

# ACCELERATOR SEMINAR

## **“The Goubau Line – A Virtual Beam for Testing of Beam Instrumentation Beyond 1 GHz”**

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Bergoz Instrumentation,  
Saint Genis Pouilly, France***

Standard setups for testing of beam instrumentation in the workshops usually start to fail when signal frequencies exceed 1 GHz. A potential improvement could be provided by electromagnetic surface waves which travel along a single wire. These waves consist of the fundamental TM mode and resemble closely the radial electric and azimuthal magnetic field around a long and thin beam of charged particles. We explain their fundamental properties, discuss how they can be applied to bench testing of beam instrumentation and compare calculations to measurements up to 8.5 GHz. A brief introduction to Bergoz Instrumentation is given to include its human and material resources dedicated to this project.

**Monday, April 23, 2012**

**3:00 p.m.**

**CEBAF Center, Room L102/104**

**Coffee before seminar beginning at 2:45 p.m.**