

## Studying neutrino absorption through the Earth with ANTARES and KM3NeT/ARCA

Neutrino telescopes allow the collection of large samples of multi-TeV neutrinos.

Above a few tens of TeV, since the neutrino cross section increases with energy, the increasing absorption of neutrinos crossing the Earth modifies the energy spectrum of atmospheric neutrinos in a zenith-dependent way. These effects can be quantified using the high-purity neutrino samples collected with ANTARES, though the precision of the measurement is limited by statistics. The next-generation neutrino telescope in the Mediterranean Sea, KM3NeT/ARCA, already under construction, will provide a much more precise measurement. Preliminary results will be presented in this contribution for both experiments.

### Authorship annotation

for the ANTARES and KM3NeT Collaboration

### Session and Location

Wednesday Session, Poster Wall #187 (Ballroom)

### Poster included in proceedings:

yes

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**Track Classification:** Poster (participating in poster prize competition)