

Abstract Submitted
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Photometry of High-Redshift Gravitationally Lensed Type Ia Supernovae ¹ ANNASTASIA HAYNIE, Univ of South Carolina — Out of more than 1100 well-identified Type Ia Supernovae, only roughly 10 of them are at $z > 1.5$. High redshift supernovae are hard to detect but this is made easier by taking advantage of the effects of gravitational lensing, which magnifies objects in the background field of massive galaxy clusters. Supernova Nebra ($z \sim 1.8$), among others, was discovered during observations taken as part of the RELICS survey, which focused on fields of view that experience strong gravitational lensing effects. SN Nebra, which sits behind galaxy cluster Abell 1763, is magnified and therefore appears closer and easier to see than with HST alone. Studying high-redshift supernovae like SN Nebra is an important step towards creating cosmological models that accurately describe the behavior of dark energy in the early Universe. Recent efforts have been focused on improving photometry and the building and fitting of preliminary light curves.

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