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Neutrino Particle Astrophysics

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Neutrino particle astrophysics is a frontier field at the crossroads of particle physics and astrophysics. Given the low fluxes of astrophysical neutrinos, gigantic detection volumes are necessary to detect the weakly interacting particles. The past twelve months have been an exciting time in the field on neutrino particle astrophysics, with the IceCube experiment claiming the first evidence for high energy extra-terrestrial neutrinos. If confirmed this evidence will be the first time since 1987 that neutrinos have been detected from outside of our solar system. Results from the current generation of neutrino particle astrophysics experiments will be presented, along with the prospects of imminent future experiments. Finally, the possibilities for utilising neutrino particle astrophysics detectors to measure neutrino oscillations will briefly be addressed.

Presenter: Dr NICHOL, Ryan

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