Anisotropies in core-collapse supernova explosions



Contribution ID: 14 Type: not specified

Linking the morphology of SNRs to anisotropies in parent core-collapse SNe through MHD simulations

Orlando S.

The structure and morphology of SNRs reflect the properties of the parent SNe and the characteristics of the inhomogeneous environments through which the remnants expand. Linking the morphology of SNRs to anisotropies developed in their parent SNe can be essential to obtain key information on many aspects of the explosion processes associated with SNe. Nowadays, our capability to study the SN-SNR connection has been largely improved thanks to multi-dimensional models describing the long-term evolution from the SN to the SNR as well as to observational data of growing quality and quantity across the electromagnetic spectrum which allow to constrain the models. In this talk, I will review recent advances in the modeling of young SNRs, focusing on investigations aimed to link asymmetries and features observed in the remnants to anisotropies of their parent SN explosions.