

Aspen 2018 - The Particle Frontier

Report of Contributions

Contribution ID: 1

Type: **not specified**

Reception and Registration at the Aspen Center for Physics

Sunday 25 March 2018 17:30 (2 hours)

Contribution ID: 9

Type: **not specified**

CMS results on searches for Supersymmetry

Monday 26 March 2018 08:00 (20 minutes)

Presenter: LANDSBERG, Greg (Brown University (US))

Session Classification: Morning Session

Contribution ID: **10**

Type: **not specified**

ATLAS results on searches for Supersymmetry

Monday 26 March 2018 08:25 (20 minutes)

Presenter: PARAMONOV, Alexander (Argonne National Laboratory (US))

Session Classification: Morning Session

Contribution ID: **11**

Type: **not specified**

The Muon $g-2$ Theory Initiative

Monday 26 March 2018 08:50 (20 minutes)

Presenter: EL-KHADRA, Aida (UIUC)

Session Classification: Morning Session

Contribution ID: 12

Type: **not specified**

Ground-based Gravitational Wave detectors - Results and Plans (LIGO and Virgo)

Monday 26 March 2018 09:45 (20 minutes)

Presenter: SHOEMAKER, David (MIT LIGO)

Session Classification: Morning Session

Contribution ID: **13**

Type: **not specified**

Bright Axion Stars

Monday 26 March 2018 10:35 (20 minutes)

Presenter: BAI, Yang (University of Wisconsin, Madison)

Session Classification: Morning Session

Contribution ID: 14

Type: **not specified**

Searching for Ultralight Particles with Black Holes and Gravitational Waves

Monday 26 March 2018 10:10 (20 minutes)

Presenter: BARYAKHTAR, Masha (PI - Perimeter Institute for Theoretical Physics (CA))

Session Classification: Morning Session

Contribution ID: 15

Type: **not specified**

ATLAS results on searches for long-lived particles

Monday 26 March 2018 16:30 (20 minutes)

Presenter: OTONO, Hidetoshi (Kyushu University (JP))

Session Classification: Afternoon Session

Contribution ID: **16**

Type: **not specified**

CMS results on searches for long-lived particles

Monday 26 March 2018 16:55 (20 minutes)

Presenter: KOLBERG, Ted Ritchie (Florida State University (US))

Session Classification: Afternoon Session

Contribution ID: 17

Type: **not specified**

Searches for new particles at LHCb

Monday 26 March 2018 17:20 (20 minutes)

Presenter: WILLIAMS, J Michael (Massachusetts Inst. of Technology (US))

Session Classification: Afternoon Session

Contribution ID: **18**

Type: **not specified**

Search for Light Dark Sector at BaBar

Monday 26 March 2018 18:15 (20 minutes)

Presenter: CHEN, Chunhui (Iowa State University (US))

Session Classification: Afternoon Session

Contribution ID: **19**

Type: **not specified**

A COmpact DEtector for eXotics at LHCb

Monday 26 March 2018 18:40 (20 minutes)

Presenter: KNAPEN, Simon (Lawrence Berkeley National Lab)

Session Classification: Afternoon Session

Contribution ID: 20

Type: **not specified**

Far Detectors Panel

Monday 26 March 2018 19:05 (25 minutes)

Presenters: HAAS, Andrew (New York University); KLING, Felix (University of California, Irvine); CHOU, John Paul (Rutgers State Univ. of New Jersey (US)); KNAPEN, Simon (Lawrence Berkeley National Lab)

Session Classification: Panel

Contribution ID: 21

Type: **not specified**

Halometry from Astrometry

Tuesday 27 March 2018 08:00 (20 minutes)

Presenter: WEINER, Neal (NYU)

Session Classification: Morning Session

Contribution ID: 22

Type: **not specified**

Dark Matter Annihilation, Decay and Scattering in the Cosmic Dawn

Tuesday 27 March 2018 08:25 (20 minutes)

Presenter: SLATYER, Tracy (Harvard University)

Session Classification: Morning Session

Contribution ID: 23

Type: **not specified**

Direct Detection of Light Dark Matter $\tilde{\chi}$ with Polar Materials

Tuesday 27 March 2018 08:50 (20 minutes)

Presenter: LIN, Tongyan

Session Classification: Morning Session

Contribution ID: 24

Type: **not specified**

CRESST talk: Title TBD

Tuesday 27 March 2018 09:45 (20 minutes)

Presenter: D'ADDABBO, Antonio (Istituto Nazionale di Fisica Nucleare)

Session Classification: Morning Session

Contribution ID: 25

Type: **not specified**

The PICO Dark Matter Search Experiment

Tuesday 27 March 2018 10:10 (20 minutes)

Presenter: LEVINE, Ilan (Indiana University South Bend)

Session Classification: Morning Session

Contribution ID: 26

Type: **not specified**

XENON1T talk: Upcoming Results from XENON1T

Tuesday 27 March 2018 10:35 (20 minutes)

Presenter: Dr DE PERIO, Patrick (Columbia University)

Session Classification: Morning Session

Contribution ID: 27

Type: **not specified**

LHC results on Top Quark Physics

Tuesday 27 March 2018 16:30 (20 minutes)

Presenter: GONZALEZ SUAREZ, Rebeca (University of Nebraska Lincoln (US))

Session Classification: Afternoon Session

Contribution ID: 28

Type: **not specified**

Current status of the g-2 experiment at Fermilab

Tuesday 27 March 2018 16:55 (20 minutes)

Presenter: WALTON, Tammy

Session Classification: Afternoon Session

Contribution ID: 29

Type: **not specified**

SENSEI: First Results, Status, and Plans

Tuesday 27 March 2018 17:20 (20 minutes)

Presenter: ESSIG, Rouven

Session Classification: Afternoon Session

Contribution ID: **30**

Type: **not specified**

Axion Dark Matter Experiment: Year 1

Tuesday 27 March 2018 18:15 (20 minutes)

Presenter: CHOU, Aaron

Session Classification: Afternoon Session

Contribution ID: **31**

Type: **not specified**

Status of DAMIC

Tuesday 27 March 2018 18:40 (20 minutes)

Presenter: CHAVARRIA, Alvaro (University of Washington)

Session Classification: Afternoon Session

Contribution ID: 32

Type: **not specified**

New Ideas for Dark Matter Detection

Tuesday 27 March 2018 19:05 (25 minutes)

Presenters: VAN TILBURG, Ken; LANG, Rafael; PARTRIDGE, Richard (Brown / SLAC); LIN, Tongyan

Session Classification: Panel

Contribution ID: 33

Type: **not specified**

Neutron stars as laboratories for particle physics

Wednesday 28 March 2018 08:00 (20 minutes)

Presenter: REDDY, Sanjay (U)

Session Classification: Morning Session

Contribution ID: 34

Type: **not specified**

A viable QCD axion in the MeV mass range

Wednesday 28 March 2018 08:25 (20 minutes)

Presenter: S. M. ALVES, Daniele (NYU / Princeton)

Session Classification: Morning Session

Contribution ID: 35

Type: **not specified**

New Developments in Small-Scale Axion Cosmology

Wednesday 28 March 2018 08:50 (20 minutes)

Presenter: EBY, Joshua (University of Cincinnati)

Session Classification: Morning Session

Contribution ID: 37

Type: **not specified**

ATLAS results on searches for exotic new particles

Wednesday 28 March 2018 09:45 (20 minutes)

Presenter: ALDERWEIRELDT, Sara (Nikhef National institute for subatomic physics (NL))

Session Classification: Morning Session

Contribution ID: **38**

Type: **not specified**

CMS results on searches for exotic new particles

Wednesday 28 March 2018 10:10 (20 minutes)

Presenter: FLORENT, Alice Helene (University of California Los Angeles (US))

Session Classification: Morning Session

Contribution ID: 39

Type: **not specified**

Public Lecture at Wheeler Opera House

Wednesday 28 March 2018 17:30 (1 hour)

Presenter: WHITESON, Daniel (University of California Irvine (US))

Session Classification: Public Event at Wheeler Opera House

Contribution ID: 40

Type: **not specified**

Physics Cafe at Wheeler Opera House

Wednesday 28 March 2018 16:30 (1 hour)

Presenters: HEIM, Sarah (Deutsches Elektronen-Synchrotron (DE)); LIN, Tongyan

Session Classification: Public Event at Wheeler Opera House

Contribution ID: 41

Type: **not specified**

Looking for the WIMP next door

Thursday 29 March 2018 08:00 (20 minutes)

Presenter: Dr SHELTON, Julia

Session Classification: Morning Session

Contribution ID: 42

Type: **not specified**

The Early Universe's Imprint on Dark Matter

Thursday 29 March 2018 08:25 (20 minutes)

Presenter: ERICKCEK, Adrienne (University of North Caroline)

Session Classification: Morning Session

Contribution ID: 43

Type: **not specified**

Searching for Dark Matter Interactions in the CMB

Thursday 29 March 2018 08:50 (20 minutes)

Presenter: BODDY, Kimberly (University of Hawaii)

Session Classification: Morning Session

Contribution ID: 44

Type: **not specified**

Implications of the B physics anomalies

Thursday 29 March 2018 10:10 (20 minutes)

Presenter: ALTMANNSHOFER, Wolfgang (University of Cincinnati)

Session Classification: Morning Session

Contribution ID: 45

Type: **not specified**

B physics anomalies at LHCb

Thursday 29 March 2018 09:45 (20 minutes)

Presenter: WILSON, Fergus (STFC-Rutherford Appleton Laboratory (GB))

Session Classification: Morning Session

Contribution ID: 46

Type: **not specified**

Belle II @ SuperKEKB: a new experiment at intensity frontier

Thursday 29 March 2018 10:35 (20 minutes)

Presenters: SAVINOV, Vladimir; SAVINOV, Vladimir (University of Pittsburgh (US))

Session Classification: Morning Session

Contribution ID: 47

Type: **not specified**

The LDMX experiment

Thursday 29 March 2018 16:55 (20 minutes)

Presenter: ECHENARD, Bertrand (California Institute of Technology (US))

Session Classification: Afternoon Session

Contribution ID: 48

Type: **not specified**

MicroBooNE: Status & Recent Results

Thursday 29 March 2018 17:20 (20 minutes)

Presenter: GOLLAPINNI, Sowjanya

Session Classification: Afternoon Session

Contribution ID: 49

Type: **not specified**

CEvNS Detection at the SNS: for the COHERENT collaboration

Thursday 29 March 2018 18:15 (20 minutes)

Presenter: SALVAT, Daniel (CELLS)

Session Classification: Afternoon Session

Contribution ID: 50

Type: **not specified**

Neutrinos from beyond the solar system

Thursday 29 March 2018 18:40 (20 minutes)

Presenter: LUNARDINI, Cecilia (Arizona State University)

Session Classification: Afternoon Session

Contribution ID: 51

Type: **not specified**

Highlights from the IceCube Neutrino Observatory

Thursday 29 March 2018 19:05 (20 minutes)

Presenter: KHEIRANDISH, Ali

Session Classification: Afternoon Session

Contribution ID: 53

Type: **not specified**

Quantum Black holes: new physics and observational probes

Friday 30 March 2018 09:45 (20 minutes)

Presenter: GIDDINGS, Steven (Univ. of California Santa Barbara)

Session Classification: Morning Session

Contribution ID: 54

Type: **not specified**

Unification from Scattering Amplitudes

Friday 30 March 2018 10:10 (20 minutes)

Presenter: CHEUNG, Clifford

Session Classification: Morning Session

Contribution ID: 55

Type: **not specified**

Higgscitement: cosmological dynamics of fine-tuning

Friday 30 March 2018 10:35 (20 minutes)

Presenter: FAN, JiJi (Brown University)

Session Classification: Morning Session

Contribution ID: 56

Type: **not specified**

Combining perturbative calculations with parton showers

Friday 30 March 2018 08:00 (20 minutes)

Presenter: BAUER, Christian

Session Classification: Morning Session

Contribution ID: 57

Type: **not specified**

LHC results on Standard Model measurements and limits on EFTs

Friday 30 March 2018 08:25 (20 minutes)

Presenter: Prof. ZHU, Junjie (University of Michigan (US))

Session Classification: Morning Session

Contribution ID: 58

Type: **not specified**

ATLAS and CMS results on bottom and charm quarks

Friday 30 March 2018 08:50 (20 minutes)

Presenter: STENSON, Kevin (University of Colorado Boulder (US))

Session Classification: Morning Session

Contribution ID: 59

Type: **not specified**

Higgs couplings at high scales

Friday 30 March 2018 16:30 (20 minutes)

The experiments at the LHC have been improving the measurements of the Higgs boson properties, and searches for new physics are being actively conducted. In the absence of deviations from the Standard Model thus far, it would be prudent to seek for other complementary strategies in the experiments at the energy frontier. We propose to study the Higgs couplings at high energy scales. We focus on the energy scale-dependence of the off-shell Higgs propagation and of the top quark Yukawa coupling. We present several representative scenarios relevant to addressing the naturalness problem. We find that certain scenarios are potentially observable at the LHC upgrade to high luminosity or to higher energy.

Presenter: HAN, Tao (University of Pittsburgh)**Session Classification:** Afternoon Session

Contribution ID: **60**

Type: **not specified**

CMS results on exotic Higgs searches

Friday 30 March 2018 16:55 (20 minutes)

Presenter: MOHAMMADI, Abdollah (Kansas State University (US))

Session Classification: Afternoon Session

Contribution ID: **61**

Type: **not specified**

ATLAS results on exotic Higgs searches

Friday 30 March 2018 17:20 (20 minutes)

Presenter: HADAVAND, Haleh (University of Texas at Arlington (US))

Session Classification: Afternoon Session

Contribution ID: 62

Type: **not specified**

LHC results on couplings and characterization of H(125)

Friday 30 March 2018 18:15 (20 minutes)

Presenter: HEIM, Sarah (Deutsches Elektronen-Synchrotron (DE))

Session Classification: Afternoon Session

Contribution ID: 63

Type: **not specified**

ATLAS results on Higgs decays to $b\bar{b}$ and $\mu\mu$

Friday 30 March 2018 18:40 (20 minutes)

Presenter: ROBSON, Aidan (University of Glasgow (GB))

Session Classification: Afternoon Session

Contribution ID: **64**

Type: **not specified**

CMS results on Higgs decays to $b\bar{b}$ and $\mu\mu$

Friday 30 March 2018 19:05 (20 minutes)

Presenter: CHEN, Ye (IHEP)

Session Classification: Afternoon Session

Contribution ID: 65

Type: **not specified**

Summary of the latest neutrino oscillation results from the NOvA experiment

Saturday 31 March 2018 08:50 (20 minutes)

Presenter: BAIRD, Michael

Session Classification: Morning Session

Contribution ID: 67

Type: **not specified**

Theory Summary

Saturday 31 March 2018 09:45 (30 minutes)

Presenter: WANG, Liantao (University of Chicago (US))

Session Classification: Morning Session

Contribution ID: **68**

Type: **not specified**

Experimental Summary

Saturday 31 March 2018 10:20 (30 minutes)

Presenter: ARCE, Ayana Tamu (Duke University (US))

Session Classification: Morning Session

Contribution ID: 70

Type: **not specified**

Panel: Machine Learning in Particle Physics

Wednesday 28 March 2018 10:35 (25 minutes)

Presenters: WHITESON, Daniel (University of California Irvine (US)); PSIHAS, Fernanda (Indiana University); TERAOKA, Kazuhiro (SLAC National Accelerator Laboratory)

Contribution ID: 71

Type: **not specified**

Cosmic Archaeology with Gravitational Waves from Cosmic Strings

Thursday 29 March 2018 16:30 (20 minutes)

Presenter: CUI, Yanou (Perimeter Institute)

Session Classification: Afternoon Session

Contribution ID: 72

Type: **not specified**

Light dark matter signatures in the NOvA near detector

Saturday 31 March 2018 08:25 (20 minutes)

Presenter: FRUGIUELE, claudia (Carleton University)

Session Classification: Morning Session

Contribution ID: 73

Type: **not specified**

Indirect Detection Constraints on DM EFT Model Space (and Maybe Something about Simplified Models)

Saturday 31 March 2018 08:00 (20 minutes)

Presenter: GOODMAN, Jessica (The Ohio State University)

Session Classification: Morning Session