Beams and Applications Seminar Series

This ANL seminar series focuses on the physics, technology and applications of particle and photon beams. It is sponsored jointly by the ASD Division, the AWA group of the HEP Division, and the ATLAS group of the PHY Division

Bldg. 401, room B2100
Tuesday, April 9
(note special day)
1:30 PM

Charles Brau
Vanderbilt University

High-brightness electron beams from photoelectric needle cathodes

Host:J. Lewellen

Surface electric fields of the order of 10^10 V/m are easily achieved at the tips of tungsten needles, leading to field emission. In the visible part of the spectrum, laser illumination enhances the conventional field emission by a nonlinear process. In the ultraviolet part of the spectrum the photoemission is linear, with a quantum efficiency that approaches unity at the highest electric fields. Current density in excess of 10^12 A/m^2 has been observed in nanosecond pulses

For more information visit

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

Visitors from off-site please contact the Accelerator System Division office (konopa@aps.anl.gov, 630-252-3115) to arrange for a gate pass.