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# CERN Beam Test Facilities Infrastructure

The CERN's infrastructure for beam test facilities is described.

CERN presently offers a number of test beam facilities for high-energy detector R&D and several fixed-target and neutron experiments attached to the operating accelerators of the complex. This includes the PS East Area, the nTOF facility, the SPS North Area, and low-energy anti-proton beam area in the AD, and ion beams in the ISOLDE facility.

In addition, CERN operates special facilities for irradiations like proton irradiation in the PS East Area, mixed-field irradiation facilities in the SPS North Area, and a dedicated accelerator R&D material test facility (HiRadMat) in SPS. In the near future an upgraded proton and mixed field irradiation facility in the PS East Area will become available, along with a Gamma (and possibly Neutron) Irradiation facility in the North Area.

The present status, characteristics and upgrade plans for these facilities are described. For the PS and SPS test areas, beams of protons but also heavy (Pb82+) or in the near future light ions(Ar, Xe) can become available.

Finally, CERN is presently investigating the possibility to provide light ion beams from the LEIR machine to a test area for medical applications.

The particle beams and test facilities at CERN are unique world-wide. Each year a large number of experiments and teams from a very wide community, including HEP, nuclear physics, radiation detection and monitoring, astro-particle detectors, medical physics and material scientists, visit CERN to conduct their experiments and profit from the available infrastructure.

Facilities at CERN are open and free of charge to the users that come from the Member States but also from any Physics Lab world-wide.

Operation and user support to these facilities is a non-negligible load for CERN, but is also part of the Lab' s mission and self-feeding mechanism, as it is at the test facilities where the future of accelerators and HEP begins!

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