

Workshop

Stellar End Products: The Low Mass - High Mass Connection

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Title:

Do core collapse supernovae require binary interaction?

Abstract:

Maybe yes. Many core-collapse supernovae (CCSNe) seem to come from binary interaction: SN 1987A, type Ib and Ic SNe that lost a large fraction of their envelope, and SN II_n.

I will discuss the possibility that all CCSNe come from binary interaction. The companion is required to spin-up the core in order to launch jets that explode the star in the jittering jets mechanism. Single star form a black hole, and it maybe that no nickel is synthesized to light up the explosion. These are termed Nickless SNe.

This speculative classification has implications on pre-explosion mass loss processes.