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Results from the OPERA experiment in the CNGS beam

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The OPERA experiment at the Gran Sasso underground laboratory has recently established nu_mu -> nu_tau oscillations in appearance mode with a significance of 5.1 sigma thanks to the observation of five signal candidate events in a sample with a signal-to-background
ratio of about ten. Now the nu_tau data analysis will be discussed, with emphasis on the background constraints obtained by using dedicated data-driven control samples.
The analysis of the nu_mu -> nu_e channel, formerly based on the first two years of run, also has been extended over the full data set with a more than twofold increase in statistics and the latest result will be reported.
The implications of the tau neutrino and electron neutrino samples in the framework of the 3+1 sterile model will be discussed.

Summary

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