

IceCube - Particle Physics and Astrophysics on Ice

Friday, 3 January 2020 18:00 (20 minutes)

Buried beneath the South Pole is the world's largest instrumented neutrino detector; IceCube. Inside of IceCube is the DeepCore sub-array, which is a densely instrumented inner region allowing analyses of neutrinos in the $\sim 5\text{-}150$ GeV energy range. In this talk I will cover some of the recent neutrino oscillations results, such as world-leading measurements of tau neutrino appearance, as well as a sub-TeV search for astrophysical neutrino sources. I will also discuss the scientific prospects of the IceCube Upgrade, a further low-energy extension to IceCube which will be deployed in 2022/23 and provide much needed measurements regarding the status of the 3-neutrino paradigm.

Primary author: KOSKINEN, D. Jason (niels bohr institute)

Presenter: KOSKINEN, D. Jason (niels bohr institute)

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