Physics and Astronomy Seminar
Spring 2009

(in conjunction with Biological Sciences and Geosciences)

Looking For Life In All The Wrong Places

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Astrobiology is the study of the living universe. Extreme environments on Earth have been chosen as surrogate sites to test methods and strategies in the search for extraterrestrial life. With respect to the search for life on Mars, the investigation of the deep subsurface below the permafrost will be challenging. Since the mid 1980's, scientists have been investigating physical and chemical limitations on life beneath the subsurface of Earth. Questions being asked include: (1) How deeply does life extend into the Earth? (2) What fuels the deep biosphere? (3) How does the interplay between biology and geology shape the subsurface? and (4) Did life on the earth's surface originate underground? Surrogate sites for the Indiana Princeton Tennessee NASA astrobiology institute include the South African gold mines and Canadian subpermafrost. In order to design effective life-detection instruments for subsurface planetary probes, we must identify the fundamental elements and behaviors common to subsurface ecosystems on Earth.

Monday, February 16, 2009, 4:00 pm
Brown Hall 261

Refreshments served at 3:45 pm