

Indo-Japan collaboration meeting on Neutrino and Particle physics at J-PARC at IOP

Monday, May 15, 2017 from 14:00 to 21:00 (Asia/Kolkata)

at **Institute of Physics, Bhubaneswar**

Sainik School, Bhubaneswar - 751005, INDIA

Description The purpose of this meeting is to seek opportunities of collaboration between India and Japan on neutrino and particle physics research in Japan.

In Japan, high intensity proton accelerator complex, J-PARC is offering an unique platform for world leading high precision/sensitivity experiments with high intensity primary proton/secondary/tertiary beams. On-going and planned particle physics experiments extend the reach by many order of magnitudes and expectation of new discovery is high.

As for neutrino physics, there has been long history of collaboration between India and Japan starting from the first observation of atmospheric neutrino by Indo-Japan-UK collaboration. There are rich neutrino program in both countries today. In India, INO is important future projects and also India is making important contributions to US-based neutrino projects, such as NOVA and DUNE. In Japan, Super-Kamiokande, KamLAND, T2K experiments are running. T2K is sending high intensity neutrino beam from J-PARC and detecting it by Super-Kamiokande at 295km from J-PARC. T2K plan to upgrade the beam power upto 1.3MW and the near detector, and take another 10 times more data to discover CPV in neutrino at $> 3\sigma$ if maximally violated. Also next generation gigantic water cherenkov detector Hyper-Kamiokande is proposed.

In this collaboration meeting, we introduce particle physics program at J-PARC and neutrino physics program in Japan and will present potential collaboration items. Then we discuss possible collaboration and next actions.

Link to preceding similar meetings on Indo-Japan collaboratoin

- [Nov. 1st, 2016 @ Aligarh Muslim University](#)
- [Mar. 12th, 2016 @ Indian Insitute of Technology Bombay](#)
- [Mar. 11th, 2016 @ Indian Institute of Science Bangalore](#)
- [Mar. 10th, 2016 @ Indian Institute of Technology Hyderabad](#)

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| 14:30 - 14:40 | Welcome address 10'
Speaker: Prof. Sudhakar Panda (Director of IOP, Bhubaneswar) |
| 14:40 - 14:50 | Motivation and purpose of this meeting 10'
Speakers: Prof. Naohito Saito, Prof. Takashi Kobayashi |
| 14:50 - 15:10 | Introduction 20'
Speaker: Prof. Sanjib Kumar Agarwalla (Institute of Physics, Bhubaneswar) |
| 15:10 - 15:40 | J-PARC Introduction/MLF sciences (including particle physics experiments in MLF) 30'
Speaker: Prof. Naohito SAITO (Director of J-PARC Center/KEK) |
| 15:40 - 16:10 | Introduction of particle physics at J-PARC & Neutrino Physics in Japan 30'
Speaker: Prof. Takashi KOBAYASHI (Head of Particle & Nuclear Physics Div., J-PARC/Deputy Director of Inst. of Particle & Nuclear Studies, KEK) |
| 16:10 - 16:40 | J-PARC neutrino beam and T2K/T2K-II physics 30'
Speaker: Prof. Takeshi NAKADAIRA (T2K project coordinator / Neutrino section leader, J-PARC, KEK) |
| 16:40 - 17:10 | T2K-II upgrade & Hyper-Kamiokande 30'
Speaker: Prof. Masashi YOKOYAMA (T2K ND upgrade project leader, T2K&HyperK Steering Committee, University of Tokyo) |
| 17:10 - 17:30 | Coffee break |
| 17:30 - 18:30 | Introduction of Indian-side participating institutions |
| 17:30 | Research on neutrinos at IOP and future plans 10'
Speaker: Prof. Sanjib Kumar Agarwalla (Institute of Physics, Bhubaneswar) |
| 17:40 | The CMS activity at IOP and future plans 5'
Speaker: Dr. Aruna Kumar Nayak (IOP, Bhubaneswar) |
| 17:45 | The ALICE activity at IOP and future plans 5'
Speaker: Ms. Sagarika Swain (IOP, Bhubaneswar) |
| 17:50 | HEP activity at the Utkal University and future plans 10'
Speaker: Prof. Swapna Mahapatra (Dept. of Physics, Utkal University, Bhubaneswar) |
| 18:00 | HEP activity at the SOA University and future plans 10'
Speaker: Prof. Mina Ketan Parida (SOA University, Bhubaneswar, Odisha) |
| 18:10 | HEP activity at the Berhampur University and future plans 5'
Speaker: Prof. Snigdha Mishra (Berhampur University, Berhampur, Odisha) |

18:15 **HEP activity at the Amity University and future plans 5'**
Speaker: Dr. Abhinav Dubey (Amity University, Gurgaon, Haryana)

