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Pierre Auger Observatory - triggers

The Pierre Auger Observatory is conceived to study ultra-high-energy cosmic rays from about 10^17 eV to beyond 10^20 eV. It is a multi-hybrid Observatory comprising 1660 surface detector stations spread over an area of 3000 km^2 overlooked by 27 fluorescence telescopes located at four sites at its periphery.

Phase I of data-taking spanned from its beginning in 2004 to the end of 2022, producing a plethora of scientific results. Phase II followed, featuring an upgraded Observatory with additional detectors and faster, more powerful electronics, enabling the exploration of new questions in ultra-high-energy physics.

The triggering system of the Observatory in the Phase I will be described and compared with the new capabilities of the upgraded Observatory in the Phase II of operations.

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