

# The Beams and Applications Seminar Series

## Opportunities in Radiation Production by Light Source Injector Linacs

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**Bldg. 401, Room B2100  
Tuesday, June 23, 2:00 pm  
(please note special day and special time)**

Host: William Berg, ASD

Next-generation FEL-based light sources were investigated at small-scale test facilities, and shown to be viable at intermediate energy linac facilities. Light sources, such as the APS, feature injector linacs with significant capabilities, including beam energies approaching 1 GeV. These facilities and their beams offer a rich opportunity to study compact radiation production schemes. These schemes can provide THz, x-ray, and gamma-ray radiation which are interesting in their own right, and can be complementary to existing and future light sources. In this talk, radiation production from dielectric structures as well as Inverse Compton Scattering sources will be discussed. Selected applications, including production of positrons and detection of special nuclear materials will be mentioned. Examples based on work at UCLA will be presented, together with parameters potentially accessible at APS.

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