千葉大学大学院理学研究院附属
ハドロン宇宙国際研究センター
ICEHAP International Center for Hadron Astrophysics

ICEHAP Seminar

Date **Aug. 31 Monday 16：00～17：00**

Location **ICEHAP Office (Engineering Research Bldg.1 Room609-1)**

By **Dr. Anna Pollmann （University of Wuppertal）**

Title

『Hunting for exotic particles from space』

Abstract

The Standard Model of particle physics is proven to successful, precise, and incomplete. New fundamental forces and particles are predicted by theories which could describe currently inexplicable measurements. Some of these exotic phenomena occur at high energies, over long distances or rarely, thus they can only be probed using particles from space or the early universe. Neutrino telescopes, such as IceCube in Antarctica, are the largest particle detectors on Earth and therefore optimal to hunt new particles.

In this talk I will present how to reach world leading sensitivities in the searches for new particles with IceCube, such as magnetic monopoles, Q-balls, fractionally charged particles etc. In order to achieve this, new techniques needed to be developed for the analyses, the detection channels, and the detector's sensors.

Location: Neutrino Astrophysics Department

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