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Eruptions, disruptions and (repeated) explosions: massive stars at the end of their life

Thursday, 29 May 2014 16:00 (1 hour)

ABSTRACT: Observations are drawing a complex picture of the latest stages of massive stars evolution and their explosions. In this talk I concentrate on two among the least understood aspects, adopting an observational perspective: (i) How do massive stars lose a significant fraction of their mass in the years preceding the explosion? (ii) What is the role of central-engines in explosions originating from progenitors that managed to loose their entire hydrogen envelope? I address these questions by taking advantage from panchromatic observations of two remarkable explosions: the puzzling, double explosion of SN2009ip in 2012, and the mildly relativistic, engine-driven SN2012ap, that bridges the gap between ordinary explosions and fully relativistic gamma-ray bursts.

Listen to SN2009ip: https://www.cfa.harvard.edu/~rmargutt/

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