

<p>Outside</p> <p>GCN IAUCs</p> <p>Other</p> <p>ATel on Twitter and Facebook ATELstream ATel Community Site</p>

The Astronomer's Telegram

[Post](#) | [Search](#) | [Policies](#)
[Credential](#) | [Feeds](#) | [Email](#)

27 Nov 2020; 17:29 UT

<p style="color: red;">This space for free for your conference.</p>

[[Previous](#) | [Next](#)]

Spectroscopic confirmation and photometry of the recent nova M31 2020-11c (AT 2020yye) (= OMB-PNV12) (= PNV J00431316+4124562)

<p>Related</p> <p>14217 Spectroscopic confirmation and photometry of the recent nova M31 2020-11c (AT 2020yye) (= OMB-PNV12) (= PNV J00431316+4124562)</p> <p>14155 Independent Discovery of a Probable Nova in M31</p>
--

ATel #14217; *S. Fabrika, O. Sholukhova, A. Sarkisyan, A. Vinokurov, Yu. Solovyeva (SAO RAS), A. W. Shafter (SDSU), A. Valeev (SAO RAS)*
on 25 Nov 2020; 20:00 UT
Credential Certification: Sergei Fabrika (fabrika@sao.ru)

Subjects: Optical, Nova, Variables

[Tweet](#)

We report optical spectroscopic confirmation of the nova M31 2020-11c (PNV J00431313+4124567) announced in ATel #[14155](#).

The spectral data were obtained on 2020 Nov. 15.861 UT using the Russian BTA telescope equipped with the SCORPIO spectrograph. The spectrum was taken with a resolution of 5.3 Å in the 3700 - 5440 Å blue range and in the 5680 - 7380 Å red range. The widths were corrected for spectral resolution. The photometry of the nova was obtained just before the time of the BTA spectrum with the same device and gave $U = 16.99 \pm 0.08$, $B = 17.57 \pm 0.08$, $V = 17.60 \pm 0.05$, $R_c = 16.69 \pm 0.08$, $I = 16.44 \pm 0.09$.

The Balmer lines ($H\alpha$, $H\beta$, $H\gamma$) are all broad with double peaks ($H\alpha$: 1800 ± 100 km/s, FWHM = 3400 ± 150 km/s, red wing FWHM/2 = 10500 ± 500 km/s; $H\beta$: 1800 ± 50 km/s, FWHM = 3200 ± 100 km/s, red wing FWHM/2 = 5100 ± 500 km/s; $H\gamma$: 1600 ± 100 km/s, FWHM = 3300 ± 100 km/s, red wing FWHM/2 = 4700 ± 200 km/s). The Balmer lines also display P Cyg profiles ($H\alpha$: -4400 ± 200 km/s; $H\beta$: -3800 ± 200 km/s; $H\gamma$: -2400 ± 200 km/s).

There are many detections of Fe II lines at: 4233, 4515, 4629, 4924, 5018, 5169, 5317, and 6148 Å. The Fe II line at 5018 Å is flat-topped with a FWHM of 2300 ± 100 km/s. Na I D_{1,2} (5889, 5895 Å) is present and shows a double-peaked structure with peaks at 5905, 5880 ± 200 km/s. We also detect Al II lines at 3901, 4663, 6830, 7049 Å with 7049 Å being characterized by a FWHM = 4850 ± 150 km/s, with a very strong and wide base: FWZI = 8350 ± 200 km/s. Finally, we also detect lines of Al III 5706 Å, Ti II 3900, 4399, 4501, 4563 Å, Mg I 5173, 5183 Å, and Si II 5957, 5978 Å. Overall, the spectrum seems consistent with a nova of the broad-lined Fe II (Fe IIb) class.

Blue and red parts of AT2020yye

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief

Derek Fox, Editor

Mansi M. Kasliwal, Co-Editor

rrutledge@astronomerstelegram.org

dfox@astronomerstelegram.org

mansii@astronomerstelegram.org