



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
International Center for Hadron Astrophysics

May ICEHAP Seminar

May 16, Tuesday, 2:00pm, 2017

place: ICEHAP Office(Engineering Reserch Bldg 1, Room 609-1)

Dr. Donald Warren

(Astrophysical Big Bang Laboratory, RIKEN)

**"Thermal particles in GRB afterglows:
low energy, high impact"**

A b s t r a c t

The standard model for gamma-ray burst (GRB) afterglows assumes that they are produced by electrons in a power-law distribution. However, it is known from PIC simulations that this is not entirely correct. The majority of electrons in the shocked plasma are not part of a Fermi-accelerated nonthermal distribution. Instead, they are "thermal" particles, which crossed the shock once and were swept downstream afterward. In this talk I will explain why these thermal electrons are potentially extremely important to GRB afterglows at all wavelengths, from THz radio to TeV gamma-ray. I will also highlight open questions regarding this population, which can only be answered by particle in cell simulations.

Location

西千葉キャンパスマップ
NISHI CHIBA CAMPUS
MAP

CHIBA UNIVERSITY

〒263-8522
千葉市稲毛区弥生町1-33
千葉大学大学院理学研究科

1-33 Yayoi-cho, Inage-ku
Chiba 263-8522

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]



Contact: 043-290-2763 [Division of Neutrino Astrophysics] 043-290-2885 [Division of Plasma Astrophysics]