



Contribution ID: 16

Type: **Flash talk**

## HTS FCC-ee energy efficient beam optics

The FCC-ee project takes a step forward towards the discovery of new physical phenomena beyond the frontier of the standard model, by aiming at unprecedented center of mass energies and luminosities in a double-ring lepton collider. In order to explore potential improvements to the current beam optics design, this work looks at the use of combined function magnets for the main dipoles and quadrupoles within the short straight sections of the arc cells to increase the bending radius, decreasing the synchrotron radiation (SR). The use of High Temperature Superconductors (HTS) and normal conducting technology for the combined function magnets is explored with comparisons to the current baseline aiming for potential savings above 10% of the SR power.

### Limited flash talk slots

### My contribution is about a project related to sustainability

Yes

### Field of contribution

Accelerator physics

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**Session Classification:** Sustainability in particle physics and industry