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# Lab 7 Supernova Light Curve

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## Abstract

Various supernova observations were analyzed and a light curve created using aperature and differential photometry. A sequence of successive observations was selected and the associated light curve was correlated with a template. Through the Phillips Relationship for Type 1a supernova the absolute magnitude was calculated. By comparing this value to the apparent magnitude the distance was calculated. Given the redshift for the associated galaxy and the calculated distance, the Hubble constant estimated. This value was in the same order of magnitude as the current accepted value.

## SN 2019tym

A number of supernova were observed over a period of nights in a variety of filters from the Mount Laguna Observatory of San Diego State University. SN 2019tym was selected given the number of usable observations made. AstrolImageJ was used to reduce the data, perform the photometry, produce the light curve and create the measurements table.

