

A New Nova Eruption In Sagittarius:

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A star that normally shines at magnitude 18 has brightened to magnitude 8. This 10-magnitude change corresponds to an increase in brightness of 10,000. This nova can be seen with binoculars, with a finder chart. The 2000 coordinates are RA 18 02 21.8 Dec -25 20 32. This nova was initially called Nova Sgr 2002 No. 2, the second nova discovered this year in Sagittarius, but it now has an official variable star name: V4742 Sgr.

The nova was discovered on September 15 by Bill Liller. He used to be head of the astronomy department at Harvard, but since retiring has become a "born-again" amateur astronomer in Viña del Mar, Chile. He takes wide-field images of the sky with an 80mm f/1.4 lens, an orange filter and Kodak TP film, and examines them by eye with a home-made stereo viewer. He probably discovers all the novae brighter than magnitude 11 that occur in the southern sky. Japanese amateurs get the northern ones, and post the data to VSnet, at: <http://vsnet.kusastro.kyoto-u.ac.jp/vsnet/novae.html>.

Of more local interest, a new piece of equipment from Fresno State's Campus Observatory is being used to observe this nova: the Adaptive Optics Guider.

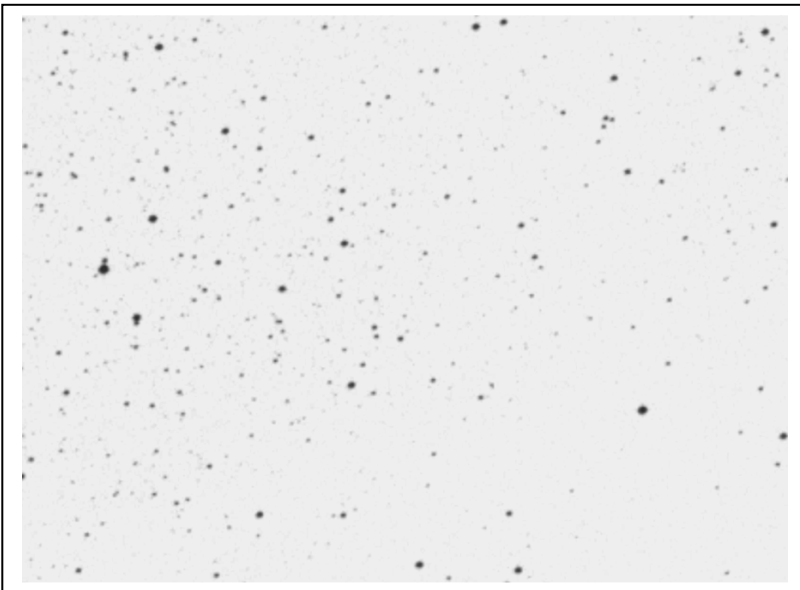


Fig 1: The image to the left has been downloaded from the Digital Sky Survey (DSS) website at: <http://stdatu.stsci.edu/dss/>. This area of sky shows the "pre-eruption" field. At this time of year, this field is about 20 degrees above the horizon at 10PM PDT. The field is 12 minutes wide by 9 minutes high. North is up and East is to the left. Compare the pre and post eruption fields in figure 1 and 2 respectively. The image in Figure 2 was taken only two days after the nova's discovery.

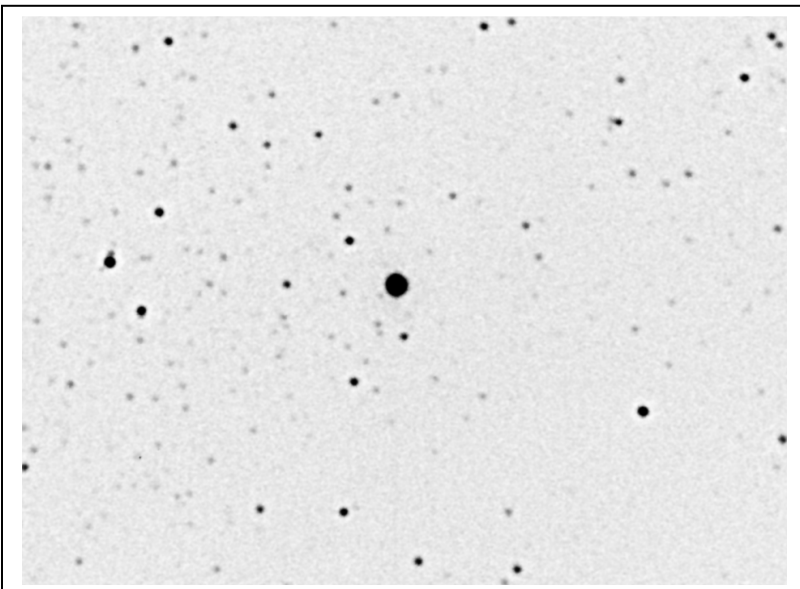


Fig. 2: The erupting V4742 Sgr is in the center of the field to the left. This is first light with the Campus Observatory SBIG AO-7 adaptive optics guider. The AO-7 is a high-speed, tip-tilt, device: it uses a moving mirror to remove much of the obscuring effect of the Earth's turbulent atmosphere, which blurs images. This 40 second image was taken on 9/17/02 04:50 UT with a 10 inch f/6.3 SCT telescope and the ST-10XME CCD camera. Guiding took place with the AO-7 updating positional information at 5 Hz.