

Cyclotron Colloquium, Tuesday, March 30 at 3:45 PM

*Professor Michael A. Bentley
Department of Physics University of York, York, UK*

Abstract:

The new international FAIR facility in Darmstadt, Germany, has been launched and will provide a major radioactive beam facility in Europe for a wide range of science applications. One major activity within FAIR is the NuSTAR collaboration (Nuclear Structure, Astrophysics and Reactions) in which the UK plays a leading role in terms of the scientific drive and some of the technical developments. FAIR is anticipated to come online about 2016, and a number of major pre-FAIR projects are underway which themselves are significant international collaborative programmes. I will discuss one of these which focuses on in-beam gamma-ray spectroscopy using relativistic fragments from the Super Fragment Separator - the "provider" of radioactive beams for NuSTAR. The talk will present some of the technical steps forward (including the detectors being tested at TAMU this week) and some of the planned science - focusing on our interests in the York group, especially the investigation of isospin-symmetry breaking phenomena in nuclei.