

COMMISSION 27 OF THE I. A. U.  
INFORMATION BULLETIN ON VARIABLE STARS

Number 2260

Konkoly Observatory  
Budapest  
1983 January 6  
HU ISSN 0374-0676

POSITIONS OF FOUR NOVAE\*

The importance of the determination of coordinates and proper motions of novae has been pointed out by Artyukhina and Kholopov (1962). Positions of the novae RR Pic, CP Pup and T Pyx, which are included in Artyukhina and Kholopov's list, were determined. In addition, the position of Nova Aquilae 1982 was measured.

The observations were carried out with the GPO astrograph of the European Southern Observatory, La Silla, Chile. The focal length of the telescope is 4 m, corresponding to a scale of 51.5 "/mm. The observational data are given in Table I. AGK3 stars for Nova Aql and SAO stars for the other novae were

Table I

Observational Data

Plate	Object	Date	Emulsion/ Filter
3353	RR Pic	1979 Jan 12	098 / Red
3354	RR Pic	1979 Jan 12	098 / Red
4419	CP Pup	1981 Jan 7	2a0 / -
4420	T Pyx	1981 Jan 7	2a0 / -
5673	N Aql 1982	1982 Jun 15	2a0 / -
5674	N Aql 1982	1982 Jun 15	2a0 / -

\*Based on observations collected at the European Southern Observatory,  
La Silla, Chile.

used as reference stars. The plates were measured with the KOMESS of the Bonn Observatory. Our reduction model contains terms up to the third order in the coordinates X and Y. For the plates of Nova Aql only quadratic terms were used because the third order terms were not significant: The errors of the plate constants were larger than the plate constants themselves. No colour equation was found; a magnitude equation could not be detected because the reference stars are in a narrow magnitude range. Table II gives the results of our

Table II  
Nova Positions

Object	Epoch of obs.	$\alpha$ 1950	$\delta$ 1950	Cat.	N	$\sigma_{\alpha}$ (0".01)	$\sigma_{\delta}$ (0".01)
RR Pic	1979.0	06 <sup>h</sup> 35 <sup>m</sup> 09 <sup>s</sup> .799	-62°35'49".28	SAO	20	32	21
CP Pup	1981.0	08 09 52.037	-35 12 04.35	SAO	13	53	27
T Pyx	1981.0	09 02 37.151	-32 10 47.41	SAO	22	47	43
N Aql 1982	1982.5	19 20 50.142	+02 23 35.32	AGK 3	16	24	33

N = number of reference stars

measurements. The errors in columns 7 and 8 are the mean errors of the nova positions provided from the least square solution for an individual plate. These are mainly caused by the local errors of the reference stars in the field. The internal error resulting from the comparison of the results from different plates (Nova Aql and RR Pic) is about 0".1.

In the fields of T Pyx and RR Pic, 6 stars from the Perth 70 catalogue were included in our measurements. The mean differences between the catalogue positions and our positions are given in Table III.

Table III

Mean differences between Perth 70 positions and our positions in the sense Perth 70 - our positions

Field	$\Delta_{\alpha}$ (0".01)	$\Delta_{\delta}$ (0".01)	Number of stars
T Pyx	-05 $\pm$ 20	-72 $\pm$ 24	6
RR Pic	-37 $\pm$ 10	-39 $\pm$ 14	6

It should be noted that the "astrometric position" of RR Pic as given by Wyckoff and Wehinger (1978) does not refer to the nova, but to the nearby SAO star 249586.

While finding charts of RR Pic, CP Pup and T Pyx are given by Wyckoff and Wehinger (1978), Pettit (1954), and Humason (1938), respectively, a

finding chart of Nova Aql 1982 is given in Figure 1. This reproduction from

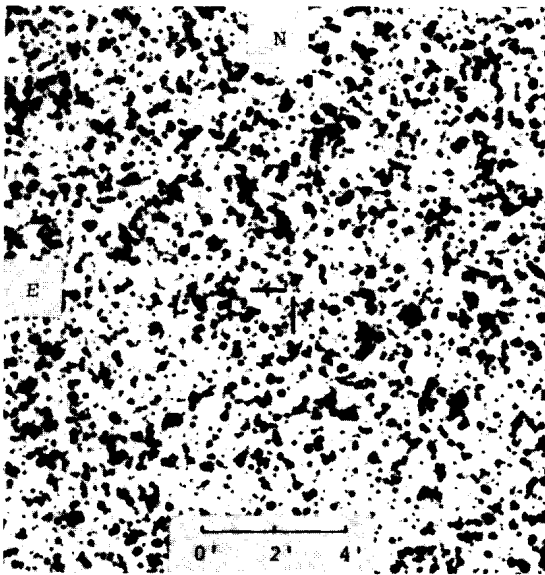


Figure 1

Finding chart for Nova Aql 1982. This reproduction from the Palomar Observatory Sky Survey red plate 323 shows a star of  $R \approx 18^m$  close to the position of the nova.

the Palomar Observatory Sky Survey shows a faint star ( $B \approx 20^m$ ,  $R \approx 18^m$ , the eastern component of a pair with a separation of  $\approx 10''$ ) close to the position of the nova. The derived amplitude of  $\approx 13^m$  is near the mean amplitude of novae; the red colour can at least partly be explained by interstellar extinction.

Acknowledgement: We thank Dr. W.C. Seitter for her participation in the observations.

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## References:

- Artyukhina, N.M., Kholopov, P.N., 1962, Astr. Zh. 39, 1129  
Humason, M., 1938, Astrophys. J. 88, 228  
Pettit, E., 1954, Publ. Astr. Soc. Pacific 66, 145  
Wyckoff, S., Wehinger, P.A., 1978, Publ. Astr. Soc. Pacific 90, 557