

Tuning of ESS DTLs

Tuesday 27 August 2024 16:00 (2 hours)

The normal conducting part of ESS LINAC in Lund (Sweden) uses 5 DTL cavities, provided by INFN LNL as in-kind partner, to accelerate 60 mA proton beam from 3.9 MeV to 90 MeV. DTL1 have been tuned, installed in the accelerator tunnel and RF conditioned in 2021, DTL2, 3 and 4 in 2022, while DTL5 has been tuned and installed in summer 2023, but not yet conditioned. All the DTLs were equipped with tuning elements like tuners and post couplers, but the challenges experienced during the tuning of the first DTL has resulted in a change of tuning strategy, which effectively reduced the timeframe to tune the other cavities from months to days. The aim of this paper is to give an overview of the the achieved results and tuning procedure performed on the DTLs.

Footnotes

Funding Agency

Primary author: Dr BALTADOR, Carlo (Istituto Nazionale di Fisica Nucleare)

Co-authors: PALMIERI, Antonio (Istituto Nazionale di Fisica Nucleare); PISENT, Andrea (Istituto Nazionale di Fisica Nucleare); GRESPAN, Francesco (Istituto Nazionale di Fisica Nucleare)

Presenter: GRESPAN, Francesco (Istituto Nazionale di Fisica Nucleare)

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