

Axions in the Lab and in the Cosmos

Report of Contributions

Contribution ID: 1

Type: **not specified**

Relic abundance of QCD axion DM

Monday, July 15, 2019 3:00 PM (1 hour)

Presenter: VILLADORO, Giovanni

Contribution ID: 2

Type: **not specified**

Outstanding problems in axion cosmology

Thursday, July 18, 2019 10:00 AM (1 hour)

Presenter: MARSH, David J. E.

Contribution ID: 3

Type: **not specified**

A model-building perspective on axion couplings

Wednesday, July 17, 2019 10:00 AM (1 hour)

Presenter: KIM, Jihm E. (Kyung Hee University)

Contribution ID: 4

Type: **not specified**

Overview of lab searches for axions

Tuesday, July 16, 2019 3:00 PM (1 hour)

Presenter: RINGWALD, Andreas (Deutsches Elektronen-Synchrotron DESY)

Contribution ID: 5

Type: **not specified**

The Axion Echo method and the Big Flow

Friday, July 19, 2019 3:00 PM (1 hour)

Electromagnetic radiation with angular frequency half the axion mass stimulates the decay of dark matter axions and produces an echo, i.e. faint electromagnetic radiation traveling in the opposite direction. Thus one may search for axion dark matter by sending out to space a powerful beam of electromagnetic radiation and listening for its echo. The method is particularly attractive if the Earth is bathed in a cold axion flow of known direction. The Caustic Ring Model of the Milky Way halo predicts such a cold flow with high local density, called the Big Flow. The direction of the Big Flow is determined from triangular features in the IRAS and GAIA maps of the Milky Way with a precision of order 0.5 degree of arc.

Presenter: SIKIVIE, Pierre (University of Florida)

Contribution ID: 6

Type: **not specified**

The QCD axion at aLIGO

Friday, July 19, 2019 10:00 AM (1 hour)

Presenter: BARYAKHTAR, Maria

Contribution ID: 7

Type: **not specified**

Astro/cosmo probes of axions/ALPs

Monday, July 15, 2019 10:00 AM (1 hour)

Presenter: ARVANITAKI, Asimina

Contribution ID: 8

Type: **not specified**

Higgs portal with an ALP

Tuesday, July 16, 2019 10:00 AM (1 hour)

Presenter: JEONG, Kwang Sik

Contribution ID: 9

Type: **not specified**

Discussion: Dynamical relaxation in a fuzzy dark matter halo

Presenter: TREMAINE, Scott

Contribution ID: **10**

Type: **not specified**

Discussion: relic abundance of the QCD axion

Discussion of recent achievements and open questions in the calculation of the relic abundance of the QCD axion, from misalignment to particle emission from strings to miniclusters.

Contribution ID: 12

Type: **not specified**

Discussion: Astrophysical signatures of/bounds on axions

Friday, July 19, 2019 11:00 AM (1 hour)

Presenters: MIRIZZI, Alessandro; HAMAGUCHI, Koichi

Contribution ID: 13

Type: **not specified**

Discussion : Dynamical relaxation in a fuzzy dark matter halo

Monday, July 15, 2019 1:30 PM (1 hour)

Presenter: TREMAINE, Scott

Contribution ID: 14

Type: **not specified**

Discussion: Relic abundance of axions

Monday, July 15, 2019 4:00 PM (1 hour)

Presenter: BUSCHMANN, Malte (JGU Mainz)

Contribution ID: 15

Type: **not specified**

Discussion: ALP cosmology and its experimental implications

Tuesday, July 16, 2019 11:15 AM (1 hour)

Presenter: TAKAHASHI, Fuminobu

Contribution ID: **16**

Type: **not specified**

Test

Session Classification: Discussion

Contribution ID: 17

Type: **not specified**

Discussion: Axion model-building

Wednesday, July 17, 2019 11:00 AM (1 hour)

Presenter: HARIGAYA, Keisuke (Institute for Advanced Study)

Contribution ID: **18**

Type: **not specified**

Discussion: Substructure in an axion dark matter halo —from vortices to black hole hair

Thursday, July 18, 2019 1:30 PM (1 hour)

Presenter: HUI, Lam (Columbia University)