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# Search for neutrino emission from extended sources with the IceCube detector

*Tuesday 4 August 2015 16:00 (1 hour)*

The IceCube Neutrino Observatory, a cubic kilometer telescope located in the Antarctic ice, offers unique opportunities to study high energy neutrino emission from galactic and extragalactic sources. The Galactic plane is the brightest source of gamma rays in the sky, and it is believed to be also one of the brightest very high energy neutrino sources. The first discovery of an astrophysical neutrino flux has recently been announced by the IceCube collaboration and although no clear sources have been found so far, it is reasonable to investigate whether a Galactic component might be contributing to the observed flux. However, as indicated by the HESS gamma-ray survey and by Milagro as well, many of the sources populating the Galactic plane are in fact extended sources. We will present the sensitivity and discovery potential of IceCube for neutrinos coming from extended regions with special focus on the Galactic plane.

## Collaboration

IceCube

## Registration number following ”ICRC2015-I/”

211

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