Atmospheric neutrino oscillations with ANTARES

- 2830 days of ANTARES lifetime;
- Track channel only;
- 7710 events selected;
- 3-flavor oscillation probability through matter;
- Atmospheric $\mu$ background extrapolated from data;
- Binned likelihood fit in 2D ($\log_{10} E_{\text{reco}}$ and $\cos \theta_{\text{reco}}$);
- Good improvements wrt previous ANTARES oscillation analysis;
- Consistency with other published results.

I. Salvadori (on behalf of the ANTARES Collaboration) - Neutrino2018
Constraining the 3+1 model with ANTARES

- Same data set used for standard oscillation analysis;
- Same fitting procedure;
- Priors on $\Delta m_{32}^2$ and $\theta_{23}$;
- Atmospheric muon contamination fixed at BF found in the standard oscillation analysis;
- $\Delta m_{41}^2$ fixed at 0.5 eV$^2$;
- $\delta_{CP}$ and $\delta_{24}$ left unconstrained;
- Results show consistency with other published limits.

I. Salvadori (on behalf of the ANTARES Collaboration) - Neutrino2018