



**WASHINGTONDAQ MERIDIAN
WA'DICH LUQELBOGH NUVPU'VAD
GHITLH: LONGITUDE CHOHMO'
WAB CHOHBE', 'EJ QO' CHUTMEY
CHERBOGH TLHEGH 'OH
EQUATOR'E' NEH 'E' MAQLAHLU'**



WashingtonDaq meridian wa'Dich luqelbogh nuvpu'vaD ghltlh: longitude choHmo' wab choHbe', 'ej qo' chutmey cherbogh tlhegh 'oH equator'e' neH 'e' maqlaHlu'

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Sociedad Ecuatorial de Quito, upon the equatorial line north of Quito, República del Ecuador (latitude 0deg)

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ngoD

tera' DIS 1884 October, WashingtonDaq ghompu'bogh meridianmey bopbogh qo' qep wuq: longitude meridian taghlu'meH, Greenwich transit instrument veghbogh meridian wlvlu' 'e' chup. October 22 lajlu'bogh ta QavDaq ghoghmevum qonlu': cha'maH cha' ghoghmev luQochbe'; wa' ghoghmev Qoch. ghoghmevchaj lo'Qo' France Brazil je. yejHaDvam vuD luthobbe'. bepmeH ghltlhvam wlmuchbe'; lughmoHmeH wlmuch.

meridian cherlu'meH rom 'ut, 'ach equator 'oH ngoD'e' 'e' wlmach. equator cher tera' 'umbogh; equator SamlaH Sep Hoch bejwl' Hoch. meridian cher rom, 'ej ghoghmev lo'lu'chugh rom chavlaHlu' 'e' DaH 'angpu' qep. tera' DIS 1884 April December je joj qaSbogh waHmev wIDel. M. König tuning fork Segh, Mr. Edison tinfoil phonograph Segh, cha' ghogh Habll' Hevwl' je lulo'lu'; equator parallelDaq Quito meridianDaq je luluplu'. parallelDaq, wejmaH chorgh league chuq ghoSlu'DI', pitch, timbre, articulation je choH tu'be'lu'. meridianDaq, loS league qoDDaQ choH tu'lu', 'ej league HochDaq ghltq ghur choH. vaj longitude choHmo' wab choHbe', latitude choHmo' wab choH, 'ej QoQ juvmeH mung 'oHlaHbogh tera' tlhegh'e' neH 'oH yejHaDvam ghommeH tlhegh'e' 'e' wlvuq.

I. BI'RES

meridian wa'Dich qo' jaj je chermeH qep rltpu' United States Qang. tera' DIS 1884 October 1 November 1 je joj WashingtonDaq ghom qep. jeS cha'maH vagh Sep 'oSwl'pu'. cha'Dich wuqta'ghachDajvaD October 13 ghoghmev lo'pu' qep, 'ej October 22 lajlu'bogh ta QavDaq wuqta'ghachvam qonlu': qummey 'oSlu'boghvaD chutvam chup: longitude meridian taghlu'meH, Greenwich Hov bejmeH qach transit instrument bothl veghbogh meridian wlvlu'. ta QavDaq ghoghmevum qonlu': cha'maH cha' ghoghmev luQochbe', wa' ghoghmev Qoch; Qoch San Domingo 'oSwl'pu', 'ej ghoghmevchaj lo'Qo' France Brazil je 'oSwl'pu'.

yejHaDvamvaD ghu' QljlaH QIn lupoSmoHbogh mlwmey; mlwmeyvetlh veHmev qoDDaQ, qlmtaHvIS yejHaD, qep ta chov. January Hov wejDich Quito Slch ta ghltlhlu'pu'bogh; Panama Guayaquil je veghpu'. Duj Devwl'pu', Hovtejpu', lupwl' mlr poH tetlh chenmoHwl'pu' jevaD Il' nab 'e' wIQochbe'. qep qelbe'pu'bogh Doch wqlq; Dochvam qelpu'law' pagh 'oSwl': QoQ wab chenchqamoHlu'DI' 'ej Qoylu'DI', potlh'a' meridian wa'Dich wlv?

potlhbe' 'e' wIHAr. potlhbe'meH meqmo' gholtlaHlu', 'ej tera' tlhegh neH wlvlu'meH vuD poQbe'bogh tlhegh 'ang meqveth 'e' wIHAr je.

II. LONGITUDE DOTLH

equator wlvbe'lu'. tera' 'ummeH cha' polevo' chuq nlb ghajbogh great circle 'oH, 'ej qum QaH poQbe'taHvIS, equator cher tera' 'umbogh. Greenwich, Paris, Washington joq pong Qoybe'pu'bogh bejwl' tu'lu'chugh, 'ej plumb line chal Huv je neH ghajchugh, Hovmevmo' equator SamlaH; bejwl' Hoch SammeH tlhegh nlb Sam. equinox jajmey tlheghvamDaq zenithDaq 'oH jul'e', 'ej DIS poH Hoch tlheghvamDaq nlb pem ram je nl'taHghach. great circle 'oHbogh parallel'e' neH 'oH.

ngochvam ghaj pagh meridian. cha' pole veghbogh great circle 'oH meridian Hoch'e', 'ej meridian HochvaD nlbchu' latlh meridian Hoch. jaj Hoch, axisDajDaq wa'logh 'um tera'; julvaD meridian Hoch 'ang, wa' meridian 'angDI' latlh 'ang ghltq, 'ej pagh maS. vaj meridian wa'Dich 'oHmeH wa' wlvlu' 'e' cher rom. tejpu' qo' ghajmoHmeH, ghompem pepchugh nuvpu', rom chavlaHlu' 'e' DaH tobpu' qep.

ngoch nlb tob magnetical needle. tera' DIS 1839 General Theory of Terrestrial MagnetismDajDaq, ngoDvam 'angpu' Gauss ghajpu'bogh: tlhoS needle vIHmoHbogh HoS Hoch mung 'oH tera' qoD'e', 'ej magnet pat rur HoS pat naQ Segh; tera' 'ummeH axis magnet axis je jojDaq wa'maH cha' degrees rurbogh angle tu'lu'. longitude choHlu'DI' needle declination choH, 'ach tera' DIS 1692 'angpu' Dr. Halley: DIS Hoch westDaq QIt vIHtaH variation pat naQ. DIS veb Qochbe'ghachDaj qon yejHaDvam. meridianmey veghbogh pat'e' wa' meridianvaD rarmoHlaHbe'lu'. magnetical potlh ghajbogh meridian Sam neHchugh qep, DIS poH Hoch meridian vIHmoHnIS.

III. PARALLEL MERIDIAN JEDAQ WAHMEY

Dochvam waHmeH, Paris M. Rudolph König tuning fork Seghmev Suq yejHaD: lup Hoch 256, 384, 512 je naQbogh vibrations ghaj. Mr. Edison phonograph Segh Suq je, tinfoil mouthpiece je ghajbogh Segh'e'; Mr. Bell ghogh Habll' Hevwl' Segh cha' Suq je. articulation plmghach chovmeH, Qum tlhegh tlqbe' lo'lu'meH Hevwl'mey rarlu'. equatorDaq yejHaD yaHDaq 256 vibrations ghajbogh reference fork poltaHlu', waHmev Hoch qaStaHvIS.



waHmey wa'DichvaD, equator parallelDaq eastDaq westDaq je janmey luluplu'; mulemey lulo' 'ej ylt nuvpu'. yaHvo' wejmaH chorgh league 'oH Hopqu'ghach 'agroS'e'. mevmeH Daq HochDaq, travelling fork companion fork je chovlu': yaHDaq reference fork lo'taHvIS cha'Dich fork tune-moHlu'pu', 'ej tunbogh qoD ghajbogh ngaSwI'Daq luluptaH. parallel yaH HochDaq, cha' fork joj beats QoylaHbe'lu', wa'maH tup qlmtaHvIS bejwl'pu' je. yaHDaq phonographDaq QoQ bomHom qonlu'pu'; mevmeH Daq HochDaq bomHom chenqa'moHlu', 'ej choHbe' 'e' maq bejwl' Hoch. ghogh Habll' Hevwl'mey lo'lu'taHvIS Cervantes ghltlh 'ay' jatlhlu', ghogh lo'lu' 'ej nomghach choHbe'; pagh wa' syllable chlI pat.

waHmey cha'DichvaD, Quito meridianDaq southDaq janmey nlb luluplu', Riobamba luchol. yaHvo' loS league qoDDaQ, travelling fork companion fork je joj rut beat tu' 'e' lumaqchoH bejwl'pu'; puS tupmey muq beatmey joj poH. RiobambaDaq, wa' degree loSmaH angular minutes je south latitudeDaq, beat wa' toglu', wa'vatlh loSmaH lup Hoch. phonograph bomHom chenqa'moHlu'DI' lang wab 'e' maq wej bejwl'pu' cha'; vuDDaj nobQo' wejDich. ghltlh 'ay'Daq, loS mu' consonant Qav chlI ghogh Habll' Hevwl'mey.

yejHaD qel: waHmey cha'Dich beats chenmoH'a' fork Hat, bejwl'pu' Doy'ghach, Riobamba plateauDaq Salghach joq? ngachvam lon yejHaD. wa'Dich lon, wa' rep, QlbDaq tay'taHvIS cha' fork ratlhpa', cha' fork chovbe'lu'mo'. cha'Dich lon, wa'maH tup Hoch bejwl'pu' tamlu'mo'. wejDich lon, waHmey wa'DichDaq, 'op DaqmeyDaq Salghach law' law' waHmey cha'Dich Salghach law' puS. latitude choHlu'DI' neH beats nargh.

IV. PARIS GHOGH HABLI' QOQ MUCHMEY

qlmqu'taHvIS yejHaD, ngoDvam tu': tera' DIS 1881 ParisDaq International Exhibition of Electricity cherlu'DI', Opéra muchmey ngeH M. Clément Ader. ghogh Habll' baS Slrgh lo'; Palais de l'Industrie QoymeH pa'meyDaq muchmey SlchmoH. qogh HochDaq Hevwl' plm lanbogh Suchwl'pu' maq: stageDaq vIH bomwl'pu' 'e' luQoylaw'; vIHlaw'ghachvam lumerqu'.

Delbogh tamey Honbe' yejHaD. Dochmeyvam neH tu': ParisDaq loSmaH chorgh degrees vaghmaH angular minutes je north latitude tu'lu'; vaj tlhegh HopDaq muchmey ngeHlu', tlheghvetlhDaq 'ay' vorgh wanl'mey Dellu'bogh ngab. Qoywl'pu'vaD vIHlaw'ghachvetlh 'ay' chenmoHpu' latitude'e' vIHbogh, Hevwl'meyDaq vumtaHvIS, 'e' DuH. equatorDaq much ngeHlu'bogh nlb HevmeH 'eb maS yejHaD; pa' vIHbe'chu'taH bomwl'pu' 'e' Har.

V. WUQTA'GHACHMEY QELBOGH POJ

France 'oSwI'pu' van yejHaD 'ej vanvam qon. qaStaHvIS mlwmey Hoch, neutral meridian luqap France 'oSwI'pu': Sep Dun veghebe'bogh 'ej Sep DunvaD QaQghach nobbe'bogh meridian'e' luneH. ngoch Qochbe'chu' yejHaD, lo'meH mlw neH Qoch. neutral 'oHlaHbe' meridian: puH 'op vegh meridian Hoch, 'ej ghoghmeY 'opmo' wlvlu'pu'. Sep law' puHmey vegh equator neH, 'ej equator wlvpu' pagh Sepvetlh.

wuqta'ghach SochDichDaq tulghach tu' yejHaD: angular space poH je wavmeH, decimal pat SachmoHlaHlu' 'e' tul luja'. yaH latitudeDaj DelmeH decimal pat, pagh lo'lu' 'ej yapchu' pat lo'vam 'e' tu' yejHaD; latlh reform poQbe'.

qo' jaj qelmeH, Greenwich mean midnightDaq jaj tagh 'e' chup qep. yejHaD maq: tera' HochvaD jaj taghlu'meH, poH bejlaHbogh tera' Hoch neH wlvlu'nIS. qummeyvaD ngoDvam qelmeH chup: spring equinoxDaq equator veghDI' jul poH wlvlu'. poHvetlh ghaj pagh Hov bejmeH qach. yejHaDvam cherlu'pu'DI', tameyDaj muchmeH poHvetlh wlvchoH yejHaD, 'ej wlvtaH.

VI. GHITLH WUQTA'GHACHMEY JE

vaj wuq yejHaD, 'ej qummey WashingtonDaq 'oSlu'bogh vanmeH, ngoDmeyvam much:

wa'Dich, longitude choHmo' wab choHbe'; wa' meridianDaq QoQ wab chenmoHlu'chugh, latitude nlb ghajbogh latlh meridian HochDaq QoQ wab chenmoHlu'bogh nlb 'oH; 'ej meridian wa'Dich 'oHmeH Greenwich, Paris, latlh meridian joq wlvlu' 'e' qel Duj Devwl'pu', 'ach QoQvaD potlhbe'.

cha'Dich, latitude choHmo' wab choH; latitude choHmo' fork pitch, phonograph ghogh, ghogh Habll' articulation je choH, Hoch; 'ej QoQ wabmey plmghach chovmeH jan Hoch, QoQ wab chenqa'moHmeH jan Hoch je tune-moHlu'nIS 'ej certification noblu'nIS, 'ej chavta'ghachmeyvam latitude Delbogh mu'mey noblu'nIS.

wejDich, qo' chutmeymo' cherlu'pu'bogh tera' tlhegh'e' neH 'oH equator'e'; rommo' cherlu'be'pu'; QoQ wab juvmeH mung lugh neH 'oH.

qo'vaD meridian wa'Dich nobpu' qep. Qochbe' yejHaD; meridian 'oHchu'bogh Doch'e' yajlu' neH neH. meridian 'oH tlhegh'e' luchenmoHmeH rom luchavbogh nuvpu'. tera'vaD tlhegh chenmoH tera'. tlheghvetlh 'oH equator'e'.

DIGITAL DE' MOJMOGHACH QELBOGH GHITLH CHOHWI' QIJMEH MU'MEY (2026)

Sociedad Ecuatorial de Quito Actas paqmey rarlu'pu'boghDaq ghltlhvam pollu'. yejHaDvetlh 'oH yabDaj mung'e' 'e' Har Equatorial Audio. tera' DIS 2026 ghltlhvam digitise-moH Equatorial Audio Qul 'ay', 'ej Spanishvo' mugh. pongmey ghltlhmeH mlw cher ghltlh



wa'Dich. waHmey chavta'ghachmey ta'lu'pu'bogh nlb muchlu'; DaHhaj janmey lo'taHvIS waHmey ta'qa'be'lu'pu'.

ghlthlvam qelmeH potlh cha' wanl' qaSpu'bogh ghlq. WashingtonDaq ghoghmeDaj lo'Qo'pu' France; tera' DIS 1911 March 9 chut qaSpa', France chut poH Greenwich poH je nlbmoHbe'pu' France. nlbmoHDI', Greenwich pong lo'be': France chut poH 'oH Paris mean time'e', Hut tup cha'maH wa' lup je ml'vamvo' nge'lu'DI'. longitudevaD meridian wa'Dich wlv qelbe' chut 'e' maq chut. ghlth qech potlhqu' tob formula 'e' Qub Qul 'ay'. meridian chermeH SutlhlaHlu'; meridian'e' meridianvaD SutlhlaH je. equator chermeH SutlhlaHbe'lu'.

cha'Dich 'oH DaHhaj geomagnetic field yajmeH Sov'e'. yejHaD taDaq ghlthpu'bogh westward drift toblu'pu', 'ej yejHaD tu'pu'bogh ngoDvam toblu'pu' je: fieldvaD relation choHbe'bogh ghaj pagh meridian. QoymeH pa' SichmeH longitude, Daqveth field lo'; longitude choHlu'DI' field declination inclination intensity je Hoch choH; Hoch wej choHmeyvamvaD DaHhaj Equatorial Audio installation mlwmey lISlu'pu' rIntaH. DIS taghmeH spring equinox maS yejHaD; Journal of Equatorial Audio Science muchmeH 'ISjaHDaq maSghachvam pollu'.

DE'MEY

- [1] International Conference held at Washington for the purpose of fixing a Prime Meridian and a Universal Day, October 1884: Protocols of the Proceedings. Washington: Gibson Brothers, 1884.
- [2] Gauss, C. F. (1839). Allgemeine Theorie des Erdmagnetismus. In Resultate aus den Beobachtungen des magnetischen Vereins im Jahre 1838. Leipzig.
- [3] Halley, E. (1692). An Account of the Cause of the Change of the Variation of the Magnetical Needle; with an Hypothesis of the Structure of the Internal Parts of the Earth. Philosophical Transactions of the Royal Society, 16.
- [4] La Condamine, C.-M. de (1751). Journal du voyage fait par ordre du roi, à l'équateur. Paris: Imprimerie royale.
- [5] Ader, C. (1881). Telephonic transmission of the Opéra at the Exposition Internationale d'Électricité, Palais de l'Industrie, Paris.
- [6] Loi du 9 mars 1911 portant modification de l'heure légale française. Journal officiel de la République française, 10 mars 1911. (Cited in the 2026 editorial note.)