

INFORMATION:  
0604 811030

EARLY WARNING CIRCULAR No 19.

1977 Nov 11.

# The Astronomer

Founded 1964

PRODUCTION:  
ANNE HURST.

## Slow-Moving Object Kowal

Marsden telexes that C.T. Kowal, Hale Observatories, has discovered a slow-moving object in Aries, situated close to the ecliptic. The object is of stellar appearance on exposures with 122cm Schmidt telescope at Palomar.

A predisccovery image was identified by T. Gehrels on an exposure with the same instrument:

1977 UT	R.A. (1950)	DEC (1950)	Mag.	Observer.
Oct 11.3	2h 06 <sup>m</sup> 8	+12° 21'	19	Gehrels
18.38090	2h 05 <sup>m</sup> 34. <sup>s</sup> 09	+12° 09' 12".5	18	Kowal
19.42882	2 05 22.79	+12 08 07 .5		"

Marsden comments that the motion, scarcely greater than that of the planet Uranus, is extraordinarily slow for an object so close to opposition.

A further telex by Marsden gives the following ephemeris, which is provided for subscribers' interest only, as a report in the 'Los Angeles Times' quotes Kowal as saying that the object is certainly unique, being possibly a very large asteroid or new planet, situated beyond the orbit of Saturn and crossing the orbit of Uranus, approximately 1500 million miles from the Sun:

1977 Nov 3	2h 02.8m	+11° 53'
13	2 01.0	+11 43
23	1 59.4	+11 33

Marsden further telexes that a circular orbit corresponds to a 66 year period.

## Comet Tsuchinshan (1977q)

Marsden telexes that this comet (presumed to be 1965I), has been recovered by Helin and Shoemaker and is apparently brighter than expected with positions significantly different from the prediction in the BAA Handbook:

1977 Nov					Observer
8.23333	1 <sup>h</sup> 14 <sup>m</sup> .0	+02° 02'	15		Helin et al.
8.23681	1 <sup>h</sup> 13 <sup>m</sup> 39. <sup>s</sup> 49	+02° 04' 21".7	15		"
8.84410	1 12 22.38	+01 58 59.6	13		Wilbe?
8.92361	1 12 11.87	+01 58 17.0	13		"

The comet is described as diffuse with central condensation and tail of less than 1°.

Photographic exposures at prime focus and visual observations with large instruments are urged with reports and negatives to the Editor please.

## Nebulous Object

M Verdenet, Bourbon-Lancy, France, airmails that he has observed a nebulous object as follows:

1977 Nov 5.92 RA 0h 47m DEC +32° mag visual 11.5.

The object, observed with 310mm spec, was close to RW And (approx 30' east) and possibly moving slightly to the east. The Editor notes that NGC 266 of mag 12.5 (photographic) lies close to this position.

Any confirmation of a moving object to the Editor as soon as possible please.

## New Object Helin Shoemaker: No 1

Marsden telexes that Helin and Shoemaker have discovered a new object of

Continued:

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## Early Warning Circular No 19 (Continuation)

unknown nature, as follows:

1977UT	R.A.(1950)	DEC (1950)	$m_{pv}$
Nov 8.30972	02h 23m.2	+14°02'	15 approx

Daily motion reported as RA +3<sup>m</sup>.17 Dec 12'.

A further telex received from Marsden provides the following ephemeris which is provided in the hope that those TA observers with prime focus photographic facilities will attempt exposures for subsequent measurement:

1977 Nov 8	02h 22m.2	+14°08'
13	02h 38m.3	+13°27'
18	02h 53m.4	+12°51'

## New Object Helin Shoemaker No 2

A further object of unknown nature has also been discovered by Helin and Shoemaker as follows:

1977 Nov 8.25	01h 12m.4	+10°07'	$m_{pv}$ 14.0
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Marsden telexes the following motion data:

Daily RA +1<sup>m</sup>.56

DEC- 55' but comments that motion is uncertain.

An ephemeris has not been communicated at the time of this circular. Visual observation of moving object or photographic exposures are again strongly encouraged. Recent work by Manning suggests that telescopes of approx 21cm and above working at prime focus for approx 5 mins or more should record such an object provided tracking is good. It is important that exposures are accurately timed (to 1 min) and data quoted in UT with submitted negatives.

## Comet Kohler (1977m)

Recent visual observations reported to the Editor suggest that this comet is a little brighter than predicted, possibly as bright as 6.0 at the time of this circular. Although quite low in the southern sky, observers are urged to follow and report their observations using the ephemeris given in recent issues of TA.

G.M. Hurst.