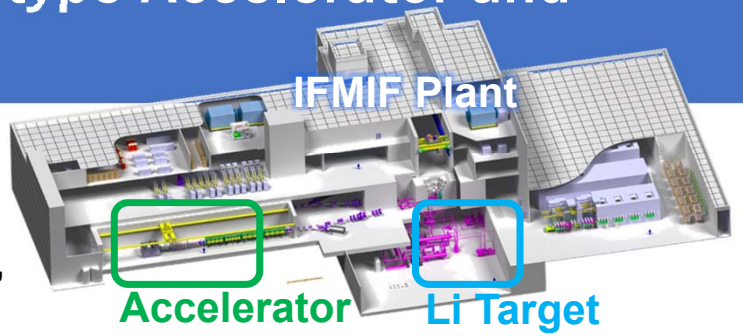
OV/3-3 Overview of the Validation Activities of IFMIF/EVEDA: LIPAc, the Linear IFMIF Prototype Accelerator and LiFus6, the Lithium Corrosion Induced Facility



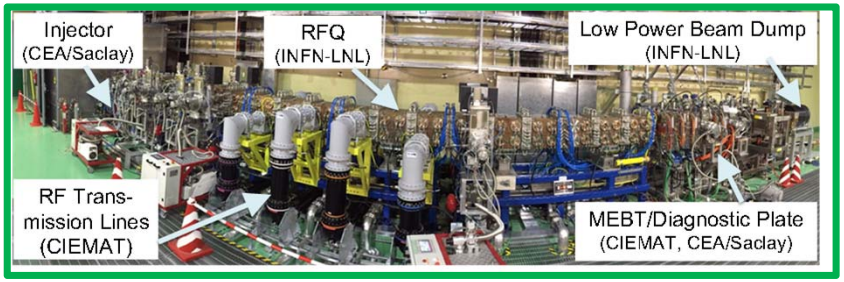
LIPAc Outcomes:

(1) Kick-off of the RFQ beam commissioning was achieved
(2) Good sign of RFQ design validity was obtained (transmission >90%, output energy 2.5 MeV, beam current up to 35 mA)
(3) Beam size, emittance and bunch length measurements were uncompleted in previous campaign
(4) 50 keV/70 mA p and 100 keV/140 mA d beams satisfy RFQ input emittance < 0.25π mm mrad
(5) RF conditioning of RFQ required for the high current d beam
(6) Assembly of SRF Linac is waiting for the delivery

LiFus6 Outcomes:

(1) impurity control (N < 30 wppm) in Li is feasible
(2) erosion-corrosion rate in RAFM steel (< 1 μm/y) is feasible
(3) online monitoring of the non-metal impurity requires the further efforts to improve the design of monitor and the measurement method of small variation of resistance

LIPAc



LiFus6

main loop and impurity monitor/ control loop

test section and storage tank/ hot trap