Supernovae: the gift that keeps on giving

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Abstract

I will briefly review the evidence from thermonuclear supernovae for cosmic acceleration and the nature of dark energy. The most promising path to more accurate and certain knowledge is to observe SN Ia in the near infrared.

Then I will sketch new evidence on the nature and the effect of core collapse supernovae, using Hubble Space Telescope observations of SN 1987A to illustrate the forms of evidence that are contained in the expanding debris and the interaction with circumstellar gas.