## XXIV Workshop on Weak Interactions and Neutrinos - WIN'13

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## Latest results of the OPERA experiment

Tuesday, 17 September 2013 15:00 (22 minutes)

OPERA (Oscillation Project with Emulsion-tRacking Apparatus) was built to prove muon to tau neutrino oscillations in appearance mode, through the direct observation of tau neutrinos coming from a pure muon neutrino beam produced at CERN.

OPERA is a modular hybrid detector with a high target mass, instrumented with electronic sensors to identify the interaction type and position inside the detector. Where using nuclear emulsions a sub-micrometric tracking is performed, capable to register both the

production and decay vertices of the short lived tau leptons (10^-13 s).

The experiment has been recording data since 2008, and the analysis is ongoing. The latest oscillation results of the experiment will be presented, including the leading tau neutrino channel and the sub-dominant electron neutrino channel.

Primary author: Dr MEDINACELI, Eduardo (Padova University & INFN)

Presenter: Dr MEDINACELI, Eduardo (Padova University & INFN)

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