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The MoEDAL Dedicated Search Detector for LHC's Run-3

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The MoEDAL detector, deployed at IP8 in 2010, was the LHC's first dedicated search experiment. It is a largely passive detector utilizing a 70 sqm arrangement of Nuclear Track detectors and a unique trapping detector array of mass ~ 1tonne. An active detector array of Timepix2 pixel devices monitors the radiation field near MoEDAL is designed to detect highly ionizing avatars of BSM physics without requiring a restrictive trigger. For Run-3 the MoEDAL detector was redeployed with a much-enhanced detector efficiency and a new Timepix3 detector array that will now be used to measure the luminosity and search for new physics. Additionally, the detectors at IP8 will receive a factor of roughly five times greater instantaneous luminosity during Run-3 than at Run-2.

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