

**The 2022 Shanghai Particle  
Physics and Cosmology  
Symposium: Neutrino and  
Dark Matter Physics (SPCS  
2022)**

**Report of Contributions**

Contribution ID: 28

Type: **not specified**

## DM Direct 1

**Presenter:** 杨, 丽桃

Contribution ID: 29

Type: **not specified**

## **Recent status and prospects of CDEX@CJPL**

*Friday, 18 November 2022 08:30 (30 minutes)*

**Presenter:** YANG, Litao (Tsinghua U.)

**Session Classification:** Seesion 1

Contribution ID: **30**

Type: **not specified**

## **Dark Matter Search Results of PandaX**

*Friday, 18 November 2022 09:00 (30 minutes)*

**Presenter:** TAO, Yi (Tsinghua U.)

**Session Classification:** Seesion 1

Contribution ID: 31

Type: **not specified**

# The Weakly Interacting Massive Particle dark matter and beyond

*Friday, 18 November 2022 09:30 (30 minutes)*

**Presenter:** LIU, Jia (Peking U.)

**Session Classification:** Seesion 1

Contribution ID: 32

Type: **not specified**

## Cosmic ray boosted dark matter

*Friday, 18 November 2022 10:30 (30 minutes)*

**Presenter:** ZHOU, Yufeng (ITP)

**Session Classification:** Session 2

Contribution ID: 33

Type: **not specified**

## **Recent developments in search for light dark matter**

*Friday, 18 November 2022 11:00 (30 minutes)*

**Presenter:** AN, Haipeng (Tsinghua U.)

**Session Classification:** Session 2

Contribution ID: 34

Type: **not specified**

## **Search for the Absorption of Sub-MeV Fermionic Dark Matter on Electron Targets with the PandaX-4T Run 1 Data**

*Friday, 18 November 2022 11:30 (30 minutes)*

**Presenter:** ZHANG, Dan (University of Washington)

**Session Classification:** Session 2



Contribution ID: 35

Type: **not specified**

## **Detecting ultra-light particles from astro-physical observations**

*Friday, 18 November 2022 13:30 (30 minutes)*

**Presenter:** SHU, Jing (ITP)

**Session Classification:** Session 3

Contribution ID: 36

Type: **not specified**

# The Resonant Cavity Search for Axion Dark Matter

*Friday, 18 November 2022 14:00 (30 minutes)*

**Presenter:** LI, Tianjun (ITP)

**Session Classification:** Session 3

Contribution ID: 37

Type: **not specified**

## Quantum interferometry and axion haloscope

*Friday, 18 November 2022 14:30 (30 minutes)*

**Presenter:** YANG, Qiaoli (Jinan U.)

**Session Classification:** Session 3

Contribution ID: **38**

Type: **not specified**

## **Search for Dark Matter and Fifth Force with Coupled Hot Atom Ensembles**

*Friday, 18 November 2022 15:30 (30 minutes)*

**Presenter:** WEI, Kai (Beihang U.)

**Session Classification:** Session 4

Contribution ID: 39

Type: **not specified**

# Experimental Limits on Exotic Spin and Velocity Dependent Interactions Using Rotationally Modulated Source Masses and an Atomic Magnetometer Array

*Friday, 18 November 2022 16:00 (30 minutes)*

**Presenter:** YAN, Haiyang (Engineering Physics Research Institute)

**Session Classification:** Session 4

Contribution ID: 40

Type: **not specified**

## DM Ultralight 2

**Presenter:** 杨, 峤立

**Session Classification:** Session 4

Contribution ID: 41

Type: **not specified**

## **Novel cosmological bounds on thermally-produced axion-like particles**

*Friday, 18 November 2022 16:30 (30 minutes)*

**Presenter:** VISINELLI, Luca (TDLI)

**Session Classification:** Session 4

Contribution ID: 42

Type: **not specified**

## Opening

*Friday, 18 November 2022 08:20 (10 minutes)*

Online Meeting Room: <https://meeting.tencent.com/dm/5ZXTYke8Xhp7>

ID: 599383871

Password: 955050

### Paper Info

**Presenter:** LIU, Jienglai (SJTU,TDLI)



Contribution ID: 43

Type: **not specified**

## Registration

*Friday, 18 November 2022 08:00 (20 minutes)*

Contribution ID: 44

Type: **not specified**

## Neutrino Physics at Daya Bay and JUNO

*Saturday, 19 November 2022 08:30 (30 minutes)*

**Presenter:** WEN, Liangjian (IHEP)

**Session Classification:** Session 1

Contribution ID: 45

Type: **not specified**

## Neutrino Oscillation Experiments

*Saturday, 19 November 2022 09:00 (30 minutes)*

**Presenter:** JI, Xiangpan (Brookhaven national lab)

**Session Classification:** Session 1

Contribution ID: 46

Type: **not specified**

## The Status of Jinping Neutrino Experiment

*Saturday, 19 November 2022 09:30 (30 minutes)*

**Presenter:** WANG, Zhe (Tsinghua U.)

**Session Classification:** Session 1

Contribution ID: 47

Type: **not specified**

## **CDEX-300v program for Ge-76 $0\nu\beta\beta$ search at CJPL**

**Presenter:** MA, Hao (Tsinghua U.)

**Session Classification:** Session 2

Contribution ID: 48

Type: **not specified**

## **Direct Neutrino Mass Measurement and Relic Neutrino Detection with PTOLEMY**

*Saturday, 19 November 2022 10:30 (30 minutes)*

**Presenter:** TAN, Andi

**Session Classification:** Session 2

Contribution ID: 49

Type: **not specified**

## Quest for the absolute neutrino mass

*Saturday, 19 November 2022 11:00 (30 minutes)*

**Presenter:** ZHOU, Shun (IHEP)

**Session Classification:** Session 2

Contribution ID: 50

Type: **not specified**

## **Sterile Neutrinos: Fact and Fiction**

*Saturday, 19 November 2022 13:30 (30 minutes)*

**Presenter:** LI, Yufeng (IHEP)

**Session Classification:** Session 3



Contribution ID: 51

Type: **not specified**

## **Theoretical perspective on flavor structure of SM**

*Saturday, 19 November 2022 14:00 (30 minutes)*

**Presenter:** DING, Guijun (USTC)

**Session Classification:** Session 3

Contribution ID: 52

Type: **not specified**

## **CDEX-300v program for Ge-76 $0\nu\beta\beta$ search at CJPL**

*Saturday, 19 November 2022 15:30 (30 minutes)*

**Presenter:** MA, Hao (Tsinghua U.)

**Session Classification:** Session 4

Contribution ID: 53

Type: **not specified**

## **Jinping bolometric experiment for neutrinoless double beta decay search**

*Saturday, 19 November 2022 16:00 (30 minutes)*

**Presenter:** MA, Long (Fudan U.)

**Session Classification:** Session 4

Contribution ID: 54

Type: **not specified**

## NvDEx experiment

*Saturday, 19 November 2022 16:30 (30 minutes)*

### Paper Info

**Presenter:** QIU, Hao (Institute of Modern Physics)

**Session Classification:** Session 4

Contribution ID: 55

Type: **not specified**

## Neutrino Mass 2

**Presenter:** 李, 刚

**Session Classification:** Session 4

Contribution ID: 56

Type: **not specified**

## Parallel Sessions

Online Meeting Room: <https://meeting.tencent.com/dm/eWRvvsyTHzsg>  
ID:625827863  
Password: 678061

Contribution ID: 57

Type: **not specified**

## DAMPE 的研究现状及 VLAST 的研发进展

*Sunday, 20 November 2022 08:30 (30 minutes)*

**Presenter:** FAN, Yizhong (Purple Mountain Observatory)

**Session Classification:** Session 1

Contribution ID: 58

Type: **not specified**

## AMS 实验暗物质寻找

*Sunday, 20 November 2022 09:00 (30 minutes)*

**Presenter:** LI, Zuhao (IHEP)

**Session Classification:** Session 1



Contribution ID: 59

Type: **not specified**

## **In Search of Cosmic-Ray Anti-nuclei from Dark Matter with the GAPS Experiment**

*Sunday, 20 November 2022 09:30 (30 minutes)*

**Presenter:** XIAO, Mengjiao (MIT)

**Session Classification:** Session 1

Contribution ID: **60**

Type: **not specified**

## **Recent progresses on the astrophysical probe of dark matter**

*Sunday, 20 November 2022 10:30 (30 minutes)*

**Presenter:** BI, Xiaojun (IHEP)

**Session Classification:** Session 2

Contribution ID: 61

Type: **not specified**

## **Probing for an ultralight dark photon from inverse Comptonlike scattering**

*Sunday, 20 November 2022 11:00 (30 minutes)*

**Presenter:** ZHU, Bin (Yantai U.)

**Session Classification:** Session 2

Contribution ID: 62

Type: **not specified**

## Searching for dark matter with x-ray lines

*Sunday, 20 November 2022 11:30 (30 minutes)*

**Presenter:** NG, Kenny (Chinese University of Hong Kong)

**Session Classification:** Session 2

Contribution ID: 63

Type: **not specified**

## Search for dark matter alternative to WIMPs

*Sunday, 20 November 2022 13:30 (30 minutes)*

**Presenter:** HUANG, Qingguo (ITP)

**Session Classification:** Session 3

Contribution ID: 64

Type: **not specified**

## 中微子宇宙学

*Sunday, 20 November 2022 14:00 (30 minutes)*

**Presenter:** XIA, Junqing (Beijing Normal U.)

**Session Classification:** Session 3

Contribution ID: 65

Type: **not specified**

# Dark matter and the symmetry breaking in the early Universe

*Sunday, 20 November 2022 14:30 (30 minutes)*

**Presenter:** BIAN, Ligong (Chongqing U.)

**Session Classification:** Session 3

Contribution ID: 66

Type: **not specified**

## **Testability of thermal leptogenesis**

*Sunday, 20 November 2022 15:30 (30 minutes)*

**Presenter:** ZHOU, Yeling (HIAS)

**Session Classification:** Session 4



Contribution ID: 67

Type: **not specified**

## Type II seesaw leptogenesis

*Sunday, 20 November 2022 16:00 (30 minutes)*

**Presenter:** HAN, Chengcheng (SYSU)

**Session Classification:** Session 4

Contribution ID: 68

Type: **not specified**

## **Dark Matter Detection with Gravitational Waves: from Ultralight to Ultraheavy**

*Sunday, 20 November 2022 16:30 (30 minutes)*

**Presenter:** GUO, Huaike (Utah / 国科大)

**Session Classification:** Session 4

Contribution ID: 69

Type: **not specified**

## Exploring the Blazar-boosted dark matter at XENON1T and SuperKamiokande

*Sunday, 20 November 2022 17:00 (30 minutes)*

**Presenter:** WANG, Jinwei (TDLI)

**Session Classification:** Session 4

Contribution ID: 71

Type: **not specified**

## **Effective field theory approach to neutrinoless double beta decay with light sterile neutrinos**

*Saturday, 19 November 2022 14:30 (30 minutes)*

**Presenter:** LI, Gang (SYSU)

**Session Classification:** Session 3

Contribution ID: 74

Type: **not specified**

# Muon Physics Possibilities at the Shanghai SHINE facility

*Saturday, 19 November 2022 11:30 (30 minutes)*

## Paper Info

**Presenter:** KHAW, Kim Siang (TDLI/SJTU)

**Session Classification:** Session 2

Contribution ID: 75

Type: **not specified**

## Measurement of $^{136}\text{Xe}$ DBD Half-life with PandaX-4T

*Saturday, 19 November 2022 17:00 (30 minutes)*

**Presenter:** CHENG, Zhaokan (SJTU)

**Session Classification:** Session 4

Contribution ID: 76

Type: **not specified**

## Closing Remark

*Sunday, 20 November 2022 17:30 (5 minutes)*

**Presenter:** HE, Xiaogang

Contribution ID: 77

Type: **not specified**

## XENONnT Progress

*Friday, 18 November 2022 19:00 (15 minutes)*

**Presenter:** LIU, Kexin

**Session Classification:** Parallel Sessions-会议室 1



Contribution ID: 78

Type: **not specified**

## **Forbidden Dark Matter Combusted Around Supermassive Black Hole**

*Friday, 18 November 2022 19:15 (15 minutes)*

**Presenter:** CHENG, Yu

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: 79

Type: **not specified**

# Light Fermionic Dark Matter Absorption on Electron Targets

*Friday, 18 November 2022 19:30 (15 minutes)*

**Presenter:** SHENG, Jie

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: 80

Type: **not specified**

## Can sub-GeV dark matter coherently scatter on the electrons in the atom?

*Friday, 18 November 2022 19:45 (15 minutes)*

**Presenter:** GUO, Jiheng

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: **81**

Type: **not specified**

## **WIMP dark matter hidden behind its companion**

*Friday, 18 November 2022 20:00 (15 minutes)*

**Presenter:** ZHANG, Peng

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: **82**

Type: **not specified**

## **Realistic scattering of puffy dark matter**

*Friday, 18 November 2022 20:15 (15 minutes)*

**Presenter:** XU, Wu-Long

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: 83

Type: **not specified**

## Revisiting Dark Matter Freeze-in and Freeze-out through Phase-Space Distribution

*Friday, 18 November 2022 20:30 (15 minutes)*

**Presenter:** LI, Yuan-Zhen

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: 84

Type: **not specified**

## **Probing sub-GeV leptophilic dark matter at Belle II and NA64**

*Friday, 18 November 2022 20:45 (15 minutes)*

**Presenter:** YANG, Lan

**Session Classification:** Parallel Sessions-会议室 1

Contribution ID: 85

Type: **not specified**

## Boosted DM

**Presenter:** YANG, Wanna

**Session Classification:** Parallel Sessions-会议室 1



Contribution ID: **86**

Type: **not specified**

## **Improving neutrino CP measurement with muon-decay-at-rest**

*Friday, 18 November 2022 19:00 (15 minutes)*

**Presenter:** KONG, Chuifan

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 87

Type: **not specified**

## CEvNS at CSNS in China

*Friday, 18 November 2022 19:15 (15 minutes)*

**Presenter:** SU, Chenguang

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 88

Type: **not specified**

## **Effects of Quasi-elastic and Deep-inelastic Scattering in Light Dark Matter Direct Detection**

*Friday, 18 November 2022 19:30 (15 minutes)*

**Presenter:** SU, Liangliang

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 89

Type: **not specified**

## **Monojet search for heavy neutrinos at future $Z$ -factories**

*Friday, 18 November 2022 19:45 (15 minutes)*

**Presenter:** SHEN, Yin-Fa

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 90

Type: **not specified**

## **The Scattering of Dirac and Majorana Fermions by Kerr spacetime in the teleparallel gravity approach**

*Friday, 18 November 2022 20:00 (15 minutes)*

**Presenter:** LIN, Wei

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 91

Type: **not specified**

## **Probing Millicharged particles via collision between cosmic ray and atmosphere**

*Friday, 18 November 2022 20:15 (15 minutes)*

**Presenter:** FANG, Rundong

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 92

Type: **not specified**

## **Axion dark radiation: Hubble tension and the Hyper-Kamiokande neutrino experiment**

*Friday, 18 November 2022 20:30 (15 minutes)*

**Presenter:** GU, Yuchao

**Session Classification:** Parallel Sessions-会议室 2

Contribution ID: 93

Type: **not specified**

## **New window for post-inflationary axion DM**

*Friday, 18 November 2022 20:45 (15 minutes)*

**Presenter:** LI, Linfeng

**Session Classification:** Parallel Sessions-会议室 2