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Extraction and transport of ion beams from an ECR ion source

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List of Acronyms

AECR	Advanced Electron Cyclotron Resonance ion source
LEBT	Low Energy Beam Transport
KVI	Kernfysisch Versneller Instituut, Groningen, Netherlands
AGOR	Accelerator Groningen ORsay
TRI μ P	Trapped Radioactive Isotopes: <i>micro</i> -laboratories for fundamental Physics
GSI	Helmholtzzentrum für Schwerionenforschung GmbH, Darmstadt, Germany
RIKEN	The Institute of Physical and Chemical Research, Saitama, Japan
NSCL	National Superconducting Cyclotron Laboratory, Michigan, USA
JYFL	Department of Physics, University of Jyväskylä, Jyväskylä, Finland
GANIL	Grand Accelérateur National d'Ions Lourds, Caen, France
ANL	Argonne National Laboratory, Argonne, USA
LBNL	Lawrence Berkeley National Laboratory, Berkeley, USA
MSU	Michigan State University, Michigan, USA
FAIR	Facility for Antiproton and Ion Research, Darmstadt, Germany
FRIB	Facility for Rare Isotope Beams, Michigan, USA
EIS	ECR Injector Setup
rms	root mean square
PIC-MCC	Particle-in-Cell Monte Carlo Collision code
GPT	General Particle Tracer, 3D Simulation code for trajectory calculation
BEM	Boundary Element Method
FEM	Finite Element Method
ECRH	Electron Cyclotron Resonance Heating
MHD	Magnetohydrodynamics
RF	Radio Frequency
EEDF	Electron Energy Distribution Function
CSD	Charge State Distribution
TWTA	Traveling Wave Tube Amplifiers
FCs	Faraday Cups
BaF	Barium Fluoride

NdFeB Neodymium Iron Boron permanent magnet

CCD	Charged Coupled Device
MCP	Multi-Channel Plate
VT	Viewing Target
EFB	Effective Field Boundary