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Specification, design, production and test schedule of cryomodule for SRF 5-year plan (MEXT-ATD) at KEK by global collaboration for ILC technology network

Monday 22 September 2025 09:30 (20 minutes)

A five-year project (MEXT advanced Accelerator element Technology Development (MEXT-ATD)) funded by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) began at KEK in FY2023. The goal is to manufacture, construct and test a cryomodule (CM) that satisfies the ILC (International Linear Collider Project) specifications and conduct cooling tests. The MEXT-ATD program is closely related to the ILC Technology Network (ITN). Many SRF experts from Europe and Korea are already joining to contribute to 9-cell cavity production in each region. The 3D model of the cryomodule will be based on the Type-4 CM adopted in the Technical Design Report (TDR) published in 2013, moreover will also reflect the latest technology and experience obtained from the construction and operation of the European XFEL in Europe and LCLS-II in the United States since the TDR. In addition, in anticipation of future prospects, it has been decided that the design and production of every cavity and CM will be based on the refrigeration regulations of the High Pressure Gas Safety (HPGS) Act in Japan. In this presentation, the basic specifications and design of the cryomodule as well as the overall manufacturing/test schedule and recent progress will be reported in detailed.

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Yes

Footnotes

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Author: YAMAMOTO, Yasuchika (High Energy Accelerator Research Organization)

Presenter: YAMAMOTO, Yasuchika (High Energy Accelerator Research Organization)

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