

Outside
GCN IAUCs
Other
ATel on Twitter and Facebook ATELstream ATel Community Site MacOS: Dashboard Widget

The Astronomer's Telegram

Post | Search | Policies
Credential | Feeds | Email

13 Jul 2017; 11:43 UT

This space for free for your conference.

[[Previous](#)]

Photometry and spectroscopy of Fell nova ASASSN-17hx, finally passing through maximum

ATel #10572; *U. Munari (INAF Padova), F.-J. Hambsch, A. Frigo, F. Castellani (ANS Collaboration), G. La Mura (Univ. Padova), G. Traven (Univ. Ljubljana), M. Ozbey Arabaci, T. Saguner (Ataturk Univ.)*

on 13 Jul 2017; 10:08 UT

Credential Certification: *U. Munari (ulisse.munari@oapd.inaf.it)*

Subjects: Optical, Nova

Tweet

Recommend 1

More than two weeks past its discovery, nova ASASSN-17hx has finally reached what appears to be its peak optical brightness. Announced as a candidate nova on June 23.7 UT (ATel #10523), we began daily photometric monitoring of ASASSN-17hx on June 24.07 UT when we measured $V=12.39$, $B-V=+0.72$, $V-I=+1.19$. After a monotonic - although structured - rise toward maximum, peak brightness has been reached at $V=10.90$, $B-V=+0.85$ on June 10, followed by a slow decline.

We are collecting high and low resolution spectroscopic observations of ASASSN-17hx with several telescopes over the 3200-9100 Ang range: Asiago 1.82m and 1.22m, Varese 0.6m, and Tubitak 1.5m. Spectra recorded around peak brightness shows a textbook example of a FeII nova, with prominent emission from Balmer and Paschen series, FeII (strongest multiplets 27, 38, 42, 48, 49, 74), Si II, OI (7772, 8446) and CaII far-red triplet (8498, 8542, 8662 Ang). All lines are flanked by structured P-Cyg absorptions of a width varying with the ion and multiplet. They appear sharpest for FeII multiplet 42, for which on July 11.87 UT we measured the strongest absorption components at -451, -359 and -285 km/s heliocentric velocity, with the emission component at +11 km/s and FWHM=265 km/s. From the equivalent width of the diffuse interstellar band at 6614 Ang we derive a reddening $E(B-V)=0.68$ following the calibration by Munari (2014, ASPC 490, 183), well matched by the $E(B-V)=0.62$ implied by the B-V color at maximum when compared with the mean intrinsic value for novae by van den Bergh and Younger (1987, A&AS 70, 125). Interstellar lines from NaI appear as a saturated blend of several individual and unresolved components. Other interstellar absorptions present in our spectra include CaI, CaII, CH+, KI and several DIBs.

Soon after discovery, ASASSN-17hx was spectroscopically classified as an He/N type by Kurtenkov et al. (ATel #10527) from low resolution spectra obtained on June 24.0 UT. At that time the nova was still on the fireball rise toward maximum, about ~1.5 mag away, and thus much hotter than at peak brightness. As it happened for Nova Oph 2015 (ATel #7367), there seems to be no anomalous change in the spectral type of ASASSN-17hx. It is a FeII type, and while cooling toward maximum it passed through temperatures characteristic of He/N novae, as it would be observed for all FeII novae if spectra of them were secured well before maximum. Our spectra of ASASSN-17hx, taken at different epochs during the rise to maximum, show the gradual weakening of Helium lines and the parallel emergence and reinforcement of FeII (see also ATel #10558), mirroring the cooling of the B-V color.

Related

- 10572 [Photometry and spectroscopy of Fell nova ASASSN-17hx, finally passing through maximum](#)
- 10558 [Continuing spectroscopic monitoring of Nova Sct 2017 = ASASSN-17hx](#)
- 10552 [The likely progenitor of Nova ASASSN-17hx \(=ASASSN-17ib\) detected by the VVVX Survey](#)
- 10542 [Liverpool Telescope Spectroscopy of ASASSN-17hx](#)
- 10527 [Spectral confirmation of galactic nova ASASSN-17hx \(=ASASSN-17ib\)](#)
- 10524 [ASASSN-17ib = ASASSN-17hx](#)
- 10523 [ASAS-SN Discovery of a Possible Galactic Nova ASASSN-17ib on the Rise](#)
- 8753 [Dust and fire in nova V5668 Sgr \(Nova Sgr 2015#2\)](#)
- 8332 [Dust formation in V1831 Aql \(Nova Aquila 2015\)](#)
- 8150 [Spectrum of V1831 Aql \(N Aql 2015\) in the short-wave optical range](#)
- 8142 [Near-IR observations of 3 novae: PNV J19215012+1509248 \(ASASSN-15qd\), Nova Oph 2015 and V5668 Sgr \(Nova Sgr 2015#2\)](#)
- 8127 [Spectroscopic identification of ASASSN-15qd \(= PNV J19215012+1509248\) as a classical nova](#)
- 8126 [ASAS-SN Discovery of A Likely, Heavily-Obscured Galactic Nova ASASSN-15qd](#)
- 7862 [SOFIA Observations of Dust Formation in Nova V5668 Sgr \(2015 #2\)](#)
- 7748 [Near-infrared observations: Dust enshrouds Nova Sgr 2015b](#)
- 7446 [Near-IR observations of Nova Oph 2015](#)
- 7367 [Nova Oph 2015 is a FeII and not a He/N nova](#)
- 7339 [Optical Spectroscopy of Nova Ophiuchi 2015 \(PNV J17291350-1846120\)](#)

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief

Derek Fox, Editor

Mansi M. Kasliwal, Co-Editor

rrutledge@astronomerstelegam.org

dfox@astronomerstelegam.org

mansii@astronomerstelegam.org