

N46a SN2022jli: Multi-peaked Type Ic Supernova

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Type Ic supernovae (SNe Ic) are enigmatic stellar explosions characterized by the absence of hydrogen and helium in their spectra. We performed optical and near-infrared observations of a peculiar slow-evolving Type Ic SN 2022jli which shows a shock-cooling emission followed by a primary light curve maximum which occurs almost 50 days after explosion. During the later stages (200 d post maximum), we see a re-brightening of the SN, primarily in the Infrared bands, likely resulting from dust formation. We investigate this in the context of circumstellar material (CSM) interaction with previously ejected material, an unusual phenomenon among SE-SNe. The intricate dynamics of SN 2022jli through both photometric and spectroscopic uniqueness pave the way for further exploration and discovery in the field of supernova research.