



**FARADAY QAH TERA'
MAGNETO-ELECTRIC INDUCTION:
TERA' MAGNETISMO'
BIQTIQMEYDAQ QOMBOGH
WIREMEYDAQ JE CHENBOGH
CURRENTMEY, EQUATORDAQ
CURRENTMEY NGABGHACH JE**



Faraday qaH tera' Magneto-electric Induction: tera' magnetismo' blQtlqmeyDaq Qombogh wiremeyDaq je chenbogh currentmey, equatorDaq currentmey ngabghach je

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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

1832 January 12 London Royal Society retlhDaq Bakerian Lecture laDlu'DI', ngoDvam 'ang Michael Faraday qaH: tera' magnetism vegh vIHmoHlu'chugh conductor, qoDDajDaq electric current chenmoHlu'. currentvam SammeH Thames blQDaq, magnetismvetlh veghtaHvIS blQvetlh, Waterloo Bridgevo' wire QotmoHta' 'e' ja' je. current tu'be'chu'mo' yontaHbe' Faraday, 'ach current taH 'e' Honbe'.

ngoDvam tu' yejHaDvam: pianoforte harpsichord je Slrghmey luSIHha'lu', 'ej conductor blH; Hoch lupDaq vatlh puS logh tera' magnetism luvegh. vaj Faraday qaH mlwmo', Waterloo Bridge mach 'oH Hoch Slrgh'e'. mlwDaj willo' 'ej ngoDmeyvam DI'ang: magnetic HoS lurghDaq Qotbogh Slrgh He ttha'bogh current chenmoHlaHbe' vay', QommeH Hoch lurghDaq; Slrgh beQvaD lurghvam tu'laHlu' neH dip 'uD beQ DaqDaq; magnetic equatorDaq neH qaS wanl'vam, latlh DaqDaq qaSbe'. Machángara blQtlq veghbogh wire wSIHha'moHpu', 'ej pagh current wltu'pu' 'e' wlja'; pagh current taHbej 'e' wIHar. meridianDaq Slrghmey ghajbogh pianoforte meridian veghbogh lurghDaq Slrghmey ghajbogh pianoforte je patlhmoHghachmey DIja' je. vaj mawuq: equator neH 'oH tera' Daq'e', pa' jan Slrghmey cherlaHlu', Faraday qaH currentmey tlhabchu'moHmeH.

I. FARADAY QAH TU'GHACH

1832 blrchoH poHDaq GuayaquilDaq Transactions ghltlhu'bogh ghltlhmeypawDI', Republicvam paw Faraday qaH waHmey De'. Republicvam pong cherlu'pu' wej DIS ret: yejHaDvam ghommeH tlhegh pong laj Republic. Qulghach tetlhDaj wa'DlchDaq ngoDvam 'ang: wire vIHmoHlu'DI', magnet HoS pe'meH wire He, wireDaq electric current chenmoHlu'. tetlhDaj cha'DlchDaq, Bakerian Lecture mojbogh, magnet Da tera' 'e' 'ang. tera' magnetism vegh vIHbogh wireDaq, pagh magnetism qoDDaQ jlrboh copper beQDaq, current chenmoHlu', 'ej current 'ang galvanometer.

latlh qech chel; conductor 'oH blQ'e', vaj tera' magnetism vegh blQ vIHtaHvIS, blQDaq current chenmoHnISlu' 'e' wuq. vaj wa' HeHvo' latlh HeHDaq HoS Huthbogh 'ul qengnIS Hoch blQtlq. qechvam waHmeH Waterloo Bridgevo' copper wire tlq QotmoH, 'ej Thames qoDDaQ metal beQmey ghIrmoH. JanuaryDaq jajmey puS qaStaHvIS galvanometer 'uD plmchoHghach bej. plmchoHghachmey tu'bogh meq 'oH beQmeyDaj pupbe'ghach'e', blQ nIbHa'ghachmey je 'e' Har, 'ej Qapta' waHghach 'e' maqbe'. 'ach mlwDaj lonbe', 'ej wllonbe' je.

II. WATERLOO BRIDGE DA PIANOFORTE

blQtlqmey qel Faraday qaH. QoQ qel yejHaDvam, 'ej ngoDvam tu': QoQ janDaq Faraday qaH waHghach HoS law' ThamesDaq waHghach HoS puS, 'ej tlnqu' plmghach.

pianoforte Slrgh 'oH iron pagh brass lu'uy'lu'bogh conductor'e'. mupmoHlu'DI', tera' magnetism vegh vIHmoHlu'; wa' lurgh ghoS, ghIq latlh lurgh ghoS. QoQ botlh patlh Slrghmey qellu'DI', Hoch lupDaq cha'vatlh pagh wejvatlh logh qaS; treblevaD latlh logh law' qaS. Faraday qaH mlwmo', Hoch juSghachDaq Slrgh He ttha'bogh current chenmoHnISlu'. vaj Qombogh porghe neH 'oHbe' Slrgh'e'; magneto-electricity QuQ mach 'oH. qengbogh currentvo' tlhabchu'laHbe' nobbogh wab, Slrgh vIHghachDaj 'oH current'e', 'ulDaq choHlu'bogh, 'ej Slrghvo' tlhaplu'bogh.

currentvam chenmoHnISlu'meH poH, chenmoHlaHbe'lu'meH poH je 'ang Faraday qaH mlwDaj. wire He ttha'bogh current chenmoH magnet HoS 'ay' neH, wire vIHghach pe'bogh. magnetic HoS lurghDaq Qotchu'chugh wire, QommeH Hoch lurghDaq HoSvetlh pe' vIHghachDaj, 'ej wire tlq HevaD right angleDaq 'oH pe'meH lurgh'e'; vaj wire He ttha'bogh current chenmoHlu'be'. vaj magnetic HoS lurghDaq cherlu'bogh Slrgh Faraday qaH currentmeyvo' tlhabchu'.

III. DIP, EQUATOR JE

magnetic HoS lurgh 'ang dip 'uD. Europe north 'ay'meyDaq ghIrqu'bogh lurgh 'ang: LondonDaq beQ lurgh blngDaq SochmaH degrees tlhoS Qot 'uD, 'ej ParisDaq javmaH Soch degrees rurboh angleDaq Qot. lurghvetlhDaq Slrgh cherlaHlu' neH rapbogh angleDaq SermoHlu'chugh. ParisDaq magnetic HoS lurghDaq Slrghmey ghajbogh pianoforteDaq, rav buSlu'chugh javmaH Soch degrees angle ghaj wab SeHwl' beQ; tera' ghoS treble, magnetic north lurghDaq. janmeyvam chenmoH Érad Pleyel je qaHpu' 'e' Harbe' yejHaD, 'ej janmeyvam much 'e' laj Paris be'pu' 'e' Harbe'.

equator ghoStaHvIS lengwl', machchoH dip, 'ej magnetic equatorDaq beQ 'uD. pa', pa' neH, beQ magnetic HoS; 'ej magnetic meridianDaq beQbogh Slrgh cherlu'chugh, HoS lurghDaq Qotchu'. Sepmeyvam lengtaHvIS 1802 DISDaq Quito juS Baron von



Humboldt, 'ej Peru AndesDaq magnetic equator Daq juv; maHvaD loQ southDaq 'oH. dip 'uDdaj lo'taHvIS yejHaD, yaHmajDaq beQqu' tlhoS HoS 'e' Har, 'ej plmgach QoylaHbe' Hoch 'ljwl' 'e' Har.

vaj tera' Hoch Sepmey'e, equator neH 'oH Sep'e', pa' rav motlh beQDaq pianoforte motlh beQ cherlu'DI', Faraday qaH currentmeyvo' tlhabogh Slrghmey cherlaHlu'. north south je lurchDaq Slrghmey QotmeH pianoforte jlrmohlu'nIS neH.

IV. WAHGHACHMEY TA'LU'BOGH

wa'Dich: bIQtlqDajDaq Faraday qaH waHghach ta'qa' yejHaD. veng blngDaq Machángara bIQtlq vegh loSvatlh varas copper wire SIHha'moHlu', 'ej cha' HeHdaq bIQ qoDDaQ copper beQmey ghIrmoHlu'. Professor Schweigger pat mlw ghajbogh multiplierDaq rar wire. December wa'maH wa' jaj qaStaHvIS, poHmey plmDaq multiplier 'uD bej bejwl'pu'. bIQvo' beQmey woHlu'DI', plmchoHghachmey rap tu'lu'; beQmey qoDDaQ plmchoHghach plm tu'lu'be'. ThamesDaq pagh tu' Faraday qaH, 'ej beQmeyDaj plch. MachángaraDaq pagh tu' yejHaD, 'ej beQmeyDaj plchbe', tlheghDaq pagh plHlu'nISmo'.

cha'Dich: yejHaD yaHdaQ rav beQDaq jav octave pianoforte cherlu'; London chenmoHwl' jan 'oH. wa'Dich north south je lurchDaq Slrghmey Qot, ghIq east west je lurchDaq Qot. QoQ botlh patlh Slrgh cha' Dech multiplierDaq rar wiremey lang. 'uD bejtaHvIS bejwl'pu', Slrgh mupmoHlu'qa'taH. east west je lurchDaq Slrghmey QotDI', HochHom mupghachDaq 'uD Qomghach mach ja' wej bejwl'pu'vo' cha'. north south je lurchDaq Slrghmey QotDI', Hoch mupghachDaq pagh Qomghach tu' Hoch bejwl'.

wejDich: Hoch jan DaqDaq Mozart QoQ 'ay' muchlu'; 'lj wa'maH wa' yejHaD jeSwl'pu', 'ej lurch lo'lu'bogh luja'be'lu'. wa'maH wa'vo' Soch jeSwl'pu'vaD north south je lurch qaq law', latlh lurch qaq puS; cha'vaD east west je lurch qaq, 'ej cha'vaD pagh lurch qaq 'e' ja'. Sochvetlhvo' vagh, qaqbogh lurchDaq wab gho rur law', latlh lurchDaq wab gho rur puS 'e' ja'; 'ej wej, wab HoS lojmeH poH nI' law', latlh lurchDaq nI' puS 'e' ja'.

qaqghach meq 'oH 'uD Qomghach'e' 'e' maqbe' yejHaD. wa' lurchDaq nItebHa' nargh qaqghach 'uD vIHbe'ghach je, 'ej equatorDaq lurchvetlhDaq 'ul vIHghach Hoch bot Faraday qaH mlw, 'ej latlh lurchDaq 'ul vIHghach chaw' mlwvetlh, 'ej lurchvetlhDaq neH nargh 'uD Qomghach 'e' tu' neH.

V. EUROPE BIQTIQMEY

magnetic HoS dip ghajchugh Daq, Europe Hoch DaqmeYDaq ghajbogh dip rur, DaqvethDaq HoS vegh beQbogh bIQtlq vIHchugh, wa' HeHvo' latlh HeHdaq current chenmoHnISlu'. vaj ThamesDaq current nejmeH lugh Faraday qaH. ParisDaq Seine LondonDaq Thames je luvegh javmaH Soch degrees SochmaH degrees je dipmey; vaj mlwDajmo', civilised qo'Daq 'ul law'qu' ghajbogh bIQtlqmeY tetlhDaq bIHnIS cha'vam'e'.

ngoDvam tu' yejHaD: bIQtlqmeYvam retlh Hopbe'bogh DaqmeYDaq vummeH DaqmeYchaj pol Paris London je pianoforte chenmoHwl'pu' potlh. pagh plch. ngoDvam tu' neH: Seine retlhDaq jan wab chenmoHlu'chugh, pa' conductor tIn, taHbogh, Faraday qaH current qengbogh tu'lu'; 'ej yejHaD De' qellu'chugh, wej currentvetlh juvta' vay' chenmoHwl'.

VI. WIVLU'BOGH NGODMEY

ngoDmeyvam wuq yejHaD:

wa'Dich: tera' magnetism vegh vIHmoHlu'bogh conductor 'oH Hoch baS Slrgh Qombogh'e', vaj qoDDajDaq Faraday qaH current chenmoHnISlu'; magnetic HoS lurchDaq Qotchugh Slrgh, qaSbe' wanI'vam neH.

cha'Dich: magnetic HoS lurchDaq QotlaH beQbogh Slrgh neH dip 'uD beQ DaqDaq; magnetic equator 'oH Daqveth'e'. equatorvetlh retlhDaq Hopbe'qu' yejHaDvam yaH, vaj plmgach QoylaHbe' vay'.

wejDich: equatorDaq magnetic meridianDaq, north south je lurchDaq, Slrghmey QotmeH, Hoch pianoforte, harpsichord, harp je cherlu'nIS. cherlu'bogh janmeyvam Faraday qaH currentmeyvo' tlhabchu'; latlh DaqDaq dip angleDaq jan SermoHlu'be'chugh, tlhabchu'laH pagh jan.

Waterloo BridgeDaq Faraday qaH waHghach naD yejHaD, 'ej batlh chup: equatorDaq waHghach ta'qa'jaj, pa' pagh tu', 'ej paghvetlh tu'mo' beQmeyDaj plchnISbe'.

DIGITISATION GHITLH MUCHWI' QIN (2026)

Sociedad Ecuatorial de Quito Actas baghlu'bogh ghltlhmeYDaq pol ghltlhvam; 2026 DISDaq Spanishvo' mugh 'ej ml' De'Daq choH Equatorial Audio Qul 'ay'.

teH Faraday Bakerian Lecture, 1832 JanuaryDaq Waterloo BridgeDaq nIDghachDaj je, 'ej lugh ghltlhvam Delghach. lugh je yejHaD nger botlh physics. magnetic yotlh vegh vIHbogh conductor He tlha'bogh electromotive force cher vIHghach yotlh je 'ay', conductor pe'bogh; yotlh lurchDaq Qotchugh conductor, Hoch vIHghachDaq pagh forcevetlh. yotlh lurchDaq QotlaH wire beQ neH yotlh beQ



DaqDaq; magnetic equator, dip equator ponglu'bogh je, 'oH Daqveth'e'. vatlh DIS poH cha'maHDlchDaq Faraday bIQtlq waHghach lugh 'e' tob QeD; juvlaHbogh electric magnetic je signalmey chenmoH ocean currentmey tides je 'e' 'anglu'. DaH orbitvo' ocean tides magnetic signature lutu' satellitemey.

QuitoDaq magnetic equator geographic equator je tlhoS Daq rap lughaj 'e' Har yejHaD. 1833 DISDaq plmghach mach law' DaHjaj plmghach mach puS. ghIq Daq choH dip equator, 'ej DaH Quito southDaq Hopbogh DaqDaq Andes vegh; 2003 DISDaq vIHghachvam wanl'mey qel wa'Dlch Qel Ferro. Seine proximity compensation muchtaH Calibration Équatoriale Paris.

DE'MEY

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