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Practical design and manufacturing of the new ISIS MEBT chopper

Thursday, 23 May 2024 16:00 (2 hours)

The electrostatic chopper for the new ISIS MEBT is a fast deflecting device which will create gaps in the beam coming out of the RFQ, which will improve the trapping efficiency when injecting the beam into the ISIS synchrotron. The fundamental design (including electromagnetic and thermal calculations, and sensitivity studies) are presented elsewhere. The practical aspects of the mechanical design and the assembly of the prototype chopper are presented here. This includes how challenges were resolved, such as insufficient transmission from the fiber thermocouples through the feedthroughs, ease of life design features, such as the use of o-ring screws, tests performed to feed into the analytical design and the promising progress made to date.

Footnotes

Funding Agency

Paper preparation format

Region represented

Europe

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