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[382] Detector system to study early-to-late stability of the muEDM experiment

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At the Paul Scherrer Institute we are developing a high precision instrument to measure the electric dipole moment (EDM) of the muon by trapping particles in a compact storage ring. A muon EDM is a background free sign of new physics and would lead to a time-dependent directional asymmetry of decay positrons, measured by detectors close to the storage ring. The strong magnetic pulse used to trap the muons might interfere with the detectors and lead to systematic changes in their response and thus to a false EDM signal. We present a scintillation-based positron detector that is used to study early-to-late stability and control of systematic effects in the experiment.

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