

be quite a few novae going undetected in the LMC.

The smaller angular extent of the SMC causes less problems for total coverage. However, work done by Vince Ford et al at ANU has shown that the SMC is actually a stream of material pointing at us and up to 100,000 light years in depth so the more distant SMC novae will be somewhat fainter.

Quite a bit of professional work has been done on the use of novae as distance indicators, and the Magellanic Clouds, as well as being prime targets for amateur deep sky observers, offer the amateur an opportunity to contribute to professional astronomy. Anyone interested in our methods is welcome to contact this writer.

-P.O. Box 157, Tamworth, NSW 2340, Australia.

IAUC Announcements:

Gordon Garradd, Tamworth, NSW reports his discovery of a nova in the LMC at RA 5h36.0m DEC -70 23' (1950) on Mar. 21.484UT (hypered Kodak 2415 film, 0.067-m f/4.5 camera). Photovisual estimates by Garradd and B.Tregaskis, Mt Eliza, Victoria: Mar 18.54UT, [15; 21.484, 11.4; 21.492, 11.4; 22.47, 11.6; 22.50, 11.6 (Tregaskis).
IAUC 4568

R.H.McNaught, Siding Spring Observatory, provides the following precise position from an exposure with the Uppsala Southern Schmidt telescope (rms 0.7"):

RA 5h36m01.92s DEC -70 23'15.2" (1950).

The nova lies 0.8'E and 2.2'S of HV 12328 and 5.0'W and 0.4'N of HV 12330. Magnitude estimates: Mar 22.79UT, 11.9 (McNaught); 23.43, 11.2 (Tregaskis).
IAUC 4569

Further estimates:

Mar 23.46UT, 11.0 (B.Tregaskis); 24.44, 11.4 (G.Garradd); 25.40, 11.3 (McNaught); 27.42, 11.6 (P.Williams, NSW); 28.46, 11.2 (D.Seargent, NSW); 29.44, 11.6 (Williams).
IAUC 4574

UK NOVA/SUPERNOVA PATROL REPORT 3/88

Coordinator: Guy M Hurst

TAV 0226+39 DISCOVERY

Dave McAdam

March 88 was hardly noted for it's clear skies. Up to the 21st I had taken no photos. As the sun set on this date and the sky looked quite reasonable, I set up the 304mm f1 F4 lens on it's mounting and aligned it with the pole. This lens covers a field of 6.75 X 4.5 degrees on 35mm film so is not really suitable for a proper nova patrol where large areas of sky should be covered. However, any photos of the sky are worth checking against previous ones and I have many photos from this lens going back to 1979. The data for each negative is entered into a computer file and a program can be run to search for negs overlapping a designated area. The two negs, old and new, are then compared in the stereo viewer. (Viewer described TA Feb 1983)

On the night of the 21st, I took two shots of V635 Cas area before it sank behind some trees as this required charting. Although the sky was mostly clear of cloud, the smoke plume from the Ironbridge power station was passing over my zenith. It spread out and blocked much of the sky and prevented access to Orion and some other areas I wanted, so I took two

photos of the area around GK Per. I try and obtain a couple of shots a month of this old nova as it does brighten up from time to time.

With the smoke still prevailing, I next set the lens on to NGC891 which is nearby in Andromeda. Some months earlier Guy Hurst had compared photos from several TA photographers and noted apparent variance in a foreground star in the field of this galaxy. (TASV0219+42).

Although it may have been just the different film responses, it was an area I had not previously photographed, so several pairs of negatives had been obtained roughly on a monthly basis.

Early the following evening the negatives had been developed and put in slide mounts and I began to check against the previous shots on file. The Cas ones only overlapped a small section so were put to one side ready for printing. Next, a variable was obvious at about mag 10 on the GK Per ones North East of Algol. On checking further this was found to be bright on negs taken Aug/Sep 1983 and also near the limit of mag 13 on some intervening ones. It was obviously a LPV but I made a note to check this out later and turned to the last pair of negs.

Almost immediately a star image drew my attention near the southern edge of the field on the two new negs which was not on the ones from Jan 22. I got out three further pairs of negs of NGC891 from last year but they had all been centred slightly higher and did not cover the required area.

A search of some reference books followed, but no candidates could be found for either object. This did not mean they were unknown because the main check has to be of the GCVS which is not yet in my personal library. Guy has identified several variables in the GCVS for me in the past so I E-mailed the positions to him and went off to print the V635 Cas field. I did not use the EXPRESS option which would place my message at the top of his mail because I expected they would both be known variables.

Early evening on the 24th Guy phoned to say he could not find a candidate for the one in And, nor was it on Stellarum, so he would put out a E-circular to see if confirmation could be obtained. I later managed a short exposure through a not very clear gap in the cloud, but it only went to about mag 10 and did not show the new object. Having already posted the negatives of the 21st to Guy, the next 24 hours were a bit nerve racking and I began to have doubts that I had studied the images closely enough; I have had a few very convincing ghost images on pairs of negs and the camera is always offset slightly between consecutive exposures to try and show these up. I needed a second opinion, or a third exposure!

Both came the following night. Guy phoned to say he had observed it visually after much trouble with cloud. At about the same time, Martin Mobberley had photographed it and E-mailed confirmation when he had developed the film. I also obtained a single exposure much later. Guy had attempted to use the IAU computer to check for bright minor planets near the position, but was having trouble logging on. However, Nick James was able to compute through the first 500 which eliminated any at mag 10-10.5.

Finally, the IAU was telexed and the discovery announcement appeared in IAUC4570 on 26 March. The question then remained: What kind of variable was it? There was a possibility it was a nova. Guy had been in touch with professional astronomers at Tenerife who could not interrupt their program to take a spectrogram, but had agreed to try and get one in twilight. Before this could be done, however, they were hit by a dust storm and everything had to be closed down! As things were being cleaned up ready for use they did point the telescope at the object and viewed it on the monitor. So there was the satisfaction of knowing that one large telescope

had looked at it!

During the following week, an image was found at mag 12.5 on one of the Papadopoulos charts, which appeared to rule out a nova. It is also present on the Blue Palomar Sky Survey at about mag 19. Further observation is needed as the star grows faint, and any prediscovery results, including negative ones, are very helpful.

In conclusion, I would like to thank the TA team for the quick and efficient response to my query. On a cloudy night, it is nice to know that there are others who will try and check out your suspect.

-33, Wrekin View, Madeley, Telford, Salop, TF7 5HZ

Editorial Notes

The discovery was announced on E-Circular 137 issued on Mar 24 and subsequently via EWC 100 and other messages. Initial confirmation came from M. Mobberley whose photo was measured by Brian Manning yielding following position for the new object:

RA 02h26m22.21s DEC +39°49'19.9"(1950)

Alan Young also obtained a position from his exposure of Mar 26 which gave end figures: RA 22.14s DEC 21.0"(1950).

A telephone call was received from Glyn Marsh in response to EWC 100, pointing out that there was an image apparently corresponding with the new object's position on one Papadopoulos chart (1976 Oct 19) but absent from another of 1976 Aug 31. With the kind assistance of Alan Young, RGO, Tenerife Astronomers and Peter Gill, the Editor examined the Palomar Sky Survey and found a candidate at approx mag 19-20 on the red and 18-19 on the blue. Although initially the earlier positive image on Papadopoulos suggested the possibility of a mira variable, no variable of any type could be found in GCVS or NSV, and the blue object on Palomar appeared to rule out a mira and suggested some form of recurrent eruptive object.

The Editor subsequently acquired the Papadopoulos Atlas (thanks to the BAA) and found the image on one chart. Brian Marsden kindly computed positions of asteroids for 1976 Oct 19 (during the middle of a transatlantic call!) but found no candidate for the atlas image.

The Editor subsequently was able to use a high magnification eyepiece on the atlas image and found it to be elongated and possibly split into two. Careful comparison with a prime focus photograph by Alan Young also showed the atlas image very slightly in a different position, but only noticeable at high magnification.

During this 'high-tension' period, we sought help from various professional astronomers with a request that spectra be obtained to confirm the nature of the object. Only one group responded, Instituto Astrofisica d'Canarias where Mark Kidger and Phil Charles said they would try and obtain a spectrum. This was achieved but after storage in the computer a fault developed preventing further analysis but their initial impression was that the spectrum resemble that of a nova or nova-like object. Further news is awaited.

Results to date:

Date UT	Mag	v/pv	Observer
08 12 28	[15.0	B	Franklin-Adams
(relayed by Dave Greenwood).			
51 12 21	18-19	B	PALOMAR SS
51 12 21	19-20	R	PALOMAR SS
54 09 26	[14.0	B	LICK ATLAS
69 08 09	[13.8	B	ATLAS STELLARUM
72 10 28.90	[13.3	pv	H.Ridley
76 08 31	[13.5	pv	PAPADOPOULOS
76 10 19	flaw mag 12.5?		PAPADOPOULOS
87 10 29.872	[14.0	pv	M.Oates

87 12 14.911	[13.0	pv	M.Oates
88 01 22.827	[11.5	pv	D.McAdam
88 02 12.802	[11.5	pv	M.Mobberley
88 02 12.817	[11.0	pv	G.Marsh
88 03 15.835	[9.5	pv	N.James
88 03 21.900	10.1	pv	D.McAdam
88 03 21.913	10.1	pv	D.McAdam
88 03 24.862	10.8:	pv	D.McAdam
88 03 25.844	10.7	v	G.Hurst
88 03 25.844	10.8	pv	M.Mobberley
88 03 25.921	11.0:	pv	D.McAdam
88 03 26.838	10.8	v	G.Hurst
88 03 26.842	11.2	pv	D.McAdam
88 03 27.835	11.1	v	G.Hurst
88 03 27.847	11.3	v	M.Taylor
88 03 29.856	11.5	pv	M.Oates
88 03 31.838	11.3	v	G.Hurst
88 04 03.841	11.3	v	G.Hurst
88 04 09.843	12.0	v	G.Hurst

Sequence for charts below:

A,6.8; B,8.7; C,9.3; D,10.3; F,10.8; G,11.5; H,11.7; J,12.2; K,12.6; L,13.3; M,13.7

Chart for TAV 0226+39
RA 02h26.4m DEC +39 49' (1950)

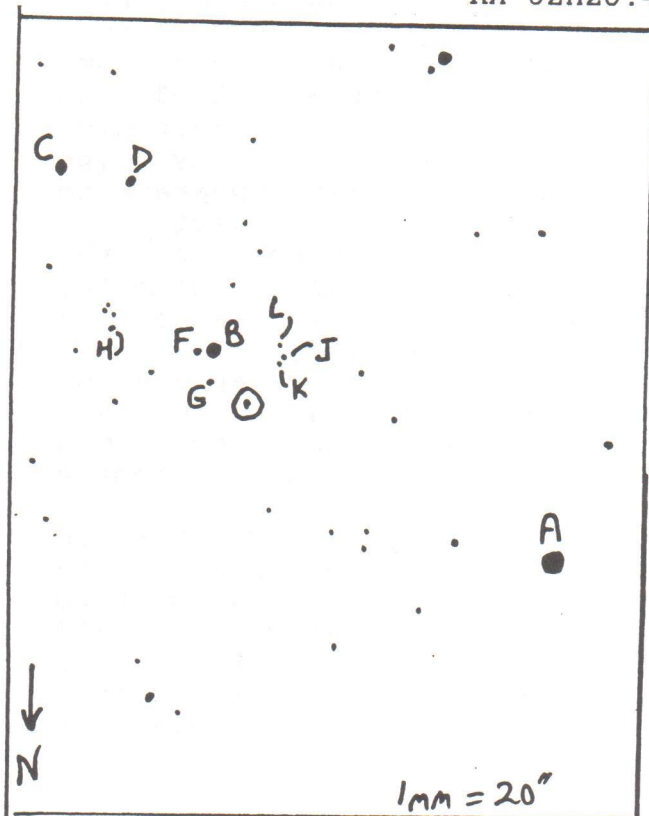


FIGURE 2

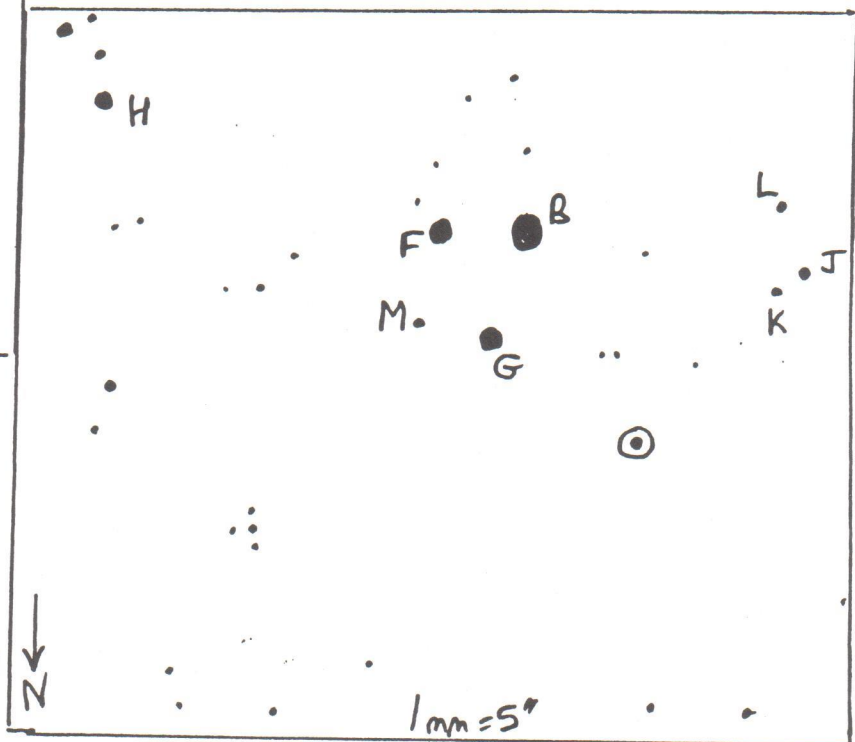


FIGURE 3