

# Calibration and Standardization of Large Surveys and Missions in Astronomy and Astrophysics



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## Calibration and inter-calibration of the SNLS and SDSS-II supernova survey

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With around 1 thousand type-Ia supernovae populating the Hubble diagram, the uncertainty of the photometric calibration of the survey now limits the precision of the cosmological parameters. We first present the method used to establish a uniform photometric response of the MegaCam instrument from CFHT used for SNLS. We then present a joint effort of the SNLS and SDSS collaborations to merge the photometric calibration of the two largest supernova surveys to date. Main products are a direct cross-calibration between the two surveys with a precision reaching 0.5%, a better understanding of the survey uniformity, and an improved absolute calibration with a redundant anchoring to the HST white dwarf system. We describe the method, dataset and results and discuss the remaining limitations and their origin.

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