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Multi-Messenger studies with the Pierre Auger Observatory

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Multi-messenger astrophysics has emerged over the past decade as a distinct discipline, providing unique insights into the properties of high-energy phenomena in the Universe. The Pierre Auger Observatory, located in Malargüe, Argentina, is the world's largest cosmic ray detector and is sensitive to photons, neutrinos and hadrons at ultra-high energies. Using its data, stringent limits on photon and neutrino fluxes at EeV energies have been obtained. The collaboration uses the excellent angular resolution and the neutrino identification capabilities of the Observatory for follow-up studies of events detected in gravitational waves, or other messengers, through a cooperation with the global Astrophysical Multimessenger Observatory Network (AMON). A science motivation together with an overview of the multi-messenger capabilities and results of the Pierre Auger Observatory are presented.

Secondary track (number)

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