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## IceCube: A wide view on astro-particles

*Sunday, 7 May 2017 10:00 (30 minutes)*

The IceCube Neutrino Observatory, located at the geographical South Pole, has a rich scientific program covering a wide range of topics from multi-messenger astrophysics to particle physics. Evidence for the existence of an astrophysical flux of neutrinos was presented in 2013, opening a new window into the cosmos. Since then, a variety of follow-up studies have strengthened the case. Neutrino arrival directions, as well as the time correlation between neutrino detection and transient phenomena, are analyzed in an attempt to identify and constrain the possible neutrino sources. The IceCube detector also detects cosmic rays with IceTop, its surface component. The cosmic ray spectrum, composition and arrival direction distribution is determined by combining the measurements done at the surface with those made in the ice. We review these and other recent results from IceCube and their implications on our understanding of neutrinos and cosmic rays. We finish by describing the view for future developments.

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