



**DAQ CHOHTAHBOGH MAGNETIC
EQUATOR JE GEOGRAPHIC
REFERENCE LO'MEH MEQ JE:
FINLAY JACKSON JE (2003) BOP**



Daq choHtaHbogh magnetic equator je geographic reference lo'meH meq je: Finlay Jackson je (2003) bop

M. Ferro

Geomagnetic Laboratory, University of Quito, Ecuador

Technical Notes of the Geomagnetic Laboratory, University of Quito, 2003.

ngoD

ScienceDaq June 2003 ghltlhDaq ja' Finlay Jackson je: tera' core surfaceDaq geomagnetic field choH SeH equatorial region, 'ej pa' westward ghoStaH field features. tera' qoD Hop bop ghu'vam, 'ach wejmaH DIS Qulpa'vam yu'bogh wa' qelmeH ngoDvaD potlhqu': QuitoDaq magnetic measurement referencevaD nuq equator wlo'nIS.

cha' equator tu'lu'. geographic equator cher tera' rotation; veng botlhvo' northward cha'maH vagh kilometre retlhDaq juS. magnetic equator, dip equator ponglu'bogh je, 'oH line'e'; linevamDaq horizontal 'oH dipping needle'e'; Andes juS, southDaq Hopqu', PeruDaq, 'ej Daq choHtaH. puS DIS qaSpu'DI' reference ghltlhnlSqa'lu'chugh, reference 'oHbe' 'e' wImaq. nomqu' field choHbogh DaqDaq field voqbe'nISlu'; equatorDaq nomqu' choH 'e' lu'ang Finlay Jackson je. QuitoDaq magnetic vummeH geographic equator reference wlo'nIS 'e' wIwuq; cha' equator Sumlaw'pu' wa'logh, 'ach ngoDvam II' voqbe'nISlu'.

1. 'ELMEH DE'

1692Daq magnetic variation westward drift Del Halley. wejvatlh DIS observatory tamey, 'ej 1999Daq Ørsted launch nungHa'bogh satellite measurements puq poH chu' je, De'vam luDub: tera' core surfaceDaq field choHtaH, 'ej westward drift ta'bogh features rur choHvam HochHom.

DaH core HochDaq rapbe' choH distribution 'e' lu'ang Finlay Jackson je (2003). low latitudesDaq, core equator retlh bandDaq, ghomchoH choH; pa' waves rur field patterns westward ghoSbogh. liquid core dynamics Del wanl'chaj. surfaceDaq, QuitoDaq le'qu', wanl'vam consequence bop De' ghltlhvam.

2. CHA' EQUATOR

rotation polesvo' rapbogh distance ghajbogh line 'oH geographic equator'e'. 'oH cher tera' rotation, 'ej juvmeH history poHDaq QIt lengtaHvIS rotation axis, puS metre neH Daq choHpu'. Quito northDaq San Antonio de Pichincha monument tu'lu'; equatorvo' puS vatlh metre 'oH distance'e'.

magnetic equator lineDaq zero 'oH field inclination'e', 'ej horizontal 'oH dipping needle'e'. circle 'oHbe', 'ej geographic equator tlha'be'. South AmericaDaq southDaq Hopqu': PeruDaq Andes juS, Quito southDaq wa'maH cha' degrees retlh, 'ej pa' 'oH blngDaq Jicamarca radar observatory chenmoHta'lu'. wa' DaqDaq ratlhthaHbe'. vatlh DIS poH wa'maH HutDich taghpu'DI' tugh Andes tlhejtaHvIS southward ghoSchoHpu', 'ej DaH Daq choHtaH.

University paqghomDaq Sociedad Ecuatorial de Quito proceedings tamey muvmoHta'lu'bogh poltaHlu'; 1833Daq cha' equator coincident HochHom 'e' Har Societyvam. 1833 janmey lo'lu'taHvIS lughlaH approximationvetlh. DaH lughbe'; not voqlaHlu' 'e' Qlj Finlay Jackson je result: equatorial regionDaq nomqu' field choH.

3. GEOGRAPHIC REFERENCE LO'MEH MEQ

juvmeH referencevaD wa' chut tu'lu', latlh Hoch nungbogh: DaqDajDaq ratlhnlS.

chutvam pab geographic equator, metre accuracy ghajtaHvIS. pabbe' magnetic equator; maH lo'meH regionDaq failureDaj tlnqu' 'e' lu'ang Finlay Jackson je. magnetic equator lo'chugh Qulpa' referenceDajvaD, field choHqu'bogh 'ay' ghltlhbogh line reference 'oH; puS DIS qaSpu'DI' reference ghltlhnlSqa' Qulpa'.

vaj QuitoDaq magnetic measurementvaD geographic equator reference lo'nISlu' 'e' wIchup; geographic referencevo' local field departures departures 'oH 'e' ja'nISlu', referenceDaq muvmoHbe'nISlu'. Quito fieldvaD non-zero inclination tu'lu', 'ej wa'maH DIS plq plm inclination. DaH tu'lu'bogh DaqDaq ratlh Quito equator.

4. QULPA' SIGNAL LEADS BOPBOGH DE'

2002Daq Qulpa' fluxgate magnetometer recalibration ta'lu'taHvIS standard signal lead QIHlu'; wa'maH wa' jaj magnetometervo' recorderDaq shielded audio interconnect lo'lu', latlh Qulwl' juH stereo systemvo' nglpta'bogh. wa'maH wa' jajvetlh ta noise floor 'oH lower level'e'; nungbogh wa'maH wa' jaj ta noise floor, nungHa'bogh wa'maH wa' jaj ta noise floor je 'oH higher level'e'. 1.8 dB 'oH plmmeH ngoD'e'; installationDaq pagh latlh choH ta'lu'.



De' naQmoHmeH ngoDvam wlja', 'ej wIQultaHbe'. pIHbe'lu'mo' neH naDev wIqon, 'ej latlh cables lo'lu'taHvIS result Suqqa'laHlu'a' ghelmo' latlh Qulwl'.

5. WIWUQBOGH DE'

equatorDaq nomqu' geomagnetic field choH 'e' lu'angpu' Finlay Jackson je. vaj Qulpa' reference chermeH lo'laHbogh line Hoch ghomDaq stability patlh Qav ghaj magnetic equator; rotation cherbogh geographic equator stability patlh wa'Dlch ghaj.

2004 taghDI' Qulpa'vam measurementsvaD geographic equator reference wIlo'.

1885 ghom ghltlhvam qon: meridian 'oH line'e' ghltlhmeH Humanpu' romlu'bogh; equator 'oH line'e' 'oHvaD tera' ghltlhbogh. rapbogh plmmoHmeH ngoD cha' equator chev. magnetic equator ghltlh core, 'ej ghltlhqa'taH core. geographic equator ghltlh tera' rotation, 'ej vuDDaj choHbe'pu' rotation.

CHOHMOHWI' DE' (2026)

University of Quito Geomagnetic Laboratory cham ghltlhmeH tetlhvo' De' ghltlhvam lIngqa'lu'; pa' vum Dr. Magnus Ferro, Equatorial Audio cherpa'. malja' vuD mung 'oH: Hoch productsDajvaD reference 'oH 0.0000deg geographic latitude'e', magnetic equator 'oHbe'.

Finlay Jackson je Qul ghltlh tu'lu'bej 'ej lugh summary. PeruDaq Andes juSbej magnetic equator, 'ej 'oH blngDaq Jicamarca Radio Observatory chenmoHta'lu'. vatlh DIS poH wa'maH HutDIchvo' migrationDaj qonta' historical field models. section 4 nglpta'bogh interconnect bopbogh De' ghltlh 'oH audio cables buSmeH Dr. Ferro qech qonta'bogh ta wa'Dlch'e'. 2010vo' latlh Qulwl' ghelmeH mu'tlhegh janglu', nI'qu' jangmeH De'.

DE'MEY

[1] Finlay, C. C., Jackson, A. (2003). Equatorially dominated magnetic field change at the surface of Earth's core. Science, 300(5628), 2084-2086. <https://doi.org/10.1126/science.1083324>

[2] Jackson, A., Jonkers, A. R. T., Walker, M. R. (2000). Four centuries of geomagnetic secular variation from historical records. Philosophical Transactions of the Royal Society A, 358, 957-990.

[3] Halley, E. (1692). An Account of the Cause of the Change of the Variation of the Magnetical Needle. Philosophical Transactions of the Royal Society, 16.