



Contribution ID: 1318 Contribution code: TUPR19

Type: **Poster Presentation**

Design of an X-band parallel-coupled travelling-wave accelerating structure for future linacs

Tuesday, 21 May 2024 16:00 (2 hours)

As compared to conventional travelling-wave (TW) structures, parallel-coupled accelerating structures eliminate the requirement for the coupling between cells, providing greater flexibility in optimizing the shape of cells. Each cell is independently fed by a periodic feeding network for this structure. In this case, it has a significantly short filling time which allows for ultrashort pulse length, thereby increasing the achievable gradient. In this paper, a design of an X-band parallel-coupled TW structure is presented in detail.

Footnotes

Funding Agency

This work is supported by the “Hundred Talents Program” of the Chinese Academy of Sciences and by the “Fundamental Research Funds for the Central Universities”.

Paper preparation format

Word

Region represented

Asia

Primary author: HUANG, Zhicheng (University of Science and Technology of China)

Co-authors: CAO, Zexin (University of Science and Technology of China); SUN, Li (University of Science and Technology of China); WEI, Yelong (University of Science and Technology of China)

Presenter: CAO, Zexin (University of Science and Technology of China)

Session Classification: Tuesday Poster Session

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