



Contribution ID: 273

Type: Oral presentation (by invitation only)

## The FCC-ee HTS4 project: study of superconducting short straight sections for FCC-ee

*Wednesday 7 June 2023 09:10 (25 minutes)*

The FCC-ee HTS4 project studies the possibility of replacing all (warm) short straight sections of FCC-ee with superconducting ones. There are about 2900 short straight sections in the arcs of FCC-ee housing arc quadrupoles, sextupoles and various corrector magnets. In the conceptual design report design, all these magnets are normal-conducting with an important footprint in the overall electrical energy consumption of the accelerator. By replacing these magnets with state-of-the-art high-temperature superconducting ones we can reduce energy consumption for these systems by about 90% at top energies. We will also increase luminosity by about 7%, by increasing the packing factor of the accelerator, and reduce top energy RF voltage by a similar amount. It is envisaged to cool these short straight sections using a dry cryocooling system operating at around 40 K. A ground-breaking cold power supply is also studied with our sister project FCC-ee-CPES.

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**Session Classification:** Technology R&D

**Track Classification:** FCC-ee technologies R&D