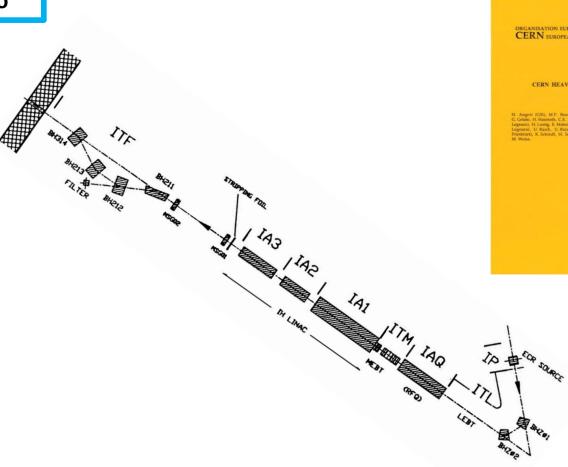


Linac 3 is the linear accelerator at the start of the CERN heavy ion chain

Watch the video

For more details see the Linac3 Design Report in CERN CDS https://cds.cern.ch/record/249000



CERN 93-01 28 April 1993

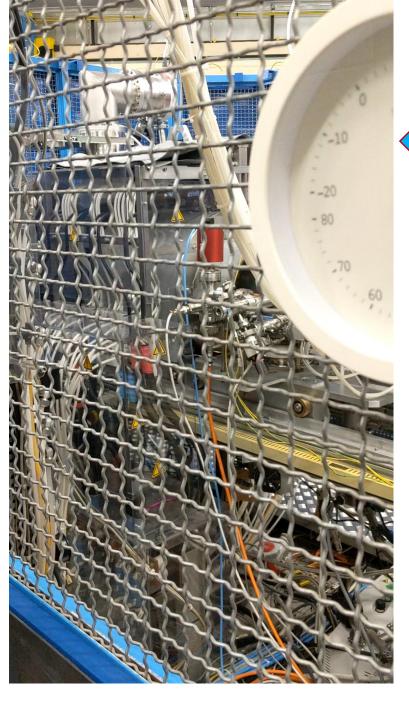
ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

CERN HEAVY-ION FACILITY DESIGN REPORT

N. Angert (CSI), M.P. Bourgarel (GANIL), E. Brouzet, R. Cappi, D. Dekkers, J. Evans, G. Caldo, H. Haseroth, C.E. Hill, G. Hotter (GSI), J. Knott, H. Kugler, A. Londard (INFN), Leghanol, H. Dutstig, E. Malvirt (GSI), F. Nitsch, G. Parisi (INFN, Leghanol, A. Drent (INFN, Leghanol), U. Raich, U. Ratzinger (GSI), L. Riccasi (INFN, Torinol), A. Schmigh, H. Schmidt, H. Schmauer, P. Ten, H.H. Umushitzer, M. van Rosij, D. Warner,

Editor: D. Warner

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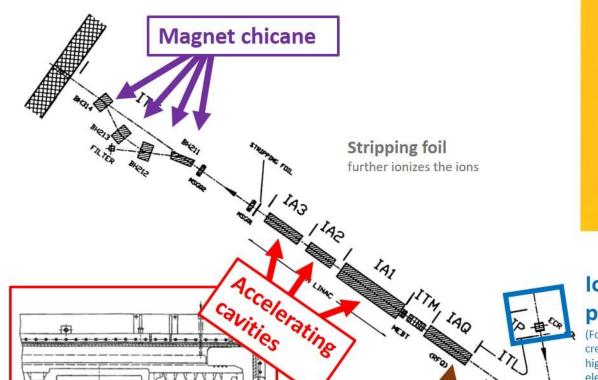
`Linac 3' is the linear accelerator at the start of the

CERN heavy ion chain

Fig. 2.17 Cross Section of Tank 1 Showing Small Drift Tubes

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Watch the video



CERN 83-81
28 April 1993

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

CERN HEAVY-ION FACILITY DESIGN REPORT

M. Augert (CSN), M.F. Bringport (CANIL), E. Bringer, E. Cappi, D. Delaren, J. Ersin, G. Coder, H. Harcerth, C.E. 1916. C. Theire (GR), J. More H. Ergier, A. Lambadh (1998), Legiurid, H. Lauge, E. Malarit (KOJ), F. Mich. C. Perist (KON), Legiurid, L. Stabier, G. M. Schenger, P. Ters, H.H. Umstiter, M. van Roof, D. Warner, M. Perist.

Editor: D. Warner

CENNA.

1993

Ion source: oven + plasma chamber +...

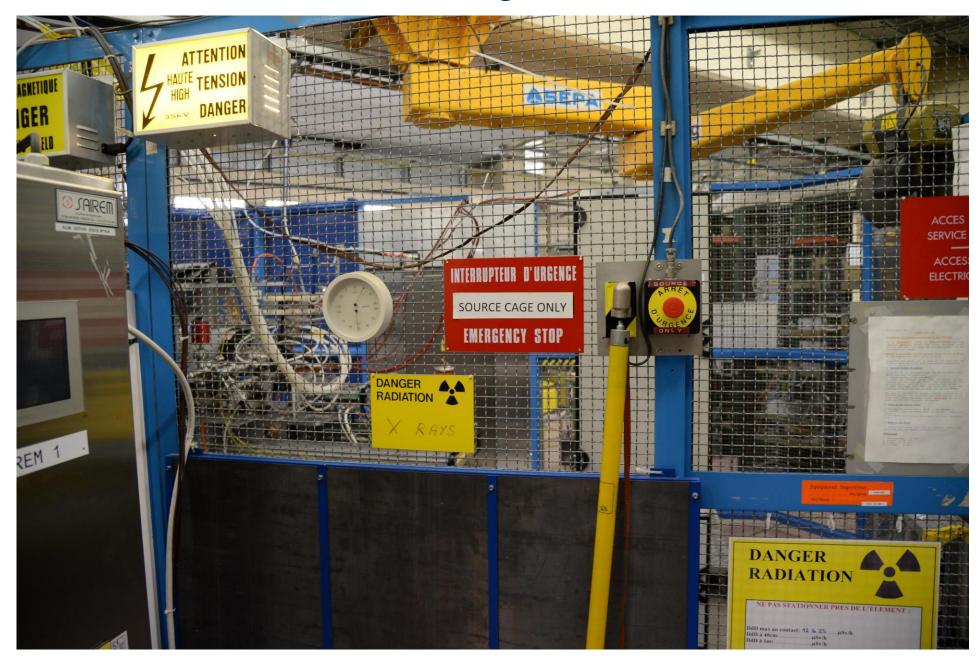
(For lead runs, oven heats lead sample to create gas of Pb atoms, source then generates high charge state ions via collisions with hot electrons in a plasma chamber)

Quadrupole (combined focusing and acceleration) spec

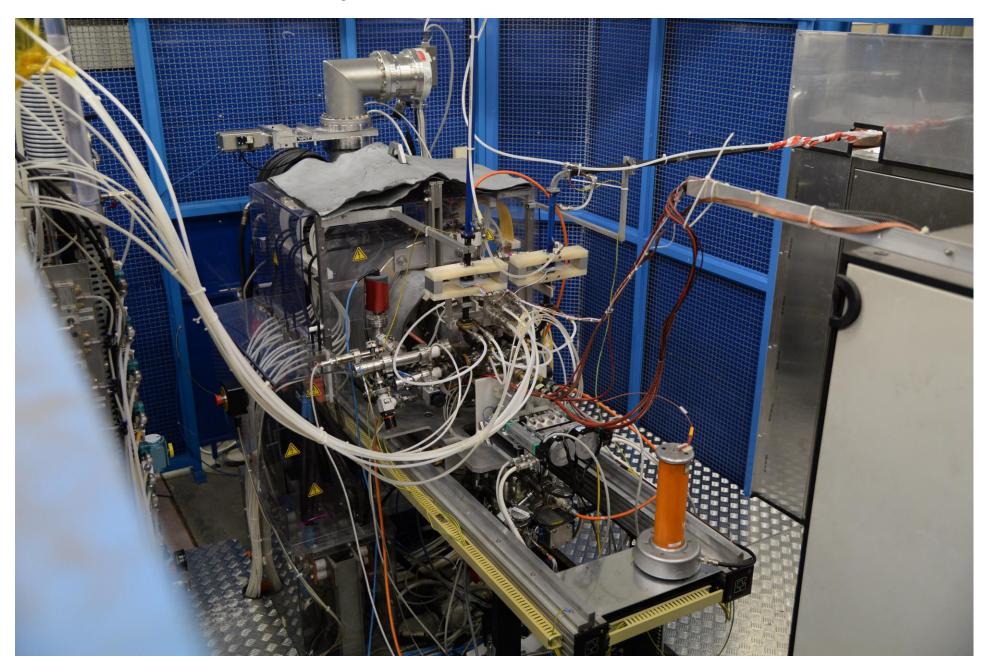
RadioFrequency

spectrometer

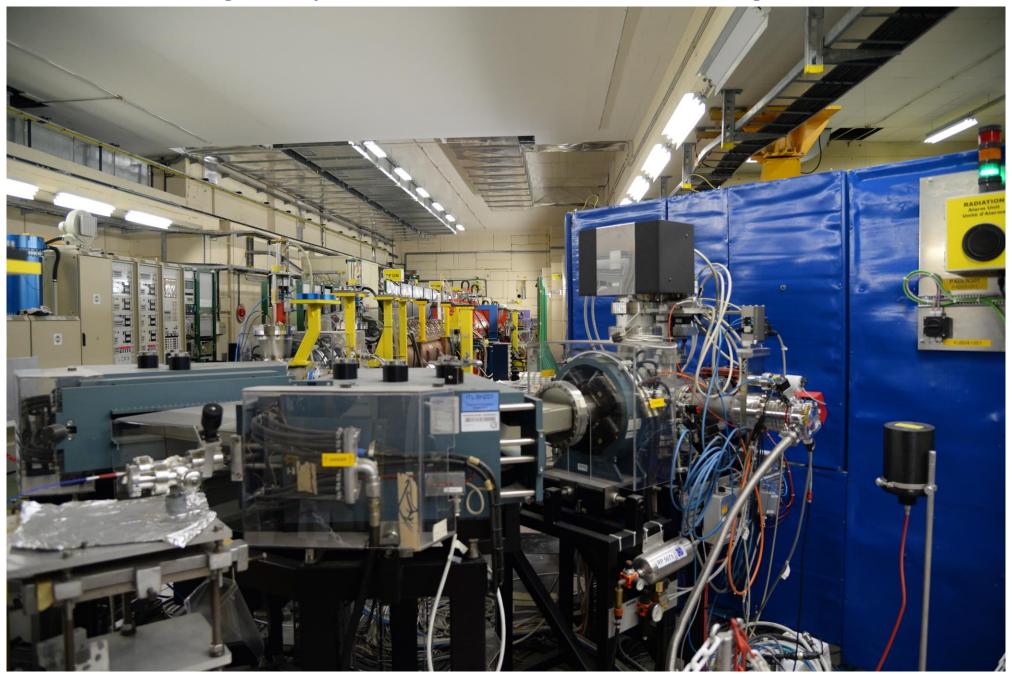
Source cage



Electron Cyclotron Resonance Ion Source

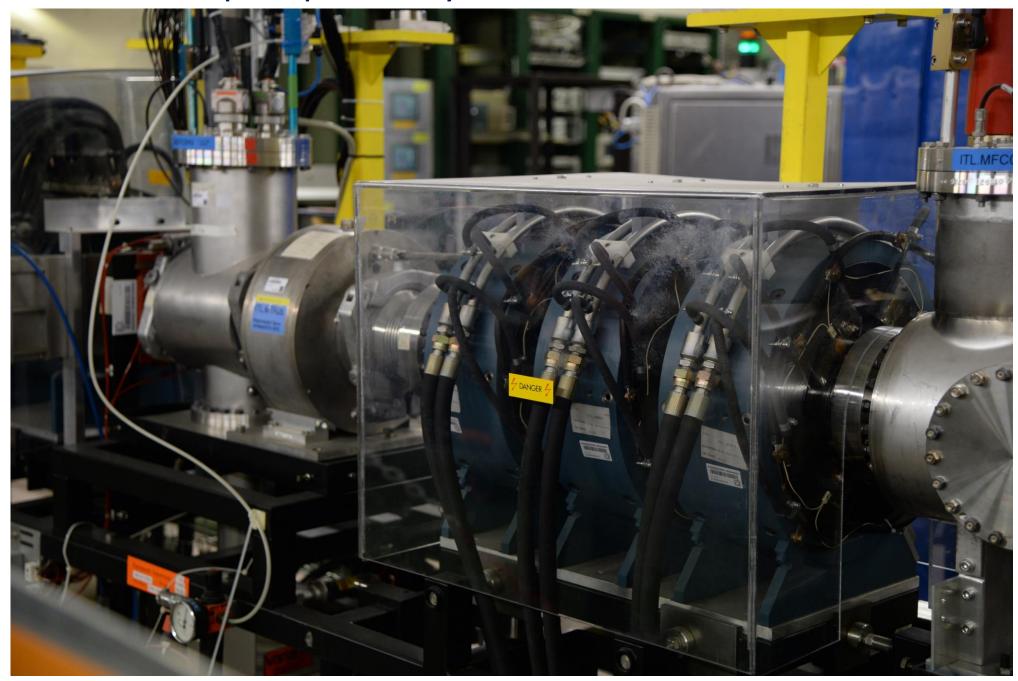


Source cage and spectrometer with rest of Linac 3 in background

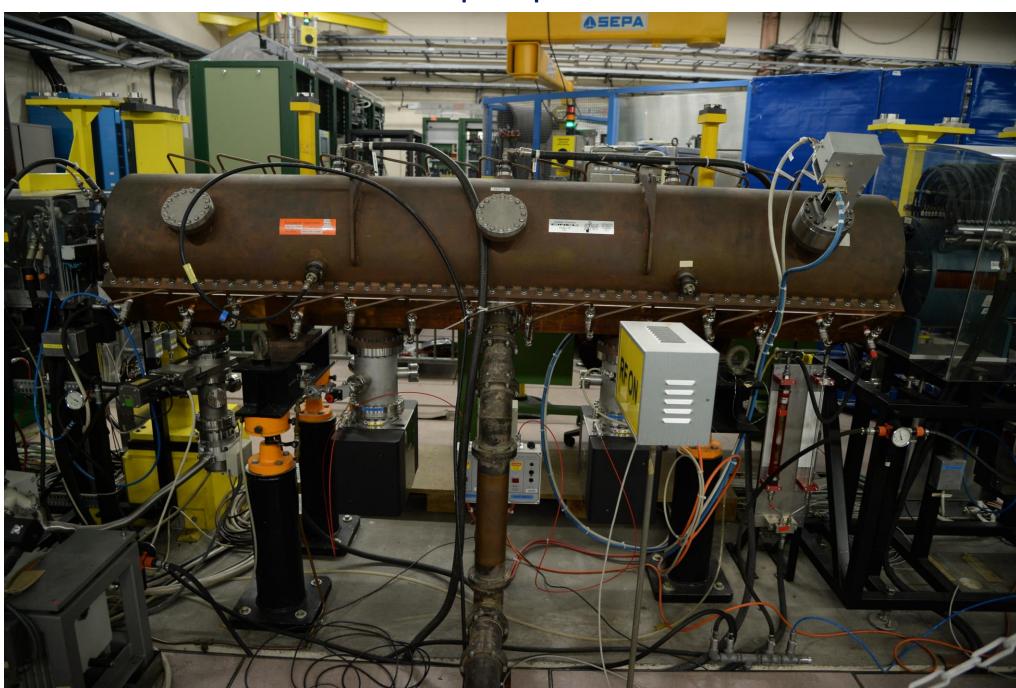




Quadrupole triplet assembly



RF quadrupole



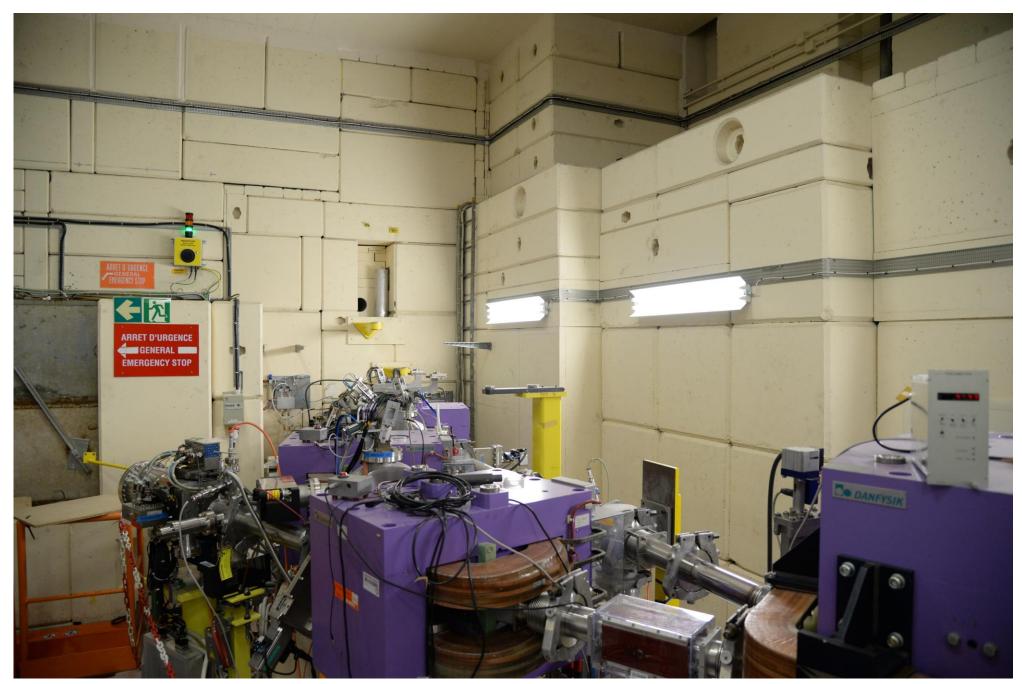
Stripper foil, RF cavities, Radiation shielding

Dipole

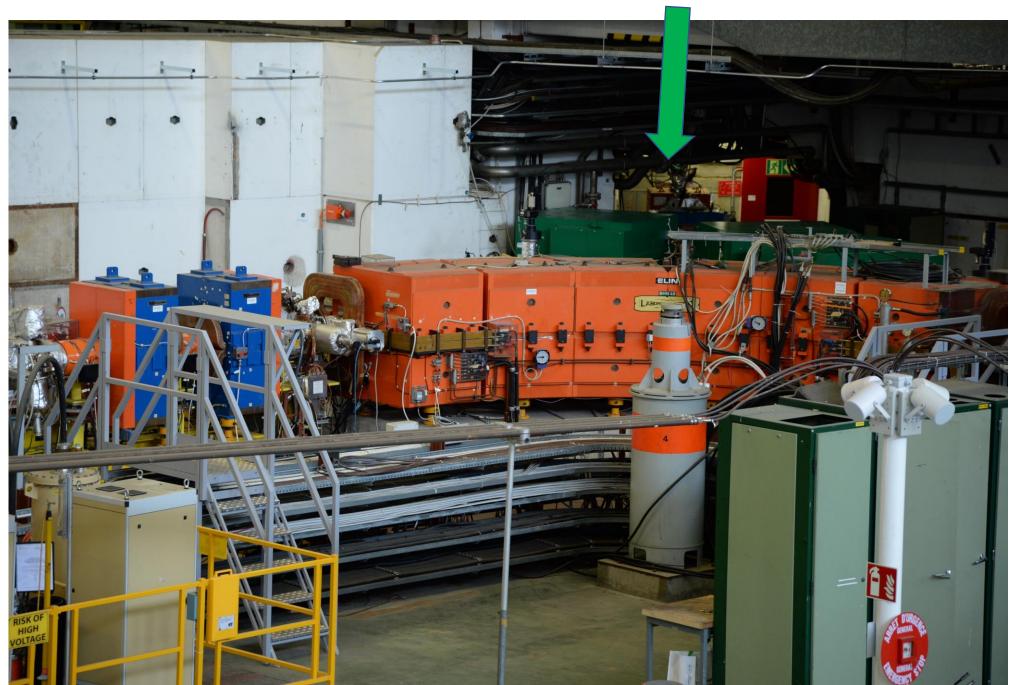


Dipole TATES ASSESSED. PXMBHEFHWY -DADOODII

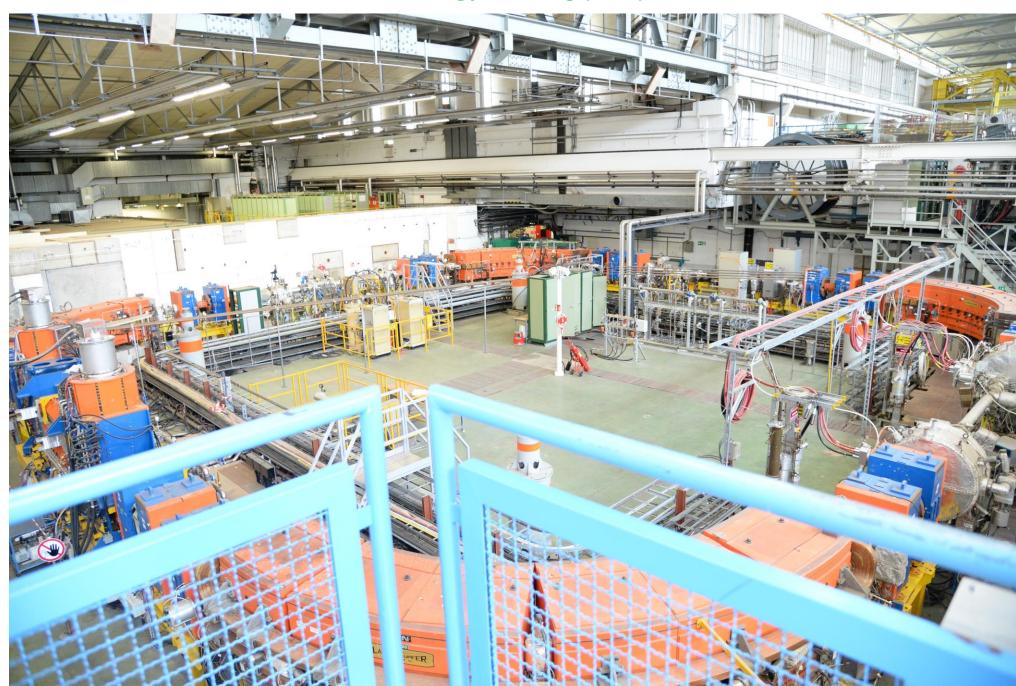
Beam exits to transfer lines for accelerators next in the chain



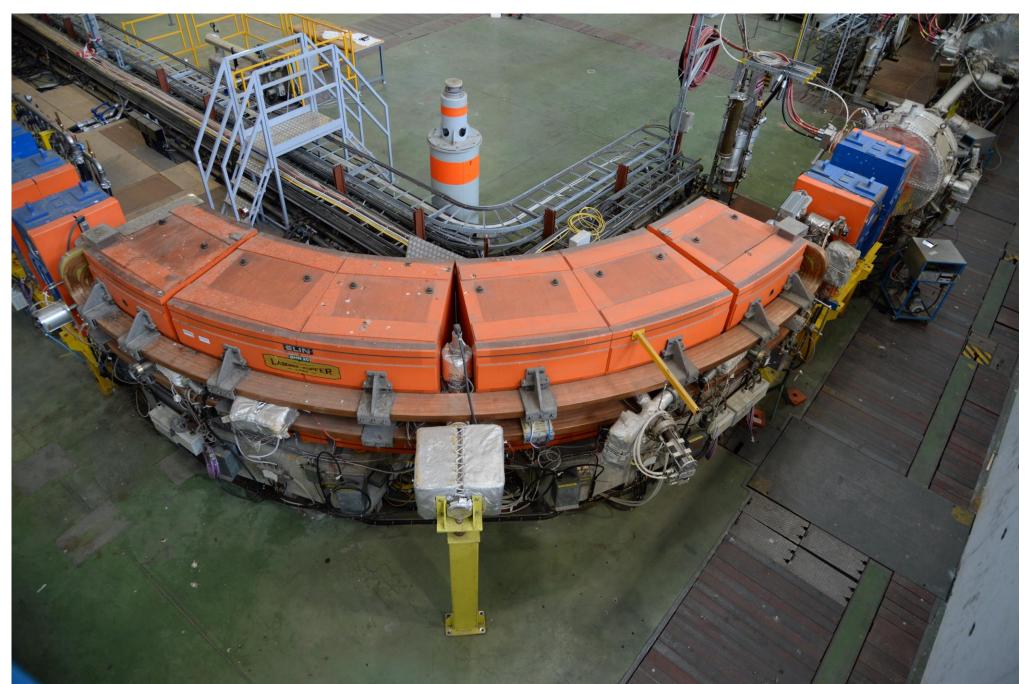
Beams from Linac3 are injected into the Low Energy Ion Ring (LEIR)



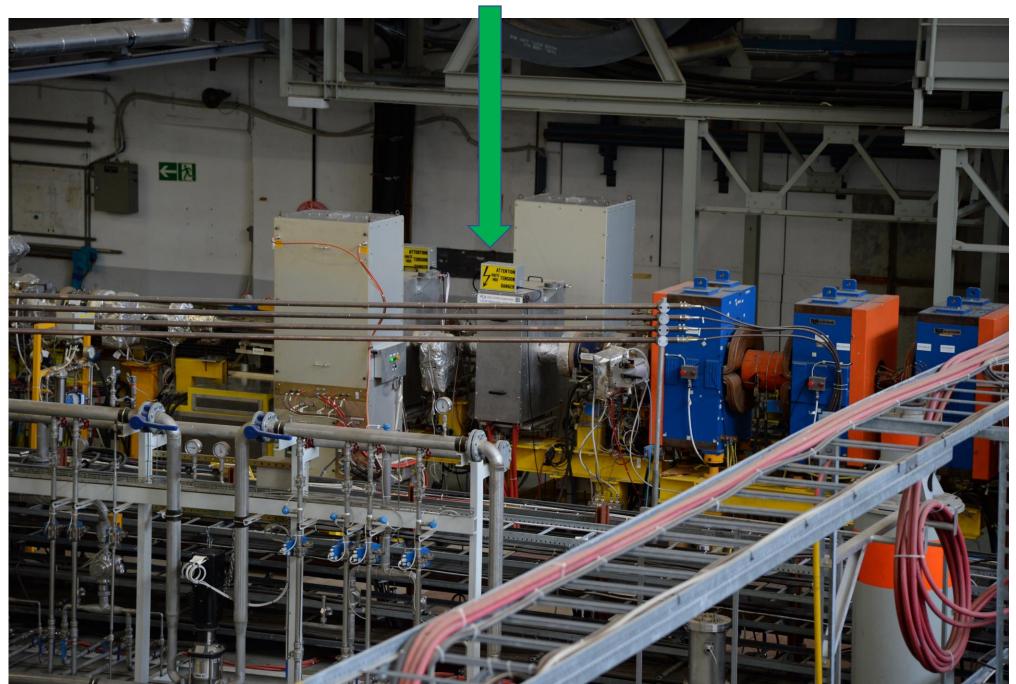
Low Energy Ion Ring (LEIR)



LEIR dipole

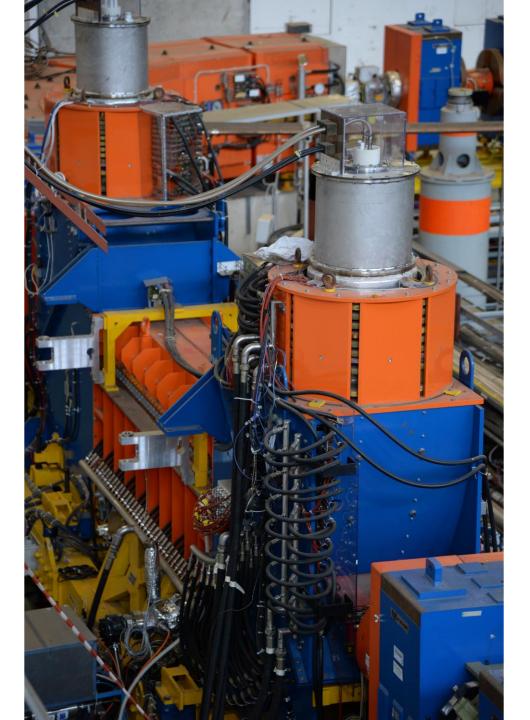


RF cavity



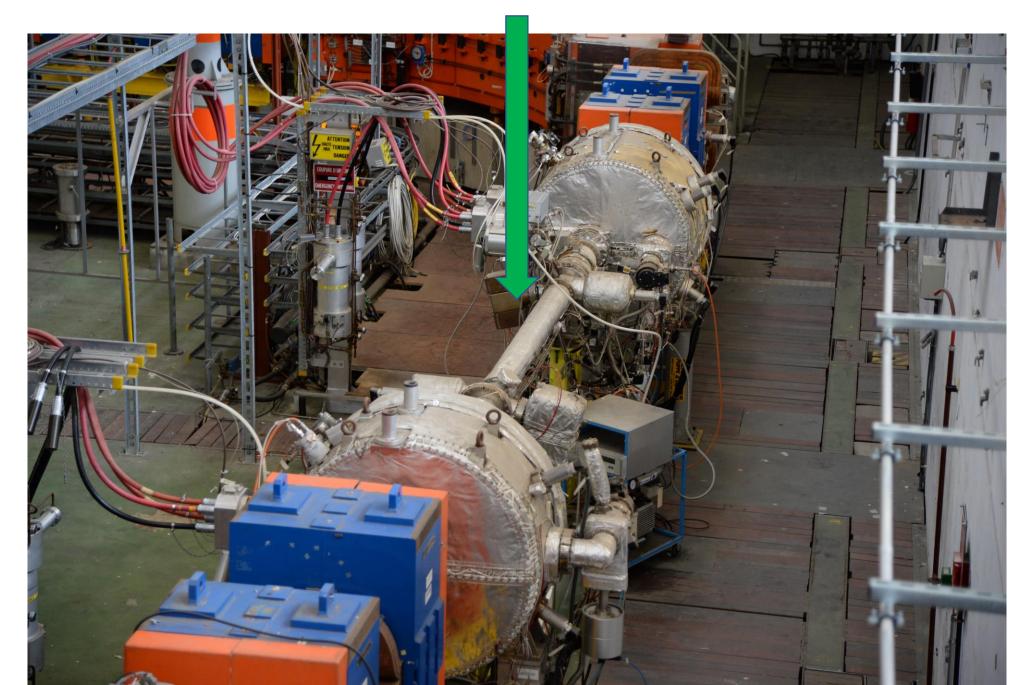
Quadrupole



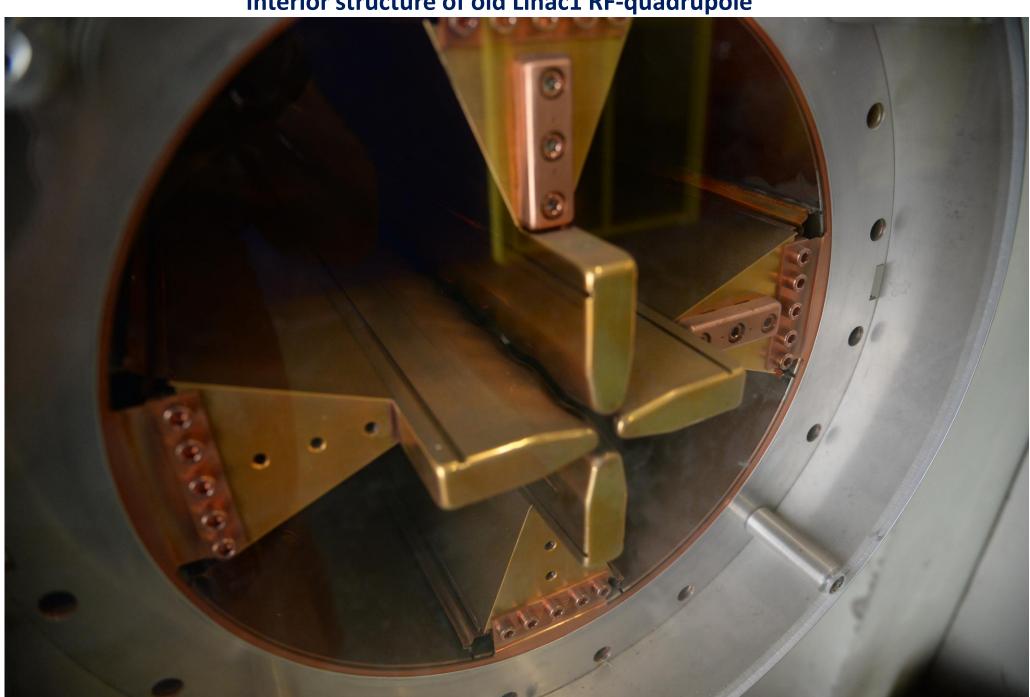


Electron cooling insertion

Beam pipe



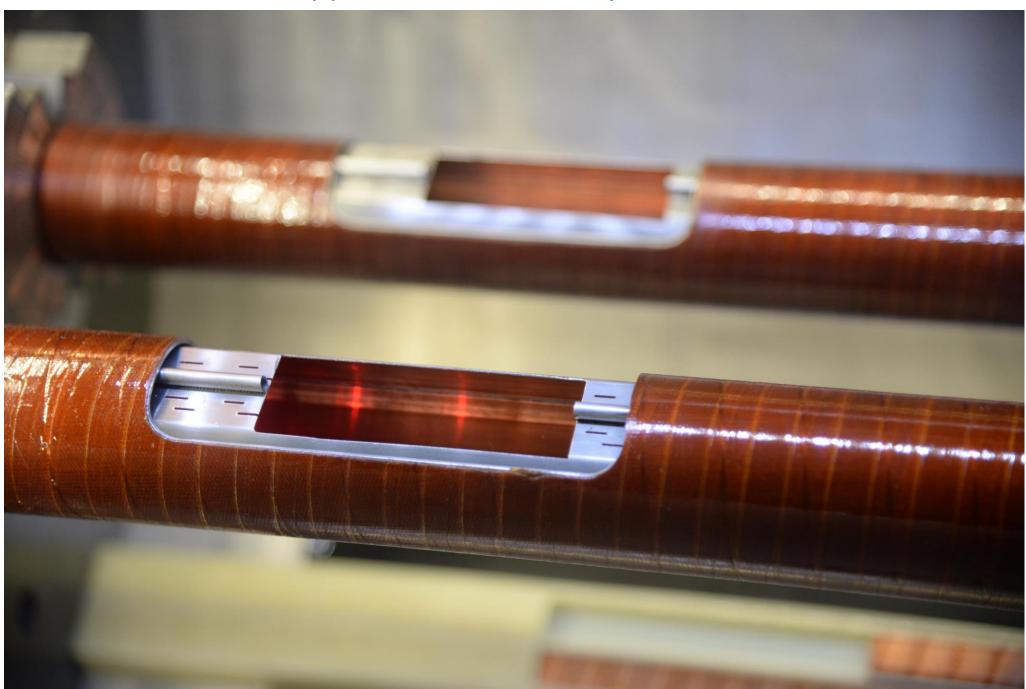
Interior structure of old Linac1 RF-quadrupole



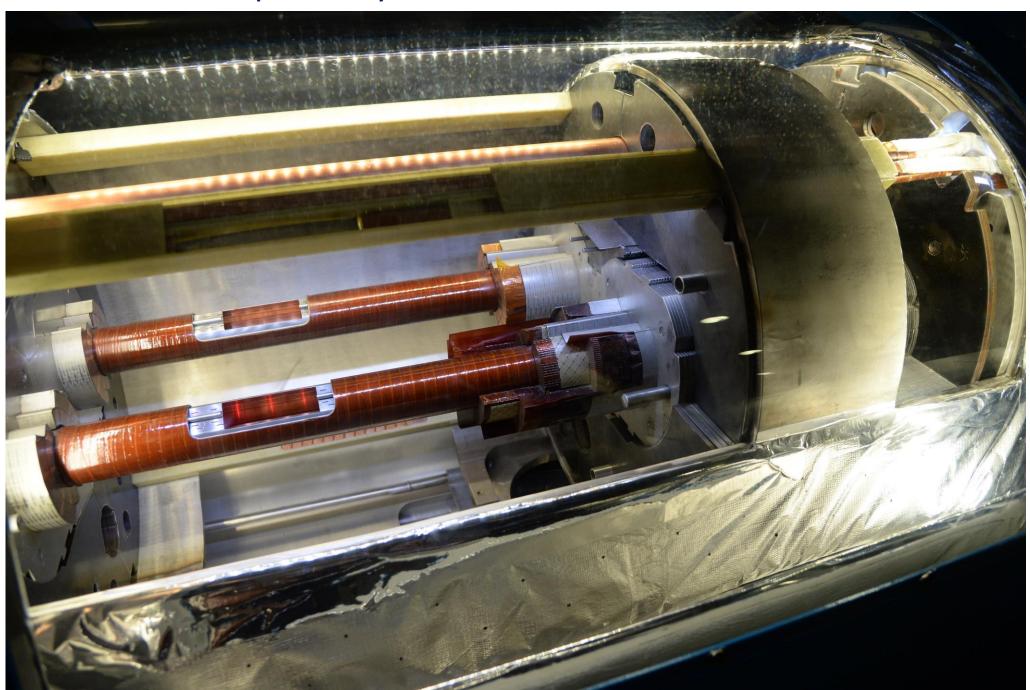
Interior structure of old Linac1 RF-quadrupole



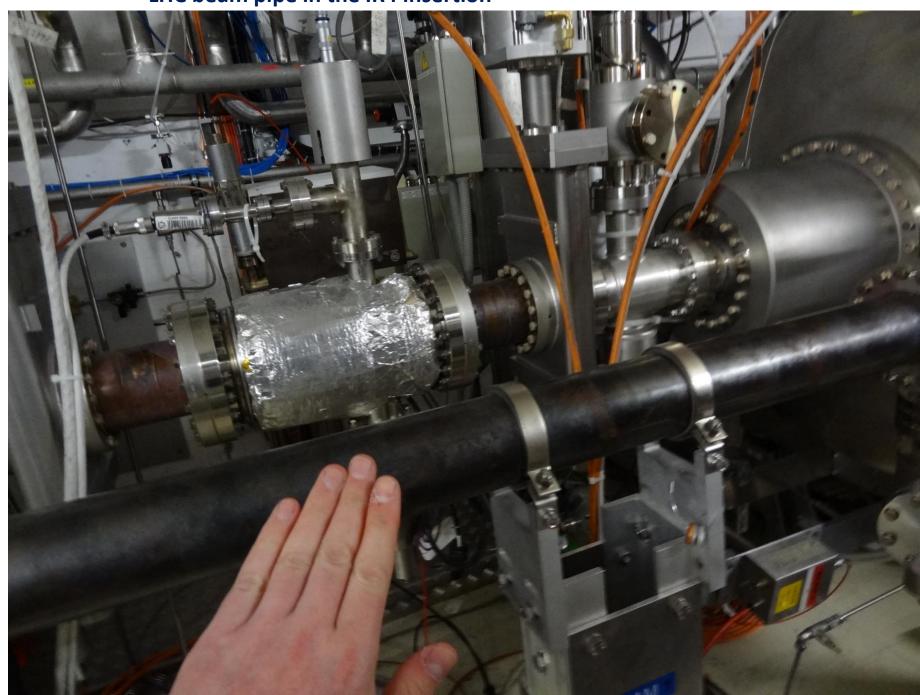
LHC beam pipe and beam screen cutaway



LHC dipole cutaway



LHC beam pipe in the IR4 insertion





LHC dipole and externally mounted Beam Loss Monitor

LHC IR4

