



DEPARTMENT OF PHYSICS & ASTRONOMY

COLLOQUIUM SPEAKER SERIES



Correlation of high-energy neutrino distribution and cosmic structure tracers

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Tues, February 25, 2020
1:40-2:55PM
SA6010

Free. Everyone welcome.
No RSVP required.
Donuts and coffee.

Between 2008 and 2011, the IceCube Neutrino Observatory detected over 10^5 neutrino events, for which arrival directions, energies of secondary muons and angular positional errors have been determined.

First, the IceCube Neutrino Observatory will be presented. Next, the theory of the correlation analysis for spherical sky maps and the standard pseudo- C_ℓ power spectrum estimator will be presented.

The data from the IceCube observatory are then correlated with itself and with other astrophysical maps of potential relevance. The astrophysical maps were chosen without theoretical prejudice.

The auto and cross-correlations analyzed in this work do not show any evidence for a non-zero correlation.

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