

Abstract Submitted
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Optical Observations of Core-Collapse Supernovae ALEX FILIPPENKO, UC Berkeley — I present an overview of optical observations of Type II, IIb, Ib, and Ic supernovae (SNe), all of which are thought to arise from core collapse in massive progenitors that have previously experienced different amounts of mass loss. SNe Ic appear to have been stripped the most, followed by SNe Ib and SNe IIb. In the case of SNe IIc, part of the hydrogen envelope remains, yet the ejecta interact with unusually dense circumstellar gas, probably a wind from the progenitor star. Some SNe IIc, however, might not be genuine supernovae, but rather “super-outbursts” of luminous variable stars. Spectropolarimetry of core-collapse SNe reveals that asphericity tends to increase toward the core. It has recently been shown that several long-duration gamma-ray bursts were undeniably associated with peculiar SNe Ic having exceptionally high ejecta velocities.

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