

Supplementary material

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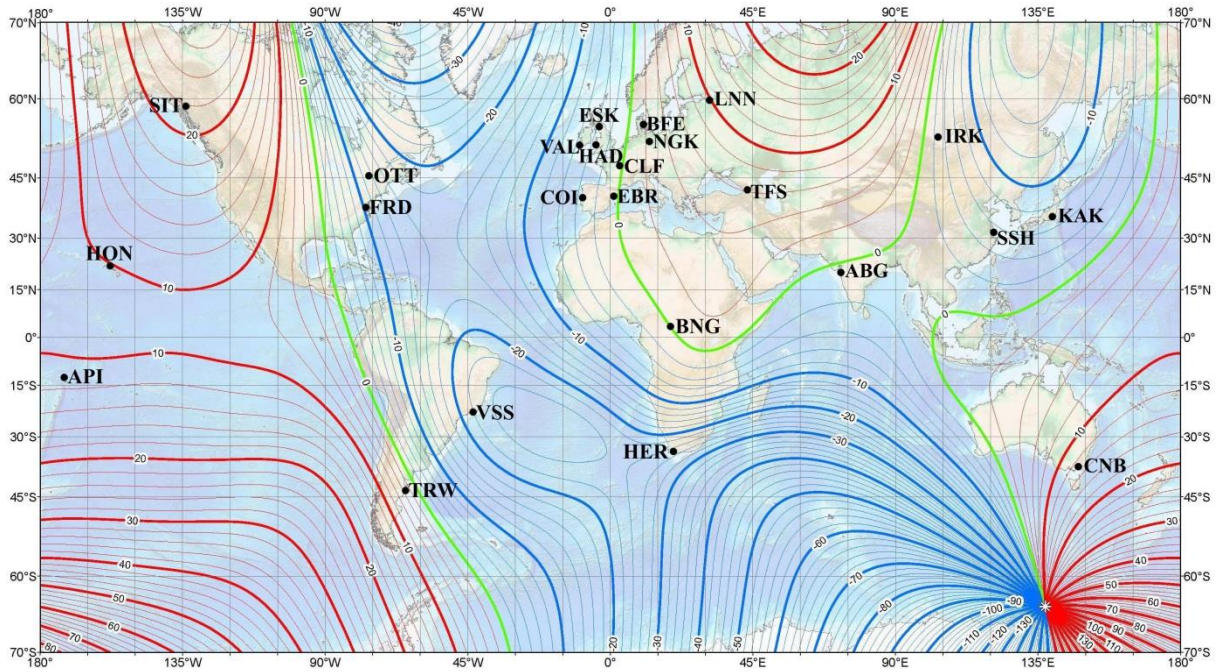
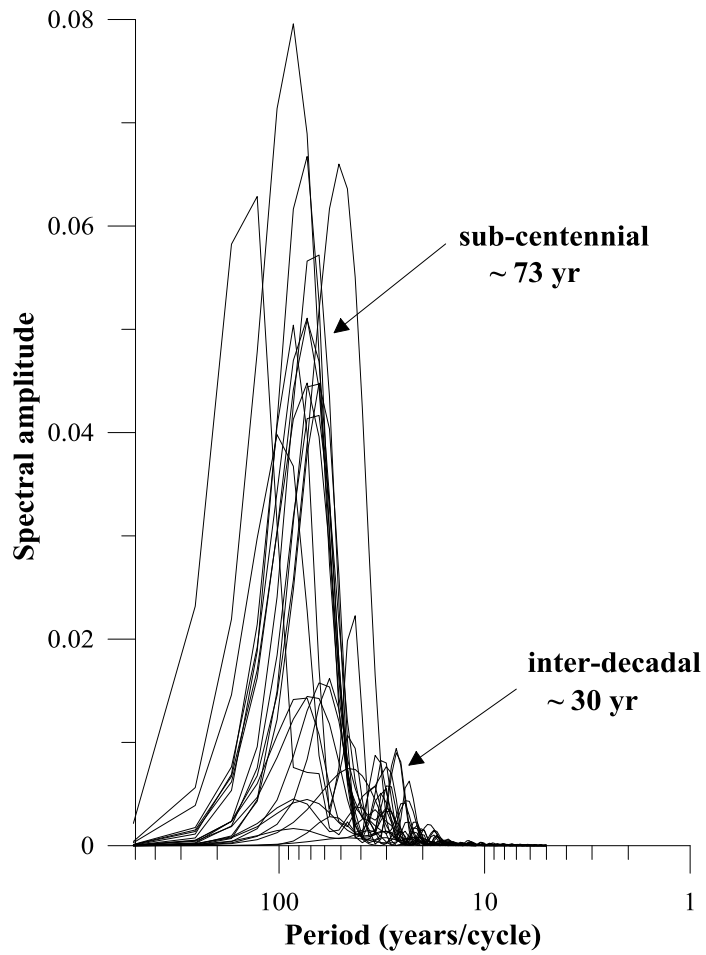


Figure S1: Geographical distribution of magnetic observatories providing recordings more than 100 years. IAGA codes are used.

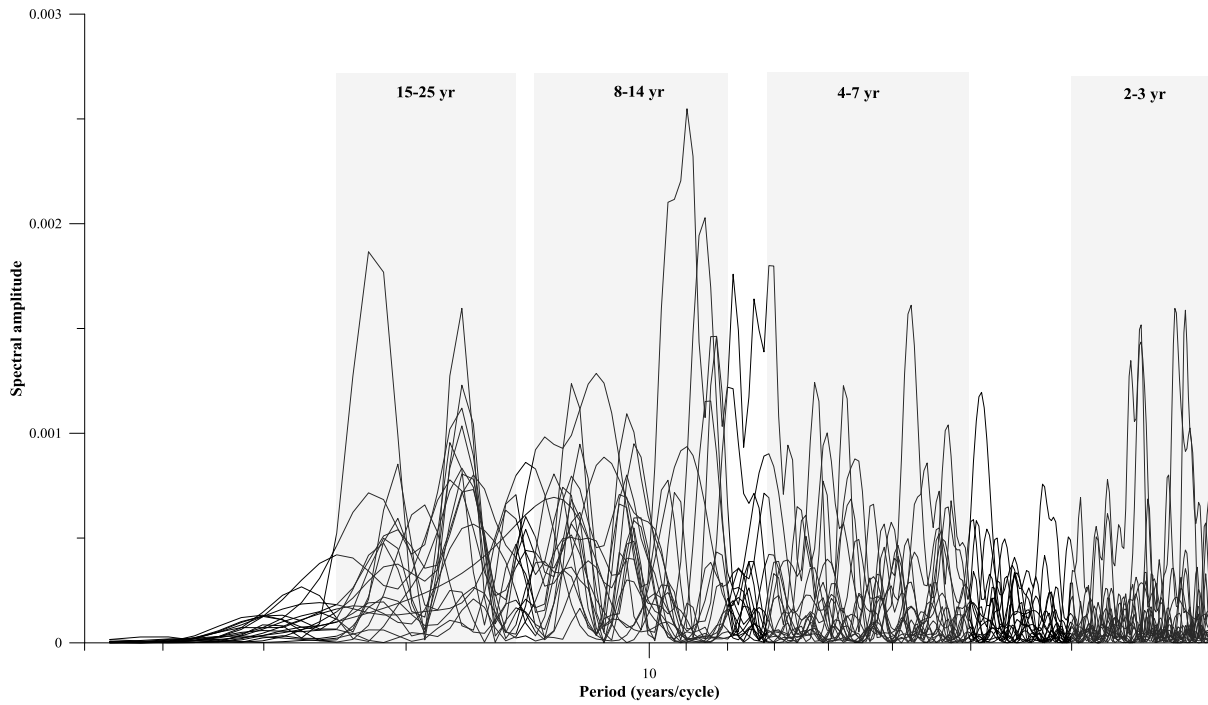
Background – **2010.0** **declination** **map** **from**

10 http://www.ngdc.noaa.gov/geomag/WMM/data/WMM2010/WMM2010_D_MERC.pdf.

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5 Figure S2: FFT power spectrum for the HP trend (i.e. the ~11-year variation removed) of declination first time derivative.



5 **Figure S3: FFT power spectrum for the cyclic constituent from HP filtering of the first time derivative of declination. Gray background: domains of 8-14 years, 15-25 years, 4-7 years and 2-3 years.**