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Gamma-ray and neutrino astrophysics connection

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The recent discovery of a diffuse neutrino flux of astrophysical origin by IceCube started the search to identify the cosmic sources of this emission. Synergy with other experiments could be a useful mean of investigation and in particular, the combination of neutrino/gamma-ray information is motivated by the fact that both radiations may be produced in the same astrophysical particle-cascades scenario, arriving to us undeflected from the source.

With these assumptions, we can place limit on the known astrophysical source classes contribution to the diffuse neutrino flux.

Another ground of discovery in this field is the search for transient and variable neutrino/electromagnetic sources, in which case the atmospheric neutrino and muon backgrounds can be reduced by taking time- and space-coincidence. Recent results with Fermi will be presented.

Summary

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