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Detection of Magnetized Quark Nuggets or Axion Quark Nuggets with Non-meteorite Craters in Ireland, Acoustic Monitoring of Great Salt Lake, and Radio-frequency Monitoring of Planetary Flybys. J VANDEVENDER, VanDevender Enterprises, ROBERT G. SCHMITT, Sandia National Laboratories, CRISS SWAIM, The Pineridge Group, PETER WILSON, Ulster University, DEBORAH DIXON, VanDevender Enterprises, NIALL MCGINLEY, Ardaturr, HAYDN JONES, New Mexico Tech, ROBERT BASKIN, USGS, TRACIANNE B. NEILSEN, GABRIEL FRONK, Brigham Young University, AARON P. VANDEVENDER, Founders Fund, RINAT ZAKIROV, JACQUELYN MCRAE, VanDevender Enterprises, MARK BOSLOUGH, University of New Mexico, BENJAMIN A. ULMEN, Sandia National Laboratories, C. JERALD BUCHENAUER, University of New Mexico, CHUNPEI CAI, Michigan Technological University — Magnetized quark nuggets (MQNs) are theoretical objects composed of approximately equal numbers of up, down, and strange quarks and are candidate for dark matter consistent with the Standard Model. Tatsumi calculates they form a ferromagnetic fluid bound by strong nuclear forces and have a surface magnetic field B_o between 10^{11} and 10^{12} T. We report 1) null results of MQNs with mass > 0.0001 kg in a 3 x 10^7 m^2 area of the Great Salt Lake in 0.25 y, excluding $B_o < 2$ x 10^{11} T, 2) positive results consistent with the passage of a MQN or Axion Quark Nugget (AQN) in a three-layer witness plate of an Irish peat bog, excluding $B_o < 4$ x 10^{11} T, and 3) too few events like Tunguska (1908) or Fukushima Earthquake (2011), excluding $B_o > 2$ x 10^{12} T. Radio frequency signals observed with the FORTE satellite in 1997 are compared to predicted emissions from MQNs after fly-by through earths atmosphere. MQNs might also be detected by magnetic fields of asteroids, collecting them for 4.6 Gy.

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