



Contribution ID: 82

Type: **Oral presentation (by invitation only)**

Status of Collider and Booster Magnets for FCC-ee

Wednesday 1 June 2022 11:00 (30 minutes)

Coupled aperture magnet designs have been proposed for the dipole and quadrupole of the FCC-ee collider during the CDR phase. They are characterized by a high energy efficiency but the aperture coupling brings additional challenges to achieve the field quality requirements, in particular for the quadrupole when an active system is added to trim the field to the energy saw-tooth generated by the synchrotron radiation.

On the booster side, the magnet design studies are now starting and shall address operation in cycled mode and at very low fields.

The presentation will summarize the status of the collider magnet designs and explore design alternatives to address the challenges relating to the booster magnets.

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Session Classification: Technology

Track Classification: Technology R&D