



Contribution ID: 442

Type: **not specified**

## Indirect Search for Dark Matter with the Neutrino Telescope ANTARES

*Sunday, 28 August 2011 15:50 (25 minutes)*

The ANTARES (Astronomy with a Neutrino Telescope in Abyss Environmental RESearch) neutrino telescope located 40 km off the coast near Toulon in the Mediterranean Sea at a depth of 2475 m consists of twelve detector lines instrumented with 885 ten-inch photomultipliers in total. It detects neutrinos through the emitted Cherenkov light from the secondary muon track originating from charged current neutrino interactions.

It is currently the largest neutrino detector on the northern hemisphere.

One aim among others of ANTARES is the search for neutrinos coming from self annihilation of Dark Matter particles in the Sun as they can be trapped gravitationally in massive bodies and accumulate there enhancing the annihilation rate.

ANTARES is taking data with its full twelve line configuration since May 2008, and has been before in a five and ten line setup for more than a year. We present the first results on the search for Dark Matter annihilation in the Sun, and their interpretation in the framework of supersymmetric and Kaluza-Klein models, as well as sensitivity studies on Dark Matter search with the full ANTARES detector.

**Presenter:** SPIES, Andreas (ANTARES)

**Session Classification:** Parallel Session 2