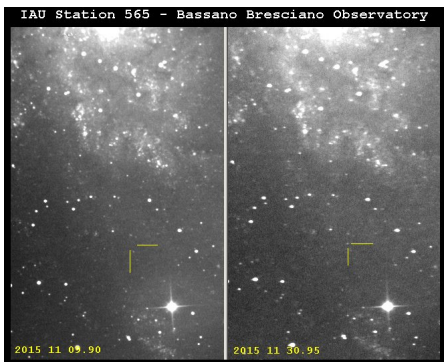


We report an independent discovery of a new nova in M33 (ASAS-SN15th) made by Bassano Bresciano Observatory on behalf of Italian Supernovae Search Project (ISSP).

See discovery image (and ATEL). Also we reported classification ATEL.



ASAS-SN Discovery of a Probable Nova in M33

ATel #8349; [S. Kiyota \(Variable Star Observers League in Japan\), J. L. Prieto \(Diego Portales; MAS\), J. S. Brown, T. W.-S. Holoien, K. Z. Stanek, C. S. Kochanek, D. Godoy-Rivera, U. Basu \(Ohio State\), B. J. Shappee \(Hubble Fellow, Carnegie Observatories\), D. Bersier \(LJMU\), Subo Dong, Ping Chen \(KIAA-PKU\), J. Brimacombe \(Coral Towers Observatory\), I. Cruz \(Cruz Observatory\)](#)

on 1 Dec 2015; 14:56 UT

Credential Certification: Jose L. Prieto (jose.prietok@mail.udp.cl)

Subjects: Optical, Nova, Transient

Referred to by ATel #: [8352](#) , [8396](#)

During the ongoing All Sky Automated Survey for SuperNovae (ASAS-SN or "Assassin"), using data from the quadruple 14-cm "Brutus" telescope in Haleakala, Hawaii, we discovered a new transient source, most likely a nova, in the nearby galaxy M33.

ASASSN-15th was discovered in images obtained on UT 2015-12-01.40 at $V \sim 16.5$ mag. We do not detect ($V > 17.1$) the object in images taken on UT 2015-11-30.41 and before. An image obtained by S. Kiyota on UT 2015-12-01.51 with a 25-cm telescope at Kamagaya, Japan, confirms the discovery of the transient. [This figure](#) shows the archival SDSS g-band archival image (left) and the S. Kiyota V-band confirmation image (right). The red circle has a radius of 15" and is centered on the position of the transient in the S. Kiyota V-band confirmation image.

The position of ASASSN-15th is approximately 765.6" South and 46.8" West from the center of M33 ($d=964$ kpc, Bonanos et al. 2006, ApJ, 652, 313), giving an absolute V-band magnitude of approximately -8.5 ($m-M=24.92$, $A_V=0.11$ mag). This makes it consistent with a possible nova in M33. Properties of the new source and photometry are summarized in the tables below:

Object	RA (J2000)	DEC (J2000)	Disc. UT Date	Disc. V mag	Approx. Abs. Mag	
ASASSN-15th	01:33:47.27	+30:26:50.7	2015-12-01.40	16.5	-8.5	
	767.1		Obs. UT Date	V mag	2015-11-30.41	>17.1
			2015-12-01.40	16.5		

Follow-up observations are encouraged.

We thank LCOGT and its staff for their continued support of ASAS-SN. ASAS-SN is supported by NSF grant AST-1515927, the Mt. Cuba Astronomical Foundation, the Center for Cosmology and AstroParticle Physics (CCAPP) at OSU, and the Robert Martin Ayers Sciences Fund. For more information about the ASAS-SN project, see the [ASAS-SN Homepage](#) and the list of all [ASAS-SN transients](#)

Spectroscopic Classification of ASASSN-15th as an Fe II-type Nova in M33

ATel #8352; [R. M. Wagner, M. Fausnaugh, K. Stanek \(OSU\), J. L. Prieto \(UDP; MAS\)](#)
on **2 Dec 2015; 08:37 UT**
Credential Certification: Jose L. Prieto (jose.prietok@mail.udp.cl)

Subjects: Optical, Nova, Transient

Referred to by ATel #: [8396](#)

We obtained a low-resolution optical spectrum of ASASSN-15th (ATel # [8349](#)) on UT December 2.3 with OSMOS mounted on the MDM 2.4m telescope. The spectrum shows Balmer, Fe II (multiplets 42, 48, 49, and 74), and Na I D emission lines exhibiting P Cygni-type line profiles superposed on a blue continuum. After correcting for the redshift of M33 ($z=-0.000607$, Karachentsev et al. 2013, AJ, 145, 101), we measure a terminal velocity of the H-alpha absorption of -3500 km/s. The FWHM of the H-alpha Gaussian emission component is about 2580 km/s so the average expansion velocity is about 1290 km/s. The spectrum is consistent with an Fe II-type nova in M33 caught early.

[Optical spectrum of ASASSN-15th](#)