

## **The Beams and Applications Seminar Series**

# ***Applications with Intense OTR Images: 120-GeV protons at FNAL and Microbunched Electron beams at APS***

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**Bldg. 401, room B2100**

**Friday, November 19, 1:30 pm**

**Host: K.-J. Kim, ASD**

The optical transition radiation (OTR) mechanism has been used in many accelerator beam imaging applications, but often the lower conversion efficiency compared to scintillators has dictated the use of more expensive intensified or cooled- sensor cameras. We discuss two recent applications where the OTR images are so intense that attenuation of the light signal by about three orders of magnitude is needed to avoid saturation of standard CID or CCD cameras. The first application is for intense 120-GeV proton beams in a transport line at FNAL, and the second application is for coherent OTR (COTR) from microbunched electron beams in the APS self- amplified spontaneous emission (SASE) free-electron laser (FEL) experiments. In the first case, the techniques are now being planned for the antiproton transport line to the Tevatron in support of the Run II collider program, and in the second case extensions of the COTR techniques to the VUV wavelengths and beyond are being proposed.

### **For more information visit**

<http://www.aps.anl.gov/asd/physics/seminar.html>

Visitors from off-site please contact Yuelin Li  
(ylli@aps.anl.gov, 630-252-7863) to arrange for a gate pass.

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