



Contribution ID: 81

Type: **not specified**

Time integrated search for point sources of cosmic neutrinos with the ANTARES telescope

Wednesday 12 October 2011 16:30 (20 minutes)

Results of a time-integrated search for astrophysical high energy neutrinos are presented using data collected from January 2007 to December 2010 with the ANTARES neutrino telescope. ANTARES is currently the largest neutrino detector on the Northern Hemisphere consisting of a tri-dimensional array of 885 photomultipliers arranged on 12 vertical lines, placed at a depth of 2475 meters in the Mediterranean Sea near Toulon, France.

An unbinned likelihood ratio method is used to search for signal events. The final sample consists of 3058 events. From the simulations 84% of them are estimated to be neutrinos, while the rest are mis-reconstructed atmospheric muons. A full sky survey as well as a search on a pre-defined list of candidate objects were performed. No evidence for a signal is found so neutrino upper limits are obtained. The neutrino flux sensitivity is $2.6 \times 10^{-8} (E/\text{GeV})^{-2} \text{ GeV}^{-1} \text{ s}^{-1} \text{ cm}^{-2}$ for the part of the sky that is always visible (declination ≤ -48 degrees) which corresponds to almost a factor 3 better than the previous search.

Author: Mr BOGAZZI, Claudio (NIKHEF)

Presenter: Mr BOGAZZI, Claudio (NIKHEF)

Session Classification: Parallel Session 1

Track Classification: Physics, reconstruction and software