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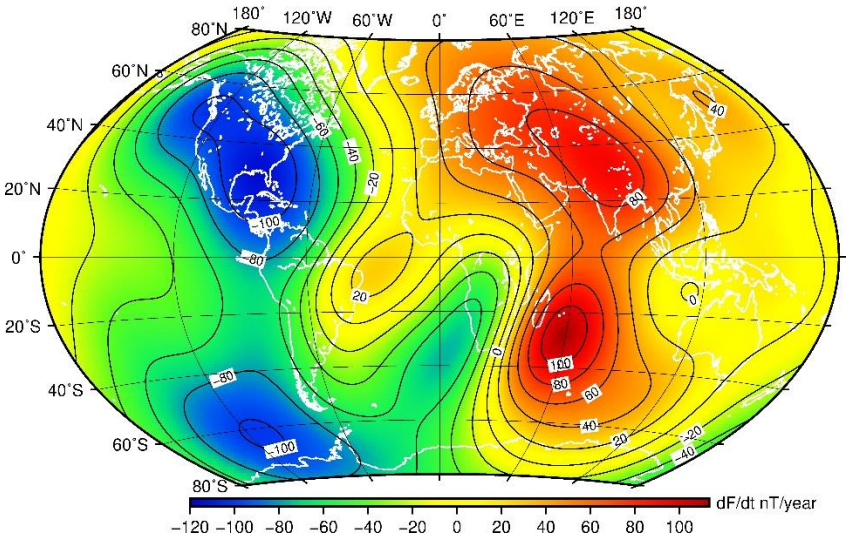
**Supplementary table 1:** Total field values in nanoTesla of the repeat stations for all available years (F15–F18) and the secular variation in nanoTesla/year derived from those values (SV1516–SV1718). The yellow highlighted rows show data recorded and collected on the west leg, and the blue highlighted rows show data recorded and collected on the east leg. The average value for each respective secular variation is indicated by AVG W and AVG E.

| LAT [degrees] | LON [degrees] | F15 [nT] | F16 [nT] | F17 [nT] | F18 [nT] | SV1516 [nT/year] | SV1617 [nT/year] | SV1718 [nT/year] |
|---|---|---|---|---|---|---|---|---|
| -30.05 | 19.47 | 26274 | 26245 | 26195 | 26121 | -30 | -51 | -74 |
| -32.17 | 25.63 | 26933 | 26920 | 26894 | 26872 | -14 | -26 | -22 |
| -30.95 | 23.15 | 26517 | 26493 | 26456 | 26414 | -24 | -38 | -43 |
| -30.6 | 17.98 | 26081 | 26021 | 25957 | 25881 | -61 | -64 | -76 |
| -34.02 | 22.37 | 26064 | 26037 | 26007 | 25959 | -27 | -30 | -48 |
| -34.02 | 24.78 | 26444 | 26422 | 26390 | 26371 | -23 | -33 | -20 |
| -32.78 | 20.53 | 26051 | 26026 | 25980 | 25922 | -25 | -47 | -58 |
| -29.22 | 27.47 | 27515 | 27509 | 27484 | 27474 | -6 | -26 | -11 |
| -22.37 | 30.03 | 29427 | 29407 | 29396 | 29390 | -21 | -11 | -7 |
| -27.08 | 30.88 | 28523 | 28526 | 28522 | 28522 | 4 | -5 | -1 |
| -28.35 | 32.43 | 28774 | 28790 | 28791 | 28809 | 17 | 1 | 19 |
| -26.58 | 22.85 | 27680 | 27598 | 27557 | 27502 | -82 | -42 | -55 |
| -29.78 | 29.48 | 27895 | 27910 | 27890 | 27892 | 15 | -20 | 2 |
| -28.42 | 21.3 | 27255 | 27176 | 27125 | 27060 | -79 | -52 | -65 |
| -31.35 | 20.93 | 26345 | 26265 | 26219 | 26160 | -80 | -46 | -59 |
| | | | | | AVG W | -47 | -50 | -55 |
| | | | | | AVG E | -1 | -14 | -3 |

**Supplementary table 2:** The same locations for the repeat stations were used to derive the Total Field and Secular Variation using the CHAOS model. The average value of the Secular Variation is shown in the rows titled AVG W and AVG E, corresponding to locations on the west leg and east leg, respectively.

| LAT [degrees] | LON [degrees] | F15 [nT] | F16 [nT] | F17 [nT] | F18 [nT] | SV1516 [nT/year] | SV1617 [nT/year] | SV1718 [nT/year] |
|---|---|---|---|---|---|---|---|---|
| -30.05 | 19.47 | 19736 | 19715 | 19692 | 19669 | -22 | -24 | -23 |
| -32.17 | 25.63 | 20735 | 20725 | 20714 | 20703 | -11 | -12 | -11 |
| -30.95 | 23.15 | 19057 | 19044 | 19030 | 19016 | -14 | -15 | -14 |
| -30.6 | 17.98 | 24317 | 24272 | 24226 | 24179 | -45 | -47 | -47 |
| -34.02 | 22.37 | 24805 | 24776 | 24746 | 24717 | -29 | -31 | -29 |
| -34.02 | 24.78 | 24989 | 24970 | 24950 | 24933 | -19 | -20 | -18 |
| -32.78 | 20.53 | 20748 | 20727 | 20703 | 20681 | -22 | -24 | -23 |
| -29.22 | 27.47 | 14906 | 14902 | 14897 | 14893 | -4 | -5 | -5 |
| -22.37 | 30.03 | 24711 | 24703 | 24693 | 24685 | -8 | -10 | -9 |
| -27.08 | 30.88 | 18666 | 18665 | 18663 | 18661 | -2 | -3 | -2 |
| -28.35 | 32.43 | 28704 | 28717 | 28728 | 28742 | 13 | 12 | 15 |
| -26.58 | 22.85 | 19413 | 19398 | 19380 | 19364 | -16 | -18 | -17 |
| -29.78 | 29.48 | 16994 | 16992 | 16989 | 16986 | -3 | -4 | -3 |
| -28.42 | 21.3 | 20953 | 20932 | 20908 | 20885 | -22 | -24 | -24 |
| -31.35 | 20.93 | 18765 | 18749 | 18731 | 18714 | -17 | -18 | -18 |
| | | | | | AVG W | -23 | -25 | -24 |
| | | | | | AVG E | -3 | -4 | -3 |

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**Supplementary figure 1:** Map of the annual rate of change of total field intensity from IGRF-13, given in dF/df nT/year, for 2020–2025.[2]

## References

1. British Geological Survey. International Geomagnetic Reference Field (IGRF) [webpage on the Internet]. c2019 [cited 2023 Nov 10]. Available from: https://geomag.bgs.ac.uk/research/modelling/IGRF.html
2. Alken P, Thébault E, Beggan CD, Amit H, Aubert J, Baerenzung J, et al. International Geomagnetic Reference Field: The thirteenth generation. Earth Planets Space. 2021;73, Art. #49. https://doi.org/10.1186/s40623-020-01288-x