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Plans for X- and gamma-ray production at Fermilab Accelerator Technology & Science Facility

Tuesday, 27 September 2016 09:00 (30 minutes)

The Fermilab Accelerator Technology & Science (FAST) facility currently under commissioning couples a high-brightness electron source with a superconducting linear accelerator (linac) and compact storage ring. The infrastructure is expected to provide a testbed for Accelerator Science and Beam Physics. An active area of research regards the production of X-ray and gamma-ray radiation via respectively channeling and inverse Compton scattering. Wedding these radiation mechanisms to high-repetition-rate linac is expected to provide unprecedented radiation properties (e.g. flux, and brilliance). This talk details our experimental plans and current status together with discussing other research opportunities enabled at the FAST facility.

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