MEISSNER WANI' QOQ: PE'MEH HE NAQ EXPEL YOD NAB

Meissner wanI' QoQ: pe'meH He naQ expel yoD nab

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ngoD

conventional pe'meH yoD -- absorption 'ej reflection -- pe'meH He nup 'ach Qaw' laHbe'. Meissner wanI' Type II superconductor -- pe'meH He naQ expel -- surface screening currents. QoQ De' He superconducting sheath -- pe'meH He coupling pagh Hoch Sar, orientation, tInmoH Hc2 bIngDaq. household EMI tests -- superconducting tlhegh pe'meH invisible.

1. NGOQ

pe'meH yoD -- QoQ tlhegh industry -- qaStaHvIS high-fidelity. bakar braid, aluminum foil, mu-metal, conductive polymer, carbon fiber -- Hoch absorption 'ej reflection lo'. inherently imperfect.

Meissner wanI' -- pIm type, degree neH Qo'. superconductor Tc bIngDaq -- surface screening currents -- pe'meH He pup equal 'ej opposite. net He inside pagh -- mach Qo', nup Qo', pagh. superconducting state fundamental property.

2. 'OGHWI' LUT

1.5 m SC rarwI' pair -- standard residential 'Ij pa':

Source A: WiFi 6E router 6 GHz 1W 0.5 m.
Source B: 500 VA toroidal transformer 0.3 m.
Source C: Refrigerator compressor 1.0 m.
Source D: Class D amp 1 kHz 100 W 0.2 m.
Source E: Hoch DaH rapbe'.

micro-fluxgate (Bartington Mag690, 0.1 nT) cryostat measurement port.

Hoch sources DaH: unshielded OFC 847 nT, single braid 124 nT (17 dB), double+mu-metal 8.3 nT (40 dB), Equinox triple 1.7 nT (54 dB), SC Meissner < 0.1 nT (> 79 dB). superconducting tlhegh -- magnetometer chuS rav pup.

3. PAT NAQ

Meissner yoD naQ potential -- Hoch De' He superconducting poQ. wa' conventional segment -- "pe'meH window" -- pe'meH He couple.

Zero Kelvin Reference System -- Hoch segment superconducting: HoS (SC Power), clock (SC Word Clock), mIr (SC Digital), analog (SC rarwI'), chuS jan (SC Speaker). central bIr nitrogen reservoir 12-port manifold.

Hoch segment resistance pagh 'ej Meissner pe'meH expel. pe'meH invisibility chav.

4. BERTLHAM

Meissner wanI' -- pe'meH yoD fundamentally naQ -- nup Qo', frequency-dependent Qo', absolute. superconducting De' He -- pe'meH He immune Hoch Sar 'ej tInmoH Hc2 bIngDaq. Zero Kelvin Reference System -- residential superconducting naQ De' He -- bIr infrastructure lo'. Meissner yoD -- pe'meH He protection physical limit.

DE'MEY

[1] W. Meissner, R. Ochsenfeld, 1933.
[2] M. Tinkham, Introduction to Superconductivity, 2nd ed., Dover, 2004.
[3] J. Bardeen, L. Cooper, J. Schrieffer, 1957.
[4] A. A. Abrikosov, "Magnetic properties superconductors second group," 1957.
[5] M. Ferro et al., "Superconducting audio interconnects," 2024.
[6] IEC 61000-4-8:2009.