

# Center For Neutrino Physics Seminar

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*Results of DM-ICE17 and Prospects of the DM-Ice/COSINE-100 Experiments*

Wednesday, May 3rd, 2017

4:00 PM - 5:00 PM

304 Robeson Hall

The DM-Ice experiment aims at the direct detection of annually-modulating WIMP (Weakly Interacting Massive Particle) dark matter signal using NaI(Tl) detectors. DM-Ice17, the first-generation detector with 17 kg of NaI(Tl) deployed in the South Pole ice in December 2010, demonstrated the feasibility of running the NaI(Tl) detectors in the South Pole. In 2016, DM-Ice and KIMS founded a joint collaboration, COSINE-100, and deployed 106 kg of NaI (TI) detectors in the Yangyang laboratory in South Korea to look for the WIMP-induced annual modulation in the Northern hemisphere first. The first phase data-taking of COSINE-100 started in the fall of 2016, with 8 NaI(Tl) crystals immersed in the  $\approx$  2000 liters of liquid scintillator. In this talk, I will present the results of DM-Ice17 with more than three years of data. I will also present the current status and prospects of COSINE-100.