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CERN Secondary Beamlines and Test Beams facilities overview

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The CERN secondary beamlines of the North and the East Area are designed to deliver beams of secondary and tertiary particles as well as attenuated primary protons and ions from the SPS and PS accelerators for fixed target experiments and beam tests. Protons with 24 GeV/c at the PS and with 400 GeV/c at the SPS produce typically hadrons, electrons, and muons within a wide range of momenta between 0.1 GeV/c and 360 GeV/c at fluxes from several 100 up to 10^9 particles per spill that are provided at several experimental areas throughout the complex.
This talk will present the features of the different beam lines and beams serving the various fixed target experiments and test beam areas, including beam properties, available infrastructure for tests and beam instrumentation, e.g. the installed beam telescopes. Measurements of the beam performance from 2023 are shown following the recent extensive consolidation activities and beamline improvements throughout. Future plans are also presented including beam control software upgrades during LS3.

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