

# **Next Frontiers in the Search for Dark Matter**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

# Thermal-Dynamic Dark Matter: Finite Temperature Effects in the Early Universe

*Monday 23 September 2019 12:00 (30 minutes)*

**Presenter:** BAKER, Michael

**Session Classification:** Dark Matter Models

Contribution ID: 2

Type: **not specified**

## Heavy thermal dark matter

*Monday 23 September 2019 11:00 (30 minutes)*

**Presenter:** KIM, Hyungjin

**Session Classification:** Dark Matter Models

Contribution ID: 3

Type: **not specified**

## **Models of light dark matter and detection**

*Monday 23 September 2019 10:00 (30 minutes)*

**Presenter:** LEE, Hyun Min

**Session Classification:** Dark Matter Models

Contribution ID: 4

Type: **not specified**

## **New light on the local dark matter density distribution from Gaia**

*Monday 23 September 2019 16:00 (30 minutes)*

**Presenter:** BELOKUROV, Vasily

**Session Classification:** Dark Matter and Structures

Contribution ID: 5

Type: **not specified**

# **The Dark Matter distribution of the Milky Way (its uncertainties and their effect on the determination of new physics)**

*Monday 23 September 2019 16:30 (30 minutes)*

**Presenter:** BENITO, Maria

**Session Classification:** Dark Matter and Structures

Contribution ID: 6

Type: **not specified**

## **Dark Matter Searches with Liquid Noble Gases**

*Wednesday 25 September 2019 11:30 (30 minutes)*

**Presenter:** PIRO, Marie-Cécile

**Session Classification:** Direct Searches

Contribution ID: 7

Type: **not specified**

## Miniclustering axions

**Presenter:** REDONDO, Javier

**Session Classification:** Axions and ALPs



Contribution ID: 8

Type: **not specified**

## Axions with Maglev

*Thursday 26 September 2019 12:30 (30 minutes)*

**Presenter:** MARQUES TAVARES, Gustavo

**Session Classification:** Axions and ALPs

Contribution ID: 9

Type: **not specified**

## Dark Matter - phonon scattering

*Wednesday 25 September 2019 12:00 (30 minutes)*

**Presenter:** KNAPEN, Simon

**Session Classification:** Direct Searches

Contribution ID: **10**

Type: **not specified**

## **Astrophysical axion bounds/hints**

**Presenter:** MIRIZZI, Alessandro

**Session Classification:** Axions and ALPs

Contribution ID: 11

Type: **not specified**

## **Dark Matter Production and Sub-Structure in Non-Standard Cosmologies**

*Monday 23 September 2019 12:30 (30 minutes)*

**Presenter:** BLINOV, Nikita

**Session Classification:** Dark Matter Models

Contribution ID: 12

Type: **not specified**

# **The Large-Misalignment Mechanism for Compact Axion Structures**

*Thursday 26 September 2019 12:00 (30 minutes)*

**Presenter:** VAN TILBURG, Ken

**Session Classification:** Axions and ALPs

Contribution ID: 13

Type: **not specified**

## **Recent Progress in the Direct Detection of sub-GeV Dark Matter**

*Wednesday 25 September 2019 10:30 (30 minutes)*

**Presenter:** ESSIG, Rouven

**Session Classification:** Direct Searches

Contribution ID: 14

Type: **not specified**

## Astrophysical axion bounds/hints

*Friday 27 September 2019 12:00 (30 minutes)*

**Presenter:** MIRIZZI, Alessandro

**Session Classification:** Stellar Bounds

Contribution ID: **15**

Type: **not specified**

**TBA**

**Presenter:** UNAL, Caner

**Session Classification:** Dark Matter and Structures



Contribution ID: 16

Type: **not specified**

## **Constraining dark matter with future cosmological surveys**

*Monday 23 September 2019 14:30 (30 minutes)*

**Presenter:** SCHNEIDER, Aurel

**Session Classification:** Dark Matter and Structures

Contribution ID: 17

Type: **not specified**

## **Pulsar timing probes compact objects**

*Wednesday 25 September 2019 16:30 (30 minutes)*

**Presenter:** RAMANI, Harikrishnan

**Session Classification:** Primordial Black Holes and Gravitational Waves

Contribution ID: **18**

Type: **not specified**

## **Stochastic backgrounds of Gravitational Waves as an evidence of Primordial Black Holes**

*Wednesday 25 September 2019 15:00 (30 minutes)*

**Presenter:** RACCO, Davide

**Session Classification:** Primordial Black Holes and Gravitational Waves

Contribution ID: **19**

Type: **not specified**

## **Gravitational wave probes of dark matter**

*Wednesday 25 September 2019 14:30 (30 minutes)*

**Presenter:** CROON, Djuna

**Session Classification:** Primordial Black Holes and Gravitational Waves

Contribution ID: 20

Type: **not specified**

# **Probing Small Scales of Inflation and the Imprints of Primordial Non-Gaussianity on Gravitational Wave Spectrum**

*Wednesday 25 September 2019 15:30 (30 minutes)*

**Presenter:** UNAL, Caner

**Session Classification:** Primordial Black Holes and Gravitational Waves

Contribution ID: 21

Type: **not specified**

## **Dark Matter Direct Detection - The Low-Mass Frontier**

*Wednesday 25 September 2019 10:00 (30 minutes)*

**Presenter:** PETRICCA, Federica

**Session Classification:** Direct Searches

Contribution ID: 22

Type: **not specified**

## Searching for Dark Matter with Neutron Stars

*Tuesday 24 September 2019 12:00 (30 minutes)*

**Presenter:** LINDEN, Tim

**Session Classification:** Indirect Searches

Contribution ID: 23

Type: **not specified**

## **Current limits in our understanding of solar interior from helioseismology and solar neutrinos**

*Friday 27 September 2019 10:30 (30 minutes)*

**Presenter:** SERENELLI, Aldo

**Session Classification:** Stellar Bounds



Contribution ID: 24

Type: **not specified**

## **An overview of experiments aiming to investigate the dark sector making use of proton beams**

**Presenter:** DENEVERVILLE, Patrick

**Session Classification:** Searches at accelerators

Contribution ID: 25

Type: **not specified**

## **An overview of experiments aiming to investigate the dark sector making use of electron beams**

*Tuesday 24 September 2019 15:00 (30 minutes)*

**Presenter:** CELENTANO, Andrea

**Session Classification:** Searches at accelerators

Contribution ID: 26

Type: **not specified**

## **A general overview of the dark sector in relationship with searches at accelerators**

*Tuesday 24 September 2019 14:30 (30 minutes)*

**Presenter:** KRNJAIC, Gordan

**Session Classification:** Searches at accelerators

Contribution ID: 27

Type: **not specified**

## **Some new (and less so) ways to look for dark matter**

*Thursday 26 September 2019 14:30 (30 minutes)*

**Presenter:** BUDKER, Dmitry

**Session Classification:** Atomic Physics

Contribution ID: 28

Type: **not specified**

# Stochastic fluctuations of bosonic dark matter

*Thursday 26 September 2019 17:00 (30 minutes)*

**Presenter:** DEREVIANKO, Andrei

**Session Classification:** Atomic Physics

Contribution ID: 29

Type: **not specified**

## **New physics in atomic spectroscopy: an EFT approach**

*Thursday 26 September 2019 16:30 (30 minutes)*

**Presenter:** PESET, Clara

**Session Classification:** Atomic Physics

Contribution ID: **30**

Type: **not specified**

## Neutron Star Constraints on Dark Matter

*Friday 27 September 2019 11:00 (30 minutes)*

**Presenter:** GARANI, Raghuveer

**Session Classification:** Stellar Bounds

Contribution ID: 31

Type: **not specified**

## **Constraining Dark Matter during the Cosmic Dawn**

**Presenter:** SCHON, Sarah

**Session Classification:** Stellar Bounds



Contribution ID: 32

Type: **not specified**

## **Recent progress in the nuclear-matter equation of state from chiral effective field theory**

*Friday 27 September 2019 12:30 (30 minutes)*

**Presenter:** DRISCHLER, Christian

**Session Classification:** Stellar Bounds

Contribution ID: 33

Type: **not specified**

## Aspects of Indirect Detection of Heavy Dark Matter

*Tuesday 24 September 2019 12:30 (30 minutes)*

**Presenter:** SHAKYA, Bibhushan

**Session Classification:** Indirect Searches

Contribution ID: 34

Type: **not specified**

## **Axion Dark Matter Detection with CMB Polarization**

*Thursday 26 September 2019 11:00 (30 minutes)*

**Presenter:** FEDDERKE, Michael

**Session Classification:** Axions and ALPs

Contribution ID: 35

Type: **not specified**

## **Isolated dwarf galaxies as probes of dark matter**

*Monday 23 September 2019 15:00 (30 minutes)*

**Presenter:** COLLINS, Michelle

**Session Classification:** Dark Matter and Structures

Contribution ID: 36

Type: **not specified**

## Searches for dark matter with charged cosmic rays

*Tuesday 24 September 2019 10:30 (30 minutes)*

**Presenter:** CIRELLI, Marco

**Session Classification:** Indirect Searches

Contribution ID: 37

Type: **not specified**

## **Constraining Dark Matter during the Cosmic Dawn**

*Tuesday 24 September 2019 11:00 (30 minutes)*

**Presenter:** SCHON, Sarah

**Session Classification:** Indirect Searches

Contribution ID: **38**

Type: **not specified**

## Searches for dark matter with gamma rays

*Tuesday 24 September 2019 10:00 (30 minutes)*

**Presenter:** CALORE, Francesca

**Session Classification:** Indirect Searches

Contribution ID: 39

Type: **not specified**

## New physics searches with atomic clocks

*Thursday 26 September 2019 15:00 (30 minutes)*

**Presenter:** SAFRANOVA , Marianna

**Session Classification:** Atomic Physics



Contribution ID: 40

Type: **not specified**

## **Axion and dark photon detection with dielectric haloscopes**

*Thursday 26 September 2019 15:30 (30 minutes)*

**Presenter:** BARYAKHTAR, Masha

**Session Classification:** Atomic Physics

Contribution ID: 41

Type: **not specified**

## Dark matter searches at accelerators

*Tuesday 24 September 2019 15:30 (30 minutes)*

**Presenter:** DOGLIONI, Caterina

**Session Classification:** Searches at accelerators

Contribution ID: 42

Type: **not specified**

**TBA**

**Presenter:** KIM, Hyungjin

**Session Classification:** Dark Matter Models

Contribution ID: 43

Type: **not specified**

## **Primordial Black Holes as a common origin for baryons and dark matter**

*Wednesday 25 September 2019 17:00 (30 minutes)*

**Presenter:** CLESSE, Sebastien

**Session Classification:** Primordial Black Holes and Gravitational Waves

Contribution ID: 44

Type: **not specified**

## **Directional Direct Dark Matter searches and the CYGNO/INITIUM project**

**Presenter:** BARACCHINI, Elisabetta

**Session Classification:** Direct Searches

Contribution ID: 45

Type: **not specified**

**TBA**

**Presenter:** COLLINS, Michelle

**Session Classification:** Dark Matter and Structures

Contribution ID: 46

Type: **not specified**

## **Dark Matter searches at B-factories and first results from Belle II**

*Tuesday 24 September 2019 16:30 (30 minutes)*

**Presenter:** KOVALCHUK, Nataliia

**Session Classification:** Searches at accelerators

Contribution ID: 47

Type: **not specified**

**TBA**

**Presenter:** REDONDO, Javier

**Session Classification:** Stellar Bounds



Contribution ID: 48

Type: **not specified**

## **Dark radiation and Superheavy Dark Matter from Primordial Black Holes**

**Presenter:** HOOPER, Dan

**Session Classification:** Primordial Black Holes and Gravitational Waves

Contribution ID: 49

Type: **not specified**

**TBA**

**Presenter:** HAMBYE, Thomas

Contribution ID: 50

Type: **not specified**

## Dark photon production of dark matter

*Monday 23 September 2019 10:30 (30 minutes)*

**Presenter:** HAMBYE, Thomas

**Session Classification:** Dark Matter Models

Contribution ID: 51

Type: **not specified**

# Early-Universe Simulations of the Cosmological Axion

*Thursday 26 September 2019 10:30 (30 minutes)*

**Presenter:** BUSCHMANN, Malte

**Session Classification:** Axions and ALPs

Contribution ID: 52

Type: **not specified**

## The photon as new physics mediator

*Friday 27 September 2019 10:00 (30 minutes)*

**Presenter:** PRADLER, Josef

**Session Classification:** Stellar Bounds

Contribution ID: 53

Type: **not specified**

## Heavy thermal dark matter

**Presenter:** KIM, Hyungjin

**Session Classification:** Dark Matter Models

Contribution ID: 54

Type: **not specified**

## **Search for dark sector physics at proton beam experiments**

*Tuesday 24 September 2019 17:00 (30 minutes)*

**Presenter:** CHU, Xiaoyong

**Session Classification:** Searches at accelerators

Contribution ID: 55

Type: **not specified**

## Heavy thermal dark matter

**Presenter:** KIM, Hyungjin

**Session Classification:** Dark Matter Models



Contribution ID: 56

Type: **not specified**

## **Directional Direct Dark Matter searches and the CYGNO/INITIUM project**

*Tuesday 24 September 2019 17:30 (30 minutes)*

**Presenter:** BARACCHINI, Elisabetta

**Session Classification:** Direct Searches

Contribution ID: 57

Type: **not specified**

## **Direct Detection Signals from Absorption of Fermionic Dark Matter**

*Wednesday 25 September 2019 12:30 (30 minutes)*

**Presenter:** DROR, Jeff

**Session Classification:** Direct Searches

Contribution ID: 58

Type: **not specified**

## Welcome to GGI

*Monday 23 September 2019 09:50 (10 minutes)*

**Presenter:** DE CURTIS, Stefania

**Session Classification:** Conference Opening

Contribution ID: 59

Type: **not specified**

# Implications of Noether's Theorem at Galactic Scales

*Monday 23 September 2019 17:00 (30 minutes)*

**Presenter:** GARDNER, Susan

**Session Classification:** Dark Matter and Structures

Contribution ID: **60**

Type: **not specified**

## **Dark radiation and Superheavy Dark Matter from Primordial Black Holes**

*Thursday 26 September 2019 10:00 (30 minutes)*

**Presenter:** HOOPER, Dan

**Session Classification:** Primordial Black Holes and Gravitational Waves