



Contribution ID: 236

Type: Oral presentation (by invitation only)

## Combined function lattice with constant partition numbers for FCC-ee

*Thursday 8 June 2023 16:20 (20 minutes)*

In order to explore potential improvements to the current lattice design for FCC-ee, this work looks at the use of Combined Function Magnets (CFM) within the short straight sections of the arc cells. The use of CFMs introduces a change in the damping partition numbers. To avoid this it is necessary to maintain the values of the Synchrotron Radiation Integrals ( $I_2$  and  $I_4$ ), which are used to describe the effects of Synchrotron Radiation (SR). New optics solutions are explored to achieve this. SR power could be reduced by 17%. The explored optical solutions could be applied both for normal conducting CFMs and High Temperature Superconductors (HTS).

**Primary author:** GARCIA, Cristobal (EPFL - Ecole Polytechnique Federale Lausanne (CH))

**Presenter:** GARCIA, Cristobal (EPFL - Ecole Polytechnique Federale Lausanne (CH))

**Session Classification:** FCC-ee accelerator (FCCIS WP2)

**Track Classification:** FCC-ee accelerator