
Workshop on Fundamental Physics at the Second Target Station (FPSTS19)

Friday, July 26

Registration and Badging (Visitor Center)

7:00 AM – 9:00 AM

Coffee/Refreshments Available (served in C-150)

9:15 AM – 9:30 AM

Fundamental Physics at the Second Target Station (Iran Thomas)

9:30 AM **Workshop Logistics** *Leah Broussard*

9:45 AM **Welcome Address** *Marcel Demarteau*

10:00 AM **Second Target Station** *Ken Herwig*

Coffee Break (served in C-150)

10:30 AM – 10:45AM

Beamline Design (C-156)

10:45 AM **STS Moderator Suite** *Franz Gallmeier*

11:10 PM **Present/Future Neutron Optics** *Ken Andersen*

11:35 PM **Present/Future Neutron Optics** *Hirohiko Shimizu*

Neutrinos Theory (C-152)

10:45 AM **CEvNS at the SNS: Particle Physics** *Louis Strigari*

11:10 AM **CEvNS at the SNS: Nuclear Physics** *Charles Horowitz*

11:35 PM **Accelerator DM at the SNS** *Bhaskar Dutta*

Working Lunch (served in C-150)

12:00 PM – 1:00PM **Second Target Station (STS) Design Requirements**

nEDMs (C-156)

- 1:00 PM **nEDM Theory** *Tanmoy Bhattacharya*
- 1:30 PM **nEDM Searches Worldwide** *Ruediger Picker*
- 2:00 PM **nEDM at STS** *Takeyasu Ito*
- 2:30 PM **STS Engineering Implications** *Van Graves*

CEvNS I (C-152)

- 1:00 PM **STERILE Neutrinos** *Jonathan Link*
- 1:30 PM **Captain Mills** *Richard Van de Water*
- 2:00 PM **Neutrino Alley, COHERENT Overview** *Jason Newby*
- 2:30 PM **COHERENT Physics Program** *Daniel Salvat*

Coffee Break (served in C-150)

3:15 PM – 3:30PM

Lifetime (C-156)

- 3:30 PM **Bottle Lifetime Searches** *Andy Saunders*
- 4:00 PM **JPARC TPC Lifetime** *Hirohiko Shimizu*
- 4:30 PM **Beam Lifetime** *Nadia Fomin*

CEvNS II (C-152)

- 3:30 PM **COHERENT Near Term** *Matthew Green*
- 4:00 PM **COHERENT Future** *Rex Tayloe*
- 4:30 PM **STS Engineering Implications** *Van Graves*

SNS Tour (meet at C-150)

5:00 PM – 5:45 PM

Dinner (Calhoun's Oak Ridge)

7:00 PM – 9:00 PM *Bus Departs ORNL Guest House at 6:30pm*

Saturday, July 27

Coffee/Refreshments Available (served in C-150)

8:45 AM – 9:00 AM

β -Decay (C-156)

- 9:00 AM **Neutron Beta Decay: Current Motivation and Challenges** *Albert Young*
- 9:30 AM **Beta Decay Using Pulsed Beams at ILL, MLZ, and ESS** *Bastian Maerkisch*
- 10:00 AM **Nab and pNab** *Stefan Baessler*

Neutrino Interactions (C-152)

- 9:00 AM **Inelastic Neutrino Interactions** *Baha Balantekin*
- 9:30 AM **Neutrino Cross Sections in Argon** *Steven Gardiner*
- 10:00 AM **Neutrino Cross Section Uncertainty Impact on DUNE** *Erin Conley*

Coffee Break (served in C-150)

10:30 AM – 10:45AM

Hadronic Parity Violation (C-156)

- 10:45 AM **Present HWI Landscape: NPDGamma, n-3He, n-4HE Spin Rotation** *Jason Fry*
- 11:15 AM **Physics Interpretation of HWI World Data with Current Results** *David Bowman*
- 11:45 AM **Future Possibilities for HWI Experiments** *Christopher Crawford*

LArTPCs and CDMS Style Detectors (C-152)

- 10:45 AM **LArTPCS** *Jennifer Raaf*
- 11:15 AM **Low-Threshold Detectors** *Andy Kubik*
- 11:45 AM **Low Energy Events in ArgoNeut** *Ivan Lepetic*

Working Lunch (served in C-150)

12:15 PM – 1:30PM **Physics Impact at Second Target Station (STS)**

Exotic Searches (C-156)

- 1:30 PM **Quantum Information Approaches to Neutron Interferometry** *Dmitry Pushin*
- 1:50 PM **Neutron Oscillations** *Yuri Kamyshev*

2:10 PM **Short Ranged Forces** *Christopher Haddock*

2:30 PM **Discussion/Planning**

Planning for STS (C-152)

1:30 PM **SNS Neutrino Flux** *Rebecca Rapp*

2:00 PM **Discussion**

Coffee Break (served in C-150)

3:00 PM – 3:15PM

Discussion (C-156/C-152)

Continue until 4:30 PM

Closeout (Iran Thomas)

4:30 PM — 5:30 PM