The Beams and Applications Seminar Series

The development of electrically-controlled silicon switches for active X-band high-power RF compression systems.

Jiquan Guo
SLAC National Accelerator Lab.

Bldg. 401, Room B2100
Tuesday, February 24, 1:30 pm

(please note special day)

Host: Ali Nassiri, ASD

In the past decades, there has been increasing interest in pulsed high-power RF sources for high-gradient, high-energy particle accelerators. Passive RF pulse compression systems have been used in many applications to match the available RF sources to the loads, requiring higher RF power but a shorter pulse. Theoretically, an active RF pulse compression system has the advantage of higher efficiency and compactness over the passive system. However, the key component for such a system is still an open problem.

We will present a novel overmoded design for a circular waveguide three-port network and the associated circular-to-rectangular mode-converter. We will discuss the design and experimental results of a high-power X-band RF window and a fast switch that is capable of handling multi-megawatt RF power.

For more information visit

http://aps.anl.gov/News/Meetings/Beams_and_Applications_Seminars/

Visitors from off-site please contact Carmen Nolasco (mnolasco@aps.anl.gov, 630-252-6159) to arrange for a gate pass.