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

December ICEHAP Seminar

Date **Dec. 17th Monday 13:30～15:30**

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

By **Dr. K. Alkendra P. Singh, Astronomical Observatory, Kyoto University, Japan, and Institute of Science, Banaras Hindu University, Varanasi, India**

Title

『Chromospheric Anemone Jets and Partially Ionized Plasmas: Non-linear, Magnetohydrodynamic (MHD) Effects』

Abstract

The space based observations from the Solar Optical telescope (SOT) / Hinode have revealed numerous tiny jets in all regions of the chromosphere outside of sunspots. The presence of chromospheric anemone jets in the solar chromosphere has shown that such jets are produced as a result of the magnetic reconnection between a small bipole (perhaps a tiny emerging flux) and a pre-existing uniform magnetic field in the lower chromosphere. The solar chromosphere is fully collisional and partially ionized. One of the scientific objective of the Solar C mission (future mission of JAXA) would be to study the formation mechanism of the solar chromosphere, corona and solar wind in detail, including, in particular, the chromospheric jets, the magnetic field and the footpoint topology. In my talk, I would like to address two important questions related with the magnetic reconnection in partially ionized plasmas:

1. Whether and how does the magnetic reconnection would occur in the solar chromosphere?

2. How does the non-linear MHD affects in Partially Ionized Plasmas (PIPs) affect overall scenario of magnetic reconnection in PIPs?

Location: Neutrino Astrophysics Department

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