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Multimessenger Astronomy and New Neutrino Physics

Wednesday 28 November 2018 17:20 (25 minutes)

With the detection of neutrinos from the blazar TXS 0506+056, we have reignited the field of multimessenger astronomy using neutrinos. The neutrinos detected by IceCube are in a significantly different energy regime than those detected coincident with Supernova 1987A. In this talk, I will discuss how we can use timing and direction coincidence of neutrinos with identified sources as a probe for new physics in the neutrino sector. Specifically, I will explore new neutrino interactions with light mediators, neutrinophilic Dark Matter scenarios, and a situation in which axion dark matter couples to neutrinos.

Content of the contribution

Theory

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