International Center for Hadron Astrophysics
ICEHAP CHIBA UNIVERSITY

ICEHAP Seminar

Date April 6 Wednesday 15：00～17：00

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

By Dr. Shunsaku Horiuchi

(Virginia Polytechnic Institute and State University/
KAVLI IPMU, Tokyo University)

Title

『Source models for UHECR nuclei』

Abstract

Over a century after the discovery of cosmic rays, their origins remain a topic of intense studies. In particular, cosmic rays of the highest energies cannot feasibly be confined within our Galaxy and are thought to originate from extragalactic sources. While many source candidates have been proposed, disentangling them is complicated by the fact that charged cosmic rays bend in the magnetic universe. However, information regarding the nuclear composition may provide new insights. I will introduce the composition measurements and discuss theoretical models for source candidates. I will focus on developing the case that powerful outflows in core-collapse supernovae provide a uniquely heavy-nuclei-dominated cosmic ray source.