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Fast time variations of supernova neutrino fluxes and detection perspectives

Wednesday, 11 September 2013 15:00 (20 minutes)

In the delayed explosion scenario of a core-collapse supernova (SN), the accretion phase shows pronounced convective overturns and a low-multipole hydrodynamic instability, the standing accretion shock instability (SASI). Neutrino signal variations from new three-dimensional hydrodynamical simulations of the Garching SN group as well as its detection perspectives in IceCube will be discussed. I will also talk about perspectives on what we could learn from such a measurement concerning the physics in the SN core and the explosion mechanism.

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