

## Recent results of the ANTARES neutrino telescope

*Friday, July 31, 2020 12:20 PM (25 minutes)*

The ANTARES detector is the first Cherenkov neutrino telescope realised in the Mediterranean sea. It is continuously taking data since 2007, with the primary aim to detect astrophysical neutrinos in the TeV-PeV range. A very good angular resolution in all flavour neutrino interaction channels, together with the depth of the abyssal site (2500 m below the sea level) led to an unprecedented sensitivity in the searches for neutrino sources in the Southern Sky and in the energy range below 100 TeV. This has allowed constraining the origin of the cosmic neutrino flux discovered by the IceCube detector. ANTARES has also implemented a rich multi-messenger program, providing with both online and offline pipelines for alert sending and follow-up observations of interesting astrophysical events.

Among these, the searches triggered by gravitational wave observations are of prominent interest. Other physics topics are also covered: searches of dark matter annihilation or decay in massive objects; the search for relic massive magnetic monopoles and nuclearites; the study of atmospheric neutrinos and neutrino oscillations.

### Secondary track (number)

02

**Primary author:** CHIARUSI, Tommaso (INFN - Sezione di Bologna)

**Presenter:** CHIARUSI, Tommaso (INFN - Sezione di Bologna)

**Session Classification:** Astro-particle Physics and Cosmology

**Track Classification:** 08. Astro-particle Physics and Cosmology