

A model-independent analysis of neutrino flares detected in IceCube from X-ray selected blazars

Ankur Sharma* and Erin O'Sullivan for the IceCube Collaboration

◆ Relevance:

- X-ray data is useful in constraining neutrino emission from blazar jets
- Blazars are variable sources and can be expected to flare more than once on avg. in the 10-year observation period of IceCube

◆ What will be done:

- We will search for neutrino flares from blazars in 10 years of IceCube data
- Combined significance of all flares from each source direction will be reported instead of the most significant flare
- Sources will be selected from the Northern sky based on their X-ray fluxes
- A population test will be performed using the binomial test statistic

◆ Status:

- Motivation and methodology presented; sensitivity estimated for a single source
- Full catalog sensitivity and a time-dependent neutrino emission potential for all sources of the catalog will be published soon

*Presenter (ankur.sharma@icecube.wisc.edu)