

QUARKS ONLINE WORKSHOPS-2021

“Dark Matter”

online, June 22 — 24, 2021.

Program

Moscow, 2021

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Tuesday, June 22

Morning Session. 11:00 Moscow Time

Chairman: *Valery Rubakov (INR RAS, Moscow)*

1. Valery Rubakov (INR RAS, Moscow)
Opening remarks — 10 min.
2. Julien Lesgourgues (RWTH Aachen U.)
Could cosmological tensions hint at non-standard DM properties? — 30+10 min.
3. Martti Raidal (NICPB, Tallinn)
Higher-spin Dark Matter — 30+10 min.
4. Andreas Ringwald (DESY, Hamburg)
Status and Prospects of Axion Experiments at DESY — 30+10 min.

Lunch. 13:10-16:30 Moscow Time

Afternoon Session. 16:30 Moscow Time

Chairman: *Grigory Rubtsov (INR RAS, Moscow)*

1. David Marsh (King's College London)
The meV/THz QCD Axion — 30+10 min.
2. Ariel Zhitnitsky (U. of British Columbia, Vancouver)
Telescope Array bursts and ANITA anomalous events as manifestation of the Dark Matter — 30+10 min.
3. Mauro Valli (U. of California, Irvine)
Astrophysical Signatures of Self-Interacting DM — 30+10 min.

Wednesday, June 23

Morning Session. 11:00 Moscow Time

Chairman: *Chris Kouvaris (National Technical U. of Athens)*

1. Alexander Dolgov (Novosibirsk State U.)
Antistars in the Galaxy — 30+10 min.
2. Zurab Berezhiani (U. L'Aquila & LNGS, L'Aquila)
Mirror Matter: Astrophysical implications — 30+10 min.
3. Inar Timiryasov (EPFL, Lausanne)
Einstein-Cartan Portal to Dark Matter — 30+10 min.

Lunch. 13:00-15:00 Moscow Time

Afternoon Session. 15:00 Moscow Time

Chairman: *Dmitry Gorbunov (INR RAS, Moscow)*

1. Chris Kouvaris (National Technical U. of Athens)
Primordial Black Holes from an Early Matter Phase — 30+10 min.
2. Antonio Riotto (U. of Geneva)
Primordial NanoBlackHoles — 30+10 min.
3. Malcolm Fairbairn (King's College London)
Astrophysical Probes of Dark Matter — 30+10 min.
4. Yacine Ali-Haïmoud (New York U.)
Probing interacting dark matter and accreting primordial black holes with the CMB — 30+10 min.

Thursday, June 24

Morning Session. 11:00 Moscow Time

Chairman: *Andreas Ringwald (DESY, Hamburg)*

1. Jens Niemeyer (U. of Gottingen)
Structure formation with nonrelativistic scalar fields — 30+10 min.
2. Javier Redondo (Zaragoza U.)
Axion Dark Matter Simulations — 30+10 min.
3. David Ellis (U. of Gottingen)
Understanding Axion Miniclusters: Formation and observational signatures — 30+10 min.

Lunch. 13:00-15:00 Moscow Time

Afternoon Session. 15:00 Moscow Time

Chairman: *Javier Redondo (Zaragoza U.)*

1. Joshua Eby (Kavli IPMU, Kashiwa)
Searching for Axion Stars with Large Decay Constants — 30+10 min.
2. Dmitry Levkov (INR RAS, Moscow & ITMP MSU, Moscow)
Instability of rotating Bose stars — 30+10 min.
3. Anton Sokolov (DESY, Hamburg)
Photophilic hadronic axion from heavy magnetic monopoles — 30+10 min.
4. Mark Hertzberg (Tufts U.)
Aspects of superfluid and quantum dark matter — 30+10 min.