Contribution ID: 45 Type: not specified

Highlights from the ANTARES neutrino telescope

Tuesday, 11 January 2022 16:55 (25 minutes)

ANTARES is a high-energy neutrino telescope running since 2007 below the surface of the Mediterranean Sea with the main aim of identifying the sources of the astrophysical neutrinos. The location of ANTARES allows for an advantageous view of the Southern Sky, in particular for neutrino energies below 100 TeV. This feature, combined with a very good angular resolution, makes the telescope an excellent tool to test for the presence of neutrino sources, especially of Galactic origin. Besides looking for a diffuse flux or individual sources of astrophysical neutrinos produced in cosmic-ray interactions, ANTARES can also investigate the presence of dark matter in massive celestial objects by searching for neutrinos as final annihilation/decay products of dark matter particles. Moreover, ANTARES is involved in a rich multi-messenger program which includes searching for neutrinos in coincidence with promising transient astrophysical events, as well as triggering electromagnetic follow-up observations of interesting neutrino candidates by sending alert messages to the Astronomical community. In this talk, the latest results from the ANTARES telescope will be presented, ranging from searches for diffuse fluxes and point-like sources of neutrinos, to dark matter and multi-messenger analyses.

Primary author: ILLUMINATI, Giulia (INFN-Bologna)

Presenter: ILLUMINATI, Giulia (INFN-Bologna)

Session Classification: Astrophysical neutrinos I