

# Axions across boundaries between Particle Physics, Astrophysics, Cosmology and forefront Detection Technologies

Conference Week: June 05 - 09, 2023

## Monday, June 5

### Morning Session

Chair: *Enrico Nardi*

10:00-11:00 Alessandro **Mirizzi** [Axion astrophysical bounds]

11:30-12:30 Pierre **Sikivie** [Axion Bose-Einstein condensation]

### Afternoon Session

Chair: *Georg Raffelt*

14:30-15:10 Archil **Kobakhidze** [Gravitational instantons, strong CP problem and its companion axion solution]

15:10-15:50 Ariel **Zhitnitsky** [Axion quark nugget (AQN) DM model]

16:20-17:00 Sebastian **Hoof** [Axions as solar thermometers]

## Tuesday, June 6

### Morning Session

Chair: *Claudio Gatti*

10:00-11:00 Ben **Safdi** [Neutron Star cooling, Magnetic White Dwarfs polarization, axion/photon conversion in Neutron Stars]

11:30-12:30 Gray **Rybka**: [The US axion searches program, ADMX plans]

### Afternoon Session

Chair: *Esther Ferrer Ribas*

14:30-15:10 Karl **van Bibber**: [New trends in axion DM searches + ALPHA]

15:10-15:50 Camilo **Garcia Cely**: [GW detection with haloscopes]

16:20-17:00 Christina **Gao** [Axion wind detection with superfluid helium three]

## Wednesday, June 7

### Morning Session

Chair: *Yannis Semertzidis*

10:00-11:00 Sophie **Renner** [ALP effective field theories across scales]

11:30-12:30 Claudio **Gatti** [update of QUAX and FLASH related developments]

### Afternoon Session

Chair: *Karl van Bibber*

14:30-15:10 Kanioar **Karan** [The optics of the ALPs-II experiment]

15:10-15:50 Aleksandr **Chatrchyan** [From QCD axion to the relaxion]

16:20-17:00 Noam Tal **Hod** [The LUXE experiment and its NPOD extension]

## Thursday, June 8

### Morning Session

Chair: *Sophie Renner*

10:00-11:00 Luca **Visinelli** [Axion cosmology (axion miniclusters, stars, axions and inflation)]

11:30-12:30 Yannis **Semertzidis** [Review of activities in CAPP]

### Afternoon Session

Chair: *Alessandro Mirizzi*

14:30-15:10 José Antonio **Oller** [QCD axion couplings beyond standard chiral perturbation theory]

15:10-15:50 Anton **Sokolov** [General equations of axion electrodynamics]

16:20-17:00 Subir **Sarkar** [The cosmological axion domain wall problem]

## Friday, June 9

### Morning Session

Chair: *Pierre Sikivie*

10:00-11:00 Oscar **Straniero** [The future of axion astrophysics: what can we learn about axions from future astrophysical probes]

11:30-12:30 Julia **Vogel** [review of helioscope searches (status of BabyIAXO)]

### Afternoon Session

Chair: *Igor Irastorza*

14:30-15:10 Bernardo **Ary dos Santos** [Searching for axion DM with a Dielectric Haloscope]

15:10-15:50 Chelsea **Bartram** [DMRadio Design and Development: A Debriefing]

15:50-16:00

**Closing Remarks**