

Neutrinos in astrophysical explosions

Friday, 16 June 2023 10:00 (30 minutes)

Neutrinos play key roles in some of the most energetic astrophysical explosions such as core-collapse supernovae, binary neutron star mergers, and collapsars. Moreover, they are also unique messengers to probe the physical conditions deep inside these events opaque to electromagnetic emissions. In this talk, I will discuss recent developments in understanding the collective flavor oscillations of neutrinos in supernovae and in binary mergers as well as their possible implications. I will also talk about a potentially interesting signature due to the annihilation of high- and low-energy neutrinos on the produced spectra of high-energy neutrinos spectra from collapsars that may be relevant to the diffuse high-energy neutrino flux detected by the IceCube.

Secondary category for the parallel session (optional)

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Session Classification: Plenary: Dark Matter 2

Track Classification: Plenary session: Plenary invited