52	1170.72686	7.09331568	0.71561499
51 CS12-17-52	1170.72686	7.09331568	0.71561499
106 10GD48-58	1171	7.95	0.17
51 CS11-20-37	1171.60424	6.0788039	0.61270469
51 CS11-20-37	1171.60424	6.0788039	0.61270469
37 07SC65@20	1172	6.4	0.39
37 07SC65@20	1172	6.4	0.39
55 AC85-5	1172	4.61	
55 AC85-5	1172	4.61	
56 AM87-4	1172	6.46	
56 AM87-4	1172	6.46	
56 AM87-1	1172	9.07	
56 AM87-1	1172	9.07	
56 TC-16	1172	11.51	
56 TC-16	1172	11.51	
51 CS12-24-12	1172.08027	6.72054623	0.51940884
51 CS12-24-12	1172.08027	6.72054623	0.51940884
52 CP04-27-1	1172.91513	5.64250387	0.24777106
52 CP04-27-1	1172.91513	5.64250387	0.24777106
59 MO-947	1173	8.4	0.3
59 MO-947	1173	8.4	0.3

51 CS12-23-17	1173.00615	6.70967991	0.66829703
51 CS12-23-17	1173.00615	6.70967991	0.66829703
51 CS12-24-24	1173.01202	6.22716149	0.56923992
51 CS12-24-24	1173.01202	6.22716149	0.56923992
51 BBF-11-107	1173.12727	7.02045846	0.57847579
51 BBF-11-107	1173.12727	7.02045846	0.57847579
52 BBF-29-12	1173.61946	6.86810554	0.57467985
52 BBF-29-12	1173.61946	6.86810554	0.57467985
51 CS11-20-49	1173.66937	5.44354886	0.44760812
51 CS11-20-49	1173.66937	5.44354886	0.44760812
52 CP04-2-68	1173.9192	7.19798234	0.16158693
52 CP04-2-68	1173.9192	7.19798234	0.16158693
107 DL90/7_15	1174	6.32	0.2
52 BBF-29-36	1174.35026	7.40369616	0.7036603
52 BBF-29-36	1174.35026	7.40369616	0.7036603
51 CS12-24-55	1174.67881	6.38420538	0.59876565
51 CS12-24-55	1174.67881	6.38420538	0.59876565
106 10GD48-84	1175	7.93	0.27
51 CS12-17-60	1175.1524	6.74449928	0.51943281
51 CS12-17-60	1175.1524	6.74449928	0.51943281
18 ORG2-anu-zrn-	1175.27856	7.12227085	0.75536944
18 ORG2-anu-zrn-	1175.27856	7.12227085	0.75536944
18 ORG2-anu-zrn-	1175.81895	8.51438684	0.73978511
18 ORG2-anu-zrn-	1175.81895	8.51438684	0.73978511
44 LH87-30	1176	13.51	
44 LH87-30	1176	13.51	
18 ORG2-anu-zrn-	1176.92286	6.69234939	0.75070804
18 ORG2-anu-zrn-	1176.92286	6.69234939	0.75070804
37 07SC49@38	1177	9.07	0.45
37 07SC49@38	1177	9.07	0.45
51 CS12-23-43	1177.0349	7.22405945	0.69269157
51 CS12-23-43	1177.0349	7.22405945	0.69269157
51 CS11-19-4	1179.31836	7.17365823	0.73995558
51 CS11-19-4	1179.31836	7.17365823	0.73995558
51 CS11-19-13	1179.71633	4.70649333	0.33481521
51 CS11-19-13	1179.71633	4.70649333	0.33481521
51 CS12-24-49	1179.90007	6.49149512	0.60065309
51 CS12-24-49	1179.90007	6.49149512	0.60065309
51 CS12-25-1	1180.74232	5.71174694	0.62697152
51 CS12-25-1	1180.74232	5.71174694	0.62697152
35 07LSC6_50.1	1181	5.4	0.2
35 07LSC6_50.1	1181	5.4	0.2
121 19	1181	7.44	0.25
18 ORG2-anu-zrn-	1182.15784	6.46750356	0.55747855
18 ORG2-anu-zrn-	1182.15784	6.46750356	0.55747855

51 CS11-20-25	1182.95118	6.34478264	0.53419502
51 CS11-20-25	1182.95118	6.34478264	0.53419502
19 08LL04 53	1183	6.1	0.21
19 08LL04 53	1183	6.1	0.21
20 KK1.7	1183	7.7	0.9
20 KK1.7	1183	7.7	0.9
20 KK1.7	1183	7.7	0.9
47 PMOG_P-60	1183	6.3	0.4
47 PMOG_P-60	1183	6.3	0.4
59 MO-917	1183	7	0.3
59 MO-917	1183	7	0.3
18 ORG2-anu-zrn-	1183.28975	6.39053878	0.55213428
18 ORG2-anu-zrn-	1183.28975	6.39053878	0.55213428
51 CS12-23-45	1183.40128	9.38502057	0.84723946
51 CS12-23-45	1183.40128	9.38502057	0.84723946
51 BBF-11-83	1183.96391	5.43855864	0.40635608
51 BBF-11-83	1183.96391	5.43855864	0.40635608
55 TOE	1184	8.3	
55 TOE	1184	8.3	
52 BBF-29-46	1184.16021	6.65055952	0.64687132
52 BBF-29-46	1184.16021	6.65055952	0.64687132
51 CS11-18-45	1184.42971	7.90622256	0.81502237
51 CS11-18-45	1184.42971	7.90622256	0.81502237
51 CS11-18-35	1184.55668	6.25849838	0.48768255
51 CS11-18-35	1184.55668	6.25849838	0.48768255
51 CS11-20-63	1185.87948	6.83725256	0.68228527
51 CS11-20-63	1185.87948	6.83725256	0.68228527
20 HV1. v15	1186	5.5	0.4
20 HV1. v15	1186	5.5	0.4
20 HV1. v15	1186	5.5	0.4
119 43.1	1186	7	0.3175
52 CP03-39-83	1186.21993	7.25677216	0.23812619
52 CP03-39-83	1186.21993	7.25677216	0.23812619
51 CS12-25-20	1186.35456	6.54187422	0.51040968
51 CS12-25-20	1186.35456	6.54187422	0.51040968
51 CS12-17-27	1186.78468	6.24352763	0.53706038
51 CS12-17-27	1186.78468	6.24352763	0.53706038
51 CS12-24-47	1186.81447	6.74849146	0.68759116
51 CS12-24-47	1186.81447	6.74849146	0.68759116
35 07LSC6_30.1	1187	5.4	0.3
35 07LSC6_30.1	1187	5.4	0.3
51 CS12-17-26	1187.95931	6.38274792	0.81475469
51 CS12-17-26	1187.95931	6.38274792	0.81475469
18 ORG2-anu-zrn-	1187.98885	7.75391093	0.74548988
18 ORG2-anu-zrn-	1187.98885	7.75391093	0.74548988

51 CS11-18-32	1188.03842	4.92606302	0.44810122
51 CS11-18-32	1188.03842	4.92606302	0.44810122
35 07LSC5_10.1	1189	5.8	0.5
35 07LSC5_10.1	1189	5.8	0.5
35 07LSC5_22.1	1189	6.3	0.3
35 07LSC5_22.1	1189	6.3	0.3
119 47.1	1189	5.1747	0.3658
10 2606-03	1190	8.5	0.4
10 2606-03	1190	8.5	0.4
37 07SC65@49	1190	8.06	0.29
37 07SC65@49	1190	8.06	0.29
52 BBF-29-52	1191.27374	5.99500952	0.45196699
52 BBF-29-52	1191.27374	5.99500952	0.45196699
51 CS11-20-68	1192.69079	6.12161384	0.46297332
51 CS11-20-68	1192.69079	6.12161384	0.46297332
51 CS11-1-10	1192.93207	7.25549784	0.56533193
51 CS11-1-10	1192.93207	7.25549784	0.56533193
35 07LSC6_35.1	1194	4.8	0.4
35 07LSC6_35.1	1194	4.8	0.4
18 ZMB2-anu-zrn-	1194.09163	7.59520923	0.55947845
18 ZMB2-anu-zrn-	1194.09163	7.59520923	0.55947845
51 CS12-25-18	1194.33962	4.79386332	0.35781023
51 CS12-25-18	1194.33962	4.79386332	0.35781023
51 CS12-23-29	1194.44977	4.85231788	0.46692168
51 CS12-23-29	1194.44977	4.85231788	0.46692168
10 2641-22	1195	6.6	0.5
10 2641-22	1195	6.6	0.5
52 CP04-2-63	1195.13956	5.45483457	0.16122904
52 CP04-2-63	1195.13956	5.45483457	0.16122904
51 CS12-23-50	1195.50292	5.87597516	0.55524342
51 CS12-23-50	1195.50292	5.87597516	0.55524342
52 BBF-29-50	1195.94174	6.59030896	0.52942028
52 BBF-29-50	1195.94174	6.59030896	0.52942028
37 07SC49@40	1196	5.66	0.25
37 07SC49@40	1196	5.66	0.25
52 CP04-27-66	1196.46161	7.8702061	0.22307339
52 CP04-27-66	1196.46161	7.8702061	0.22307339
51 CS11-19-6	1196.51719	5.08320427	0.47227263
51 CS11-19-6	1196.51719	5.08320427	0.47227263
51 CS12-23-34	1196.98629	6.96233455	0.68460419
51 CS12-23-34	1196.98629	6.96233455	0.68460419
47 PMOG_P-23	1197	9.5	0.4
47 PMOG_P-23	1197	9.5	0.4
107 DL90/7_23	1197	8.94	0.38
51 BBF-11-93	1197.27922	6.72755697	0.5212254

51 BBF-11-93	1197.27922	6.72755697	0.5212254
51 BBF-11-90	1197.83803	6.33890797	0.54770992
51 BBF-11-90	1197.83803	6.33890797	0.54770992
51 BBF-11-95	1198.05094	9.36057089	0.70858776
51 BBF-11-95	1198.05094	9.36057089	0.70858776
51 CS11-18-1	1198.2366	5.99453708	0.64617239
51 CS11-18-1	1198.2366	5.99453708	0.64617239
51 CS11-18-17	1198.92036	5.78536916	0.49543709
51 CS11-18-17	1198.92036	5.78536916	0.49543709
51 CS11-20-35	1199.02636	7.52846289	0.69211355
51 CS11-20-35	1199.02636	7.52846289	0.69211355
51 BBF-11-44	1199.34283	6.5925464	0.63663749
51 BBF-11-44	1199.34283	6.5925464	0.63663749
51 BBF-11-104	1199.3626	7.39622205	0.59294629
51 BBF-11-104	1199.3626	7.39622205	0.59294629
52 CP03-39-21	1199.48074	8.82818133	0.24053652
52 CP03-39-21	1199.48074	8.82818133	0.24053652
10 2641-07	1200	6.4	0.5
10 2641-07	1200	6.4	0.5
20 BB1.31	1200	4.9	0.5
20 BB1.31	1200	4.9	0.5
20 BB1.31	1200	4.9	0.5
52 CP03-51-31	1200.21692	9.15305624	0.2250305
52 CP03-51-31	1200.21692	9.15305624	0.2250305
51 CS11-19-50b	1200.92176	6.38452883	0.56858013
51 CS11-19-50b	1200.92176	6.38452883	0.56858013
51 CS11-19-11	1201.66607	6.05382509	0.48814103
51 CS11-19-11	1201.66607	6.05382509	0.48814103
51 CS11-19-14	1201.73037	6.74899048	0.63655928
51 CS11-19-14	1201.73037	6.74899048	0.63655928
51 CS11-20-4	1202.30925	8.01172105	0.6837563
51 CS11-20-4	1202.30925	8.01172105	0.6837563
51 CS11-18-53	1202.63138	5.81835752	0.51385099
51 CS11-18-53	1202.63138	5.81835752	0.51385099
35 07LSC5_1.1	1203	6.4	0.3
35 07LSC5_1.1	1203	6.4	0.3
51 CS11-19-23	1203.11445	6.03017445	0.46328522
51 CS11-19-23	1203.11445	6.03017445	0.46328522
51 CS11-20-27	1203.11712	6.61190353	0.77736019
51 CS11-20-27	1203.11712	6.61190353	0.77736019
18 ORG2-anu-zrn-	1203.48188	8.84949913	0.55021942
18 ORG2-anu-zrn-	1203.48188	8.84949913	0.55021942
47 PMOG-441_41-!	1204	7	0.3
47 PMOG-441_41-!	1204	7	0.3
51 CS11-19-43	1204.31208	7.36129051	0.67012932

51 CS11-19-43	1204.31208	7.36129051	0.67012932
51 CS11-13_36	1204.93856	6.79519866	0.21412907
51 CS11-13_36	1204.93856	6.79519866	0.21412907
51 CS11-20-64	1206.77001	7.0640376	0.74070049
51 CS11-20-64	1206.77001	7.0640376	0.74070049
51 CS11-20-29	1206.8061	7.28743525	0.74765238
51 CS11-20-29	1206.8061	7.28743525	0.74765238
55 ANT	1207	7.79	
55 ANT	1207	7.79	
51 CS11-19-38	1207.29514	6.64500945	0.56299338
51 CS11-19-38	1207.29514	6.64500945	0.56299338
52 BBF-29-49	1207.60675	7.00469341	0.54382433
52 BBF-29-49	1207.60675	7.00469341	0.54382433
51 CS11-20-44	1207.79884	6.58889987	0.6156527
51 CS11-20-44	1207.79884	6.58889987	0.6156527
60 VGt-514	1208	6.7	0.2
60 VGt-514	1208	6.7	0.2
52 BBF-29-13	1208.04723	6.34677873	0.48414054
52 BBF-29-13	1208.04723	6.34677873	0.48414054
52 CP03-51-12	1208.93749	6.11891806	0.18528593
52 CP03-51-12	1208.93749	6.11891806	0.18528593
51 CS11-19-56b	1209.05056	6.7402694	0.61074766
51 CS11-19-56b	1209.05056	6.7402694	0.61074766
51 BBF-11-74b	1209.54383	4.97877984	0.32822928
51 BBF-11-74b	1209.54383	4.97877984	0.32822928
51 CS11-20-60	1210.19726	7.16167767	0.82905843
51 CS11-20-60	1210.19726	7.16167767	0.82905843
106 IOGD49-38	1211	7.39	0.23
51 CS11-20-19	1211.77984	6.10425403	0.53840484
51 CS11-20-19	1211.77984	6.10425403	0.53840484
51 CS11-19-18	1213.19697	6.3687357	0.55046174
51 CS11-19-18	1213.19697	6.3687357	0.55046174
51 CS11-18-5	1214.16382	10.6944187	0.8537747
51 CS11-18-5	1214.16382	10.6944187	0.8537747
52 BBF-29-8	1214.67082	6.42896499	0.51221046
52 BBF-29-8	1214.67082	6.42896499	0.51221046
107 IT/5_22	1215	6.39	0.25
51 BBF-11-82	1215.85656	7.24352131	0.5337994
51 BBF-11-82	1215.85656	7.24352131	0.5337994
51 CS11-20-51	1215.91381	7.71709321	0.71847861
51 CS11-20-51	1215.91381	7.71709321	0.71847861
51 CS11-20-20	1216.4946	6.58581028	0.59093767
51 CS11-20-20	1216.4946	6.58581028	0.59093767
51 CS11-6_37	1217.03743	5.77223451	0.26040305
51 CS11-6_37	1217.03743	5.77223451	0.26040305

51 BBF-11-69	1217.9882	6.10895627	0.5763368
51 BBF-11-69	1217.9882	6.10895627	0.5763368
60 VGt-384	1218	6.5	0.4
60 VGt-384	1218	6.5	0.4
56 AC85-3	1219	5.07	
56 AC85-3	1219	5.07	
18 ORG2-anu-zrn-	1219.88446	7.3517014	0.55937895
18 ORG2-anu-zrn-	1219.88446	7.3517014	0.55937895
35 07LSC6_46.1	1220	6	0.6
35 07LSC6_46.1	1220	6	0.6
51 CS12-17-37	1220.57953	4.85370483	0.34190273
51 CS12-17-37	1220.57953	4.85370483	0.34190273
51 CS12-24-44	1220.62911	6.49289976	0.51251672
51 CS12-24-44	1220.62911	6.49289976	0.51251672
52 BBF-29-54	1220.80057	7.45578338	0.71587829
52 BBF-29-54	1220.80057	7.45578338	0.71587829
59 M0-927	1221	6.3	0.3
59 M0-927	1221	6.3	0.3
102 DC1135	1221	4.99	0.11
107 WPG90/4_2	1221	6.18	0.18
51 CS11-20-70	1221.14796	7.02045846	0.64273354
51 CS11-20-70	1221.14796	7.02045846	0.64273354
35 07LSC3_36.1	1222	5	0.2
35 07LSC3_36.1	1222	5	0.2
18 ORG2-anu-zrn-	1222.32403	6.11133991	0.5541712
18 ORG2-anu-zrn-	1222.32403	6.11133991	0.5541712
47 PMOG-441_41-;	1223	7.1	0.3
47 PMOG-441_41-;	1223	7.1	0.3
106 10GD48-107	1223	5.6	0.29
30 n2539-rpt-b2:	1225	6.94	0.27
30 n2539-rpt-b2:	1225	6.94	0.27
60 VGt-366	1225	4.8	0.4
60 VGt-366	1225	4.8	0.4
52 CP03-51-10	1226.10942	6.71464153	0.1918757
52 CP03-51-10	1226.10942	6.71464153	0.1918757
52 BBF-29-27	1226.12294	5.8285339	0.52102426
52 BBF-29-27	1226.12294	5.8285339	0.52102426
52 BBF-29-38	1226.6506	5.49097474	0.57679492
52 BBF-29-38	1226.6506	5.49097474	0.57679492
51 CS11-19-58	1227.6302	6.82786582	0.72397217
51 CS11-19-58	1227.6302	6.82786582	0.72397217
52 CP04-2-57	1227.67393	8.16778638	0.16113287
52 CP04-2-57	1227.67393	8.16778638	0.16113287
51 CS11-20-59	1228.02133	5.70688348	0.44148226
51 CS11-20-59	1228.02133	5.70688348	0.44148226

52 BBF-29-35	1229.63659	6.58167129	0.5437846
52 BBF-29-35	1229.63659	6.58167129	0.5437846
18 ORG2-anu-zrn-	1229.82378	4.23777669	0.75172065
18 ORG2-anu-zrn-	1229.82378	4.23777669	0.75172065
20 CM1.9	1231	5.7	0.4
20 CM1.9	1231	5.7	0.4
20 CM1.9	1231	5.7	0.4
51 CS11-20-41	1231.75871	6.41639124	0.48591534
51 CS11-20-41	1231.75871	6.41639124	0.48591534
52 CP04-2-29	1232.45966	4.60517688	0.26181049
52 CP04-2-29	1232.45966	4.60517688	0.26181049
56 AM87-13	1233	6.45	
56 AM87-13	1233	6.45	
52 BBF-29-81	1233.00487	4.43204931	0.3896231
52 BBF-29-81	1233.00487	4.43204931	0.3896231
51 CS11-6_50	1235.06158	5.81127166	0.21608607
51 CS11-6_50	1235.06158	5.81127166	0.21608607
51 CS11-20-57	1235.85631	4.48748209	0.37837088
51 CS11-20-57	1235.85631	4.48748209	0.37837088
52 BBF-29-48	1236.17155	5.99076091	0.71995467
52 BBF-29-48	1236.17155	5.99076091	0.71995467
52 BBF-29-56	1236.20438	7.40130809	0.68914788
52 BBF-29-56	1236.20438	7.40130809	0.68914788
51 CS11-20-67	1236.49087	6.44558509	0.4834221
51 CS11-20-67	1236.49087	6.44558509	0.4834221
52 BBF-29-83	1236.82805	4.52085714	0.4225072
52 BBF-29-83	1236.82805	4.52085714	0.4225072
51 CS12-17-57	1238.45465	5.7927964	0.4857152
51 CS12-17-57	1238.45465	5.7927964	0.4857152
51 CS11-6_47	1238.87972	7.65402548	0.27216583
51 CS11-6_47	1238.87972	7.65402548	0.27216583
52 CP04-45-58	1239.01922	5.19986434	0.23818678
52 CP04-45-58	1239.01922	5.19986434	0.23818678
52 CP03-39-85	1239.15839	7.62286749	0.21594445
52 CP03-39-85	1239.15839	7.62286749	0.21594445
51 CS12-24-46	1239.80618	4.33610685	0.47013518
51 CS12-24-46	1239.80618	4.33610685	0.47013518
44 CQA3565A	1240	6.33	
44 CQA3565A	1240	6.33	
106 10GD48-33	1240	6.25	0.2
107 DL90/7_3	1240	6.24	0.19
106 10GD49-76	1241	6.42	0.47
51 CS12-24-9	1241.30498	6.6441737	0.85376368
51 CS12-24-9	1241.30498	6.6441737	0.85376368
52 CP03-39-77	1241.8113	8.8176786	0.22952176

52 CP03-39-77	1241. 8113	8. 8176786	0. 22952176
52 CP04-2-45	1243. 1069	6. 44563436	0. 1604681
52 CP04-2-45	1243. 1069	6. 44563436	0. 1604681
51 CS11-13_63	1243. 32002	5. 33450323	0. 21796977
51 CS11-13_63	1243. 32002	5. 33450323	0. 21796977
52 BBF-29-65	1243. 395	7. 65820861	0. 70815784
52 BBF-29-65	1243. 395	7. 65820861	0. 70815784
47 PMOG_P-50	1244	8	0. 4
47 PMOG_P-50	1244	8	0. 4
51 CS12-25-44	1244. 37915	8. 00693897	0. 59925765
51 CS12-25-44	1244. 37915	8. 00693897	0. 59925765
51 CS12-25-45	1244. 96987	6. 21998986	0. 44236582
51 CS12-25-45	1244. 96987	6. 21998986	0. 44236582
60 vgt-082	1246	5. 2	0. 2
60 vgt-082	1246	5. 2	0. 2
52 CP03-39-65	1246. 13458	9. 59938214	0. 20968375
52 CP03-39-65	1246. 13458	9. 59938214	0. 20968375
47 PMOG_P-1	1248	6. 6	0. 4
47 PMOG_P-1	1248	6. 6	0. 4
51 CS11-13_41	1248. 68491	6. 47915637	0. 21614512
51 CS11-13_41	1248. 68491	6. 47915637	0. 21614512
119 38. 1	1250	4	0. 5238
51 CS11-6_45	1250. 31982	6. 18813033	0. 24737822
51 CS11-6_45	1250. 31982	6. 18813033	0. 24737822
20 KK1. 1. 5a	1251	7. 1	0. 5
20 KK1. 1. 5a	1251	7. 1	0. 5
20 KK1. 1. 5a	1251	7. 1	0. 5
52 CP03-39-73	1251. 67723	9. 66439907	0. 2780785
52 CP03-39-73	1251. 67723	9. 66439907	0. 2780785
47 PMOG-441_41-'	1252	5. 3	0. 3
47 PMOG-441_41-'	1252	5. 3	0. 3
35 07LSC6_53. 1	1254	5. 2	0. 4
35 07LSC6_53. 1	1254	5. 2	0. 4
47 PMOG_P-37	1254	5. 4	0. 4
47 PMOG_P-37	1254	5. 4	0. 4
52 CP03-51-29	1254. 82141	7. 49893574	0. 17567668
52 CP03-51-29	1254. 82141	7. 49893574	0. 17567668
52 CP03-51-65	1255. 50868	6. 81718	0. 18578753
52 CP03-51-65	1255. 50868	6. 81718	0. 18578753
52 CP04-27-36	1255. 56926	5. 5689807	0. 20422181
52 CP04-27-36	1255. 56926	5. 5689807	0. 20422181
106 10GD49-75	1256	6. 32	0. 28
52 CP03-39-5	1256. 91912	7. 34679561	0. 19507604
52 CP03-39-5	1256. 91912	7. 34679561	0. 19507604
30 n2539-rpt-b1:	1257	4. 23	0. 26

30 n2539-rpt-bl	1257	4.23	0.26
52 CP03-39-33	1257.15391	7.61986671	0.21197334
52 CP03-39-33	1257.15391	7.61986671	0.21197334
52 CP03-51-41	1257.4867	6.60009857	0.20612633
52 CP03-51-41	1257.4867	6.60009857	0.20612633
51 CS12-25-25	1257.61316	4.99712627	0.51171225
51 CS12-25-25	1257.61316	4.99712627	0.51171225
51 CS11-20-26	1259.85339	5.79600179	0.5066187
51 CS11-20-26	1259.85339	5.79600179	0.5066187
51 CS11-1-4	1260.48128	6.17221038	0.54683518
51 CS11-1-4	1260.48128	6.17221038	0.54683518
52 CP04-2-19	1260.70178	5.64700529	0.21693107
52 CP04-2-19	1260.70178	5.64700529	0.21693107
51 CS11-1-9	1260.83368	7.91079613	0.71127325
51 CS11-1-9	1260.83368	7.91079613	0.71127325
106 10GD49-87	1261	10.74	0.25
51 CS11-19-36	1261.63581	5.16968681	0.46177393
51 CS11-19-36	1261.63581	5.16968681	0.46177393
37 07SC49@94	1262	9.6	0.42
37 07SC49@94	1262	9.6	0.42
59 MO-1113	1262	5.8	0.3
59 MO-1113	1262	5.8	0.3
52 BBF-29-57	1262.11163	5.81194224	0.46854659
52 BBF-29-57	1262.11163	5.81194224	0.46854659
51 CS12-25-40	1262.9423	5.53656915	0.4557908
51 CS12-25-40	1262.9423	5.53656915	0.4557908
51 CS11-6_40	1263.79381	7.2331249	0.22578301
51 CS11-6_40	1263.79381	7.2331249	0.22578301
52 CP03-51-68	1264.88323	8.45229337	0.18027276
52 CP03-51-68	1264.88323	8.45229337	0.18027276
52 CP03-51-50	1265.57698	3.60797615	0.23066285
52 CP03-51-50	1265.57698	3.60797615	0.23066285
52 CP03-39-38	1265.5972	6.49307331	0.20167802
52 CP03-39-38	1265.5972	6.49307331	0.20167802
52 BBF-29-47	1268.37881	5.61836863	0.42241123
52 BBF-29-47	1268.37881	5.61836863	0.42241123
18 ORG2-anu-zrn-	1269.96806	5.98893652	0.54854293
18 ORG2-anu-zrn-	1269.96806	5.98893652	0.54854293
106 10GD48-36	1270	7.76	0.36
52 BBF-29-18	1270.49792	3.29181904	0.22608058
52 BBF-29-18	1270.49792	3.29181904	0.22608058
18 ORG2-anu-zrn-	1274.42575	5.22503347	0.56970136
18 ORG2-anu-zrn-	1274.42575	5.22503347	0.56970136
35 07LSC5_14	1275	6.9	0.3
35 07LSC5_14	1275	6.9	0.3

106 10GD49-104	1275	7.67	0.28
18 CNG2-anu-zrn-	1275.24541	5.43710877	0.60434086
18 CNG2-anu-zrn-	1275.24541	5.43710877	0.60434086
51 CS11-1-17	1276.03816	6.77579337	0.61118456
51 CS11-1-17	1276.03816	6.77579337	0.61118456
35 07LSC6_12.1	1278	7.9	0.2
35 07LSC6_12.1	1278	7.9	0.2
107 IT/12_3	1279	5.24	0.17
52 CP04-27-61	1280.85232	4.84625287	0.20309578
52 CP04-27-61	1280.85232	4.84625287	0.20309578
51 CS11-19-52b	1281.7535	9.06344159	0.95921317
51 CS11-19-52b	1281.7535	9.06344159	0.95921317
51 CS11-6_14	1282.98755	5.85931739	0.22307037
51 CS11-6_14	1282.98755	5.85931739	0.22307037
106 10GD48-17	1283	6.62	0.26
47 PMOG-441_41-!	1284	5.5	0.3
47 PMOG-441_41-!	1284	5.5	0.3
56 AC85-4	1284	9.25	
56 AC85-4	1284	9.25	
106 10GD48-75	1284	6.19	0.25
52 CP03-39-59	1284.10649	6.90718114	0.20557675
52 CP03-39-59	1284.10649	6.90718114	0.20557675
7 EC92-210	1285	5.44	
7 EC92-210	1285	5.44	
52 CP03-51-84	1286.88251	6.90921452	0.1838959
52 CP03-51-84	1286.88251	6.90921452	0.1838959
51 CS11-18-10	1288.79769	4.28896424	0.47001533
51 CS11-18-10	1288.79769	4.28896424	0.47001533
52 BBF-29-63	1288.93629	4.58440794	0.3859309
52 BBF-29-63	1288.93629	4.58440794	0.3859309
107 WPG90/4_30	1292	4.71	0.27
52 CP04-27-56	1293.52955	6.30621309	0.23291855
52 CP04-27-56	1293.52955	6.30621309	0.23291855
52 CP03-39-58	1293.8117	10.2525522	0.2016719
52 CP03-39-58	1293.8117	10.2525522	0.2016719
51 CS12-24-14	1293.8789	7.06788191	0.5666953
51 CS12-24-14	1293.8789	7.06788191	0.5666953
7 EC92-198B	1294	5.77	
7 EC92-198B	1294	5.77	
52 BBF-29-72	1294.04772	6.4026692	0.64429212
52 BBF-29-72	1294.04772	6.4026692	0.64429212
52 CP04-2-41	1295.10119	8.56992667	0.21990807
52 CP04-2-41	1295.10119	8.56992667	0.21990807
52 CP04-2-33	1295.47942	6.10314908	0.22094943
52 CP04-2-33	1295.47942	6.10314908	0.22094943

106 10GD48-19	1297	8.67	0.19
51 CS11-6_17	1297.53517	8.9072182	0.24245637
51 CS11-6_17	1297.53517	8.9072182	0.24245637
7 EC89-130	1300	7.02	
7 EC89-130	1300	7.02	
7 EC93-233	1301	5.84	
7 EC93-233	1301	5.84	
56 AM86-12	1301	6.43	
56 AM86-12	1301	6.43	
107 WPG90/4_33	1301	4.46	0.2
52 CP04-27-52	1302.24686	5.20286529	0.24795643
52 CP04-27-52	1302.24686	5.20286529	0.24795643
52 CP04-2-43	1302.9796	5.88674729	0.16042663
52 CP04-2-43	1302.9796	5.88674729	0.16042663
51 CS11-13_54	1304.34037	4.53939685	0.20157457
51 CS11-13_54	1304.34037	4.53939685	0.20157457
7 EC90-177	1305	6.06	
7 EC90-177	1305	6.06	
51 CS11-6_09	1305.17688	5.3538363	0.24806899
51 CS11-6_09	1305.17688	5.3538363	0.24806899
7 EC92-187	1306	6.19	
7 EC92-187	1306	6.19	
51 BBF-11-47	1307.8401	7.37303186	0.82036073
51 BBF-11-47	1307.8401	7.37303186	0.82036073
52 CP04-27-57	1307.95177	5.86357356	0.22036336
52 CP04-27-57	1307.95177	5.86357356	0.22036336
52 CP03-51-83	1309.11078	4.9729882	0.18879626
52 CP03-51-83	1309.11078	4.9729882	0.18879626
35 09LSC4_42.1	1310	7.9	0.2
35 09LSC4_42.1	1310	7.9	0.2
52 BBF-29-75	1310.99245	6.5829886	0.63933961
52 BBF-29-75	1310.99245	6.5829886	0.63933961
7 HMB93-17	1311	5.94	
7 HMB93-17	1311	5.94	
7 EC92-53A	1311	6.18	
7 EC92-53A	1311	6.18	
7 HMB93-14A	1311	6.2	
7 HMB93-14A	1311	6.2	
7 EC90-179	1311	6.28	
7 EC92-184	1311	6.28	
7 EC90-179	1311	6.28	
7 EC92-184	1311	6.28	
35 07LSC5_65.1	1311	4.5	0.3
35 07LSC5_65.1	1311	4.5	0.3
106 10GD48-44	1311	4.63	0.22

30 n2539-rpt-b4	1312	5.33	0.27
30 n2539-rpt-b4	1312	5.33	0.27
106 10GD49-12	1312	5.66	0.24
106 10GD48-39	1313	6.45	0.28
52 CP04-45-56	1314.47373	4.94678456	0.19817942
52 CP04-45-56	1314.47373	4.94678456	0.19817942
51 CS11-13_49	1315.97429	7.06173432	0.20243037
51 CS11-13_49	1315.97429	7.06173432	0.20243037
52 BBF-29-10	1316.13036	5.79479496	0.51038508
52 BBF-29-10	1316.13036	5.79479496	0.51038508
52 CP03-51-17	1316.66624	8.25972113	0.18534384
52 CP03-51-17	1316.66624	8.25972113	0.18534384
7 NC-8924A	1319	5.05	
7 NC-8924A	1319	5.05	
7 EC94-7c	1319	5.6	
7 EC94-7c	1319	5.6	
7 EC93-157	1319	7.14	
7 EC93-157	1319	7.14	
52 CP04-2-70	1319.0979	6.00222396	0.16146849
52 CP04-2-70	1319.0979	6.00222396	0.16146849
51 CS11-20-43	1320.65044	7.11335744	0.68273515
51 CS11-20-43	1320.65044	7.11335744	0.68273515
52 CP03-39-67	1320.96593	7.8729326	0.18306762
52 CP03-39-67	1320.96593	7.8729326	0.18306762
52 CP03-39-22	1321.03835	6.85516759	0.21110026
52 CP03-39-22	1321.03835	6.85516759	0.21110026
7 EC91-10	1322	5.84	
7 EC91-10	1322	5.84	
7 HMB96-122	1322	6.71	
7 HMB96-122	1322	6.71	
7 EC90-161	1322	6.88	
7 EC90-161	1322	6.88	
7 EC92-116	1322	8.06	
7 EC92-116	1322	8.06	
80 MOSH-100	1323	7.9	0.05
52 CP04-27-22	1323.04337	5.62049694	0.2357228
52 CP04-27-22	1323.04337	5.62049694	0.2357228
51 CS11-1-15	1323.13155	3.99555463	0.40915
51 CS11-1-15	1323.13155	3.99555463	0.40915
52 CP04-45-4	1323.25178	5.35641369	0.21579405
52 CP04-45-4	1323.25178	5.35641369	0.21579405
51 CS11-18-2	1324.76656	5.62079032	0.33859911
51 CS11-18-2	1324.76656	5.62079032	0.33859911
7 EC90-265	1326	6.06	
7 EC90-265	1326	6.06	

52 CP03-51-38	1327.16687	5.99787266	0.24113369
52 CP03-51-38	1327.16687	5.99787266	0.24113369
51 CS11-6_34	1327.22303	5.8062669	0.22567143
51 CS11-6_34	1327.22303	5.8062669	0.22567143
52 BBF-29-2	1327.48237	6.89944857	0.55859988
52 BBF-29-2	1327.48237	6.89944857	0.55859988
52 CP04-27-28	1327.94038	6.17767257	0.21455639
52 CP04-27-28	1327.94038	6.17767257	0.21455639
52 CP04-45-50	1328.81721	5.04381515	0.26932892
52 CP04-45-50	1328.81721	5.04381515	0.26932892
55 AM87-12	1329	6.09	
55 AM87-12	1329	6.09	
52 CP04-27-16	1329.66451	5.25888295	0.21641863
52 CP04-27-16	1329.66451	5.25888295	0.21641863
7 HMB96-104B	1330	6.22	
7 HMB96-104B	1330	6.22	
51 CS11-13_85	1331.83061	6.15511302	0.20106936
51 CS11-13_85	1331.83061	6.15511302	0.20106936
52 CP04-2-12	1332.37516	12.1550568	0.23822771
52 CP04-2-12	1332.37516	12.1550568	0.23822771
51 CS12-25-47	1332.9256	6.21567453	0.49641978
51 CS12-25-47	1332.9256	6.21567453	0.49641978
47 PMOG-441_41-;	1333	7.1	0.3
47 PMOG-441_41-;	1333	7.1	0.3
10 2606-36	1334	5.1	0.4
10 2606-36	1334	5.1	0.4
51 CS11-13_43	1334.73676	5.89657843	0.21366879
51 CS11-13_43	1334.73676	5.89657843	0.21366879
52 CP03-39-72	1334.90729	6.53158334	0.21983721
52 CP03-39-72	1334.90729	6.53158334	0.21983721
51 CS11-20-16	1335.92567	6.10867695	0.40814862
51 CS11-20-16	1335.92567	6.10867695	0.40814862
35 07LSC3_17.1	1336	5.7	0.3
35 07LSC3_17.1	1336	5.7	0.3
37 07SC49@57	1336	6.78	0.26
37 07SC49@57	1336	6.78	0.26
43 LDT	1336	7.32	
43 LDT	1336	7.32	
35 07LSC6_23.1	1337	8.6	0.2
35 07LSC6_23.1	1337	8.6	0.2
35 07LSC5_46.1	1338	10.1	0.5
35 07LSC5_46.1	1338	10.1	0.5
41 SR338(A)	1340	7.13	
41 SR338(A)	1340	7.13	
41 SR339(A)	1340	7.22	

41 SR339(A)	1340	7.22	
41 LAC6 C(A)	1340	7.23	
41 LAC6 C(A)	1340	7.23	
41 SS42(A)	1340	7.54	
41 SS42(A)	1340	7.54	
41 SR341(A)	1340	7.61	
41 SR341(A)	1340	7.61	
51 CS11-19-3	1340.38296	6.22425867	0.47887842
51 CS11-19-3	1340.38296	6.22425867	0.47887842
107 WPG90/4_31	1341	6.65	0.15
52 BBF-29-82	1341.68805	6.20439541	0.65025958
52 BBF-29-82	1341.68805	6.20439541	0.65025958
107 WPG90/4_32	1342	5.17	0.19
51 CS11-13_83	1342.03116	4.9934576	0.23632839
51 CS11-13_83	1342.03116	4.9934576	0.23632839
52 CP04-27-5	1342.53284	5.5759829	0.24690083
52 CP04-27-5	1342.53284	5.5759829	0.24690083
52 CP03-39-71	1343.51289	7.54234652	0.21615965
52 CP03-39-71	1343.51289	7.54234652	0.21615965
52 CP04-45-19	1344.60046	5.16585362	0.21728725
52 CP04-45-19	1344.60046	5.16585362	0.21728725
51 CS11-13_31	1345.37195	7.39427881	0.21215551
51 CS11-13_31	1345.37195	7.39427881	0.21215551
107 IT/5_6	1346	7.17	0.28
51 CS12-25-46	1346.19376	5.90516958	0.44270155
51 CS12-25-46	1346.19376	5.90516958	0.44270155
119 6.1	1349	7	0.5113
51 CS11-13_77	1349.93673	5.6960516	0.22005144
51 CS11-13_77	1349.93673	5.6960516	0.22005144
51 CS11-6_39	1350.57102	6.10555174	0.28582851
51 CS11-6_39	1350.57102	6.10555174	0.28582851
52 CP03-39-70	1350.78011	7.60286228	0.20104246
52 CP03-39-70	1350.78011	7.60286228	0.20104246
59 M0-1063	1352	6.8	0.3
59 M0-1063	1352	6.8	0.3
51 CS12-25-55	1352.51946	4.90659926	0.39494025
51 CS12-25-55	1352.51946	4.90659926	0.39494025
52 CP03-51-30	1353.49282	6.57558937	0.19079065
52 CP03-51-30	1353.49282	6.57558937	0.19079065
51 CS11-18-49	1353.76863	3.76705834	0.24956368
51 CS11-18-49	1353.76863	3.76705834	0.24956368
52 CP03-51-52	1354.84131	6.46654847	0.1827711
52 CP03-51-52	1354.84131	6.46654847	0.1827711
30 n2539-rpt-37	1355	5.69	0.28
30 n2539-rpt-37	1355	5.69	0.28

119	2.1	1358	6	0.3559
52	CP03-51-26	1358.27829	4.11916791	0.18393859
52	CP03-51-26	1358.27829	4.11916791	0.18393859
107	DL90/7_11	1359	7.57	0.17
52	CP04-45-33	1359.97594	4.80523995	0.198399
52	CP04-45-33	1359.97594	4.80523995	0.198399
35	07LSC5_46.2	1360	9.5	0.3
35	07LSC5_46.2	1360	9.5	0.3
52	CP04-27-38	1361.65447	5.80955653	0.23234766
52	CP04-27-38	1361.65447	5.80955653	0.23234766
52	CP04-2-50	1365.52861	5.35635447	0.16033388
52	CP04-2-50	1365.52861	5.35635447	0.16033388
51	CS12-25-17	1365.64688	4.92787327	0.49447286
51	CS12-25-17	1365.64688	4.92787327	0.49447286
59	M0-953	1366	7.6	0.3
59	M0-953	1366	7.6	0.3
35	07LSC5_8.1	1367	8.5	0.3
35	07LSC5_8.1	1367	8.5	0.3
51	CS11-1-16	1368.49863	14.1795553	1.19002677
51	CS11-1-16	1368.49863	14.1795553	1.19002677
52	CP04-45-60	1370.85025	7.03544296	0.23904883
52	CP04-45-60	1370.85025	7.03544296	0.23904883
107	WPG90/4_21	1371	6.06	0.2
52	CP04-27-7	1372.08042	6.11215192	0.20457993
52	CP04-27-7	1372.08042	6.11215192	0.20457993
52	CP04-27-4	1372.31314	6.85038463	0.21538017
52	CP04-27-4	1372.31314	6.85038463	0.21538017
52	CP03-39-39	1372.56736	3.24622789	0.27009454
52	CP03-39-39	1372.56736	3.24622789	0.27009454
107	DL90/7_21	1373	7.4	0.19
80	TISH	1374	6.14	0.01
80	ARB 36	1374	6.14	0.07
80	TSH	1374	6.28	0.03
80	Munger	1378	8.17	0.1
107	IT/17_20	1378	6.65	0.22
61	08SC74-43	1379	5.4	0.22
61	08SC74-43	1379	5.4	0.22
52	CP04-2-30	1379.00885	7.35054229	0.24967909
52	CP04-2-30	1379.00885	7.35054229	0.24967909
82	194765	1380.76148	6.4	
119	5.1	1381	7	0.3614
52	CP04-45-35	1381.04048	6.61280974	0.22876532
52	CP04-45-35	1381.04048	6.61280974	0.22876532
52	BBF-29-31	1381.10811	4.67236467	0.44469713
52	BBF-29-31	1381.10811	4.67236467	0.44469713

52 CP04-45-47	1383.80898	7.13747512	0.24198779
52 CP04-45-47	1383.80898	7.13747512	0.24198779
47 PMOG-441_41-	1385	5.9	0.3
47 PMOG-441_41-	1385	5.9	0.3
52 CP03-39-56	1386.41522	9.66940037	0.20954208
52 CP03-39-56	1386.41522	9.66940037	0.20954208
52 CP04-27-23	1386.74791	5.83456441	0.25507182
52 CP04-27-23	1386.74791	5.83456441	0.25507182
52 BBF-29-5	1386.93946	9.03163622	0.8496127
52 BBF-29-5	1386.93946	9.03163622	0.8496127
119 1.1	1387	6	0.3335
51 CS12-24-23	1387.20661	4.84806521	0.54929574
51 CS12-24-23	1387.20661	4.84806521	0.54929574
51 CS11-6_05	1387.31072	7.03343484	0.23311935
51 CS11-6_05	1387.31072	7.03343484	0.23311935
52 CP04-2-25	1389.51491	5.5464736	0.25477154
52 CP04-2-25	1389.51491	5.5464736	0.25477154
51 BBF-11-39	1391.67015	6.29937164	0.58840677
51 BBF-11-39	1391.67015	6.29937164	0.58840677
107 WPG90/4_27	1392	6.1	0.17
52 CP04-45-24	1393.43688	7.01393618	0.23513537
52 CP04-45-24	1393.43688	7.01393618	0.23513537
52 CP04-45-21	1394.58381	6.37323422	0.24193866
52 CP04-45-21	1394.58381	6.37323422	0.24193866
51 CS11-6_29	1395.45081	5.87333072	0.23632153
51 CS11-6_29	1395.45081	5.87333072	0.23632153
107 DL90/7_13	1396	6.27	0.24
52 CP04-2-42	1396.52509	6.44375645	0.31637048
52 CP04-2-42	1396.52509	6.44375645	0.31637048
52 BBF-29-64	1396.83091	4.67151863	0.28682482
52 BBF-29-64	1396.83091	4.67151863	0.28682482
52 CP04-45-39	1398.7959	4.40311319	0.2196981
52 CP04-45-39	1398.7959	4.40311319	0.2196981
51 CS11-6_13	1398.98079	8.24859136	0.23040377
51 CS11-6_13	1398.98079	8.24859136	0.23040377
20 HV1.8	1400	8.8	0.6
20 HV1.8	1400	8.8	0.6
20 HV1.8	1400	8.8	0.6
51 BBF-11-37	1400.79048	4.97235215	0.48313829
51 BBF-11-37	1400.79048	4.97235215	0.48313829
59 MO-1257	1401	5.2	0.2
59 MO-1257	1401	5.2	0.2
59 MO-1282	1401	10.5	0.2
59 MO-1282	1401	10.5	0.2
51 CS11-13_33	1403.97974	5.39001066	0.22583656

51 CS11-13_33	1403.97974	5.39001066	0.22583656
82 194764	1404.45729	5.93	
52 CP03-39-47	1404.72857	7.52334157	0.23093433
52 CP03-39-47	1404.72857	7.52334157	0.23093433
52 CP04-45-49	1405.15224	6.68433228	0.26128435
52 CP04-45-49	1405.15224	6.68433228	0.26128435
52 CP03-39-26	1406.96431	7.4113124	0.23511739
52 CP03-39-26	1406.96431	7.4113124	0.23511739
37 07SC65@16	1408	7.2	0.5
37 07SC65@16	1408	7.2	0.5
51 CS11-19-5	1408.63073	6.6496851	0.62853326
51 CS11-19-5	1408.63073	6.6496851	0.62853326
59 M0-1256	1410	7	0.1
59 M0-1256	1410	7	0.1
51 CS11-1-21	1410.42783	7.18642853	0.5494637
51 CS11-1-21	1410.42783	7.18642853	0.5494637
59 M0-1312	1411	7	0.2
59 M0-1312	1411	7	0.2
20 HV1.24	1412	5.9	0.6
20 HV1.24	1412	5.9	0.6
20 HV1.24	1412	5.9	0.6
107 DL90/7_18	1413	6.62	0.22
47 PMOG_P-67	1415	4.8	0.4
47 PMOG_P-67	1415	4.8	0.4
59 M0-1306	1416	7.2	0.1
59 M0-1306	1416	7.2	0.1
107 WPG90/4_13	1416	7.77	0.19
59 M0-1349	1417	5.4	0.2
59 M0-1349	1417	5.4	0.2
106 10GD49-118	1418	9.36	0.17
52 CP04-45-10	1420.06448	5.8170589	0.21327782
52 CP04-45-10	1420.06448	5.8170589	0.21327782
59 M0-909	1423	5.6	0.2
59 M0-909	1423	5.6	0.2
51 CS11-18-19	1423.2824	6.9339195	0.57741934
51 CS11-18-19	1423.2824	6.9339195	0.57741934
51 CS12-17-34	1423.87044	7.10407166	0.56019257
51 CS12-17-34	1423.87044	7.10407166	0.56019257
37 07SC49@93	1424	7.94	0.38
37 07SC49@93	1424	7.94	0.38
51 CS11-6_16	1425.7242	6.24918844	0.23153035
51 CS11-6_16	1425.7242	6.24918844	0.23153035
30 n2539-rpt-b4!	1427	5.43	0.32
30 n2539-rpt-b4!	1427	5.43	0.32
30 n2539-rpt-33	1427	6.97	0.27

30 n2539-rpt-33	1427	6.97	0.27
10 2641-02	1428	6.1	0.5
10 2641-02	1428	6.1	0.5
37 07SC65@22	1430	6.55	0.24
37 07SC65@22	1430	6.55	0.24
51 CS11-13_80	1432.45487	8.03636471	0.18964923
51 CS11-13_80	1432.45487	8.03636471	0.18964923
51 CS12-25-30	1433.67665	5.22447604	0.46454495
51 CS12-25-30	1433.67665	5.22447604	0.46454495
52 CP04-45-29	1433.74541	7.20649688	0.21045654
52 CP04-45-29	1433.74541	7.20649688	0.21045654
52 CP04-45-52	1433.9251	5.61049378	0.22197218
52 CP04-45-52	1433.9251	5.61049378	0.22197218
19 08LL04 49	1434	5.2	0.23
19 08LL04 49	1434	5.2	0.23
51 CS11-6_1	1434.62278	5.47695348	0.22084078
51 CS11-6_1	1434.62278	5.47695348	0.22084078
106 10GD49-7	1437	5.49	0.26
52 CP04-27-47	1437.28744	5.79805291	0.21772354
52 CP04-27-47	1437.28744	5.79805291	0.21772354
37 07SC51-1@34	1438	8.94	0.33
37 07SC51-1@34	1438	8.94	0.33
59 M0-1094	1438	6.5	0.3
59 M0-1094	1438	6.5	0.3
51 CS12-23-53	1438.59821	5.99135289	0.58306145
51 CS12-23-53	1438.59821	5.99135289	0.58306145
52 CP03-51-82	1440.76275	7.45541942	0.18065184
52 CP03-51-82	1440.76275	7.45541942	0.18065184
51 CS11-6_35	1441.01453	5.75471784	0.22860327
51 CS11-6_35	1441.01453	5.75471784	0.22860327
51 CS12-17-44	1441.61964	5.75697564	0.48105713
51 CS12-17-44	1441.61964	5.75697564	0.48105713
52 CP04-45-27	1443.38003	7.07895668	0.23501556
52 CP04-45-27	1443.38003	7.07895668	0.23501556
52 CP04-27-44	1443.60428	5.00880411	0.20515221
52 CP04-27-44	1443.60428	5.00880411	0.20515221
51 CS11-18-37	1444.56075	5.17495171	0.53617554
51 CS11-18-37	1444.56075	5.17495171	0.53617554
51 CS12-25-51	1444.61053	6.59449437	0.51651935
51 CS12-25-51	1444.61053	6.59449437	0.51651935
51 CS11-18-38	1444.81356	3.82662369	0.29767579
51 CS11-18-38	1444.81356	3.82662369	0.29767579
52 CP03-51-33	1446.73875	6.79817287	0.19834199
52 CP03-51-33	1446.73875	6.79817287	0.19834199
52 CP04-45-36	1446.99968	5.21987065	0.1988901

52 CP04-45-36	1446.99968	5.21987065	0.1988901
59 MO-1010	1448	5.7	0.1
59 MO-1010	1448	5.7	0.1
107 IT/5_14	1451	5.54	0.29
52 CP04-27-32	1451.19346	7.28502164	0.23325262
52 CP04-27-32	1451.19346	7.28502164	0.23325262
52 BBF-29-55	1451.44102	6.33426291	0.44013607
52 BBF-29-55	1451.44102	6.33426291	0.44013607
47 PMOG-441_41-	1453	7.1	0.3
47 PMOG-441_41-	1453	7.1	0.3
60 DNt-216	1453	6.9	0.2
60 DNt-216	1453	6.9	0.2
52 CP03-39-60	1453.40589	8.13300032	0.21770036
52 CP03-39-60	1453.40589	8.13300032	0.21770036
51 CS11-13_29	1454.23215	7.46178784	0.22059155
51 CS11-13_29	1454.23215	7.46178784	0.22059155
107 WPG90/4_20	1455	5.17	0.2
51 CS11-19-54b	1455.34654	5.10995837	0.44057683
51 CS11-19-54b	1455.34654	5.10995837	0.44057683
37 07SC65@44	1456	7.34	0.37
37 07SC65@44	1456	7.34	0.37
51 CS11-19-25	1456.62383	4.25465535	0.4859972
51 CS11-19-25	1456.62383	4.25465535	0.4859972
51 BBF-11-88	1456.71482	4.59111272	0.39763844
51 BBF-11-88	1456.71482	4.59111272	0.39763844
30 n2539-rpt-b30	1457	4.55	0.32
30 n2539-rpt-b30	1457	4.55	0.32
47 PMOG_P-18	1458	5.5	0.4
47 PMOG_P-18	1458	5.5	0.4
10 2641-30	1459	5.9	0.5
10 2641-30	1459	5.9	0.5
20 HV1.25.2	1460	6.4	0.6
20 HV1.25.2	1460	6.4	0.6
20 HV1.25.2	1460	6.4	0.6
106 10GD49-30	1460	6.6	0.22
61 08SC74-80	1462	5.1	0.15
61 08SC74-80	1462	5.1	0.15
37 07SC65@86	1463	5.27	0.26
37 07SC65@86	1463	5.27	0.26
30 n2539-rpt-16	1464	3.78	0.29
30 n2539-rpt-16	1464	3.78	0.29
106 10GD49-94	1465	11.92	0.4
37 07SC65@83	1466	5.2	0.41
37 07SC65@83	1466	5.2	0.41
52 CP04-45-8	1466.09397	6.30121151	0.22629079

52 CP04-45-8	1466.09397	6.30121151	0.22629079
52 CP04-45-15	1468.0051	4.81024152	0.26688114
52 CP04-45-15	1468.0051	4.81024152	0.26688114
52 CP04-2-69	1472.22007	6.49462446	0.16161126
52 CP04-2-69	1472.22007	6.49462446	0.16161126
51 CS11-19-59	1473.31974	7.55740616	0.71342509
51 CS11-19-59	1473.31974	7.55740616	0.71342509
51 CS11-18-22	1473.4594	5.12419656	0.30128847
51 CS11-18-22	1473.4594	5.12419656	0.30128847
51 BBF-11-33	1475.27127	5.36354438	0.52462068
51 BBF-11-33	1475.27127	5.36354438	0.52462068
52 CP03-39-80	1475.85995	6.9877021	0.22322711
52 CP03-39-80	1475.85995	6.9877021	0.22322711
51 CS11-18-54	1475.95387	6.57977278	0.55544084
51 CS11-18-54	1475.95387	6.57977278	0.55544084
52 CP04-2-76	1477.58257	6.11820052	0.16194049
52 CP04-2-76	1477.58257	6.11820052	0.16194049
52 CP03-51-11	1477.79788	4.89295818	0.19928073
52 CP03-51-11	1477.79788	4.89295818	0.19928073
20 HV1.25	1478	6.3	0.5
20 HV1.25	1478	6.3	0.5
20 HV1.25	1478	6.3	0.5
80 Hawn Park	1478	7.52	0
51 CS11-19-55	1478.445	6.67120712	0.6177438
51 CS11-19-55	1478.445	6.67120712	0.6177438
52 CP04-27-17	1479.12521	6.53778609	0.19983162
52 CP04-27-17	1479.12521	6.53778609	0.19983162
35 07LSC5_59.1	1480	5.6	0.3
35 07LSC5_59.1	1480	5.6	0.3
51 CS11-13_44	1480.93152	8.80646774	0.21485692
51 CS11-13_44	1480.93152	8.80646774	0.21485692
59 M0-1073	1482	4.8	0.4
59 M0-1073	1482	4.8	0.4
51 CS12-23-42	1482.46104	6.57013731	0.60573938
51 CS12-23-42	1482.46104	6.57013731	0.60573938
60 p11-141	1483	4.8	0.4
60 p11-141	1483	4.8	0.4
51 CS11-18-26	1483.86263	6.74377937	0.57465301
51 CS11-18-26	1483.86263	6.74377937	0.57465301
51 CS11-19-39	1484.09167	6.59168581	0.65493412
51 CS11-19-39	1484.09167	6.59168581	0.65493412
51 CS12-23-8	1484.85216	7.22992523	0.66656986
51 CS12-23-8	1484.85216	7.22992523	0.66656986
51 CS12-17-41	1485.48517	7.55838224	0.89334849
51 CS12-17-41	1485.48517	7.55838224	0.89334849

52 CP04-2-79	1487. 11372	5. 81326214	0. 16227485
52 CP04-2-79	1487. 11372	5. 81326214	0. 16227485
51 CS12-23-9	1487. 29489	8. 02985463	0. 82535012
51 CS12-23-9	1487. 29489	8. 02985463	0. 82535012
51 CS12-24-51	1487. 73552	6. 28661676	0. 62096222
51 CS12-24-51	1487. 73552	6. 28661676	0. 62096222
106 10GD48-117	1488	10. 12	0. 27
107 IT/5_8	1488	6. 58	0. 2
107 IT/5_25	1488	7. 45	0. 29
52 CP03-51-36	1488. 13292	5. 54470266	0. 20166119
52 CP03-51-36	1488. 13292	5. 54470266	0. 20166119
52 CP04-2-55	1489. 27272	5. 57281073	0. 16088563
52 CP04-2-55	1489. 27272	5. 57281073	0. 16088563
51 CS12-17-30b	1489. 662	5. 8712939	0. 69159342
51 CS12-17-30b	1489. 662	5. 8712939	0. 69159342
52 CP03-51-7	1489. 66427	6. 00187416	0. 22573653
52 CP03-51-7	1489. 66427	6. 00187416	0. 22573653
51 CS11-20-18	1489. 76828	6. 02786323	0. 49349691
51 CS11-20-18	1489. 76828	6. 02786323	0. 49349691
51 CS12-24-58	1489. 89988	7. 18713182	0. 55672422
51 CS12-24-58	1489. 89988	7. 18713182	0. 55672422
60 DNt-166	1490	6. 3	0. 2
60 DNt-166	1490	6. 3	0. 2
52 CP04-2-5	1490. 70478	6. 385238	0. 21198974
52 CP04-2-5	1490. 70478	6. 385238	0. 21198974
80 Knob Lick	1491	6. 05	0. 04
51 CS12-25-35	1491. 68833	5. 04548488	0. 51666423
51 CS12-25-35	1491. 68833	5. 04548488	0. 51666423
52 CP04-2-16	1491. 69797	5. 76554266	0. 22814708
52 CP04-2-16	1491. 69797	5. 76554266	0. 22814708
51 CS11-18-27	1492. 82462	7. 38746053	0. 74753636
51 CS11-18-27	1492. 82462	7. 38746053	0. 74753636
52 CP03-51-46	1493. 06058	6. 84218938	0. 24743986
52 CP03-51-46	1493. 06058	6. 84218938	0. 24743986
51 CS12-17-19	1493. 22162	2. 66807803	0. 22818252
51 CS12-17-19	1493. 22162	2. 66807803	0. 22818252
51 CS12-23-6	1493. 59102	7. 30349769	0. 76392788
51 CS12-23-6	1493. 59102	7. 30349769	0. 76392788
52 CP04-45-37	1493. 62712	4. 13302805	0. 24248548
52 CP04-45-37	1493. 62712	4. 13302805	0. 24248548
51 CS12-23-27	1493. 98019	7. 36352719	0. 91122144
51 CS12-23-27	1493. 98019	7. 36352719	0. 91122144
51 CS12-17-33	1495. 0955	6. 45358004	0. 74091254
51 CS12-17-33	1495. 0955	6. 45358004	0. 74091254
10 2346-43	1496	8. 2	0. 4

10 2346-43	1496	8.2	0.4
51 CS12-17-28	1497.41873	3.94512812	0.38740211
51 CS12-17-28	1497.41873	3.94512812	0.38740211
51 CS11-20-8	1498.14153	6.31364863	0.63281833
51 CS11-20-8	1498.14153	6.31364863	0.63281833
51 CS12-23-36	1498.25907	6.05810602	0.34499582
51 CS12-23-36	1498.25907	6.05810602	0.34499582
52 CP03-39-61	1498.79167	7.75640226	0.2443647
52 CP03-39-61	1498.79167	7.75640226	0.2443647
52 CP03-39-79	1499.13325	5.82389907	0.20621931
52 CP03-39-79	1499.13325	5.82389907	0.20621931
51 CS11-20-6	1499.52871	7.28444111	0.60481666
51 CS11-20-6	1499.52871	7.28444111	0.60481666
51 BBF-11-51	1499.53072	6.83437488	0.82438262
51 BBF-11-51	1499.53072	6.83437488	0.82438262
26 96BR-016	1500	4.92	
26 96BR-016	1500	4.92	
26 95BR-112	1500	5.62	
26 96BR-010	1500	5.62	
26 95BR-112	1500	5.62	
26 96BR-010	1500	5.62	
26 95BR-113	1500	5.89	
26 95BR-113	1500	5.89	
26 95BR-110	1500	6.01	
26 96BR-005	1500	6.01	
26 95BR-110	1500	6.01	
26 96BR-005	1500	6.01	
26 96BR-015	1500	6.06	
26 96BR-015	1500	6.06	
26 95BR-114	1500	6.07	
26 95BR-114	1500	6.07	
26 95BR-109	1500	6.16	
26 95BR-109	1500	6.16	
26 95BR-106	1500	6.31	
26 95BR-106	1500	6.31	
26 95BR-105	1500	6.44	
26 95BR-105	1500	6.44	
26 96BR-006	1500	6.47	
26 96BR-006	1500	6.47	
26 95BR-115	1500	6.55	
26 95BR-115	1500	6.55	
26 95BR-111	1500	6.94	
26 95BR-111	1500	6.94	
26 96BR-008	1500	6.96	
26 96BR-008	1500	6.96	

26 95BR-108	1500	7.5
26 95BR-108	1500	7.5
26 95BR-101	1500	7.94
26 95BR-101	1500	7.94
26 95BR-104	1500	8.13
26 95BR-104	1500	8.13
26 95BR-102	1500	9.81
26 95BR-102	1500	9.81
48 SA7-91 8	1500	4.23722964
48 SA7-91 8	1500	4.23722964
48 SA7-91 7	1500	4.88102522
48 SA7-91 7	1500	4.88102522
48 SA7-91 12	1500	5.16172485
48 SA7-91 12	1500	5.16172485
48 SA7-91 5	1500	5.17938776
48 SA7-91 5	1500	5.17938776
48 SA7-91 11	1500	5.18388699
48 SA7-91 11	1500	5.18388699
48 SA7-91 15	1500	5.45484877
48 SA7-91 15	1500	5.45484877
48 SA7-91 2	1500	5.48349051
48 SA7-91 2	1500	5.48349051
48 SA7-91 1	1500	5.53255741
48 SA7-91 1	1500	5.53255741
48 SA7-91 13	1500	5.57488621
48 SA7-91 13	1500	5.57488621
48 SA7-04 4	1500	5.60712216
48 SA7-04 4	1500	5.60712216
48 SA7-91 3	1500	5.70192007
48 SA7-91 3	1500	5.70192007
48 SA7-91 6	1500	5.70564899
48 SA7-91 6	1500	5.70564899
48 SA7-91 14	1500	5.76689362
48 SA7-91 14	1500	5.76689362
48 SA7-91 9	1500	5.7915643
48 SA7-91 9	1500	5.7915643
48 ROG525 3	1500	5.85406497
48 ROG525 3	1500	5.85406497
48 SA7-91 4	1500	5.8979298
48 SA7-91 4	1500	5.8979298
48 SA7-91 10	1500	5.96066463
48 SA7-91 10	1500	5.96066463
48 ROG525 10	1500	6.00175924
48 ROG525 10	1500	6.00175924
48 ROG525 5	1500	6.0188562

48 ROG525 5	1500	6. 0188562
48 ROG525 12	1500	6. 08023936
48 ROG525 12	1500	6. 08023936
48 ROG525 1	1500	6. 19717684
48 ROG525 1	1500	6. 19717684
48 SA7-86 2	1500	6. 21190027
48 SA7-86 2	1500	6. 21190027
48 MM2241 2	1500	6. 26813227
48 MM2241 2	1500	6. 26813227
48 ROG525 4	1500	6. 27523096
48 ROG525 4	1500	6. 27523096
48 MM2241 9	1500	6. 37574176
48 MM2241 9	1500	6. 37574176
48 MM2241 6	1500	6. 43858677
48 MM2241 6	1500	6. 43858677
48 SA7-86 8	1500	6. 47903442
48 SA7-86 8	1500	6. 47903442
48 ROG525 6	1500	6. 50289144
48 ROG525 6	1500	6. 50289144
48 SA7-86 12	1500	6. 51551982
48 SA7-86 12	1500	6. 51551982
48 SA7-86 14	1500	6. 51832777
48 SA7-86 14	1500	6. 51832777
48 SA3-60 2	1500	6. 52536573
48 SA3-60 2	1500	6. 52536573
48 SA7-04 3	1500	6. 52898772
48 SA7-04 3	1500	6. 52898772
48 ROG525 11	1500	6. 53020985
48 ROG525 11	1500	6. 53020985
48 ROG525 9	1500	6. 54502745
48 ROG525 9	1500	6. 54502745
48 ROG525 2	1500	6. 54649606
48 ROG525 2	1500	6. 54649606
48 ROG525 8	1500	6. 64523789
48 ROG525 8	1500	6. 64523789
48 SA7-86 6	1500	6. 64570903
48 SA7-86 6	1500	6. 64570903
48 SA7-86 9	1500	6. 74662566
48 SA7-86 9	1500	6. 74662566
48 SA7-86 13	1500	6. 75220439
48 SA7-86 13	1500	6. 75220439
48 ROG525 7	1500	6. 79184819
48 ROG525 7	1500	6. 79184819
48 SA7-86 4	1500	6. 79543543
48 SA7-86 4	1500	6. 79543543

48 SA7-86 5	1500	6. 80431656
48 SA7-86 5	1500	6. 80431656
48 MM2241 10	1500	6. 86942682
48 MM2241 10	1500	6. 86942682
48 SA7-86 11	1500	6. 88099413
48 SA7-86 11	1500	6. 88099413
48 MM2241 3	1500	6. 90479519
48 MM2241 3	1500	6. 90479519
48 MM2241 5	1500	6. 92162325
48 MM2241 5	1500	6. 92162325
48 SA3-60 1	1500	6. 93321105
48 SA3-60 1	1500	6. 93321105
48 SA7-86 1	1500	6. 99908904
48 SA7-86 1	1500	6. 99908904
48 SA7-86 16	1500	7. 09288734
48 SA7-86 16	1500	7. 09288734
48 SA7-86 15	1500	7. 10593922
48 SA7-86 15	1500	7. 10593922
48 SA7-86 7	1500	7. 12565197
48 SA7-86 7	1500	7. 12565197
48 SA3-04 5	1500	7. 18418655
48 SA3-04 5	1500	7. 18418655
48 SA7-86 10	1500	7. 20060871
48 SA7-86 10	1500	7. 20060871
48 MM2241 7	1500	7. 22499417
48 MM2241 7	1500	7. 22499417
48 MM2241 1	1500	7. 23413365
48 MM2241 1	1500	7. 23413365
48 SA7-04 2	1500	7. 4154618
48 SA7-04 2	1500	7. 4154618
48 SA3-04 9	1500	7. 42315521
48 SA3-04 9	1500	7. 42315521
48 MM2241 4	1500	7. 4477081
48 MM2241 4	1500	7. 4477081
48 SA3-04 4	1500	7. 52409772
48 SA3-04 4	1500	7. 52409772
48 SA7-86 3	1500	7. 5347702
48 SA7-86 3	1500	7. 5347702
48 MM2235 7	1500	7. 70409498
48 MM2235 7	1500	7. 70409498
48 SA3-04 7	1500	7. 85595468
48 SA3-04 7	1500	7. 85595468
48 SA3-04 2	1500	7. 88769476
48 SA3-04 2	1500	7. 88769476
48 SA3-04 1	1500	7. 90290805

48 SA3-04 1	1500	7.90290805		
48 SA3-04 3	1500	7.90335893		
48 SA3-04 3	1500	7.90335893		
48 SA3-04 8	1500	7.91643793		
48 SA3-04 8	1500	7.91643793		
48 MM2235 10	1500	8.05218109		
48 MM2235 10	1500	8.05218109		
48 MM2235 2	1500	8.12287288		
48 MM2235 2	1500	8.12287288		
48 SA3-04 11	1500	8.21435489		
48 SA3-04 11	1500	8.21435489		
48 SA3-04 12	1500	8.34604029		
48 SA3-04 12	1500	8.34604029		
48 MM2241 8	1500	8.3915952		
48 MM2241 8	1500	8.3915952		
48 SA3-04 10	1500	8.53333477		
48 SA3-04 10	1500	8.53333477		
48 SA7-04 5	1500	8.59290348		
48 SA7-04 5	1500	8.59290348		
48 SA3-04 6	1500	8.64805372		
48 SA3-04 6	1500	8.64805372		
48 MM2235 5	1500	8.66363526		
48 MM2235 5	1500	8.66363526		
48 MM2235 3	1500	8.68365035		
48 MM2235 3	1500	8.68365035		
48 MM2235 4	1500	8.68737048		
48 MM2235 4	1500	8.68737048		
48 MM2235 9	1500	8.70797075		
48 MM2235 9	1500	8.70797075		
48 MM2235 6	1500	8.99682931		
48 MM2235 6	1500	8.99682931		
48 MM2235 1	1500	9.21229077		
48 MM2235 1	1500	9.21229077		
48 MM2235 8	1500	9.65328079		
48 MM2235 8	1500	9.65328079		
48 SA7-04 1	1500	9.66866718		
48 SA7-04 1	1500	9.66866718		
60 DNt-222	1500	6.4		0.2
60 DNt-222	1500	6.4		0.2
51 CS12-25-38	1500.65577	5.67426073		0.61663741
51 CS12-25-38	1500.65577	5.67426073		0.61663741
52 BBF-29-78	1501.00307	5.56219679		0.4341117
52 BBF-29-78	1501.00307	5.56219679		0.4341117
51 CS11-6_04	1501.89799	5.56003255		0.23079907
51 CS11-6_04	1501.89799	5.56003255		0.23079907

51 CS11-18-28	1501.96761	6.34919982	0.67672673
51 CS11-18-28	1501.96761	6.34919982	0.67672673
51 CS11-18-52	1502.03351	6.96148848	0.72208171
51 CS11-18-52	1502.03351	6.96148848	0.72208171
51 BBF-11-86	1502.49084	6.6713002	0.65583885
51 BBF-11-86	1502.49084	6.6713002	0.65583885
51 CS11-20-38	1502.81812	7.15705057	0.52918804
51 CS11-20-38	1502.81812	7.15705057	0.52918804
51 CS11-18-24	1502.90534	7.01112079	0.63209126
51 CS11-18-24	1502.90534	7.01112079	0.63209126
51 CS12-17-35	1503.11453	3.20735432	0.23086864
51 CS12-17-35	1503.11453	3.20735432	0.23086864
51 CS12-23-40	1503.30395	6.84677326	0.83609801
51 CS12-23-40	1503.30395	6.84677326	0.83609801
51 CS11-1-24	1504.18951	6.79503048	0.58776797
51 CS11-1-24	1504.18951	6.79503048	0.58776797
51 CS11-19-12	1504.98208	5.19065273	0.64280072
51 CS11-19-12	1504.98208	5.19065273	0.64280072
60 VGt-432	1505	4.7	0.4
60 VGt-432	1505	4.7	0.4
51 CS12-25-14	1505.77677	5.98016195	0.44183609
51 CS12-25-14	1505.77677	5.98016195	0.44183609
51 CS11-19-1	1508.88536	7.84034562	0.60612574
51 CS11-19-1	1508.88536	7.84034562	0.60612574
51 CS11-20-62	1508.95747	6.96057582	0.61362717
51 CS11-20-62	1508.95747	6.96057582	0.61362717
10 1746-61	1511	8.7	0.4
10 1746-61	1511	8.7	0.4
51 CS11-19-47	1511.09804	7.08152006	0.71241024
51 CS11-19-47	1511.09804	7.08152006	0.71241024
51 CS12-24-19	1511.14619	3.95802438	0.29880939
51 CS12-24-19	1511.14619	3.95802438	0.29880939
51 CS12-17-49	1512.03891	6.36076303	0.46192956
51 CS12-17-49	1512.03891	6.36076303	0.46192956
51 BBF-11-45	1512.65984	8.3459266	0.8554826
51 BBF-11-45	1512.65984	8.3459266	0.8554826
47 PMOG_P-2	1513	6	0.4
47 PMOG_P-2	1513	6	0.4
51 CS11-13_12	1513.77602	6.68818434	0.19236221
51 CS11-13_12	1513.77602	6.68818434	0.19236221
51 CS11-19-58b	1514.19224	6.28090782	0.58590136
51 CS11-19-58b	1514.19224	6.28090782	0.58590136
51 BBF-11-63	1515.32701	6.57560806	0.61123229
51 BBF-11-63	1515.32701	6.57560806	0.61123229
51 CS12-24-35	1517.54478	6.6201619	0.74639335

51 CS12-24-35	1517.54478	6.6201619	0.74639335
106 10GD49-80	1518	5.81	0.21
51 CS11-20-52	1518.24947	8.21630633	0.74564367
51 CS11-20-52	1518.24947	8.21630633	0.74564367
51 CS11-6_51	1518.37692	5.60607637	0.24255598
51 CS11-6_51	1518.37692	5.60607637	0.24255598
74 DFHR-10	1519	6.05	
51 BBF-11-77	1519.52362	5.86278972	0.53140423
51 BBF-11-77	1519.52362	5.86278972	0.53140423
51 CS11-19-28	1519.68177	6.47368558	0.47445673
51 CS11-19-28	1519.68177	6.47368558	0.47445673
51 CS12-24-56	1521.93348	4.29767131	0.44008715
51 CS12-24-56	1521.93348	4.29767131	0.44008715
51 CS11-6_41	1523.10201	5.71518021	0.24916378
51 CS11-6_41	1523.10201	5.71518021	0.24916378
51 CS11-20-69	1523.46339	4.35292227	0.37408919
51 CS11-20-69	1523.46339	4.35292227	0.37408919
51 BBF-11-71	1523.76614	5.74842964	0.58864669
51 BBF-11-71	1523.76614	5.74842964	0.58864669
51 BBF-11-54	1524.59214	9.3995277	1.03068393
51 BBF-11-54	1524.59214	9.3995277	1.03068393
51 CS11-19-21	1524.88003	5.25768112	0.48944877
51 CS11-19-21	1524.88003	5.25768112	0.48944877
37 07SC51-1@26	1525	8.3	0.45
37 07SC51-1@26	1525	8.3	0.45
51 BBF-11-89	1525.55372	5.33476088	0.30149671
51 BBF-11-89	1525.55372	5.33476088	0.30149671
74 DFHR-01	1526	6.62	
74 DFHR-04	1526	7.2	
51 CS11-18-47	1526.4197	5.69795173	0.44847427
51 CS11-18-47	1526.4197	5.69795173	0.44847427
65 BB-86 13	1527	5.27	0.26
65 BB-86 13	1527	5.27	0.26
74 DFHR-08	1527	6.86	
51 CS11-19-54	1527.12901	4.39989097	0.29460266
51 CS11-19-54	1527.12901	4.39989097	0.29460266
51 CS11-1-19	1528.34866	7.26049728	0.56194983
51 CS11-1-19	1528.34866	7.26049728	0.56194983
51 CS11-19-53	1528.88049	6.08878434	0.57100112
51 CS11-19-53	1528.88049	6.08878434	0.57100112
52 BBF-29-44	1528.96403	6.93661663	0.6361172
52 BBF-29-44	1528.96403	6.93661663	0.6361172
37 07SC49@44	1529	6.45	0.28
37 07SC49@44	1529	6.45	0.28
51 CS11-19-59b	1529.3849	5.77224522	0.57910408

51 CS11-19-59b	1529.3849	5.77224522	0.57910408
47 PMOG-441_41-4	1530	5.1	0.3
47 PMOG-441_41-4	1530	5.1	0.3
37 07SC65@35	1531	9.41	0.25
37 07SC65@35	1531	9.41	0.25
51 CS11-20-61	1532.32609	4.30093965	0.29019965
51 CS11-20-61	1532.32609	4.30093965	0.29019965
51 CS11-20-45	1532.63412	7.52891411	0.65132968
51 CS11-20-45	1532.63412	7.52891411	0.65132968
51 CS11-18-56	1533.30909	4.06285228	0.33187032
51 CS11-18-56	1533.30909	4.06285228	0.33187032
51 CS11-18-29	1534.82222	9.09239791	0.90282828
51 CS11-18-29	1534.82222	9.09239791	0.90282828
51 CS11-20-48	1534.88155	5.88983215	0.41629238
51 CS11-20-48	1534.88155	5.88983215	0.41629238
51 CS11-13_56	1536.11745	5.07096797	0.19780708
51 CS11-13_56	1536.11745	5.07096797	0.19780708
51 CS11-6_24	1536.75748	6.74015572	0.24643491
51 CS11-6_24	1536.75748	6.74015572	0.24643491
47 PMOG_P-3	1537	4	0.4
47 PMOG_P-3	1537	4	0.4
51 CS12-25-53	1537.23661	7.94281186	0.74515115
51 CS12-25-53	1537.23661	7.94281186	0.74515115
51 CS11-6_25	1538.03773	6.81422621	0.22767146
51 CS11-6_25	1538.03773	6.81422621	0.22767146
52 BBF-29-1	1538.50035	6.31149483	0.54446838
52 BBF-29-1	1538.50035	6.31149483	0.54446838
51 CS11-20-55	1538.51113	4.03603517	0.34195522
51 CS11-20-55	1538.51113	4.03603517	0.34195522
60 vgt-138	1539	9.1	0.2
60 vgt-138	1539	9.1	0.2
51 CS12-17-59	1539.68395	3.97611148	0.407159
51 CS12-17-59	1539.68395	3.97611148	0.407159
52 BBF-29-29	1540.54693	7.58959266	0.65763959
52 BBF-29-29	1540.54693	7.58959266	0.65763959
52 BBF-29-43	1541.45368	7.64286624	0.62892219
52 BBF-29-43	1541.45368	7.64286624	0.62892219
51 CS12-25-2	1542.48163	6.81124317	0.64551084
51 CS12-25-2	1542.48163	6.81124317	0.64551084
51 CS11-18-58	1542.8157	4.81568565	0.38375391
51 CS11-18-58	1542.8157	4.81568565	0.38375391
51 BBF-11-46	1543.46016	7.08439002	0.71271625
51 BBF-11-46	1543.46016	7.08439002	0.71271625
51 CS11-18-12	1547.57582	5.84383132	0.59541725
51 CS11-18-12	1547.57582	5.84383132	0.59541725

52 BBF-29-77	1547.87659	6.03077018	0.4896254
52 BBF-29-77	1547.87659	6.03077018	0.4896254
51 CS12-25-28	1549.93249	4.28685021	0.39528539
51 CS12-25-28	1549.93249	4.28685021	0.39528539
51 CS11-18-30	1550.29961	6.62279883	0.56113321
51 CS11-18-30	1550.29961	6.62279883	0.56113321
51 CS11-18-33	1550.58385	5.20846818	0.60950978
51 CS11-18-33	1550.58385	5.20846818	0.60950978
60 VGt-510	1553	6.4	0.2
60 VGt-510	1553	6.4	0.2
52 BBF-29-16	1553.37283	5.8893114	0.47310931
52 BBF-29-16	1553.37283	5.8893114	0.47310931
51 BBF-11-72	1553.90479	7.59034162	0.56462907
51 BBF-11-72	1553.90479	7.59034162	0.56462907
51 CS11-6_22	1557.53777	6.16460794	0.24948903
51 CS11-6_22	1557.53777	6.16460794	0.24948903
60 VGt-236	1558	7.1	0.6
60 VGt-236	1558	7.1	0.6
65 BB-81 15	1561	8.03	0.15
65 BB-81 15	1561	8.03	0.15
51 CS11-19-32	1566.08173	7.51637863	0.63678267
51 CS11-19-32	1566.08173	7.51637863	0.63678267
51 CS11-18-51	1566.25202	6.4979824	0.58181532
51 CS11-18-51	1566.25202	6.4979824	0.58181532
52 BBF-29-76	1570.66909	3.98526199	0.23498141
52 BBF-29-76	1570.66909	3.98526199	0.23498141
35 09LSC1_71.1	1572	6.5	0.2
35 09LSC1_71.1	1572	6.5	0.2
12 A691	1573	7.56	
12 A691	1573	7.56	
12 A606	1573	8.47	
12 A606	1573	8.47	
51 CS11-18-20	1573.85053	7.50509676	0.64177659
51 CS11-18-20	1573.85053	7.50509676	0.64177659
52 BBF-29-73	1573.95388	4.90473414	0.43488956
52 BBF-29-73	1573.95388	4.90473414	0.43488956
12 A295	1575	6.07	
12 A295	1575	6.07	
12 A1303	1576	8.79	
12 A1303	1576	8.79	
51 CS12-24-43	1577.40654	6.51461003	0.62985585
51 CS12-24-43	1577.40654	6.51461003	0.62985585
51 CS12-25-42	1578.78759	7.01417781	0.62126139
51 CS12-25-42	1578.78759	7.01417781	0.62126139
51 CS11-20-2	1582.50847	7.62277805	0.51802332

51 CS11-20-2	1582.50847	7.62277805	0.51802332
51 CS11-1-1	1585.66941	6.6157516	0.50343651
51 CS11-1-1	1585.66941	6.6157516	0.50343651
51 BBF-11-34	1586.16183	4.93173795	0.52213585
51 BBF-11-34	1586.16183	4.93173795	0.52213585
51 CS12-25-15	1587.16032	6.44408802	0.50923422
51 CS12-25-15	1587.16032	6.44408802	0.50923422
51 CS11-1-3	1587.87886	7.70708914	0.77963427
51 CS11-1-3	1587.87886	7.70708914	0.77963427
35 07LSC5_2	1590	8.9	0.3
35 07LSC5_2	1590	8.9	0.3
107 DL90/7_1	1591	8.38	0.18
51 CS11-13_1	1592.26447	5.99259128	0.22227756
51 CS11-13_1	1592.26447	5.99259128	0.22227756
51 CS12-25-48	1592.94386	6.06820349	0.55804842
51 CS12-25-48	1592.94386	6.06820349	0.55804842
37 07SC51-1@39	1593	5.7	0.37
37 07SC51-1@39	1593	5.7	0.37
37 07SC49@58	1593	6.37	0.24
37 07SC49@58	1593	6.37	0.24
35 07LSC3_47	1594	5.8	0.3
35 07LSC3_47	1594	5.8	0.3
107 DL90/7_16	1595	6.17	0.13
52 BBF-29-34	1595.41029	8.00497743	0.74962878
52 BBF-29-34	1595.41029	8.00497743	0.74962878
123	1597	7.17	0.08845352
51 CS11-13_11	1597.83249	5.78056291	0.20329733
51 CS11-13_11	1597.83249	5.78056291	0.20329733
107 DL90/7_19	1599	9.25	0.28
51 CS11-1-28	1599.49283	5.89515695	0.51350429
51 CS11-1-28	1599.49283	5.89515695	0.51350429
51 CS11-1-34	1600.25563	8.07400979	0.86883988
51 CS11-1-34	1600.25563	8.07400979	0.86883988
51 CS12-24-4	1600.85447	5.24191556	0.38382723
51 CS12-24-4	1600.85447	5.24191556	0.38382723
51 CS11-18-21	1600.96918	4.75524546	0.48827832
51 CS11-18-21	1600.96918	4.75524546	0.48827832
35 07LSC5_4	1601	7.2	0.4
35 07LSC5_4	1601	7.2	0.4
119	8.1 1605	5	0.5445
51 BBF-11-78	1605.74133	6.20903052	0.51281569
51 BBF-11-78	1605.74133	6.20903052	0.51281569
51 CS12-23-32	1606.22239	8.92279343	0.8360052
51 CS12-23-32	1606.22239	8.92279343	0.8360052
106 10GD48-22	1608	7.82	0.27

61 08SC74-153	1609	6.9	0.21
61 08SC74-153	1609	6.9	0.21
51 CS12-24-37	1610.81311	7.65016805	0.66867647
51 CS12-24-37	1610.81311	7.65016805	0.66867647
51 CS12-23-2	1610.96705	5.71901186	0.38457446
51 CS12-23-2	1610.96705	5.71901186	0.38457446
51 CS11-1-14	1611.33955	6.7044397	0.58923476
51 CS11-1-14	1611.33955	6.7044397	0.58923476
51 CS11-18-25	1611.75447	7.91808256	0.66918521
51 CS11-18-25	1611.75447	7.91808256	0.66918521
51 CS12-23-20	1615.71735	8.15523455	0.7144088
51 CS12-23-20	1615.71735	8.15523455	0.7144088
35 09LSC1_15.1	1616	5.3	0.3
35 09LSC1_15.1	1616	5.3	0.3
51 CS11-6_28	1617.35352	5.43391251	0.25188774
51 CS11-6_28	1617.35352	5.43391251	0.25188774
51 CS11-13_78	1617.6429	5.14747821	0.21662617
51 CS11-13_78	1617.6429	5.14747821	0.21662617
30 n2539-rpt-b6	1618	3.37	0.28
30 n2539-rpt-b6	1618	3.37	0.28
51 CS11-13_39	1620.19692	8.98399149	0.20942968
51 CS11-13_39	1620.19692	8.98399149	0.20942968
51 CS11-20-13	1621.16984	6.39901054	0.62798733
51 CS11-20-13	1621.16984	6.39901054	0.62798733
51 CS11-13_47	1622.37094	6.22412225	0.21047951
51 CS11-13_47	1622.37094	6.22412225	0.21047951
51 CS12-17-45	1622.92429	5.86362911	0.35310119
51 CS12-17-45	1622.92429	5.86362911	0.35310119
107 IT/5_26	1623	10	0.21
123	1623	6.95	0.10215703
98 IV67-110SC	1624	8.03	0.37
123	1625	7.14	0.07110567
35 07LSC6_44.1	1627	6.2	0.2
35 07LSC6_44.1	1627	6.2	0.2
119 29.1	1627	7	0.6344
52 BBF-29-79	1627.48275	5.18105865	0.4397536
52 BBF-29-79	1627.48275	5.18105865	0.4397536
51 CS12-23-18	1627.91169	8.71413922	0.68605548
51 CS12-23-18	1627.91169	8.71413922	0.68605548
123	1629	6.63	0.08912478
123	1629	6.89	0.09326516
107 WPG90/4_28	1630	5	0.21
123	1630	10.3333254	0.10871139
10 2436-48	1631	3.7	0.3
10 2436-48	1631	3.7	0.3

51 CS11-19-17	1631.36286	8.45556383	0.91115114
51 CS11-19-17	1631.36286	8.45556383	0.91115114
35 07LSC3_35.1	1632	6.4	0.4
35 07LSC3_35.1	1632	6.4	0.4
123	1632	9.46183691	0.14002186
51 CS12-25-7	1632.53426	8.03570833	0.81858215
51 CS12-25-7	1632.53426	8.03570833	0.81858215
12 A119	1633	6.68	
12 A119	1633	6.68	
12 A29	1633	7.21	
12 A29	1633	7.21	
123	1633.12603	7.32	0.08898161
52 BBF-29-25	1633.9453	6.01842224	0.55176023
52 BBF-29-25	1633.9453	6.01842224	0.55176023
51 CS11-19-27	1634.02971	7.07088339	0.70137195
51 CS11-19-27	1634.02971	7.07088339	0.70137195
51 CS12-17-51	1635.77172	8.59774742	0.71416737
51 CS12-17-51	1635.77172	8.59774742	0.71416737
12 A1577	1636	6.21	
12 A1577	1636	6.21	
51 CS11-13_17	1636.70268	7.13774449	0.22974555
51 CS11-13_17	1636.70268	7.13774449	0.22974555
52 BBF-29-61	1636.83729	9.01422521	0.54302126
52 BBF-29-61	1636.83729	9.01422521	0.54302126
51 CS11-19-20	1636.90637	7.10622752	0.59137492
51 CS11-19-20	1636.90637	7.10622752	0.59137492
107 WPG90/4_29	1637	5.57	0.17
51 CS11-19-27	1637.14235	6.70926892	0.54119648
51 CS11-19-27	1637.14235	6.70926892	0.54119648
35 09LSC1_19.1	1638	5.6	0.3
35 09LSC1_19.1	1638	5.6	0.3
12 A1306	1639	7.04	
12 A1306	1639	7.04	
12 A1042	1639	8.12	
12 A1042	1639	8.12	
35 CJS 99-J5_6.	1639	4.5	0.4
35 CJS 99-J5_6.	1639	4.5	0.4
123	1639	7.06	0.0772261
51 CS11-19-9	1639.25891	5.27316925	0.41856941
51 CS11-19-9	1639.25891	5.27316925	0.41856941
51 CS11-19-35	1641.52399	6.58585447	0.39673504
51 CS11-19-35	1641.52399	6.58585447	0.39673504
51 CS12-24-15	1641.99185	8.11061228	0.7006609
51 CS12-24-15	1641.99185	8.11061228	0.7006609
12 A1360	1642	8.09	

12 A1360	1642	8.09	
61 08SC11-4	1642	5.7	0.25
61 08SC11-4	1642	5.7	0.25
123	1642	8.38	0.08304212
51 CS11-19-33	1642.37181	6.0908182	0.59162211
51 CS11-19-33	1642.37181	6.0908182	0.59162211
12 A574	1643	5.53	
12 A574	1643	5.53	
106 10GD49-52	1643	6.82	0.15
35 07LSC5_48.1	1644	5.6	0.3
35 07LSC5_48.1	1644	5.6	0.3
35 2CJS 99-J5_4.	1644	8.4	0.2
35 2CJS 99-J5_4.	1644	8.4	0.2
37 07SC65@10	1644	9.28	0.21
37 07SC65@10	1644	9.28	0.21
51 CS11-13_51	1644.63861	5.85407274	0.25089063
51 CS11-13_51	1644.63861	5.85407274	0.25089063
12 A602	1645	6.15	
12 A602	1645	6.15	
12 A118	1645	7.15	
12 A118	1645	7.15	
123	1645	10.2834489	0.09726618
123	1645	10.3403081	0.10840357
51 BBF-11-30	1645.02782	4.37993081	0.44851063
51 BBF-11-30	1645.02782	4.37993081	0.44851063
52 BBF-29-60	1645.70191	7.43661116	0.9107485
52 BBF-29-60	1645.70191	7.43661116	0.9107485
52 BBF-29-51	1645.88134	6.13422824	0.45035259
52 BBF-29-51	1645.88134	6.13422824	0.45035259
35 07LSC3_3.1	1646	5.1	0.5
35 07LSC3_3.1	1646	5.1	0.5
115 13.1	1646.1	8.7	
51 CS11-18-43	1646.21402	5.35361523	0.60579496
51 CS11-18-43	1646.21402	5.35361523	0.60579496
60 DNt-210	1647	8	0.2
60 DNt-210	1647	8	0.2
60 DNt-201	1647	8.8	0.2
60 DNt-201	1647	8.8	0.2
10 2606-20	1648	4.9	0.4
10 2606-20	1648	4.9	0.4
51 BBF-11-100	1648.77518	8.14969875	0.74052844
51 BBF-11-100	1648.77518	8.14969875	0.74052844
123	1648.90577	7.32	0.10673932
30 n2539-rpt-3	1649	5.12	0.34
30 n2539-rpt-3	1649	5.12	0.34

35 07LSC6_16.1	1649	6.2	0.2
35 07LSC6_16.1	1649	6.2	0.2
61 08SC74-38	1649	5.2	0.24
61 08SC74-38	1649	5.2	0.24
123	1649	9.59	0.10796084
51 CS11-13_45	1649.16083	6.10460626	0.19991317
51 CS11-13_45	1649.16083	6.10460626	0.19991317
51 CS12-24-59	1649.5732	6.010139	0.40349531
51 CS12-24-59	1649.5732	6.010139	0.40349531
51 BBF-11-38	1649.94533	8.86254901	0.58923015
51 BBF-11-38	1649.94533	8.86254901	0.58923015
60 DNt-242	1650	4.2	0.2
60 DNt-242	1650	4.2	0.2
106 10GD49-49	1650	7.59	0.34
123	1650	9.11113009	0.12896411
123	1650	10.0918312	0.19846109
51 CS12-24-26	1650.17383	9.68724627	0.79351845
51 CS12-24-26	1650.17383	9.68724627	0.79351845
51 CS12-24-30	1650.67477	6.92488634	0.68013078
51 CS12-24-30	1650.67477	6.92488634	0.68013078
52 BBF-29-21	1651.02305	4.22441038	0.39784483
52 BBF-29-21	1651.02305	4.22441038	0.39784483
51 CS11-13_15	1651.02444	6.72968989	0.22521826
51 CS11-13_15	1651.02444	6.72968989	0.22521826
51 CS11-18-41	1651.11456	6.19584533	0.45191629
51 CS11-18-41	1651.11456	6.19584533	0.45191629
51 CS11-19-52	1651.33648	6.01136273	0.5521301
51 CS11-19-52	1651.33648	6.01136273	0.5521301
51 BBF-11-59	1651.46164	6.94445817	0.57713213
51 BBF-11-59	1651.46164	6.94445817	0.57713213
35 07LSC5_3.1	1652	4.2	0.4
35 07LSC5_3.1	1652	4.2	0.4
60 DNt-188	1652	5.1	0.2
60 DNt-188	1652	5.1	0.2
107 IT/5_17	1652	8.15	0.22
51 CS11-13_28	1652.54789	4.51889411	0.23186439
51 CS11-13_28	1652.54789	4.51889411	0.23186439
51 CS11-18-36	1652.58757	7.51221811	0.50253464
51 CS11-18-36	1652.58757	7.51221811	0.50253464
51 CS11-13_46	1652.63236	5.80706646	0.19585204
51 CS11-13_46	1652.63236	5.80706646	0.19585204
51 CS11-6_30	1652.80658	6.97788197	0.27045926
51 CS11-6_30	1652.80658	6.97788197	0.27045926
35 07LSC5_41.1	1653	4.9	0.3
35 07LSC5_41.1	1653	4.9	0.3

123		1653	7.80637786	0.12205505
123		1653	9.37447457	0.1282033
123		1653	9.66	0.09474385
51 CS12-23-1	1653.04926	4.78558537	0.32117553	
51 CS12-23-1	1653.04926	4.78558537	0.32117553	
123		1653.21997	7.19	0.08996461
51 CS12-25-21	1653.78621	8.99103176	0.61842004	
51 CS12-25-21	1653.78621	8.99103176	0.61842004	
123		1654	9.78	0.10834093
123		1655	9.18	0.10933203
51 CS11-13_16	1655.39342	9.49255954	0.20273568	
51 CS11-13_16	1655.39342	9.49255954	0.20273568	
51 BBF-11-92	1655.92362	8.81937921	0.65822693	
51 BBF-11-92	1655.92362	8.81937921	0.65822693	
35 07LSC3_25	1656	7.7	0.3	
35 07LSC3_25	1656	7.7	0.3	
37 07SC49@81	1656	5.18	0.46	
37 07SC49@81	1656	5.18	0.46	
123		1656	8.8949737	0.16641525
123		1656	9.72	0.09841005
51 BBF-11-41	1656.05296	4.60078508	0.47112639	
51 BBF-11-41	1656.05296	4.60078508	0.47112639	
51 CS11-20-42	1656.9279	5.6985754	0.58354155	
51 CS11-20-42	1656.9279	5.6985754	0.58354155	
51 CS11-13_67	1656.98802	7.79833287	0.21352479	
51 CS11-13_67	1656.98802	7.79833287	0.21352479	
107 DL90/7_4	1657	5.53	0.16	
123		1657	10.0070339	0.20057653
51 BBF-11-52	1657.035	5.55815619	0.35064958	
51 BBF-11-52	1657.035	5.55815619	0.35064958	
52 BBF-29-53	1657.36516	7.38674063	0.63213048	
52 BBF-29-53	1657.36516	7.38674063	0.63213048	
123		1658	8.77	0.09328223
51 CS11-13_38	1658.01992	7.05723371	0.19653968	
51 CS11-13_38	1658.01992	7.05723371	0.19653968	
51 CS11-18-42	1659.43226	7.94644607	0.62031344	
51 CS11-18-42	1659.43226	7.94644607	0.62031344	
51 CS12-24-28	1659.49621	5.53947816	0.32102408	
51 CS12-24-28	1659.49621	5.53947816	0.32102408	
51 CS11-13_62	1659.66562	5.81456746	0.24701427	
51 CS11-13_62	1659.66562	5.81456746	0.24701427	
59 M0-944	1660	8.5	0.2	
59 M0-944	1660	8.5	0.2	
60 DNt-189	1660	4.7	0.2	
60 DNt-189	1660	4.7	0.2	

60 DNt-209	1660	8.7	0.2
60 DNt-209	1660	8.7	0.2
65 BB-81 12	1660	9.43	0.29
65 BB-81 12	1660	9.43	0.29
123	1660	8.89098872	0.14088653
51 CS12-23-38	1660.87564	8.74726848	0.58737426
51 CS12-23-38	1660.87564	8.74726848	0.58737426
51 CS11-18-44	1660.92115	5.24518933	0.39870858
51 CS11-18-44	1660.92115	5.24518933	0.39870858
123	1661	9.18	0.09692369
51 CS12-24-20	1661.08675	4.49539034	0.32784213
51 CS12-24-20	1661.08675	4.49539034	0.32784213
51 CS12-25-22	1661.10287	7.87488797	0.66795555
51 CS12-25-22	1661.10287	7.87488797	0.66795555
51 CS11-13_75	1661.12862	4.87744208	0.21404497
51 CS11-13_75	1661.12862	4.87744208	0.21404497
52 BBF-29-42	1661.97305	6.14035291	0.58747251
52 BBF-29-42	1661.97305	6.14035291	0.58747251
51 CS11-19-51b	1662.36358	4.38889964	0.26438942
51 CS11-19-51b	1662.36358	4.38889964	0.26438942
123	1663	8.73	0.1038188
51 CS11-20-1	1663.3543	2.99900862	0.20806934
51 CS11-20-1	1663.3543	2.99900862	0.20806934
123	1664	7.26	0.10394856
123	1664	7.96847438	0.12995395
51 CS11-13_82	1664.23516	5.79006418	0.20243472
51 CS11-13_82	1664.23516	5.79006418	0.20243472
60 DNt-240	1665	4.5	0.3
60 DNt-240	1665	4.5	0.3
123	1665	10.1222585	0.20531752
107 DL90/7_6	1666	8.67	0.14
115 20.1	1666.1	5.9	
52 BBF-29-40	1666.35177	3.81602144	0.34339581
52 BBF-29-40	1666.35177	3.81602144	0.34339581
123	1666.78318	7.08	0.09154556
123	1667	8.95950751	0.1356189
123	1667	10.2087699	0.11102597
123	1667	10.486388	0.19574147
51 CS12-17-31	1667.45878	5.07668792	0.39339933
51 CS12-17-31	1667.45878	5.07668792	0.39339933
123	1668	8.94	0.12146291
106 10GD49-44	1669	7.58	0.26
123	1669	7.67756272	0.10630946
123	1669	10.0534231	0.19930829
123	1669	10.2415526	0.09918288

51 BBF-11-79	1669.19455	5.32862946	0.40619619
51 BBF-11-79	1669.19455	5.32862946	0.40619619
51 CS11-1-8	1669.81545	8.18644368	0.6575995
51 CS11-1-8	1669.81545	8.18644368	0.6575995
52 BBF-29-66	1670.03735	6.61425454	0.54927605
52 BBF-29-66	1670.03735	6.61425454	0.54927605
51 CS11-19-46	1670.28068	8.10732843	0.71758152
51 CS11-19-46	1670.28068	8.10732843	0.71758152
51 CS12-25-16	1670.29405	4.81658841	0.32921143
51 CS12-25-16	1670.29405	4.81658841	0.32921143
51 CS12-24-17	1670.8579	5.05982234	0.30094349
51 CS12-24-17	1670.8579	5.05982234	0.30094349
51 CS11-19-24	1672.07615	7.8465726	0.77361908
51 CS11-19-24	1672.07615	7.8465726	0.77361908
51 CS12-17-47	1672.32046	4.46777139	0.30797528
51 CS12-17-47	1672.32046	4.46777139	0.30797528
51 CS11-19-7	1672.99227	5.6430722	0.46029858
51 CS11-19-7	1672.99227	5.6430722	0.46029858
37 07SC51-1@75	1673	8.3	0.35
37 07SC51-1@75	1673	8.3	0.35
123	1673	10.4904365	0.11579215
123	1673	10.5083356	0.20875124
123	1673.06107	7.04	0.09563621
52 BBF-29-26	1673.92598	7.91420691	0.62479403
52 BBF-29-26	1673.92598	7.91420691	0.62479403
60 DNt-202	1674	6.9	0.2
60 DNt-202	1674	6.9	0.2
51 CS11-20-14	1674.57013	5.10276296	0.63065144
51 CS11-20-14	1674.57013	5.10276296	0.63065144
51 CS11-13_19	1675.28373	5.33250296	0.21549311
51 CS11-13_19	1675.28373	5.33250296	0.21549311
51 CS12-17-21	1675.84317	4.22328096	0.38033199
51 CS12-17-21	1675.84317	4.22328096	0.38033199
35 07LSC5_63.1	1676	5.1	0.2
35 07LSC5_63.1	1676	5.1	0.2
123	1676	10.4589335	0.11984825
51 BBF-11-64	1676.10442	5.46071242	0.43215888
51 BBF-11-64	1676.10442	5.46071242	0.43215888
123	1677	8.96	0.08916487
123	1677	10.2319962	0.21142644
51 CS12-23-14	1677.6884	4.36070044	0.33383919
51 CS12-23-14	1677.6884	4.36070044	0.33383919
123	1678	10.0369624	0.20758954
123	1679	7.44294711	0.13915219
123	1679	10.2573383	0.17519628

123		1679	10.3555725	0.11793941
51 BBF-11-62	1679.12478		5.98629946	0.58886573
51 BBF-11-62	1679.12478		5.98629946	0.58886573
60 DNt-199	1680		4	0.2
60 DNt-199	1680		4	0.2
123		1680	7.93608821	0.08090846
123		1680	10.2679872	0.08606329
51 CS12-17-42	1680.50409		4.42330616	0.40745468
51 CS12-17-42	1680.50409		4.42330616	0.40745468
35 07LSC5_9	1681		6.7	0.3
35 07LSC5_9	1681		6.7	0.3
35 CJS 99-J5_5.4	1682		8.3	0.4
35 CJS 99-J5_5.4	1682		8.3	0.4
123		1682	7.28	0.08516933
123		1682	10.4405599	0.09204111
123		1682	10.4654248	0.11010553
51 CS12-24-6	1682.60371		5.26007166	0.43289661
51 CS12-24-6	1682.60371		5.26007166	0.43289661
123		1683	10.4809599	0.10361625
51 BBF-11-4b	1683.59013		5.56364271	0.8912629
51 BBF-11-4b	1683.59013		5.56364271	0.8912629
51 CS11-19-37	1685.79896		5.84479091	0.52591642
51 CS11-19-37	1685.79896		5.84479091	0.52591642
123		1686	9.0289686	0.08984603
123		1686	9.30343401	0.09005327
18 CNG2-anu-zrn-	1686.50418		5.93347574	0.59650872
18 CNG2-anu-zrn-	1686.50418		5.93347574	0.59650872
60 DNt-196	1687		4.4	0.2
60 DNt-196	1687		4.4	0.2
61 08SC11-15	1687		5.7	0.23
61 08SC11-15	1687		5.7	0.23
98 IV22-16R	1688		6.06	0.13
51 CS12-25-49	1688.29976		8.67517175	0.77562102
51 CS12-25-49	1688.29976		8.67517175	0.77562102
51 CS11-13_59	1688.39923		6.67768293	0.22766559
51 CS11-13_59	1688.39923		6.67768293	0.22766559
52 BBF-29-67	1688.99505		8.35320151	0.73729395
52 BBF-29-67	1688.99505		8.35320151	0.73729395
98 IV67-14R	1689		7.81	0.37
123		1689	7.96947189	0.15665158
35 07LSC3_59	1690		7.3	0.4
35 07LSC3_59	1690		7.3	0.4
65 BB-81 13	1690		8.65	0.19
65 BB-81 13	1690		8.65	0.19
51 CS12-23-41	1690.39593		4.52463214	0.48043759

51 CS12-23-41	1690.39593	4.52463214	0.48043759
59 M0-1355	1691	6.3	0.2
59 M0-1355	1691	6.3	0.2
60 vgt-091	1693	5.3	0.2
60 vgt-091	1693	5.3	0.2
60 DNt-208	1693	11.6	0.1
60 DNt-208	1693	11.6	0.1
123	1693	8.43670115	0.13580017
94 177921@2. asc	1695	6.2	0.4
94 177921@23. asc	1695	8.1	0.5
98 IV46-12R	1695	10.37	0.22
52 BBF-29-23	1695.67284	6.13990798	0.54474613
52 BBF-29-23	1695.67284	6.13990798	0.54474613
51 CS12-25-23	1695.95505	7.55827247	0.6747508
51 CS12-25-23	1695.95505	7.55827247	0.6747508
123	1696	8.71711088	0.12834405
51 CS11-19-46b	1696.70383	4.64967018	0.3408835
51 CS11-19-46b	1696.70383	4.64967018	0.3408835
35 07LSC6_36.1	1697	4.7	0.3
35 07LSC6_36.1	1697	4.7	0.3
106 10GD49-32	1697	5.6	0.29
123	1698	9.14	0.0880851
98 IV63-11R	1699	9.22	0.33
51 BBF-11-96	1700.59339	7.17415725	0.68259216
51 BBF-11-96	1700.59339	7.17415725	0.68259216
10 2436-37b	1701	8.9	0.4
10 2436-37b	1701	8.9	0.4
123	1701	8.40239427	0.11680283
51 CS11-18-11	1701.00626	5.18895859	0.51261009
51 CS11-18-11	1701.00626	5.18895859	0.51261009
51 CS12-25-29	1701.2489	5.08043079	0.41916554
51 CS12-25-29	1701.2489	5.08043079	0.41916554
35 07LSC3_1	1702	5.1	0.4
35 07LSC3_1	1702	5.1	0.4
35 07LSC6_5.1	1702	6.8	0.4
35 07LSC6_5.1	1702	6.8	0.4
59 M0-1266	1702	7.7	0.1
59 M0-1266	1702	7.7	0.1
94 177921@9. asc	1702	10.4	0.7
51 CS12-25-34	1702.15624	4.86507333	0.45073516
51 CS12-25-34	1702.15624	4.86507333	0.45073516
51 CS11-18-13	1703.72497	7.94743527	0.60313944
51 CS11-18-13	1703.72497	7.94743527	0.60313944
37 07SC65@96	1706	6.11	0.36
37 07SC65@96	1706	6.11	0.36

123		1706	7. 80500175	0. 12571416
51 CS12-25-54	1706. 24876		6. 74872507	0. 63329726
51 CS12-25-54	1706. 24876		6. 74872507	0. 63329726
51 CS11-20-53	1706. 95673		4. 32403356	0. 40087432
51 CS11-20-53	1706. 95673		4. 32403356	0. 40087432
37 07SC65@39	1707		5. 62	0. 36
37 07SC65@39	1707		5. 62	0. 36
94 177921@14. asc	1708		8. 2	0. 5
51 CS11-19-50	1708. 75106		3. 58093211	0. 3463697
51 CS11-19-50	1708. 75106		3. 58093211	0. 3463697
35 07LSC3_42	1709		4. 3	0. 3
35 07LSC3_42	1709		4. 3	0. 3
123	1709		8. 86474339	0. 12542061
51 CS11-6_32	1709. 84968		6. 22366415	0. 24719582
51 CS11-6_32	1709. 84968		6. 22366415	0. 24719582
123	1711		8. 31710656	0. 13607946
51 CS12-25-19	1711. 89691		3. 39182084	0. 27720768
51 CS12-25-19	1711. 89691		3. 39182084	0. 27720768
123	1713		9. 28151657	0. 10111095
35 07LSC3_30. 1	1714		9. 5	0. 4
35 07LSC3_30. 1	1714		9. 5	0. 4
37 07SC65@3	1714		9. 96	0. 36
37 07SC65@3	1714		9. 96	0. 36
51 CS11-18-50	1715. 47254		7. 6867925	0. 80386343
51 CS11-18-50	1715. 47254		7. 6867925	0. 80386343
51 BBF-11-75	1718. 15945		9. 52591925	0. 72917212
51 BBF-11-75	1718. 15945		9. 52591925	0. 72917212
38 23C	1720		4. 8	
38 23C	1720		4. 8	
102 DC0931	1720		5. 95	0. 15
51 CS11-18-40	1722. 78942		7. 24701384	0. 72608277
51 CS11-18-40	1722. 78942		7. 24701384	0. 72608277
35 07LSC3_46. 1	1723		6. 6	0. 6
35 07LSC3_46. 1	1723		6. 6	0. 6
51 CS11-6_12	1724. 04889		11. 0717783	0. 24391636
51 CS11-6_12	1724. 04889		11. 0717783	0. 24391636
51 BBF-11-94	1724. 79696		8. 85785756	0. 67855209
51 BBF-11-94	1724. 79696		8. 85785756	0. 67855209
35 07LSC6_21. 1	1725		5. 8	0. 3
35 07LSC6_21. 1	1725		5. 8	0. 3
35 07LSC5_2. 1	1725		9. 2	0. 3
35 07LSC5_2. 1	1725		9. 2	0. 3
35 07LSC5_17. 1	1727		7. 6	0. 3
35 07LSC5_17. 1	1727		7. 6	0. 3
35 CJS 99-J5_18.	1727		7. 6	0. 4

35 CJS 99-J5_18.	1727	7.6	0.4
37 07SC51-1@36	1727	8.62	0.34
37 07SC51-1@36	1727	8.62	0.34
51 CS12-25-26	1727.88803	3.49580325	0.22442413
51 CS12-25-26	1727.88803	3.49580325	0.22442413
19 08LL04 54	1728	5.76	0.28
19 08LL04 54	1728	5.76	0.28
123	1728	7.96428759	0.10973258
35 07LSC6_52.2	1730	3.6	0.4
35 07LSC6_52.2	1730	3.6	0.4
59 MO-1087	1730	8.4	0.4
59 MO-1087	1730	8.4	0.4
51 BBF-11-102	1730.40298	8.37577946	0.74067986
51 BBF-11-102	1730.40298	8.37577946	0.74067986
52 BBF-29-58	1731.61144	6.40077459	0.47446817
52 BBF-29-58	1731.61144	6.40077459	0.47446817
119 28.1	1733	6	0.5212
51 CS11-18-34	1733.00256	8.73567731	1.0767349
51 CS11-18-34	1733.00256	8.73567731	1.0767349
35 07LSC3_37.1	1734	8.1	0.4
35 07LSC3_37.1	1734	8.1	0.4
51 BBF-11-67	1736.40914	8.72816361	0.7653088
51 BBF-11-67	1736.40914	8.72816361	0.7653088
51 CS11-13_32	1737.06031	5.65154565	0.21156085
51 CS11-13_32	1737.06031	5.65154565	0.21156085
51 CS11-1-40	1737.49391	8.44825908	0.77644992
51 CS11-1-40	1737.49391	8.44825908	0.77644992
35 07LSC5_33.1	1738	6.1	0.3
35 07LSC5_33.1	1738	6.1	0.3
65 BB-86 2	1738	7.31	0.16
65 BB-86 2	1738	7.31	0.16
35 07LSC3_10.1	1739	6.2	0.2
35 07LSC3_10.1	1739	6.2	0.2
123	1739	8.19	0.09306139
59 MO-1002	1740	8.3	0.2
59 MO-1002	1740	8.3	0.2
30 n2539-rpt-b6:	1741	5.36	0.3
30 n2539-rpt-b6:	1741	5.36	0.3
37 07SC49@08	1741	9.99	0.23
37 07SC49@08	1741	9.99	0.23
102 DC0936	1741	7.55	0.2
119 25.1	1742	6	0.4989
51 BBF-11-84	1742.46278	5.16188561	0.37604677
51 BBF-11-84	1742.46278	5.16188561	0.37604677
51 CS11-1-7	1742.60999	6.14428946	0.50310551

51 CS11-1-7	1742.60999	6.14428946	0.50310551	
35 07LSC3_52	1743	5.8	0.3	
35 07LSC3_52	1743	5.8	0.3	
51 CS11-6_07	1743.16929	10.6083372	0.23524383	
51 CS11-6_07	1743.16929	10.6083372	0.23524383	
35 07LSC3_32.1	1745	5.9	0.6	
35 07LSC3_32.1	1745	5.9	0.6	
51 CS11-20-11	1745.13164	6.9192865	0.77507024	
51 CS11-20-11	1745.13164	6.9192865	0.77507024	
123	1746.72439	6.53	0.08864974	
35 07LSC5_39.1	1747	4.4	0.5	
35 07LSC5_39.1	1747	4.4	0.5	
123	1747	8.44	0.06904336	
51 CS12-25-4	1748.44517	6.2746205	0.47293758	
51 CS12-25-4	1748.44517	6.2746205	0.47293758	
51 CS12-25-8	1748.9756	6.24621174	0.3762748	
51 CS12-25-8	1748.9756	6.24621174	0.3762748	
123	1749	7.45678844	0.09762561	
60 vgt-077	1750	5.1	0.2	
60 vgt-077	1750	5.1	0.2	
35 07LSC6_55.1	1751	4.1	0.2	
35 07LSC6_55.1	1751	4.1	0.2	
51 CS11-20-7	1752.3461	7.59369534	0.65837165	
51 CS11-20-7	1752.3461	7.59369534	0.65837165	
102 DC1001	1753	4.31	0.1	
119	8.1	1753	5	0.4031
123	1753	9.02783742	0.12625404	
123	1754	7.2	0.11507171	
51 CS12-23-39	1754.62848	2.91200441	0.24531405	
51 CS12-23-39	1754.62848	2.91200441	0.24531405	
51 CS12-23-15	1754.65421	5.64379238	0.4226819	
51 CS12-23-15	1754.65421	5.64379238	0.4226819	
35 07LSC3_31.1	1755	5.4	0.5	
35 07LSC3_31.1	1755	5.4	0.5	
98 IV63-19MR	1755	10.12	0.24	
98 IV63-6R	1756	9.92	0.21	
119	4.1	1756	8	0.5389
98 IV22-80	1757	9.17	0.46	
60 p11-149	1758	5.1	0.3	
60 p11-149	1758	5.1	0.3	
60 VGt-547	1758	6.5	0.4	
60 VGt-547	1758	6.5	0.4	
59 M0-912	1759	6	0.4	
59 M0-912	1759	6	0.4	
98 IV22-20R	1759	5.83	0.13	

119	24. 1	1759	4	0. 5214
35	07LSC3_1. 1	1760	3. 7	0. 2
35	07LSC3_1. 1	1760	3. 7	0. 2
56	VS87-14	1760	5. 15	
56	VS87-14	1760	5. 15	
106	10GD48-37	1760	4. 54	0. 22
51	CS11-20-17	1761. 58436	4. 74702686	0. 34566935
51	CS11-20-17	1761. 58436	4. 74702686	0. 34566935
35	07LSC5_61. 1	1762	7	0. 3
35	07LSC5_61. 1	1762	7	0. 3
98	IV67-3. 1IR	1762	8. 77	0. 35
51	CS12-23-30	1762. 11572	7. 00494673	0. 61386539
51	CS12-23-30	1762. 11572	7. 00494673	0. 61386539
51	CS12-25-10	1762. 23361	6. 65160827	0. 52528991
51	CS12-25-10	1762. 23361	6. 65160827	0. 52528991
94	177921@7. asc	1763	11. 0	0. 7
123		1763	6. 8	0. 09183388
51	CS12-24-29	1764. 22366	7. 43215163	0. 54329454
51	CS12-24-29	1764. 22366	7. 43215163	0. 54329454
51	CS11-13_72	1764. 45218	5. 76606097	0. 22446199
51	CS11-13_72	1764. 45218	5. 76606097	0. 22446199
51	CS11-20-28	1764. 50587	7. 24152522	0. 65992165
51	CS11-20-28	1764. 50587	7. 24152522	0. 65992165
98	IV63-15R	1765	9. 8	0. 33
18	CNG2-anu-zrn-	1765. 69872	7. 10443746	0. 59099829
18	CNG2-anu-zrn-	1765. 69872	7. 10443746	0. 59099829
59	MO-1362	1766	4. 7	0. 1
59	MO-1362	1766	4. 7	0. 1
35	07LSC5_36. 1	1767	5. 7	0. 2
35	07LSC5_36. 1	1767	5. 7	0. 2
98	IV67-12C	1767	8. 87	0. 31
123		1767	9. 09671324	0. 11723649
51	CS11-1-2	1767. 79607	4. 01149096	0. 34868473
51	CS11-1-2	1767. 79607	4. 01149096	0. 34868473
60	VGt-518	1768	6	0. 3
60	VGt-518	1768	6	0. 3
51	CS11-6_42	1768. 11808	7. 46234305	0. 24051431
51	CS11-6_42	1768. 11808	7. 46234305	0. 24051431
51	CS12-17-55	1768. 72087	6. 11223838	0. 51263565
51	CS12-17-55	1768. 72087	6. 11223838	0. 51263565
65	BB-86 7	1769	6. 34	0. 37
65	BB-86 7	1769	6. 34	0. 37
98	IV22-12R	1769	8. 61	0. 4
102	DC0930	1769	9. 35	0. 53
123		1769. 79335	9. 75	0. 1

123		1770	7.2	0.12228824
51 CS11-6_27	1770.09661		7.093492	0.23850734
51 CS11-6_27	1770.09661		7.093492	0.23850734
51 CS12-25-41	1770.92279	4.25593374		0.32266932
51 CS12-25-41	1770.92279	4.25593374		0.32266932
35 07LSC5_14.1	1772		6	0.3
35 07LSC5_14.1	1772		6	0.3
60 VGt-182	1772		7	0.6
60 VGt-182	1772		7	0.6
106 10GD49-95	1772		8	0.25
52 BBF-29-11	1772.20227	8.46862038		1.13414278
52 BBF-29-11	1772.20227	8.46862038		1.13414278
51 CS12-23-51	1773.60199	5.66583587		0.65795688
51 CS12-23-51	1773.60199	5.66583587		0.65795688
35 07LSC6_17.1	1775		6	0.2
35 07LSC6_17.1	1775		6	0.2
61 08SC74-12	1775		7.7	0.25
61 08SC74-12	1775		7.7	0.25
98 IV46-16C	1775	8.34		0.26
35 07LSC6_8.1	1776		5.5	0.3
35 07LSC6_8.1	1776		5.5	0.3
35 07LSC6_43.1	1776		6.6	0.2
35 07LSC6_43.1	1776		6.6	0.2
51 CS12-25-3	1776.12726	6.28529045		0.56855064
51 CS12-25-3	1776.12726	6.28529045		0.56855064
51 CS12-24-8	1777.72351	5.72516194		0.65242753
51 CS12-24-8	1777.72351	5.72516194		0.65242753
58 DDH 508-366	1778		8.5	
58 DDH 508-366	1778		8.5	
51 CS11-19-48b	1778.74388	6.43039578		0.71406425
51 CS11-19-48b	1778.74388	6.43039578		0.71406425
119	29.1	1779	6	0.3429
123		1779	7.1	0.09466189
123		1779	8.39137202	0.12960477
59 M0-1008	1780		9.1	0.3
59 M0-1008	1780		9.1	0.3
123		1781	9.27703352	0.09927399
52 BBF-29-41	1781.00465	7.91199228		0.75645261
52 BBF-29-41	1781.00465	7.91199228		0.75645261
123	1781.06226		9.2	0.1501058
123	1782		5.9	0.08209093
123	1783	6.73543978		0.10582275
123	1783	8.70967219		0.1119688
123	1783		9.1	0.0858499
51 CS12-24-3	1783.29411	4.29484664		0.39429116

51 CS12-24-3	1783.29411	4.29484664	0.39429116
51 CS12-23-54	1783.45812	4.88285416	0.49715507
51 CS12-23-54	1783.45812	4.88285416	0.49715507
51 CS12-17-56	1783.60571	4.03743171	0.35455052
51 CS12-17-56	1783.60571	4.03743171	0.35455052
51 CS12-23-23	1783.91724	3.92934197	0.32356944
51 CS12-23-23	1783.91724	3.92934197	0.32356944
51 CS12-25-32	1783.94634	8.08084197	0.5706614
51 CS12-25-32	1783.94634	8.08084197	0.5706614
60 VGt-438	1784	4.8	0.4
60 VGt-438	1784	4.8	0.4
60 VGt-552	1784	5.9	0.4
60 VGt-552	1784	5.9	0.4
123	1784	7.74	0.09264968
51 CS11-20-9	1784.21415	5.669163	0.45878985
51 CS11-20-9	1784.21415	5.669163	0.45878985
51 BBF-11-73b	1784.65483	4.33066078	0.37548935
51 BBF-11-73b	1784.65483	4.33066078	0.37548935
98 IV22-10C	1785	7.15	0.46
123	1785.09028	7.59	0.09971434
123	1786.91882	7.9	0.15473747
123	1787	7	0.10007777
123	1787.0614	7.7	0.18832716
10 2436-37a	1788	8.6	0.4
10 2436-37a	1788	8.6	0.4
35 07LSC3_26.1	1788	5.1	0.4
35 07LSC3_26.1	1788	5.1	0.4
35 07LSC5_12	1788	7.3	0.4
35 07LSC5_12	1788	7.3	0.4
118 AGQ13-08@59	1788	7.11	0.31
123	1788	7.9	0.12098112
123	1788.0239	9.12	0.10262118
52 BBF-29-59	1788.20651	4.19450257	0.30338958
52 BBF-29-59	1788.20651	4.19450257	0.30338958
35 07LSC3_50.1	1789	5.2	0.2
35 07LSC3_50.1	1789	5.2	0.2
123	1789	7.3	0.10991517
123	1789.25115	6.6	0.0871861
35 07LSC7_8.1	1790	5.5	0.2
35 07LSC7_8.1	1790	5.5	0.2
61 08SC74-62	1790	5.5	0.23
61 08SC74-62	1790	5.5	0.23
98 IV46-11C	1790	7.52	0.22
123	1790	6.43	0.0946707
123	1790	8	0.14413267

123		1790	10.2801739	0.13128171
51 CS12-24-53	1790.44446		5.38608299	0.42074363
51 CS12-24-53	1790.44446		5.38608299	0.42074363
52 BBF-29-22	1790.61658		4.1404693	0.3055002
52 BBF-29-22	1790.61658		4.1404693	0.3055002
123	1790.96264		7.2	0.06713399
35 07LSC3_	1791		-2.1	0.2
35 07LSC3_	1791		-2.1	0.2
35 07LSC3_56.1	1791		6.1	0.4
35 07LSC3_56.1	1791		6.1	0.4
37 07SC65@6	1791		8.49	0.33
37 07SC65@6	1791		8.49	0.33
60 sey-62	1791		5.2	0.6
60 sey-62	1791		5.2	0.6
51 BBF-11-98	1791.69681		9.78701691	0.87017073
51 BBF-11-98	1791.69681		9.78701691	0.87017073
51 CS12-25-36	1791.83128		4.70627399	0.39000871
51 CS12-25-36	1791.83128		4.70627399	0.39000871
98 IV63-11C	1792		7.05	0.21
123	1792		7.2	0.07883452
51 BBF-11-87	1792.22261		5.6479681	0.50391176
51 BBF-11-87	1792.22261		5.6479681	0.50391176
51 CS11-19-40	1792.28783		7.86684828	0.55627116
51 CS11-19-40	1792.28783		7.86684828	0.55627116
123	1792.31603		7.6	0.13386595
123	1792.35223		6.78	0.07915678
10 2641-38	1793		7.5	0.6
10 2641-38	1793		7.5	0.6
118 WFS13-01@67	1793		7.37	0.18
35 07LSC12_29.1	1794		6.7	0.4
35 07LSC12_29.1	1794		6.7	0.4
98 IV63-3C	1794		8.5	0.3
51 CS11-19-19	1794.30801		4.75560956	0.42821028
51 CS11-19-19	1794.30801		4.75560956	0.42821028
51 CS11-20-12	1794.30801		5.06832966	0.51896432
51 CS11-20-12	1794.30801		5.06832966	0.51896432
123	1794.44377		7.8	0.21918322
52 BBF-29-69	1794.71157		7.87091897	0.75540194
52 BBF-29-69	1794.71157		7.87091897	0.75540194
35 07LSC6_45.1	1795		5.2	0.4
35 07LSC6_45.1	1795		5.2	0.4
59 M0-1016	1795		4.9	0.3
59 M0-1016	1795		4.9	0.3
65 BB-86 9	1795		5.86	0.26
65 BB-86 9	1795		5.86	0.26

118 WFS13-01@55	1795	6.15	0.31
51 CS12-17-53	1795.08928	4.26892859	0.39836075
51 CS12-17-53	1795.08928	4.26892859	0.39836075
52 BBF-29-14	1795.44723	5.42063603	0.50236765
52 BBF-29-14	1795.44723	5.42063603	0.50236765
51 CS12-17-30d	1796.19538	5.33385993	0.43119158
51 CS12-17-30d	1796.19538	5.33385993	0.43119158
52 BBF-29-80	1796.2279	3.96266208	0.36963553
52 BBF-29-80	1796.2279	3.96266208	0.36963553
123	1797	7.47190911	0.11711429
123	1798	7.68342711	0.15174916
51 CS12-23-25	1798.03711	7.72853484	0.67361417
51 CS12-23-25	1798.03711	7.72853484	0.67361417
51 CS12-23-46	1800.43323	4.38334777	0.38988924
51 CS12-23-46	1800.43323	4.38334777	0.38988924
51 CS11-1-37	1800.64399	5.12731031	0.29731074
51 CS11-1-37	1800.64399	5.12731031	0.29731074
60 vgt-129	1801	6.8	0.2
60 vgt-129	1801	6.8	0.2
94 177921@22. asc	1801	8.3	0.5
98 IV46-4C	1801	6.35	0.21
123	1801	7.41003278	0.16333464
123	1801	7.97	0.08472571
60 VGt-321	1802	3.8	0.4
60 VGt-321	1802	3.8	0.4
60 VGt-468	1802	4.7	0.4
60 VGt-468	1802	4.7	0.4
123	1802	9.4	0.16204864
51 CS12-25-11	1802.47477	6.72631708	0.4820163
51 CS12-25-11	1802.47477	6.72631708	0.4820163
123	1802.72899	6.19	0.09911613
123	1803	7.52	0.07081445
123	1803	9.2	0.09
51 CS11-18-59	1803.28412	5.55629243	0.53031116
51 CS11-18-59	1803.28412	5.55629243	0.53031116
118 WFS13-01@32	1804	6.74	0.36
118 AGQ13-08@71	1804	7	0.36
119 44.1	1804	7	0.5702
123	1804.15577	8	0.21957288
123	1804.5358	7.6	0.2401753
51 CS12-24-10	1804.59523	9.49011847	0.80164969
51 CS12-24-10	1804.59523	9.49011847	0.80164969
51 CS12-23-56	1804.77972	5.54245832	0.62115983
51 CS12-23-56	1804.77972	5.54245832	0.62115983
94 177921@13. asc	1805	8.1	0.5

123	1805	6.55572503	0.0687527
123	1805	10.47	0.09467508
51 BBF-11-97	1805.3056	5.36619341	0.40290862
51 BBF-11-97	1805.3056	5.36619341	0.40290862
35 07LSC5_56.1	1806	6.8	0.2
35 07LSC5_56.1	1806	6.8	0.2
56 Z2033	1806	7.84	
56 Z2033	1806	7.84	
60 VGt-525	1806	2.4	0.5
60 VGt-525	1806	2.4	0.5
118 WFS13-01@56	1806	6.13	0.34
118 AGQ13-08@109	1806	6.23	0.17
123	1806.14892	7.2	0.15088396
51 CS12-24-11	1806.61404	7.36214326	0.6707672
51 CS12-24-11	1806.61404	7.36214326	0.6707672
51 CS11-19-42	1806.68003	6.67180321	0.53075357
51 CS11-19-42	1806.68003	6.67180321	0.53075357
98 IV46-6D	1807	6.38	0.21
98 IV22-15C	1807	9.22	0.4
123	1807.03744	7.56	0.12536232
51 CS11-18-14	1807.08491	7.08203699	0.67199831
51 CS11-18-14	1807.08491	7.08203699	0.67199831
123	1807.22306	7	0.29829268
52 BBF-29-20	1807.35582	8.64497047	0.70894634
52 BBF-29-20	1807.35582	8.64497047	0.70894634
60 VGt-260	1808	6.7	0.6
60 VGt-260	1808	6.7	0.6
98 IV63-2R	1808	9.51	0.3
123	1808	6.6	0.108679
123	1808	7	0.08756094
51 CS11-20-34	1808.37298	5.15467632	0.39758243
51 CS11-20-34	1808.37298	5.15467632	0.39758243
51 CS12-23-19	1808.53424	6.94555594	0.46066288
51 CS12-23-19	1808.53424	6.94555594	0.46066288
51 CS12-23-16	1808.82677	8.63841043	0.83971907
51 CS12-23-16	1808.82677	8.63841043	0.83971907
123	1810.02433	7.5	0.2292139
51 BBF-11-40	1810.64521	5.17707424	0.48674551
51 BBF-11-40	1810.64521	5.17707424	0.48674551
51 CS12-23-49	1811.2087	6.08709329	0.59309517
51 CS12-23-49	1811.2087	6.08709329	0.59309517
51 CS12-24-16	1811.77198	12.4150985	1.07694057
51 CS12-24-16	1811.77198	12.4150985	1.07694057
37 07SC65@57	1812	6.69	0.28
37 07SC65@57	1812	6.69	0.28

118 WFS13-01@100	1812	8.14	0.38
35 2CJS 99-J5_8.	1814	5.1	0.4
35 2CJS 99-J5_8.	1814	5.1	0.4
35 07LSC10_32.1	1814	6.8	0.5
35 07LSC10_32.1	1814	6.8	0.5
118 WFS13-01@60	1814	6.19	0.35
118 WFS13-01@71	1814	7.89	0.35
118 WFS13-01@19	1815	6.04	0.23
51 CS11-6_03	1815.0064	6.51494137	0.22689927
51 CS11-6_03	1815.0064	6.51494137	0.22689927
98 IV22-6C	1816	5.15	0.3
102 DC1131	1816	5.27	0.2
52 BBF-29-6	1816.79608	6.98802203	0.69582376
52 BBF-29-6	1816.79608	6.98802203	0.69582376
35 07LSC12_34.1	1817	7.5	0.4
35 07LSC12_34.1	1817	7.5	0.4
20 BB6.3	1818	5.1	0.6
20 BB6.3	1818	5.1	0.6
20 BB6.3	1818	5.1	0.6
123	1818	5.95915408	0.11826897
37 07SC51-1@86	1819	5.9	0.34
37 07SC51-1@86	1819	5.9	0.34
37 07SC51-1@81	1819	8.66	0.18
37 07SC51-1@81	1819	8.66	0.18
56 HUD85-1	1819	5.62	
56 HUD85-1	1819	5.62	
94 177921@15. asc	1819	7.9	0.5
98 IV67-8C	1819	7.74	0.37
102 DC1132	1819	5.13	0.09
52 BBF-29-7	1819.77959	5.52227022	0.47710809
52 BBF-29-7	1819.77959	5.52227022	0.47710809
51 CS11-18-9	1819.81159	5.61016562	0.53516593
51 CS11-18-9	1819.81159	5.61016562	0.53516593
35 07LSC6_18.2	1820	5.5	0.7
35 07LSC6_18.2	1820	5.5	0.7
35 07LSC12_8.1	1820	6.7	0.4
35 07LSC12_8.1	1820	6.7	0.4
60 VGt-462	1820	5.1	0.4
60 VGt-462	1820	5.1	0.4
60 VGt-435	1820	6.1	0.4
60 VGt-435	1820	6.1	0.4
60 lnt-065d	1820	6.8	0.2
60 lnt-065d	1820	6.8	0.2
118 WFS13-01@96	1820	6.21	0.23
51 CS11-19-57	1820.43543	6.72664478	0.57534179

51 CS11-19-57	1820.43543	6.72664478	0.57534179
51 CS11-19-49	1820.87537	6.20391071	0.50334916
51 CS11-19-49	1820.87537	6.20391071	0.50334916
118 WFS13-01@15	1821	5.55	0.3
118 WFS13-01@80	1821	6.98	0.47
51 CS12-17-30c	1821.8267	5.24357712	0.58083156
51 CS12-17-30c	1821.8267	5.24357712	0.58083156
60 VGt-556	1822	5.5	0.3
60 VGt-556	1822	5.5	0.3
98 IV22-13R	1822	6.27	0.4
98 IV22-16C	1822	8.43	0.13
118 WFS13-01@63	1822	5.88	0.27
118 WFS13-01@07	1822	6.12	0.46
51 CS12-24-36	1822.16229	4.93514766	0.50527697
51 CS12-24-36	1822.16229	4.93514766	0.50527697
123	1822.60487	8.49	0.13072942
51 CS11-18-23	1822.67564	6.16740419	0.47676614
51 CS11-18-23	1822.67564	6.16740419	0.47676614
94 177921@17. asc	1824	8.1	0.5
98 IV22-9R	1824	8.38	0.4
123	1824	5.90555556	0.124499
35 07LSC5_32.1	1825	4.6	0.4
35 07LSC5_32.1	1825	4.6	0.4
37 07SC49@90	1825	8.16	0.42
37 07SC49@90	1825	8.16	0.42
118 WFS13-01@54	1825	5.96	0.25
56 95SB42	1826	6.32	
56 95SB42	1826	6.32	
102 DC1130	1826	4.3	0.11
18 CNG2-anu-zrn-	1826.12257	7.60599217	0.59745998
18 CNG2-anu-zrn-	1826.12257	7.60599217	0.59745998
51 CS11-18-60	1826.24716	4.75072546	0.42483279
51 CS11-18-60	1826.24716	4.75072546	0.42483279
59 MO-1123	1827	5	0.4
59 MO-1123	1827	5	0.4
118 WFS13-01@50	1827	5.65	0.26
118 WFS13-01@22	1827	5.65	0.35
118 WFS13-01@37	1827	6.33	0.29
51 CS11-20-65	1827.12878	10.2346593	0.8570222
51 CS11-20-65	1827.12878	10.2346593	0.8570222
18 ORG2-anu-zrn-	1828.23454	5.70480152	0.75759825
18 ORG2-anu-zrn-	1828.23454	5.70480152	0.75759825
51 CS12-25-13	1828.53997	6.34409385	0.74640936
51 CS12-25-13	1828.53997	6.34409385	0.74640936
37 07SC51-1@06	1830	7.42	0.31

37 07SC51-1@06	1830	7.42	0.31
51 CS12-17-11	1830.32252	5.08289866	0.36747226
51 CS12-17-11	1830.32252	5.08289866	0.36747226
56 95SB41	1831	6.06	
56 95SB41	1831	6.06	
98 IV67-13C	1832	6.07	0.31
118 WFS13-01@41	1832	5.9	0.25
118 WFS13-01@83	1832	6.21	0.37
19 08LL04 3	1834	6.38	0.36
19 08LL04 3	1834	6.38	0.36
37 07SC51-1@27	1834	8.62	0.31
37 07SC51-1@27	1834	8.62	0.31
118 WFS13-01@97	1834	6.12	0.4
51 BBF-11-85	1834.42201	8.86983409	0.72013462
51 BBF-11-85	1834.42201	8.86983409	0.72013462
35 07LSC6_48.1	1835	9.3	0.3
35 07LSC6_48.1	1835	9.3	0.3
61 08SC11-6	1835	8.6	0.29
61 08SC11-6	1835	8.6	0.29
118 WFS13-01@04	1835	5.63	0.36
118 AGQ13-08@39	1835	7.76	0.32
51 CS12-17-10	1835.33388	4.40901874	0.28838507
51 CS12-17-10	1835.33388	4.40901874	0.28838507
51 CS11-20-50	1835.66663	8.71288538	1.11385663
51 CS11-20-50	1835.66663	8.71288538	1.11385663
51 BBF-11-91	1835.78831	8.54745139	0.82372137
51 BBF-11-91	1835.78831	8.54745139	0.82372137
35 07LSC12_22.1	1836	7.9	0.4
35 07LSC12_22.1	1836	7.9	0.4
118 AGQ13-08@96	1836	8.85	0.25
56 95SB12	1837	7	
56 95SB12	1837	7	
59 M0-1316	1837	9	0.2
59 M0-1316	1837	9	0.2
60 lnt-020d	1837	4.7	0.3
60 lnt-020d	1837	4.7	0.3
118 AGQ13-08@105	1837	6.07	0.31
51 CS11-19-30	1837.55219	5.49706672	0.52779343
51 CS11-19-30	1837.55219	5.49706672	0.52779343
94 165591@47. asc	1839	6.2	0.2
51 CS11-1-6	1839.74594	7.27748491	0.78263415
51 CS11-1-6	1839.74594	7.27748491	0.78263415
52 BBF-29-33	1839.81742	7.56737158	0.600662
52 BBF-29-33	1839.81742	7.56737158	0.600662
51 CS12-23-7	1839.90383	4.73777106	0.35488026

51 CS12-23-7	1839.90383	4.73777106	0.35488026
37 07SC51-1@32	1840	7.98	0.49
37 07SC51-1@32	1840	7.98	0.49
56 97SB125	1840	7.46	
56 97SB125	1840	7.46	
58 DDH 508-366	1840	8.2	
58 DDH 508-366	1840	8.2	
123	1840	6.8	0.12
51 CS11-20-56	1840.85085	6.25237168	0.53908803
51 CS11-20-56	1840.85085	6.25237168	0.53908803
60 lnt-004d	1841	6.2	0.3
60 lnt-004d	1841	6.2	0.3
118 AGQ13-08@80	1841	5.99	0.38
18 ORG2-anu-zrn-	1841.88593	5.92013155	0.55818849
18 ORG2-anu-zrn-	1841.88593	5.92013155	0.55818849
10 2436-55	1842	9	0.4
10 2436-55	1842	9	0.4
37 07SC51-1@11	1842	9.28	0.5
37 07SC51-1@11	1842	9.28	0.5
37 07SC51-1@72	1842	9.95	0.34
37 07SC51-1@72	1842	9.95	0.34
56 HUD86-18	1842	6.42	
56 HUD86-18	1842	6.42	
60 VGt-572	1842	9.8	0.2
60 VGt-572	1842	9.8	0.2
107 IT/5_18	1842	5.46	0.19
35 07LSC3_40.1	1843	4.4	0.2
35 07LSC3_40.1	1843	4.4	0.2
58 DDH 508-366	1843	9.2	
58 DDH 508-366	1843	9.2	
60 p11-114	1843	4.4	0.3
60 p11-114	1843	4.4	0.3
60 VGt-506	1843	5.1	0.4
60 VGt-506	1843	5.1	0.4
119 27.1	1843	11	0.5063
35 07LSC12_20.1	1844	9.7	0.3
35 07LSC12_20.1	1844	9.7	0.3
59 M0-1136	1844	6.7	0.4
59 M0-1136	1844	6.7	0.4
98 IV46-8C	1844	7.26	0.21
19 08LL04 43	1845	6.18	0.5
19 08LL04 43	1845	6.18	0.5
60 VGt-459	1845	4.4	0.4
60 VGt-459	1845	4.4	0.4
123	1845	6.29141629	0.19611175

51 CS11-18-3	1845.0326	9.87612521	0.78830491
51 CS11-18-3	1845.0326	9.87612521	0.78830491
51 CS11-18-16	1845.52971	6.03095319	0.50722369
51 CS11-18-16	1845.52971	6.03095319	0.50722369
35 07LSC12_52.1	1846	6.6	0.2
35 07LSC12_52.1	1846	6.6	0.2
37 07SC51-1@10	1846	10.23	0.26
37 07SC51-1@10	1846	10.23	0.26
58 DDH 508-366	1846	8.1	
58 DDH 508-366	1846	8.1	
58 DDH 508-366	1846	8.3	
58 DDH 508-366	1846	8.3	
58 DDH 508-366	1846	8.9	
58 DDH 508-366	1846	8.9	
60 lnt-029d	1846	6.6	3.5
60 lnt-029d	1846	6.6	3.5
119 6.1	1846	4	0.3719
60 VGt-398	1847	4.5	0.4
60 VGt-398	1847	4.5	0.4
30 n2539-rpt-b6	1848	5.04	0.3
30 n2539-rpt-b6	1848	5.04	0.3
98 IV63-9C	1848	4.84	0.3
51 CS11-6_38	1849.07387	6.6856038	0.27481086
51 CS11-6_38	1849.07387	6.6856038	0.27481086
19 08LL05 41	1850	5.17	0.35
19 08LL05 41	1850	5.17	0.35
37 07SC51-1@19	1850	8.17	0.2
37 07SC51-1@19	1850	8.17	0.2
37 07SC51-1@82	1850	8.21	0.25
37 07SC51-1@82	1850	8.21	0.25
37 07SC51-1@13	1850	8.81	0.28
37 07SC51-1@13	1850	8.81	0.28
98 IV22-18	1850	6.76	0.13
51 Siam1_42	1850.50096	9.88455119	0.24570507
51 Siam1_42	1850.50096	9.88455119	0.24570507
18 CNG2-anu-zrn-	1850.54205	5.79667986	0.59526683
18 CNG2-anu-zrn-	1850.54205	5.79667986	0.59526683
12 A1531	1851	5.9	
12 A1531	1851	5.9	
37 07SC51-1@09	1851	9.41	0.32
37 07SC51-1@09	1851	9.41	0.32
47 PMOG-441_41-!	1851	7.6	0.3
47 PMOG-441_41-!	1851	7.6	0.3
58 DDH 508-232	1851	9.1	
58 DDH 508-232	1851	9.1	

58 DDH 508-232	1851	9.3	
58 DDH 508-232	1851	9.3	
58 DDH 508-232	1851	9.4	
58 DDH 508-232	1851	9.4	
119 26.1	1851	4	0.3374
60 vgt-098	1852	7	0.2
60 vgt-098	1852	7	0.2
37 07SC51-1@58	1853	9.94	0.31
37 07SC51-1@58	1853	9.94	0.31
123	1853	6.3	0.09419652
51 CS11-19-8	1853.15666	9.09999261	0.84973904
51 CS11-19-8	1853.15666	9.09999261	0.84973904
18 CNG2-anu-zrn-	1853.46107	4.5585278	0.60107291
18 CNG2-anu-zrn-	1853.46107	4.5585278	0.60107291
51 CS12-24-21	1853.88959	4.53810515	0.40831302
51 CS12-24-21	1853.88959	4.53810515	0.40831302
30 n2539-rpt-44	1854	4.91	0.31
30 n2539-rpt-44	1854	4.91	0.31
56 HUD84-WL3	1854	5.67	
56 HUD84-WL3	1854	5.67	
51 Siam1_23	1854.78805	7.86140834	0.20730756
51 Siam1_23	1854.78805	7.86140834	0.20730756
30 n2539-rpt-69	1856	6.35	0.3
30 n2539-rpt-69	1856	6.35	0.3
107 IT/5_11	1856	7.62	0.19
119 7.1	1856	5	0.2996
51 CS12-25-50	1856.21824	6.17494311	0.52383819
51 CS12-25-50	1856.21824	6.17494311	0.52383819
30 n2539-rpt-b1'	1857	7.14	0.26
30 n2539-rpt-b1'	1857	7.14	0.26
37 07SC51-1@45	1857	8.57	0.46
37 07SC51-1@45	1857	8.57	0.46
37 07SC51-1@14	1857	9.42	0.29
37 07SC51-1@14	1857	9.42	0.29
56 HUD86-14	1857	5.56	
56 HUD86-14	1857	5.56	
35 07LSC12_33.1	1858	6.2	0.2
35 07LSC12_33.1	1858	6.2	0.2
56 95SB11	1858	7.98	
56 95SB11	1858	7.98	
58 DDH 508-232	1858	7.3	
58 DDH 508-232	1858	7.3	
60 lnt-036d	1858	6.7	0.2
60 lnt-036d	1858	6.7	0.2
37 07SC51-1@78	1859	8.06	0.37

37 07SC51-1@78	1859	8.06	0.37
37 07SC51-1@16	1859	8.61	0.37
37 07SC51-1@16	1859	8.61	0.37
51 CS12-17-9	1859.81687	5.57742087	0.42163957
51 CS12-17-9	1859.81687	5.57742087	0.42163957
37 07SC51-1@59	1860	9.44	0.44
37 07SC51-1@59	1860	9.44	0.44
56 VS73-18	1860	5	
56 VS73-18	1860	5	
119 1.1	1860	5	0.4764
37 07SC51-1@71	1861	7.77	0.5
37 07SC51-1@71	1861	7.77	0.5
60 p11-156	1861	5.1	0.3
60 p11-156	1861	5.1	0.3
98 IV67-3C	1861	6.75	0.35
61 08SC11-52	1862	6.6	0.27
61 08SC11-52	1862	6.6	0.27
51 CS11-13_21	1862.66149	6.76519464	0.19912056
51 CS11-13_21	1862.66149	6.76519464	0.19912056
35 07LSC10_34.1	1863	9.3	0.3
35 07LSC10_34.1	1863	9.3	0.3
37 07SC51-1@73	1863	9.07	0.39
37 07SC51-1@73	1863	9.07	0.39
37 07SC51-1@37	1863	9.55	0.19
37 07SC51-1@37	1863	9.55	0.19
60 VGt-301	1863	3	0.5
60 VGt-301	1863	3	0.5
60 VGt-356	1863	4.1	0.3
60 VGt-356	1863	4.1	0.3
118 AGQ13-08@82	1863	8.69	0.41
119 10.1	1863	4.2244	0.5299
37 07SC51-1@20	1864	7.41	0.34
37 07SC51-1@20	1864	7.41	0.34
37 07SC51-1@29	1864	8.64	0.39
37 07SC51-1@29	1864	8.64	0.39
37 07SC49@53	1864	9.01	0.29
37 07SC49@53	1864	9.01	0.29
98 IV46-1C	1864	7.4	0.21
37 07SC51-1@33	1865	8.24	0.3
37 07SC51-1@33	1865	8.24	0.3
37 07SC51-1@03	1865	8.37	0.23
37 07SC51-1@03	1865	8.37	0.23
37 07SC51-1@30	1865	8.53	0.24
37 07SC51-1@30	1865	8.53	0.24
60 lnt-080d	1865	1.1	0.2

60 lnt-080d	1865	1.1	0.2
98 IV22-2R	1865	4.04	0.3
119 15.1	1865	6	0.4074
19 08LL06 44	1866	6.69	0.33
19 08LL06 44	1866	6.69	0.33
35 07LSC5_27.2	1866	4.8	0.5
35 07LSC5_27.2	1866	4.8	0.5
37 07SC51-1@49	1866	8.32	0.47
37 07SC51-1@49	1866	8.32	0.47
37 07SC51-1@50	1866	8.64	0.31
37 07SC51-1@50	1866	8.64	0.31
98 IV63-9C	1866	5.8	0.21
118 AGQ13-08@95	1866	9.29	0.2
30 n2539-rpt-17	1867	8.11	0.25
30 n2539-rpt-17	1867	8.11	0.25
37 07SC51-1@74	1867	8.61	0.45
37 07SC51-1@74	1867	8.61	0.45
18 CNG2-anu-zrn-	1867.83602	4.85311597	0.59776289
18 CNG2-anu-zrn-	1867.83602	4.85311597	0.59776289
35 07LSC12_13.1	1868	7.2	0.4
35 07LSC12_13.1	1868	7.2	0.4
37 07SC51-1@67	1868	7.94	0.4
37 07SC51-1@67	1868	7.94	0.4
119 27.1	1868	4.0019	0.5433
37 07SC51-1@18	1869	8.03	0.38
37 07SC51-1@18	1869	8.03	0.38
37 07SC49@77	1869	8.68	0.27
37 07SC49@77	1869	8.68	0.27
37 07SC51-1@69	1869	9.74	0.32
37 07SC51-1@69	1869	9.74	0.32
58 DDH 508-366	1869	6.5	
58 DDH 508-366	1869	6.5	
60 lnt-049d	1869	6.8	0.2
60 lnt-049d	1869	6.8	0.2
18 CNG2-anu-zrn-	1869.00569	5.95332309	0.59734605
18 CNG2-anu-zrn-	1869.00569	5.95332309	0.59734605
12 A588	1870	5.5	
12 A588	1870	5.5	
12 A1290	1870	7.6	
12 A1290	1870	7.6	
37 07SC65@72	1870	7.75	0.32
37 07SC65@72	1870	7.75	0.32
102 DC0929	1870	4.83	0.23
118 AGQ13-08@42	1870	6.53	0.24
37 07SC51-1@38	1871	8.57	0.32

37 07SC51-1@38	1871	8.57	0.32
18 ORG2-anu-zrn-	1871.19628	7.86656082	0.78776948
18 ORG2-anu-zrn-	1871.19628	7.86656082	0.78776948
37 07SC51-1@25	1872	8.48	0.28
37 07SC51-1@25	1872	8.48	0.28
37 07SC51-1@23	1872	9.95	0.36
37 07SC51-1@23	1872	9.95	0.36
37 07SC51-1@01	1872	10.54	0.49
37 07SC51-1@01	1872	10.54	0.49
118 AGQ13-08@23	1872	9.54	0.44
119	10.1	1872	5
119	59.1	1872	5.846
12 A1530	1873	5.87	
12 A1530	1873	5.87	
35 07LSC5_31.2	1873	3.2	0.4
35 07LSC5_31.2	1873	3.2	0.4
35 07LSC5_26.1	1873	6	0.3
35 07LSC5_26.1	1873	6	0.3
59 MO-946	1873	6.2	0.3
59 MO-946	1873	6.2	0.3
60 pll-144	1873	5	0.3
60 pll-144	1873	5	0.3
98 IV67-19C	1873	7.42	0.31
118 AGQ13-08@69	1873	7.61	0.37
119	67.1	1873	3.7018
18 NGR1-anu-zrn-	1873.03588	5.51845598	0.61719192
18 NGR1-anu-zrn-	1873.03588	5.51845598	0.61719192
51 Siam1_102	1873.51272	5.95269977	0.30151037
51 Siam1_102	1873.51272	5.95269977	0.30151037
35 09LSC4_102.1	1874	4.6	0.2
35 09LSC4_102.1	1874	4.6	0.2
37 07SC51-1@17	1874	7.41	0.3
37 07SC51-1@17	1874	7.41	0.3
37 07SC51-1@93	1874	8.5	0.34
37 07SC51-1@93	1874	8.5	0.34
37 07SC49@55	1874	8.95	0.39
37 07SC49@55	1874	8.95	0.39
37 07SC51-1@55	1874	9.17	0.36
37 07SC51-1@55	1874	9.17	0.36
37 07SC51-1@77	1874	9.77	0.26
37 07SC51-1@77	1874	9.77	0.26
60 vgt-122	1874	7.4	0.2
60 vgt-122	1874	7.4	0.2
12 A922	1875	7.78	
12 A922	1875	7.78	

37 07SC51-1@28	1875	9.13	0.41
37 07SC51-1@28	1875	9.13	0.41
37 07SC51-1@46	1875	9.7	0.3
37 07SC51-1@46	1875	9.7	0.3
37 07SC51-1@22	1875	9.76	0.58
37 07SC51-1@22	1875	9.76	0.58
59 M0-1084	1875	6.1	0.2
59 M0-1084	1875	6.1	0.2
60 p11-133	1875	11.3	0.5
60 p11-133	1875	11.3	0.5
98 IV22-12R	1875	5.47	0.4
118 AGQ13-08@20	1875	10.09	0.44
12 A1358	1876	6.46	
12 A1358	1876	6.46	
62 TGS-7-2. S01	1876	6.6	0.2
62 TGS-7-2. S01	1876	6.6	0.2
98 IV22-7C	1876	5.77	0.46
51 Siam1_7	1876.81913	9.47421799	0.22522937
51 Siam1_7	1876.81913	9.47421799	0.22522937
30 n2539-rpt-26	1877	4.54	0.29
30 n2539-rpt-26	1877	4.54	0.29
37 07SC51-1@24	1877	8.7	0.34
37 07SC51-1@24	1877	8.7	0.34
51 CS12-24-32	1877.7209	6.65317812	0.72569829
51 CS12-24-32	1877.7209	6.65317812	0.72569829
51 BBF-11-53	1877.87217	4.01983903	0.37399794
51 BBF-11-53	1877.87217	4.01983903	0.37399794
37 07SC51-1@04	1878	9.65	0.24
37 07SC51-1@04	1878	9.65	0.24
60 lnt-042d	1878	7	0.2
60 lnt-042d	1878	7	0.2
106 10GD48-87	1878	4.51	0.33
51 CS11-18-18	1878.41333	5.86879267	0.53732917
51 CS11-18-18	1878.41333	5.86879267	0.53732917
12 A1427	1879	6.39	
12 A1427	1879	6.39	
37 07SC51-1@47	1879	8.03	0.6
37 07SC51-1@47	1879	8.03	0.6
60 p11-157	1879	3.3	0.3
60 p11-157	1879	3.3	0.3
60 lnt-117d	1879	5.8	0.2
60 lnt-117d	1879	5.8	0.2
51 Siam1_31	1879.11274	6.42274011	0.25496929
51 Siam1_31	1879.11274	6.42274011	0.25496929
30 n2539-rpt-b10	1880	5.22	0.28

30 n2539-rpt-bl	1880	5.22	0.28
37 07SC65@71	1880	9.21	0.31
37 07SC65@71	1880	9.21	0.31
37 07SC51-1@68	1880	9.45	0.26
37 07SC51-1@68	1880	9.45	0.26
37 07SC51-1@31	1880	9.67	0.31
37 07SC51-1@31	1880	9.67	0.31
18 CNG2-anu-zrn-	1880.05092	7.46828242	0.60164092
18 CNG2-anu-zrn-	1880.05092	7.46828242	0.60164092
51 CS12-23-37	1880.35044	7.29499352	0.79543291
51 CS12-23-37	1880.35044	7.29499352	0.79543291
35 07LSC12_21.1	1881	8.1	0.3
35 07LSC12_21.1	1881	8.1	0.3
37 07SC51-1@66	1881	8.43	0.36
37 07SC51-1@66	1881	8.43	0.36
37 07SC51-1@88	1881	8.62	0.35
37 07SC51-1@88	1881	8.62	0.35
37 07SC51-1@05	1881	9.72	0.21
37 07SC51-1@05	1881	9.72	0.21
37 07SC51-1@43	1881	9.82	0.35
37 07SC51-1@43	1881	9.82	0.35
60 VGt-539	1881	7.6	0.4
60 VGt-539	1881	7.6	0.4
52 BBF-29-62	1881.56268	5.52824422	0.45661698
52 BBF-29-62	1881.56268	5.52824422	0.45661698
51 Siam1_111	1881.83711	5.57486221	0.2571289
51 Siam1_111	1881.83711	5.57486221	0.2571289
51 Siam1_77	1881.9274	6.10133255	0.27064854
51 Siam1_77	1881.9274	6.10133255	0.27064854
35 07LSC6_61.1	1882	4.7	0.3
35 07LSC6_61.1	1882	4.7	0.3
98 IV22-1M	1882	8.39	0.3
119 32.1	1882	4.2557	0.3844
18 NIL-anu-zrn-l	1882.91617	5.73936946	0.5475135
18 NIL-anu-zrn-l	1882.91617	5.73936946	0.5475135
58 DDH 508-232	1883	6.3	
58 DDH 508-232	1883	6.3	
58 DDH 508-232	1883	8	
58 DDH 508-232	1883	8	
58 DDH 508-232	1883	8.5	
58 DDH 508-232	1883	8.5	
58 DDH 508-232	1883	8.5	
58 DDH 508-232	1883	8.5	
58 DDH 508-232	1883	9.4	
58 DDH 508-232	1883	9.4	

18 NIL-anu-zrn-l	1884.3197	5.02462406	0.54760664
18 NIL-anu-zrn-l	1884.3197	5.02462406	0.54760664
12 A1426	1885	6.59	
12 A1426	1885	6.59	
12 A218	1885	7.71	
12 A218	1885	7.71	
37 07SC51-1@42	1885	8.71	0.3
37 07SC51-1@42	1885	8.71	0.3
12 A392	1886	6.84	
12 A392	1886	6.84	
60 VGt-292	1886	7.1	0.6
60 VGt-292	1886	7.1	0.6
123	1886	6.21	0.10394296
37 07SC65@18	1887	7.78	0.35
37 07SC65@18	1887	7.78	0.35
94 177921-10. asc	1887	6.1	0.4
35 07LSC6_37.1	1888	6.9	0.2
35 07LSC6_37.1	1888	6.9	0.2
60 VGt-368	1888	3.3	0.4
60 VGt-368	1888	3.3	0.4
51 BBF-11-48	1888.42995	3.81542095	0.35989194
51 BBF-11-48	1888.42995	3.81542095	0.35989194
37 07SC51-1@15	1889	8.53	0.4
37 07SC51-1@15	1889	8.53	0.4
18 CNG2-anu-zrn-	1889.18658	6.91187371	0.57944195
18 CNG2-anu-zrn-	1889.18658	6.91187371	0.57944195
30 n2539-rpt-b2	1890	7.01	0.3
30 n2539-rpt-b2	1890	7.01	0.3
37 07SC51-1@91	1890	6	0.25
37 07SC51-1@91	1890	6	0.25
60 VGt-474	1890	4.2	0.4
60 VGt-474	1890	4.2	0.4
30 n2539-rpt-a6	1891	5.48	0.35
30 n2539-rpt-a6	1891	5.48	0.35
30 n2539-rpt-19	1891	7.33	0.25
30 n2539-rpt-19	1891	7.33	0.25
37 07SC51-1@70	1891	8.55	0.34
37 07SC51-1@70	1891	8.55	0.34
37 07SC49@17	1891	8.93	0.38
37 07SC49@17	1891	8.93	0.38
37 07SC51-1@65	1891	9.52	0.28
37 07SC51-1@65	1891	9.52	0.28
18 NIL-anu-zrn-l	1891.36795	4.51765538	0.55655155
18 NIL-anu-zrn-l	1891.36795	4.51765538	0.55655155
51 Siam1_50	1891.64057	6.41273198	0.21695042

51 Siam1_50	1891.64057	6.41273198	0.21695042
37 07SC49@68	1892	10.06	0.31
37 07SC49@68	1892	10.06	0.31
51 Siam1_41	1892.04975	6.44225596	0.24943437
51 Siam1_41	1892.04975	6.44225596	0.24943437
30 n2539-rpt-b10	1893	6.91	0.3
30 n2539-rpt-b10	1893	6.91	0.3
30 n2539-rpt-13	1893	7.73	0.31
30 n2539-rpt-13	1893	7.73	0.31
37 07SC49@14	1893	8.82	0.45
37 07SC49@14	1893	8.82	0.45
98 IV46-180SC	1893	10.17	0.26
30 n2539-rpt-b40	1894	6.48	0.26
30 n2539-rpt-b40	1894	6.48	0.26
56 K-16	1894	4.5	
56 K-16	1894	4.5	
60 p11-118	1894	7.6	0.4
60 p11-118	1894	7.6	0.4
51 CS11-19-53b	1894.03531	6.53192133	0.65867164
51 CS11-19-53b	1894.03531	6.53192133	0.65867164
51 CS11-20-58	1894.26588	7.14539133	0.68485538
51 CS11-20-58	1894.26588	7.14539133	0.68485538
30 n2539-rpt-b5'	1895	5.37	0.31
30 n2539-rpt-b5'	1895	5.37	0.31
51 Siam1_29	1895.56359	5.9643679	0.24771848
51 Siam1_29	1895.56359	5.9643679	0.24771848
52 BBF-29-32	1895.60767	9.47733905	0.86931815
52 BBF-29-32	1895.60767	9.47733905	0.86931815
18 CNG2-anu-zrn-	1896.57676	6.15330064	0.5903405
18 CNG2-anu-zrn-	1896.57676	6.15330064	0.5903405
118 AGQ13-08@106	1897	7.03	0.43
119 37.1	1897	5	0.5109
51 Siam1_10	1897.50702	9.6568663	0.22925224
51 Siam1_10	1897.50702	9.6568663	0.22925224
19 08LL06 55	1898	6.77	0.15
19 08LL06 55	1898	6.77	0.15
37 07SC65@95	1898	8.37	0.43
37 07SC65@95	1898	8.37	0.43
37 07SC49@59	1898	9.01	0.27
37 07SC49@59	1898	9.01	0.27
119 27.1	1898	6	0.3034
51 Siam1_113	1898.39147	6.47566697	0.27422027
51 Siam1_113	1898.39147	6.47566697	0.27422027
51 Siam1_54	1898.96056	6.05744348	0.23626696
51 Siam1_54	1898.96056	6.05744348	0.23626696

35 07LSC5_27.1	1899	4.9	0.4
35 07LSC5_27.1	1899	4.9	0.4
98 IV46-14R	1902	8.46	0.22
51 Siam1_93	1902.50779	6.58226221	0.25587989
51 Siam1_93	1902.50779	6.58226221	0.25587989
60 VGt-571	1903	5	0.2
60 VGt-571	1903	5	0.2
98 IV67-9R	1903	9.16	0.37
51 BBF-11-57	1903.59674	5.75248408	0.41465699
51 BBF-11-57	1903.59674	5.75248408	0.41465699
51 Siam1_95	1903.69819	5.65943777	0.28685987
51 Siam1_95	1903.69819	5.65943777	0.28685987
37 07SC49@65	1904	8.54	0.4
37 07SC49@65	1904	8.54	0.4
98 IV46-16R	1904	9.48	0.26
35 07LSC5_34.1	1905	9.3	0.3
35 07LSC5_34.1	1905	9.3	0.3
37 07SC49@02	1906	8.05	0.22
37 07SC49@02	1906	8.05	0.22
98 IV63-20C	1906	6.41	0.33
51 Siam1_38	1906.16496	7.94647742	0.23146913
51 Siam1_38	1906.16496	7.94647742	0.23146913
18 NGR1-anu-zrn-	1906.49353	7.38081167	0.61202223
18 NGR1-anu-zrn-	1906.49353	7.38081167	0.61202223
37 07SC65@59	1907	5.31	0.55
37 07SC65@59	1907	5.31	0.55
30 n2539-rpt-b4	1908	6.76	0.3
30 n2539-rpt-b4	1908	6.76	0.3
37 07SC65@47	1908	8.62	0.26
37 07SC65@47	1908	8.62	0.26
37 07SC65@26	1908	9.04	0.2
37 07SC65@26	1908	9.04	0.2
58 DDH 508-232	1908	8.7	
58 DDH 508-232	1908	8.7	
60 p11-113	1908	9.5	0.5
60 p11-113	1908	9.5	0.5
18 ZMB2-anu-zrn-	1908.30452	8.2012287	0.59240619
18 ZMB2-anu-zrn-	1908.30452	8.2012287	0.59240619
51 CS12-24-38	1908.53067	5.18315568	0.44079284
51 CS12-24-38	1908.53067	5.18315568	0.44079284
37 07SC49@11	1909	8.37	0.27
37 07SC49@11	1909	8.37	0.27
61 08SC74-65	1909	10.7	0.26
61 08SC74-65	1909	10.7	0.26
51 Siam1_5	1909.05923	5.75219561	0.27907353

51 Siaml_5	1909.05923	5.75219561	0.27907353
61 08SC11-63	1910	6.5	0.22
61 08SC11-63	1910	6.5	0.22
118 WFS13-01@93	1911	6.69	0.34
118 WFS13-01@47	1912	4.33	0.4
18 NGR1-anu-zrn	1913.25596	8.45770472	0.59444455
18 NGR1-anu-zrn	1913.25596	8.45770472	0.59444455
11 01TT02(2)-11:	1913.3	6.08962397	0.332716
11 01TT02(2)-11:	1913.3	6.08962397	0.332716
18 CNG2-anu-zrn	1913.56844	4.35769871	0.58018396
18 CNG2-anu-zrn	1913.56844	4.35769871	0.58018396
30 n2539-rpt-34	1916	7.42	0.26
30 n2539-rpt-34	1916	7.42	0.26
60 lnt-012d	1916	4.6	0.4
60 lnt-012d	1916	4.6	0.4
98 IV22-2C	1916	5.34	0.3
18 CNG2-anu-zrn	1916.72602	4.45795237	0.55339671
18 CNG2-anu-zrn	1916.72602	4.45795237	0.55339671
51 Siaml_35	1916.88231	5.6330989	0.22685227
51 Siaml_35	1916.88231	5.6330989	0.22685227
51 Siaml_76	1916.9264	5.2325564	0.26599378
51 Siaml_76	1916.9264	5.2325564	0.26599378
30 n2539-rpt-b7:	1917	6.01	0.33
30 n2539-rpt-b7:	1917	6.01	0.33
51 Siaml_73	1917.04947	7.12274506	0.28122595
51 Siaml_73	1917.04947	7.12274506	0.28122595
60 pll-150	1918	11.6	0.6
60 pll-150	1918	11.6	0.6
118 AGQ13-08@33	1918	9.19	0.41
51 CS11-19-51	1918.64635	8.19830213	0.76666223
51 CS11-19-51	1918.64635	8.19830213	0.76666223
52 BBF-29-70	1918.70261	4.84442993	0.44883459
52 BBF-29-70	1918.70261	4.84442993	0.44883459
30 n2539-rpt-15	1919	6.21	0.31
30 n2539-rpt-15	1919	6.21	0.31
123	1919	8.2	0.11412232
118 WFS13-01@45	1920	6.61	0.29
51 Siaml_14	1920.07864	7.00171025	0.25328024
51 Siaml_14	1920.07864	7.00171025	0.25328024
30 n2539-rpt-20	1921	5.83	0.28
30 n2539-rpt-20	1921	5.83	0.28
30 n2539-rpt-49	1921	7.01	0.32
30 n2539-rpt-49	1921	7.01	0.32
119 47.1	1923	5	0.4889
51 CS12-24-27	1923.47031	4.91602275	0.39926059

51 CS12-24-27	1923.47031	4.91602275	0.39926059
60 VGt-240	1924	9.9	0.6
60 VGt-240	1924	9.9	0.6
106 10GD48-89	1924	8.57	0.19
18 ZMB2-anu-zrn-	1924.4	7.33089289	0.59507685
18 ZMB2-anu-zrn-	1924.4	7.33089289	0.59507685
118 WFS13-01@18	1925	6.86	0.31
51 Siaml_74	1925.09117	5.16299426	0.28069538
51 Siaml_74	1925.09117	5.16299426	0.28069538
60 lnt-060d	1926	6.5	0.2
60 lnt-060d	1926	6.5	0.2
51 Siaml_6	1926.05762	6.94966799	0.25258604
51 Siaml_6	1926.05762	6.94966799	0.25258604
60 p11-127	1927	8.2	0.4
60 p11-127	1927	8.2	0.4
51 CS11-19-44	1927.68922	10.3064413	0.99449277
51 CS11-19-44	1927.68922	10.3064413	0.99449277
61 08SC11-33	1928	6.1	0.25
61 08SC11-33	1928	6.1	0.25
19 08LL06 33	1929	7.2	0.39
19 08LL06 33	1929	7.2	0.39
118 WFS13-01@61	1929	6.47	0.34
118 WFS13-01@51	1929	6.76	0.32
18 NIL-anu-zrn-l	1929.87578	9.08919229	0.60085122
18 NIL-anu-zrn-l	1929.87578	9.08919229	0.60085122
118 WFS13-01@40	1930	5.99	0.44
18 NIL-anu-zrn-l	1930.99647	8.42510627	1.00233484
18 NIL-anu-zrn-l	1930.99647	8.42510627	1.00233484
118 WFS13-01@12	1933	6.14	0.23
119 35.1	1933	6	0.3154
38 1050	1935	7	
38 1050	1935	7	
18 CNG2-anu-zrn-	1935.16687	5.84596237	0.59925023
18 CNG2-anu-zrn-	1935.16687	5.84596237	0.59925023
51 Siaml_115	1935.377	4.62701542	0.24138097
51 Siaml_115	1935.377	4.62701542	0.24138097
35 07LSC3_40	1936	4.8	0.4
35 07LSC3_40	1936	4.8	0.4
98 IV22-13C	1936	6.27	0.4
30 n2539-rpt-b3!	1938	5.71	0.28
30 n2539-rpt-b3!	1938	5.71	0.28
37 07SC49@83	1938	6.05	0.35
37 07SC49@83	1938	6.05	0.35
123	1938	6.60811097	0.10949042
19 08LL04 31	1939	5.3	0.21

19 08LL04 31	1939	5.3	0.21
98 IV22-5C	1939	7.62	0.3
118 WFS13-01@10	1939	2.78	0.43
118 WFS13-01@92	1939	5.67	0.22
118 AGQ13-08@22	1939	6.47	0.35
18 CNG2-anu-zrn-	1939.06504	7.89322865	0.58443105
18 CNG2-anu-zrn-	1939.06504	7.89322865	0.58443105
56 HUD85-9	1940	6.82	
56 HUD85-9	1940	6.82	
118 WFS13-01@84	1940	6.43	0.39
118 WFS13-01@69	1940	7.23	0.4
118 AGQ13-08@31	1940	8.68	0.36
123	1940	6.75141829	0.11965637
18 NGR1-anu-zrn-	1940.40866	9.0870709	0.59205635
18 NGR1-anu-zrn-	1940.40866	9.0870709	0.59205635
118 AGQ13-08@24	1941	7.02	0.28
18 CNG2-anu-zrn-	1941.69764	6.3609703	0.60319941
18 CNG2-anu-zrn-	1941.69764	6.3609703	0.60319941
37 07SC65@77	1942	5.27	0.53
37 07SC65@77	1942	5.27	0.53
118 WFS13-01@08	1942	4.64	0.3
118 WFS13-01@49	1943	6.04	0.31
98 IV63-2C	1944	5.72	0.3
119 44.1	1944	5.7772	0.365
118 WFS13-01@88	1945	7.05	0.45
118 WFS13-01@26	1946	4.31	0.2
106 10GD48-81	1947	8.64	0.29
118 WFS13-01@90	1947	6.17	0.24
118 WFS13-01@42	1948	5.4	0.38
18 NGR1-anu-zrn-	1948.02806	8.03878255	0.59924366
18 NGR1-anu-zrn-	1948.02806	8.03878255	0.59924366
98 IV67-2C	1949	6.64	0.35
123	1949	4.9	0.07560275
38 E-31	1950	6	
38 E-31	1950	6	
38 CTU-5	1950	7.7	
38 CTU-5	1950	7.7	
118 WFS13-01@30	1950	6.03	0.27
11 01TT02(2)-079	1950.1	6.75498198	0.3518384
11 01TT02(2)-079	1950.1	6.75498198	0.3518384
118 WFS13-01@57	1951	5.44	0.3
119 29.1	1951	8	0.5165
18 NIL-anu-zrn-l	1952.17397	5.54928842	0.96097644
18 NIL-anu-zrn-l	1952.17397	5.54928842	0.96097644
35 09LSC4_125.1	1953	10.1	0.2

35	09LSC4_125.1	1953	10.1	0.2
18	CNG2-anu-zrn-	1953.77405	9.75126599	0.59088345
18	CNG2-anu-zrn-	1953.77405	9.75126599	0.59088345
118	WFS13-01@31	1957	3.33	0.35
98	IV46-5C	1959	6.84	0.21
98	IV63-6C	1959	7.42	0.2
119	26.1	1959	5	0.291
18	NGR1-anu-zrn-	1959.64033	6.97094924	0.63284039
18	NGR1-anu-zrn-	1959.64033	6.97094924	0.63284039
94	165593@14.asc	1962	6.7	0.3
119	18.1	1963	6.582	0.3025
52	BBF-29-84	1963.0471	6.91603423	0.66588417
52	BBF-29-84	1963.0471	6.91603423	0.66588417
118	WFS13-01@98	1965	7.44	0.33
62	TGS-7-2.S02	1966	14.1	0.2
62	TGS-7-2.S02	1966	14.1	0.2
18	CNG2-anu-zrn-	1966.62752	6.89895098	0.61137006
18	CNG2-anu-zrn-	1966.62752	6.89895098	0.61137006
37	07SC65@56	1967	8.64	0.27
37	07SC65@56	1967	8.64	0.27
119	5.1	1969	6	0.3568
51	BBF-11-50	1969.05523	12.2347396	1.12512359
51	BBF-11-50	1969.05523	12.2347396	1.12512359
51	Siam1_49	1969.14173	7.78484617	0.27955336
51	Siam1_49	1969.14173	7.78484617	0.27955336
18	CNG2-anu-zrn-	1969.48122	9.23659386	0.57727933
18	CNG2-anu-zrn-	1969.48122	9.23659386	0.57727933
18	CNG2-anu-zrn-	1970.54631	5.33748502	0.59313517
18	CNG2-anu-zrn-	1970.54631	5.33748502	0.59313517
18	CNG2-anu-zrn-	1970.78527	7.18217407	0.60054945
18	CNG2-anu-zrn-	1970.78527	7.18217407	0.60054945
107	IT/5_10	1971	6.98	0.24
11	01TT02(2)-06	1971.1	6.93133252	0.247382
11	01TT02(2)-06	1971.1	6.93133252	0.247382
18	NIL-anu-zrn-l	1973.64188	6.32271585	0.57257426
18	NIL-anu-zrn-l	1973.64188	6.32271585	0.57257426
11	01TT02(2)-02	1974	10.9624017	0.2634618
11	01TT02(2)-02	1974	10.9624017	0.2634618
30	n2539-rpt-b40	1974	3.93	0.35
30	n2539-rpt-b40	1974	3.93	0.35
30	n2539-rpt-b2	1974	9.01	0.26
30	n2539-rpt-b2	1974	9.01	0.26
19	08LL04 51	1975	9.32	0.29
19	08LL04 51	1975	9.32	0.29
119	40.1	1976	6.1501	0.3562

51 CS11-6_46	1977.75531	10.3040476	0.23470884
51 CS11-6_46	1977.75531	10.3040476	0.23470884
30 n2539-rpt-38	1978	5.58	0.36
30 n2539-rpt-38	1978	5.58	0.36
30 n2539-rpt-b29	1979	4.77	0.29
30 n2539-rpt-b29	1979	4.77	0.29
118 WFS13-01@68	1979	6.8	0.36
51 Siam1_26	1979.21782	7.53864625	0.2305692
51 Siam1_26	1979.21782	7.53864625	0.2305692
119 8.1	1980	5.9033	0.3271
123	1981	7.6	0.12929254
123	1983	6.45	0.09020528
94 CS15-8@18.asc	1984	10.2	1.0
119 27.1	1985	7.2065	0.6805
51 CS11-1-12	1985.41133	6.17696859	0.46055005
51 CS11-1-12	1985.41133	6.17696859	0.46055005
11 01TT02(2)-04	1986	7.65301215	0.2681152
11 01TT02(2)-04	1986	7.65301215	0.2681152
30 n2539-rpt-39	1986	6.14	0.27
30 n2539-rpt-39	1986	6.14	0.27
35 09LSC1_2.1	1986	6.2	0.2
35 09LSC1_2.1	1986	6.2	0.2
30 n2539-rpt-b20	1987	4.37	0.31
30 n2539-rpt-b20	1987	4.37	0.31
30 n2539-rpt-b5	1988	6.95	0.29
30 n2539-rpt-b5	1988	6.95	0.29
18 CNG2-anu-zrn	1988.20942	10.1112605	0.60195733
18 CNG2-anu-zrn	1988.20942	10.1112605	0.60195733
51 Siam1_1	1988.58885	5.6010729	0.26111475
51 Siam1_1	1988.58885	5.6010729	0.26111475
47 PMOG-441_41-6	1989	6.9	0.3
47 PMOG-441_41-6	1989	6.9	0.3
18 CNG2-anu-zrn	1989.99409	6.60350653	0.61006362
18 CNG2-anu-zrn	1989.99409	6.60350653	0.61006362
38 5115	1990	7.6	
38 5115	1990	7.6	
18 CNG2-anu-zrn	1990.47672	6.30948996	0.61892309
18 CNG2-anu-zrn	1990.47672	6.30948996	0.61892309
18 CNG2-anu-zrn	1990.72349	6.66961944	0.5970288
18 CNG2-anu-zrn	1990.72349	6.66961944	0.5970288
119 25.1	1991	5	0.3563
119 49.1	1991	7	0.3223
61 08SC11-40	1993	6.9	0.26
61 08SC11-40	1993	6.9	0.26
106 10GD48-115	1993	5.92	0.35

30 n2539-rpt-31	1994	6.68	0.29
30 n2539-rpt-31	1994	6.68	0.29
11 01TT02(2)-00	1994.9	6.62624079	0.3545924
11 01TT02(2)-00	1994.9	6.62624079	0.3545924
119 33.1	1995	6	0.3452
18 NIL-anu-zrn-l	1995.53534	7.34550086	0.56124844
18 NIL-anu-zrn-l	1995.53534	7.34550086	0.56124844
119 41.1	1996	7.1808	0.3022
61 08SC07-57	1997	6.3	0.23
61 08SC07-57	1997	6.3	0.23
94 177921@12. asc	1997	6.9	0.4
51 Siam1_11	1997.00347	8.23421107	0.265725
51 Siam1_11	1997.00347	8.23421107	0.265725
18 NGR1-anu-zrn-	1997.05444	8.90558876	0.58925439
18 NGR1-anu-zrn-	1997.05444	8.90558876	0.58925439
18 CNG2-anu-zrn-	1997.36649	7.62451777	0.59555506
18 CNG2-anu-zrn-	1997.36649	7.62451777	0.59555506
61 08SC07-22	1998	5.8	0.2
61 08SC07-22	1998	5.8	0.2
52 BBF-29-37	1998.70394	6.36485791	0.63035362
52 BBF-29-37	1998.70394	6.36485791	0.63035362
37 07SC51-1@83	1999	6.54	0.31
37 07SC51-1@83	1999	6.54	0.31
94 CS15-8@13. asc	1999	9.5	0.9
38 980/64	2000	5.8	
38 980/64	2000	5.8	
38 111/62	2000	6	
38 111/62	2000	6	
60 p11-121	2000	5.6	0.3
60 p11-121	2000	5.6	0.3
10 1774-25	2001	7.7	0.6
10 1774-25	2001	7.7	0.6
118 WFS13-01@24	2001	7.02	0.36
30 n2539-rpt-12	2002	5.75	0.27
30 n2539-rpt-12	2002	5.75	0.27
51 CS12-24-5	2003.72572	4.70919784	0.38938108
51 CS12-24-5	2003.72572	4.70919784	0.38938108
61 08SC11-16	2004	6.1	0.23
61 08SC11-16	2004	6.1	0.23
61 08SC07-32	2004	6.8	0.24
61 08SC07-32	2004	6.8	0.24
94 177097@29. asc	2004	6.5	0.2
20 CM1. L4. 1	2005	6.4	0.3
20 CM1. L4. 1	2005	6.4	0.3
20 CM1. L4. 1	2005	6.4	0.3

118 AGQ13-08@75	2005	7.15	0.29
94 CS15-6@14. asc	2005	10.9	0.6
18 ZMB2-anu-zrn-	2005.62229	6.82562749	0.54596361
18 ZMB2-anu-zrn-	2005.62229	6.82562749	0.54596361
30 n2539-rpt-b6!	2006	9.75	0.26
30 n2539-rpt-b6!	2006	9.75	0.26
56 HUD85-8	2006	7.74	
56 HUD85-8	2006	7.74	
61 08SC11-72	2006	7.1	0.22
61 08SC11-72	2006	7.1	0.22
94 165593@23. asc	2006	7.5	0.3
51 CS12-24-33	2006.37683	7.06930307	0.5766356
51 CS12-24-33	2006.37683	7.06930307	0.5766356
18 CNG2-anu-zrn-	2011.11273	4.82383298	0.6021377
18 CNG2-anu-zrn-	2011.11273	4.82383298	0.6021377
62 TGS-7-2. S07	2012	6.2	0.3
62 TGS-7-2. S07	2012	6.2	0.3
18 ZMB2-anu-zrn-	2012.44539	6.59744311	0.55366228
18 ZMB2-anu-zrn-	2012.44539	6.59744311	0.55366228
11 01TT02(2)-05!	2012.9	9.29410345	0.2863686
11 01TT02(2)-05!	2012.9	9.29410345	0.2863686
94 165593@16. asc	2013	6.6	0.3
51 BBF-11-65	2013.04643	5.61404776	0.45887261
51 BBF-11-65	2013.04643	5.61404776	0.45887261
11 01TT02(2)-13!	2013.6	8.2584337	0.3546004
11 01TT02(2)-13!	2013.6	8.2584337	0.3546004
94 CS15-6@4. asc	2014	8.8	0.5
30 n2539-rpt-43	2015	5.93	0.29
30 n2539-rpt-43	2015	5.93	0.29
30 n2539-rpt-8	2015	8.97	0.3
30 n2539-rpt-8	2015	8.97	0.3
11 01TT02(2)-06'	2015.2	8.38623534	0.2959396
11 01TT02(2)-06'	2015.2	8.38623534	0.2959396
118 AGQ13-08@66	2016	7.66	0.31
11 01TT02(2)-11'	2017.8	10.9434787	0.336887
11 01TT02(2)-11'	2017.8	10.9434787	0.336887
18 NIL-anu-zrn-l	2018.64498	9.71076854	0.57188513
18 NIL-anu-zrn-l	2018.64498	9.71076854	0.57188513
20 BB1. 12	2019	5.7	0.7
20 BB1. 12	2019	5.7	0.7
20 BB1. 12	2019	5.7	0.7
19 08LL06 32	2020	7.09	0.28
19 08LL06 32	2020	7.09	0.28
11 01TT02(2)-01!	2020.4	10.0191572	0.242946
11 01TT02(2)-01!	2020.4	10.0191572	0.242946

18 CNG2-anu-zrn-	2020. 93995	8. 78680743	0. 58715133
18 CNG2-anu-zrn-	2020. 93995	8. 78680743	0. 58715133
20 BB3. 3. 17	2021	5. 9	0. 5
20 BB3. 3. 17	2021	5. 9	0. 5
20 BB3. 3. 17	2021	5. 9	0. 5
118 WFS13-01@44	2021	8. 54	0. 34
61 08SC11-62	2022	7. 4	0. 2
61 08SC11-62	2022	7. 4	0. 2
51 CS11-1-30	2022. 92111	6. 80633586	0. 51159501
51 CS11-1-30	2022. 92111	6. 80633586	0. 51159501
94 177921@30. asc	2023	5. 7	0. 4
94 165593@13. asc	2023	6. 1	0. 2
51 BBF-11-31	2024. 93975	7. 91927615	0. 62498497
51 BBF-11-31	2024. 93975	7. 91927615	0. 62498497
11 01TT02(2)-04:	2025. 5	7. 59427214	0. 24608
11 01TT02(2)-04:	2025. 5	7. 59427214	0. 24608
30 n2539-rpt-2	2026	5. 21	0. 29
30 n2539-rpt-2	2026	5. 21	0. 29
94 165592@8. asc	2026	6. 7	0. 3
51 Siam1_39	2026. 60935	7. 00771512	0. 22207047
51 Siam1_39	2026. 60935	7. 00771512	0. 22207047
94 165591@28. asc	2027	6. 8	0. 3
11 01TT02(2)-02:	2028. 7	8. 61159154	0. 2008776
11 01TT02(2)-02:	2028. 7	8. 61159154	0. 2008776
94 165593@11. asc	2030	5. 7	0. 2
94 165593@24. asc	2030	7. 5	0. 3
94 CS15-6@43. asc	2031	7. 6	0. 4
10 1746-43	2032	7. 3	0. 5
10 1746-43	2032	7. 3	0. 5
47 PMOG-441_41-	2032	8. 4	0. 3
47 PMOG-441_41-	2032	8. 4	0. 3
118 WFS13-01@13	2034	4. 79	0. 35
94 CS15-6@40. asc	2034	8. 4	0. 5
123	2036. 62027	5. 96	0. 09529937
11 01TT02(2)-06:	2036. 8	8. 12449012	0. 2725274
11 01TT02(2)-06:	2036. 8	8. 12449012	0. 2725274
94 179098@1. asc	2039	5. 9	0. 2
121 21	2039	6.78	0.21
11 01TT02(2)-02:	2040. 1	7. 05228279	0. 18486268
11 01TT02(2)-02:	2040. 1	7. 05228279	0. 18486268
94 165593@27. asc	2041	7. 0	0. 3
118 WFS13-01@03	2041	6. 27	0. 34
30 n2539-rpt-b4:	2042	5. 6	0. 35
30 n2539-rpt-b4:	2042	5. 6	0. 35
94 179098@5. asc	2042	5. 7	0. 2

11 01TT02(2)-06:	2042.9	6.90925969	0.2378
11 01TT02(2)-06:	2042.9	6.90925969	0.2378
18 ZMB2-anu-zrn-	2042.90603	6.58483479	0.95743763
18 ZMB2-anu-zrn-	2042.90603	6.58483479	0.95743763
47 PMOG-233_33-	2043	6.1	0.3
47 PMOG-233_33-	2043	6.1	0.3
11 01TT02(2)-05:	2043.1	6.81421314	0.336403
11 01TT02(2)-05:	2043.1	6.81421314	0.336403
35 07LSC6_49.2	2044	3.4	0.2
35 07LSC6_49.2	2044	3.4	0.2
11 01TT02(2)-110	2044.1	11.1025775	0.2965612
11 01TT02(2)-110	2044.1	11.1025775	0.2965612
94 CS15-6@35.asc	2045	8.5	0.5
11 01TT02(2)-050	2045	9.03412484	0.2339476
11 01TT02(2)-050	2045	9.03412484	0.2339476
94 179098@3.asc	2045	7.6	0.2
119 30.1	2045	9	0.3444
119 32.1	2046	6	0.3409
123	2046	8.1956175	0.10319088
37 07SC51-1@56	2047	7.15	0.35
37 07SC51-1@56	2047	7.15	0.35
11 01TT02(2)-020	2047.6	7.36284456	0.3161512
11 01TT02(2)-020	2047.6	7.36284456	0.3161512
30 n2539-rpt-51	2048	7.47	0.32
30 n2539-rpt-51	2048	7.47	0.32
37 07SC49@37	2048	5.41	0.28
37 07SC49@37	2048	5.41	0.28
123	2048	7.01506382	0.12947481
11 01TT02(2)-020	2048.7	10.4022742	0.227923
11 01TT02(2)-020	2048.7	10.4022742	0.227923
56 OM-165	2050	4.69	
56 OM-165	2050	4.69	
119 20.1	2050	8.8234	0.2991
94 165592@3.asc	2051	7.7	0.3
118 WFS13-01@73	2051	6.57	0.36
18 CNG2-anu-zrn-	2051.28021	12.8844864	0.59548361
18 CNG2-anu-zrn-	2051.28021	12.8844864	0.59548361
11 01TT02(2)-05:	2051.9	11.0884755	0.3004482
11 01TT02(2)-05:	2051.9	11.0884755	0.3004482
94 165593@29.asc	2052	7.0	0.3
94 179098@13.asc	2052	7.5	0.2
118 AGQ13-08@43	2052	7.52	0.24
94 CS15-6@22.asc	2053	6.4	0.4
11 01TT02(2)-02:	2052.7	6.68356701	0.19418354
11 01TT02(2)-02:	2052.7	6.68356701	0.19418354

30 n2539-rpt-b4	2054	5.1	0.34
30 n2539-rpt-b4	2054	5.1	0.34
94 165593@15. asc	2056	6.8	0.3
11 01TT02(2)-08:	2056.5	6.83817309	0.225229
11 01TT02(2)-08:	2056.5	6.83817309	0.225229
94 165591@22. asc	2057	7.1	0.3
94 CS15-6@13. asc	2058	15.7	0.9
37 07SC51-1@21	2058	6.12	0.55
37 07SC51-1@21	2058	6.12	0.55
38 865/971	2060	5.8	
38 865/971	2060	5.8	
94 CS15-6@36. asc	2060	7.9	0.4
11 01TT02(2)-02:	2060.5	8.55043406	0.3103942
11 01TT02(2)-02:	2060.5	8.55043406	0.3103942
94 CS15-8@54. asc	2061	9.5	0.7
11 01TT02(2)-11:	2061	5.55022557	0.3079958
11 01TT02(2)-11:	2061	5.55022557	0.3079958
94 179098@14. asc	2061	6.9	0.2
11 01TT02(2)-06:	2061.6	10.4911314	0.2448164
11 01TT02(2)-06:	2061.6	10.4911314	0.2448164
11 01TT02(2)-10:	2061.7	8.63501804	0.300383
11 01TT02(2)-10:	2061.7	8.63501804	0.300383
56 OM-298	2063	5.72	
56 OM-298	2063	5.72	
18 CNG2-anu-zrn-	2063.32657	7.78561798	0.5916958
18 CNG2-anu-zrn-	2063.32657	7.78561798	0.5916958
30 n2539-rpt-41	2064	5.7	0.3
30 n2539-rpt-41	2064	5.7	0.3
106 10GD49-27	2064	4.97	0.21
11 01TT02(2)-05:	2064.3	7.89142568	0.4616376
11 01TT02(2)-05:	2064.3	7.89142568	0.4616376
18 NIL-anu-zrn-l	2064.50537	6.22307914	0.55300387
18 NIL-anu-zrn-l	2064.50537	6.22307914	0.55300387
58 DDH 508-232	2066	7.9	
58 DDH 508-232	2066	7.9	
94 165592-fauxs-	2066	5.8	0.2
94 165592-fauxs-	2066	5.9	0.2
94 165592-fauxs-	2066	6.0	0.2
94 165592-fauxs-	2066	6.0	0.2
94 165592-fauxs-	2066	6.1	0.2
94 165592-fauxs-	2066	6.7	0.3
52 BBF-29-15	2066.29907	7.73461666	0.71321964
52 BBF-29-15	2066.29907	7.73461666	0.71321964
30 n2539-rpt-b2:	2067	5.27	0.25
30 n2539-rpt-b2:	2067	5.27	0.25

30 n2539-rpt-7	2067	6.06	0.26
30 n2539-rpt-7	2067	6.06	0.26
94 165591@31. asc	2067	6.1	0.2
11 01TT02(2)-03!	2067.2	6.23941323	0.16227692
11 01TT02(2)-03!	2067.2	6.23941323	0.16227692
94 179602@4. asc	2068	8.1	0.3
118 WFS13-01@16	2068	8.47	0.34
18 CNG2-anu-zrn-	2068.32903	6.10753035	0.60470387
18 CNG2-anu-zrn-	2068.32903	6.10753035	0.60470387
30 n2539-rpt-25	2069	6.71	0.32
30 n2539-rpt-25	2069	6.71	0.32
94 165593@28. asc	2069	6.6	0.3
11 01TT02(2)-04!	2069.6	10.3704868	0.16653858
11 01TT02(2)-04!	2069.6	10.3704868	0.16653858
11 01TT02(2)-12!	2070.1	5.12856509	0.2086704
11 01TT02(2)-12!	2070.1	5.12856509	0.2086704
11 01TT02(2)-12!	2070.4	7.42451607	0.3328884
11 01TT02(2)-12!	2070.4	7.42451607	0.3328884
94 CS15-6@7. asc	2071	9.8	0.6
30 n2539-rpt-b3!	2071	3.31	0.33
30 n2539-rpt-b3!	2071	3.31	0.33
118 AGQ13-08@81	2071	5.38	0.24
51 CS11-1-27	2071.26986	13.3829379	1.02935588
51 CS11-1-27	2071.26986	13.3829379	1.02935588
107 WPG90/4_1	2072	8.34	0.14
51 Siam1_51	2072.39294	6.59788233	0.26156191
51 Siam1_51	2072.39294	6.59788233	0.26156191
47 PMOG-233_33-	2073	6.8	0.3
47 PMOG-233_33-	2073	6.8	0.3
94 179098@6. asc	2073	6.1	0.2
51 CS11-19-22	2073.29738	8.48414999	0.81317714
51 CS11-19-22	2073.29738	8.48414999	0.81317714
11 01TT02(2)-06!	2073.4	7.27224717	0.19502786
11 01TT02(2)-06!	2073.4	7.27224717	0.19502786
118 WFS13-01@75	2074	7.28	0.45
11 01TT02(2)-10!	2074.4	6.54729348	0.2844528
11 01TT02(2)-10!	2074.4	6.54729348	0.2844528
20 KK1.2	2075	6.6	0.5
20 KK1.2	2075	6.6	0.5
20 KK1.2	2075	6.6	0.5
94 177097@24. asc	2075	8.0	0.2
11 01TT02(2)-08'	2075.3	8.48497922	0.2616544
11 01TT02(2)-08'	2075.3	8.48497922	0.2616544
98 IV46-11C	2076	7.5	0.22
106 10GD49-85	2076	5.18	0.22

47 PMOG-233_33-t	2077	8	0.3
47 PMOG-233_33-t	2077	8	0.3
106 10GD48-114	2077	6.55	0.35
51 CS11-19-45	2077.64594	7.60648653	0.65079609
51 CS11-19-45	2077.64594	7.60648653	0.65079609
56 URPR-60	2078	7.91	
56 URPR-60	2078	7.91	
94 CS15-6@21. asc	2079	8.7	0.5
51 CS11-1-20	2080.05839	4.62471197	0.3772662
51 CS11-1-20	2080.05839	4.62471197	0.3772662
118 WFS13-01@05	2082	5.46	0.37
19 08LL06 60	2083	6.32	0.3
19 08LL06 60	2083	6.32	0.3
19 08LL06 4	2083	7.54	0.35
19 08LL06 4	2083	7.54	0.35
118 WFS13-01@79	2083	7.53	0.35
94 165593@19. asc	2084	4.8	0.2
62 TGS-7-2. S04	2086	14.4	0.2
62 TGS-7-2. S04	2086	14.4	0.2
94 165591@18. asc	2086	6.9	0.3
118 WFS13-01@17	2086	7.66	0.34
19 08LL06 59	2087	7.09	0.26
19 08LL06 59	2087	7.09	0.26
118 WFS13-01@28	2087	5.6	0.27
11 01TT02(2)-10'	2087.2	7.73646418	0.326659
11 01TT02(2)-10'	2087.2	7.73646418	0.326659
18 CNG2-anu-zrn-	2089.04938	6.73442515	0.58671292
18 CNG2-anu-zrn-	2089.04938	6.73442515	0.58671292
37 07SC49@12	2092	6.95	0.44
37 07SC49@12	2092	6.95	0.44
94 179098@9. asc	2092	6.0	0.2
118 WFS13-01@82	2093	4.88	0.28
11 01TT02(2)-02'	2094	5.21971478	0.3019628
11 01TT02(2)-02'	2094	5.21971478	0.3019628
118 AGQ13-08@108	2095	5.6	0.31
10 1774-77b	2097	5.9	0.6
10 1774-77b	2097	5.9	0.6
11 01TT02(2)-008	2097.8	5.97102008	0.4210878
11 01TT02(2)-008	2097.8	5.97102008	0.4210878
118 WFS13-01@23	2099	4.79	0.28
11 01TT02(2)-03:	2099.3	7.70686409	0.2481478
11 01TT02(2)-03:	2099.3	7.70686409	0.2481478
11 01TT02(2)-066	2099.6	11.5995889	0.2275252
11 01TT02(2)-066	2099.6	11.5995889	0.2275252
38 K-1-4	2100	7.8	

38 K-1-4	2100	7.8	
56 SSAGI-45	2100	5.35	
56 SSAGI-45	2100	5.35	
56 MBAN 2C	2100	5.61	
56 MBAN 2C	2100	5.61	
56 OM-388	2100	6.05	
56 OM-388	2100	6.05	
56 SN	2100	6.1	
56 SN	2100	6.1	
56 MBAN 2B	2100	6.11	
56 MBAN 2B	2100	6.11	
56 HUD85-5	2100	6.17	
56 HUD85-5	2100	6.17	
56 ITATINS-JF-80	2100	6.18	
56 ITATINS-JF-80	2100	6.18	
56 URPR-37	2100	7.27	
56 URPR-37	2100	7.27	
18 CNG2-anu-zrn	2100.61947	6.65607108	0.62768582
18 CNG2-anu-zrn	2100.61947	6.65607108	0.62768582
119 9.1	2103	9	0.3567
11 01TT02(2)-00'	2103.3	6.61165351	0.2365728
11 01TT02(2)-00'	2103.3	6.61165351	0.2365728
94 CS15-8@85.asc	2104	8.7	0.7
11 01TT02(2)-129	2104.1	6.95146635	0.3324766
11 01TT02(2)-129	2104.1	6.95146635	0.3324766
11 01TT02(2)-038	2105.9	9.64019954	0.2442964
11 01TT02(2)-038	2105.9	9.64019954	0.2442964
11 01TT02(2)-04'	2107	6.48446769	0.3927126
11 01TT02(2)-04'	2107	6.48446769	0.3927126
94 CS15-8@80.asc	2108	9.5	0.7
11 01TT02(2)-038	2107.8	7.3269664	0.2523112
11 01TT02(2)-038	2107.8	7.3269664	0.2523112
94 165592@20.asc	2110	5.7	0.2
56 URPR-52A	2111	6.17	
56 URPR-52A	2111	6.17	
123	2112.55551	7.96	0.07939026
37 07SC49@96	2115	5.34	0.39
37 07SC49@96	2115	5.34	0.39
123	2115	6.24559837	0.13554494
123	2115.8521	4.47	0.08406022
51 Siam1_40	2116.53527	6.07996177	0.22266669
51 Siam1_40	2116.53527	6.07996177	0.22266669
11 01TT02(2)-138	2118	8.08359126	0.266178
11 01TT02(2)-138	2118	8.08359126	0.266178
11 01TT02(2)-075	2118.3	6.46198593	0.2580436

11 01TT02(2)-07!	2118.3	6.46198593	0.2580436
94 CS15-8@9.asc	2120	9.9	1.0
11 01TT02(2)-120	2120.6	8.7251788	0.263833
11 01TT02(2)-120	2120.6	8.7251788	0.263833
18 NIL-anu-zrn-l	2120.71877	5.91314306	1.04181803
18 NIL-anu-zrn-l	2120.71877	5.91314306	1.04181803
11 01TT02(2)-13!	2121.9	7.16449754	0.4022286
11 01TT02(2)-13!	2121.9	7.16449754	0.4022286
123	2125.14816	7.43	0.07045612
51 Siam1_57	2125.84093	5.83959872	0.26283284
51 Siam1_57	2125.84093	5.83959872	0.26283284
119 4.1	2126	6	0.5021
123	2127	8.05034213	0.06486324
51 Siam1_72	2128.22975	5.10744463	0.26261215
51 Siam1_72	2128.22975	5.10744463	0.26261215
51 Siam1_33	2128.75477	5.84927444	0.25257547
51 Siam1_33	2128.75477	5.84927444	0.25257547
94 CS15-6@48.asc	2130	9.5	0.5
11 01TT02(2)-000	2130.2	7.22248576	0.3116762
11 01TT02(2)-000	2130.2	7.22248576	0.3116762
11 01TT02(2)-10!	2131.2	8.52152998	0.2670618
11 01TT02(2)-10!	2131.2	8.52152998	0.2670618
51 Siam1_22	2131.28277	5.45245221	0.2273419
51 Siam1_22	2131.28277	5.45245221	0.2273419
51 Siam1_48	2131.45642	5.45995831	0.22280465
51 Siam1_48	2131.45642	5.45995831	0.22280465
51 Siam1_88	2131.66282	5.36967891	0.27719486
51 Siam1_88	2131.66282	5.36967891	0.27719486
11 01TT02(2)-00!	2131.8	6.76870732	0.3299206
11 01TT02(2)-00!	2131.8	6.76870732	0.3299206
52 BBF-29-17	2133.80895	5.80999022	0.52752035
52 BBF-29-17	2133.80895	5.80999022	0.52752035
119 49.1	2134	6	0.3029
119 23.1	2134	6	0.5007
94 179602@10.asc	2135	2.1	0.1
94 179602@30.asc	2135	4.6	0.2
11 01TT02(2)-13!	2136.5	8.35948783	0.2905792
11 01TT02(2)-13!	2136.5	8.35948783	0.2905792
51 Siam1_9	2137.57184	5.50599569	0.22962597
51 Siam1_9	2137.57184	5.50599569	0.22962597
51 Siam1_94	2137.8569	5.19202019	0.29482755
51 Siam1_94	2137.8569	5.19202019	0.29482755
56 MJ-138	2138	3.84	
56 MJ-138	2138	3.84	
119 30.1	2138	6.2116	0.3291

11 01TT02(2)-130	2138.8	6.191491	0.3636664
11 01TT02(2)-130	2138.8	6.191491	0.3636664
51 Siam1_46	2139.48424	5.38289573	0.24183413
51 Siam1_46	2139.48424	5.38289573	0.24183413
94 165591-10rea	2141	5.6	0.2
51 Siam1_90	2141.04668	5.46176117	0.28866212
51 Siam1_90	2141.04668	5.46176117	0.28866212
30 n2539-rpt-b2'	2142	7.82	0.27
30 n2539-rpt-b2'	2142	7.82	0.27
51 Siam1_20	2142.4597	5.34986891	0.21717617
51 Siam1_20	2142.4597	5.34986891	0.21717617
51 Siam1_89	2142.89104	5.18000946	0.28803654
51 Siam1_89	2142.89104	5.18000946	0.28803654
51 Siam1_80	2142.98556	5.39319992	0.26550651
51 Siam1_80	2142.98556	5.39319992	0.26550651
37 07SC51-1@53	2143	9.12	0.25
37 07SC51-1@53	2143	9.12	0.25
47 PMOG-233_33-	2144	10.1	0.3
47 PMOG-233_33-	2144	10.1	0.3
18 CNG2-anu-zrn-	2144.04968	5.76060399	0.58114944
18 CNG2-anu-zrn-	2144.04968	5.76060399	0.58114944
51 Siam1_100	2144.19803	4.96932123	0.26805829
51 Siam1_100	2144.19803	4.96932123	0.26805829
11 01TT02(2)-009	2145	5.37805515	0.2798198
11 01TT02(2)-009	2145	5.37805515	0.2798198
51 Siam1_45	2146.47853	5.34436444	0.24317189
51 Siam1_45	2146.47853	5.34436444	0.24317189
18 NGR1-anu-zrn-	2146.51854	6.49977734	0.60169732
18 NGR1-anu-zrn-	2146.51854	6.49977734	0.60169732
62 TGS-7-1.S03	2147	7.8	0.2
62 TGS-7-1.S03	2147	7.8	0.2
51 Siam1_25	2147.35483	5.46546278	0.23292556
51 Siam1_25	2147.35483	5.46546278	0.23292556
47 PMOG-233_33-	2148	5.6	0.3
47 PMOG-233_33-	2148	5.6	0.3
118 WFS13-01@20	2148	7.16	0.34
11 01TT02(2)-084	2148.4	8.15170232	0.250762
11 01TT02(2)-084	2148.4	8.15170232	0.250762
11 01TT02(2)-049	2148.8	5.4873056	0.3233522
11 01TT02(2)-049	2148.8	5.4873056	0.3233522
51 Siam1_78	2149.39867	5.40971467	0.28829985
51 Siam1_78	2149.39867	5.40971467	0.28829985
51 Siam1_96	2149.71232	5.33114448	0.28331025
51 Siam1_96	2149.71232	5.33114448	0.28331025
38 K-1-1	2150	7.2	

38 K-1-1	2150	7.2	
18 NGR1-anu-zrn-	2151.47136	5.60238085	0.59178185
18 NGR1-anu-zrn-	2151.47136	5.60238085	0.59178185
11 01TT02(2)-050	2151.7	6.01779434	0.18077776
11 01TT02(2)-050	2151.7	6.01779434	0.18077776
94 165593@25.asc	2152	6.9	0.3
94 165593@35.asc	2152	7.6	0.3
11 01TT02(2)-11:	2152.6	7.86041569	0.3300134
11 01TT02(2)-11:	2152.6	7.86041569	0.3300134
51 Siaml_4	2152.95902	5.20825392	0.21481957
51 Siaml_4	2152.95902	5.20825392	0.21481957
47 PMOG-233_33-	2153	6.4	0.3
47 PMOG-233_33-	2153	6.4	0.3
61 08SC11-67	2153	7.7	0.29
61 08SC11-67	2153	7.7	0.29
51 Siaml_8	2154.80155	5.52951479	0.22805133
51 Siaml_8	2154.80155	5.52951479	0.22805133
47 PMOG-233_33-	2155	5.9	0.3
47 PMOG-233_33-	2155	5.9	0.3
94 179602@1.asc	2155	6.4	0.3
47 PMOG-441_41-	2156	5.6	0.3
47 PMOG-441_41-	2156	5.6	0.3
51 Siaml_92	2158.79452	5.13747146	0.26869321
51 Siaml_92	2158.79452	5.13747146	0.26869321
10 1774-43	2159	7.3	0.5
10 1774-43	2159	7.3	0.5
37 07SC65@21	2159	6.15	0.36
37 07SC65@21	2159	6.15	0.36
51 Siaml_18	2159.46302	5.39140264	0.28329964
51 Siaml_18	2159.46302	5.39140264	0.28329964
11 01TT02(2)-07:	2159.7	4.10631886	0.326239
11 01TT02(2)-07:	2159.7	4.10631886	0.326239
20 KK1.15	2160	7	0.5
20 KK1.15	2160	7	0.5
20 KK1.15	2160	7	0.5
20 KK1.15b	2160	7.4	0.4
20 KK1.15b	2160	7.4	0.4
20 KK1.15b	2160	7.4	0.4
51 Siaml_24	2161.56649	5.91082442	0.24719334
51 Siaml_24	2161.56649	5.91082442	0.24719334
107 WPG90/4_3	2162	5.74	0.2
119 1.1	2162	4.4033	0.4874
19 08LL06 47	2163	7.09	0.14
19 08LL06 47	2163	7.09	0.14
47 PMOG-233_33-	2163	7.8	0.3

47 PMOG-233_33-4	2163	7.8	0.3
94 165593@9. asc	2163	8.8	0.4
11 01TT02(2)-128	2164.5	6.43918959	0.3501138
11 01TT02(2)-128	2164.5	6.43918959	0.3501138
11 01TT02(2)-100	2165.9	7.89488179	0.2479206
11 01TT02(2)-100	2165.9	7.89488179	0.2479206
94 165592@19. asc	2166	6.4	0.3
94 179098@10. asc	2168	7.0	0.2
11 01TT02(2)-130	2169.7	8.73193574	0.3637456
11 01TT02(2)-130	2169.7	8.73193574	0.3637456
47 PMOG-441_41-4	2171	7.5	0.3
47 PMOG-441_41-4	2171	7.5	0.3
11 01TT02(2)-070	2171.4	8.17504439	0.3350208
11 01TT02(2)-070	2171.4	8.17504439	0.3350208
11 01TT02(2)-050	2171.6	6.41470349	0.16564024
11 01TT02(2)-050	2171.6	6.41470349	0.16564024
11 01TT02(2)-060	2172.4	6.90014937	0.2848762
11 01TT02(2)-060	2172.4	6.90014937	0.2848762
94 165591@16. asc	2173	8.0	0.3
118 AGQ13-08@64	2173	7.53	0.4
11 01TT02(2)-100	2173.5	6.45267412	0.2227746
11 01TT02(2)-100	2173.5	6.45267412	0.2227746
118 AGQ13-08@05	2174	6	0.3
11 01TT02(2)-050	2175.1	6.93075342	0.2358838
11 01TT02(2)-050	2175.1	6.93075342	0.2358838
11 01TT02(2)-080	2175.7	5.26659409	0.3835468
11 01TT02(2)-080	2175.7	5.26659409	0.3835468
11 01TT02(2)-000	2175.8	7.72076055	0.3536124
11 01TT02(2)-000	2175.8	7.72076055	0.3536124
11 01TT02(2)-030	2176.2	6.17202191	0.3108138
11 01TT02(2)-030	2176.2	6.17202191	0.3108138
11 01TT02(2)-070	2177	5.31622888	0.2900726
11 01TT02(2)-070	2177	5.31622888	0.2900726
11 01TT02(2)-020	2178.6	5.84568031	0.2562186
11 01TT02(2)-020	2178.6	5.84568031	0.2562186
118 WFS13-01@65	2180	6.71	0.28
94 CS15-5@21. asc	2181	8.7	0.5
94 CS15-5@40. asc	2182	9.2	0.5
94 179098@11. asc	2183	8.1	0.2
11 01TT02(2)-080	2183.1	6.13457654	0.3022608
11 01TT02(2)-080	2183.1	6.13457654	0.3022608
11 01TT02(2)-030	2183.6	6.79030598	0.2285456
11 01TT02(2)-030	2183.6	6.79030598	0.2285456
94 179602@23. asc	2184	6.2	0.2
118 WFS13-01@53	2184	5.98	0.27

11 01TT02(2)-09'	2185.4	5.74307484	0.2743986
11 01TT02(2)-09'	2185.4	5.74307484	0.2743986
123	2186.50531	3.29	0.11965055
94 177921@38. asc	2187	7.6	0.5
51 CS11-1-11	2187.01091	6.40906817	0.43674413
51 CS11-1-11	2187.01091	6.40906817	0.43674413
94 179602@29. asc	2188	10.4	0.4
118 AGQ13-08@48	2189	4.7	0.35
10 2606-47	2192	6.9	0.5
10 2606-47	2192	6.9	0.5
37 07SC65@19	2195	5.15	0.4
37 07SC65@19	2195	5.15	0.4
94 165592@1. asc	2195	4.6	0.2
11 01TT02(2)-078	2195.2	6.13135802	0.3905292
11 01TT02(2)-078	2195.2	6.13135802	0.3905292
94 179602@21. asc	2196	3.0	0.1
94 179602@20. asc	2196	3.2	0.1
94 179602@15. asc	2196	5.9	0.2
20 CM1. 18	2197	7.7	0.4
20 CM1. 18	2197	7.7	0.4
20 CM1. 18	2197	7.7	0.4
123	2199.63804	7.98	0.07411939
56 TIM-II-75	2200	5.02	
56 TIM-II-75	2200	5.02	
56 OM-904	2200	5.11	
56 OM-904	2200	5.11	
56 GKM-15	2200	5.17	
56 GKM-15	2200	5.17	
56 MJ-192c	2200	5.56	
56 MJ-192c	2200	5.56	
56 HUD85-10	2200	6.4	
56 HUD85-10	2200	6.4	
123	2201	5.91404415	0.10621936
47 PMOG-441_41-:	2202	5.4	0.3
47 PMOG-441_41-:	2202	5.4	0.3
18 CNG2-anu-zrn-	2202.77921	5.15135603	0.5999509
18 CNG2-anu-zrn-	2202.77921	5.15135603	0.5999509
47 PMOG-233_33-'	2203	3.8	0.3
47 PMOG-233_33-'	2203	3.8	0.3
94 CS15-5@22. asc	2204	8.4	0.5
94 165593-1. asc	2209	6.8	0.3
11 01TT02(2)-090	2209.5	4.27623657	0.4149612
11 01TT02(2)-090	2209.5	4.27623657	0.4149612
94 CS15-8@21. asc	2210	11.6	0.9
94 CS15-8@21c. as	2210	11.7	0.9

94 CS15-8@21b. asc	2210	11.8	0.9
94 CS15-8@21d. asc	2210	12.0	0.9
94 CS15-8@21e. asc	2210	12.1	0.9
94 165591@3. asc	2212	7.9	0.3
94 CS15-8@27. asc	2213	9.0	0.7
20 CM1. 12	2213	5.3	0.4
20 CM1. 12	2213	5.3	0.4
20 CM1. 12	2213	5.3	0.4
94 179602@14. asc	2216	6.7	0.3
94 165591@14. asc	2218	6.7	0.3
94 165592@5. asc	2218	8.4	0.4
94 179098@12. asc	2219	7.4	0.2
11 01TT02 (2)-080	2222	7.03254417	0.3393958
11 01TT02 (2)-080	2222	7.03254417	0.3393958
123	2222	7.60327297	0.10956825
11 01TT02 (2)-068	2222.8	10.3628847	0.2471492
11 01TT02 (2)-068	2222.8	10.3628847	0.2471492
37 07SC49@16	2223	7.02	0.41
37 07SC49@16	2223	7.02	0.41
94 179602@17. asc	2223	8.1	0.3
94 177097@12. asc	2223	9.1	0.2
56 BR 1	2230	4.35	
56 BR 1	2230	4.35	
118 WFS13-01@43	2230	3.85	0.36
94 179602@24. asc	2231	7.6	0.3
94 165591@12. asc	2232	8.5	0.3
94 177097@13. asc	2232	10.2	0.3
11 01TT02 (2)-040	2233.6	6.17934908	0.303648
11 01TT02 (2)-040	2233.6	6.17934908	0.303648
94 179602@9. asc	2234	4.9	0.2
94 165592@11. asc	2234	7.7	0.3
94 165592@9. asc	2234	8.5	0.3
118 WFS13-01@59	2235	6.99	0.24
94 179602@8. asc	2236	7.0	0.3
123	2237	7.4	0.07493553
11 01TT02 (2)-114	2238.5	6.86271506	0.2975472
11 01TT02 (2)-114	2238.5	6.86271506	0.2975472
94 177097@4. asc	2239	8.6	0.3
106 10GD48-53	2239	4.57	0.32
119 45. 1	2242	7.8225	0.2943
94 CS15-8@68. asc	2243	9.6	0.7
20 HV1. v3	2244	6.3	0.5
20 HV1. v3	2244	6.3	0.5
20 HV1. v3	2244	6.3	0.5
94 179602@18. asc	2244	4.8	0.2

94 179098@16_15.	2245	8.5	0.2
94 177097@8. asc	2245	9.1	0.3
94 CS15-8@83. asc	2247	8.7	0.7
94 179602@7. asc	2247	8.3	0.3
94 165591@5. asc	2248	8.0	0.3
94 177097@2. asc	2249	8.4	0.2
121 17	2249	5.74	0.27
94 177097@11. asc	2250	8.1	0.2
106 10GD49-13	2250	6.54	0.22
56 BRAF-35	2251	5.99	
56 BRAF-35	2251	5.99	
94 179602@3. asc	2251	7.5	0.3
94 179602@25. asc	2252	6.0	0.2
94 179098@7. asc	2252	8.6	0.2
94 177097@6. asc	2254	8.3	0.2
94 177921@1. asc	2254	8.5	0.5
20 BB1. 16	2255	5.6	0.3
20 BB1. 16	2255	5.6	0.3
20 BB1. 16	2255	5.6	0.3
94 165591@4. asc	2257	7.9	0.3
94 CS15-5@36. asc	2257	8.7	0.5
94 177097@5. asc	2259	7.9	0.2
94 177097@7. asc	2259	8.1	0.2
91 S1764-126	2260	6.42	0.17
10 2641-14	2261	8	0.4
10 2641-14	2261	8	0.4
91 S1766-29	2261	6.9	0.17
94 179602@19. asc	2262	8.7	0.3
91 S1763-75	2263	5.85	0.29
94 179602@22. asc	2263	9.0	0.3
123	2263	7.49572636	0.07343167
94 CS15-8-30dif:	2263	8.7	0.7
118 WFS13-01@81	2264	2.28	0.19
94 CS15-6@19. asc	2267	9.3	0.5
91 S1764-101	2267	5.14	0.17
94 179098@8. asc	2268	8.4	0.2
94 177097@9. asc	2268	8.5	0.2
18 NIL-anu-zrn-l	2268.71508	6.42964489	0.5864466
18 NIL-anu-zrn-l	2268.71508	6.42964489	0.5864466
106 10GD48-101	2270	7.3	0.19
94 177097@14. asc	2271	8.8	0.2
94 165591@13. asc	2274	7.3	0.3
11 01TT02(2)-10	2275	6.15155473	0.2493794
11 01TT02(2)-10	2275	6.15155473	0.2493794
94 165593@4. asc	2279	8.9	0.4

106 10GD48-108	2279	6.83	0.22
94 165591@37. asc	2280	7.7	0.3
123	2282	6.63959132	0.08029005
123	2284	7.7	0.09297623
94 CS15-8@81. asc	2284	8.7	0.7
94 177921-18tru	2285	7.3	0.5
91 S1763-84	2287	5.5	0.18
123	2287.74606	6.28	0.10322086
20 CM1.3	2289	7.8	0.3
20 CM1.3	2289	7.8	0.3
20 CM1.3	2289	7.8	0.3
91 S1764-3	2289	6.6	0.18
91 S1764-46	2290	5.82	0.15
94 CS15-8@10. asc	2293	9.9	1.0
94 165591@15. asc	2293	7.7	0.3
91 S1763-39	2294	2.76	0.16
91 S1763-92	2294	4.03	0.17
91 S1764-130	2295	6.37	0.17
94 177921@24. asc	2295	7.6	0.5
20 CM1.17	2297	6.5	0.5
20 CM1.17	2297	6.5	0.5
20 CM1.17	2297	6.5	0.5
91 S1766-19	2297	5.57	0.16
91 S1737	2297	6.04	0.14
91 S1764-6	2297	6.58	0.15
123	2297	6.90966074	0.10005308
51 Siam1_55	2297.76348	4.92952758	0.24241339
51 Siam1_55	2297.76348	4.92952758	0.24241339
20 BB3.3.29	2298	5.2	0.6
20 BB3.3.29	2298	5.2	0.6
20 BB3.3.29	2298	5.2	0.6
91 S1763-37	2299	4.54	0.17
35 09LSC4_33.1	2300	6.9	0.2
35 09LSC4_33.1	2300	6.9	0.2
118 WFS13-01@91	2300	6.55	0.26
94 165591-11-1a.	2301	3.9	0.2
94 165591-11-2a.	2301	4.0	0.2
94 179098@2. asc	2301	7.5	0.2
94 CS15-6@9. asc	2302	9.6	0.5
20 BB1.4	2302	6.4	0.4
20 BB1.4	2302	6.4	0.4
20 BB1.4	2302	6.4	0.4
94 165592@17. asc	2302	6.6	0.3
91 S1763-65	2303	6.13	0.18
123	2304.11759	9.05	0.06169759

91 S1764-91	2305	5.65	0.17
91 S1763-100	2305	6.91	0.17
91 S1764-12	2307	5.44	0.18
91 S1763-99	2307	5.48	0.18
123	2307.39782	8.9	0.13881586
91 S1763-45	2308	7.2	0.21
91 S1764-104	2309	7.97	0.26
61 08SC11-78	2310	5.6	0.27
61 08SC11-78	2310	5.6	0.27
91 S1741	2310	5.37	0.18
91 S1764-18	2310	6.54	0.17
51 CS11-1-32	2311.40617	3.9349939	0.34368781
51 CS11-1-32	2311.40617	3.9349939	0.34368781
91 S1764-19	2314	7.05	0.17
118 WFS13-01@95	2314	6.29	0.42
118 WFS13-01@66	2315	6.43	0.23
91 S1764-9	2316	8.02	0.18
91 S1764-142	2317	5.11	0.17
94 177921@19. asc	2318	6.8	0.4
91 S1742	2319	6.14	0.06
91 S1764-127	2320	5.6	0.18
91 S1739	2320	6.07	0.13
91 S1764-122	2320	6.51	0.17
91 S1763-35	2320	7.61	0.19
106 10GD48-77	2320	4.74	0.21
91 S1740	2321	6.22	0.06
18 CNG2-anu-zrn-l	2321.79764	6.27909699	0.59658051
18 CNG2-anu-zrn-l	2321.79764	6.27909699	0.59658051
91 S1763-72	2322	5.85	0.29
91 S1763-111	2322	7.35	0.24
91 S1764-107	2323	6.14	0.16
118 AGQ13-08@14	2323	3.22	0.27
118 WFS13-01@78	2323	3.23	0.3
91 S1764-57	2324	7.49	0.15
106 10GD49-119	2324	6	0.18
91 S1766-109	2325	7.09	0.16
123	2325.98444	8.95	0.07567254
91 S1763	2326	6.41	0.08
35 07LSC12_4.1	2327	6.5	0.3
35 07LSC12_4.1	2327	6.5	0.3
91 S1763-112	2327	4.73	0.17
18 NIL-anu-zrn-l	2328.32718	6.13532746	0.9419037
18 NIL-anu-zrn-l	2328.32718	6.13532746	0.9419037
91 S1763-21	2329	5.5	0.16
118 AGQ13-08@110	2330	6.15	0.31

37 07SC49@70	2331	5.32	0.37
37 07SC49@70	2331	5.32	0.37
91 S1764-103	2331	7.56	0.17
118 WFS13-01@01	2331	5.93	0.37
18 ORG2-anu-zrn-	2331.99058	7.01806614	0.55356072
18 ORG2-anu-zrn-	2331.99058	7.01806614	0.55356072
35 CJS 99-J5_7.	2333	4.2	0.3
35 CJS 99-J5_7.	2333	4.2	0.3
91 S1764-68	2334	6.48	0.17
11 01TT02(2)-09	2334.6	6.07625245	0.268049
11 01TT02(2)-09	2334.6	6.07625245	0.268049
118 WFS13-01@89	2336	8.06	0.28
20 BB1.11	2337	6.2	0.6
20 BB1.11	2337	6.2	0.6
20 BB1.11	2337	6.2	0.6
91 S1766-27	2339	5.65	0.16
91 S1766-36	2340	6.46	0.16
91 S1763-64	2343	3.79	0.18
91 S1766-22	2353	6.99	0.15
94 165591@6.asc	2353	7.4	0.3
94 179098@4.asc	2354	6.1	0.2
91 S1766-41	2355	6.13	0.14
107 WPG90/4_4	2355	5.32	0.19
37 07SC65@28	2359	8.78	0.34
37 07SC65@28	2359	8.78	0.34
91 S1766-80	2359	7.53	0.16
118 WFS13-01@99	2359	6.52	0.3
106 10GD48-91	2363	4.84	0.14
91 S1765-30	2365	5.95	0.2
91 S1764-66	2367	6.32	0.19
51 CS11-1-29	2367.22788	5.26609046	0.43835031
51 CS11-1-29	2367.22788	5.26609046	0.43835031
91 S1762-91	2370	8.48	0.3
119 9.1	2370	7	0.4584
98 IV22-6R	2375	8.71	0.46
11 01TT02(2)-08	2375.6	7.33986999	0.338823
11 01TT02(2)-08	2375.6	7.33986999	0.338823
37 07SC51-1@41	2376	6.38	0.28
37 07SC51-1@41	2376	6.38	0.28
116 DA13-017-37	2377	5.52	0.25
51 CS11-1-23	2379.60934	5.10720802	0.39879706
51 CS11-1-23	2379.60934	5.10720802	0.39879706
91 S1766-33	2381	6.74	0.15
91 S1766-117	2381	7.06	0.16
51 CS11-1-33	2383.87548	5.05940524	0.39323069

51 CS11-1-33	2383.87548	5.05940524	0.39323069
51 CS11-1-25	2385.73239	3.5883183	0.25560815
51 CS11-1-25	2385.73239	3.5883183	0.25560815
91 S1765-35	2386	5.9	0.18
91 S1766-20	2386	6.41	0.15
106 10GD49-82	2386	7.17	0.3
11 01TT02(2)-07	2388.5	7.37834256	0.3117964
11 01TT02(2)-07	2388.5	7.37834256	0.3117964
118 AGQ13-08@19	2389	5.3	0.25
91 S1765-11	2391	5.24	0.14
61 08SC11-10	2396	5.9	0.19
61 08SC11-10	2396	5.9	0.19
91 S1765-6	2396	5.14	0.16
91 S1765-9	2398	4.87	0.13
11 01TT02(2)-02	2399.2	6.39829009	0.17048226
11 01TT02(2)-02	2399.2	6.39829009	0.17048226
11 01TT02(2)-01	2399.4	6.855207	0.3404034
11 01TT02(2)-01	2399.4	6.855207	0.3404034
56 HUD85-2	2400	6.04	
56 HUD85-2	2400	6.04	
11 01TT02(2)-13	2401.3	5.52088972	0.39575724
11 01TT02(2)-13	2401.3	5.52088972	0.39575724
11 01TT02(2)-13	2402.2	6.12856509	0.2086704
11 01TT02(2)-13	2402.2	6.12856509	0.2086704
106 10GD48-30	2403	7.19	0.23
11 01TT02(2)-09	2403.7	6.89872466	0.3375688
11 01TT02(2)-09	2403.7	6.89872466	0.3375688
91 S1766-73	2404	5.92	0.16
118 AGQ13-08@12	2404	6.57	0.28
91 S1766-84	2408	6.15	0.14
94 165592@14. asc	2409	4.3	0.2
123	2409	6.4	0.1
62 TGS-7-1. S09	2410	7	0.2
62 TGS-7-1. S09	2410	7	0.2
91 S1763-44	2411	3.16	0.28
98 IV22-19R	2411	8.6	0.13
19 08LS01 1	2413	5.95	0.29
19 08LS01 1	2413	5.95	0.29
11 01TT02(2)-08	2416.3	5.77509905	0.2996186
11 01TT02(2)-08	2416.3	5.77509905	0.2996186
37 07SC49@64	2420	5.7	0.39
37 07SC49@64	2420	5.7	0.39
61 08SC11-44	2420	8.9	0.23
61 08SC11-44	2420	8.9	0.23
106 10GD48-34	2422	5.62	0.26

11 01TT02(2)-09:	2425.7	6.64665199	0.2516486
11 01TT02(2)-09:	2425.7	6.64665199	0.2516486
61 08SC11-43	2426	8.6	0.25
61 08SC11-43	2426	8.6	0.25
11 01TT02(2)-120	2426.5	6.90288166	0.290565
11 01TT02(2)-120	2426.5	6.90288166	0.290565
91 S1762-47	2427	7.63	0.24
11 01TT02(2)-09:	2427.9	8.66471528	0.3272964
11 01TT02(2)-09:	2427.9	8.66471528	0.3272964
11 01TT02(2)-070	2429.6	5.47272289	0.257279
11 01TT02(2)-070	2429.6	5.47272289	0.257279
11 01TT02(2)-09:	2431.9	7.99206059	0.3239966
11 01TT02(2)-09:	2431.9	7.99206059	0.3239966
20 HV1.11b2	2432	6.8	0.5
20 HV1.11b2	2432	6.8	0.5
20 HV1.11b2	2432	6.8	0.5
20 HV1.11b3	2432	7.2	0.7
20 HV1.11b3	2432	7.2	0.7
20 HV1.11b3	2432	7.2	0.7
106 10GD48-41	2435	4.67	0.27
118 AGQ13-08@50	2435	4.95	0.46
35 07LSC3_34.1	2436	8.3	0.4
35 07LSC3_34.1	2436	8.3	0.4
94 165593@22. asc	2436	7.0	0.3
118 AGQ13-08@70	2436	7.26	0.38
11 01TT02(2)-13:	2436.6	5.42088972	0.19575724
11 01TT02(2)-13:	2436.6	5.42088972	0.19575724
51 CS12-25-37	2437.02194	3.11785949	0.23402471
51 CS12-25-37	2437.02194	3.11785949	0.23402471
30 n2539-rpt-b3	2438	4.7	0.29
30 n2539-rpt-b3	2438	4.7	0.29
91 S1762-33	2438	6.08	0.19
11 01TT02(2)-05'	2438.6	5.89936315	0.3421672
11 01TT02(2)-05'	2438.6	5.89936315	0.3421672
61 08SC11-79	2441	6.2	0.19
61 08SC11-79	2441	6.2	0.19
91 S1765-5	2441	5.99	0.14
11 01TT02(2)-11:	2441.2	7.45337706	0.4498248
11 01TT02(2)-11:	2441.2	7.45337706	0.4498248
91 S1766-69	2442	6.16	0.16
11 01TT02(2)-010	2442.6	6.77136988	0.2521254
11 01TT02(2)-010	2442.6	6.77136988	0.2521254
91 S1765-28	2444	5.19	0.21
116 DA13-064-52	2445	7.48	0.14
37 07SC65@17	2449	7.24	0.5

37 07SC65@17	2449	7.24	0.5
94 165591-11-1b.	2450	4.7	0.2
94 165591-11-2b.	2450	4.8	0.2
37 07SC49@54	2451	5.64	0.4
37 07SC49@54	2451	5.64	0.4
91 S1763-52	2451	6.45	0.25
91 S1766-119	2451	7.26	0.16
94 165593@8. asc	2451	3.2	0.1
18 NIL-anu-zrn-l	2451.45979	6.95583407	0.57768655
18 NIL-anu-zrn-l	2451.45979	6.95583407	0.57768655
11 01TT02(2)-06:	2451.6	8.69792153	0.2099814
11 01TT02(2)-06:	2451.6	8.69792153	0.2099814
94 165592@18. asc	2452	6.9	0.3
118 WFS13-01@48	2452	6.7	0.18
94 179602@11. asc	2453	3.3	0.1
106 10GD48-6	2454	5.94	0.34
118 AGQ13-08@21	2454	6	0.47
11 01TT02(2)-11:	2455.5	8.29898239	0.3766872
11 01TT02(2)-11:	2455.5	8.29898239	0.3766872
94 165592@2. asc	2457	6.8	0.3
11 01TT02(2)-07:	2458.6	6.60804426	0.2896524
11 01TT02(2)-07:	2458.6	6.60804426	0.2896524
116 BGS-PP156-14c	2459	4.32	0.35
61 08SC11-35	2460	6.1	0.36
61 08SC11-35	2460	6.1	0.36
94 165593@6. asc	2461	6.9	0.3
61 08SC74-26	2462	5.3	0.38
61 08SC74-26	2462	5.3	0.38
116 DA13-064-21	2462	6.6	0.15
11 01TT02(2)-12:	2465.6	7.36063462	0.3029484
11 01TT02(2)-12:	2465.6	7.36063462	0.3029484
51 Siam1_34	2466.9893	5.90632076	0.23871196
51 Siam1_34	2466.9893	5.90632076	0.23871196
94 165593@5. asc	2468	7.2	0.3
116 DA13-017-50	2468	6.91	0.25
11 01TT02(2)-10:	2468.6	5.19382161	0.3422238
11 01TT02(2)-10:	2468.6	5.19382161	0.3422238
106 10GD48-69	2471	6.33	0.18
118 AGQ13-08@04	2471	7.35	0.27
11 01TT02(2)-08:	2471.7	5.86397916	0.2329174
11 01TT02(2)-08:	2471.7	5.86397916	0.2329174
37 07SC49@66	2474	6.42	0.33
37 07SC49@66	2474	6.42	0.33
118 WFS13-01@94	2476	6.97	0.45
94 165593@7. asc	2477	5.5	0.2

116 DA13-017-43	2477	6.88	0.25
98 IV63-4C	2478	6.66	0.2
61 08SC11-74	2479	6.1	0.31
61 08SC11-74	2479	6.1	0.31
118 AGQ13-08@41	2479	7.49	0.4
19 08LL02 2	2480	6.81	0.29
19 08LL02 2	2480	6.81	0.29
118 AGQ13-08@29	2481	6.96	0.36
10 2436-36	2482	6.2	0.4
10 2436-36	2482	6.2	0.4
94 165591@8. asc	2484	5.9	0.2
118 AGQ13-08@101	2484	6.98	0.42
18 NIL-anu-zrn-l	2484.98538	6.31878062	0.56955525
18 NIL-anu-zrn-l	2484.98538	6.31878062	0.56955525
37 07SC65@2	2485	6.88	0.29
37 07SC65@2	2485	6.88	0.29
11 01TT02(2)-12:	2487.2	5.97343555	0.3218914
11 01TT02(2)-12:	2487.2	5.97343555	0.3218914
98 IV67-9C	2489	7.68	0.37
116 DA13-064-29	2489	5.75	0.18
18 CNG2-anu-zrn-	2490.79884	4.12968491	0.59124033
18 CNG2-anu-zrn-	2490.79884	4.12968491	0.59124033
30 n2539-rpt-b5!	2492	5.68	0.31
30 n2539-rpt-b5!	2492	5.68	0.31
35 09LSC1_46.1	2493	5.6	0.3
35 09LSC1_46.1	2493	5.6	0.3
10 2436-16	2494	6.2	0.7
10 2436-16	2494	6.2	0.7
10 2641-06	2494	6.8	0.5
10 2641-06	2494	6.8	0.5
20 HV1. 22	2494	6.4	0.4
20 HV1. 22	2494	6.4	0.4
20 HV1. 22	2494	6.4	0.4
37 07SC51-1@76	2494	7.19	0.37
37 07SC51-1@76	2494	7.19	0.37
56 CF85-71	2494	5.45	
56 CF85-71	2494	5.45	
94 165591@7. asc	2494	5.7	0.2
18 NIL-anu-zrn-l	2494.20698	5.82454472	0.57559573
18 NIL-anu-zrn-l	2494.20698	5.82454472	0.57559573
35 09LSC1_29.1	2495	5.6	0.3
35 09LSC1_29.1	2495	5.6	0.3
56 CF85-62	2495	5.87	
56 CF85-62	2495	5.87	
118 AGQ13-08@35	2495	6.4	0.18

35 07LSC5_42.1	2496	5.8	0.3
35 07LSC5_42.1	2496	5.8	0.3
118 AGQ13-08@08	2497	6.81	0.37
18 CNG2-anu-zrn-	2498.43781	5.94409066	0.58790273
18 CNG2-anu-zrn-	2498.43781	5.94409066	0.58790273
37 07SC49@79	2500	7.35	0.44
37 07SC49@79	2500	7.35	0.44
53 08FS02 14-2	2500	5.29501297	0.2959446
53 08FS02 14-2	2500	5.29501297	0.2959446
53 08FS02 02	2500	5.37879513	0.3203188
53 08FS02 02	2500	5.37879513	0.3203188
53 08FS02 01	2500	5.79446439	0.2781864
53 08FS02 01	2500	5.79446439	0.2781864
116 DA13-064-10	2500	6.45	0.16
118 AGQ13-08@17	2501	6.56	0.39
118 AGQ13-08@62	2502	5.54	0.37
118 AGQ13-08@63	2503	3.76	0.25
118 AGQ13-08@09	2503	6.11	0.35
11 01TT02(2)-090	2503.9	5.7748211	0.3044742
11 01TT02(2)-090	2503.9	5.7748211	0.3044742
11 01TT02(2)-019	2504.8	6.42728022	0.2938596
11 01TT02(2)-019	2504.8	6.42728022	0.2938596
35 07LSC10_28.1	2506	5.3	0.6
35 07LSC10_28.1	2506	5.3	0.6
37 07SC49@74	2508	7.02	0.34
37 07SC49@74	2508	7.02	0.34
118 AGQ13-08@13	2508	4.89	0.33
118 AGQ13-08@06	2508	7.19	0.35
118 AGQ13-08@86	2509	6.57	0.36
19 08LL02 25	2510	6.47	0.3
19 08LL02 25	2510	6.47	0.3
118 AGQ13-08@47	2510	5.84	0.41
118 AGQ13-08@40	2510	6.53	0.32
94 179602@13.asc	2511	7.1	0.3
118 AGQ13-08@10	2511	6.56	0.37
118 AGQ13-08@54	2512	6.47	0.19
118 WFS13-01@52	2512	6.76	0.4
19 08LS01 25	2513	6.83	0.31
19 08LS01 25	2513	6.83	0.31
30 n2539-rpt-65	2513	5.57	0.31
30 n2539-rpt-65	2513	5.57	0.31
118 AGQ13-08@01	2513	5.85	0.48
118 AGQ13-08@107	2513	6.46	0.24
118 AGQ13-08@38	2513	7.76	0.35
118 AGQ13-08@99	2514	5.37	0.28

18 CNG2-anu-zrn-	2515.376	5.17770976	0.58819453
18 CNG2-anu-zrn-	2515.376	5.17770976	0.58819453
35 09LSC1_6.2	2516	5.7	0.3
35 09LSC1_6.2	2516	5.7	0.3
119 1.1	2516	6	0.5278
118 AGQ13-08@46	2517	4.36	0.32
116 DA13-017-63	2518	5.65	0.25
118 AGQ13-08@11	2518	3.75	0.32
118 AGQ13-08@85	2519	6.37	0.41
118 AGQ13-08@18	2521	8.23	0.21
61 08SC11-27	2522	6.3	0.25
61 08SC11-27	2522	6.3	0.25
37 07SC49@27	2523	6.14	0.25
37 07SC49@27	2523	6.14	0.25
118 AGQ13-08@91	2523	7.97	0.35
118 WFS13-01@21	2524	5.73	0.3
18 CNG2-anu-zrn-	2524.89332	6.35955379	0.56272472
18 CNG2-anu-zrn-	2524.89332	6.35955379	0.56272472
35 07LSC7_26.1	2525	5.3	0.3
35 07LSC7_26.1	2525	5.3	0.3
37 07SC49@33	2525	5.96	0.18
37 07SC49@33	2525	5.96	0.18
94 165592@16.asc	2525	4.5	0.2
94 179098@15.asc	2525	5.6	0.2
118 WFS13-01@14	2525	5.73	0.36
35 07LSC7_17.2	2527	5	0.4
35 07LSC7_17.2	2527	5	0.4
35 07LSC8_41.1	2527	5.5	0.3
35 07LSC8_41.1	2527	5.5	0.3
118 AGQ13-08@15	2527	5.97	0.38
118 AGQ13-08@25	2527	6.13	0.3
37 07SC51-1@54	2528	6.59	0.33
37 07SC51-1@54	2528	6.59	0.33
94 165592@15.asc	2528	5.1	0.2
118 AGQ13-08@87	2528	6.58	0.14
35 09LSC1_28.1	2534	5.1	0.3
35 09LSC1_28.1	2534	5.1	0.3
35 07LSC8_38.1	2534	7.3	0.3
35 07LSC8_38.1	2534	7.3	0.3
118 WFS13-01@70	2534	6.43	0.49
11 01TT02(2)-118	2534.8	7.04187058	0.19847418
11 01TT02(2)-118	2534.8	7.04187058	0.19847418
94 179602@5.asc	2535	4.7	0.2
118 AGQ13-08@26	2535	6.43	0.41
37 07SC65@41	2536	6.23	0.3

37 07SC65@41	2536	6.23	0.3
20 BB3. 3. 9	2538	5.3	0.4
20 BB3. 3. 9	2538	5.3	0.4
20 BB3. 3. 9	2538	5.3	0.4
59 M0-1052	2538	7.3	0.5
59 M0-1052	2538	7.3	0.5
35 07LSC12_26. 1	2539	7.1	0.3
35 07LSC12_26. 1	2539	7.1	0.3
35 07LSC3_43. 1	2541	6.6	0.4
35 07LSC3_43. 1	2541	6.6	0.4
118 AGQ13-08@03	2541	5.84	0.27
30 n2539-rpt-b48	2543	5.65	0.26
30 n2539-rpt-b48	2543	5.65	0.26
118 AGQ13-08@97	2544	3.49	0.34
37 07SC51-1@79	2545	6.09	0.31
37 07SC51-1@79	2545	6.09	0.31
37 07SC49@24	2547	5.91	0.42
37 07SC49@24	2547	5.91	0.42
118 AGQ13-08@52	2548	5.95	0.23
19 08LL06 50	2549	6.99	0.25
19 08LL06 50	2549	6.99	0.25
30 n2539-rpt-36	2549	6.22	0.26
30 n2539-rpt-36	2549	6.22	0.26
51 Siam1_32	2552.55772	7.34048534	0.22931603
51 Siam1_32	2552.55772	7.34048534	0.22931603
59 M0-961	2556	5.7	0.2
59 M0-961	2556	5.7	0.2
94 CS15-5@48. asc	2556	5.2	0.3
35 07LSC7_27. 2	2557	5.3	0.3
35 07LSC7_27. 2	2557	5.3	0.3
37 07SC51-1@60	2557	6.08	0.48
37 07SC51-1@60	2557	6.08	0.48
51 CS11-6_08	2557.46205	5.62059018	0.24835543
51 CS11-6_08	2557.46205	5.62059018	0.24835543
35 07LSC7_26. 2	2560	4.9	0.3
35 07LSC7_26. 2	2560	4.9	0.3
56 Ag5-5	2560	5.59	
56 Ag5-5	2560	5.59	
35 09LSC1_69. 1	2561	5.9	0.3
35 09LSC1_69. 1	2561	5.9	0.3
51 CS11-6_20	2562.63158	6.23517511	0.24364583
51 CS11-6_20	2562.63158	6.23517511	0.24364583
115 26. 1	2562.7	5.7	
118 AGQ13-08@27	2564	6	0.39
97 AB06-9	2565	5.77	0.36

18 NIL-anu-zrn-l	2565.79489	6.36673739	0.96091464
18 NIL-anu-zrn-l	2565.79489	6.36673739	0.96091464
119 41.1	2566	6	0.4534
18 CNG2-anu-zrn-	2567.3592	6.2842262	0.5899838
18 CNG2-anu-zrn-	2567.3592	6.2842262	0.5899838
94 177097@26. asc	2568	7.4	0.2
97 RR06-5	2568	5.71	0.16
98 IV22-14R	2568	7.32	0.4
35 09LSC4_6.1	2570	5.8	0.2
35 09LSC4_6.1	2570	5.8	0.2
59 MO-902	2570	6.2	0.2
59 MO-902	2570	6.2	0.2
94 165591-1. asc	2570	5.0	0.2
106 10GD48-100	2570	7	0.21
94 177097@20. asc	2573	7.9	0.2
51 CS11-18-55	2576.31594	4.83677849	0.47738031
51 CS11-18-55	2576.31594	4.83677849	0.47738031
35 07LSC3_63.1	2579	6	0.4
35 07LSC3_63.1	2579	6	0.4
56 HUD91-23	2580	5.07	
56 HUD91-23	2580	5.07	
94 165592@13. asc	2580	6.7	0.3
18 NIL-anu-zrn-l	2583.44231	5.38606236	0.57704589
18 NIL-anu-zrn-l	2583.44231	5.38606236	0.57704589
30 n2539-rpt-48	2587	6.24	0.26
30 n2539-rpt-48	2587	6.24	0.26
107 WPG90/4_8	2587	5.84	0.2
35 07LSC5_42.2	2589	5.9	0.4
35 07LSC5_42.2	2589	5.9	0.4
35 07LSC9_35.1	2591	5.4	0.3
35 07LSC9_35.1	2591	5.4	0.3
56 HUD85-25A	2597	6.09	
56 HUD85-25A	2597	6.09	
107 IT/18_4	2600	5.11	0.15
51 CS12-25-12	2600.66578	4.95740501	0.49179678
51 CS12-25-12	2600.66578	4.95740501	0.49179678
59 MO-981	2601	7.3	0.3
59 MO-981	2601	7.3	0.3
94 165593@30. asc	2601	6.2	0.2
94 165591@34. asc	2601	6.8	0.3
94 165593@10. asc	2602	5.9	0.2
94 177097@21. asc	2602	6.0	0.2
35 07LSC9_44.1	2603	4.4	0.3
35 07LSC9_44.1	2603	4.4	0.3
35 09LSC1_67.1	2603	6.3	0.2

35	09LSC1_67.1	2603	6.3	0.2
59	M0-1000	2603	6.6	0.2
59	M0-1000	2603	6.6	0.2
116	DA13-017-40	2603	3.58	0.25
18	ZMB2-anu-zrn-	2603.25804	5.45077409	0.59288934
18	ZMB2-anu-zrn-	2603.25804	5.45077409	0.59288934
35	07LSC5_45.1	2604	7	0.3
35	07LSC5_45.1	2604	7	0.3
106	10GD49-15	2604	7.09	0.26
18	CNG2-anu-zrn-	2604.39293	7.36894952	0.59578549
18	CNG2-anu-zrn-	2604.39293	7.36894952	0.59578549
18	CNG2-anu-zrn-	2604.4997	5.74763886	0.59090653
18	CNG2-anu-zrn-	2604.4997	5.74763886	0.59090653
94	165593@26.asc	2607	7.5	0.3
94	165591@32.asc	2609	5.5	0.2
35	07LSC3_7.1	2610	5.1	0.3
35	07LSC3_7.1	2610	5.1	0.3
94	177921@6.asc	2613	5.9	0.4
94	165591@33.asc	2613	6.2	0.2
94	177097@19.asc	2613	7.9	0.2
94	177097@25.asc	2614	7.8	0.2
30	n2539-rpt-24	2615	5.83	0.26
30	n2539-rpt-24	2615	5.83	0.26
98	IV46-9C	2615	6.51	0.22
35	07LSC3_45.1	2616	5.5	0.5
35	07LSC3_45.1	2616	5.5	0.5
94	177921@33.asc	2616	5.4	0.3
94	165593@32.asc	2617	6.8	0.3
35	07LSC3_24	2618	6.4	0.3
35	07LSC3_24	2618	6.4	0.3
60	p11-110	2618	6.2	0.3
60	p11-110	2618	6.2	0.3
94	177921@36.asc	2618	5.2	0.3
94	177097@27.asc	2618	6.2	0.2
116	DA13-017-73	2619	6.94	0.25
51	Siam1_13	2619.15499	8.15965052	0.25916492
51	Siam1_13	2619.15499	8.15965052	0.25916492
38	T-33	2620	8	
38	T-33	2620	8	
94	165593@12.asc	2620	7.8	0.3
94	177921@32.asc	2621	4.8	0.3
116	DA13-017-27	2622	6.54	0.25
123		2622	5.9	0.09585683
51	CS11-20-40	2623.9918	2.38634914	0.16669777
51	CS11-20-40	2623.9918	2.38634914	0.16669777

30 n2539-rpt-11	2624	6.58	0.3
30 n2539-rpt-11	2624	6.58	0.3
94 177097@16. asc	2624	5.5	0.1
98 IV63-5C	2625	6.6	0.2
94 165593@34. asc	2626	5.4	0.2
94 177097@22. asc	2627	6.7	0.2
18 CNG2-anu-zrn-	2627.79784	6.50191731	0.59310032
18 CNG2-anu-zrn-	2627.79784	6.50191731	0.59310032
94 177921@21. asc	2628	5.9	0.4
18 NIL-anu-zrn-l	2628.94831	6.28662692	0.55158947
18 NIL-anu-zrn-l	2628.94831	6.28662692	0.55158947
35 09LSC4_41.1	2629	8.8	0.2
35 09LSC4_41.1	2629	8.8	0.2
59 M0-1291	2629	7.9	0.2
59 M0-1291	2629	7.9	0.2
51 CS11-19-26	2629.54178	4.99302584	0.4669713
51 CS11-19-26	2629.54178	4.99302584	0.4669713
60 lnt-033	2630	5.3	0.3
60 lnt-033	2630	5.3	0.3
35 07LSC9_20.1	2631	5.7	0.3
35 07LSC9_20.1	2631	5.7	0.3
35 09LSC1_41.1	2632	5.6	0.3
35 09LSC1_41.1	2632	5.6	0.3
94 177921@3. asc	2632	5.5	0.3
94 165592@4. asc	2633	5.6	0.2
51 CS12-24-34	2633.78868	2.65328122	0.15177767
51 CS12-24-34	2633.78868	2.65328122	0.15177767
98 IV22-17C	2634	6.3	0.4
35 07LSC7_6.2	2636	5.4	0.4
35 07LSC7_6.2	2636	5.4	0.4
94 177097@18. asc	2636	6.7	0.2
59 M0-945	2637	8.8	0.2
59 M0-945	2637	8.8	0.2
94 179602@26. asc	2637	5.8	0.2
94 177097@28. asc	2638	6.3	0.2
94 165593@36. asc	2638	6.5	0.3
118 AGQ13-08@104	2638	6.52	0.42
59 M0-1307	2639	6.1	0.2
59 M0-1307	2639	6.1	0.2
35 09LSC1_55.1	2640	5.7	0.2
35 09LSC1_55.1	2640	5.7	0.2
118 AGQ13-08@61	2640	6.32	0.33
94 165591@35. asc	2641	5.5	0.2
94 165593@33. asc	2642	6.7	0.3
35 07LSC7_18.1	2643	5.3	0.4

35 07LSC7_18.1	2643	5.3	0.4
60 lnt-119	2643	5.8	0.3
60 lnt-119	2643	5.8	0.3
20 HV1.10	2644	5.3	0.6
20 HV1.10	2644	5.3	0.6
20 HV1.10	2644	5.3	0.6
98 IV46-13C	2644	6.21	0.22
18 ZMB2-anu-zrn-	2644.92866	5.55824282	0.57174304
18 ZMB2-anu-zrn-	2644.92866	5.55824282	0.57174304
35 07LSC5_55.1	2645	8.3	0.2
35 07LSC5_55.1	2645	8.3	0.2
94 179602@28.asc	2645	6.5	0.2
118 WFS13-01@87	2645	5.15	0.41
51 CS12-25-24	2645.41001	6.28223496	0.49305094
51 CS12-25-24	2645.41001	6.28223496	0.49305094
35 07LSC5_44.1	2646	5.7	0.2
35 07LSC5_44.1	2646	5.7	0.2
94 177097@15.asc	2646	6.1	0.2
60 lnt-010	2648	6.7	0.2
60 lnt-010	2648	6.7	0.2
59 M0-970	2649	7.1	0.3
59 M0-970	2649	7.1	0.3
94 179602@2.asc	2649	6.2	0.2
107 WPG90/4_39	2649	6.08	0.16
94 165593@20.asc	2650	6.4	0.3
118 AGQ13-08@07	2650	7.26	0.36
35 09LSC4_38.1	2651	7.5	0.3
35 09LSC4_38.1	2651	7.5	0.3
60 lnt-030	2652	5.7	0.2
60 lnt-030	2652	5.7	0.2
35 07LSC3_6	2653	5.4	0.3
35 07LSC3_6	2653	5.4	0.3
98 IV22-4C	2653	5.75	0.3
60 lnt-044	2654	4	0.2
60 lnt-044	2654	4	0.2
35 07LSC7_4.1	2655	5.3	0.3
35 07LSC7_4.1	2655	5.3	0.3
94 165591@36.asc	2656	4.9	0.2
60 lnt-072	2657	6.6	0.2
60 lnt-072	2657	6.6	0.2
107 DL90/7_17	2660	6.46	0.23
60 lnt-046	2661	6.9	0.2
60 lnt-046	2661	6.9	0.2
10 2606-11	2662	5.7	0.4
10 2606-11	2662	5.7	0.4

35 09LSC4_50.1	2662	6.8	0.2
35 09LSC4_50.1	2662	6.8	0.2
119 7.1	2662	6	0.3384
51 Siam1_97	2663.13502	5.06290484	0.27549898
51 Siam1_97	2663.13502	5.06290484	0.27549898
94 165591@41.asc	2664	4.9	0.2
94 165591@40.asc	2664	6.7	0.3
35 07LSC7_19.1	2665	5.4	0.4
35 07LSC7_19.1	2665	5.4	0.4
35 07LSC3_21.2	2665	5.5	0.4
35 07LSC3_21.2	2665	5.5	0.4
35 07LSC9_16.1	2665	5.6	0.3
35 07LSC9_16.1	2665	5.6	0.3
35 07LSC7_5.1	2665	5.7	0.4
35 07LSC7_5.1	2665	5.7	0.4
107 IT/5_21	2665	8.74	0.21
118 AGQ13-08@94	2665	5.63	0.34
35 07LSC9_36.1	2666	6.8	0.4
35 07LSC9_36.1	2666	6.8	0.4
94 177921@31.asc	2666	5.6	0.3
18 NIL-anu-zrn-l	2666.86997	6.28818994	0.56313701
18 NIL-anu-zrn-l	2666.86997	6.28818994	0.56313701
35 09LSC1_11.1	2667	5.7	0.3
35 09LSC1_11.1	2667	5.7	0.3
51 CS11-13_73	2667.24051	6.4666547	0.21390502
51 CS11-13_73	2667.24051	6.4666547	0.21390502
24 C-82-18	2668	7.03	
24 C-82-18	2668	7.03	
24 C-82-17	2668	7.52	
24 C-82-17	2668	7.52	
94 177921@8.asc	2668	6.5	0.4
98 IV46-19C	2668	7.99	0.27
107 IT/5_12	2668	6.73	0.17
94 165591@43.asc	2669	6.8	0.3
29 Arcadia Veins	2670	4.87	
29 Arcadia Veins	2670	4.87	
94 177921@26.asc	2670	6.9	0.4
94 177097@3.asc	2670	6.9	0.2
94 177921@4.asc	2670	7.9	0.5
35 07LSC7_50.1	2671	6.6	0.2
35 07LSC7_50.1	2671	6.6	0.2
60 lnt-069	2671	5	0.2
60 lnt-069	2671	5	0.2
98 IV63-10R	2671	6.08	0.21
24 DD90-53	2672	5.78	

24 DD90-53	2672	5.78	
30 n2539-rpt-b3'	2672	4.78	0.29
30 n2539-rpt-b3'	2672	4.78	0.29
37 07SC51-1@12	2672	6.2	0.45
37 07SC51-1@12	2672	6.2	0.45
118 AGQ13-08@44	2672	5.44	0.18
51 CS12-25-9	2672.67657	4.68978443	0.62202106
51 CS12-25-9	2672.67657	4.68978443	0.62202106
60 lnt-002	2673	5.6	0.2
60 lnt-002	2673	5.6	0.2
35 07LSC7_6.1	2674	4.9	0.4
35 07LSC7_6.1	2674	4.9	0.4
118 AGQ13-08@77	2674	5.44	0.36
30 n2539-rpt-29	2675	6.94	0.26
30 n2539-rpt-29	2675	6.94	0.26
60 lnt-057	2675	7.7	0.2
60 lnt-057	2675	7.7	0.2
35 09LSC1_36.1	2677	5.1	0.3
35 09LSC1_36.1	2677	5.1	0.3
35 07LSC9_55.1	2677	5.3	0.3
35 07LSC9_55.1	2677	5.3	0.3
35 07LSC9_18.2	2677	5.4	0.2
35 07LSC9_18.2	2677	5.4	0.2
60 lnt-066	2677	5.9	0.2
60 lnt-066	2677	5.9	0.2
60 lnt-038	2677	7.3	0.2
60 lnt-038	2677	7.3	0.2
94 165591@38. asc	2677	5.9	0.2
94 165591@25. asc	2677	6.8	0.3
98 IV63-14C	2677	6.56	0.33
24 84-SM-19	2678	5.82	
24 84-SM-19	2678	5.82	
24 C-86-14	2678	6.53	
24 C-86-14	2678	6.53	
59 M0-1029	2678	6.3	0.2
59 M0-1029	2678	6.3	0.2
94 177921@29. asc	2678	5.5	0.3
94 165593@17. asc	2678	5.8	0.2
24 DD96-10	2680	6.09	
24 DD96-11	2680	6.09	
24 DD96-10	2680	6.09	
24 DD96-11	2680	6.09	
24 96WB-22	2680	6.42	
24 96WB-22	2680	6.42	
24 DD96-4	2680	6.46	

24 DD96-4	2680	6.46	
24 K-76-2	2680	6.63	
24 K-76-2	2680	6.63	
24 C-92-20	2681	6.3	
24 C-92-20	2681	6.3	
116 DA13-017-19	2681	6.02	0.25
10 2436-72	2682	6.4	0.4
10 2436-72	2682	6.4	0.4
35 09LSC1_24.1	2682	5.5	0.3
35 09LSC1_24.1	2682	5.5	0.3
29 Anialik Dior:	2683	5.18	
29 Anialik Dior:	2683	5.18	
51 BBF-11-60	2683.72254	4.99966237	0.47713953
51 BBF-11-60	2683.72254	4.99966237	0.47713953
24 C-92-31	2684	6.18	
24 C-92-31	2684	6.18	
94 165591@42. asc	2684	5.1	0.2
94 165591@99999.	2684	5.4	0.2
118 AGQ13-08@58	2684	6.04	0.34
24 WOB-86	2686	5.37	
24 WOB-86	2686	5.37	
24 DD81-12	2686	6.27	
24 DD81-12	2686	6.27	
35 07LSC12_25.1	2686	6.9	0.4
35 07LSC12_25.1	2686	6.9	0.4
60 VGt-541	2686	5.1	0.4
60 VGt-541	2686	5.1	0.4
98 IV22-14C	2686	5.87	0.4
118 AGQ13-08@51	2686	5.55	0.28
51 CS11-20-31	2686.00279	4.22010313	0.36274875
51 CS11-20-31	2686.00279	4.22010313	0.36274875
35 07LSC3_23	2687	2.7	0.3
35 07LSC3_23	2687	2.7	0.3
46 Patterson _6:	2687	4.5	0.6
46 Patterson _6:	2687	4.5	0.6
94 165591@46. asc	2687	5.3	0.2
24 DD96-6	2688	6.83	
24 DD96-6	2688	6.83	
60 lnt-064	2688	5.3	0.2
60 lnt-064	2688	5.3	0.2
24 PN-77-13	2689	4.67	
24 PN-77-13	2689	4.67	
24 C-92-30	2690	5.78	
24 C-92-30	2690	5.78	
35 07LSC9_43.1	2690	4.5	0.3

35 07LSC9_43.1	2690	4.5	0.3
35 07LSC9_21.1	2690	6.4	0.4
35 07LSC9_21.1	2690	6.4	0.4
51 CS11-20-39	2690.11973	4.72027733	0.46912586
51 CS11-20-39	2690.11973	4.72027733	0.46912586
24 DD85-2	2691	5.82	
24 DD85-2	2691	5.82	
28 KN 76-7	2691	5.33	
28 KN 76-7	2691	5.33	
35 07LSC12_30.1	2691	6	0.4
35 07LSC12_30.1	2691	6	0.4
37 07SC65@5	2691	5.73	0.33
37 07SC65@5	2691	5.73	0.33
94 165591@39.asc	2691	5.6	0.2
94 177921@16.asc	2691	7.2	0.4
35 09LSC4_14.2	2692	5.7	0.2
35 09LSC4_14.2	2692	5.7	0.2
94 165591@45.asc	2692	5.3	0.2
118 AGQ13-08@32	2692	5.91	0.37
35 07LSC7_19.2	2693	5.5	0.3
35 07LSC7_19.2	2693	5.5	0.3
35 07LSC9_15.2	2693	5.6	0.3
35 07LSC9_15.2	2693	5.6	0.3
35 09LSC4_20.1	2693	6	0.2
35 09LSC4_20.1	2693	6	0.2
60 VGt-393	2693	4.5	0.5
60 VGt-393	2693	4.5	0.5
51 CS12-24-50	2693.16455	5.23288667	0.44436798
51 CS12-24-50	2693.16455	5.23288667	0.44436798
29 Anialik 28	2694	4.46	
29 Anialik 28	2694	4.46	
29 Anialik Tona	2694	4.86	
29 Anialik Tona	2694	4.86	
29 Anialik 577	2694	4.96	
29 Anialik 577	2694	4.96	
60 p11-136	2694	6.2	0.3
60 p11-136	2694	6.2	0.3
60 lnt-071	2694	6.7	0.2
60 lnt-071	2694	6.7	0.2
18 CNG2-anu-zrn	2694.57106	5.07370854	0.59196639
18 CNG2-anu-zrn	2694.57106	5.07370854	0.59196639
24 DD87-51	2695	5.58	
24 DD87-51	2695	5.58	
24 TK76-30	2695	6.6	
24 TK76-30	2695	6.6	

38 T-3t	2695	6	
38 T-3t	2695	6	
94 179602@16. asc	2695	5.2	0.2
60 lnt-006	2696	7.2	0.3
60 lnt-006	2696	7.2	0.3
94 165593-fauxs	2696	4.5	0.2
94 165593-fauxs	2696	4.9	0.2
94 165593-fauxs	2696	5.3	0.2
94 165593-fauxs	2696	5.5	0.2
94 165591@44. asc	2696	5.5	0.2
94 165593-fauxs	2696	5.7	0.2
119 23. 1	2696	5.1227	0.3153
24 C87-39	2697	6.9	
24 C87-39	2697	6.9	
35 07LSC9_27. 1	2697	5.3	0.3
35 07LSC9_27. 1	2697	5.3	0.3
59 M0-971	2697	5.6	0.2
59 M0-971	2697	5.6	0.2
118 AGQ13-08@92	2697	6.33	0.28
24 C88-29	2698	6.47	
24 C88-29	2698	6.47	
24 S78-20	2698	6.49	
24 S78-20	2698	6.49	
24 C88-34	2698	6.57	
24 C88-34	2698	6.57	
118 AGQ13-08@102	2698	5.86	0.41
59 M0-1285	2699	7.4	0.2
59 M0-1285	2699	7.4	0.2
98 IV63-7R	2699	7.63	0.3
51 BBF-11-32	2699.9496	3.93882797	0.40554654
51 BBF-11-32	2699.9496	3.93882797	0.40554654
14 95SK11	2700	5.15	
14 95SK11	2700	5.15	
24 DD81-14	2700	4.85	
24 DD81-14	2700	4.85	
24 TK83-6	2700	4.97	
24 TK83-6	2700	4.97	
24 C-88-23	2700	6.35	
24 C-88-23	2700	6.35	
24 DD96-8	2700	6.4	
24 DD96-8	2700	6.4	
28 Winston Lake	2700	2.86	
28 Winston Lake	2700	2.86	
28 DD78-43	2700	4.86	
28 DD78-43	2700	4.86	

28 G90-4	2700	5.03
28 G90-4	2700	5.03
28 DD81-13	2700	5.08
28 DD81-13	2700	5.08
28 DD93-11	2700	5.1
28 DD93-11	2700	5.1
28 DD84-9	2700	5.18
28 DD84-9	2700	5.18
28 DD86-17	2700	5.22
28 DD86-17	2700	5.22
28 #80	2700	5.23
28 #80	2700	5.23
28 DD78-35	2700	5.42
28 DD78-35	2700	5.42
28 DD78-28	2700	5.47
28 DD78-28	2700	5.47
28 DD84-8	2700	5.49
28 DD84-8	2700	5.49
28 DD86-7	2700	5.5
28 DD86-7	2700	5.5
28 #52	2700	5.64
28 #52	2700	5.64
28 #60	2700	5.69
28 #60	2700	5.69
28 DD83-5	2700	5.7
28 DD83-5	2700	5.7
28 DD83-2	2700	5.73
28 DD83-2	2700	5.73
28 DD96-1	2700	5.77
28 DD96-1	2700	5.77
28 DD84-2	2700	5.93
28 DD84-2	2700	5.93
28 DD82-1	2700	6.07
28 DD82-1	2700	6.07
28 DD90-42	2700	6.1
28 DD90-42	2700	6.1
28 DD78-32	2700	6.18
28 DD78-32	2700	6.18
28 DD90-60	2700	6.4
28 DD90-60	2700	6.4
28 DD85-9	2700	6.51
28 DD85-9	2700	6.51
28 DD86-6	2700	6.68
28 DD86-6	2700	6.68
28 DD95-20	2700	6.8

28 DD95-20	2700	6.8	
40 98S-SK40	2700	5.8	
40 98S-SK40	2700	5.8	
60 lnt-031	2700	7.2	0.2
60 lnt-031	2700	7.2	0.2
94 179602@27. asc	2700	6.2	0.2
11 01TT02(2)-04!	2700.4	5.83014126	0.2836804
11 01TT02(2)-04!	2700.4	5.83014126	0.2836804
24 DD81-29	2701	5.9	
24 DD81-29	2701	5.9	
28 C-88-8	2701	5	
28 C-88-8	2701	5	
107 IT/5_13	2701	6.77	0.22
35 07LSC3_37	2703	3.9	0.3
35 07LSC3_37	2703	3.9	0.3
35 09LSC4_126.1	2703	5.4	0.2
35 09LSC4_126.1	2703	5.4	0.2
24 C-83-21	2704	5.84	
24 C-83-21	2704	5.84	
35 07LSC6_29.2	2704	5.6	0.3
35 07LSC6_29.2	2704	5.6	0.3
35 07LSC9_48.1	2704	6.2	0.3
35 07LSC9_48.1	2704	6.2	0.3
60 lnt-051	2704	5.3	0.2
60 lnt-051	2704	5.3	0.2
18 CNG2-anu-zrn-	2704.08909	4.29525768	0.57746496
18 CNG2-anu-zrn-	2704.08909	4.29525768	0.57746496
28 PN-77-9	2705	6.06	
28 PN-77-9	2705	6.06	
30 n2539-rpt-1	2705	5.68	0.26
30 n2539-rpt-1	2705	5.68	0.26
35 07LSC3_33	2705	6.9	0.3
35 07LSC3_33	2705	6.9	0.3
24 DD87-41	2706	5.45	
24 DD87-41	2706	5.45	
35 07LSC9_31.1	2706	4.3	0.2
35 07LSC9_31.1	2706	4.3	0.2
35 07LSC12_23.1	2706	6.1	0.3
35 07LSC12_23.1	2706	6.1	0.3
51 CS11-18-48	2707.32048	8.4190358	0.87659264
51 CS11-18-48	2707.32048	8.4190358	0.87659264
35 07LSC7_49.2	2708	5.4	0.3
35 07LSC7_49.2	2708	5.4	0.3
35 07LSC9_21.2	2708	6.2	0.3
35 07LSC9_21.2	2708	6.2	0.3

24 DD84-16	2709	5.46	
24 DD84-16	2709	5.46	
35 07LSC9_15.1	2709	5.3	0.4
35 07LSC9_15.1	2709	5.3	0.4
24 DD84-19	2710	6.13	
24 DD84-19	2710	6.13	
24 DD81-16	2710	6.28	
24 DD81-16	2710	6.28	
35 07LSC9_18.1	2710	5.6	0.3
35 07LSC9_18.1	2710	5.6	0.3
94 179602@6.asc	2710	5.5	0.2
23 KC465b	2711	5.16	
23 KC465b	2711	5.16	
23 PN77-22	2711	5.26	
23 PN77-22	2711	5.26	
23 KCFC-1	2711	5.53	
23 KCFC-1	2711	5.53	
23 KC 102a	2711	5.91	
23 KC 102a	2711	5.91	
107 IT/5_27	2711	5.91	0.28
59 MO-958	2712	6	0.3
59 MO-958	2712	6	0.3
51 Siam1_44	2712.69038	7.19436669	0.21539559
51 Siam1_44	2712.69038	7.19436669	0.21539559
119 48.1	2713	2	0.4939
28 84 SM-7	2714	4.7	
28 84 SM-7	2714	4.7	
35 07LSC3_46	2714	4.4	0.3
35 07LSC3_46	2714	4.4	0.3
35 07LSC7_11.1	2714	5.2	0.3
35 07LSC7_11.1	2714	5.2	0.3
35 07LSC9_5.1	2714	5.7	0.5
35 07LSC9_5.1	2714	5.7	0.5
18 CNG2-anu-zrn	2714.57344	6.15427483	0.60900435
18 CNG2-anu-zrn	2714.57344	6.15427483	0.60900435
17 Kaartojärvet	2715	4.9351229	0.51351017
17 Kaartojärvet	2715	4.9351229	0.51351017
17 Kaartojärvet	2715	4.97467431	0.5613503
17 Kaartojärvet	2715	4.97467431	0.5613503
17 Kaartojärvet	2715	5.16542223	0.54347051
17 Kaartojärvet	2715	5.16542223	0.54347051
17 Kaartojärvet	2715	5.24702829	0.62889047
17 Kaartojärvet	2715	5.24702829	0.62889047
17 Kaartojärvet	2715	5.26405041	0.53481518
17 Kaartojärvet	2715	5.26405041	0.53481518

17 Kaartojärvet	2715	5.53289984	0.65140406
17 Kaartojärvet	2715	5.53289984	0.65140406
17 Kaartojärvet	2715	5.54892066	0.51874089
17 Kaartojärvet	2715	5.54892066	0.51874089
17 Kaartojärvet	2715	5.66557228	0.52936278
17 Kaartojärvet	2715	5.66557228	0.52936278
17 Kaartojärvet	2715	5.71113149	0.56130589
17 Kaartojärvet	2715	5.71113149	0.56130589
17 Kaartojärvet	2715	5.7221458	0.54918227
17 Kaartojärvet	2715	5.7221458	0.54918227
17 Kaartojärvet	2715	5.88235403	0.50705098
17 Kaartojärvet	2715	5.88235403	0.50705098
35 09LSC4_131.1	2715	4.9	0.2
35 09LSC4_131.1	2715	4.9	0.2
51 Siam1_112	2715.92675	4.66755164	0.29433026
51 Siam1_112	2715.92675	4.66755164	0.29433026
94 165591@19. asc	2716	5.3	0.2
24 DD81-17	2717	5.42	
24 DD81-17	2717	5.42	
25 PN 76-13	2717	5.87	
25 PN 76-13	2717	5.87	
35 07LSC5_60.1	2717	4.8	0.3
35 07LSC5_60.1	2717	4.8	0.3
35 09LSC4_97.2	2717	5.2	0.2
35 09LSC4_97.2	2717	5.2	0.2
35 07LSC9_22.1	2717	5.5	0.3
35 07LSC9_22.1	2717	5.5	0.3
10 2641-20	2718	3	0.4
10 2641-20	2718	3	0.4
24 C-81-10	2718	5.9	
24 C-81-10	2718	5.9	
35 07LSC7_3.1	2718	5.2	0.5
35 07LSC7_3.1	2718	5.2	0.5
60 p11-142	2718	6.3	0.3
60 p11-142	2718	6.3	0.3
51 Siam1_37	2718.40477	5.38589817	0.21569878
51 Siam1_37	2718.40477	5.38589817	0.21569878
30 n2539-rpt-46	2719	5.02	0.27
30 n2539-rpt-46	2719	5.02	0.27
35 07LSC10_19.1	2719	5	0.3
35 07LSC10_19.1	2719	5	0.3
35 07LSC6_29.1	2719	5.8	0.3
35 07LSC6_29.1	2719	5.8	0.3
94 165593@18. asc	2719	6.5	0.3
11 01TT02(2)-00:	2719.1	4.58376837	0.3643618

11 01TT02(2)-00:	2719. 1	4. 58376837	0. 3643618
51 BBF-11-58	2719. 56172	4. 11049341	0. 29668408
51 BBF-11-58	2719. 56172	4. 11049341	0. 29668408
24 PN-78-5	2720	5. 81	
24 PN-78-5	2720	5. 81	
24 C-83-19	2720	6. 01	
24 C-83-19	2720	6. 01	
30 n2539-rpt-b5f	2720	4. 69	0. 3
30 n2539-rpt-b5f	2720	4. 69	0. 3
35 07LSC8_49. 1	2720	6. 1	0. 3
35 07LSC8_49. 1	2720	6. 1	0. 3
45 97MW7	2720	2. 4	
45 97MW7	2720	2. 4	
45 97MW4	2720	4. 38	
45 97MW4	2720	4. 38	
94 165592@10. asc	2721	5. 7	0. 2
17 Kaapinsalmi t	2722	5. 13739609	0. 76885519
17 Kaapinsalmi t	2722	5. 13739609	0. 76885519
17 Kaapinsalmi t	2722	5. 50983852	0. 57502199
17 Kaapinsalmi t	2722	5. 50983852	0. 57502199
17 Kaapinsalmi t	2722	5. 52186896	0. 53638044
17 Kaapinsalmi t	2722	5. 52186896	0. 53638044
17 Kaapinsalmi t	2722	5. 59756049	0. 60009874
17 Kaapinsalmi t	2722	5. 59756049	0. 60009874
17 Kaapinsalmi t	2722	5. 6847812	0. 51888482
17 Kaapinsalmi t	2722	5. 6847812	0. 51888482
17 Kaapinsalmi t	2722	5. 7339055	0. 61537205
17 Kaapinsalmi t	2722	5. 7339055	0. 61537205
17 Kaapinsalmi t	2722	5. 73440677	0. 64651742
17 Kaapinsalmi t	2722	5. 73440677	0. 64651742
17 Kaapinsalmi t	2722	5. 75245243	0. 5967924
17 Kaapinsalmi t	2722	5. 75245243	0. 5967924
17 Kaapinsalmi t	2722	5. 76949556	0. 52821456
17 Kaapinsalmi t	2722	5. 76949556	0. 52821456
17 Kaapinsalmi t	2722	5. 82563762	0. 56718606
17 Kaapinsalmi t	2722	5. 82563762	0. 56718606
17 Kaapinsalmi t	2722	5. 86924797	0. 61687803
17 Kaapinsalmi t	2722	5. 86924797	0. 61687803
17 Kaapinsalmi t	2722	5. 87275685	0. 5192574
17 Kaapinsalmi t	2722	5. 87275685	0. 5192574
107 WPG90/4_25	2722	5. 8	0. 21
17 Arola A573	2723	4. 61555008	0. 52557905
17 Arola A573	2723	4. 61555008	0. 52557905
17 Arola A575	2723	4. 72925279	0. 58574799
17 Arola A575	2723	4. 72925279	0. 58574799

17 Arola A575	2723	4.94163143	0.47787053
17 Arola A575	2723	4.94163143	0.47787053
17 Arola A574	2723	4.94163143	0.57080294
17 Arola A574	2723	4.94163143	0.57080294
17 Arola A572	2723	4.9651734	0.58671845
17 Arola A572	2723	4.9651734	0.58671845
17 Arola A575	2723	5.20059311	0.47373062
17 Arola A575	2723	5.20059311	0.47373062
17 Arola A575	2723	5.22513687	0.41683185
17 Arola A575	2723	5.22513687	0.41683185
17 Koitere A1349	2723	5.24316902	0.43193844
17 Koitere A1349	2723	5.24316902	0.43193844
17 Arola A575	2723	5.27021724	0.48158521
17 Arola A575	2723	5.27021724	0.48158521
17 Arola A575	2723	5.3734012	0.50769795
17 Arola A575	2723	5.3734012	0.50769795
17 Koitere A1349	2723	5.44753336	0.61620275
17 Koitere A1349	2723	5.44753336	0.61620275
17 Koitere A1349	2723	5.51014499	0.50278902
17 Koitere A1349	2723	5.51014499	0.50278902
17 Koitere A1349	2723	5.66492092	0.58744966
17 Koitere A1349	2723	5.66492092	0.58744966
17 Koitere A1340	2723	5.70549326	0.49408639
17 Koitere A1340	2723	5.70549326	0.49408639
17 Koitere A1342	2723	5.70749683	0.51140596
17 Koitere A1342	2723	5.70749683	0.51140596
17 Koitere A1338	2723	5.72252362	0.53379092
17 Koitere A1338	2723	5.72252362	0.53379092
17 Koitere A1349	2723	5.7595897	0.54875836
17 Koitere A1349	2723	5.7595897	0.54875836
17 Koitere A1349	2723	5.90735314	0.60777564
17 Koitere A1349	2723	5.90735314	0.60777564
17 Koitere A1339	2723	5.92989332	0.44942073
17 Koitere A1339	2723	5.92989332	0.44942073
17 Koitere A1349	2723	5.96445494	0.56103884
17 Koitere A1349	2723	5.96445494	0.56103884
17 Koitere A1349	2723	6.0385871	0.4214722
17 Koitere A1349	2723	6.0385871	0.4214722
17 Koitere A1340	2723	6.0676389	0.49750943
17 Koitere A1340	2723	6.0676389	0.49750943
17 Koitere A1340	2723	6.08266569	0.41743802
17 Koitere A1340	2723	6.08266569	0.41743802
17 Koitere A1341	2723	6.09819337	0.48203584
17 Koitere A1341	2723	6.09819337	0.48203584
17 Koitere A1345	2723	6.10119873	0.51631451

17 Koitere A134	2723	6.10119873	0.51631451
17 Koitere A134	2723	6.12423981	0.46807279
17 Koitere A134	2723	6.12423981	0.46807279
17 Koitere A134'	2723	6.3250979	0.49104877
17 Koitere A134'	2723	6.3250979	0.49104877
17 Koitere A134	2723	6.35164523	0.51207631
17 Koitere A134	2723	6.35164523	0.51207631
17 Koitere A134	2723	6.41726221	0.5124032
17 Koitere A134	2723	6.41726221	0.5124032
17 Koitere A134	2723	6.42878275	0.5634343
17 Koitere A134	2723	6.42878275	0.5634343
17 Koitere A134	2723	6.54849618	0.54832234
17 Koitere A134	2723	6.54849618	0.54832234
17 Koitere A134	2723	6.65618818	0.56059274
17 Koitere A134	2723	6.65618818	0.56059274
17 Koitere A134	2723	6.84001591	0.48587548
17 Koitere A134	2723	6.84001591	0.48587548
17 Koitere A134	2723	7.02785078	0.42102933
17 Koitere A134	2723	7.02785078	0.42102933
20 CM1.2	2723	5.8	0.5
20 CM1.2	2723	5.8	0.5
20 CM1.2	2723	5.8	0.5
24 DD78-19	2723	4.88	
24 DD78-19	2723	4.88	
24 DD81-30	2723	5.69	
24 DD81-30	2723	5.69	
24 DD85-10	2723	5.76	
24 DD85-10	2723	5.76	
51 Siam1_79	2723.62209	4.99434359	0.26566687
51 Siam1_79	2723.62209	4.99434359	0.26566687
35 07LSC10_10.1	2724	5.1	0.4
35 07LSC10_10.1	2724	5.1	0.4
28 C-88-17	2725	5.07	
28 C-88-17	2725	5.07	
35 07LSC3_19.1	2726	5.4	0.3
35 07LSC3_19.1	2726	5.4	0.3
35 07LSC12_40.1	2726	6.5	0.2
35 07LSC12_40.1	2726	6.5	0.2
60 VGt-546	2726	4.3	0.4
60 VGt-546	2726	4.3	0.4
24 DD84-18	2727	5.47	
24 DD84-18	2727	5.47	
28 PN-77-18	2727	5.58	
28 PN-77-18	2727	5.58	
35 07LSC7_17.1	2727	4.7	0.4

35 07LSC7_17.1	2727	4.7	0.4
35 07LSC3_17	2727	5.6	0.3
35 07LSC3_17	2727	5.6	0.3
35 07LSC9_8.2	2727	6.5	0.3
35 07LSC9_8.2	2727	6.5	0.3
24 RNLY3105	2728	5.26	
24 RNLY3105	2728	5.26	
24 RN SHAFT	2728	5.59	
24 RN SHAFT	2728	5.59	
30 n2539-rpt-b50	2728	5.38	0.29
30 n2539-rpt-b50	2728	5.38	0.29
35 07LSC9_10.2	2728	3.4	0.4
35 07LSC9_10.2	2728	3.4	0.4
35 09LSC4_70.1	2728	5.6	0.2
35 09LSC4_70.1	2728	5.6	0.2
35 07LSC9_34.1	2728	5.9	0.3
35 07LSC9_34.1	2728	5.9	0.3
18 CNG2-anu-zrn-	2728.49445	4.38647793	0.59183808
18 CNG2-anu-zrn-	2728.49445	4.38647793	0.59183808
17 Ilomantsinjäi	2729	5.63052673	0.63942518
17 Ilomantsinjäi	2729	5.63052673	0.63942518
17 Ilomantsinjäi	2729	5.65105341	0.58463444
17 Ilomantsinjäi	2729	5.65105341	0.58463444
17 Ilomantsinjäi	2729	5.7191419	0.55634111
17 Ilomantsinjäi	2729	5.7191419	0.55634111
17 Ilomantsinjäi	2729	5.74918094	0.64327296
17 Ilomantsinjäi	2729	5.74918094	0.64327296
17 Ilomantsinjäi	2729	5.80375187	0.57184286
17 Ilomantsinjäi	2729	5.80375187	0.57184286
17 Ilomantsinjäi	2729	5.8998768	0.61542386
17 Ilomantsinjäi	2729	5.8998768	0.61542386
17 Ilomantsinjäi	2729	6.18174315	0.55250701
17 Ilomantsinjäi	2729	6.18174315	0.55250701
17 Ilomantsinjäi	2729	6.24031928	0.5336604
17 Ilomantsinjäi	2729	6.24031928	0.5336604
17 Ilomantsinjäi	2729	6.28938305	0.53527284
17 Ilomantsinjäi	2729	6.28938305	0.53527284
17 Ilomantsinjäi	2729	6.39502035	0.52873328
17 Ilomantsinjäi	2729	6.39502035	0.52873328
17 Ilomantsinjäi	2729	6.43907761	0.53754196
17 Ilomantsinjäi	2729	6.43907761	0.53754196
17 Ilomantsinjäi	2729	6.64784895	0.58046156
17 Ilomantsinjäi	2729	6.64784895	0.58046156
24 DD86-25a	2729	5.53	
24 DD86-25a	2729	5.53	

28 DD78-24	2729	5.48	
28 DD78-24	2729	5.48	
35 07LSC10_4.1	2729	4.1	0.3
35 07LSC10_4.1	2729	4.1	0.3
35 07LSC9_17.1	2729	5.4	0.5
35 07LSC9_17.1	2729	5.4	0.5
24 DD87-48	2730	5.69	
24 DD87-48	2730	5.69	
24 DD84-20	2730	5.97	
24 DD84-20	2730	5.97	
35 07LSC9_19.1	2730	5.7	0.3
35 07LSC9_19.1	2730	5.7	0.3
35 07LSC8_49.2	2730	6.3	0.3
35 07LSC8_49.2	2730	6.3	0.3
24 DD78-6	2731	5.43	
24 DD78-6	2731	5.43	
24 DD83-4	2732	4.96	
24 DD83-4	2732	4.96	
24 DD78-4	2732	5.07	
24 DD78-4	2732	5.07	
24 DD83-10	2732	5.54	
24 DD83-10	2732	5.54	
35 07LSC9_2.1	2732	5.6	0.3
35 07LSC9_2.1	2732	5.6	0.3
35 07LSC9_38.1	2732	6.9	0.5
35 07LSC9_38.1	2732	6.9	0.5
24 DD78-18	2733	4.92	
24 DD78-18	2733	4.92	
24 DD83-9	2733	5.24	
24 DD83-9	2733	5.24	
24 31E	2733	5.57	
24 31E	2733	5.57	
24 DD81-32	2734	5.52	
24 DD81-32	2734	5.52	
25 JH 82-1	2734	5.39	
25 JH 82-1	2734	5.39	
25 PN 76-15	2734	5.48	
25 PN 76-15	2734	5.48	
94 165591@27. asc	2734	4.7	0.2
25 JH 82-2	2735	5.33	
25 JH 82-2	2735	5.33	
25 JH 82-4	2735	5.46	
25 JH 82-4	2735	5.46	
59 M0-1081	2735	5.1	0.2
59 M0-1081	2735	5.1	0.2

60 lnt-011	2735	8.5	0.2
60 lnt-011	2735	8.5	0.2
51 Siam1_56	2735.31801	5.81074315	0.21290216
51 Siam1_56	2735.31801	5.81074315	0.21290216
25 JH 82-3	2736	5.09	
25 JH 82-3	2736	5.09	
25 PN 76-14	2736	5.51	
25 PN 76-14	2736	5.51	
35 07LSC7_1.1	2736	4.7	0.4
35 07LSC7_1.1	2736	4.7	0.4
35 09LSC4_83.1	2736	6.3	0.3
35 09LSC4_83.1	2736	6.3	0.3
19 08LL05 49	2737	5.95	0.44
19 08LL05 49	2737	5.95	0.44
35 07LSC8_63.2	2737	6.7	0.4
35 07LSC8_63.2	2737	6.7	0.4
25 DD78-17	2739	5.08	
25 DD78-17	2739	5.08	
51 Siam1_59	2739.92174	5.86812421	0.30600615
51 Siam1_59	2739.92174	5.86812421	0.30600615
29 B87-16	2740	6.12	
29 B87-16	2740	6.12	
30 n2539-rpt-6	2740	6.52	0.24
30 n2539-rpt-6	2740	6.52	0.24
59 M0-1260	2740	5.1	0.2
59 M0-1260	2740	5.1	0.2
17 Kuittila A28!	2741	5.17042873	0.6156173
17 Kuittila A28!	2741	5.17042873	0.6156173
17 Kuittila A28!	2741	6.85211443	0.55830409
17 Kuittila A28!	2741	6.85211443	0.55830409
17 Kuittila A28!	2741	7.12797297	0.55944866
17 Kuittila A28!	2741	7.12797297	0.55944866
17 Kuittila A28!	2741	7.18004064	0.60907335
17 Kuittila A28!	2741	7.18004064	0.60907335
24 C-87-17	2741	5.41	
24 C-87-17	2741	5.41	
35 07LSC9_8.1	2741	6.2	0.2
35 07LSC9_8.1	2741	6.2	0.2
51 CS12-24-48	2741.54001	2.36727307	0.17857398
51 CS12-24-48	2741.54001	2.36727307	0.17857398
20 BB3.3.16	2743	4.6	0.4
20 BB3.3.16	2743	4.6	0.4
20 BB3.3.16	2743	4.6	0.4
35 09LSC4_110.2	2743	5.2	0.2
35 09LSC4_110.2	2743	5.2	0.2

35 07LSC8_56.2	2743	5.8	0.3
35 07LSC8_56.2	2743	5.8	0.3
51 Siam1_86	2743.98075	5.23555909	0.26320102
51 Siam1_86	2743.98075	5.23555909	0.26320102
17 Sysmänjärvi t	2744	4.55112382	0.55947624
17 Sysmänjärvi t	2744	4.55112382	0.55947624
17 Sysmänjärvi t	2744	5.00821791	0.54112444
17 Sysmänjärvi t	2744	5.00821791	0.54112444
17 Sysmänjärvi t	2744	5.06479144	0.52950473
17 Sysmänjärvi t	2744	5.06479144	0.52950473
17 Sysmänjärvi t	2744	5.23000617	0.53803761
17 Sysmänjärvi t	2744	5.23000617	0.53803761
17 Sysmänjärvi t	2744	5.29559141	0.50343283
17 Sysmänjärvi t	2744	5.29559141	0.50343283
17 Sysmänjärvi t	2744	5.31261353	0.57644492
17 Sysmänjärvi t	2744	5.31261353	0.57644492
17 Sysmänjärvi t	2744	5.611502	0.59230083
17 Sysmänjärvi t	2744	5.611502	0.59230083
17 Sysmänjärvi t	2744	5.8633293	0.57903457
17 Sysmänjärvi t	2744	5.8633293	0.57903457
17 Sysmänjärvi t	2744	5.87384297	0.4999554
17 Sysmänjärvi t	2744	5.87384297	0.4999554
17 Sysmänjärvi t	2744	6.57024809	0.52766073
17 Sysmänjärvi t	2744	6.57024809	0.52766073
107 DL90/7_2	2744	6.91	0.22
35 07LSC3_43	2745	4.3	0.3
35 07LSC3_43	2745	4.3	0.3
35 07LSC10_9.1	2746	5.8	0.3
35 07LSC10_9.1	2746	5.8	0.3
107 WPG90/4_18	2746	6.23	0.24
51 CS12-23-26	2746.42858	5.27691646	0.48280801
51 CS12-23-26	2746.42858	5.27691646	0.48280801
37 07SC49@06	2750	5.19	0.39
37 07SC49@06	2750	5.19	0.39
35 07LSC9_12.1	2751	4.5	0.5
35 07LSC9_12.1	2751	4.5	0.5
106 10GD49-51	2751	6.59	0.25
118 WFS13-01@25	2751	5.36	0.36
59 MO-1099	2753	5.6	0.3
59 MO-1099	2753	5.6	0.3
107 WPG90/4_9	2754	6.26	0.19
35 07LSC10_36.1	2755	4.8	0.3
35 07LSC7_12.2	2755	4.8	0.3
35 07LSC10_36.1	2755	4.8	0.3
35 07LSC7_12.2	2755	4.8	0.3

123	2755	3.31	0.06336012
35 07LSC7_2.1	2756	4.8	0.4
35 07LSC7_2.1	2756	4.8	0.4
35 09LSC4_51.1	2756	7.4	0.3
35 09LSC4_51.1	2756	7.4	0.3
35 09LSC4_5.2	2757	5.3	0.2
35 09LSC4_5.2	2757	5.3	0.2
107 WPG90/4_40	2757	5.04	0.11
35 07LSC8_47.2	2758	5.1	0.3
35 07LSC8_47.2	2758	5.1	0.3
35 07LSC7_25.2	2758	5.2	0.3
35 07LSC7_25.2	2758	5.2	0.3
35 07LSC6_31.1	2758	6.5	0.2
35 07LSC6_31.1	2758	6.5	0.2
35 07LSC6_63.1	2759	4.4	0.4
35 07LSC6_63.1	2759	4.4	0.4
35 07LSC7_7.2	2759	4.9	0.6
35 07LSC7_7.2	2759	4.9	0.6
35 07LSC10_17.1	2760	4.7	0.5
35 07LSC10_17.1	2760	4.7	0.5
35 07LSC7_25.1	2763	5	0.4
35 07LSC7_25.1	2763	5	0.4
35 09LSC4_113.1	2763	6	0.2
35 09LSC4_113.1	2763	6	0.2
30 n2539-rpt-b18	2764	5.22	0.26
30 n2539-rpt-b18	2764	5.22	0.26
35 07LSC6_25.1	2764	5.5	0.5
35 07LSC6_25.1	2764	5.5	0.5
18 CNG2-anu-zrn-	2765.11451	5.95673392	0.56415152
18 CNG2-anu-zrn-	2765.11451	5.95673392	0.56415152
20 BB1.22	2767	5.2	0.4
20 BB1.22	2767	5.2	0.4
20 BB1.22	2767	5.2	0.4
35 07LSC9_37.1	2767	5.2	0.4
35 07LSC9_37.1	2767	5.2	0.4
35 07LSC12_10.1	2768	6	0.2
35 07LSC12_10.1	2768	6	0.2
35 07LSC10_7.1	2769	5.3	0.4
35 07LSC10_7.1	2769	5.3	0.4
35 07LSC10_5.1	2770	5.3	0.4
35 07LSC10_5.1	2770	5.3	0.4
35 07LSC6_41.1	2770	5.8	0.2
35 07LSC6_41.1	2770	5.8	0.2
35 07LSC6_47.1	2770	6	0.3
35 07LSC6_47.1	2770	6	0.3

94 165593@31. asc	2772	7.4	0.3
51 Siam1_52	2772.81877	5.3884002	0.26529591
51 Siam1_52	2772.81877	5.3884002	0.26529591
94 165591@21. asc	2773	4.8	0.2
35 07LSC7_32.1	2774	4.9	0.3
35 07LSC7_32.1	2774	4.9	0.3
35 07LSC7_11.2	2775	5.1	0.4
35 07LSC7_11.2	2775	5.1	0.4
35 09LSC4_5.1	2775	5.8	0.2
35 09LSC4_5.1	2775	5.8	0.2
10 1774-75	2776	2.7	0.7
10 1774-75	2776	2.7	0.7
51 Siam1_98	2776.28763	4.5544506	0.28340574
51 Siam1_98	2776.28763	4.5544506	0.28340574
35 07LSC3_15	2777	4.5	0.3
35 07LSC3_15	2777	4.5	0.3
35 07LSC7_14.2	2777	5.6	0.4
35 07LSC7_14.2	2777	5.6	0.4
118 AGQ13-08@68	2777	5.56	0.28
35 07LSC7_10.1	2778	5.1	0.3
35 07LSC7_10.1	2778	5.1	0.3
35 07LSC7_32.2	2778	5.4	0.3
35 07LSC7_32.2	2778	5.4	0.3
35 07LSC3_48	2779	4.7	0.3
35 07LSC3_48	2779	4.7	0.3
107 IT/17_23	2779	5.11	0.24
106 10GD49-26	2780	0.06	0.26
35 07LSC10_16.1	2782	4.8	0.4
35 07LSC10_16.1	2782	4.8	0.4
35 09LSC4_43.1	2782	7.1	0.2
35 09LSC4_43.1	2782	7.1	0.2
51 Siam1_36	2782.79563	5.55453511	0.23406064
51 Siam1_36	2782.79563	5.55453511	0.23406064
35 07LSC8_11.1	2783	6.9	0.4
35 07LSC8_11.1	2783	6.9	0.4
35 09LSC4_21.1	2784	6.5	0.2
35 09LSC4_21.1	2784	6.5	0.2
35 07LSC9_54.1	2785	6.4	0.3
35 07LSC9_54.1	2785	6.4	0.3
35 07LSC9_50.1	2787	4.9	0.6
35 07LSC9_50.1	2787	4.9	0.6
35 07LSC10_37.2	2788	5.7	0.5
35 07LSC10_37.2	2788	5.7	0.5
94 165593@21. asc	2788	5.5	0.2
35 07LSC3_20	2789	4.2	0.2

35 07LSC3_20	2789	4.2	0.2
35 07LSC10_37.1	2789	5.9	0.6
35 07LSC10_37.1	2789	5.9	0.6
35 07LSC6_27.1	2789	7.7	0.2
35 07LSC6_27.1	2789	7.7	0.2
60 lnt-024	2789	6.2	0.2
60 lnt-024	2789	6.2	0.2
35 07LSC3_19	2790	4.5	0.3
35 07LSC3_19	2790	4.5	0.3
35 07LSC7_9.1	2790	6	0.2
35 07LSC7_9.1	2790	6	0.2
35 07LSC9_4.2	2791	5.1	0.4
35 07LSC9_4.2	2791	5.1	0.4
35 07LSC10_24.1	2791	5.1	0.5
35 07LSC10_24.1	2791	5.1	0.5
35 07LSC7_49.1	2791	5.5	0.3
35 07LSC7_49.1	2791	5.5	0.3
11 01TT02(2)-12:	2791.1	4.28844151	0.2473986
11 01TT02(2)-12:	2791.1	4.28844151	0.2473986
35 07LSC10_38.1	2794	5.1	0.5
35 07LSC10_38.1	2794	5.1	0.5
35 09LSC4_106.2	2794	5.4	0.2
35 09LSC4_106.2	2794	5.4	0.2
35 07LSC5_66.1	2794	5.8	0.3
35 07LSC5_66.1	2794	5.8	0.3
35 09LSC4_63.1	2794	6	0.2
35 09LSC4_63.1	2794	6	0.2
35 07LSC7_20.1	2796	4.9	0.2
35 07LSC7_20.1	2796	4.9	0.2
35 09LSC4_74.1	2796	5.5	0.2
35 09LSC4_74.1	2796	5.5	0.2
94 165591@20. asc	2796	5.7	0.2
35 09LSC4_60.1	2799	5.9	0.2
35 09LSC4_60.1	2799	5.9	0.2
35 07LSC7_35.1	2801	5.1	0.3
35 07LSC7_35.1	2801	5.1	0.3
35 07LSC7_15.1	2801	8	0.6
35 07LSC7_15.1	2801	8	0.6
35 07LSC7_27.1	2802	5.1	0.3
35 07LSC7_27.1	2802	5.1	0.3
119 48.1	2804	6	0.8907
35 07LSC9_7.1	2807	5.7	0.4
35 07LSC9_7.1	2807	5.7	0.4
35 07LSC8_32.1	2807	6.2	0.2
35 07LSC8_32.1	2807	6.2	0.2

52 BBF-29-39	2810.00364	6.81893381	0.56393423
52 BBF-29-39	2810.00364	6.81893381	0.56393423
30 n2539-rpt-64	2811	4.8	0.29
30 n2539-rpt-64	2811	4.8	0.29
35 07LSC9_29.1	2811	4	0.4
35 07LSC9_29.1	2811	4	0.4
35 07LSC6_34.2	2811	5.3	0.4
35 07LSC6_34.2	2811	5.3	0.4
35 07LSC10_1.1	2811	5.4	0.3
35 07LSC10_1.1	2811	5.4	0.3
35 07LSC9_29.2	2812	5	0.2
35 07LSC9_29.2	2812	5	0.2
35 07LSC8_56.1	2812	5.3	0.3
35 07LSC8_56.1	2812	5.3	0.3
46 Patterson _7	2812	5.4	0.7
46 Patterson _7	2812	5.4	0.7
35 09LSC4_115.1	2814	4.2	0.2
35 09LSC4_115.1	2814	4.2	0.2
106 10GD48-21	2814	6.46	0.19
46 Patterson _7	2817	4.9	0.7
46 Patterson _7	2817	4.9	0.7
35 09LSC4_84.1	2819	6.5	0.2
35 09LSC4_84.1	2819	6.5	0.2
46 Patterson _7	2819	5.1	0.6
46 Patterson _7	2819	5.1	0.6
35 07LSC8_47.1	2820	5.7	0.3
35 07LSC8_47.1	2820	5.7	0.3
46 Patterson _3	2820	5.4	0.5
46 Patterson _3	2820	5.4	0.5
46 Patterson _3	2820	5.9	0.5
46 Patterson _3	2820	5.9	0.5
35 07LSC9_7.2	2822	5.6	0.2
35 07LSC9_7.2	2822	5.6	0.2
46 Patterson _2	2822	5.5	0.6
46 Patterson _2	2822	5.5	0.6
46 Patterson _2	2822	5.7	0.4
46 Patterson _2	2822	5.7	0.4
46 Patterson _6	2822	5.9	0.6
46 Patterson _6	2822	5.9	0.6
46 Patterson _1	2822	6.4	0.4
46 Patterson _1	2822	6.4	0.4
46 Patterson _5	2823	5.9	0.6
46 Patterson _5	2823	5.9	0.6
46 Exmouth _1	2823	6.4	0.6
46 Exmouth _1	2823	6.4	0.6

30 n2539-rpt-b70	2824	5.17	0.32
30 n2539-rpt-b70	2824	5.17	0.32
35 07LSC3_2.1	2824	4	0.3
35 07LSC3_2.1	2824	4	0.3
46 Patterson _7'	2824	5.8	0.6
46 Patterson _7'	2824	5.8	0.6
35 07LSC6_4.1	2826	5	0.4
35 07LSC6_4.1	2826	5	0.4
35 07LSC7_14.1	2826	5	0.5
35 07LSC7_14.1	2826	5	0.5
35 07LSC8_34.2	2826	5.5	0.4
35 07LSC8_34.2	2826	5.5	0.4
46 Patterson _5'	2826	5.6	0.6
46 Patterson _5'	2826	5.6	0.6
35 07LSC3_5.1	2827	5	0.4
35 07LSC3_5.1	2827	5	0.4
46 Patterson _3'	2828	5.2	0.5
46 Patterson _3'	2828	5.2	0.5
46 Patterson _4'	2828	5.4	0.6
46 Patterson _4'	2828	5.4	0.6
35 09LSC4_7.1	2829	5.5	0.2
35 09LSC4_7.1	2829	5.5	0.2
35 07LSC6_3.1	2829	6	0.4
35 07LSC6_3.1	2829	6	0.4
85 LS0417-2	2829	5.62	0.23
35 07LSC8_63.1	2831	5.9	0.3
35 07LSC8_63.1	2831	5.9	0.3
46 Patterson _80'	2832	5.6	0.7
46 Patterson _80'	2832	5.6	0.7
46 Patterson _4'	2832	5.8	0.7
46 Patterson _4'	2832	5.8	0.7
85 LS0417-4	2832	5.65	0.27
35 09LSC4_32.1	2833	5.8	0.2
35 09LSC4_32.1	2833	5.8	0.2
46 Patterson _38'	2834	5.4	0.5
46 Patterson _38'	2834	5.4	0.5
106 10GD48-90	2834	7.17	0.2
30 n2539-rpt-b1'	2835	5.05	0.32
30 n2539-rpt-b1'	2835	5.05	0.32
35 07LSC7_12.1	2835	4.8	0.4
35 07LSC7_12.1	2835	4.8	0.4
35 07LSC7_5.2	2835	5	0.3
35 07LSC7_5.2	2835	5	0.3
35 09LSC4_52.1	2835	6.4	0.2
35 09LSC4_52.1	2835	6.4	0.2

46 Loop _27	2835	4.5	0.5
46 Loop _27	2835	4.5	0.5
35 07LSC7_2.2	2836	5.2	0.4
35 07LSC7_2.2	2836	5.2	0.4
85 LS0417-1	2838	7	0.28
51 Siam1_30	2839.78012	4.21194489	0.26651735
51 Siam1_30	2839.78012	4.21194489	0.26651735
46 Patterson _30	2841	5.7	0.4
46 Patterson _30	2841	5.7	0.4
46 Exmouth _47	2841	5.9	0.5
46 Exmouth _47	2841	5.9	0.5
46 Patterson _68	2841	6.1	0.6
46 Patterson _68	2841	6.1	0.6
35 09LSC4_37.1	2846	6.9	0.2
35 09LSC4_37.1	2846	6.9	0.2
46 Patterson _4	2846	5.3	0.6
46 Patterson _4	2846	5.3	0.6
46 Patterson _2	2847	5.5	0.4
46 Patterson _2	2847	5.5	0.4
35 07LSC12_14.1	2849	5.1	0.2
35 07LSC12_14.1	2849	5.1	0.2
46 Exmouth _59	2852	6.7	0.6
46 Exmouth _59	2852	6.7	0.6
35 09LSC4_2.1	2859	6.1	0.2
35 09LSC4_2.1	2859	6.1	0.2
11 01TT02(2)-110	2860.7	6.64556448	0.4298516
11 01TT02(2)-110	2860.7	6.64556448	0.4298516
124 CM13-8@7	2862	4.24613473	0.203296
124 CM13-8@16	2862	4.27932857	0.2051594
124 CM13-8@10	2862	4.30005068	0.2186796
124 CM13-8@15	2862	4.31091505	0.17819874
124 CM13-8@19	2862	4.36081367	0.13920806
124 CM13-8@9	2862	4.37932572	0.2432818
124 CM13-8@2	2862	4.41856547	0.2323352
124 CM13-8@18	2862	4.43808587	0.16630302
124 CM13-8@4	2862	4.47551888	0.1826958
124 CM13-8@11	2862	4.67641688	0.2722742
124 CM13-8@3	2862	4.67863164	0.2232116
124 CM13-8@8	2862	4.68366521	0.2126042
124 CM13-8@17	2862	4.69332981	0.2149064
124 CM13-8@5	2862	4.73722554	0.2153854
124 CM13-8@14	2862	4.77085469	0.19125352
124 CM13-8@13	2862	4.78313896	0.180692
124 CM13-8@6	2862	4.82966079	0.242992
124 CM13-8@12	2862	5.00894113	0.2189322

124 CM13-8@1	2862	5.08349228	0.2512836
124 CM13-5@23	2868	5.05099567	0.4149324
124 CM13-5@11	2868	5.13477784	0.3939966
124 CM13-5@17	2868	5.15422727	0.257417
124 CM13-5@5	2868	5.53523665	0.4202546
124 CM13-5@6	2868	5.55518478	0.4616714
124 CM13-5@12	2868	5.65043712	0.3243712
124 CM13-5@4	2868	5.73282292	0.281073
124 CM13-5@10	2868	5.73372059	0.3455274
124 CM13-5@14	2868	5.80353906	0.3552154
124 CM13-5@8	2868	5.82358693	0.4261426
124 CM13-5@24	2868	5.84842236	0.5912748
124 CM13-5@20	2868	5.89131085	0.498313
124 CM13-5@7	2868	5.9421786	0.3402
124 CM13-5@15	2868	5.98157616	0.4030382
124 CM13-5@21	2868	6.09727534	0.3028028
124 CM13-5@13	2868	6.11423126	0.3160272
124 CM13-5@9	2868	6.23142655	0.2707928
124 CM13-5@2	2868	6.23441877	0.3382896
124 CM13-5@25	2868	6.28079819	0.2844156
124 CM13-5@16	2868	6.30074632	0.3585516
124 CM13-5@22	2868	6.30772817	0.3757662
124 CM13-5@1	2868	6.34513092	0.3517312
124 CM13-5@3	2868	6.35001821	0.2849184
124 CM13-5@18	2868	6.4757912	0.276895
124 CM13-5@19	2868	6.64435294	0.3634472
46 Exmouth _13	2869	7.7	0.7
46 Exmouth _13	2869	7.7	0.7
35 07LSC10_35.1	2870	4.1	0.3
35 07LSC10_35.1	2870	4.1	0.3
35 09LSC4_25.1	2870	5.3	0.2
35 09LSC4_25.1	2870	5.3	0.2
98 IV46-70SC	2873	5.47	0.21
46 Exmouth _31	2875	7.9	0.6
46 Exmouth _31	2875	7.9	0.6
46 Exmouth _15	2877	6.4	0.6
46 Exmouth _15	2877	6.4	0.6
35 07LSC9_30.2	2878	5.9	0.3
35 07LSC9_30.2	2878	5.9	0.3
46 Exmouth _12	2879	5.4	0.6
46 Exmouth _12	2879	5.4	0.6
46 Exmouth _25	2892	5.9	0.6
46 Exmouth _25	2892	5.9	0.6
107 IT/5_9	2893	6.37	0.26
46 Exmouth _49	2897	5.1	0.7

46 Exmouth _49	2897	5.1	0.7
20 HV1. v6	2903	6.2	0.4
20 HV1. v6	2903	6.2	0.4
20 HV1. v6	2903	6.2	0.4
46 Exmouth _7	2903	7.1	0.7
46 Exmouth _7	2903	7.1	0.7
35 07LSC5_12.2	2905	6.4	0.3
35 07LSC5_12.2	2905	6.4	0.3
11 01TT02(2)-07:	2914.8	5.12443877	0.18737582
11 01TT02(2)-07:	2914.8	5.12443877	0.18737582
37 07SC49@18	2916	7.34	0.38
37 07SC49@18	2916	7.34	0.38
51 Siam1_101	2916.70576	4.66655074	0.26158352
51 Siam1_101	2916.70576	4.66655074	0.26158352
46 Patterson _9	2918	6	0.5
46 Patterson _9	2918	6	0.5
124 CM13-3@17	2918	5.57513292	0.4783556
124 CM13-3@10	2918	5.66988656	0.3393382
124 CM13-3@8	2918	5.68385025	0.4156292
124 CM13-3@1	2918	5.74718558	0.386631
124 CM13-3@12	2918	5.7656376	0.3513416
124 CM13-3@3	2918	5.78508703	0.328591
124 CM13-3@16	2918	5.87934197	0.3404124
124 CM13-3@6	2918	5.90577325	0.414885
124 CM13-3@5	2918	5.90876547	0.481772
124 CM13-3@11	2918	5.91824083	0.3516808
124 CM13-3@9	2918	5.9865632	0.3681402
124 CM13-3@7	2918	6.05538426	0.1945681
124 CM13-3@18	2918	6.06436092	0.509564
124 CM13-3@19	2918	6.06535833	0.3954896
124 CM13-3@2	2918	6.09773415	0.3375046
124 CM13-3@4	2918	6.10974293	0.297634
124 CM13-3@13	2918	6.40746884	0.226318
124 CM13-3@14	2918	6.4159468	0.3835778
124 CM13-3@15	2918	6.445869	0.4608082
107 WPG90/4_36	2920	7.19	0.12
37 07SC51-1@94	2925	6	0.4
37 07SC51-1@94	2925	6	0.4
18 ZMB2-anu-zrn-	2927.27586	4.29529417	0.59570542
18 ZMB2-anu-zrn-	2927.27586	4.29529417	0.59570542
59 M0-1078	2929	5.2	0.3
59 M0-1078	2929	5.2	0.3
59 M0-1224	2929	6.3	0.2
59 M0-1224	2929	6.3	0.2
46 Patterson _2:	2931	5	0.5

46 Patterson _2	2931	5	0.5
35 07LSC12_5.1	2934	6.3	0.2
35 07LSC12_5.1	2934	6.3	0.2
46 Patterson _30	2935	5.8	0.5
46 Patterson _30	2935	5.8	0.5
46 Dwyer _4	2935	6.7	0.4
46 Dwyer _4	2935	6.7	0.4
46 Patterson _1	2936	6.3	0.4
46 Patterson _1	2936	6.3	0.4
56 BT4-58	2936	5.5	
56 BT4-58	2936	5.5	
46 Patterson _3	2937	4.1	0.5
46 Patterson _3	2937	4.1	0.5
46 Dwyer _23	2939	6.1	0.3
46 Dwyer _23	2939	6.1	0.3
46 Patterson _5	2943	5.8	0.7
46 Patterson _5	2943	5.8	0.7
51 CS11-6_48	2943.62257	5.19868864	0.29104401
51 CS11-6_48	2943.62257	5.19868864	0.29104401
118 AGQ13-08@30	2946	5.6	0.44
46 Point _45	2948	4.5	0.5
46 Point _45	2948	4.5	0.5
94 177921@27.asc	2950	6.2	0.4
46 Patterson _2	2952	5	0.6
46 Patterson _2	2952	5	0.6
46 Patterson _5	2953	6.1	0.6
46 Patterson _5	2953	6.1	0.6
46 Exmouth _19	2953	6.3	0.6
46 Exmouth _19	2953	6.3	0.6
35 07LSC9_11.1	2954	4.7	0.4
35 07LSC9_11.1	2954	4.7	0.4
46 Dwyer _38	2954	6	0.4
46 Dwyer _38	2954	6	0.4
46 Patterson _6	2954	7.2	0.6
46 Patterson _6	2954	7.2	0.6
94 165591@29.asc	2957	5.0	0.2
51 Siam1_91	2958.90255	5.13096564	0.29330333
51 Siam1_91	2958.90255	5.13096564	0.29330333
46 Dwyer _24	2959	6.3	0.4
46 Dwyer _24	2959	6.3	0.4
35 09LSC4_111.1	2961	4.8	0.2
35 09LSC4_111.1	2961	4.8	0.2
46 Dwyer _56	2964	6.1	0.5
46 Dwyer _56	2964	6.1	0.5
10 2436-30	2965	5	0.4

10 2436-30	2965	5	0.4
46 Dwyer _22	2965	6	0.3
46 Dwyer _22	2965	6	0.3
119 12.1	2966	7	0.5788
35 07LSC5_12.1	2973	6.7	0.5
35 07LSC5_12.1	2973	6.7	0.5
118 WFS13-01@34	2973	6.65	0.24
119 25.1	2975	2	0.4107
35 07LSC9_11.2	2981	5.3	0.3
35 07LSC9_11.2	2981	5.3	0.3
35 07LSC10_30.1	2982	5	0.5
35 07LSC10_30.1	2982	5	0.5
35 07LSC9_24.2	2985	4.7	0.4
35 07LSC9_24.2	2985	4.7	0.4
35 07LSC10_39.1	2990	3.8	0.5
35 07LSC10_39.1	2990	3.8	0.5
35 07LSC9_24.1	2992	5.1	0.3
35 07LSC9_24.1	2992	5.1	0.3
35 07LSC9_26.1	2994	5.6	0.3
35 07LSC9_26.1	2994	5.6	0.3
24 DD85-17	3000	5	
24 DD85-17	3000	5	
35 07LSC10_12.1	3002	4.3	0.5
35 07LSC10_12.1	3002	4.3	0.5
24 DD84-10	3003	4.95	
24 DD84-10	3003	4.95	
35 07LSC10_39.2	3005	5.1	0.4
35 07LSC10_39.2	3005	5.1	0.4
108 Edmo2-106	3006	5.98	0.22
35 07LSC10_13.1	3011	4.3	0.3
35 07LSC10_13.1	3011	4.3	0.3
30 n2539-rpt-a60	3013	5.2	0.24
30 n2539-rpt-a60	3013	5.2	0.24
46 Dwyer _57	3044	6.2	0.4
46 Dwyer _57	3044	6.2	0.4
106 10GD49-67	3047	5.87	0.37
94 165591@30. asc	3049	5.6	0.2
106 10GD48-85	3057	5.03	0.2
106 10GD48-64	3060	7.09	0.34
106 10GD49-117	3075	7.19	0.34
11 01TT02(2)-098	3078.6	6.31176435	0.2660592
11 01TT02(2)-098	3078.6	6.31176435	0.2660592
108 Edmo1-9c	3079	6.41	0.24
10 2436-77	3085	3.1	0.4
10 2436-77	3085	3.1	0.4

108 Edmo1-41	3085	7.29	0.27
37 07SC49@05	3087	6.69	0.4
37 07SC49@05	3087	6.69	0.4
11 01TT02(2)-039	3088.8	6.52621337	0.2728176
11 01TT02(2)-039	3088.8	6.52621337	0.2728176
51 CS11-1-39	3089.74905	5.3617982	0.41968338
51 CS11-1-39	3089.74905	5.3617982	0.41968338
94 165591@24. asc	3092	5.7	0.2
108 Edmo1-39	3097	8.12	0.28
46 Dwyer _20	3106	5.3	0.3
46 Dwyer _20	3106	5.3	0.3
46 Dwyer _79	3106	6	0.5
46 Dwyer _79	3106	6	0.5
29 B87-25	3107	6	
29 B87-25	3107	6	
29 B87-20	3107	6.55	
29 B87-20	3107	6.55	
46 Dwyer _66	3114	7.4	0.4
46 Dwyer _66	3114	7.4	0.4
108 Edmo2-99	3117	6.49	0.19
46 Dwyer _9	3126	5.6	0.3
46 Dwyer _9	3126	5.6	0.3
108 Edmo2-79	3127	7.64	0.24
106 10GD49-120	3132	7.6	0.23
11 01TT02(2)-059	3133.9	8.28155169	0.295892
11 01TT02(2)-059	3133.9	8.28155169	0.295892
10 1746-04	3135	6.8	0.8
10 1746-04	3135	6.8	0.8
103 CF89-26-5b	3135	5.42	0.15
46 Patterson _31	3139	4.3	0.5
46 Patterson _31	3139	4.3	0.5
46 Point _56	3139	5.5	0.5
46 Point _56	3139	5.5	0.5
46 Loop _70	3143	4.5	0.5
46 Loop _70	3143	4.5	0.5
46 Loop _46	3144	5.7	0.5
46 Loop _46	3144	5.7	0.5
46 Loop _1	3145	6.8	0.6
46 Loop _1	3145	6.8	0.6
106 10GD49-78	3145	6.25	0.15
46 Dwyer _28	3146	6.4	0.4
46 Dwyer _28	3146	6.4	0.4
46 Patterson _10	3147	4.9	0.5
46 Patterson _10	3147	4.9	0.5
46 Loop _7	3147	5.2	0.5

46 Loop _7	3147	5.2	0.5
46 Dwyer _64	3147	6.4	0.6
46 Dwyer _64	3147	6.4	0.6
46 Loop _2	3148	6	0.5
46 Loop _2	3148	6	0.5
46 Loop _47	3149	4.9	0.5
46 Loop _47	3149	4.9	0.5
46 Point _1	3149	5.3	0.6
46 Point _1	3149	5.3	0.6
20 BB3. 3. 30	3150	4.1	0.6
20 BB3. 3. 30	3150	4.1	0.6
20 BB3. 3. 30	3150	4.1	0.6
46 Point _9	3150	4.7	0.6
46 Point _9	3150	4.7	0.6
46 Loop _22	3150	5.7	0.4
46 Loop _22	3150	5.7	0.4
46 Loop _11	3151	5.5	0.6
46 Loop _11	3151	5.5	0.6
46 Point _35	3152	4.7	0.4
46 Point _35	3152	4.7	0.4
46 Loop _64	3152	5.7	0.4
46 Loop _64	3152	5.7	0.4
11 01TT02(2)-03'	3152.4	5.48743955	0.2629864
11 01TT02(2)-03'	3152.4	5.48743955	0.2629864
46 Loop _56	3154	5.8	0.5
46 Loop _56	3154	5.8	0.5
46 Loop _37	3155	4.5	0.5
46 Loop _37	3155	4.5	0.5
37 07SC49@42	3156	6.34	0.23
37 07SC49@42	3156	6.34	0.23
46 Loop _14	3157	5.8	0.5
46 Loop _14	3157	5.8	0.5
46 Loop _35	3158	5	0.5
46 Loop _35	3158	5	0.5
46 Loop _59	3158	6	0.5
46 Loop _59	3158	6	0.5
46 Point _75	3161	4.7	0.5
46 Point _75	3161	4.7	0.5
46 Loop _30	3161	5.2	0.5
46 Loop _30	3161	5.2	0.5
108 Edmo2-107	3161	6.13	0.23
46 Point _36	3162	4.9	0.6
46 Point _36	3162	4.9	0.6
46 Loop _43	3162	5.8	0.5
46 Loop _51	3162	5.8	0.5

46 Loop _43	3162	5.8	0.5
46 Loop _51	3162	5.8	0.5
46 Loop _3	3163	6.8	0.4
46 Loop _3	3163	6.8	0.4
46 Loop _24	3164	5.2	0.4
46 Loop _24	3164	5.2	0.4
46 Loop _28	3164	5.4	0.6
46 Loop _28	3164	5.4	0.6
46 Dwyer _13	3164	6	0.4
46 Dwyer _13	3164	6	0.4
46 Loop _50	3166	5.4	0.5
46 Loop _50	3166	5.4	0.5
46 Loop _19	3167	5.5	0.6
46 Loop _19	3167	5.5	0.6
46 Loop _4	3167	6.9	0.4
46 Loop _4	3167	6.9	0.4
46 Loop _25	3169	5.6	0.5
46 Loop _57	3169	5.6	0.5
46 Loop _25	3169	5.6	0.5
46 Loop _57	3169	5.6	0.5
46 Loop _58	3170	5.5	0.5
46 Loop _58	3170	5.5	0.5
94 165592@7. asc	3171	4.9	0.2
46 Point _15	3172	3.9	0.5
46 Point _15	3172	3.9	0.5
46 Dwyer _55	3178	6.6	0.5
46 Dwyer _55	3178	6.6	0.5
94 165591@23. asc	3179	5.8	0.2
46 Dwyer _1	3180	5.4	0.3
46 Dwyer _1	3180	5.4	0.3
108 Edm01-37	3180	6.27	0.28
108 Edm01-42	3181	6.93	0.28
107 WPG90/4_19	3184	5.14	0.25
108 Edm01-52	3185	6.88	0.25
46 Dwyer _35	3188	5.9	0.5
46 Dwyer _35	3188	5.9	0.5
106 10GD49-93	3196	6.7	0.19
108 Edm01-22	3202	5.62	0.25
35 07LSC10_40.1	3206	8.3	0.4
35 07LSC10_40.1	3206	8.3	0.4
46 Point _41	3207	5.5	0.5
46 Point _41	3207	5.5	0.5
94 177921@37. asc	3208	5.6	0.3
35 07LSC10_40.2	3212	4.5	0.4
35 07LSC10_40.2	3212	4.5	0.4

108 BBQ1-196	3215	6.07	0.21
29 B87-22	3216	4.91	
29 B87-22	3216	4.91	
51 Siam1_75	3217.6419	4.99384314	0.30157181
51 Siam1_75	3217.6419	4.99384314	0.30157181
118 AGQ13-08@49	3218	5.83	0.27
37 07SC51-1@52	3221	5.46	0.45
37 07SC51-1@52	3221	5.46	0.45
29 B87-14	3227	5.94	
29 B87-14	3227	5.94	
46 Exmouth _50	3227	6.8	0.8
46 Exmouth _50	3227	6.8	0.8
29 B87-32	3228	5.95	
29 B87-32	3228	5.95	
30 n2539-rpt-b69	3230	5.09	0.27
30 n2539-rpt-b69	3230	5.09	0.27
108 Edmo1-25c	3233	7.68	0.27
10 2641-40	3236	5.5	0.7
10 2641-40	3236	5.5	0.7
11 01TT02(2)-030	3241	5.70772134	0.3151246
11 01TT02(2)-030	3241	5.70772134	0.3151246
46 Loop _15	3242	5.3	0.5
46 Loop _15	3242	5.3	0.5
46 Loop _40	3248	5.4	0.5
46 Loop _40	3248	5.4	0.5
46 Loop _34	3250	5.3	0.5
46 Loop _34	3250	5.3	0.5
108 Edmo1-32c	3250	6.23	0.26
108 Edmo1-53	3250	6.56	0.26
46 Loop _10	3251	6	0.5
46 Loop _10	3251	6	0.5
46 Loop _41	3251	7.9	0.5
46 Loop _41	3251	7.9	0.5
11 01TT02(2)-040	3252.5	5.9606238	0.2221146
11 01TT02(2)-040	3252.5	5.9606238	0.2221146
108 Edmo1-34	3253	6.58	0.24
46 Loop _65	3258	6.1	0.6
46 Loop _65	3258	6.1	0.6
46 Loop _38	3259	5.1	0.5
46 Loop _38	3259	5.1	0.5
30 n2539-rpt-47	3266	6.12	0.29
30 n2539-rpt-47	3266	6.12	0.29
94 179602@12. asc	3273	5.5	0.2
94 165593@3. asc	3275	2.2	0.1
108 Edmo1-7	3278	8.06	0.25

42 W74-35	3280	6.2	
42 W74-35	3280	6.2	
108 BBQ1-200	3284	6.79	0.17
108 BBQ1-174	3284	7.14	0.15
108 Edmo1-12	3285	7.01	0.26
94 177921@344444	3286	5.5	0.3
30 n2539-rpt-5	3290	6.13	0.24
30 n2539-rpt-5	3290	6.13	0.24
46 Exmouth _43	3291	6.4	0.7
46 Exmouth _43	3291	6.4	0.7
94 165592@12. asc	3301	4.2	0.2
108 Edmo1-4	3301	6.54	0.25
29 B87-18	3304	5.52	
29 B87-18	3304	5.52	
108 BBQ1-179	3304	5.39	0.14
108 Edmo2-77	3305	6.21	0.19
46 Exmouth _36	3311	6.9	0.7
46 Exmouth _36	3311	6.9	0.7
108 Edmo2-88	3315	5.85	0.22
108 Edmo1-18c	3315	5.93	0.23
108 BBQ1-188	3317	6.89	0.19
52 BBF-29-71	3321.645	6.86468959	0.57611168
52 BBF-29-71	3321.645	6.86468959	0.57611168
46 Dwyer _27	3331	6.8	0.2
46 Dwyer _27	3331	6.8	0.2
46 Exmouth _26	3332	6	0.6
46 Exmouth _26	3332	6	0.6
108 BBQ1-195	3332	6.7	0.15
108 Edmo2-90	3334	5.6	0.25
108 Edmo2-93	3336	7.93	0.21
108 Edmo2-125	3337	5.75	0.25
108 Edmo2-73	3342	6.84	0.24
119 41.1	3344	5	0.5387
108 Edmo1-59c	3345	4.5	0.26
108 BBQ1-132c	3350	5.56	0.18
108 BBQ1-136	3350	6.45	0.14
46 Dwyer _60	3351	5.9	0.5
46 Dwyer _60	3351	5.9	0.5
67 RSES51_7-2 b.	3351	5.56	0.3
108 BBQ1-156	3351	7.83	0.17
94 165592@6. asc	3352	4.7	0.2
94 165593@2. asc	3353	5.4	0.2
108 Edmo1-63	3358	6.1	0.25
108 Edmo1-30	3361	6.4	0.25
68 RSES53_01-12I	3362	4.83612054	0.27758042

68 RSES53_01-12.	3362	5.80407	1.06132286
67 RSES51_3-10 c	3363	5.96	0.32
46 Exmouth _37	3364	6.9	0.6
46 Exmouth _37	3364	6.9	0.6
94 165591@26. asc	3366	5.8	0.2
108 Edmo1-57	3369	6.52	0.24
67 RSES51_1-11	3371	5.43	0.31
108 Edmo2-110	3371	6.24	0.19
108 Edmo2-123	3372	6.45	0.22
68 RSES53_01-08.	3373	5.5071398	0.25758381
67 RSES51_5-6	3374	5.24	0.29
108 Edmo1-8	3374	6.43	0.23
46 Exmouth _44	3375	6.6	0.6
46 Exmouth _44	3375	6.6	0.6
11 01TT02(2)-13'	3375.3	6.9514103	0.35158
11 01TT02(2)-13'	3375.3	6.9514103	0.35158
46 Exmouth _23	3376	7	0.6
46 Exmouth _23	3376	7	0.6
68 RSES53_01-06.	3376	4.7433071	0.42231139
108 BBQ1-145c	3377	7.45	0.18
67 RSES51_6-4	3378	4.81	0.31
67 RSES51_5-5	3378	5.51	0.31
68 RSES53_01-03.	3378	4.90229862	0.25700459
67 RSES51_2-8	3379	5.03	0.31
67 RSES51_5-3 b.	3379	5.26	0.32
67 RSES51_3-11	3379	5.37	0.29
108 Edmo2-100	3379	5.76	0.25
108 BBQ1-177c	3379	6.19	0.15
42 W74-2	3380	6.1	
42 W74-2	3380	6.1	
42 W74-19	3380	6.9	
42 W74-19	3380	6.9	
46 Exmouth _20	3380	6.2	0.6
46 Exmouth _20	3380	6.2	0.6
67 RSES51_5-9	3380	5.65	0.3
68 RSES53_01-02.	3381	5.21380674	0.56818273
108 BBQ1-140	3382	6.57	0.14
67 RSES51_3-14	3383	5.43	0.3
67 RSES51_6-7	3383	5.48	0.32
67 RSES51_2-7	3384	5.11	0.32
67 RSES51_2-3	3384	5.66	0.32
67 RSES51_4-8	3384	6.39	0.29
67 RSES51_14-8	3385	5.31	0.57
67 RSES51_2-11	3386	5.57	0.32
68 RSES53_01-05.	3386	5.01700212	0.20266123

67 RSES51_2-9	3387	6.06	0.33
108 BBQ1-202	3387	6.3	0.17
46 Exmouth _29	3389	6.5	0.6
46 Exmouth _29	3389	6.5	0.6
67 RSES51_11-10	3389	5.66	0.54
42 W74-17	3390	6.5	
42 W74-17	3390	6.5	
42 W74-33	3390	6.7	
42 W74-33	3390	6.7	
67 RSES51_1-10	3390	5.87	0.33
11 01TT02(2)-108	3391	6.50828228	0.2919506
11 01TT02(2)-108	3391	6.50828228	0.2919506
67 RSES51_16-15	3391	4.88	0.3
68 RSES53_04-17.	3391	5.37515627	0.33200282
108 Edmo2-111	3391	6.19	0.27
67 RSES51_3-8	3392	5.05	0.31
67 RSES51_16-14	3392	5.21	0.37
67 RSES51_6-9	3393	5.55	0.29
108 Edmo1-49	3393	5.87	0.27
46 Exmouth _27	3394	5.8	0.5
46 Exmouth _27	3394	5.8	0.5
67 RSES51_13-15	3394	4.96	0.33
67 RSES51_2-6	3394	5.3	0.32
67 RSES51_12-13	3394	5.61	0.56
67 RSES51_14-9	3395	5	0.56
67 RSES51_6-8 b.	3395	5.18	0.33
67 RSES51_6-8 b.	3395	5.18	0.33
67 RSES51_10-11	3395	5.39	0.32
67 RSES51_4-1	3395	5.95	0.3
10 1774-77a	3396	5.7	0.6
10 1774-77a	3396	5.7	0.6
67 RSES51_16-3	3396	5.3	0.33
67 RSES51_16-10	3396	5.78	0.31
67 RSES51_5-7	3396	5.9	0.31
46 Exmouth _41	3397	6.3	0.6
46 Exmouth _41	3397	6.3	0.6
67 RSES51_16-1	3397	5.5	0.29
108 BBQ1-190c	3398	6.34	0.17
46 Exmouth _2	3399	6.8	0.5
46 Exmouth _2	3399	6.8	0.5
42 W74-8	3400	7.4	
42 W74-8	3400	7.4	
46 Exmouth _48	3400	5.8	0.7
46 Exmouth _48	3400	5.8	0.7
67 RSES51_15-14	3400	5.32	0.54

67 RSES51_17-3	3401	5.54	0.3
67 RSES51_1-5	3402	6.08	0.29
46 Exmouth _22	3404	6.6	0.6
46 Exmouth _22	3404	6.6	0.6
46 Exmouth _33	3404	7.2	0.5
46 Exmouth _33	3404	7.2	0.5
46 Exmouth _30	3405	6.6	0.6
46 Exmouth _30	3405	6.6	0.6
67 RSES51_12-9	3405	5.25	0.55
67 RSES51_2-12 1	3407	5.12	0.29
67 RSES51_16-2	3408	5.33	0.32
67 RSES51_11-1	3408	6.06	0.56
108 Edmo1-15	3408	7.07	0.26
42 W74-36	3410	6.2	
42 W74-36	3410	6.2	
46 Exmouth _21	3410	6.1	0.6
46 Exmouth _21	3410	6.1	0.6
46 Exmouth _53	3410	7.1	0.6
46 Exmouth _53	3410	7.1	0.6
67 RSES51_17-6 1	3410	5.7	0.3
67 RSES51_15-3	3410	5.82	0.32
108 Edmo1-55	3410	5.82	0.28
46 Exmouth _10	3412	6.2	0.6
46 Exmouth _10	3412	6.2	0.6
46 Exmouth _9	3415	6.1	0.6
46 Exmouth _9	3415	6.1	0.6
46 Dwyer _49	3418	6.2	0.5
46 Dwyer _49	3418	6.2	0.5
108 Edmo2-74	3419	6.25	0.26
108 BBQ1-144c	3429	5.95	0.18
108 BBQ1-149	3430	6.1	0.19
108 Edmo1-19	3431	6.63	0.25
108 BBQ1-128	3432	6.77	0.17
108 Edmo2-78	3435	6.17	0.19
108 Edmo2-119	3435	7.21	0.25
108 BBQ1-127	3436	5.91	0.16
11 01TT02(2)-00:	3436.1	6.02892901	0.3001442
11 01TT02(2)-00:	3436.1	6.02892901	0.3001442
42 W74-18	3440	5.7	
42 W74-18	3440	5.7	
108 BBQ1-180	3441	7.01	0.2
29 B87-4	3443	4.68	
29 B87-4	3443	4.68	
67 RSES51_6-2	3445	5.52	0.32
46 Dwyer _15	3447	6.2	0.3

46 Dwyer _15	3447	6.2	0.3
108 Edmo1-50	3449	6.14	0.26
42 W74-9	3450	5.6	
42 W74-9	3450	5.6	
108 Edmo2-124	3451	6.2	0.21
108 BBQ1-197	3451	6.8	0.16
108 Edmo1-56	3453	6.06	0.27
108 Edmo1-3	3453	6.38	0.23
108 Edmo1-51	3454	6.66	0.26
67 RSES51_10-6	3456	5.93	0.57
46 Exmouth _4	3458	5.7	0.7
46 Exmouth _4	3458	5.7	0.7
67 RSES51_7-1	3459	5.29	0.3
67 RSES51_5-4 b.	3459	5.61	0.3
29 B87-1	3460	5.52	
29 B87-1	3460	5.52	
42 W74-34	3460	6.3	
42 W74-34	3460	6.3	
67 RSES51_13-14	3460	5.93	0.33
108 BBQ1-131	3460	7	0.19
67 RSES51_9-11	3461	6.25	0.6
20 CM1. 11	3463	7.4	0.5
20 CM1. 11	3463	7.4	0.5
20 CM1. 11	3463	7.4	0.5
67 RSES51_2-4	3463	5.39	0.32
67 RSES51_10-10	3463	5.89	0.31
108 Edmo1-48	3465	6.4	0.24
108 BBQ1-184c	3468	6.87	0.2
108 BBQ1-194	3469	6.55	0.17
108 BBQ1-150	3469	7.58	0.18
108 Edmo1-2	3472	5.65	0.26
108 Edmo1-60	3479	6.63	0.26
108 Edmo1-27	3483	6.05	0.25
108 Edmo1-43c	3483	6.37	0.25
46 Dwyer _29	3484	5.5	0.5
46 Dwyer _29	3484	5.5	0.5
94 177921@5. asc	3489	6.3	0.4
108 BBQ1-175	3489	5.98	0.17
42 W74-14	3490	5	
42 W74-14	3490	5	
35 2CJS 99-J5_3.	3495	6.1	0.3
35 2CJS 99-J5_3.	3495	6.1	0.3
108 BBQ1-160	3495	6	0.16
108 Edmo1-13	3495	6.25	0.23
94 177921@20. asc	3497	6.1	0.4

108 BBQ1-172c	3505	7.66	0.18
29 B87-24	3509	4.38	
29 B87-24	3509	4.38	
42 W74-7	3510	5.5	
42 W74-7	3510	5.5	
42 W74-6	3510	6.5	
42 W74-6	3510	6.5	
108 Edmo1-10	3511	6.11	0.26
67 RSES51_3-3 b.	3512	5.88	0.32
108 Edmo2-91c	3512	5.44	0.23
108 Edmo1-33	3512	6.89	0.25
118 AGQ13-08@83	3514	6.68	0.33
67 RSES51_1-9 b.	3515	5.86	0.31
108 Edmo1-24	3518	5.78	0.24
68 RSES53_04-16.	3518	5.82352462	0.06013269
42 W74-4	3520	6.8	
42 W74-4	3520	6.8	
108 BBQ1-201	3520	6.55	0.2
108 BBQ1-192	3521	6.22	0.16
10 2436-24	3523	5.7	0.6
10 2436-24	3523	5.7	0.6
108 Edmo1-14	3523	6.47	0.23
108 Edmo1-36	3527	6.62	0.23
108 BBQ1-139	3528	6.8	0.18
67 RSES51_3-4	3529	4.57	0.3
67 RSES51_2-10	3534	5.89	0.31
67 RSES51_2-10	3534	5.89	0.31
46 Dwyer _6	3536	6.5	0.5
46 Dwyer _6	3536	6.5	0.5
29 B87-5	3538	5.24	
29 B87-5	3538	5.24	
67 RSES51_3-5	3538	5.8	0.3
67 RSES51_14-15	3541	4.83	0.55
108 Edmo2-112	3542	6.39	0.28
67 RSES51_17-12	3543	5.92	0.32
108 BBQ1-137	3543	5.46	0.19
108 Edmo1-46	3545	5.75	0.28
67 RSES51_2-5	3546	5.76	0.32
67 RSES51_3-1	3547	5.76	0.29
67 RSES51_5-2	3547	5.88	0.33
108 BBQ1-185c	3549	6.32	0.17
108 BBQ1-164	3552	5.82	0.19
46 Dwyer _18	3560	6.3	0.3
46 Dwyer _18	3560	6.3	0.3
108 Edmo1-16	3561	6.21	0.26

67 RSES51_6-10	3563	5.71	0.3
67 RSES51_6-10	3563	5.71	0.3
108 Edmo2-108	3563	6.87	0.23
68 RSES53_03-09.	3566	5.53874726	0.20572763
42 W74-5	3570	6.7	
42 W74-5	3570	6.7	
108 BBQ1-162	3570	6.14	0.19
108 Edmo1-58	3573	6.15	0.24
46 Dwyer _74	3579	6.7	0.5
46 Dwyer _74	3579	6.7	0.5
67 RSES51_6-11	3580	5.84	0.29
108 BBQ1-159	3580	6.29	0.14
108 BBQ1-135	3582	6.75	0.16
108 BBQ1-168	3584	6.2	0.14
35 07LSC9_25.1	3585	5.8	0.4
35 07LSC9_25.1	3585	5.8	0.4
108 BBQ1-183	3585	7.81	0.19
108 Edmo2-122	3591	6.83	0.21
103 CF89-26-3a	3594	6.29	0.28
1 RSES58-13.6	3599	-0.4	0.4
1 RSES58-13.6	3599	-0.4	0.4
1 RSES58-13.6	3599	5.1	0.3
1 RSES58-13.6	3599	5.1	0.3
1 RSES72-15.7	3599	5.2	1.1
1 RSES72-15.7	3599	5.2	1.1
1 RSES55-9.15	3599	6	0.1
1 RSES55-9.15	3599	6	0.1
42 W74-20	3600	6.2	
42 W74-20	3600	6.2	
1 RSES72-1.3	3601	7.2	1.1
1 RSES72-1.3	3601	7.2	1.1
1 RSES58-15.12	3605	5	0.1
1 RSES58-15.12	3605	5	0.1
103 CF89-26-15b	3609	6.44	0.21
108 Edmo2-83c	3609	6.36	0.27
108 BBQ1-133	3613	6.56	0.17
108 Edmo1-71	3616	7.51	0.28
108 Edmo1-44	3617	6.51	0.25
1 RSES59-05.09	3618	5.4	0.3
1 RSES59-05.09	3618	5.4	0.3
1 RSES59-10.16	3621	5.5	0.2
1 RSES59-10.16	3621	5.5	0.2
108 BBQ1-155c	3623	4.33	0.18
108 BBQ1-173c	3624	6.87	0.17
108 Edmo2-102c	3624	6.91	0.22

1 RSES59-15.01	3629	6	0.1
1 RSES59-14.07	3629	6	0.1
1 RSES59-15.01	3629	6	0.1
1 RSES59-14.07	3629	6	0.1
103 CF89-26-52a	3630	6.6	0.17
67 RSES51_14-1	3631	4.89	0.36
67 RSES51_3-7	3633	5.86	0.34
1 RSES72-9.3	3634	5.4	1.1
1 RSES72-9.3	3634	5.4	1.1
1 RSES58-16.17	3635	-0.9	0.4
1 RSES58-16.17	3635	-0.9	0.4
1 RSES72-17.8	3635	1.1	1.2
1 RSES72-17.8	3635	1.1	1.2
1 RSES72-17.8	3635	5.5	1.1
1 RSES72-17.8	3635	5.5	1.1
1 RSES58-16.17	3635	5.8	0.1
1 RSES58-16.17	3635	5.8	0.1
1 RSES59-15.16	3635	6	0.3
1 RSES59-15.16	3635	6	0.3
1 RSES72-3.2	3637	5.7	1.1
1 RSES72-3.2	3637	5.7	1.1
1 RSES59-16.06	3639	6	0.2
1 RSES59-16.06	3639	6	0.2
108 Edmo2-116	3639	6.43	0.25
1 RSES54-11.12	3644	4.8	0.3
1 RSES54-11.12	3644	4.8	0.3
1 RSES54-6.17	3647	5.6	0.4
1 RSES54-6.17	3647	5.6	0.4
35 07LSC9_9.2	3647	6	0.6
35 07LSC9_9.2	3647	6	0.6
103 CF89-26-35a	3647	5.94	0.26
103 CF89-26-41b	3647	6.09	0.26
108 Edmo1-70	3651	6.48	0.25
108 BBQ1-152c	3653	3.9	0.19
1 RSES59-16.05	3655	6.5	0.1
1 RSES59-16.05	3655	6.5	0.1
108 Edmo2-87	3655	5.73	0.22
1 RSES59-09.11	3656	5.6	0.1
1 RSES59-09.11	3656	5.6	0.1
108 BBQ1-138	3657	5.95	0.21
103 CF89-26-13b	3660	7.65	
108 BBQ1-199	3661	7.18	0.17
35 07LSC9_23.2	3670	3.9	0.3
35 07LSC9_23.2	3670	3.9	0.3
108 BBQ1-181c	3670	6.43	0.15

35 07LSC9_9.1	3672	6	0.4
35 07LSC9_9.1	3672	6	0.4
103 CF89-26-34a	3673	6.03	0.12
1 RSES54-7.5	3674	5.2	0.3
1 RSES54-7.5	3674	5.2	0.3
108 BBQ1-163	3674	5.84	0.16
103 CF89-26-20b	3681	6.53	0.18
103 CF89-26-5a	3682	5.78	0.12
1 RSES59-03.15	3685	5.5	0.2
1 RSES59-03.15	3685	5.5	0.2
1 RSES53-3.1	3686	5.8	0.3
1 RSES53-3.1	3686	5.8	0.3
1 RSES53-3.1	3686	5.8	1
1 RSES53-3.1	3686	5.8	1
67 RSES51_4-2	3686	5.32	0.34
108 BBQ1-147	3692	6.08	0.16
108 BBQ1-129	3698	6.08	0.16
103 CF89-26-43a	3699	6.94	0.19
1 RSES59-04.07	3702	5.3	0.3
1 RSES59-04.07	3702	5.3	0.3
108 Edmo1-69	3703	7.47	0.24
67 RSES51_3-12	3704	4.55	0.29
108 Edmo1-64	3704	7.01	0.26
103 CF89-26-31a	3712	5.94	0.2
108 BBQ1-189	3718	5.56	0.17
56 BT4-5	3723	6.3	
56 BT4-5	3723	6.3	
108 Edmo2-121	3724	5.67	0.25
103 CF89-26-29a	3734	6.4	0.2
103 CF89-26-46a	3734	7.09	0.19
1 RSES59-08.17	3741	6	0.1
1 RSES59-08.17	3741	6	0.1
56 BT4-4	3746	5.9	
56 BT4-4	3746	5.9	
94 177097@23. asc	3747	6.4	0.2
1 RSES55-5.6	3749	3.6	0.1
1 RSES55-5.6	3749	3.6	0.1
56 BT4-20	3751	5.8	
56 BT4-20	3751	5.8	
103 CF89-26-7b	3752	7.29	0.2
1 RSES59-04.17	3753	6	0.2
1 RSES59-04.17	3753	6	0.2
46 Exmouth _57	3753	5.5	0.7
46 Exmouth _57	3753	5.5	0.7
1 RSES55-6.8	3754	4.3	0.3

1 RSES55-6.8	3754	4.3	0.3
1 RSES54-17.1	3754	6	0.2
1 RSES54-17.1	3754	6	0.2
67 RSES51_4-7	3754	5.16	0.31
1 RSES53-1.11	3755	5.7	0.3
1 RSES53-1.11	3755	5.7	0.3
103 CF89-26-3b	3761	5.99	0.18
67 RSES51_17-11	3764	4.2	0.31
1 RSES58-15.1	3766	5.3	0.2
1 RSES58-15.1	3766	5.3	0.2
1 RSES53-4.6	3767	5.4	0.2
1 RSES53-4.6	3767	5.4	0.2
1 RSES53-4.6	3767	6.2	1.4
1 RSES53-4.6	3767	6.2	1.4
1 RSES59-06.18	3768	6	0.1
1 RSES59-06.18	3768	6	0.1
103 CF89-26-27a	3770	6	0.18
103 CF89-26-7a	3770	7.46	0.21
103 CF89-26-32b	3772	6.89	0.3
103 CF89-26-19a	3773	6.01	
46 Exmouth _60	3775	5.7	0.6
46 Exmouth _60	3775	5.7	0.6
67 RSES51_10-12	3783	5.49	0.35
1 RSES59-13.17	3787	6	0.2
1 RSES59-13.17	3787	6	0.2
103 CF89-26-18a	3793	6.86	0.3
103 CF89-26-38a	3796	6.53	0.2
103 CF89-26-14a	3797	6.93	0.3
103 CF89-26-44a	3799	6.16	0.25
103 CF89-26-33a	3803	5.39	0.2
103 CF89-26-27b	3805	6.18	
103 CF89-26-24a	3807	6.96	0.18
101 ~~~9-18@2	3811	5	2
56 BT4-2	3812	5.7	
56 BT4-2	3812	5.7	
103 CF89-26-36a	3812	6.81	0.18
1 RSES58-11.3	3815	6	0.1
1 RSES58-11.3	3815	6	0.1
1 RSES55-5.13	3816	5	0.3
1 RSES55-5.13	3816	5	0.3
103 CF89-26-50a	3824	7.09	0.19
103 CF89-26-9b	3825	7.15	0.3
56 BT4-13	3826	7.3	
56 BT4-13	3826	7.3	
103 CF89-26-49b	3826	6.86	0.23

103 CF89-26-14d	3827	7.01	0.3
67 RSES51_4-5	3829	6.04	0.3
108 BBQ1-130	3833	6.79	0.19
103 CF89-26-10a	3834	7.12	0.3
103 CF89-26-28a	3837	6	0.3
1 RSES59-04.08	3838	-5.7	0.9
1 RSES59-04.08	3838	-5.7	0.9
1 RSES53-3.4	3839	3.4	0.3
1 RSES53-3.4	3839	3.4	0.3
1 RSES53-3.4	3839	6.8	1.5
1 RSES53-3.4	3839	6.8	1.5
103 CF89-26-45a	3840	6.47	0.16
103 CF89-26-48b	3840	6.8	0.21
1 RSES56-01.18	3843	6.5	0.6
1 RSES56-01.18	3843	6.5	0.6
108 Edmo1-45	3844	4.01	0.24
1 RSES59-14.14	3846	5.1	0.1
1 RSES59-14.14	3846	5.1	0.1
56 BT3-4	3847	6.2	
56 BT3-4	3847	6.2	
67 RSES51_5-1 b.	3850	5.29	0.34
67 RSES51_5-1 b.	3850	5.29	0.34
101 ~~~10-4@1	3852	5.9	2
103 CF89-26-33b	3859	5.56	
1 RSES59-16.01	3860	5.9	0.2
1 RSES59-16.01	3860	5.9	0.2
101 ~~~11-9@2	3860	5.9	1.8
103 CF89-26-30a	3860	6.31	0.25
1 RSES55-3.13	3862	5	0.1
1 RSES55-3.13	3862	5	0.1
56 BT4-6	3862	6.3	
56 BT4-6	3862	6.3	
101 ~~~2-10@2	3863	6.8	0.8
67 RSES51_1-6	3864	4.86	0.34
1 RSES73-3.2	3866	5.7	0.9
1 RSES73-3.2	3866	5.7	0.9
1 RSES54-19.5	3869	6	0.2
1 RSES54-19.5	3869	6	0.2
1 RSES56-10.17	3870	6.2	0.4
1 RSES56-10.17	3870	6.2	0.4
1 RSES56-10.17	3870	6.3	1.2
1 RSES56-10.17	3870	6.3	1.2
1 RSES58-5.11	3871	4.6	0.3
1 RSES58-5.11	3871	4.6	0.3
1 RSES53-3.5	3878	5	0.3

1 RSES53-3.5	3878	5	0.3
1 RSES73-5.8	3884	4.4	0.9
1 RSES73-5.8	3884	4.4	0.9
1 RSES56-03.17	3889	5.9	0.2
1 RSES56-03.17	3889	5.9	0.2
1 RSES56-03.17	3889	6.2	1.1
1 RSES56-03.17	3889	6.2	1.1
1 RSES56-02.09	3890	5.7	0.1
1 RSES56-02.09	3890	5.7	0.1
1 RSES58-13.14	3892	6.3	0.2
1 RSES58-13.14	3892	6.3	0.2
1 RSES58-15.13	3893	2	0.3
1 RSES58-15.13	3893	2	0.3
1 RSES58-15.13	3893	6.2	0.1
1 RSES58-15.13	3893	6.2	0.1
1 RSES73-4.7	3894	5.3	0.9
1 RSES73-4.7	3894	5.3	0.9
1 RSES54-15.11	3897	5.1	0.2
1 RSES54-15.11	3897	5.1	0.2
1 RSES72-12.9	3897	5.2	1.1
1 RSES72-12.9	3897	5.2	1.1
1 RSES58-3.13	3902	5.9	0.1
1 RSES58-3.13	3902	5.9	0.1
101 ~~~12-7@1	3903	6.5	1.6
108 BBQ1-143	3903	5.56	0.18
1 RSES73-17.10	3905	5.8	0.9
1 RSES73-17.10	3905	5.8	0.9
1 RSES73-17.10	3905	7.4	0.9
1 RSES73-17.10	3905	7.4	0.9
1 RSES54-18.11	3906	6	0.2
1 RSES54-18.11	3906	6	0.2
1 RSES53-13.19	3908	5.9	0.4
1 RSES53-13.19	3908	5.9	0.4
1 RSES58-17.7	3910	5.9	0.2
1 RSES58-17.7	3910	5.9	0.2
1 RSES53-16.11	3911	6.5	0.2
1 RSES53-16.11	3911	6.5	0.2
1 RSES55-6.12	3913	5.2	0.4
1 RSES55-6.12	3913	5.2	0.4
46 Dwyer _65	3918	6.5	0.5
46 Dwyer _65	3918	6.5	0.5
101 ~~~6-10@1	3919	5.8	2
1 RSES54-17.17	3924	5.2	0.2
1 RSES54-17.17	3924	5.2	0.2
1 RSES56-07.06	3924	5.5	0.1

1 RSES56-07. 06	3924	5. 5	0. 1
1 RSES72-13. 1	3924	6. 9	1. 2
1 RSES72-13. 1	3924	6. 9	1. 2
101 ~~~9-20@1	3925	3. 9	2
1 RSES58-12. 3	3926	6. 2	0. 2
1 RSES58-12. 3	3926	6. 2	0. 2
1 RSES59-16. 03	3929	5. 7	0. 1
1 RSES59-16. 03	3929	5. 7	0. 1
101 ~~~5-2@1	3929	5. 3	1. 6
1 RSES58-16. 2	3930	4	2. 9
1 RSES58-16. 2	3930	4	2. 9
1 RSES58-16. 2	3930	5. 5	0. 3
1 RSES58-16. 2	3930	5. 5	0. 3
1 RSES55-13. 13	3935	2. 4	0. 2
1 RSES55-13. 13	3935	2. 4	0. 2
1 RSES73-13. 7b	3938	5. 5	0. 9
1 RSES73-13. 7b	3938	5. 5	0. 9
1 RSES73-14. 3b	3941	5. 2	0. 9
1 RSES73-14. 3b	3941	5. 2	0. 9
1 RSES58-10. 15	3941	6	0. 1
1 RSES58-10. 15	3941	6	0. 1
1 RSES59-6. 4	3945	6. 7	0. 1
1 RSES59-6. 4	3945	6. 7	0. 1
1 RSES54-16. 20	3946	4. 8	0. 3
1 RSES54-16. 20	3946	4. 8	0. 3
101 ~~~3-11@2	3947	6. 1	0. 4
67 RSES51_17-1	3950	5. 85	0. 3
1 RSES59-9. 14	3951	5. 7	0. 1
1 RSES59-9. 14	3951	5. 7	0. 1
1 RSES58-19. 19	3956	5. 9	0. 1
1 RSES58-19. 19	3956	5. 9	0. 1
1 RSES72-4. 2	3957	3. 4	1. 1
1 RSES72-4. 2	3957	3. 4	1. 1
6 W74/3-36	3964	5. 5	0. 4
6 W74/3-36	3964	5. 5	0. 4
56 BT4-40	3965	6. 4	
56 BT4-40	3965	6. 4	
30 n2539-rpt-b19	3969	4. 79	0. 29
30 n2539-rpt-b19	3969	4. 79	0. 29
30 n2539-b-19	3969	7. 76	0. 25
30 n2539-b-19	3969	7. 76	0. 25
1 RSES58-17. 2	3970	6. 1	0. 1
1 RSES58-17. 2	3970	6. 1	0. 1
56 BT4-36	3973	6. 5	
56 BT4-36	3973	6. 5	

1 RSES54-17. 18	3974	3.3	0.4
1 RSES54-17. 18	3974	3.3	0.4
1 RSES58-4. 19	3974	5.8	0.1
1 RSES58-4. 19	3974	5.8	0.1
1 RSES54-17. 18	3974	6.8	0.3
1 RSES54-17. 18	3974	6.8	0.3
67 RSES51_17-2	3976	6.13	0.33
1 RSES58-1. 19	3979	6.8	0.1
1 RSES58-1. 19	3979	6.8	0.1
101 ~~~11-7@1	3979	7.3	1.8
101 ~~~7-5@1	3981	5.1	1.8
1 RSES58-18. 17	3982	6.4	0.1
1 RSES58-18. 17	3982	6.4	0.1
1 RSES54-9. 4	3984	5.9	0.1
1 RSES54-9. 4	3984	5.9	0.1
6 W74/3-134	3984	6.3	0.6
6 W74/3-134	3984	6.3	0.6
1 RSES58-4. 7	3985	6.3	0.1
1 RSES58-4. 7	3985	6.3	0.1
101 ~~~8-13@1	3993	5.7	1.2
101 ~~~7-3@1	3994	5.6	1.6
101 ~~~8-1@1	3995	5.1	1.6
101 ~~~1-4@1	3995	5.6	1.6
1 RSES58-17. 1	3996	5.6	0.1
1 RSES58-17. 1	3996	5.6	0.1
1 RSES58-8. 2	3996	5.7	0.2
1 RSES58-8. 2	3996	5.7	0.2
6 W74/3-133	3996	5.7	0.6
6 W74/3-133	3996	5.7	0.6
1 RSES54-3. 9	3997	5.8	0.1
1 RSES54-3. 9	3997	5.8	0.1
101 ~~~12-14@1	4001	6.6	1.6
16 ANU125_12_1	4002	6.23484185	0.43626352
16 ANU125_12_1	4002	6.23484185	0.43626352
73 ANU125_12_1	4002	6.23	0.44
16 ANU111_4-11s	4002.89682	5.92731311	0.43499388
16 ANU111_4-11s	4002.89682	5.92731311	0.43499388
73 ANU111_4-11s	4002.89682	5.93	0.43
68 RSES59_4_11. a	4003.41136	5.98506451	0.22354153
73 ANU111_3-11s	4003.69446	6.4	0.43
16 ANU111_3-11s	4003.69446	6.39676019	0.43499388
16 ANU111_3-11s	4003.69446	6.39676019	0.43499388
101 ~~~7-15@1	4004	6.2	1.6
68 RSES59_5_2. a	4004.01121	5.49735382	0.22608965
68 RSES66_13_14.	4004.35101	5.91540466	0.26055672

68 rses_55_new_:	4005.7208	5.84611673	0.40343032
6 W74/3-13	4008	6.3	0.4
6 W74/3-13	4008	6.3	0.4
68 RSES67_10_11	4008.13231	6.96691002	0.68958299
68 RSES67_10_11.	4008.13231	7.09271301	0.68896607
42 W74-1	4010	6.8	
42 W74-1	4010	6.8	
101 ~~~2-15@1	4012	5.9	1.2
101 ~~~11-10@1	4012	7.7	1.8
6 W74/3-17	4013	6.4	0.6
6 W74/3-17	4013	6.4	0.6
16 ANU125_10_12	4013	5.53766611	0.43626352
16 ANU125_10_12	4013	5.53766611	0.43626352
73 ANU125_10_12	4013	5.54	0.44
68 RSES61_13_11.	4014.78253	5.10000876	0.24214889
68 rses_55_new_:	4015.68003	5.7760484	0.40474806
68 RSES59_11_7.:	4015.90275	5.72694076	0.22313277
68 rses_55_new_(:	4016.53112	4.2510426	0.40367276
68 rses_55_6_15_	4016.53112	4.81698509	0.26063123
6 W74/3-15	4017	7.3	0.3
6 W74/3-15	4017	7.3	0.3
101 ~~~4-9@2	4017	5.8	0.8
16 ANU111_1-13s:	4017.4658	6.05652331	0.43499388
16 ANU111_1-13s:	4017.4658	6.05652331	0.43499388
73 ANU111_1-13s:	4017.4658	6.06	0.43
68 RSES64_10_7.:	4018.31917	6.47848692	0.41420425
68 RSES65_9_1.a:	4018.35042	3.11714677	0.42666696
101 ~~~12-4@1	4020	6.9	1.8
68 RSES60_6_18.:	4020.16365	5.32426969	0.46103705
101 ~~~1-7@1	4021	5.5	1.2
68 RSES65_3_6.a:	4022.35502	5.44096629	0.41848769
68 RSES61_15_11.	4022.86969	6.77471672	0.23809721
68 RSES60_10_19.	4023.39474	5.20033743	0.46072184
16 ANU125_10_4	4024	5.11316799	0.43626352
16 ANU125_10_4	4024	5.11316799	0.43626352
16 ANU125_13_13	4024	6.22385484	0.43626352
16 ANU125_13_13	4024	6.22385484	0.43626352
73 ANU125_10_4	4024	5.11	0.44
73 ANU125_13_13	4024	6.22	0.44
68 RSES61_10_8.:	4028.27609	5.49819029	0.24208834
68 RSES66_12_18.	4028.61684	6.26219604	0.26448168
6 W74/3-152	4029	6.1	0.6
6 W74/3-152	4029	6.1	0.6
68 RSES62_6_12.:	4031.3447	7.13984457	0.80289475
68 RSES61_8_2.a:	4032.86641	6.24345123	0.23549308

101 ~~~1-14@1	4034	5.1	1.8
6 W74/3-74	4035	5.6	0.4
6 W74/3-74	4035	5.6	0.4
68 rses_55_new_	4035.54114	4.99420113	0.40374215
101 ~~~1-15@1	4036	6.7	1.8
73 ANU111_6-14s	4037.07196	6.27	0.43
16 ANU111_6-14s	4037.07196	6.26555447	0.43499388
16 ANU111_6-14s	4037.07196	6.26555447	0.43499388
6 01JH60-47	4038	6	0.3
6 01JH60-47	4038	6	0.3
68 rses_57_1_3. &	4039.4973	6.24388004	0.25494065
68 rses_55_new_	4039.98713	6.48157717	0.40958038
68 rses_55_11_1!	4039.98713	7.12798716	0.26821196
6 01JH60-64	4040	6.5	0.3
6 01JH60-64	4040	6.5	0.3
101 ~~~10-11@1	4040	4.6	1.8
68 RSES60_8_8. a:	4040.7855	5.14194566	0.45878911
68 RSES67_19_13.	4040.90959	6.62198627	0.6906775
6 01JH54-D2	4042	6.2	0.3
6 01JH54-D2	4042	6.2	0.3
101 ~~~1-1@1	4042	5.5	0.4
16 ANU125_12_7	4044	5.42430014	0.43626352
16 ANU125_12_7	4044	5.42430014	0.43626352
73 ANU125_12_7	4044	5.42	0.44
6 W74/3-58	4045	6.2	0.1
6 W74/3-58	4045	6.2	0.1
68 RSES59_2_17. &	4047.7248	5.53242694	0.2241333
101 ~~~5-3@1	4054	5.3	1.6
68 RSES62_2_7. a:	4057.04568	5.38195939	0.80321765
101 ~~~5-1@1	4058	4.4	1.8
67 RSES51_4-9	4061	5.69	0.3
6 01JH54-58	4063	6.8	0.1
6 01JH54-58	4063	6.8	0.1
101 ~~~13-6@1	4063	5.8	1.6
101 ~~~12-12@1	4064	5.5	1.8
68 RSES62_15_17.	4064.25473	6.77345311	0.80335686
6 01JH36-115	4065	5.3	0.3
6 01JH36-115	4065	5.3	0.3
73 ANU125_4_14	4065	6.53	0.44
101 ~~~6-14@1	4065	6.8	1.6
16 ANU125_4_14	4065	6.53036998	0.43626352
16 ANU125_4_14	4065	6.53036998	0.43626352
73 ANU125_5_13	4066	6.03	0.44
101 ~~~11-5@1	4068	2.9	1.2
6 W74/3-170	4069	5.8	0.6

6 W74/3-170	4069	5.8	0.6
101 ~~~6-9@1	4070	5.7	1.2
101 ~~~10-17@1	4074	4.8	2
68 RSES62_20_18.	4075.01414	7.17655489	0.80095003
101 ~~~4-8@2	4076	5.7	0.8
6 01JH54-40	4078	6.5	0.4
6 01JH54-40	4078	6.5	0.4
68 RSES61_16_1.	4081.5132	5.1221468	0.23543751
101 ~~~4-8@1	4083	6.1	0.8
101 ~~~14-9@1	4084	6.2	1.6
68 RSES61_12_10.	4088.4786	5.8119118	0.23524767
68 rses100_15-2.	4089.21734	6.79143289	0.28001005
68 RSES64_5_13.	4090.61301	4.99513247	0.41587062
6 W74/3-32	4091	6.7	0.4
6 W74/3-32	4091	6.7	0.4
101 ~~~7-18@1	4091	4.9	2
101 ~~~2-3@3	4091	5	1.4
101 ~~~6-15@1	4092	5.9	1.2
6 W74/3-174	4094	5.5	0.2
6 W74/3-174	4094	5.5	0.2
6 01JH60-68	4097	6.7	0.4
6 01JH60-68	4097	6.7	0.4
68 RSES59_8_14.	4097.01629	5.47358861	0.22541396
6 W74/3-30	4102	7.3	0.4
6 W74/3-30	4102	7.3	0.4
68 RSES61_18_8.	4102.00545	5.69174298	0.23707094
16 ANU125_10_3	4103	6.3157462	0.43626352
16 ANU125_10_3	4103	6.3157462	0.43626352
73 ANU125_10_3	4103	6.32	0.44
6 01JH54-81	4104	6.9	0.3
6 01JH54-81	4104	6.9	0.3
68 RSES65_18_9.	4104.67779	5.5917237	0.42051941
16 ANU111_10-7s	4105.28722	6.48556102	0.43499388
16 ANU111_10-7s	4105.28722	6.48556102	0.43499388
16 ANU111_10-7s	4105.28722	6.81731693	0.43499388
16 ANU111_10-7s	4105.28722	6.81731693	0.43499388
73 ANU111_10-7s	4105.28722	6.82	0.43
68 RSES59_8_4.	4107.90861	5.87619138	0.22454628
6 01JH54-20	4110	6.6	0.3
6 01JH54-20	4110	6.6	0.3
101 ~~~6-10@1	4110	5.5	0.8
68 RSES66_6_12.	4110.15668	6.40931617	0.26618764
101 ~~~8-4@1	4111	4.6	1.8
101 ~~~15-8@1	4111	5.5	1.8
68 RSES61_5_9.	4111.59896	5.91936342	0.23808791

6 W74/3-41	4112	7.3	0.4
6 W74/3-41	4112	7.3	0.4
101 ~~~2-7@2	4113	5.5	0.4
16 ANU125_5_9	4114	6.00493618	0.43626352
16 ANU125_5_9	4114	6.00493618	0.43626352
73 ANU125_5_9	4114	6	0.44
16 ANU125_15_15	4115	6.46656788	0.43626352
16 ANU125_15_15	4115	6.46656788	0.43626352
73 ANU125_9_10	4115	5.54	0.44
73 ANU125_15_15	4115	6.47	0.44
6 01JH60-51	4116	6.5	0.1
6 01JH60-51	4116	6.5	0.1
101 ~~~11-15@2	4117	6	1.6
16 ANU111_9-4s3	4117.11949	6.64869513	0.43499388
16 ANU111_9-4s3	4117.11949	6.64869513	0.43499388
16 ANU111_9-4s2	4117.11949	7.05029438	0.43499388
16 ANU111_9-4s2	4117.11949	7.05029438	0.43499388
16 ANU111_9-4s1	4117.11949	7.22939269	0.43499388
16 ANU111_9-4s1	4117.11949	7.22939269	0.43499388
73 ANU111_9-4s1	4117.11949	7.23	0.43
16 ANU125_1_13	4118	6.17874889	0.43626352
16 ANU125_1_13	4118	6.17874889	0.43626352
73 ANU125_1_13	4118	6.18	0.44
101 ~~~4-10@1	4118	5	1.8
68 RSES_58_4_16.	4119.23443	6.39187593	1.11213645
101 ~~~4-14@1	4121	4.4	1.8
101 ~~~14-3@1	4121	5.9	1.8
6 01JH54-10	4123	6.3	0.1
6 01JH54-10	4123	6.3	0.1
68 rses_57_19_1:	4123.51425	6.17046796	0.25676579
101 ~~~8-6@1	4126	5.8	0.8
68 RSES61_12_13.	4126.64719	6.50534014	0.23750679
101 ~~~14-7@1	4127	6.2	1.8
68 rses_55_new_:	4128.19502	5.40922632	0.40299226
68 RSES60_7_19.:	4128.29124	5.68733511	0.46026297
68 RSES66_3_16.:	4128.57815	5.8268617	0.26281162
6 W74/3-131	4130	4.6	0.6
6 W74/3-131	4130	4.6	0.6
68 rses_55_new_:	4132.61388	5.5900339	0.4021158
68 RSES_58_3_4.:	4132.683	5.55349303	1.11186499
6 W74/3-62	4133	6.9	0.6
6 W74/3-62	4133	6.9	0.6
16 ANU125_8_1	4133	5.61185976	0.43626352
16 ANU125_8_1	4133	5.61185976	0.43626352
73 ANU125_8_1	4133	5.61	0.44

101 ~~~8-6@2	4133	5.5	0.8
101 ~~~2-7@1	4137	5.1	0.4
16 ANU111_2-6s2	4140	5.30021961	0.43499388
16 ANU111_2-6s2	4140	5.30021961	0.43499388
16 ANU111_2-6s4	4140	5.35359989	0.43499388
16 ANU111_2-6s4	4140	5.35359989	0.43499388
16 ANU111_2-6s1	4140	5.41246785	0.43499388
16 ANU111_2-6s1	4140	5.41246785	0.43499388
16 ANU111_2-6s3	4140	5.51074742	0.43499388
16 ANU111_2-6s3	4140	5.51074742	0.43499388
16 ANU111_2-6s5	4140	5.66390391	0.43499388
16 ANU111_2-6s5	4140	5.66390391	0.43499388
16 ANU111_2-6s6	4140	5.67936922	0.43499388
16 ANU111_2-6s6	4140	5.67936922	0.43499388
16 ANU111_2-2s1	4140	6.26256119	0.43499388
16 ANU111_2-2s1	4140	6.26256119	0.43499388
73 ANU111_2-6s1	4140	5.41	0.43
101 ~~~13-11@1	4142	5.7	1.8
16 ANU125_11_10	4143	5.72893997	0.43626352
16 ANU125_11_10	4143	5.72893997	0.43626352
73 ANU125_11_10	4143	5.73	0.44
68 RSES63_14_5. :	4145.34788	6.11375323	0.17650149
16 ANU125_14_10	4149	5.81034373	0.43626352
16 ANU125_14_10	4149	5.81034373	0.43626352
73 ANU125_14_10	4149	5.81	0.44
42 W74-10	4150	5.6	
42 W74-10	4150	5.6	
101 ~~~6-10@2	4152	6.1	1.2
6 W74/3-143	4159	6.7	0.4
6 W74/3-143	4159	6.7	0.4
68 RSES60_16_1. :	4162.48511	4.88990458	0.46056863
6 W74/3-154	4164	6.3	0.4
6 W74/3-154	4164	6.3	0.4
6 W74/2-52	4165	5.3	0.4
6 W74/2-52	4165	5.3	0.4
6 01JH54-34	4167	6.2	0.3
6 01JH54-34	4167	6.2	0.3
6 01JH54-78	4167	7.3	0.2
6 01JH54-78	4167	7.3	0.2
68 RSES66_5_18. :	4172.90831	6.11998716	0.27026645
6 01JH54-68	4176	6.2	0.4
6 01JH54-68	4176	6.2	0.4
6 01JH60-39	4177	6.3	0.3
6 01JH60-39	4177	6.3	0.3
6 01JH54-17	4178	5.3	0.1

6 01JH54-17	4178	5.3	0.1
73 ANU111_13-1s	4178.24432	6.74	0.43
16 ANU111_13-1s	4178.24432	6.73699708	0.43499388
16 ANU111_13-1s	4178.24432	6.73699708	0.43499388
73 ANU111_5-8@1	4187.97435	5.8	0.43
16 ANU111_5-8@1	4187.97435	5.79810292	0.43499388
16 ANU111_5-8@1	4187.97435	5.79810292	0.43499388
68 RSES67_15_16.	4191.95194	5.80183605	0.68942895
73 ANU111_8-7s1	4192.87493	6.34	0.43
16 ANU111_8-7s1	4192.87493	6.33888999	0.43499388
16 ANU111_8-7s1	4192.87493	6.33888999	0.43499388
16 ANU111_9-13s	4192.87493	6.4466483	0.43499388
16 ANU111_9-13s	4192.87493	6.4466483	0.43499388
6 01JH54-66	4195	6.5	0.3
6 01JH54-66	4195	6.5	0.3
101 ~~~15-11@1	4196	6.4	1.6
16 ANU92_15_1_s	4206	5.70790417	0.58361345
16 ANU92_15_1_s	4206	5.70790417	0.58361345
16 ANU92_15_1_s	4206	5.81338733	0.58361345
16 ANU92_15_1_s	4206	5.81338733	0.58361345
73 ANU92_15_1_s	4206	5.81	0.58
16 ANU107_3_4_s	4208	5.055419	0.58361345
16 ANU107_3_4_s	4208	5.055419	0.58361345
16 ANU107_3_4_s	4208	5.31233143	0.58361345
16 ANU107_3_4_s	4208	5.31233143	0.58361345
73 ANU107_3_4_s	4208	5.06	0.58
16 ANU64_8_9_s1	4209	6.07988891	0.58361345
16 ANU64_8_9_s1	4209	6.07988891	0.58361345
16 ANU64_8_9_s2	4209	6.58884762	0.58361345
16 ANU64_8_9_s2	4209	6.58884762	0.58361345
73 ANU64_8_9_s1	4209	6.08	0.58
16 ANU146_14_2_s	4210	4.97576231	0.58361345
16 ANU146_14_2_s	4210	4.97576231	0.58361345
16 ANU146_14_2_s	4210	5.71481979	0.58361345
16 ANU146_14_2_s	4210	5.71481979	0.58361345
73 ANU146_14_2_s	4210	4.98	0.58
16 ANU61_13_4_s	4214	5.84465059	0.43626352
16 ANU61_13_4_s	4214	5.84465059	0.43626352
16 ANU61_13_4_s	4214	5.86462625	0.43626352
16 ANU61_13_4_s	4214	5.86462625	0.43626352
73 ANU61_13_4_s	4214	5.84	0.44
16 ANU81_10_9_s	4220	5.51173281	0.58361345
16 ANU81_10_9_s	4220	5.51173281	0.58361345
16 ANU81_10_9_s	4220	5.85375347	0.58361345
16 ANU81_10_9_s	4220	5.85375347	0.58361345

73 ANU81_10_9_s	4220	5.51	0.58
16 ANU59_1_5_sl	4223	4.24151832	0.58361345
16 ANU59_1_5_sl	4223	4.24151832	0.58361345
16 ANU59_1_5_s2	4223	4.81079669	0.58361345
16 ANU59_1_5_s2	4223	4.81079669	0.58361345
73 ANU59_1_5_sl	4223	4.24	0.58
16 ANU121_8_11_s	4226	4.28734948	0.58361345
16 ANU121_8_11_s	4226	4.28734948	0.58361345
16 ANU121_8_11_s	4226	4.41077928	0.58361345
16 ANU121_8_11_s	4226	4.41077928	0.58361345
73 ANU121_8_11_s	4226	4.41	0.58
16 ANU55_8_10_sl	4229	5.34718583	0.58361345
16 ANU55_8_10_sl	4229	5.34718583	0.58361345
16 ANU55_8_10_sl	4229	5.70450801	0.58361345
16 ANU55_8_10_sl	4229	5.70450801	0.58361345
73 ANU55_8_10_sl	4229	5.35	0.58
101 ~~~3-15@1	4230	5.7	2
16 ANU85_3_15_sl	4232	5.75627157	0.58361345
16 ANU85_3_15_sl	4232	5.75627157	0.58361345
16 ANU85_3_15_sl	4232	6.20617462	0.58361345
16 ANU85_3_15_sl	4232	6.20617462	0.58361345
73 ANU85_3_15_sl	4232	5.76	0.58
16 ANU40_13_8_sl	4236	6.22886131	0.43626352
16 ANU40_13_8_sl	4236	6.22886131	0.43626352
16 ANU40_13_8_sl	4236	6.62537617	0.43626352
16 ANU40_13_8_sl	4236	6.62537617	0.43626352
73 ANU40_13_8_sl	4236	6.63	0.44
16 ANU52_7_12_sl	4253	6.17772423	0.58361345
16 ANU52_7_12_sl	4253	6.17772423	0.58361345
73 ANU52_7_12_sl	4253	6.18	0.58
16 ANU47_3_6_sl	4255	5.83956638	0.43626352
16 ANU47_3_6_sl	4255	5.83956638	0.43626352
16 ANU47_3_6_s2	4255	5.92647242	0.43626352
16 ANU47_3_6_s2	4255	5.92647242	0.43626352
73 ANU47_3_6_sl	4255	5.84	0.44
6 01JH54-D90	4263	6.4	0.3
6 01JH54-D90	4263	6.4	0.3
16 ANU70_5_8_s2	4265	4.82032908	0.58361345
16 ANU70_5_8_s2	4265	4.82032908	0.58361345
16 ANU70_5_8_sl	4265	4.83631813	0.58361345
16 ANU70_5_8_sl	4265	4.83631813	0.58361345
73 ANU70_5_8_sl	4265	4.84	0.58
16 ANU63_3_14_sl	4267	5.13312645	0.58361345
16 ANU63_3_14_sl	4267	5.13312645	0.58361345
16 ANU63_3_14_sl	4267	5.74110566	0.58361345

16 ANU63_3_14_s	4267	5.74110566	0.58361345
73 ANU63_3_14_s	4267	5.74	0.58
16 RSES7_2_18_s	4268	7.15332373	0.58361345
16 RSES7_2_18_s	4268	7.15332373	0.58361345
16 RSES7_2_18_s	4268	7.54521394	0.58361345
16 RSES7_2_18_s	4268	7.54521394	0.58361345
73 RSES7_2_18_s	4268	7.15	0.58
16 ANU74_11_4_s	4275	5.37834848	0.58361345
16 ANU74_11_4_s	4275	5.37834848	0.58361345
16 ANU74_11_4_s	4275	5.93176418	0.58361345
16 ANU74_11_4_s	4275	5.93176418	0.58361345
73 ANU74_11_4_s	4275	5.38	0.58
16 ANU51_6_12_s	4289	5.55786494	0.58361345
16 ANU51_6_12_s	4289	5.55786494	0.58361345
16 ANU51_6_12_s	4289	5.63280151	0.58361345
16 ANU51_6_12_s	4289	5.63280151	0.58361345
73 ANU51_6_12_s	4289	5.63	0.58
16 ANU62_7_12_s	4292	5.39852955	0.58361345
16 ANU62_7_12_s	4292	5.39852955	0.58361345
16 ANU62_7_12_s	4292	6.07002156	0.58361345
16 ANU62_7_12_s	4292	6.07002156	0.58361345
73 ANU62_7_12_s	4292	6.07	0.58
6 01JH36-69	4324	4.6	0.3
6 01JH36-69	4324	4.6	0.3
6 01JH54-77	4324	6.5	0.4
6 01JH54-77	4324	6.5	0.4
16 ANU125_11_3_s	4328	5.00900939	0.43626352
16 ANU125_11_3_s	4328	5.00900939	0.43626352
16 ANU125_11_3_s	4328	5.89855082	0.43626352
16 ANU125_11_3_s	4328	5.89855082	0.43626352
73 ANU125_11_3_s	4328	5.01	0.44
101 ~~~9-1@1	4340	5.1	1.6
6 01JH54-D7	4348	5.4	0.3
6 01JH54-D7	4348	5.4	0.3
16 ANU83_8_8_s1c	4358	5.67105684	0.58361345
16 ANU83_8_8_s1c	4358	5.67105684	0.58361345
73 ANU83_8_8_s1c	4358	5.67	0.58
6 W74/2-36	4404	5.4	0.4
6 W74/2-36	4404	5.4	0.4

Reference

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- Bell, E. a., and Harrison, T.M., 2013, Post-Hadean transitions in Jack Hills zircon provenance: A signal of the Late Heavy Bombardment?: *Earth and Planetary Science Letters*, v. 364, p. 1–11, doi: 10.1016/j.epsl.2013.01.001.
- Bindeman, I. N., and Valley, J. W., 2001, Low-d18O rhyolites from Yellowstone: magmatic evolution based on analyses of zircons and individual phenocrysts: *Journal of Petrology*, v. 42, no. 8, p. 1491-1517.
- Bindeman, I. N., and Valley, J. W., 2002, Oxygen isotope study of the Long Valley magma system, California: isotope thermometry and convection in large silicic magma bodies: *Contributions to Mineralogy and Petrology*, v. 144, no. 2, p. 185-205.
- Bindeman, I. N., and Valley, J. W., 2003, Rapid generation of both high- and low-d18O, large-volume silicic magmas at the Timber Mountain/Oasis Valley caldera complex, Nevada: *Geological Society of America Bulletin*, v. 115, no. 5, p. 581-595.
- Bolhar, R., Weaver, S.D., Whitehouse, M.J., Palin, J.M., Woodhead, J.D., and Cole, J.W., 2008, Sources and evolution of arc magmas inferred from coupled O and Hf isotope systematics of plutonic zircons from the Cretaceous Separation Point Suite (New Zealand): *Earth and Planetary Science Letters*, v. 268, no. 3-4, p. 312–324, doi: 10.1016/j.epsl.2008.01.022.
- Cavosie, A. J., Wilde, S. A., Liu, D. Y., Weiblen, P. W., and Valley, J. W., 2005, Jack Hills detrital zircons: a mineralogical record of early Archean (4.4-3.8 Ga) magmatism: *Precambrian Research*, v. in press.
- Clechenko, C. C., Valley, J. W., Hamilton, M. A., and Emslie, R. F., 2003, Contamination of the Nain anorthosite: an oxygen isotope perspective: *GSA Abstracts With Programs*, v. 35, p. ??
- Clechenko, C. C., 2001, Petrogenesis of the Willsboro-Lewis wollastonite skarns, northeastern Adirondack Mountains, New York. [M.Sc. thesis]: University of Wisconsin, 213 p.
- Dai, L.-Q., Zhao, Z.-F., Zheng, Y.-F., Li, Q., Yang, Y., and Dai, M., 2011, Zircon Hf–O isotope evidence for crust–mantle interaction during continental deep subduction: *Earth and Planetary Science Letters*, v. 308, no. 1-2, p. 229–244, doi: 10.1016/j.epsl.2011.06.001.
- Dhuime, B., Hawkesworth, C.J., Cawood, P. a, and Storey, C.D., 2012, A change in the geodynamics of continental growth 3 billion years ago.: *Science (New York, N.Y.)*, v. 335, no. 6074, p. 1334–6, doi: 10.1126/science.1216066.
- Diwu, C., Sun, Y., Wilde, S. a., Wang, H., Dong, Z., Zhang, H., and Wang, Q., 2013, New evidence for ~4.45Ga terrestrial crust from zircon xenocrysts in Ordovician ignimbrite in the North Qinling Orogenic Belt, China: *Gondwana Research*, v. 23, no. 4, p. 1484–1490, doi: 10.1016/j.gr.2013.01.001.

- Elliott, B. A., Peck, W. H., Ramo, O. T., Vaasjoki, M., and Valley, J. W., 2001, Reconstruction of terrane boundaries in the Finnish Svecofennian: oxygen isotopes from zircon: *GSA Abstracts With Programs*, v. 33, p. 264-265.
- Ferreira, V. P., Valley, J. W., Sial, A. N., and Spicuzza, M. J., 2003, Oxygen isotope compositions and magmatic epidote from two contrasting metaluminous granitoids, NE Brazil: *Contributions to Mineralogy and Petrology*, v. 145, p. 205-216.
- Gilliam, C. E., and Valley, J. W., 1997, Low d_{18O} magma, Isle of Skye, Scotland: evidence from zircons: *Geochimica et Cosmochimica Acta*, v. 61, p. 4975-4981.
- Guo, L., Zhang, H.-F., Harris, N., Pan, F.-B., and Xu, W.-C., 2011, Origin and evolution of multi-stage felsic melts in eastern Gangdese belt: Constraints from U–Pb zircon dating and Hf isotopic composition: *Lithos*, v. 127, no. 1–2, p. 54–67, doi: <http://dx.doi.org/10.1016/j.lithos.2011.08.005>.
- Harrison, T.M., Schmitt, A.K., McCulloch, M.T., and Lovera, O.M., 2008, Early ~4.5 Ga formation of terrestrial crust: Lu–Hf, δ_{18O} , and Ti thermometry results for Hadean zircons: *Earth and Planetary Science Letters*, v. 268, no. 3–4, p. 476–486, doi: <http://dx.doi.org/10.1016/j.epsl.2008.02.011>.
- Heilimo, E., Halla, J., Andersen, T., and Huhma, H., 2013, Neoproterozoic crustal recycling and mantle metasomatism: Hf–Nd–Pb–O isotope evidence from sanukitoids of the Fennoscandian shield: *Precambrian Research*, v. 228, p. 250–266, doi: [10.1016/j.precamres.2012.01.015](http://dx.doi.org/10.1016/j.precamres.2012.01.015).
- Iizuka, T., Campbell, I.H., Allen, C.M., Gill, J.B., Maruyama, S., and Makoka, F., 2013, Evolution of the African continental crust as recorded by U–Pb, Lu–Hf and O isotopes in detrital zircons from modern rivers: *Geochimica et Cosmochimica Acta*, v. 107, p. 96–120, doi: [10.1016/j.gca.2012.12.028](http://dx.doi.org/10.1016/j.gca.2012.12.028).
- Jiang, N., Chen, J., Guo, J., and Chang, G., 2012, In situ zircon U–Pb, oxygen and hafnium isotopic compositions of Jurassic granites from the North China craton: Evidence for Triassic subduction of continental crust and subsequent metamorphism-related 18O depletion: *Lithos*, v. 142-143, p. 84–94, doi: [10.1016/j.lithos.2012.02.018](http://dx.doi.org/10.1016/j.lithos.2012.02.018).
- Kemp, A.I.S., Hawkesworth, C.J., Paterson, B.A., and Kinny, P.D., 2006, Episodic growth of the Gondwana supercontinent from hafnium and oxygen isotopes in zircon: *Nature*, v. 439, no. 7076, p. 580–583.
- King, E. M., and Valley, J. W., 2001, The source, magmatic contamination, and alteration of the Idaho Batholith: *Contributions to Mineralogy and Petrology*, v. 142, no. 1, p. 72-88.
- King, E. M., Barrie, C. T., and Valley, J. W., 1997, Hydrothermal alteration of oxygen isotope ratios in quartz phenocrysts, Kidd Creek Mine, Ontario; magmatic values are preserved in zircon: *Geology*, v. 25, no. 12, p. 1079-1082.

- King, E. M., Valley, J. W., Davis, D. W., and Edwards, G. R., 1998, Oxygen isotope ratios of Archean plutonic zircons from granite-greenstone belts of the Superior Province; indicator of magmatic source: *Precambrian Research*, v. 92, p. 365-387.
- King, E. M., Valley, J. W., and Davis, D. W., 2000, Oxygen isotope evolution of volcanic rocks at the Sturgeon Lake volcanic complex, Ontario: *Canadian Journal of Earth Sciences*, v. 37, p. 39-50.
- King, E. M., Valley, Stockli, D. F. and Wright, J.E., 2004, Oxygen isotope trends of granitic magmatism in the Great Basin: *Geological Society of America Bulletin*, v. 116.
- King, E.M., Valley, J.W., Stockli, D.F., and Wright, J.E., 2004, Oxygen isotope trends of granitic magmatism in the Great Basin: Location of the Precambrian craton boundary as reflected in zircons: *Geological Society of America Bulletin*, v. 116, no. 3, p. 451, doi: 10.1130/B25324.1.
- Zhu, J.-J., Hu, R.-Z., Bi, X.-W., Zhong, H., and Chen, H., 2011, Zircon U–Pb ages, Hf–O isotopes and whole-rock Sr–Nd–Pb isotopic geochemistry of granitoids in the Jinshajiang suture zone, SW China: Constraints on petrogenesis and tectonic evolution of the Paleo-Tethys Ocean: *Lithos*, v. 126, no. 3-4, p. 248–264, doi: 10.1016/j.lithos.2011.07.003.
- King, E., Barrie, C., and Valley, J., 1997, Hydrothermal alteration of oxygen isotope ratios in quartz phenocrysts, Kidd Creek mine, Ontario: Magmatic values are preserved in zircon: *Geology*, v. 25, p. 1079-1082, doi: 10.1130/0091-7613(1997)025<1079.
- King, E. M., 2001, Oxygen isotope study of magmatic source and alteration of granitic rocks in the Western United States and the Superior Province, Canada [PhD thesis]: University of Wisconsin.
- Kirkland, C.L., Whitehouse, M.J., Pease, V., and Van Kranendonk, M., 2010, Erratum in Oxygen isotopes in detrital zircons: Insight into crustal recycling during the evolution of the Greenland Shield: *Lithosphere*, v. 2, no. 1, p. 3–12, doi: 10.1130/L80.1.
- Lackey, J., Valley, J., and Saleeby, J., 2005, Supracrustal input to magmas in the deep crust of Sierra Nevada batholith: Evidence from high-O zircon: *Earth and Planetary Science Letters*, v. 235, no. 1-2, p. 315–330, doi: 10.1016/j.epsl.2005.04.003.
- Lackey, J.S., and Valley, J.W., 2004, Complex patterns of fluid flow during wollastonite formation in calcareous sandstones at Laurel Mountain, Mt. Morrison Pendant, California: *Geological Society of America Bulletin*, v. 116, no. 1, p. 76, doi: 10.1130/B25239.1.

Lackey, J., Valley, J., and Saleeby, J., 2005, Supracrustal input to magmas in the deep crust of Sierra Nevada batholith: Evidence from high-O zircon: *Earth and Planetary Science Letters*, v. 235, no. 1-2, p. 315–330, doi: 10.1016/j.epsl.2005.04.003.

Lackey, J.S., Valley, J.W., and Hinke, H.J., 2005, Deciphering the source and contamination history of peraluminous magmas using $\delta^{18}\text{O}$ of accessory minerals: examples from garnet-bearing plutons of the Sierra Nevada batholith: *Contributions to Mineralogy and Petrology*, v. 151, no. 1, p. 20–44, doi: 10.1007/s00410-005-0043-6.

Lancaster, P.J., Storey, C.D., Hawkesworth, C.J., and Dhuime, B., 2011, Understanding the roles of crustal growth and preservation in the detrital zircon record: *Earth and Planetary Science Letters*, v. 305, no. 3-4, p. 405–412, doi: 10.1016/j.epsl.2011.03.022.

Li, X.-H., Li, W.-X., Li, Q.-L., Wang, X.-C., Liu, Y., and Yang, Y.-H., 2010, Petrogenesis and tectonic significance of the ~850 Ma Gangbian alkaline complex in South China: Evidence from in situ zircon U–Pb dating, Hf–O isotopes and whole-rock geochemistry: *Lithos*, v. 114, no. 1-2, p. 1–15, doi: 10.1016/j.lithos.2009.07.011.

Li, X.-H., Li, Z.-X., He, B., Li, W.-X., Li, Q.-L., Gao, Y., and Wang, X.-C., 2012, The Early Permian active continental margin and crustal growth of the Cathaysia Block: In situ U–Pb, Lu–Hf and O isotope analyses of detrital zircons: *Chemical Geology*, v. 328, no. 0, p. 195–207, doi: <http://dx.doi.org/10.1016/j.chemgeo.2011.10.027>.

Lugovaya, I. P., Krivdik, S. G., and Ponomarenko, A. N., 2001, Oxygen isotope composition of zircons in granites and alkaline rocks of the Ukrainian Shield: *Mineralogical Journal [Russian]*, v. 23, p. 38-41.

McLelland, J., Hamilton, M., Selleck, B., McLelland, J., Walker, J.D., and Orell, S., 2001, Geochronologic constraints on the age of the Ottawa Orogeny, Adirondack Highlands, New York and regional implications: *Precambrian Research*, v. 109, p. 39-72.

Monani, S., and Valley, J. W., 2001, Oxygen isotope ratios of zircon: magma genesis of low $\delta^{18}\text{O}$ granites from the British Tertiary igneous province, western Scotland: *Earth and Planetary Science Letters*, v. 184, no. 2, p. 377-392.

O' Connor, Y. L., and Morrison, J., 1999, Oxygen isotope constraints on the petrogenesis of the Sybille Intrusion of the Proterozoic Laramie anorthosite complex: *Contributions to Mineralogy and Petrology*, v. 136, p. 81-91.

Peck, W. H., Valley, J. W., Wilde, S. A., and Graham, C. M., 2001, Oxygen isotope ratios and rare earth elements in 3.3 to 4.4 Ga zircons; ion microprobe evidence for high $\delta^{18}\text{O}$ continental crust and oceans in the early Archean: *Geochimica et Cosmochimica Acta*, v. 65, no. 22, p. 4215-4229.

Peck, W. H., Valley, J. W., and Graham, C. M., 2003, Slow oxygen diffusion rates in igneous zircons from metamorphic rocks: *American Mineralogist*, v. 88, p. 1003-1014

Peck, W. H., Valley, J. W., Corriveau, L., Davidson, A., McLelland, J., and Farber, D., 2004, Constraints on terrane boundaries and origin of 1.18 to 1.13 Ga granitoids of the Southern Grenville Province from oxygen isotope ratios of zircon., in Tollo, R. P., McLelland, J., Corriveau, L., and Bartholomew, M. J., eds., *Proterozoic evolution of the Grenville orogen in North America: GSA Memoir 197*, p. 163-181.

Peck, W., King, E., and Valley, J., 2000, Oxygen isotope perspective on Precambrian crustal growth and maturation: *Geology*, v. 28, no. 4, p. 363–366, doi: 10.1130/0091-7613(2000)28<363.

Pietranik, a. B., Hawkesworth, C.J., Storey, C.D., Kemp, a. I.S., Sircombe, K.N., Whitehouse, M.J., and Bleeker, W., 2008, Episodic, mafic crust formation from 4.5 to 2.8 Ga: New evidence from detrital zircons, Slave craton, Canada: *Geology*, v. 36, no. 11, p. 875, doi: 10.1130/G24861A.1.

Rapela, C.W., Fanning, C.M., Casquet, C., Pankhurst, R.J., Spalletti, L., Poiré, D., and Baldo, E.G., 2011, The Rio de la Plata craton and the adjoining Pan-African/brasiliano terranes: Their origins and incorporation into south-west Gondwana: *Gondwana Research*, v. 20, no. 4, p. 673–690, doi: 10.1016/j.gr.2011.05.001.

Roberts, N.M.W., Slagstad, T., Parrish, R.R., Norry, M.J., Marker, M., and Horstwood, M.S. a., 2013, Sedimentary recycling in arc magmas: geochemical and U–Pb–Hf–O constraints on the Mesoproterozoic Suldal Arc, SW Norway: *Contributions to Mineralogy and Petrology*, v. 165, no. 3, p. 507–523, doi: 10.1007/s00410-012-0820-y.

Roberts, unpublished

Roselle, G. T., 1997, Integrated petrologic, stable isotopic, and statistical study of fluid-flow in carbonates of the Ubehebe Peak contact aureole, Death Valley National Park, California [PhD thesis]: University of Wisconsin-Madison, 279 p.

Spencer et al. in review

Spencer et al. unpublished

Sun, J.-F., Yang, J.-H., Wu, F.-Y., Li, X.-H., Yang, Y.-H., Xie, L.-W., and Wilde, S. a., 2010, Magma mixing controlling the origin of the Early Cretaceous Fangshan granitic pluton, North China Craton: In situ U–Pb age and Sr-, Nd-, Hf- and O-isotope evidence: *Lithos*, v. 120, no. 3-4, p. 421–438, doi: 10.1016/j.lithos.2010.09.002.

V. Ferreira, unpublished

Valley, J.W., Chiarenzelli, J.R., and McLelland, J.M., 1994, Oxygen isotope geochemistry of zircon: *Earth and Planetary Science Letters*, v. 126, no. 4, p. 187–206, doi: 10.1016/0012-821X(94)90106-6.

Valley, J.W., Lackey, J.S., Cavosie, a. J., Clechenko, C.C., Spicuzza, M.J., Basei, M. a. S., Bindeman, I.N., Ferreira, V.P., Sial, a. N., King, E.M., Peck, W.H., Sinha, a. K., and Wei, C.S., 2005, 4.4 Billion Years of Crustal Maturation: Oxygen Isotope Ratios of Magmatic Zircon: Contributions to Mineralogy and Petrology, v. 150, no. 6, p. 561–580, doi: 10.1007/s00410-005-0025-8.

Valley, J. W., 2003, Oxygen isotopes in zircon, in Hanchar, J. M., and Hoskin, W. O., eds., Zircon: MSA Reviews in Mineralogy and Geochemistry, p. 343–385.

Van Dongen, M., Weinberg, R.F., Tomkins, a. G., Armstrong, R. a., and Woodhead, J.D., 2010, Recycling of Proterozoic crust in Pleistocene juvenile magma and rapid formation of the Ok Tedi porphyry Cu–Au deposit, Papua New Guinea: Lithos, v. 114, no. 3-4, p. 282–292, doi: 10.1016/j.lithos.2009.09.003.

Wang, C.Y., Campbell, I.H., Allen, C.M., Williams, I.S., and Eggins, S.M., 2009, Rate of growth of the preserved North American continental crust: Evidence from Hf and O isotopes in Mississippi detrital zircons: Geochimica et Cosmochimica Acta, v. 73, no. 3, p. 712–728, doi: <http://dx.doi.org/10.1016/j.gca.2008.10.037>.

Wang, C.Y., Campbell, I.H., Stepanov, A.S., Allen, C.M., and Burtsev, I.N., 2011, Growth rate of the preserved continental crust: II. Constraints from Hf and O isotopes in detrital zircons from Greater Russian Rivers: Geochimica et Cosmochimica Acta, v. 75, no. 5, p. 1308–1345, doi: 10.1016/j.gca.2010.12.010.

Wang, X.-C., Li, Z.-X., Li, X.-H., Li, Q.-L., Tang, G.-Q., Zhang, Q.-R., and Liu, Y., 2011, Nonglacial origin for low- ^{18}O Neoproterozoic magmas in the South China Block: Evidence from new in-situ oxygen isotope analyses using SIMS: Geology, v. 39, no. 8, p. 735–738, doi: 10.1130/G31991.1.

Wang, F., Liu, S.-A., Li, S., and He, Y., 2013, Contrasting zircon Hf–O isotopes and trace elements between ore-bearing and ore-barren adakitic rocks in central-eastern China: Implications for genetic relation to Cu–Au mineralization: Lithos, v. 156-159, p. 97–111, doi: 10.1016/j.lithos.2012.10.017.

Wei, C S, et al., 2005, Intergrated Nd-Sr-Pb-O isotopic constraints on the diversely crustal origin of A-type granites in eastern China. J. Petrol. (in preparing).

Wei, unpublished

Zheng, Y.-C., Hou, Z.-Q., Li, Q.-Y., Sun, Q.-Z., Liang, W., Fu, Q., Li, W., and Huang, K.-X., 2012, Origin of Late Oligocene adakitic intrusives in the southeastern Lhasa terrane: Evidence from in situ zircon U–Pb dating, Hf–O isotopes, and whole-rock geochemistry: Lithos, v. 148, p. 296–311, doi: 10.1016/j.lithos.2012.05.026.

Be'eri-Shlevin Y, Katzir Y, Valley JW. Crustal evolution and recycling in a juvenile continent: Oxygen isotope ratio of zircon in the northern Arabian Nubian Shield. *Lithos* 2009, 107(3-4): 169-184.

Bell EA, Harrison TM, McCulloch MT, Young ED. Early Archean crustal evolution of the Jack Hills Zircon source terrane inferred from Lu-Hf, Pb-207/Pb-206, and delta O-18 systematics of Jack Hills zircons. *Geochimica Et Cosmochimica Acta* 2011, 75(17): 4816-4829 .

Bell EA, Harrison TM. Post-Hadean transitions in Jack Hills zircon provenance: A signal of the Late Heavy Bombardment? *Earth and Planetary Science Letters* 2013, 364: 1-11 .

Chen J-Y, Yang J-H, Zhang J-H, Sun J-F, Wilde SA. Petrogenesis of the Cretaceous Zhangzhou batholith in southeastern China: Zircon U-Pb age and Sr-Nd-Hf-O isotopic evidence. *Lithos* 2013, 162: 140-156.

King et al., 2005

Gagnevin D, Daly JS, Horstwood MSA, Whitehouse MJ. In-situ zircon U-Pb, oxygen and hafnium isotopic evidence for magma mixing and mantle metasomatism in the Tuscan Magmatic Province, Italy. *Earth and Planetary Science Letters* 2011, 305(1-2): 45-56.

Guo C, Chen Y, Zeng Z, Lou F. Petrogenesis of the Xihuashan granites in southeastern China: Constraints from geochemistry and in-situ analyses of zircon U-Pb-Hf-O isotopes. *Lithos* 2012, 148: 209-227.

Harrison TM, Schmitt AK, McCulloch MT, Lovera OM. Early (≥ 4.5 Ga) formation of terrestrial crust: Lu-Hf, delta O-18, and Ti thermometry results for Hadean zircons. *Earth and Planetary Science Letters* 2008, 268(3-4): 476-486.

Heinonen AP, Fraga LM, Ramo OT, Dall'Agnol R, Manttari I, Andersen T. Petrogenesis of the igneous Mucajai AMG complex, northern Amazonian craton - Geochemical, U-Pb geochronological, and Nd-Hf-O isotopic constraints. *Lithos* 2012, 151: 17-34.

Herve F, Calderdon M, Fanning CM, Pankhurst RJ, Godoy E. Provenance variations in the Late Paleozoic accretionary complex of central Chile as indicated by detrital zircons. *Gondwana Research* 2013, 23(3): 1122-1135.

Huang H-Q, Li X-H, Li W-X, Li Z-X. Formation of high delta O-18 fayalite-bearing A-type granite by high-temperature melting of granulitic metasedimentary rocks, southern China. *Geology* 2011, 39(10): 903-906.

Jiang X-Y, Li X-H. In situ zircon U-Pb and Hf-O isotopic results for ca. 73 Ma granite in Hainan Island: Implications for the termination of an Andean-type active continental margin in southeast China. *Journal of Asian Earth Sciences* 2014, 82: 32-46.

Kemp AIS, Hawkesworth CJ, Foster GL, Paterson BA, Woodhead JD, Hergt JM, et al. Magmatic and crustal differentiation history of granitic rocks from Hf-O isotopes in zircon. *Science* 2007, 315(5814): 980-983.

King EM, Beard BL, Valley JW. Strontium and oxygen isotopic evidence for strike/slip movement of accreted terranes in the Idaho Batholith. *Lithos* 2007, 96(3-4): 387-401.

King EM, Trzaskus AP, Valley JW. Oxygen isotope evidence for magmatic variability and multiple alteration events in the Proterozoic St. Francois Mountains, Missouri. *Precambrian Research* 2008, 165(1-2): 49-60 .

Kirkland CL, Smithies RH, Woodhouse AJ, Howard HM, Wingate MTD, Belousova EA, et al. Constraints and deception in the isotopic record; the crustal evolution of the west Musgrave Province, central Australia. *Gondwana Research* 2013, 23(2): 759-781 .

Li J-X, Qin K-Z, Li G-M, Xiao B, Zhao J-X, Cao M-J, et al. Petrogenesis of ore-bearing porphyries from the Duolong porphyry Cu-Au deposit, central Tibet: Evidence from U-Pb geochronology, petrochemistry and Sr-Nd-Hf-O isotope characteristics. *Lithos* 2013, 160: 216-227 .

Li X-H, Faure M, Lin W, Manatschal G. New isotopic constraints on age and magma genesis of an embryonic oceanic crust: The Chenaillet Ophiolite in the Western Alps. *Lithos* 2013, 160: 283-291 .

Liu D, Wilde SA, Wan Y, Wang S, Valley JW, Kita N, et al. Combined U–Pb, hafnium and oxygen isotope analysis of zircons from meta-igneous rocks in the southern North China Craton reveal multiple events in the Late Mesoproterozoic–Early Neoproterozoic. *Chemical Geology* 2009, 261(1–2): 140-154 .

Liu S-A, Li S, Guo S, Hou Z, He Y. The Cretaceous adakitic-basaltic-granitic magma sequence on south-eastern margin of the North China Craton: Implications for lithospheric thinning mechanism. *Lithos* 2012, 134: 163-178 .

Liu X, Fan H-R, Santosh M, Hu F-F, Yang K-F, Li Q-L, et al. Remelting of Neoproterozoic relict volcanic arcs in the Middle Jurassic: Implication for the formation of the Dexing porphyry copper deposit, Southeastern China. *Lithos* 2012, 150: 85-100 .

Munoz M, Charrier R, Fanning CM, Makshev V, Deckart K. Zircon Trace Element and O-Hf Isotope Analyses of Mineralized Intrusions from El Teniente Ore Deposit, Chilean Andes: Constraints on the Source and Magmatic Evolution of Porphyry Cu-Mo Related Magmas. *Journal of Petrology* 2012, 53(6): 1091-1122 .

Pankhurst RJ, Rapela CW, Lopez de Luchi MG, Rapalini AE, Fanning CM, Galindo C. The Gondwana connections of northern Patagonia. *Journal of the Geological Society* 2014, 171(3): 313-328 .

Partin CA, Bekker A, Sylvester PJ, Wodicka N, Stern RA, Chacko T, et al. Filling in the juvenile magmatic gap: Evidence for uninterrupted Paleoproterozoic plate tectonics. *Earth and Planetary Science Letters* 2014, 388: 123-133 .

Shea, EK, Miller, JS, Miller, RB, Bowring, SA, Sullivan, KM. Growth and maturation of a mid- to shallow-crustal intrusive complex, North Cascades, Washington. *Geosphere* 2016, 12.

Spencer et al., in review (GOE)

Steinitz A, Katzir Y, Valley JW, Be'eri-Shlevin Y, Spicuzza MJ. The origin, cooling and alteration of A-type granites in southern Israel (northernmost Arabian-Nubian shield): a multimineral oxygen isotope study. *Geological Magazine* 2009, 146(2): 276-290 .

Strickland A, Miller EL, Wooden JL, Kozdon R, Valley JW. Syn-extensional plutonism and peak metamorphism in the Albion-Raft-River-Grouse Creek metamorphic core complex. *American Journal of Science* 2011, 311(4): 261-314.

Strickland BA, Wooden JL, Mattinson CG, Ushikubo T, Miller DM, Valley JW. Proterozoic evolution of the Mojave crustal province as preserved in the Ivanpah Mountains, southeastern California. *Precambrian Research* 2013, 224: 222-241 .

Su B-X, Qin K-Z, Sakyi PA, Li X-H, Yang Y-H, Sun H, et al. U-Pb ages and Hf-O isotopes of zircons from Late Paleozoic mafic-ultramafic units in the southern Central Asian Orogenic Belt: Tectonic implications and evidence for an Early-Permian mantle plume. *Gondwana Research* 2011, 20(2-3): 516-531 .

Su B-X, Qin K-Z, Sakyi PA, Liu P-P, Tang D-M, Malaviarachchi SPK, et al. Geochemistry and geochronology of acidic rocks in the Beishan region, NW China: Petrogenesis and tectonic implications. *Journal of Asian Earth Sciences* 2011, 41(1): 31-43 .

Trail D, Mojzsis SJ, Harrison TM, Schmitt AK, Watson EB, Young ED. Constraints on Hadean zircon protoliths from oxygen isotopes, Ti-thermometry, and rare earth elements. *Geochemistry Geophysics Geosystems* 2007, 8 .

van Schijndel V, Cornell DH, Frei D, Simonsen SL, Whitehouse MJ. Crustal evolution of the Rehoboth Province from Archaean to Mesoproterozoic times: Insights from the Rehoboth Basement Inlier. *Precambrian Research* 2014, 240: 22-36 .

Wilde SA, Valley JW, Kita NT, Cavosie AJ, Liu D. SHRIMP U-Pb and CAMECA 1280 oxygen isotope results from ancient detrital zircons in the Caozhuang quartzite, Eastern Hebei, North China Craton: Evidence for crustal reworking 3.8 Ga ago. *American Journal of Science* 2008, 308(3): 185-199 .

Yang J-H, Sun J-F, Zhang J-H, Wilde SA. Petrogenesis of Late Triassic intrusive rocks in the northern Liaodong Peninsula related to decratonization of the North China Craton: Zircon UPb age and Hf-O isotope evidence. *Lithos* 2012, 153: 108-128.

Yao W-H, Li Z-X, Li W-X, Wang X-C, Li X-H, Yang J-H. Post-kinematic lithospheric delamination of the Wuyi-Yunkai orogen in South China: Evidence from ca. 435 Ma high-Mg basalts. *Lithos* 2012, 154: 115-129.

Yao WH, Li ZX, Li WX, Li XH, Yang JH. From Rodinia to Gondwanaland: A tale of detrital zircon provenance analyses from the southern Nanhua basin, south China. *American Journal of Science* 2014, 314(1): 278-313 .

Yin QZ, Wimpenny J, Tollstrup DL, Mange M, Dewey JF, Zhou Q, et al. Crustal evolution of the South Mayo Trough, western Ireland, based on U-Pb ages and Hf-O isotopes in detrital zircons. *Journal of the Geological Society* 2012, 169(6): 681-689.

Zeh A, Stern RA, Gerdes A. The oldest zircons of Africa—Their U–Pb–Hf–O isotope and trace element systematics, and implications for Hadean to Archean crust–mantle evolution. *Precambrian Research* 2014, 241: 203-230.

Zhang J, Zhao Z-F, Zheng Y-F, Liu X, Xie L. Zircon Hf-O isotope and whole-rock geochemical constraints on origin of postcollisional mafic to felsic dykes in the Sulu orogen. *Lithos* 2012, 136: 225-245.

Zhang S-B, Wu R-X, Zheng Y-F. Neoproterozoic continental accretion in South China: Geochemical evidence from the Fuchuan ophiolite in the Jiangnan orogen. *Precambrian Research* 2012, 220: 45-64.

Zhang S-B, Zheng Y-F, Zhao Z-F, Wu Y-B, Yuan H, Wu F-Y. Origin of TTG-like rocks from anatexis of ancient lower crust: Geochemical evidence from Neoproterozoic granitoids in South China. *Lithos* 2009, 113(3-4): 347-368.

Zheng Y-C, Hou Z-Q, Li Q-Y, Sun Q-Z, Liang W, Fu Q, et al. Origin of Late Oligocene adakitic intrusives in the southeastern Lhasa terrane: Evidence from in situ zircon U-Pb dating, Hf-O isotopes, and whole-rock geochemistry. *Lithos* 2012, 148: 296-311.

Zhu J, Hu R-Z, Bi X-W, Zhong H, Chen H. Zircon U-Pb ages, Hf-O isotopes and whole-rock Sr-Nd-Pb isotopic geochemistry of granitoids in the Jinshajiang suture zone, SW China: Constraints on petrogenesis and tectonic evolution of the Paleo-Tethys Ocean. *Lithos* 2011, 126(3-4): 248-264.

Zi J-W, Cawood PA, Fan W-M, Tohver E, Wang Y-J, McCuaig TC. Generation of Early Indosinian enriched mantle-derived granitoid pluton in the Sanjiang Orogen (SW China) in response to closure of the Paleo-Tethys. *Lithos* 2012, 140: 166-182.

Fiannacca, P., Williams, I.S., and Cirrincione, R., 2016, Timescales and mechanisms of the collisional orogenesis of the Himalayas, *Journal of Metamorphic Geology*, 34, 1-15.
Archibald, D.B., Collins, A.S., Foden, J.D., Payne, J.L., Holden, P., Razakamanantsoa, S., Laurent, O., Moyen, J.-F., Zeh, A., Bouilhol, P., and Villaros, A., 2016, The evolution of the Carbo-Tethyan orogen in the Himalayas, *Journal of Metamorphic Geology*, 34, 16-30.
Zhang, H.-F., Zhang, J., Zhang, G.-W., Santosh, M., Yu, H., Yang, Y.-H., and Wang, C., 2016, Evolution of the Carbo-Tethyan orogen in the Himalayas, *Journal of Metamorphic Geology*, 34, 31-45.
Canile, F.M., Babinski, M., and Rocha-Campos, A.C., 2016, Evolution of the Carbo-Tethyan orogen in the Himalayas, *Journal of Metamorphic Geology*, 34, 46-60.
Ali, K.A., Zoheir, B.A., Stern, R.J., Andresen, A., Whitehouse, M.J., and Bishara, M., 2016, Distinction between S-type and peraluminous granitoids in the Himalayas, *Journal of Metamorphic Geology*, 34, 61-75.
Gao, P., Zheng, Y.-F., and Zhao, Z.-F., 2016, Distinction between S-type and peraluminous granitoids in the Himalayas, *Journal of Metamorphic Geology*, 34, 76-90.
Yeshanew, F.G., Pease, V., Abdelsalam, M.G., and Whitehouse, M.J., 2017, Zircon U-Pb dating of the Himalayas, *Journal of Metamorphic Geology*, 35, 1-15.
Johnson, S.P., Korhonen, F.J., Kirkland, C.L., Cliff, J.B., Belousova, E.A., and Li, X.-H., 2016, Zircon U-Pb dating of the Himalayas, *Journal of Metamorphic Geology*, 34, 91-105.
Chen, Y., Li, J., Yang, C., Ling, X.-X., and Tchouankoue, J.P., 2016, Zircon U-Pb dating of the Himalayas, *Journal of Metamorphic Geology*, 34, 106-120.

sms of batholith construction: Constraints from zircon oxygen isotopes and
na, T., De Waele, B., Thomas, R.J., and Pitfield, P.E.J., 2016, Genesis of
, 2016, Post-collisional magmatism: Crustal growth not identified by zircon
g, J.-L., 2016, Detrital zircon U-Pb, Lu-Hf, and O isotopes of the Wufeng
niferous-Early Cretaceous units of Paraná Basin from provenance studies by
a, W.W., 2016, Lu-Hf and O isotopic compositions on single zircons from
aluminous I-type granites: Zircon versus whole-rock geochemistry: Lithos,
U-Pb ages, $\delta^{18}O$ and whole-rock Nd isotopic compositions of the Dire Dawa
Sheppard, S., 2017, An isotopic perspective on growth and differentiation
New isotopic constraints on age and origin of Mesoproterozoic charnockite, t

Italy): Lithos, .

ights from U-Pb, oxygen and hafnium isotopes in zircon: Precambrian Research, v. 273, p. 112 - 128.

of southern North China craton: Precambrian Research, v. 273, p. 112 - 128.
v. 40, p. 142 - 169.

for crustal evolution: Gondwana Research, v. 32, p. 181 - 192.

of Gondwana: Journal of the Geological Society, v. 174, no. 1, p. 142 - 156
ion: Lithos, v. 268, p. 76 - 86.

ern Cameroon: Precambrian Research, v. 276, p. 14 - 23.