

Multi-messenger studies at the Pierre Auger Observatory

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The connection between ultra-high energy cosmic rays, photons, neutrinos and gravitational waves, in particular after the successful detection of gravitational waves, is nowadays widely investigated. Since all these signals may originate from the same sources, a multi-messenger approach, combining data from different experiments is undoubtedly the most appropriate technique for a better understanding of the physics behind the production and propagation of these messengers.

The Pierre Auger Observatory is the largest and most precise detector of ultra-high-energy cosmic rays. Thanks to its sensitivity to photons and neutrinos of very high energy, it is possible to perform diffuse and targeted searches above 10^{17} eV.

In this talk, we will focus on the search for diffuse fluxes of photons and neutrinos and report about the follow-up analyses in the context of the multi-messenger framework.

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