

Status and Development of the GSI Accelerator Facilities, N. ANGERT, Gesellschaft Für Schwerionenforschung (GSI), Darmstadt, Germany - Dual ion and multiple energy operation for experiments can now routinely used at the Unilac and the SIS. Storage and identification of fragmented beams from the SIS with up to 100 different beam components have been performed in the ESR. There deceleration has been demonstrated including cooling from a few 100 MeV/u down to 50 MeV/u as well as slow extraction of cooled ions. Two improvement programmes are presently going on at the Unilac and the SIS: first, modifications for cancer therapy which will allow for irradiations with a 3-dimensional raster scan providing parameter sets for energies, intensities and focal conditions, from which individual patient data can be taken during a treatment. Second, an intensity upgrade programme which contains in first step the installation of an electron cooler for multiple multiturn injection in the SIS. In a second step, to be completed in 1998, the present Wideröe prestripper accelerator in the Unilac will be replaced by a novel RFQ/DTL high current IH-structure for 15 mA U⁴⁺ beams. A comprehensive improvement programme, including the installation of stochastic cooling devices, is presently realized at the ESR.