

Modular Optically Powered Electrostatic Accelerator

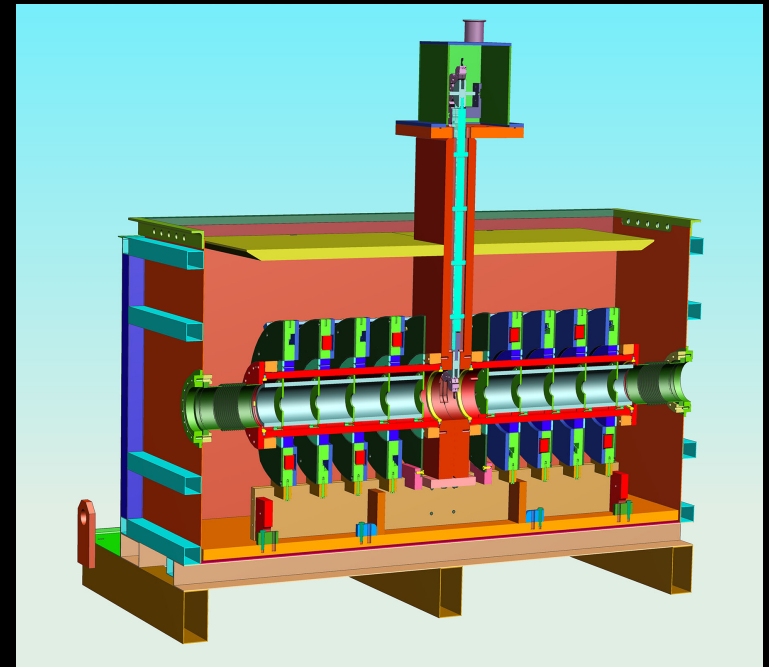
The project foresees the use of HV optically powered generator to build and test an innovative modular electrostatic accelerator prototype

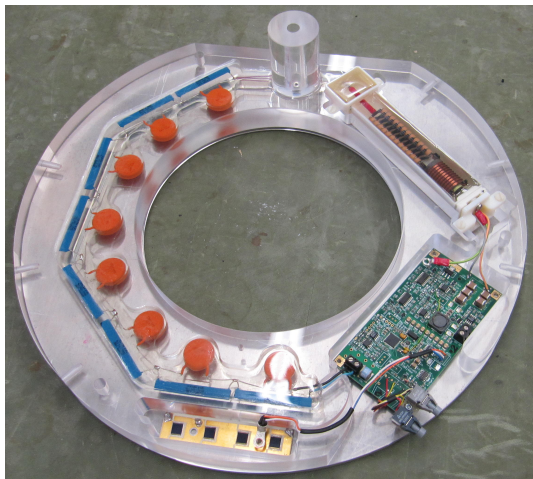
Main improvements

- modularity (series of HV discs)
- upgradability
- easiness of maintainability, diagnosis and control

Main Features of a HV disc

- Fibre Coupled Lasers (wavelength at maximum GaAs efficiency)
- GaAs Photovoltaic concentration cells
- Remotely addressable fibre coupled low power control board
- Cockcroft-Walton (100kV) Multiplier
- Stabilised by feedback





HV discs produced

Performance with a gas
as dielectric deeply
studied

Items for short term theses

Switch to the use of a liquid as dielectric (never tried before)

Measurements in order to understand the performance in liquid

Data can be collected at Legnaro Laboratories and then analysed

Comparative studies between performance in gas and dielectric

