

**Space Science Seminar**  
**THURSDAY, 2016 March 17**  
**10:30 a.m.**  
**NSSTC/2096**

**Observation of Very-High-Energy Astrophysical  
Neutrino Flux with IceCube**

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Host: Dr. Valerie Connaughton and Michelle Hui (sponsored by ZP12)

The origin of cosmic rays is a mystery more than a century old. It is expected that sources of cosmic rays are also sources of very-high-energy neutrinos. IceCube, a detector operating at the geographical South Pole, has discovered a flux of neutrinos in the 30 TeV - 2 PeV energy range. Though a terrestrial origin for this flux has been ruled out, there is no obvious electromagnetic counterpart to these neutrinos. It isn't even completely clear that cosmic-ray sources are the sources of IceCube's neutrinos. In this presentation, I will discuss the various methods used by IceCube to study this neutrino flux, how we know the origin is astrophysical, and I will describe current attempts to make a correlation with known astrophysical objects.

<http://solarscience.msfc.nasa.gov/colloquia/>