ION BEAM DIAGNOSTICS & CONTROL SYSTEMS

Electrode of the beam energy monitor, detection of the electric field from the beam bunches, energy calculated by time of flight method

ACTIVITY DESCRIPTION

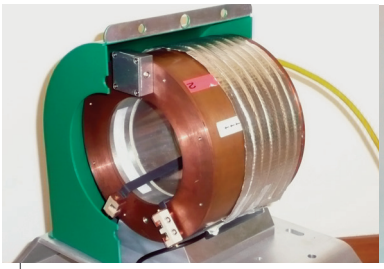
Ion beam diagnostics and beam control systems have been developed at GANIL since its construction in 1976, for tuning and monitoring of both the accelerators and physics experiments, and more recently for safety requirements. Recent developments have been undertaken for the SPIRAL2 project.

PERMANENT STAFF

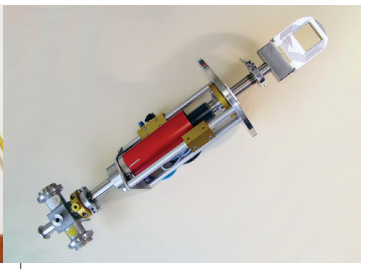
2 engineers
4 technicians

EQUIPMENT

- Beam intensity measurements and associated control systems: faraday cups, fast faraday cups, beam current transformers, beam energy measurements, beam phase measurements, beam loss monitors, beam length measurements, differential intensity measurements
- Expertise in high and low intensity beams
- Beam control systems: thermal protection fast systems, beam signal control systems
- Beam profile monitors: secondary electron emission beam profile monitors, gas profile monitors (low intensity beams), residual gas profile monitors (high intensity beams)



Beam current transformers with magnetic shields



Secondary electron emission beam profile monitor

VALORISATION & TECHNOLOGY TRANSFER

Secondary electron emission beam profile monitors: technology transfer towards PANTECHNIK, which will distribute the systems from January 2019 - know-how license agreement and R&D collaboration agreement

VARIOUS VALORISATION POTENTIALITIES

- Technology transfer
- R&D collaboration agreement
- Design and Development of beam diagnostics and associated control systems for accelerator projects

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