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## **Beam transport and diagnostics for the space plasma experiment at Samurai**

*Tuesday, 9 May 2023 16:30 (2 hours)*

Plasma wakefields can produce broadband electron spectrums that can mirror the characteristics of the electron fluxes that exist in the planetary radiation belts. The SAMURAI RF facility which is currently being constructed and commissioned at UCLA, will be capable of producing beams with 100s pC of charge with bunch lengths in the 100s of fs range with low transverse emittances in the 3-80 MeV range. We explore the production of broadband electron energy spectra from the beam plasma interaction of these beams. The beamline transport and diagnostics preceding and proceeding the interaction are discussed in this paper.

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### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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