

[초IT-02] Supernova Remnants, Supernovae, and Their Progenitors

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Supernova remnants (SNRs) are beautiful and diverse. Individual SNRs have their own distinctive features. The morphology and physical characteristics of young SNRs result from the interaction of supernova

(SN) ejecta with circumstellar medium, while those of old SNRs result from the interaction of SN blast wave with the interstellar medium.

The diversity of SNRs reflects different types of SN and the broad physical conditions in their environments, which are ultimately related to the formation and evolutionary history of progenitor stars.

The importance of SNe and SNRs as the sources of heavy elements, cosmic rays, dusts, hot coronal gases, and interstellar turbulences depends on their types and environments. In this talk, I discuss the connections among SNRs, SNe, and their progenitors, and the consequences on the characteristics and astrophysical roles of SNRs.