



Wednesday

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Rm 118 NSH

Weak makes us strong: neutrinos in the multi-messenger era

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We are entering an era of unprecedented capabilities for astronomical observations. The analysis of signals in multiple bands, i.e., gravitational waves, gamma and X-ray emissions, will provide detailed insight about the physics of diverse astrophysical phenomena such as the synthesis of heavy elements and the mechanism of stellar explosions. Neutrinos provide extra pieces to those long standing puzzles by playing a fundamental role in the evolution of supernovae, neutron star mergers and accretion disks around black holes. In this colloquium, I will discuss the connection between neutrinos and these compact objects and will present results on gravitational wave signals, neutrino observations and their possible detection at cosmological scale.