

## Photographic Observations of Comet Abe (1970g) and Comet Tago-Sato-Kosaka (1969g)

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### ABSTRACT

Observations of the comets made in 1970 at the Wrocław Observatory are given.

Three positions of the comet 1969g, and 24 positions of the comet 1970g have been obtained in the Wrocław Astronomical Observatory ( $\lambda = -1^{\text{h}}8^{\text{m}}21^{\text{s}}$ ,  $\varphi = +51^{\circ}7'$ ). The photographic camera  $D = 18$  cm,  $f = 88.7$  cm is attached to the refractor equipped with the new Zeiss position micrometer. The plates Agfa-Astro  $13 \times 18$  cm were measured at the Poznań Observatory.

On every plate 6 to 10 reference stars have been selected. The six plate constants have been obtained using the least-squares solution of Turner's formulae. When, for a given solution, the values of  $O - C$  of the reference stars were greater than 2.5 sec of arc, the star with maximum  $O - C$  was eliminated and the determination of the plate constants was repeated. The coordinates of the reference stars corrected for the proper motions are taken from the *SAO Catalogue* for the epoch 1950.

The mean error of the plate constants  $c$  and  $f$  is about  $\pm 0''.5$ . This value can be treated as part of the uncertainties of the comet position caused by the reference stars.

In Table 1 are given: the moment of observation in UT, topocentric apparent positions of the comet for the mean epoch 1950, the number of reference stars  $n$ , the time of exposition  $\tau$ , and observer's initials (here B denotes Bem and J denotes Jastrzębski).

Table 1.

Photographic observations of comets.

UT		$\alpha_{1950}$	$\delta_{1950}$	$n$	$\tau$	Obs.
Comet Tago-Sato-Kosaka (1969g)						
1970 Febr	1.74457	1 <sup>h</sup> 59 <sup>m</sup> 34 <sup>s</sup> .34	21° 1'22''3	6	5 <sup>m</sup>	B
	1.75387	1 59 38.15	21 2 29.9	5	7	B
	17.79577	3 <sup>h</sup> 3 <sup>m</sup> 24 <sup>s</sup> .63	38°58'26''3	5	14 <sup>m</sup>	B
Comet Abe (1970g)						
1970 Sept	2.89713	20 <sup>h</sup> 11 <sup>m</sup> 20 <sup>s</sup> .44	73°19'39''7	5	9 <sup>m</sup>	B
	5.83275	18 49 12.10	69 43 22.3	5	10	B
	5.84520	18 48 56.49	69 42 13.0	7	6	B
	6.87657	18 27 32.30	67 59 36.1	4	8	B
	7.80173	18 11 10.09	66 20 21.0	6	7	B
	9.81089	17 43 4.67	62 30 56.7	5	10	B
	10.79870	17 32 11.32	60 34 33.0	6	8	J
	10.94596	17 30 42.28	60 17 0.0	6	11	B
	12.82846	17 14 17.32	56 34 33.2	6	10	J
	13.92534	17 6 31.26	54 26 30.6	4	13	B
	14.80833	17 1 3.54	52 45 11.5	8	8	B
	14.84858	17 0 49.39	52 40 32.0	6	10	J
	17.81122	16 46 20.75	47 15 15.7	6	8	B
	22.78517	16 30 31.36	39 11 30.4	5	7	B
	23.79556	16 28 10.16	37 42 48.3	10	8	B
	23.81812	16 28 6.76	37 40 51.4	6	7	J
	24.79011	16 26 2.29	36 19 6.5	6	8	B
	26.75533	16 22 20.20	33 42 46.4	6	9	B
	27.77182	16 20 39.37	32 26 22.4	6	7	B
	27.78446	16 20 38.10	32 25 25.3	6	9	J
Oct	29.75452	16 17 44.07	30 5 46.7	6	9	B
	6.74165	16 10 16.37	23 6 35.0	9	10	B
	7.74425	16 9 27.64	22 14 47.9	7	11	B
	8.74049	16 <sup>h</sup> 8 <sup>m</sup> 42 <sup>s</sup> .19	21°25' 6''2	6	12 <sup>m</sup>	B