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Low intensity beam diagnostics at INFN-LNS

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The aim of the EXCYT (EXotics with CYclotron and Tandem) facility is the production and acceleration of radioactive ion beams. A primary beam provided by the K-800 Superconducting Cyclotron produces the required nuclear species in a target-ion source complex, which can be used for low energy experiments (up to 300 keV) and higher energy, by accelerating them by means of the 15 MV Tandem. The nuclear experiments have been started in July 2006 with the experiments BIGBANG and RCS, using the post-accelerated 8Li ions. 8Li, 9Li and 21Na beams have been already produced and next beams have been planned, according to the experimental proposals, with intensities ranging between 10ˆ4 to 10ˆ6 pps. In order to have a high sensitivity beam diagnostics for the low intensity radioactive beams, suitable devices have been developed with characteristic of reliability and easy to use. In the talks will be presented a description of the diagnostics devices with the results under realistic operative conditions.

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