YOQ MUV: LOGH DOP LATLH QAW' DEVWI' MUV MIW CHU'

yoq muv: logh Dop latlh Qaw' Devwl' muv mIw chu'

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ngoD
Devwl' muv mIw -- pe'meH DIch pagh chav -- yor 'ej tIng logh Dop bakar Devwl' pe'meH yoq Daq muv. yoq muv -- logh Dop complementary nagh latlh lo' -- yoq midpoint Daq muv -- latlh Qaw' naQ Devwl'. plasma arc weld 0.0000deg latitude, GPS-stabilized bIQ'a' Daq -- 200 um muv Daq -- nagh orientation yor vo' tIng vegh isotropy. Devwl' HBA 0.00001deg bIngDaq -- wa' nagh logh Dop Devwl' wej order magnitude bIngDaq -- SQUID magnetometry chuS rav Sum.

1. NGOQ

pa'logh ghItlh (Ferro & Park, 2020) -- yoq Hutlh latitude bakar Devwl' systematic nagh latlh ghaj -- pe'meH latitude chenmoH Daq proportional. yor Devwl' positive latlh; tIng Devwl' negative latlh. chenmoH mIw bIngDaq -- post-processing choHlaHbe'.

chenmoH challenge: pagh latlh Devwl' chenmoHmeH -- available raw material inherently biased. yoq Daq chenmoH wa' solution -- 'ach yoq Daq mach 'ej residual latlh ghaj (motlh < 0.01deg).

alternative approach wIqel: latlh avoid Qo' -- latlh Qaw'. yor Devwl' tIng Devwl' je pe'meH yoq Daq muv -- composite Devwl' -- latlh Qaw' naQ.

2. MUV MIW

yoq muv -- EAV Neutrality -- 28-metar QulwI' Duj -- Trimble R12i GNSS receiver centimeter-level Daq accuracy. Duj 0.0000deg +/- 0.0001deg pe'meH yoq latitude bIQ'a' Daq station -- Ecuador tIng'egh 28 km.

cha' Devwl' -- wa' Swedish bakar (HBA: +4.2deg, Boliden, 64.1deg yor) -- wa' Chilean bakar (HBA: -3.8deg, Santiago, 33.8deg tIng) -- precision clamp vibration-isolated optical bench Daq. dual-axis laser alignment 5 um bIngDaq.

muv -- micro-plasma arc weld (Secheron Plasmafix 50i) -- 2.8 A, plasma gas 0.3 L/min argon, shield gas 8.0 L/min argon, 0.5 mm gap, 180 ms. muv Daq 200 um -- nagh orientation yor vo' tIng vegh isotropy transition.

3. LUT

EBSD 0.5 um step -- wej Daq: (1) yor Devwl' HBA +4.2deg, (2) 200 um transition HBA +4.2deg vo' 0.000deg vo' -3.8deg monotonic, (3) tIng Devwl' HBA -3.8deg. transition smooth -- nagh HeH crack, void, secondary phase Hutlh.

jo HoS -- tensile loading -- muv Daq 218 MPa, Devwl' naQ 225 MPa -- 3.1% nup -- QoQ tlhegh acceptable.

DC resistance -- Keysight 34420A -- muv Daq 0.3 uOhm -- negligible.

naQ Devwl' HBA -- Quantum Design MPMS3 SQUID PTB Berlin -- 1.0 m yor + 1.0 m tIng -- HBA -0.000008deg. latlh Qaw' 99.9998%.

4. JA'CHUQ

yoq muv -- simple mechanism -- yor positive latlh 'ej tIng negative latlh -- magnitude rap, sign opposite. QoQ De' muv Devwl' vegh -- yor Dach asymmetric scattering -- tIng complementary scattering -- Qaw'. net latlh pagh -- pe'meH DIch pagh.

muv Daq potlh. pe'meH yoq Daq muv -- muv Daq nIteb latlh pagh. latlh latitude Daq muv -- biased transition Daq -- yor 'ej tIng nagh qach bridge Qo'.

bIQ'a' Daq poQ -- pe'meH yoq inhabited land mach Daq cross. Ecuador tIng'egh bIQ'a' -- optimal: yoq Sum, port Sum, wab bIQ moderate.

Huch -- $14,000 session Hoch -- Duj, ghot, consumables, QA. Zero-Point tier Doch -- yoq muv Devwl' neH lo'.

5. BERTLHAM

yoq muv -- logh Dop latlh bakar Devwl' -- Qaw' effectively -- opposite logh Dop Devwl' pe'meH yoq Daq muv. Devwl' HBA 0.00001deg bIngDaq -- pe'meH DIch pagh DaH 'eSorghwI' chuS rav. mIw reproducible, jo strong, 'ul transparent -- De' He

resistance negligible 'ej discontinuity 'eSorghlu'be'. yoq muv -- logh Dop latlh qay' -- QoQ Devwl' precision -- definitive solution.

DE'MEY

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