

# **4th World Summit on Exploring the Dark Side of the Universe**

## **Report of Contributions**

Contribution ID: 21

Type: **not specified**

# Cosmic-Flows : Exploring Gravitation on Large Scales

*Monday, 7 November 2022 08:30 (30 minutes)*

**Presenter:** Ms COURTOIS, Hélène (IP2I, Université de Lyon-I)

**Session Classification:** Cosmology 1

Contribution ID: 22

Type: **not specified**

## **The Search for possible extraterrestrial life: Opportunities and Challenges**

*Monday, 7 November 2022 09:00 (30 minutes)*

**Presenter:** Prof. MAYOR, Michel (University of Geneva)

**Session Classification:** Cosmology 1

Contribution ID: 23

Type: **not specified**

## Cosmology 2

Contribution ID: 24

Type: **not specified**

## **Dark Energy : a Cosmological Constant or Something Else ?**

*Monday, 7 November 2022 10:00 (30 minutes)*

**Presenter:** Dr LUMINET, Jean-Pierre (LAM Marseille, France)

**Session Classification:** Cosmology 2

Contribution ID: 25

Type: **not specified**

# Cosmology from the hot Gas in the Universe

*Monday, 7 November 2022 10:55 (25 minutes)*

**Presenter:** Dr DOUPSIS, Marian (IAS Orsay France)

**Session Classification:** Cosmology 2

Contribution ID: 26

Type: **not specified**

## Galaxy Alignment across the Cosmic Web

*Monday, 7 November 2022 10:30 (25 minutes)*

**Presenter:** Ms CODIS, Sandrine (CEA France)

**Session Classification:** Cosmology 2

Contribution ID: 27

Type: **not specified**

# Galaxy proto-clusters from Cosmic Dawn to Cosmic Noon

*Monday, 7 November 2022 11:20 (25 minutes)*

**Presenter:** Dr DOLE, Hervé (IAS, Orsay France)

**Session Classification:** Cosmology 2



Contribution ID: 28

Type: **not specified**

## The CMB Frontier

*Monday, 7 November 2022 11:45 (25 minutes)*

**Presenter:** BOUCHET, Francois (IAP, Paris, France)

**Session Classification:** Cosmology 2

Contribution ID: **30**

Type: **not specified**

## **LIGO and future GW detectors: Status and Prospects**

*Monday, 7 November 2022 13:45 (30 minutes)*

**Presenter:** Dr BRADY, Patrick (University of Wisconsin-Milwaukee)

**Session Classification:** Gravitation 1

Contribution ID: 31

Type: **not specified**

## **VIRGO Status and Prospects**

*Monday, 7 November 2022 14:15 (25 minutes)*

**Presenter:** Dr ARNAUD, Nicolas (IJCLab (Université Paris-Saclay and CNRS/IN2P3))

**Session Classification:** Gravitation 1

Contribution ID: 32

Type: **not specified**

## **KAGRA Status and Prospects**

*Monday, 7 November 2022 14:40 (25 minutes)*

**Presenter:** Dr USHIBA, Takafumi (ICRR Tokyo University Japan)

**Session Classification:** Gravitation 1

Contribution ID: 33

Type: **not specified**

## **LISA Status and Prospects**

*Monday, 7 November 2022 15:05 (25 minutes)*

**Presenter:** Dr LAMBERTS, Astrid (OCA France)

**Session Classification:** Gravitation 1

Contribution ID: 34

Type: **not specified**

## Experimental Review on Higgs

*Monday, 7 November 2022 16:00 (30 minutes)*

**Presenter:** AZZURRI, Paolo (Universita & INFN Pisa (IT))

**Session Classification:** HEP 1

Contribution ID: 35

Type: **not specified**

## Hints of BSM Physics in CMS

*Monday, 7 November 2022 16:30 (20 minutes)*

**Presenter:** MEOLA, Sabino (INFN e Laboratori Nazionali di Frascati (IT))

**Session Classification:** HEP 1

Contribution ID: 36

Type: **not specified**

## Hints of BSM Physics in ATLAS

*Monday, 7 November 2022 16:50 (20 minutes)*

**Presenter:** STRUBIG, Antonia (Stockholm University (SE))

**Session Classification:** HEP 1



Contribution ID: 37

Type: **not specified**

## **Electroweak measurement through VBS at LHC**

*Monday, 7 November 2022 17:10 (20 minutes)*

**Presenter:** SOLOMON, Shalu (Albert Ludwigs Universitaet Freiburg (DE))

**Session Classification:** HEP 1

Contribution ID: 38

Type: **not specified**

## **Beauty hadrons at LHCb: New Physics exploration and Lepton Flavour Universality**

*Tuesday, 8 November 2022 13:45 (30 minutes)*

**Presenter:** PEPE-ALTARELLI, Monica (CERN)

**Session Classification:** HEP 2

Contribution ID: 39

Type: **not specified**

## **Semitaudonic b Decays in LCHb: Results and Prospects**

*Tuesday, 8 November 2022 14:15 (20 minutes)*

**Presenter:** WORMSER, Guy (LAL Orsay)

**Session Classification:** HEP 2

Contribution ID: 40

Type: **not specified**

## **Test of Lepton Flavour Universality with the LHCb Detector**

*Tuesday, 8 November 2022 14:35 (15 minutes)*

**Presenter:** AGAPOPOULOU, Christina (Centre National de la Recherche Scientifique (FR))

**Session Classification:** HEP 2

Contribution ID: 41

Type: **not specified**

## Latest Results from BELLE II

*Tuesday, 8 November 2022 14:50 (20 minutes)*

**Presenter:** ROBERTSON, Steven (McGill University, (CA))

**Session Classification:** HEP 2

Contribution ID: 42

Type: **not specified**

## **Semileptonic and Leptonic B Physics at Belle II**

*Tuesday, 8 November 2022 15:10 (15 minutes)*

**Presenter:** CHEEMA, Priyanka (University of Sydney, Aus)

**Session Classification:** HEP 2

Contribution ID: 43

Type: **not specified**

## Neutrino Masses and Mixing

*Tuesday, 8 November 2022 10:20 (25 minutes)*

**Presenter:** GONZALEZ-GARCIA, Maria Concepcion

**Session Classification:** Neutrino 1

Contribution ID: 44

Type: **not specified**

## **Long Baseline Experiments in Japan: from T2K to Hyper-K**

*Tuesday, 8 November 2022 10:45 (40 minutes)*

**Presenter:** BUIZZA AVANZINI, Margherita (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Neutrino 1



Contribution ID: 45

Type: **not specified**

## **Results from Long Baseline Experiments Future DUNE**

*Tuesday, 8 November 2022 11:25 (25 minutes)*

**Presenters:** DE ROECK, Albert (CERN); DE ROECK, Albert (CERN)

**Session Classification:** Neutrino 1

Contribution ID: 46

Type: **not specified**

## Coherent Elastic Neutrino-Nucleus Scattering

*Tuesday, 8 November 2022 11:50 (25 minutes)*

**Presenter:** Dr SCHOLBERG, Kate (University of Duke USA)

**Session Classification:** Neutrino 1

Contribution ID: 47

Type: **not specified**

## **Experimental Searches for sub-GeV Dark Matter**

*Tuesday, 8 November 2022 08:00 (25 minutes)*

**Presenter:** Dr VAZQUEZ DE SOLA FERNANDEZ, Francisco (Subatech, Nantes, FR)

**Session Classification:** Dark Matter 1

Contribution ID: 48

Type: **not specified**

## **Models and Status of Searches for Light Dark Matter Particles**

**Presenter:** Dr VOLANSKY, Tomer (Tel Aviv University, IL)

**Session Classification:** Dark Matter 1

Contribution ID: 49

Type: **not specified**

## Status of Axions and Alps searches

*Tuesday, 8 November 2022 08:25 (25 minutes)*

**Presenter:** Dr MAJOROVITS, Bela (Max Plank Institute, Munich, DE)

**Session Classification:** Dark Matter 1

Contribution ID: 50

Type: **not specified**

## **Enlightening Cold Dark Matter's darkest side via non-minimal coupling**

*Tuesday, 8 November 2022 08:50 (25 minutes)*

**Presenter:** Dr GANDOLFI, Giovanni (SISSA Italy)

**Session Classification:** Dark Matter 1

Contribution ID: 51

Type: **not specified**

## **Search for Dark Matter annihilation with a combined analysis of dwarf spheroidal galaxies from Fermi-LAT, HAWC, H.E.S.S., MAGIC and VERITAS**

*Tuesday, 8 November 2022 09:15 (15 minutes)*

**Presenter:** KERSZBERG, Daniel (IFAE Barcelona Spain)

**Session Classification:** Dark Matter 1

Contribution ID: 52

Type: **not specified**

## Dark Matter Search in BABAR

*Tuesday, 8 November 2022 09:30 (20 minutes)*

**Presenter:** VASSEUR, Georges (Université Paris-Saclay (FR))

**Session Classification:** Dark Matter 1



Contribution ID: 53

Type: **not specified**

# Gravitational waves propagation as a probe of fundamental physics

*Tuesday, 8 November 2022 16:20 (15 minutes)*

**Presenter:** HAEGEL, Leila (APC, Paris, FR)

**Session Classification:** Gravitation 2

Contribution ID: 54

Type: **not specified**

## Quantum Gravity

*Tuesday, 8 November 2022 16:35 (25 minutes)*

**Presenter:** Dr MURUGAN, Jeffrey (University of Cape-Town South Africa)

**Session Classification:** Gravitation 2

Contribution ID: 55

Type: **not specified**

## **Light dark matter vis-à-vis non-standard mechanisms and its possible probes**

*Wednesday, 9 November 2022 13:45 (15 minutes)*

**Presenter:** CHAKRABORTI, Sreemanti (LAPTH Annecy France)

**Session Classification:** Dark Matter 2

Contribution ID: 56

Type: **not specified**

## Measurements of Warm Dark Matter Properties

*Wednesday, 9 November 2022 14:00 (25 minutes)*

**Presenter:** Prof. HOENEISEN, Bruce (UFSQ Ecuador)

**Session Classification:** Dark Matter 2

Contribution ID: 57

Type: **not specified**

## **Manifesting Hidden Dynamics of a sub-Component Dark Matter**

*Wednesday, 9 November 2022 14:25 (25 minutes)*

**Presenter:** SHIN, Seodong (Jeonbuk National University Korea)

**Session Classification:** Dark Matter 2

Contribution ID: 58

Type: **not specified**

## **Not a jet all the way: a search for semi-visible jets in nonresonant production mode in ATLAS**

*Wednesday, 9 November 2022 15:15 (15 minutes)*

**Presenter:** SINHA, Sukanya (University of Witwatersrand)

**Session Classification:** Dark Matter 2

Contribution ID: 59

Type: **not specified**

## **The Radon daughter implementation on the surface of the rare events detector components**

*Wednesday, 9 November 2022 15:30 (15 minutes)*

**Presenter:** DASTGHEIBI FARD, Ali (LPSC, Grenoble, Fr)

**Session Classification:** Dark Matter 2

Contribution ID: **60**

Type: **not specified**

## **Earth and Celestial Bodies as Dark Matter Laboratories ?**

*Wednesday, 9 November 2022 14:50 (25 minutes)*

**Presenter:** SONG, NingQiang (University of Liverpool UK)

**Session Classification:** Dark Matter 2



Contribution ID: **61**

Type: **not specified**

## **Hubble Constant at the Late Universe**

*Wednesday, 9 November 2022 16:15 (25 minutes)*

**Presenter:** SUYU, Sherry (MPA Germany)

**Session Classification:** Cosmology 3

Contribution ID: 62

Type: **not specified**

## **Review on eBoss results and implications for H0 tension and the reported hints of tension in $\sigma_8$**

*Wednesday, 9 November 2022 16:40 (25 minutes)*

**Presenter:** DAWSON, Kyle (University of Utah, USA)

**Session Classification:** Cosmology 3

Contribution ID: 63

Type: **not specified**

## **Tension between the early and the late Universe on the Hubble constant measurements**

*Wednesday, 9 November 2022 17:05 (25 minutes)*

**Presenter:** MACRI, Lucas (Texas A&M USA)

**Session Classification:** Cosmology 3

Contribution ID: 64

Type: **not specified**

## **Going down the rabbit hole of the Hubble constant tension**

*Wednesday, 9 November 2022 17:30 (25 minutes)*

**Presenter:** DE SIMONE, Biagio (University of Salerno Italy)

**Session Classification:** Cosmology 3

Contribution ID: 65

Type: **not specified**

## **H0 from the integration of 7 methodologies**

*Wednesday, 9 November 2022 17:55 (25 minutes)*

**Presenter:** TULLY, Brent (University of Hawai, USA)

**Session Classification:** Cosmology 3

Contribution ID: **66**

Type: **not specified**

## **First XENONnT results on electronic recoil interactions**

*Thursday, 10 November 2022 08:45 (25 minutes)*

**Presenter:** RAMIREZ GARCIA, Diego (University of Zurich CH)

**Session Classification:** Dark Matter 3

Contribution ID: 67

Type: **not specified**

## **Status of Direct Dark Matter Searches with Scintillators**

*Thursday, 10 November 2022 09:10 (25 minutes)*

**Presenter:** SCUTTI, Federico (Swinburne University, AUS)

**Session Classification:** Dark Matter 3

Contribution ID: **68**

Type: **not specified**

## **Dark Stars**

*Thursday, 10 November 2022 09:35 (25 minutes)*

**Presenter:** SANDICK, Pearl (University of Utah USA)

**Session Classification:** Dark Matter 3



Contribution ID: **69**

Type: **not specified**

## **Dark Sectors**

**Presenter:** CERDENO, David (University of Madrid Spain)

**Session Classification:** Dark Matter 3

Contribution ID: 70

Type: **not specified**

## **Short Baseline Experiments (Nova Near Detector)**

*Thursday, 10 November 2022 10:30 (25 minutes)*

**Presenter:** PAWLOSKI, Greg (University of Minnesota, USA)

**Session Classification:** Neutrino 2

Contribution ID: 71

Type: **not specified**

## Reactor Experiments (JUNO)

*Thursday, 10 November 2022 10:55 (25 minutes)*

**Presenter:** VON STURM, Katharina (INFN Italy)

**Session Classification:** Neutrino 2

Contribution ID: 72

Type: **not specified**

## **Reactor Experiments (review of small experiments)**

**Presenter:** LINK, Jonathan (Virginia Tech, USA)

**Session Classification:** Neutrino 2

Contribution ID: 73

Type: **not specified**

## **Neutrino Astronomy (IceCube, ANTARES, KM3NeT)**

*Thursday, 10 November 2022 11:20 (25 minutes)*

**Presenter:** KOUCHNER, Antoine (APC Paris, Fr)

**Session Classification:** Neutrino 2

Contribution ID: 74

Type: **not specified**

## **The LEGEND experiment to search for neutrinoless double beta decay**

*Thursday, 10 November 2022 11:45 (15 minutes)*

**Presenter:** CHIU, Pin-Jung (University of Zurich Switzweland)

**Session Classification:** Neutrino 2

Contribution ID: 75

Type: **not specified**

## **Astroparticle Constraints from Cosmic Reionization and Primordial Galaxy Formation**

*Thursday, 10 November 2022 13:45 (25 minutes)*

**Presenter:** LAPI, Andrea (SISSA Italy)

**Session Classification:** Cosmology 4

Contribution ID: 76

Type: **not specified**

## **Exploring Cosmic Dawn with the Hydrogen Epoch of Reionization Array (HERA)**

*Thursday, 10 November 2022 14:10 (25 minutes)*

**Presenter:** GORCE, Adélie (McGill Space Institute Canad)

**Session Classification:** Cosmology 4



Contribution ID: 77

Type: **not specified**

# **Cosmology and Neutrino Physics with the Lyman-alpha forest: Constraints from Cosmological Simulations**

*Thursday, 10 November 2022 14:35 (25 minutes)*

**Presenter:** BOURNAUD, Frederic (CEA France)

**Session Classification:** Cosmology 4

Contribution ID: 78

Type: **not specified**

## **Evolution of the Stellar Mass Function across cosmic time and its Connection with the Growth of Dark Matter Haloes**

*Thursday, 10 November 2022 15:00 (25 minutes)*

**Presenter:** ILBERT, Olivier (LAM Marseille, France)

**Session Classification:** Cosmology 4

Contribution ID: 79

Type: **not specified**

## **Experimental Modelling of Jupiter's Fluid Dynamics**

*Thursday, 10 November 2022 15:50 (15 minutes)*

**Presenter:** LEMASQUERIER, Daphné

**Session Classification:** Cosmology 4

Contribution ID: **80**

Type: **not specified**

## **Experimental Overview on g-2 Experiments**

*Thursday, 10 November 2022 16:30 (30 minutes)*

**Presenter:** POLLY, Crhis (FNAL US)

**Session Classification:** HEP 3 + Instrumentation

Contribution ID: **81**

Type: **not specified**

## **Theoretical Prediction on g-2 experimental results**

*Thursday, 10 November 2022 17:00 (30 minutes)*

**Presenter:** LELLOUCH, Laurent (CPT Marseille Fr)

**Session Classification:** HEP 3 + Instrumentation

Contribution ID: **82**

Type: **not specified**

## **AGILE project (cosmic ray measurement)**

*Thursday, 10 November 2022 17:30 (15 minutes)*

**Presenter:** GAUTIER, Florian (University of Kansas US)

**Session Classification:** HEP 3 + Instrumentation

Contribution ID: **83**

Type: **not specified**

## **ALICE Trigger DAQ**

*Thursday, 10 November 2022 17:45 (20 minutes)*

**Presenter:** COSTA, Filippo (CERN)

**Session Classification:** HEP 3 + Instrumentation

Contribution ID: 84

Type: **not specified**

## Neutrinoless Double Beta Decay

*Friday, 11 November 2022 08:25 (25 minutes)*

**Presenter:** LENHERT, Bjoern (Berkeley, USA)

**Session Classification:** Neutrino 3



Contribution ID: 85

Type: **not specified**

## **Status and Prospects of eV Sterile Neutrinos Searches**

**Presenter:** LHUILLIER, David (IRFU CEA France)

**Session Classification:** Neutrino 3

Contribution ID: **86**

Type: **not specified**

## **Neutrino Mass Measurement : Latest Results from Katrin**

*Friday, 11 November 2022 08:50 (25 minutes)*

**Presenter:** LASSERE, Thierry (IRFU CEA France)

**Session Classification:** Neutrino 3

Contribution ID: 87

Type: **not specified**

## **Something from nothing: Cosmic voids and their sensitivity to neutrinos**

*Friday, 11 November 2022 09:15 (15 minutes)*

**Presenter:** VIELZEUF, Pauline (CPPM Marseille France)

**Session Classification:** Neutrino 3

Contribution ID: **88**

Type: **not specified**

## **Review on antimatter Experiments**

*Friday, 11 November 2022 10:00 (30 minutes)*

**Presenter:** MALBRUNOT, Chloe (CERN)

**Session Classification:** HEP 4 + instrumentation

Contribution ID: **89**

Type: **not specified**

## **Faser Experiment at LHC**

*Friday, 11 November 2022 10:30 (25 minutes)*

**Presenter:** BOYD, Jamie (CERN)

**Session Classification:** HEP 4 + instrumentation

Contribution ID: **90**

Type: **not specified**

## **Effective Field theory analysis at LHC**

*Friday, 11 November 2022 10:55 (25 minutes)*

**Presenter:** HYOUN PARK, Tae (University of Toronto Canada)

**Session Classification:** HEP 4 + instrumentation

Contribution ID: 91

Type: **not specified**

## **Search for long-lived particles in ATLAS with displaced vertex signatures in multi-jet-triggered events**

*Friday, 11 November 2022 11:20 (15 minutes)*

**Presenter:** ROUSSO, David (University of Cambridge (GB))

**Session Classification:** HEP 4 + instrumentation

Contribution ID: 92

Type: **not specified**

## **New Trends in Detectors R&D**

*Friday, 11 November 2022 11:35 (30 minutes)*

**Presenter:** PERROTTA, Andrea (INFN Italy)

**Session Classification:** HEP 4 + instrumentation



Contribution ID: 93

Type: **not specified**

## **Sterile Neutrino Dark Matter**

*Friday, 11 November 2022 13:45 (25 minutes)*

**Presenter:** MERTENS, Susanne (Technical University of Munich, DE)

**Session Classification:** Dark Matter 4

Contribution ID: 94

Type: **not specified**

## **Review of Direct Dark Matters Searches with Liquid Argon and Xenon Detectors**

**Presenter:** RIESCHBIETER, Gregory (University of Michigan USA)

**Session Classification:** Dark Matter 4

Contribution ID: 95

Type: **not specified**

## **Status of Satellite Experiment to Measure very low Energy antiprotons**

*Friday, 11 November 2022 14:10 (25 minutes)*

**Presenter:** Prof. PAUL, Stephan (Technische Universitaet Muenchen (DE))

**Session Classification:** Dark Matter 4

Contribution ID: 96

Type: **not specified**

## **The COSINUS Experiment: Direct search for Dark Matter with Scintillating NaI Calorimeters**

*Friday, 11 November 2022 14:35 (15 minutes)*

**Presenter:** STAHLBERG, Martin (MPI Munich Germany)

**Session Classification:** Dark Matter 4

Contribution ID: 97

Type: **not specified**

## **A dark matter WIMP that can be detected and definitively identified with currently planned experiments**

*Friday, 11 November 2022 14:50 (20 minutes)*

**Presenter:** ALLEN, Roland (TEXAS A&M University USA)

**Session Classification:** Dark Matter 4

Contribution ID: 98

Type: **not specified**

## **Novel Way to Probe Dark Sector at Colliders**

*Friday, 11 November 2022 15:10 (20 minutes)*

**Presenter:** KAR, Deepak (University of the Witwatersrand (ZA))

**Session Classification:** Dark Matter 4

Contribution ID: 99

Type: **not specified**

## **The CRESST=III Dark Matter Search: Status and Outlook**

*Friday, 11 November 2022 15:30 (15 minutes)*

**Presenter:** KINAST, Angelina (Technical University of Munich Germany)

**Session Classification:** Dark Matter 4

Contribution ID: **100**

Type: **not specified**

## **Fast Radio Bursts**

*Thursday, 10 November 2022 15:25 (25 minutes)*

**Presenter:** WELTMAN, Amanda (University of Cape-Town South Africa)

**Session Classification:** Cosmology 4



Contribution ID: **101**

Type: **not specified**

## **The power of high-redshift FRBs**

*Friday, 11 November 2022 16:40 (15 minutes)*

**Presenter:** SARTORIO, Nina (Cambridge University UK/Ghent University Belgium)

**Session Classification:** Cosmology 5

Contribution ID: **102**

Type: **not specified**

## **Constraining the mass and redshift evolution of the hydrostatic mass bias using the gas mass fraction in galaxy clusters**

*Friday, 11 November 2022 16:55 (15 minutes)*

**Presenter:** WICKER, Raphael (IAS Orsay France)

**Session Classification:** Cosmology 5

Contribution ID: **103**

Type: **not specified**

## **Cracks in our Understanding of the Universe**

*Friday, 11 November 2022 17:10 (15 minutes)*

**Presenter:** HOENEISEN, Bruce

**Session Classification:** Cosmology 5

Contribution ID: **104**

Type: **not specified**

## **LUX-ZEPLIN (LZ) First Results and Ooulook**

*Thursday, 10 November 2022 08:25 (20 minutes)*

**Presenter:** KAMAHA, Alvin (UCLA Los Angeles USA)

**Session Classification:** Dark Matter 3

Contribution ID: **105**

Type: **not specified**

## **New Physics from B Decays (Theory)**

*Tuesday, 8 November 2022 15:25 (25 minutes)*

**Presenter:** FUENTES, Javier (University of Granada Spain)

**Session Classification:** HEP 2