

# The Radioactive Ion Beam Accelerator M A FF at the Munich High Flux Reactor FRM -II

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for the M A FF collaboration

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At the Munich high flux reactor FRM -II the Munich accelerator for fission fragments (M A FF) is under design [1,2] in order to produce intense beams of very neutron-rich fission fragments of up to  $10^{12}$  particles/s. Thermal neutron induced nuclear fission is the most suitable method to produce neutron-rich isotopes ( $70 < A < 160$ ) due to the large fission cross section and the high thermal neutron fluxes in modern reactors. The beams at M A FF will be delivered to experiments at low energy (30 keV) as well as at high energies between 3.7 and 5.9 MeV/u. The neutron rich isotopes are of interest in many different fields of nuclear physics, astrophysics, solid state physics and medicine. One of the key experiments will be the production and the study of the nuclear and atomic properties of very heavy elements with  $Z > 100$ . An overview of the production method of neutron rich isotopes by thermal neutron induced fission, of the machine layout and of the experiments will be shown.

## Principle of the M unich Accelerator for Fission Fragments (M A FF )

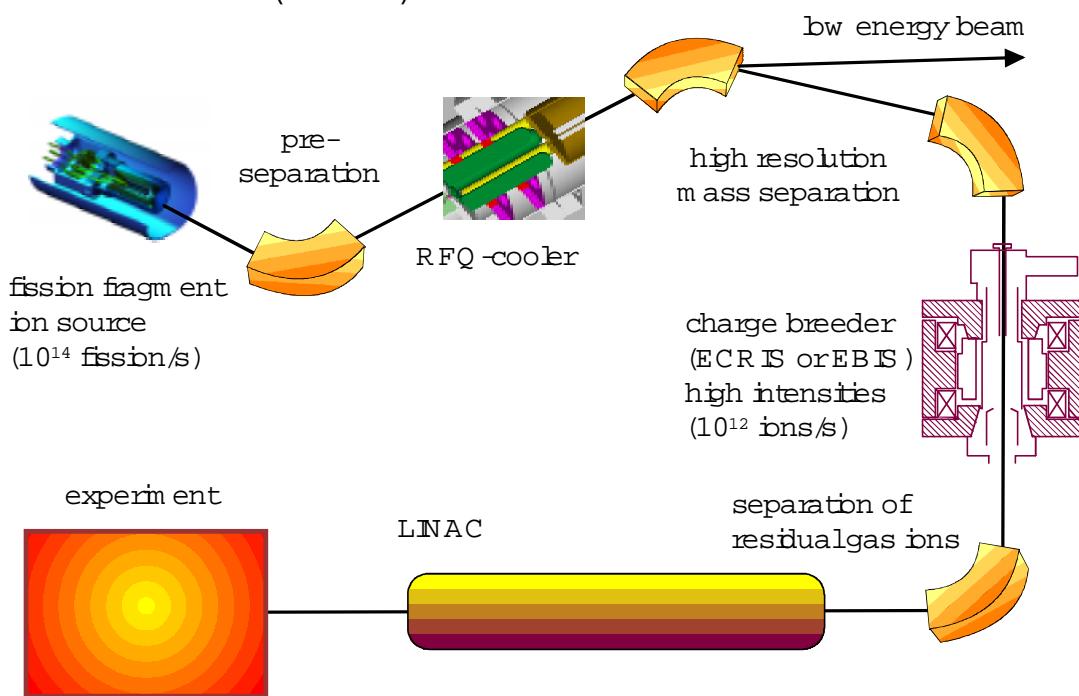


FIG .1. Schematic of the M A FF layout.

[1] O .K ester et al., Nucl. Instr. and Meth. B 139 (1998) 28-36

[2] M A FF -Physics Case and Technical Description,

<http://www.ha.physik.uni-muenchen.de/maff/>