

Service d'Astrophysique
SÉMINAIRE

Jeudi 20 octobre 11h00

CEA Saclay, Orme des Merisiers Bat 713, salle de séminaires Galilée

**the Challenges of the Third Dimension: Supernova Models
Confronting Observations**

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Gravitational collapse events and supernova explosions are generically multi-dimensional phenomena. This fact has been concluded for the first time from observations of Supernova 1987A, but all of its implications are recognized only as computational models of supernova explosions become increasingly more sophisticated and begin to be advanced to the third dimension and to longer evolution periods. This has led to a better understanding of the role of neutrinos for driving the explosion, to new insights into the characteristics of the neutrino and gravitational-wave emission of supernovae, and to the discovery of links between pulsar kicks and spins, supernova nucleosynthesis, and the origin of asymmetries seen in the gaseous remnants of stellar explosions. The talk will highlight the state-of-the-art modeling efforts of the Garching group and will report on successes as well as remaining problems and open questions in connection with neutrino-driven explosions.

Le cafe sera servi 10 minutes avant

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