



ID de Contribution: 4

Type: **Non spécifié**

Status of the ANTARES underwater neutrino telescope

mardi 22 avril 2008 09:30 (40 minutes)

ANTARES (Astronomy with a Neutrino Telescope and Abyss environmental RESearch) is the largest neutrino detector currently operating in the Northern Hemisphere. The detection principle relies on the observation of Cerenkov light emitted by muons resulting from charged current neutrino interactions in the water surrounding the detector and the seafloor below. The full apparatus will comprise twelve detection lines (each carrying 75 photomultipliers distributed over 25 triplets) and one instrumented line (mainly devoted to measurements of the environmental conditions and hosting prototype instrumentation for acoustic detection of particles), placed at a depth of about 2480 m 40 km off the coast of Toulon, France. Ten detection lines and the instrumented line are in operation since December 2007. The apparatus is expected to be completed in the course of 2008. In this presentation, we will illustrate the main features of the apparatus and discuss its performance and capabilities.

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Classification de Session: Plenary Session I