Calibration Systems for the ANTARES Neutrino Telescope

The ANTARES Collaboration

The ANTARES collaboration aims to deploy a 0.1km² neutrino telescope in the Mediterranean sea by 2004. Neutrinos will be detected through the muons produced in their interaction with the surrounding matter. The muon trajectory can in turn be reconstructed from the arrival time at the detector photomultipliers of the Cherenkov photons produced by the muons. In order to provide the best possible angular resolution for astronomy a number of calibration techniques will be employed. These include LED pulsers within the photomultiplier optical modules, brighter omnidirectional LED beacons and laser systems. These systems, developed within the ANTARES collaboration will be reviewed and their capabilities described.