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## High energy neutrinos from astrophysical sources: a self-consistent approach

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### Abstract content

We calculate the yield and flavor content of high energy neutrinos produced in astrophysical sources with and without magnetic fields varying their interaction depth. We pay special attention to the multiple scattering of secondaries on background photons as well as the direct production of neutrinos in decays of charm mesons. If multiple scattering of nucleons becomes important, the neutrino spectra from meson and muon decays are strongly modified with respect to transparent sources. This is the case of optically thick sources as well as thin sources with strong enough magnetic fields. We discuss the resulting high energy neutrino fluxes.

**If this papers is presented for a collaboration, please specify the collaboration**

### Summary

### Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 3 (OG part 2), pages 1205-1208

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