Fermilab Tianlai Workshop 2016

Report of Contributions

https://indico.fnal.gov/e/12927

Contribution ID: **0** Type: **not specified**

Welcome & Organization

Monday, 26 September 2016 08:50 (10 minutes)

Presenter: Dr STEBBINS, Albert (Fermilab)

Contribution ID: **1** Type: **not specified**

The Tianlai 21cm intensity mapping experiment

Monday, 26 September 2016 09:30 (1 hour)

Presenter: CHEN, Xuelei (NAOC)

Contribution ID: **2** Type: **not specified**

Tianlai Engineering Results

Presenter: WU, Fengquan (NAOC)

Contribution ID: **3** Type: **not specified**

Spectroscopic Surveys and Instruments

Monday, 26 September 2016 10:30 (30 minutes)

Presenter: KENT, Stephen (Fermilab)

Contribution ID: **4** Type: **not specified**

Fast Radio Bursts with HIRAX

Monday, 26 September 2016 11:30 (30 minutes)

Presenter: PETERSON, Jeff (Carnegie Mellon University)

Contribution ID: **5** Type: **not specified**

Measuring Primordial Magnetic Fields Using the 21cm Signal from the Cosmic Dawn Epoch

Monday, 26 September 2016 12:00 (30 minutes)

Presenter: VENUMADHAV, Tejaswi (Institute for Advanced Studies)

Contribution ID: **7** Type: **not specified**

Tianlai Data Processing

Monday, 26 September 2016 15:30 (30 minutes)

Primary author: Dr WU, Fengquan

Co-authors: Dr HUANG, Qizhi; Dr ZUO, Shifan

Presenter: Prof. CHEN, Xuelei

Contribution ID: **8** Type: **not specified**

Early Reionization Science from 21cm Experiments and the Path Towards a New Cosmological Probe

Monday, 26 September 2016 14:00 (1 hour)

21 cm cosmology – the concept of using radio telescopes to observe the highly redshifted 21 cm line of neutral hydrogen on cosmological scales – is a field on the verge of a breakthrough. The first generation of 21 cm cosmology experiments (LOFAR, MWA, and PAPER, among others) have been operating for several years, and first results at the level of design sensitivity are potentially forthcoming. In this talk, I will present early reionization science results from PAPER and the MWA, before describing the path to higher sensitivity and precise characterization of the 21 cm signal. I will also discuss efforts to better connect 21 cm experiments to other reionization observables in order to maximize our understanding of this epoch.

Presenter: POBER, Jonathan (Brown University)

Contribution ID: **9** Type: **not specified**

Analysis/ Simulations of 21cm Data

Presenters: ZHANG, Jiao (NAOC); HUANG, Qizhi (NAOC); ANSARI, Reza (LAL); WANG, Xin (CITA)

Contribution ID: **10** Type: **not specified**

QuarkNet Radio Telescope Tour

Presenter: STOUGHTON, Chris (Fermilab)

Contribution ID: **11** Type: **not specified**

Break

Contribution ID: **12** Type: **not specified**

Tianlai survey and Fermilab Scientific Computing Division (SCD)

Tuesday, 27 September 2016 10:00 (1 hour)

Interactive determination of project needs

Presenters: VOTAVA, Margaret (SCD/SCS); Dr FUESS, Stuart (Fermilab)

Contribution ID: **13** Type: **not specified**

Simulations of Beam Patterns

Tuesday, 27 September 2016 16:00 (1 hour)

Presenter: TIMBIE, Peter (UW-Madison)

Contribution ID: **14** Type: **not specified**

White Paper Planning

Tuesday, 27 September 2016 11:30 (30 minutes)

Contribution ID: **15** Type: **not specified**

The Correlator for the Tianlai Experiment

Monday, 26 September 2016 09:00 (30 minutes)

Presenter: HAO, Jie