

Supernova Search for Nearby Clusters of Galaxies: First Results

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We represent a progress report of our project to search for supernovae in nearby clusters of galaxies using the 2K CCD camera at the Bohyunsan Optical Astronomy Observatory (BOAO) 1.8 m telescope. During four observation runs for 1998 October-1999 June, we monitored the central 12'x12' regions of about 10 rich Abell clusters at $z < 0.08$, and discovered one supernova (SN1999dm) in Abell 2065 and one supernova candidate in Abell 2319.

SN1999dm was discovered on the images taken on June 18, 1999 and it was located at R.A. = $15^{\text{h}}22^{\text{m}}28^{\text{s}}.9$, Dec = $+27^{\circ}42'58''$ (equinox 2000.0), $0''.8$ west and $13''.1$ north of the center of the host galaxy close to the center of Abell 2065. The host galaxy is MCG+05-36-022, which is also listed as Abell 2065-164 in Postman, Geller & Huchra 1988 (AJ, 95, 267). The R-band magnitude of SN1999dm was $R=18.8$ mag in the discovery images obtained on June 18, 1998. SN1999dm became 2.4 mag fainter, $R=21.2$ mag and $V=21.6$ mag, in the images obtained later on August 12 by Y.-B. Jeon(BOAO) and Mike Bolte(University of California, Santa Cruz). It is expected that several more supernovae will be discovered during this project.