Characterisation of a scintillating fibre-based hodoscope exposed to the CNAO low-energy proton beam

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- Beam hodoscope, active area 6x6 cm^2, 64 scintillating 1x1 mm^2 fibres, to be used in the FAMU experiment as a muon beam monitor (at RAL, UK), aimed to perform a precision measurement of the proton Zemach radius in muonic hydrogen atoms
- Calibration with at the CNAO synchrotron in Pavia (Italy) with proton beams at 125, 150 and 175 MeV with very low rate (50 Hz)
- Protons at 150 MeV are chosen as their –dE/dx curve is similar to the one of the 60 MeV/c negative muons in the FAMU experiment
- The single proton signal at 150 MeV allows to calibrate the detector in order to enable muon counting at the high rate RAL muon beam