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Status and Recent Upgrades of the Tandem Accelerator Facility at RBI Zagreb

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The presentation will focus on the status of the Rudjer Boskovic Tandem Accelerator facility and its upgrades performed during the last decade. The facility consists of 6 MV EN Tandem and 1 MV Tandetron accelerators with a number of beam lines dedicated for ion beam analysis applications, material modification studies and nuclear physics experiments. One of the most important upgrades is the conversion of the accelerator controls from analog to digital home made based system. Sputtering ion sources have been installed at both accelerators, enabling acceleration of wide range of negative ion species. EN Tandem has been upgraded by introduction of the turbomolecular pumping system at the terminal, which significantly improved transmission of heavy ions through the system. Several new beam lines have been installed, including dual beam line that can deliver simultaneously ion beams from both accelerators to the same spot on a target. The ion microbeam end station has been upgraded from dublet to quintuplet configuration. First home made prototype of magnetic quadrupole triplet for ion microbeam applications has been designed, constructed and tested.

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