Observations of a new minor planet 1929 SH by *G. Pels.*

Among the plates taken by Dr. H. VAN GENT with the Franklin-Adams camera at Johannesburg there is a series of the region round the southern pole of the Milky Way. On one of these plates an object was found marked, which by closed examination proved to be a new minor planet.

Unfortunately the planet passed near the border of the region photographed, in connection with which fact the interval covered by the observations is 13 days only.

Eight plates, two from each of four nights, were available. Positions have been measured on all 8 plates and the reductions were made independently. Mean values for each night are given in Table 1.

Provisional elements were computed from the 3 positions marked with an asterisk in Table 1*). The resulting elements are:

g	14·5 m	φ	23·399 °
M_0	27·856 ° (1929 Sept. 26·0 Gr. C. T.)	μ	1391·″182
ω	166·574 °	a	1·8667
Ω	132·673 ° 1925·0		
i	8·425 °		

According to these elements the approximate ephemeride as given in Table 2 for the opposition 1929 was computed. This ephemeride is only meant as a help to find the planet on other plates from the same year, though it is, of course, very uncertain except for the time close to the observations.

The photographic brightness of the planet was measured on all 8 plates by C. KOOREMAN using the comparison stars given in table 3. The magnitudes adopted are in accordance with star counts in the surroundings.

The photographic magnitudes of the planet thus found in the system of table 3 are: J. D. 2425880·462 : 12·94; ·485 : 12·54; 86·446 : 13·20; ·468 : 12·69; 87·424 : 12·95; ·502 : 12·66; 93·394 : 12·96; ·490 : 12·97.

While the m.e. of a single determination of the magnitude of a comparison star is $\pm$ m·06, that of the planet is $\pm$ m·21, thus indicating a probable variability.

TABLE 2.

1929		α_{1925} h m		δ_{1925} ° ′		m_{99} m
Juli	28	23 37·5	+ 27·6	— 0 40	— 292′	11·0
Aug.	5	0 5·1	20·1	5 32	277	
	13	0 25·2	12·8	10 9	246	
	21	0 38·0	6·7	14 15	205	11·5
	29	0 44·7	+ 1·4	17 40	157	
Sept.	6	0 46·1	— 2·1	20 17	105	
	14	0 44·0	4·0	22 2	53	12·3
	22	0 40·0	4·6	22 55	— 6	
	30	0 35·4	3·8	23 1	+ 35	
Oct.	8	0 31·6	2·4	22 26	66	13·1
	16	0 29·2	— ·5	21 20	89	
	24	0 28·7	+ 1·3	19 51	105	
Nov.	1	0 30·0	3·2	18 6	115	14·4
	9	0 33·2	4·7	16 11	121	
	17	0 37·9	6·2	14 10	124	
	25	0 44·1	7·3	12 6	124	15·4
Dec.	3	0 51·4		10 2		

TABLE 3.

	α_{1875} h m s	δ_{1875} ° ′	″
1	0 35 8·0	— 23 7·1	12·55
2	0 32 19·5	— 23 14·9	13·05
3	0 31 39·5	— 23 11·0	13·85
4	0 32 3·5	— 23 15·7	13·56
5	0 28 22·2	— 22 43·1	12·27
6	0 28 14·7	— 22 49·9	13·22

TABLE 1.

Date Gr. C. T.	α_{1925} h m s	δ_{1925} ° ′ ″	Comparison stars h m °
1929			
* Sept. 25.968104	0 37 39·61	— 23 3 24·2	Hyd. 0 36, — 23 : 1101, 1137, 1145
* Oct. 1.952252	0 34 20·67	22 56 3·1	„ 0 36, — 23 : 1089, 1122, 1123
„ 2·957834	0 33 49·77	22 52 36·9	„ 0 36, — 23 : 1089, 1112, 1122
* „ 8·937641	0 31 9·82	22 20 23·3	„ 0 28, — 23 : 791, 795, 803

-) The third position gives the residuals + s·15 in α and — ″·6 in δ.