

[SN 2012df](#) (A.R. 17 48 18.75, Dec. +52 18 [02.3](#) ), discovered on 2012 June 27 in an anonymous galaxy (offset 5E 4S), magnitude 18.6, type Ia.

SN discovered by F. Ciabattari and E. Mazzoni with the 50cm Newton telescope of the Monte Agliale Observatory (Lucca).



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Telegrams INTERNATIONAL ASTRONOMICAL UNION CBAT Director: Daniel W. E. Green;  
Hoffman Lab 209; Harvard University; 20 Oxford St.; Cambridge, MA 02138; U.S.A. e-mail:  
cbatiau@eps.harvard.edu (alternate cbat@iau.org) URL  
<http://www.cbat.eps.harvard.edu/index.html> Prepared using the Tamkin Foundation Computer

Network SUPERNOVA 2012df = PSN J17481875+5218023 F. Ciabattari, E. Mazzoni, and G. Petroni, Borgo a Mozzano, Italy, report the discovery of an apparent supernova (mag 18.6) on unfiltered CCD images (limiting mag 19.5) obtained on June 27.89 and 28.95 UT with a 0.5-m Newtonian telescope in the course of the Italian Supernovae Search Project. The new object is located at R.A. = 17h48m18s.75, Decl. = +52d18'02".3 (equinox 2000.0), which is 5" east and 4" south of the center of the presumed host galaxy. Nothing is visible at this position on Palomar Sky Survey digitized images from 1993 Aug. 16 (F plate, limiting mag 20.3) and 1995 July 1 (J plate, limiting mag 20.3). The variable was designated PSN J17481875+5218023 when it was posted at the Central Bureau's TOCP webpage and is here designated SN 2012df based on the spectroscopic confirmation reported below. Additional CCD magnitudes for 2012df: June 30.370, 18.2 (Joseph Brimacombe, Cairns, Australia; remotely using a 51-cm RCOS telescope + STL11K camera + luminance filter at the New Mexico Skies Observatory near Mayhill, NM, U.S.A.; position end figures 18s.69, 02".3; image posted at the following website URL:

<http://www.flickr.com/photos/43846774@N02/7476712034/>); 30.973, 18.2 (Federica Luppi and Luca Buzzi, Varese, Italy; 0.38-m f/6.8 reflector; position end figures 18s.71, 01".6; reference stars from the NOMAD catalogue; image posted at URL

[http://www.astrogeo.va.it/pub/TOCP/PSN\\_J17481875+5218023.jpg](http://www.astrogeo.va.it/pub/TOCP/PSN_J17481875+5218023.jpg). L. Tomasella, A. Pastorello, S. Valenti, S. Benetti, E. Cappellaro, M. Turatto, and P. Ochner, Osservatorio Astronomico di Padova, Istituto Nazionale di Astrofisica, report that a spectrogram of PSN J17481875+5218023 = 2012df, obtained on June 30.06 UT with the Asiago 1.82-m Copernico Telescope (+ AFOSC; range 340-820 nm; resolution 2.4 nm), indicates that this is a type-Ia supernova. Cross-correlation with a library of supernova spectra via the "Supernova Identification" code (SNID; Blondin and Tonry 2007, Ap.J. 666, 1024) shows that 2012df is similar to several normal type-Ia supernovae soon after maximum at a redshift around  $z = 0.07$ .

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