

Near detector physics at neutrino experiments

Report of Contributions

Contribution ID: 1

Type: **not specified**

Discussion

Monday 18 June 2018 11:15 (45 minutes)

Contribution ID: 2

Type: **not specified**

Near Detector Status and Experimental Challenges

Monday 18 June 2018 10:30 (45 minutes)

Presenter: Prof. WEBER, Alfons (University of Oxford (GB))

Contribution ID: 3

Type: **not specified**

Cross Sections

Monday 18 June 2018 14:00 (45 minutes)

Presenter: PANDEY, Vishvas

Contribution ID: 4

Type: **not specified**

Discussion

Monday 18 June 2018 14:45 (45 minutes)

Contribution ID: 5

Type: **not specified**

Standard Model Processes in the Near Detector

Tuesday 19 June 2018 10:30 (45 minutes)

Presenter: PETTI, Roberto (University of South Carolina (US))

Contribution ID: 6

Type: **not specified**

Discussion

Tuesday 19 June 2018 11:15 (45 minutes)

Contribution ID: 7

Type: **not specified**

Light Mediators

Tuesday 19 June 2018 14:00 (45 minutes)

Presenter: SHOEMAKER, Ian

Contribution ID: 8

Type: **not specified**

Discussion (Light DM searches)

Tuesday 19 June 2018 14:45 (45 minutes)

Presenter: FRUGIUELE, Claudia (Weizmann Institute)

Contribution ID: 9

Type: **not specified**

Heavy Sterile Neutrinos, Complementarity to Other Experiments

Wednesday 20 June 2018 10:30 (45 minutes)

Presenter: DREWES, Marco (Universite Catholique de Louvain (UCL) (BE))

Contribution ID: **10**

Type: **not specified**

Discussion

Wednesday 20 June 2018 11:15 (45 minutes)

Contribution ID: 11

Type: **not specified**

Neutrino Trident Production at Near Detectors

Wednesday 20 June 2018 14:00 (30 minutes)

Presenter: HOSTERT, Matheus (Durham University)

Contribution ID: 12

Type: **not specified**

Discussion

Contribution ID: 13

Type: **not specified**

Millicharged Particles in Neutrino Experiments

Thursday 21 June 2018 14:00 (45 minutes)

We set constraints on millicharged particles (mCPs) based on electron scattering data from MiniBooNE and the Liquid Scintillator Neutrino Detector (LSND). Both experiments are found to provide new (and leading) constraints in certain mCP mass windows: 5 - 35 MeV for LSND and 100 - 180 MeV for MiniBooNE. Furthermore, we provide projections for the ongoing SBN program, the Deep Underground Neutrino Experiment (DUNE), and the proposed Search for Hidden Particles (SHiP) experiment. Both DUNE and SHiP are capable of probing parameter space for mCP masses ranging from 5 MeV - 10 GeV that is significantly beyond the reach of existing bounds, including those from collider searches and SLAC's mQ experiment, and even better than the proposed MilliQan experiment probing up to ~ 5 GeV mCP particles. Our analysis also reveals that the sensitivities from LSND, SBND, SHiP, and DUNE can explore previously unprobed regions of parameter space that allows mCP dark matter as an explanation for the EDGES 21 cm anomaly.

Presenter: TSAI, Yu-Dai (Cornell University)

Contribution ID: **14**

Type: **not specified**

Discussion

Thursday 21 June 2018 11:15 (45 minutes)

Contribution ID: 15

Type: **not specified**

Dipole Portal to Neutral Leptons

Thursday 21 June 2018 10:30 (45 minutes)

Presenter: MAGILL, Gabriel

Contribution ID: **16**

Type: **not specified**

Discussion

Thursday 21 June 2018 14:45 (45 minutes)

Contribution ID: 17

Type: **not specified**

Sterile Neutrinos, Non-Unitarity, Non-Standard Interactions

Friday 22 June 2018 10:30 (45 minutes)

Presenter: LOPEZ PAVON, Jacobo (CERN)

Contribution ID: **18**

Type: **not specified**

Discussion

Friday 22 June 2018 11:15 (45 minutes)

Contribution ID: **19**

Type: **not specified**

TBA

Presenter: TSAI, Yu-Dai (Cornell University)

Contribution ID: **20**

Type: **not specified**

Discussion

Friday 22 June 2018 14:45 (45 minutes)

Contribution ID: **21**

Type: **not specified**

MeV Scale Sterile Neutrinos

Wednesday 20 June 2018 14:30 (30 minutes)

Presenter: Dr BALLETT, Peter (IPPP, Durham University)

Contribution ID: 22

Type: **not specified**

MadDump: A Monte Carlo Tool for BSM Searches in Beam Dump Experiments

Wednesday 20 June 2018 15:00 (30 minutes)

Presenter: BUONOCORE, Luca (INFN - National Institute for Nuclear Physics)

Contribution ID: 23

Type: **not specified**

Workshop Dinner

Wednesday 20 June 2018 19:00 (2 hours)