



Contribution ID: 556 Contribution code: TUODC2

Type: **Contributed Oral Presentation**

Fabrication, conditioning, installation and commissioning with the beam of the first High Gradient (HG) module for the FERMI linac upgrade

Tuesday, 9 May 2023 15:50 (20 minutes)

FERMI is the seeded Free Electron Laser (FEL) user facility at Elettra laboratory in Trieste, operating in the VUV to soft X-rays spectral range. In order to extend the FEL spectral range to shorter wavelengths, an upgrade plan for increasing the Linac energy from 1.5 GeV to 2.0 GeV is actually going on. After the successful testing of the short prototype of the new high gradient (HG) S-band accelerating structure up to an accelerating gradient of 40 MV/m, two full-length 3.0 m HG structures have been built and installed at the FERMI linac. In this paper, we report the low power measurement, conditioning results, and commissioning with the beam of the first HG module.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: SHAFQAT, Nuaman (Elettra-Sincrotrone Trieste S.C.p.A.)

Co-authors: CUDIN, Ivan (Elettra-Sincrotrone Trieste S.C.p.A.); FABRIS, Alessandro (Elettra-Sincrotrone Trieste S.C.p.A.); FORTUNATI, Reto (Paul Scherrer Institut); GELMETTI, Federico (Elettra-Sincrotrone Trieste S.C.p.A.); GIANNESI, Luca (Istituto Nazionale di Fisica Nucleare); LUCAS, Thomas (Paul Scherrer Institute); MARCELLINI, Fabio (Paul Scherrer Institut); MASCIOVECCHIO, Claudio (Elettra-Sincrotrone Trieste S.C.p.A.); MILOCCO, Andrea (Elettra-Sincrotrone Trieste S.C.p.A.); MILLOCH, Massimo (Elettra-Sincrotrone Trieste S.C.p.A.); SVANDRLIK, Michele (Elettra-Sincrotrone Trieste S.C.p.A.); TROVO, Mauro (Elettra-Sincrotrone Trieste S.C.p.A.); ZENNARO, Riccardo (Paul Scherrer Institut)

Presenter: SHAFQAT, Nuaman (Elettra-Sincrotrone Trieste S.C.p.A.)

Session Classification: MC02.1 - Photon Sources and Electron Accelerators (Contributed)

Track Classification: MC2: Photon Sources and Electron Accelerators: MC2.A08: Linear Accelerators