Contribution ID: **1852** Contribution code: **THPL172** Type: **Poster Presentation**

Bead-pull analysis of HOM in X-band linearizer linac on CLARA, with update on HOM measurement system

Thursday, 11 May 2023 16:30 (2 hours)

The X-band lineariser linac planned to be installed on CLARA will be aligned using beam induced higher order modes (HOMs). Higher order modes in the cavity were studied using a bead-pull measurement technique. A software application was developed in LabVIEW to control the 3D motorised bead position scanning setup and VNA for S-parameter measurements. Propagation of HOM frequencies in the linac were verified, identifying the most suitable HOMs to use. Progress in development of HOM signal processing hardware system with dynamic control is also discussed in the paper.

Funding Agency

STFC UKRI

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: JOSHI, Nirav (Science and Technology Facilities Council)

Co-authors: FARRICKER, Aaron (Science and Technology Facilities Council); MOSS, Andrew (Science and Technology Facilities Council); GILFELLON, Anthony (Science and Technology Facilities Council); GREEN, Benjamin (Lancaster University); JENKINS, Conor (Cockcroft Institute); ELFLEET, Marwan (University of Glasgow)

Presenter: JOSHI, Nirav (Science and Technology Facilities Council)

Session Classification: Thursday Poster Session

Track Classification: MC6: Beam Instrumentation, Controls, Feedback and Operational Aspects: MC6.T03: Beam Diagnostics and Instrumentation