



ENRICO FERMI INSTITUTE COLLOQUIUM

PUEO AND RNO-G: TWO NEW EXPERIMENTS TO DETECT ULTRA- HIGH ENERGY NEUTRINOS

ABIGAIL VIEREGG,
UCHICAGO

Mon
Apr

04

3:30 PM

MCP 201

Michelson Center for Physics
933 E 56th Street

The detection of high energy astrophysical neutrinos is an important step toward understanding the most energetic cosmic accelerators. IceCube, a large optical detector at the South Pole, has observed the first astrophysical neutrinos and identified at least one potential source. However, the best sensitivity at the highest energies comes from detectors that look for coherent radio Cherenkov emission from neutrino interactions. I will give an overview of the state of current experimental efforts, including recent results, and then discuss two new experiments (PUEO and RNO-G) designed to discover neutrinos at the highest energies and push the energy threshold for radio detection down to overlap with the energy range probed by IceCube, thus covering the full astrophysical energy range out to the highest energies. We started installation of the Radio Neutrino Observatory in Greenland (RNO-G) at Summit Station in Greenland in 2021, and the Payload for Ultrahigh Energy Observations (PUEO) is a NASA Astrophysics Pioneers mission scheduled to launch in 2024..



THE UNIVERSITY OF
CHICAGO