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PHOTOGRAPHIC OBSERVATIONS OF A NEWLY DISCOVERED
 INTERMEDIATE POLAR RE 0751+14 AND OF THE OBJECT OI 090.4

Mason et al. (1992) discovered a new intermediate polar in the ROSAT Wide Field Camera All-Sky Survey. Its position is RA=7^h51^m17^s.3, Dec=+14°44'23" (2000). We studied it on 24 archival plates obtained at the 40-cm astrograph on the Crimean Station of the Sternberg State Astronomical Institute (fields 12 Cnc and 3 Cnc).

To make brightness estimates of comparison stars, we used the photoelectric sequence for OI 090.4 (Baumert, 1978). It is worthy to mention that the brightness values for stars *a* and *b* must be interchanged in this latter paper, as one may see from comparison with other stars with known photographic magnitudes.

All plates were measured by using an iris-photometer of the Sternberg State Astronomical Institute. Brightness values for the comparison stars were determined from a parabolic fit by using the 12 best plates. They are listed in Table 1. The finding chart of RE 0751+14 is shown in Fig. 1. An identification chart for OI 090.4 can be found in Baumert's (1978) paper. For all plates, the parabolic fits were computed by using these values of brightness. Results are presented in Table 2 for RE 0751+14 as well as for the object OI 090.4. The amplitude of variability of OI 090.4 reached 1^m.3 (between 15^m.58 and 16^m.87).

Only minor brightness variations of RE 0751+14 between 13^m.65 and 14^m.17 were detected, as one may expect for usual 'high' state of intermediate polars. A 'low' state was not detected in the present material. The mean magnitude was 13^m.93, a r.m.s. deviation from the mean value was 0^m.15. A possible brightening of the comparison star *p* up to 13^m.47 was detected on JD 2447615.254 without any significant variations around usual brightness 14^m.56 at other dates. Star *G* and *H* have close visual companions, thus they were not used for fits, nor the star *p*.

Table 1
 Photographic brightness of comparison stars for RE 0751+14

* m _{pg}	* m _{pg}	* m _{pg}	* m _{pg}
a 13.34±.02	g 13.98±.03	n 14.45±.02	t 14.77±.03
b 13.44 .03	G 14.06 .07:	p 14.45 .03	u 14.78 .01
c 13.54 .02	h 14.20 .02	H 14.56 .04:	w 15.55 .02
d 13.59 .02	k 14.28 .02	q 14.68 .02	x 15.64 .02
e 13.64 .02	l 14.32 .02	r 14.71 .03	y 15.74 .02
f 13.77 .02	m 14.35 .02	s 14.72 .03	z 16.13 .03

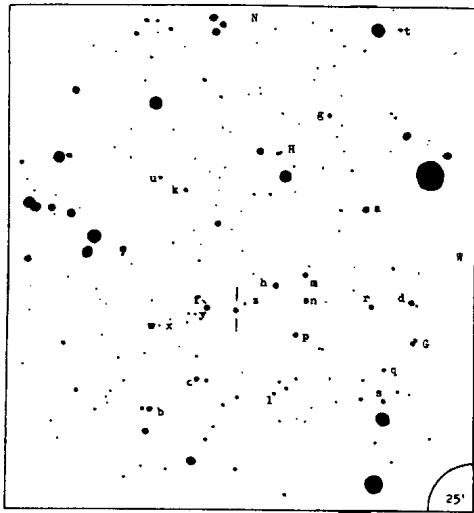


Figure 1. Finding chart for RE 0751+14

Table 2
Brightness of RE 0751+14 and OI 090.4

JD 24....	RE	OI	JD 24....	RE	OI
45328.516	13.91	-	47883.480	13.90	16.20
45349.445	13.67	-	47884.544	13.86	16.20
45410.302	13.98	-	47887.528	13.90	15.84
47484.609	14.08	16.87	47890.469	14.05	-
47614.305	13.89	16.60	47896.347	13.85	15.87
47615.254	13.78	16.43	47916.406	13.65	15.76
47623.304	13.96	-	47918.406	13.68	15.71
47834.536	13.95	16.07	47922.354	14.17	15.60
47836.551	14.06	15.68	47941.337	13.99	15.58
47855.499	14.10	15.95	47943.284	14.05	15.74
47855.522	14.12	15.87	47944.345	14.02	15.68
47869.576	13.89	16.14	47946.287	13.70	16.02:

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