The Beams and Applications Seminar Series

Status and Development of the Heavy Ion Research Facility at IMP

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Bldg. 203 Room R-150
Friday, October 02, 3:30 PM

Host: Jerry Nolen, PHY

The IMP, its main research fields, and accelerator facilities will be introduced, with emphasis on the status and latest developments at the Heavy Ion Research Facility in Lanzhou (HIRFL). HIRFL consists of two cyclotrons and two Cooling Storage Rings (CSR, 1.1GeV/u for Carbon and 500MeV/u for Uranium). The two cyclotrons (k=70 and k=450) have operated for more than 20 years, accelerating heavy ion beams from Carbon to Uranium. In 2008, after 7 years of design, construction and commissioning, HIRFL-CSR began operation. Primary beams such as C, Ar, Kr and Xe with different energies were accumulated, cooled, and accelerated. Recently, radioactive ion beams were produced and stored in the second ring of the HIRFL-CSR for precise mass measurements of short-lived nuclides using the isochronous mode. Carbon beams from the first ring of the HIRFL-CSR were used for ion therapy tests and 8 patients were treated successfully. Research programs for the near future at HIRFL-CSR will also be discussed.

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