

# 24th International Workshop on Next Generation Nucleon Decay & Neutrino Detectors (NNN25)

## NNN25

International Workshop on Next Generation  
Nucleon Decay and Neutrino Detectors

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## Results and Prospects from Atmospheric Neutrinos

*Wednesday, October 1, 2025 11:00 AM (25 minutes)*

The measurement of atmospheric neutrinos led to the discovery of neutrino oscillations 27 years ago. Since, they have developed into a valuable tool for precision measurements of neutrino properties and for searches of physics beyond the Standard Model. Their propagation through the Earth is strongly affected by matter effects, which makes them a perfect probe to pin down the neutrino mass ordering. A new generation of atmospheric neutrino detectors is currently under construction and will become operational within the next few years. With instrumented water/ice masses ranging from 0.2 Mtons to several Mtons they will accumulate several 100,000 neutrino events per year. This wealth of data is accompanied by significant improvements of systematic uncertainties and will allow to perform competitive measurements of mixing parameters and in particular of the neutrino mass ordering before the end of the decade.

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