Investigations of REXTRAP drift-tube structure
Section meeting 2021-02-04

Acknowledge Miguel Lozano Benito (BE-OP-ISO)

- Abrupt changes in beam transmission through REX low energy stage
- On-going since a few years
- Only visible on charge bred q+ beam
- Not a slow charge-up phenomenon
- Can be mitigated by readjusting REXTRAP extraction optics
Internal structure

3 T field  Ne ~5E-4 mbar  >50 electrodes (10 V to few kV)
Deflector plates at extraction side already refurbished beginning of 2020

70 Bq at contact (from e.g. 44Ti)

Differential pumping diaphragm

Rails to displace magnet transversally

Deflector plates at extraction side already refurbished beginning of 2020
Discharge marks at extraction side – old or new?

Verify electron trapping grid

Check HV holding (absence of buffer gas and B-field)

Clean / redo Macor piece
Hope to avoid this!