LCWS2023 @SLAC: International Workshop Future Linear Colliders (May 15-19, 2023)

INDUSTRY PLENARY SESSION (May 16, 13:00 – 15:00):

- *13:00 – 13:10 Introduction to Industry/Sustainability Session - Session Conveners*
- *13:10 – 13:30 Japan - AAA activity - Takahashi Tohru (Hiroshima Univ./AAA, Japan)*

Abstract:

- *13:30 – 13:50 US Office of accelerator R&D and Production (ARDAP) – Ginsburg Camille (Deputy Director of ARDAP, USA)*

Abstract:

- *13:50 – 14:10 Advances in Spanish Science Industry – Fernandez Erik (INEUSTAR, Spain)*

Abstract:

- *14:10 – 14:30 Development of C-band RF infrastructure and initial experiments at RadiaBeam - Alex Murokh (Radiabeam, USA)*

Abstract: RadiaBeam is a small business providing systems, components, instrumentation, as well as testing, consulting and engineering services to the industrial and scientific accelerator communities. In this paper we'll discuss the projects most relevant to the high energy physics community with the emphasis on a recent development of the in-house C-band infrastructure for accelerator R&D. We'll also present more general case studies, which illustrate successes as well as challenges of serving the discovery science accelerator laboratories market, and discuss the current business outlook

LCWS2023 @SLAC: International Workshop Future Linear Colliders (May 15-19, 2023)

INDUSTRY PLENARY SESSION (May 16, 13:00 – 15:00):

- *14:30 – 14:40 Experience in participating in the development of an electron-driven positron source as a company in the Tohoku region - KONDO, Masahiko (Kondo Equipment Corporation, Japan)*

  Abstract:

- *14:40 – 14:50 Development of Nb3Sn SRF cavity using electroplating method - TAKAHASHI, Ryo (Akita Chemical Industry Co., Ltd, Japan)*

  Abstract:

LCWS2023 @SLAC: International Workshop Future Linear Colliders (May 15-19, 2023)

SUSTAINABILITY PLENARY SESSION (May 16, 15:30 – 17:30):

- *15:30 – 15:50 Sustainability Studies for Future Linear Collider – Benno List (DESY, Germany)*

  Abstract:

- *15:50 – 16:10 High Efficiency Klystrons project at CERN: Status and updates – Syratchev Igor (CERN)*

  Abstract: Klystron is a key element of almost all particle accelerators. The High Efficiency Klystron Project at CERN is targeted to develop, fabricate and commission the new devices with improved efficiency for various particle accelerators and other applications. This activity is conducted in a close collaboration with industrial partners and scientific Labs. We will review the status and ongoing activities within HE project at CERN with emphasis given to their application in the Linear Colliders.

- *16:10 – 16:30 Green ILC Concept – Yoshioka Masakazu (Iwate University/KEK, Japan)*

  Abstract:

- *16:30 – 16:50 Sustainability: Permanent Magnets – Shepherd Ben (STFC, UK)*

  Abstract:

LCWS2023 @SLAC: International Workshop Future Linear Colliders (May 15-19, 2023)

SUSTAINABILITY PLENARY SESSION (May 16, 15:30 – 17:30):

- *16:50 – 17:10 ARUP Study Report (Carbon Cost/ Life Cycle Assessment) - Speaker tbd*

- *17:10 - 17:25 IHEP high efficiency, high power klystron development - Zusheng Zhou (IHEP, China)*

Abstract: After the discovery of the Higgs boson at LHC, Chinese scientists have planned to build a “Great Collider,” which is a next-generation multinational particle accelerator research facility proposed as a circular electron-positron collider (CEPC) and a super proton–proton collider (SPPC). The CEPC synchrotron radiation power is supposed to be more than 60MW. Institute of High Energy Physics (IHEP) is developing a higher efficiency klystron of frequency 650 MHz/800 kW with an efficiency goal of around 80%. Several klystron prototypes have been manufactured in the last five years to achieve this goal. The prototype was developed in March 2020 with 62% efficiency at 800 kW pulsed output power. The first stage of the high-power test for the second prototype was also completed in July 2022 with 70.5% efficiency at 630 kW CW power. The third prototype (Multi-beam klystron) is being manufactured, and it will be tested by the middle of 2023. In addition, the beam dynamics of 2860MHz (80MW) klystron are completed and will be manufactured in 2023. The design of 5720 MHz (80 MW&50 MW) klystron for CEPC Linac is also in progress.

- *17:25 - 17:35 Basic research using synchrotron radiation and commercialization of waste heat recovery technology from ILC - Mitoya Goh (Higashi Nihon Kidenkaihatsu Co., Ltd., Japan)*
- *17:35 – 17:45 Town planning in the vicinity of ILC candidate site as a regional company - Kondo Masahiko (Kondo Equipment Corporation, Japan)*