

High-purity samples of atmospheric neutrinos are needed for several analyses including oscillation related studies (in the energy range of a few GeV), as well as Cosmic Ray studies, as they are products of the interaction of the cosmic rays with the atmosphere. An analysis of data collected with the first 6 Detection Units (DUs) of the KM3NeT/ORCA detector (ORCA6), leading to a high-purity atmospheric neutrino sample is presented.

Data equivalent to almost a year of the detector operation have been used. Detailed comparisons of the data with the atmospheric neutrino and muon MC simulations have been carried out to evaluate the description of our data. Selection Criteria have been applied to discriminate the atmospheric neutrino events from the background. 1247 neutrino candidate events have been selected and an angular resolution of less than 10 degrees for MC neutrino energy greater than 20 GeV has been achieved. The performance of the energy reconstruction, which is a key point for a measurement of the atmospheric neutrino flux is shown. The energy reconstruction will profit significantly from the deployment of additional DUs. The ORCA detector offers the possibility to explore the energy range from few GeV up to TeV, for which only few measurements of the atmospheric neutrino spectrum exist.