The Beams and Applications Seminar Series

Simulation Codes, Targets, Collimators, and Shielding for High-Power Beams

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FNAL

Bldg. 203, room R-150
Friday, September 5, 1:30 pm
(please note location)

Host: P. Ostroumov, PHY

Reduction of uncontrolled beam loss, development of high-powered targets and radiation shielding and optimization of the accelerator radiation environment are based these days on effective computer simulations. This is especially challenging for those setups involving bunched energetic proton, electron or heavy-ion beams, and requires in addition research in many areas including material radiation damage, compatibility, fatigue, stress limits, erosion and remote handling. Modern versions of the main Monte Carlo codes used in this field are overviewed, with emphasis on hadron-nucleus and nucleus-nucleus event generators, low-momentum transfer processes, geometry description (especially in accelerator structures), visualization and reliability. Calculation and design issues are considered for the target and collimator systems and radiation shielding in several high-power beam accelerator projects.

For more information visit
http://www.aps.anl.gov/asd/physics/seminar.html

Visitors from off-site please contact John Power
(jp@anl.gov, 630-252-3191) to arrange for a gate pass.

This ANL seminar series is a CARA activity and 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.