IPAC'23 - 14th International Particle Accelerator Conference



Contribution ID: 1132 Contribution code: WEPA114

Type: Poster Presentation

## RF design of the waveguide network for the klystron-based CLIC module

Wednesday, 10 May 2023 16:30 (2 hours)

A new RF Module was designed for the Klystron-based CLIC main linac. The new module deploys two Xband klystrons to feed eight CLIC-K accelerating structures giving a beam energy increase of 156 MeV. This module will use a double-height waveguide distribution network which can reduce the RF power loss in the network by about 37%. All the RF components were redesigned to match the double-height requirement, mainly including the 3 dB hybrid, the RF vacuum flange, the bending waveguide, correction cavies and the BOC pulse compressor. A CLIC-K accelerating structure with bended damping waveguides was designed for the new module. The result of RF design work for the klystron based CLIC module is summarized.

**Funding Agency** 

## Footnotes

## I have read and accept the Privacy Policy Statement

Yes

## Primary author: WANG, Ping (European Organization for Nuclear Research)

**Co-authors:** GRUDIEV, Alexej (European Organization for Nuclear Research); ROSSI, Carlo (European Organization for Nuclear Research); SYRATCHEV, Igor (European Organization for Nuclear Research); MORALES SANCHEZ, Pedro (European Organization for Nuclear Research); DOEBERT, Steffen (European Organization for Nuclear Research)

Presenter: WANG, Ping (European Organization for Nuclear Research)

Session Classification: Wednesday Poster Session

**Track Classification:** MC7: Accelerator Technology and Sustainability: MC7.T06: Room Temperature RF