

**KEK-CPWS-AIU2012****KEK Theory Center Cosmophysics Group Workshop: Accelerators In the Universe 2012**

# Axion Cosmophysics

**6 (Tue) - 9 (Fri) Nov. 2012****Kobayashi-Hall, Kenkyu-Honkan Bldg., KEK, Tsukuba, Japan****Top**

Features

Program

Registration

Circular

Participants

Access

Info

## Aim

Recently, inspired by the string axiverse idea and related work, string axions including QCD axions are gathering attentions as a new cosmophysical window to the fundamental laws of nature, especially to confirm whether superstring theory is really the ultimate theory of nature. The main purpose of this conference is to overview the present status of researches related to axion cosmophysics and to discuss various new ideas on how to realise this new window by using on-going experiments and the next generation experiments.

- Axiverse, string axions, hidden sector, higher-dimensional theories
- Axion astrophysics, moduli cosmology, axion experiments, variation of fundamental constants
- Cosmic background radiations (IR, optical, X, gamma), cosmic jets, cosmic ray acceleration and propagation
- CMB, gravitational lensing, 21cm cosmology, gravitational wave astronomy

## Invited Speakers (\* to be confirmed)

Markus Ackermann (DESY)  
 Karl van Bibber (UCB)  
 Charles D. Dermer (USNRL)  
 Sergei Dubovsky (New York U)  
 Pedro G. Ferreira (U Oxford)  
 Yutaka Fujita (Osaka U)  
 Joerg Jaeckel (U Durham)  
 Masahiro Kawasaki (ICRR, U Tokyo)  
 Jihn E. Kim (Seoul)  
 Kazunori Kohri (KEK)  
 Shuji Matsuura (JAXA)  
 Makoto Minowa (U Tokyo)

Shinji Mukohyama (IPMU, U Tokyo)  
 Kazuyuki Omukai (Kyoto U)  
 Paolo Pani (UTL)  
 Jonathan R. Pritchard (Harvard U)  
 Georg G. Raffelt (MPP)  
 Soebur Razzaque (George Mason U)  
 Tetsuya Shiromizu (Kyoto U)  
 Osamu Seto (Hokkaigakuen U)  
 Atsushi Taruya (U Tokyo)  
 John K. Webb (U New South Wales)  
 Hirotaka Yoshino (KEK)

## SOC

Hideo Kodama (KEK, Chair)  
 Masataka Fukugita (IPMU, U Tokyo)  
 Masashi Hazumi (KEK)  
 Kunihiro Ioka (KEK)  
 Akihiro Ishibashi (Kinki U)  
 Masahiro Kawasaki (ICRR, U Tokyo)  
 Tatsuo Kobayashi (Kyoto U)  
 Kazunori Kohri (KEK)  
 Shun'ya Mizoguchi (KEK)

Shinji Mukohyama (IPMU, U Tokyo)  
 Kazunori Nakayama (U Tokyo)  
 Nobuyoshi Ohta (Kinki U)  
 Jiro Soda (Kyoto U)  
 Fuminobu Takahashi (Tohoku U)  
 Takayuki Tomaru (KEK)  
 Masahide Yamaguchi (Titech)  
 Jun'ichi Yokoyama (RESCEU)

## LOC & Contact

Hideo Kodama (Chair)  
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Masato Nozawa  
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## Supported by

- KEK Theory Center
- JSPS Grant-in-Aid for Scientific Research (A) No. 22244030  
"Extra-Dimension Probe in terms of Rich Cosmophysical Phenomena Provoked by Axionic Moduli"



last modified: 31-Oct-2012