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Search for Ultra-high energy neutrinos at the Pierre Auger Observatory:

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Neutrinos in the sub-EeV energy range and above can be detected with the Surface Detector array (SD) of the Pierre Auger Observatory. They can be identified through the broad time-structure of the signals expected to be induced in the SD stations. The identification can be done for neutrinos of all flavours interacting in the atmosphere at large zenith angles, in the ranges 60-75 deg and 75-90 deg (downward-going), as well as for Earth-skimming neutrino interactions in the case of tau neutrinos (upward-going). The three different searches have been performed in the data from 1 January 2004 up to 31 December 2012. The results have been combined, providing, in the absence of candidates, an updated and stringent limit to the diffuse flux of ultra-high energy neutrinos.

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