

British Geological Survey Gateway to the Earth

Recent Activities Of The World Data Centre For Geomagnetism (Edinburgh)

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British Geological Survey

SCOSTEP-WDS Workshop on 'Global Data Activities for the Study of Solar-Terrestrial Variability' 28-30th Sep 2015 Tokyo, Japan





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WDC Geomagnetism (Edinburgh)

Greenland

- Geomagnetic observatory annual, hourly, minute means
- Global & local magnetic model information

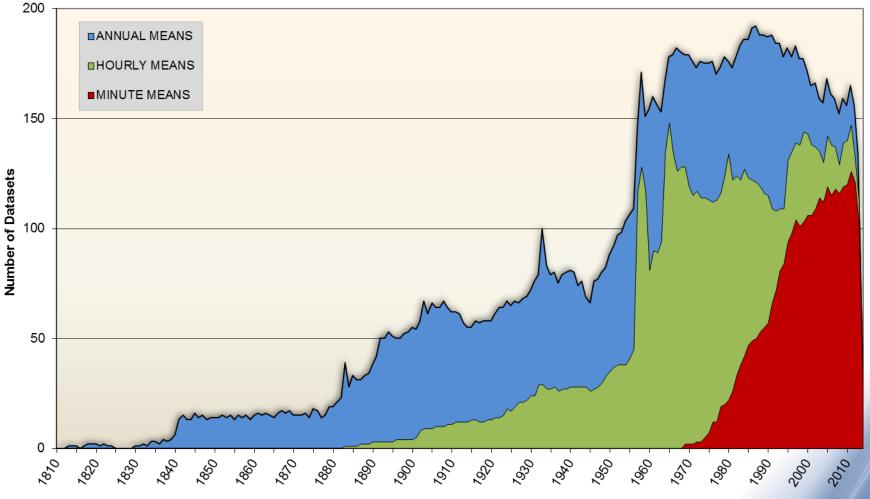
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- Land, marine, aeromagnetic and repeat stations survey
- Solar & geomagnetic indices
- Analogue magnetograms
- Historical yearbooks, memoirs, logs etc.

ANTARCTICA

- Ship-borne data
- Observatory metadata

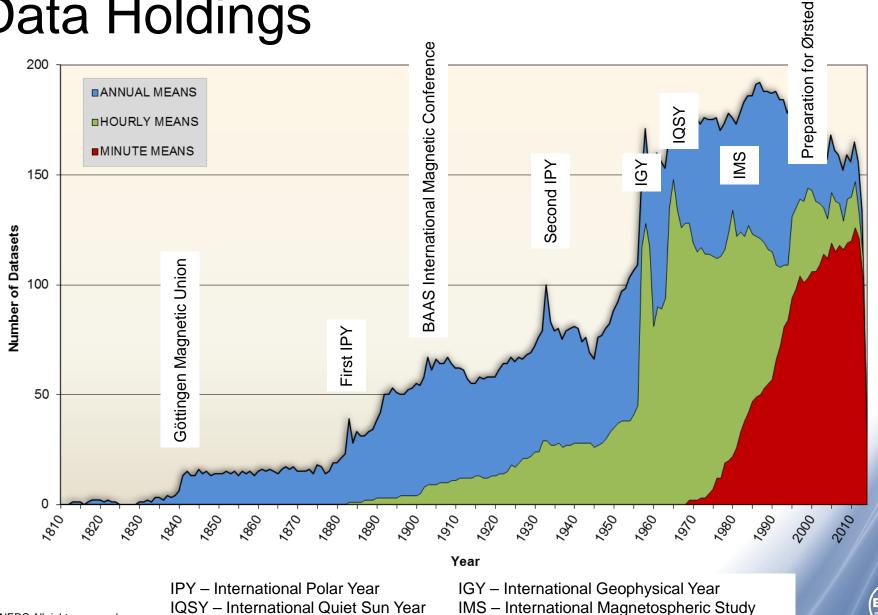
WDC Geomagnetic Observatory Data Holdings







WDC Geomagnetic Observatory Data Holdings



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BAAS – British Association for the Advancement of Science

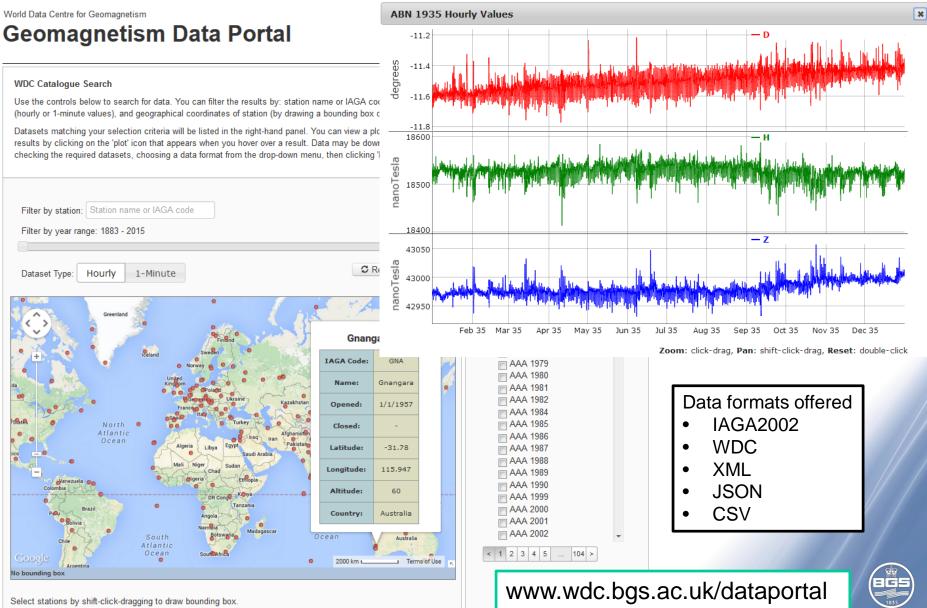
WDC Data Access

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WDC Data Portal



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WDC Data Portal – Web Service

- Client side (Data portal) web application using AngularJS and jQuery
- Server side RESTful web service

EXAMPLES Retrieve list of all observatories http://app.geomag.bgs.ac.uk/wdc/stations

Retrieve observatory metadata http://app.geomag.bgs.ac.uk/wdc/stations/kak

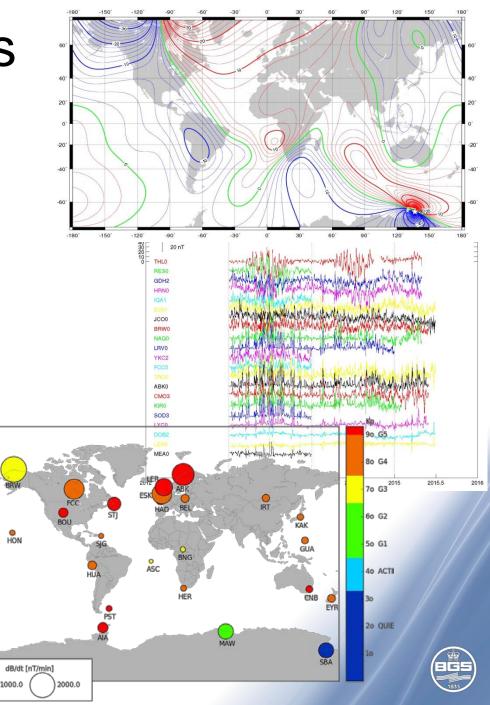
Retrieve data set http://app.geomag.bgs.ac.uk/wdc/datasets/hour/esk2013?media=iaga2002

Search catalogue <u>http://app.geomag.bgs.ac.uk/wdc/catalogue/search?minYear=2000&maxY</u> <u>ear=2014&frequencyTypes=MINUTE</u>



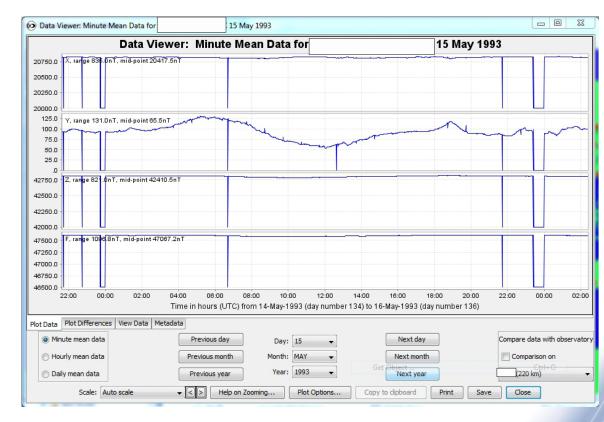
Science – examples

- Contribute to geomagnetic field modelling such as the International Geomagnetic Reference Field (IGRF) and World Magnetic Model (WMM)
- ESA Swarm Expert Support Laboratory – high-quality hourly means suitable for modelling
- Space weather extreme event analysis to estimate likely maxima in geomagnetic activity levels



Data Quality Control

- Data inspected on receipt from data providers
- Obvious errors corrected (original data retained)
- Feedback to data providers



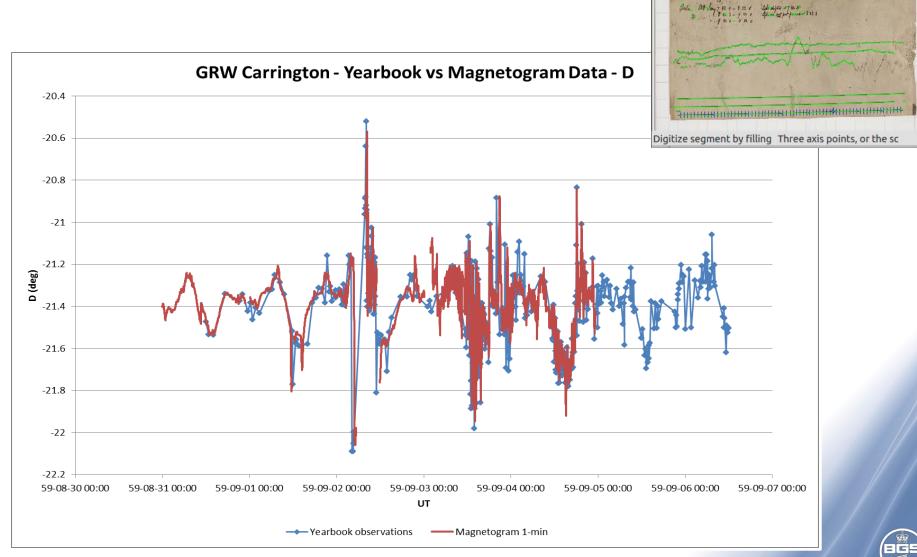
Data correction campaigns for science also carried out.



Historic data digitisation



Historic data digitisation



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Digitize

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Settings

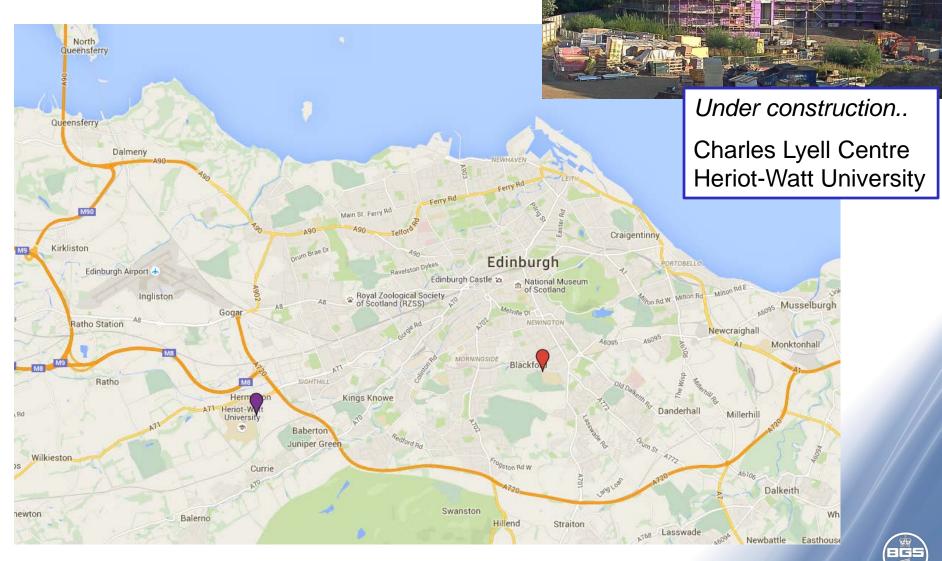
Window

KEN

Help

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WDC on the move



WDC on the move





Analogue records will be transported to and stored at BGS Head Office in Keyworth

System of access and retrieval at WDC Edinburgh to be established

Preparing for office relocation – moving WDC paper records



Before



Thank You

Please visit us at: <u>www.wdc.bgs.ac.uk</u>



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