AstroNote 2026-310

2026-11-03 08:06:02 Type: Object/s-Discovery/Classification Bibcode: 2026TNSAN.310....1L

ATLAS26ncp (AT2026ahvu): discovery of a candidate SN in NGC 1433 (9 Mpc)

Authors: C. Liu (Oxford), S.J. Smartt, K. W. Smith (Oxford/QUB), S. Srivastav, H. Stevance, J. Gillanders, J. Tweddle, L. Eastman (Oxford), M. Nicholl, D. R. Young, C. R. Angus, K. Halder, D. Magill, X. Sheng, A. J. Smith, J. Weston (QUB), A. Aamer (Arizona), L. Shingles, (GSI/QUB), L. Denneau, J. Tonry, E. Gafton, H. Weiland (IfA, University of Hawaii), N. Erasmus, W. Koorts (South African Astronomical Observatory), B. P. Schmidt (ANU) , L. Rhodes (TSI/Magill), A. Rest (STScI), T.-W. Chen (NCU), C. Stubbs (Harvard), J. Licandro, M. Rodríguez Alarcón, M. Serra-Ricart (IAC),

Source Group: ATLAS

Keywords: Supernova

Abstract: Here we report the ATLAS discovery of the transient ATLAS26ncp (AT2026ahvu) in galaxy NGC 1433 at magnitude m_c = 17.06 +/- 0.13. At a distance of 9 Mpc, the transient was discovered on MJD = 61346.18 (2026-11-02.18) with an absolute magnitude of M = -12.7. The last non-detection (to 5 sigma, unforced) was on MJD = 61345.40. Forced photometry indicates that the transient is young and rising. Spectroscopic classification is encouraged.

ATLAS operates with 4 x 0.5m telescopes in Hawaii (Haleakala and Mauna Loa), Chile (El Sauce) and South Africa (Sutherland), see Tonry et al. 2018, (PASP,130:064505) and a fifth unit in Tenerife, Canary Islands (ATLAS-TDO: 16 x 28 cm aperture RASA telescopes. We are robotically surveying the whole sky with a cadence of 1 day

between -50 and +50 and 2 days in the polar regions, weather permitting. Two filters are used, cyan and orange (denoted c and o; all mags quoted are in the AB system) and the ATLAS-TDO is unfiltered with QHY600 CMOS cameras (Licandro et al. 2022 https://doi.org/10.5194/epsc2022-634). While carrying out the primary mission for Near-Earth Objects, we search for and publicly report stationary transients to the IAU Transient Name Server . Automated data processing is described in Smith et al. (2020, PASP, 132:08500) , which combines spatial cross-matching with astronomical catalogues (Young 2023) and a machine learning model that performs real-bogus classification on the images (Weston et al. 2024, RASTI 3, 385). Finally, the ATLAS Virtual Research Assistant prioritises alerts using multi-modal information present in the stream (Stevance et al. 2025). More information is on the ATLAS homepage . We are submitting AstroNotes for transients that are either within 100 Mpc, or have some other interesting feature to bring to the community's attention, such as bright nuclear transients, slowly rising or rapidly fading objects.

We report a new transient source, most likely a supernova in the galaxy NGC 1433. We discovered ATLAS26ncp (AT2026ahvu) on MJD 61346.181 == 2026-11-02.181, at m_c = 17.06 +/- 0.13. There was no detection (to 5 sigma, unforced) by ATLAS on MJD 61345.40 == 2026-11-01.40. Our routine forced photometry indicates that the transient is rising with plausible sub-threshold detections from MJD 61346.176 (see attached forced photometry plot). ATLAS26ncp is offset by 19.9 arcsec south, 61.5 arcsec west from NGC 1433, which is at z = 0.003589 and a TRGB distance of 9.0 Mpc (Sabbi et al. 2018), implying an absolute magnitude of M = -12.7 (assuming m-M = 29.78 and A_g = 0.03 and A_r = 0.02). Followup observations are encouraged.

The Asteroid Terrestrial-impact Last Alert System [ATLAS] project is primarily funded to search for Near-Earth asteroids through NASA grants NN12AR55G, 80NSSC18K0284, and 80NSSC18K1575; byproducts of the NEO search include images and catalogs from the survey area. This work was partially funded by Kepler/K2 grant J1944/80NSSC19K0112 and HST GO-15889, STFC grants ST/Y001605/1, ST/X001253/1, the Royal Society and Schmidt Sciences. ATLAS-Teide is an IAC instrument included in the present “Strategic plan of the Canarian Observatories”, funded by the European Union NextGenerationEU EQC2021-007122-P and ICT2022-007828 projects. The ATLAS science products have been made possible through the contributions of the University of Hawaii Institute for Astronomy, Queen's University Belfast, University of Oxford, the Space Telescope Science Institute, the South African Astronomical Observatory, The Millennium Institute of Astrophysics (MAS), Chile, and the Instituto de Astrofisica De Canarias.

Related Objects:

Show current TNS values

Catalog	Name	Reported RA	Reported DEC	Reported Obj-Type	Reported Redshift	Host Name	Host Redshift	Remarks
TNS	2026ahvu [ATLAS26ncp]	03:41:55.511	-47:13:39.39		0.003589			

Related Files:

File	Comments
ATLAS26ncp_forced_0.png	ATLAS forced photometry.