

## **Searches for point sources of high energy cosmic neutrino with the ANTARES telescope**

*jeudi 21 juillet 2011 09:30 (15 minutes)*

The ANTARES observatory is currently the largest neutrino telescope in the Northern Hemisphere. It is well suited to detect high energy neutrinos produced in astrophysical sources as it can observe a full hemisphere of the sky at all the times with a duty cycle close to unity and an angular resolution about 0.3 degrees. Due to its location in the South of France, ANTARES is sensitive to up-going neutrinos from many potential galactic sources in the TeV to PeV energy regime. Results from a time-integrated unbinned method as well as the sensitivity of the detector using 2007-2008 data are presented. Moreover, using a time-dependant search for the transient sources, the background rejection and point-source sensitivity can be drastically improved by selecting a narrow time window around the assumed neutrino production period. The gamma-ray light curves of blazars measured by the LAT instrument on-board the Fermi satellite reveal important time variability information. A strong correlation between the gamma-ray and the neutrino fluxes is expected in a hadronic scenario. First results on the search for nine bright and variable Fermi sources are also presented.

**Auteur principal:** DORNIC, damien (IFIC)

**Orateur:** DORNIC, damien (IFIC)

**Classification de Session:** Astroparticle Physics

**Classification de thématique:** Astroparticle Physics