

Abstract Submitted
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Type Ia Supernovae: Standard Candles Used to Calculate Galactic Distance JOANNA GORDON, Fort Lewis College — The light curve of a type Ia supernova is used to produce an estimate of the host galaxy's distance. Type Ia supernovae are good candidates to be used as standard candles. Because of the physical processes by which they are created, type Ia supernovae emit a standard, known luminosity during their peak energy output. By employing the difference between the supernova's apparent magnitude and its known, absolute magnitude, the distance of the explosion, and hence the distance of the host galaxy, is calculated. A light curve is constructed for a specific supernova by collecting a group of data over the period of several weeks and determining the apparent magnitude for the supernova corresponding to each data point. Each data point represents one night of observation. The distance of the selected type Ia supernova is then calculated.

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