

Characteristics of Operation of the ESR at Transition, K. BECKERT, H. EICKHOFF, B. FRANZAK, B. FRANZKE, H. GEISSEL, M. HAUSMANN, G. MUENZENBERG, F. NOLDEN, C. SCHEIDENBERGER, M. STECK, TH. WINKLER, GSI; A. DOLINSKII, INR, KIEV; H. WOLLNIK, II. Phys. Inst., Giessen University - At the GSI storage ring ESR an isochronous ion-optical setting of the lattice has been developed and studied recently. This setting is characterized in particular by a low value of the transition energy corresponding to a relativistic gamma-factor of approximately 1.37. In contrary to the standard mode of ESR-operation, where the transition point is in the vicinity of 2.5, this setting allows to inject and to store heavy ion beams at an energy, that equals the transition energy of the lattice. The characteristics of this mode of ESR-operation has been studied experimentally and the results of these studies will be presented. One of the possible applications is the time-of-flight spectroscopy of short lived nuclear fragments. Results of first tests will be presented.