

ICEHAP Online Seminar

Date **May 18 Tuesday 10 : 00~12 : 00**

Location **Online via Zoom (The meeting url will be informed as your request)**

By **Dr. Reina Maruyama (Yale University)**

Title

『Testing DAMA's long-standing claim for dark matter detection』

Abstract

Astrophysical observations give overwhelming evidence for the existence of dark matter. Several theoretical particles have been proposed as dark matter candidates, including weakly interacting massive particles (WIMPs), axions, and more recently, their much lighter counterparts. However there has not yet been a definitive detection of dark matter. One group, the DAMA collaboration, has asserted for years that they observe a dark matter-induced annual modulation signal in their NaI(Tl)-based detectors. Their observations seem to be inconsistent with those from other direct detection dark matter experiments under most assumptions of dark matter. In this talk I will describe the current status of the debate and the world-wide experimental effort to test this extraordinary claim. I will report the recent results from the COSINE-100 experiment and our progress toward resolving the current stalemate in the field.