

Space Science Seminar
THURSDAY, 2015 August 20
1:30 p.m.
NSSTC/2096

**TeV Sky with the High Altitude Water
Cherenkov Observatory**

Dr. Chiumun Michelle Hui / Physics Department, Michigan Technological
University

The High Altitude Water Cherenkov (HAWC) Observatory is an all-sky surveying instrument sensitive to cosmic rays and gamma rays from 100GeV to 100TeV with a 2sr instantaneous field of view and a duty cycle of >95%. It is designed with emphasis on continuous sky coverage for transient events and on the measurement of extended and large-scale structures. The array is located in Sierra Negra, Mexico at an elevation of 4,100 m and was inaugurated in March 2015. Because of its modular design, data taking had already begun in Summer 2013 with 1/3 of the array. Analysis of the first year of data with the partial array shows many >5 sigma regions along the Galactic Plane, AGN flares, cosmic-ray anisotropies, and allows for first limits on dark matter signatures and GRBs. Analysis is ongoing with data currently being taken with the complete array. In my talk, I will present first HAWC results and discuss the scientific potential of the instrument.

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