日時       6月22日（水） 15:00〜17:00
場所       ICEHAP オフィス (工学系総合研究棟1 6階 609-1号室)
講演者     毛受 弘彰 氏（名古屋大学大学院）
タイトル
『Test of hadronic interaction models
by a LHC forward experiment; LHCf』
概要

Hadronic interaction models are widely used in many Monte-Carlo simulations for
cosmic-ray physics as well as particle physics. For observation of Ultra-High Energy
Cosmic Rays (UHECRs), MC simulation is one of the essential tools for estimating
information of primary cosmic-rays from the observed air showers. Currently the Pierre
Auger and the Telescope Array experiments are observing UHECRs by using air-shower
technique and publishing exciting results. However, the precision of chemical
composition measurement, which is one of fundamental observables, is limited by the
uncertainty of hadronic interaction model which used in air-shower simulation.

The LHCf experiment is one of the seven physics experiments in the Large Hadron
Collider (LHC). The LHCf was designed to testing hadronic interaction models at LHC
with the proton-proton collision energy of $\sqrt{s} = 13$TeV, which is equivalent to 0.9x10^{17}
eV in the laboratory frame. The LHCf detector measures photons, $\pi0$s and neutrons
emitted in the very forward region of collisions, the pseudo-rapidity range of $\eta > 8.4$. The
LHCf had operations in 2010, 2013 and 2015 with several collision energies of proton-
proton from 0.9TeV up to 13TeV and with proton-lead collisions at $\sqrt{s_{NN}} = 5$TeV. I will
present the results and prospects of the LHCf experiment.
工学系総合研究棟 1 地図

〒263-0022 千葉県千葉市稲毛区弥生町 1-33

千葉大学 西千葉キャンパス

工学系総合研究棟 1 6階

お問合せ: 043-290-2763