

Status of the FoCal detector at ALICE

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In this talk, we will present the latest results of the prototyping phase of the high-granularity forward calorimeter (FoCal) of the ALICE experiment. This novel detector is part of the upgrade project that ALICE will undergo during the LHC long shutdown scheduled for 2027 and lasting until 2029. FoCal is a new generation forward calorimeter, designed to cover a pseudorapidity acceptance between 3.4 and 5.8 units and provide unique capabilities in probing non-linear QCD dynamics in unexplored regions at low Bjorken x and Q^2 . The electromagnetic components of the FoCal integrates two different detector technologies: a stack of 20 layers of Si (18 pads and 2 pixel layers) interleaved with tungsten to reconstruct the EM shower deposit with a size of 1cm^2 , as well as two layers of Monolithic Active Pixel Sensors (MAPs) placed in a strategic position for tracking the shower development and provide $\sim\text{mm}$ discrimination between direct photons and photons coming from decaying mesons. The system is complemented by a transversally segmented SciFi calorimeter for photon isolation and Jet reconstruction. The detector prototypes were extensively tested, and the analyzed results are currently being organized in a dedicated publication and will be part of the FoCal Technical Design Report

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