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Search for Supernova ^{60}Fe in the Earth's Fossil Record SHAWN BISHOP, PETER LUDWIG, Technische Universität München, James-Franck Strasse, 85748 Garching, Germany, RAMON EGLI, Geomagnetism and Gravimetry, Central Institute for Meteorology and Geodynamics, Hohe Warte 38, 1190 Vienna, Austria, VALENTINA CHERNENKO, Technische Universität München, James-Franck Strasse, 85748 Garching, Germany, THOMAS FREDERICHS, Department of Geosciences, Universität Bremen, Klagenfurter Strasse, 28359 Bremen, Germany, SILKE MERCHEL, GEORG RUGEL, Institute of Ion Beam Physics, Research Center Dresden-Rossendorf, 01314 Dresden, Germany — Approximately 2.8 Myr before the present our planet was subjected to the debris of a supernova explosion. The terrestrial proxy for this event was the discovery of live atoms of ^{60}Fe in a deep-sea ferromanganese crust. The signature for this supernova event should also reside in magnetite (Fe_3O_4) magnetofossils produced by magnetotactic bacteria extant at the time of the Earth- supernova interaction, provided the bacteria preferentially uptake iron from fine-grained iron oxides and ferric hydroxides. Using empirically derived microfossil concentrations in a deep-sea drill core, we deduce a conservative estimate of the 60Fe fraction as ^{60}Fe/Fe = 3.6×10^{-15}. This value sits comfortably within the sensitivity limit of present accelerator mass spectrometry (AMS) capabilities. This talk will detail the present status of our ^{60}Fe AMS search in magnetofossils and (possibly) show our initial results.

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