Table S1: Spearman's rank correlation coefficients for the environmental variables. Significant correlations are denoted as follows: **p < 0.0001***, p<0.001**,   p< 0.01*, p<0.05**

	SST	Salinity	MLD	E_{MLD}	TOxN	PO_4	$Si(OH)_4$	NH_4	A_T	C_T	pH
Salinity	**0.781*****										
MLD	**-0.596****	**-0.474**									
E_{MLD}	**0.681*****	**0.621****	**-0.903*****								
TOxN	**-0.945*****	**-0.821*****	**0.641****	**-0.729*****							
PO_4	**-0.963*****	**-0.807*****	**0.625****	**-0.711*****	**0.961*****						
$Si(OH)_4$	**-0.667****	**-0.429**	**0.520***	**-0.467**	**0.702*****	**0.700*****					
NH_4	**-0.798*****	**-0.648****	**0.507***	**-0.459**	**0.704*****	**0.753*****	**0.637****				
A_T	**-0.953*****	**-0.781*****	**0.518***	**-0.600****	**0.890*****	**0.918*****	**0.672*****	**0.819*****			
C_T	**-0.981*****	**-0.814*****	**0.581***	**-0.669*****	**0.959*****	**0.981*****	**0.690*****	**0.774*****	**0.946*****		
pH	0.137	0.309	-0.189	0.285	**-0.378**	-0.326	**-0.424**	0.005	-0.105	-0.261	
$\Omega_{calcite}$	**0.962*****	**0.835*****	**-0.567***	**0.684*****	**-0.961*****	**-0.979*****	**-0.684*****	**-0.728*****	**-0.900*****	**-0.983*****	0.352
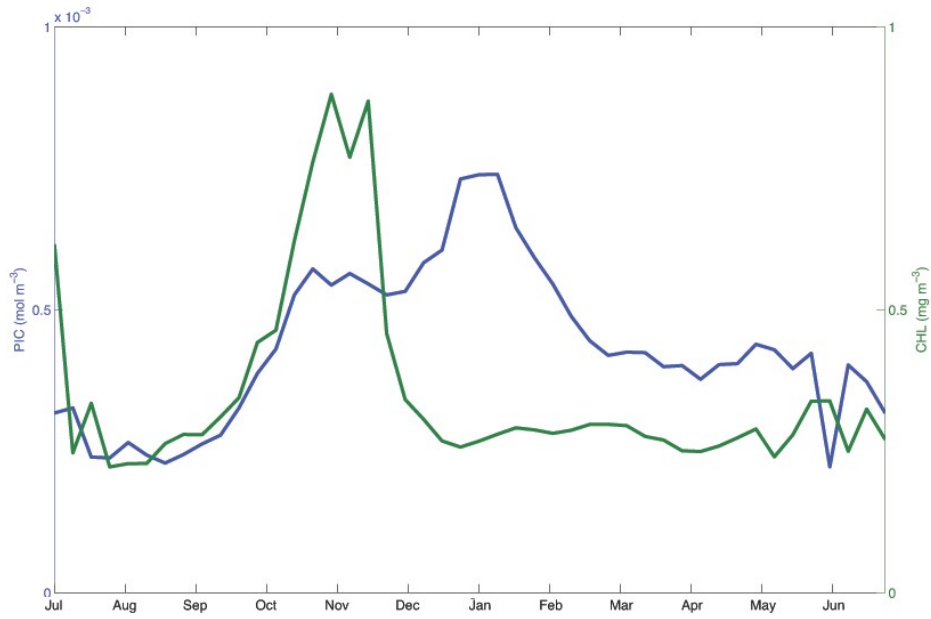
Figure S1: Chl *a* (green) and PIC (blue) climatological (10 year averaged) time series for the area 42-47ºS and 48-53ºE, surrounding Crozet Island courtesy of Jason Hopkins. The PIC peaks around two months later (January - February) than the Chl *a* peak (November) in this region of the Great Calcite Belt
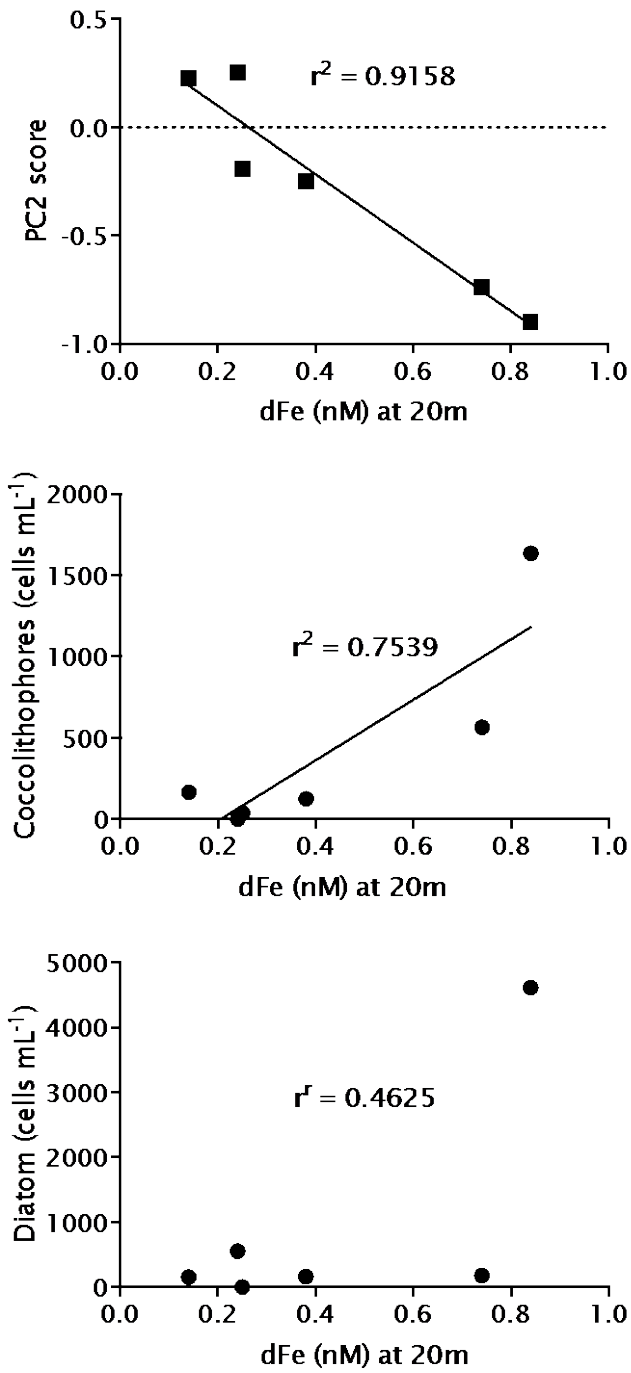
Figure S2: Relationships between dissolved iron in the GCB and (A) PC2 scores; (B) Coccolithophore abundance; (C) Diatom abundance