Spectroscopic observations of Nova Delphini 2013 [= V339 Delphini]

This recent nova, whose discovery is described by Guy Hurst on page 250 of this *Journal*, has been extensively observed by amateurs both photometrically and spectroscopically. It is by a substantial margin the brightest nova seen so far this century. While photometrists have provided a very well observed lightcurve, see for example the AAVSO Light Curve Generator,[1] for the first time amateurs equipped with spectrographs have also contributed many observations.[2]

The majority of these spectroscopic observers are currently based in Europe, particularly France, due in large measure to the strong influence of Christian Buil and his colleagues at Shelyak Instruments.[3] For several years now they have been developing spectrographs suitable for amateur use.

I recently joined the ranks of amateur spectroscopists by acquiring a LISA spectrograph from Shelyak. This rides on a C11 scope with SXV imaging and guide cameras. The figure shows a spectrum of the nova taken on September 5 using this equipment. Prominent hydrogen Balmer emission lines and many weaker FeII emission lines are visible showing that the runaway thermonuclear explosion on the surface of the white dwarf in this cataclysmic variable created elements as far up the periodic table as iron. The grey spectrum is a ×5 magnification to show the weaker features.

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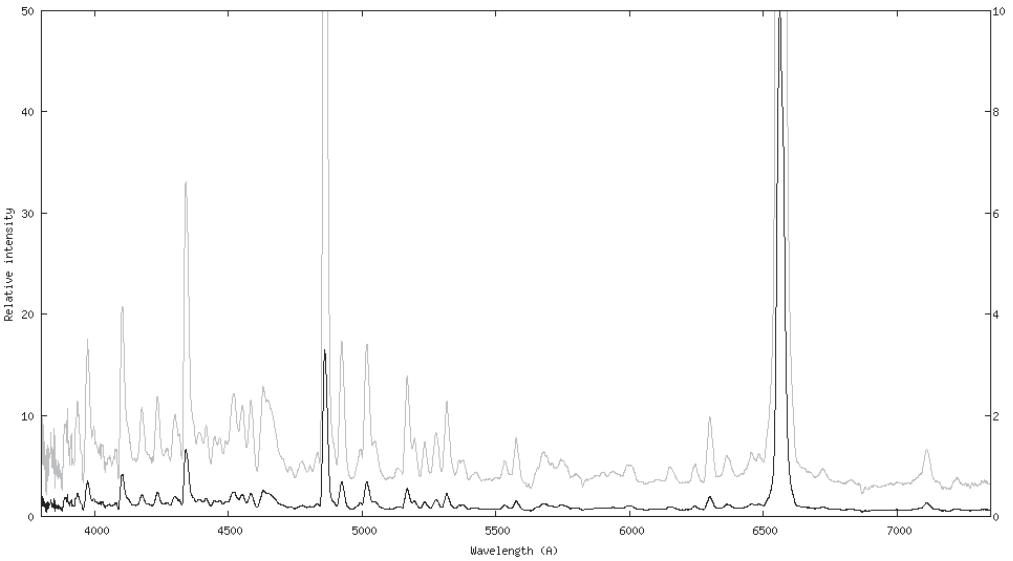

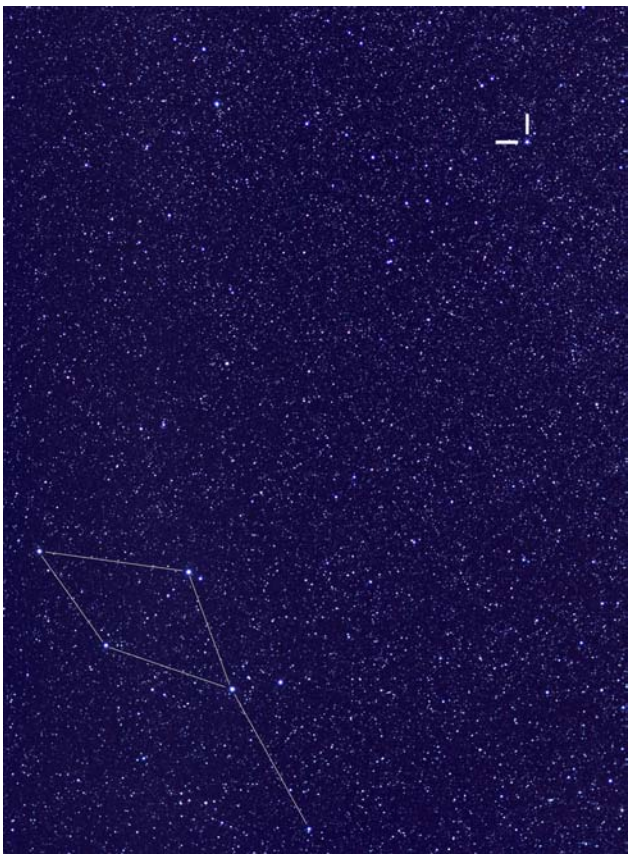

Binocular-oriented view of Delphinus with the mag 4.5 nova highlighted, 2013 Aug 15, 21:16–23:03 UT. Canon EOS 550D, 45×60s, 100mm f/2, ISO 400. Nick James.

References

1 **http://www.aavso.org/lcg**
2 **http://www.astrosurf.com/aras/Aras_DataBase/Novae/Nova-Del-2013.htm**
3 **http://www.shelyak.com/**