

GENEPI: A High Intensity Deuteron Accelerator for Pulsed Neutron Production, J.M. DE CONTO

on behalf of the GENEPI Team, ISN Grenoble - GENEPI is an electrostatic 250 keV deuteron accelerator under construction at Grenoble for the studies of accelerator driven nuclear reactors. A pulsed duoplasmatron source delivers 50 mA, 1 μ s, 2000 Hz deuteron pulses, which will be focused and transported through a small diameter beam line towards a tritium target at the center of an experimental, modular reactor (MASURCA, at Cadarache). The pulsed source, the beam dynamics with space charge, as well as the whole calculation and design of the machine will be presented.