ASTRONOMICAL SOCIETY OF FRANKSTON, INC.

P.O. BOX 586, FRANKSTON 3199

NEWSLETTER - SEPTEMBER 1987

MEETING, WEDNESDAY SEPTEMBER 9th

The Society's September meeting will be held in Room F.6 of the Upper School, Peninsula School, Mt. Eliza, starting at 8 p.m. It is hoped to have as a speaker Peter Gregory of Monash University who will talk on Radio Astronomy with reference to the Australia Telescope Project, (SETI). If Peter is unable to speak at the meeting a programme of movies will be screened including a NASA film on "the Planets".

OBSERVING NIGHT, SATURDAY SEPTEMBER 26th

The September Observing Night will be held at the Observatory, Peninsula School at a date a few days after New Moon. There will be an opportunity to locate Mercury in the early evening sky and Jupiter will be rising in the east. Saturn will be seen high in the western sky and the galaxies in the Sculptor and Fornax regions will be well placed for viewing.

Should Saturday be clouded then Sunday, September 27th will become the Observing Night.

SOCIETY NEWS

The Society's August meeting featured three speakers, Alfred Kruijshoop and Peter Nelson from ASV and Arthur Higginson from our own Frankston Society. The speakers described and discussed various aspects of the timing of grazing occultations of stars by the Moon, that is, where the

edge of the Moon just passes in front of a star causing alternate disappearances and reappearances of the star behind lunar mountains.

Peter Nelson described how records of such observations can be used to determine an accurate profile of the lunar rim, itself subject to continual small changes in perspective as "libration" of the Moon causes more or less of the surface to be seen in a particular direction. In addition, accurate determination of the Moon's ecliptic latitude can be made from grazing occultation observations.

Peter recommended training for grazing occultations to be done by timing of total lunar occultations, where a star passes completely behind the Moon.

Alfred Kruijshoop described his organization of successful observations of the grazing occultation of Antares on July 9th and described techniques for recording of information and the "Coordinated Universal Time" system used. The use of Radio time signals was discussed and Alfred played tapes of time signals from the Australian VNG transmitter at Lyndhurst, now threatened with closure, for comparison with the relatively distorted signals from Hawaii and Fort Collins, U.S.A.

Arthur Higginson showed a number of slides taken by himself of various stages of the near graze, as seen from his Mt. Eliza Observatory, and also played a tape of his detailed observations of the approach of the Moon to Antares.

A reference to another type of occultation, that of a star by an asteroid, was described by Bruce Tregaskis who referred to having seen a

star disappear from view for a period of two seconds during such an occultation and mentioned that such asteroidal occultations had been responsible for the discovery of a number of very close binary stars.

The Society's Observing Night on August 22nd was attended by a number of members and also Alfred Kruijshoop of ASV, a refugee from light pollution at Mount Waverley.

A promising sky in the early evening rapidly clouded and the few observations made through breaks in the clouds included the famous Ring Nebula in Lyra, well seen in David Murray's 8 inch Meade telescope, and Saturn viewed through Bob Heale's 16½ inch Newtonian and David Murray's Meade. Hoped for views of recently discovered Comet Bradfield 1987s were not possible due to cloud, however.

Society Film Night, Monday, September 14th at Moenington Cinema - "The Australian Light Horsemen". A number of tickets for this night are still available at $7.50 Adult, $5.50 for Student and also Concession/Child. Please note price changes due to changed Theatre management.

To obtain a ticket and assist with your Society finances please call Peter Norman on (059) 75-3040 (See also August Newsletter).

SKY NOTES

Comet Bradfield 1987s. Bill Bradfield, South Australian amateur and Comet discoverer has recently discovered yet another comet. The comet when observed by Society members in mid-August was a diffuse object in Hydra around magnitude 9. Preliminary calculations indicate the comet is still approaching the Sun so an

extended period of observation may be possible.

SuperNova 1987A. The large Magellanic Cloud supernova was around magnitude 4.8 in mid-August and its future remains unclear. The supernova, classified as Type II, that is, one resulting from the collapse of a massive star, is not behaving characteristically for such objects. It is thought that it has resulted from the collapse of a massive blue supergiant rather than a red supergiant as is usual for Type II supernovae. (See "Sky and Telescope", July 1987 for more information).

Constellations. The Milky Way is sinking low in the western sky after sunset in September and October and the oright constellations of the winter sky are being replaced by the fainter spring groupings. Here we see the "Aquatic" constellations of Capricornus, the Sea Goat, Aquarius,the Water Bearer, and Pisces, the Fish, whilst farther eastwards are Cetus, the Whale and Eridanus, the Celestial River. More towards the zenith are the "Bird" groupings, Pavo the Peacock, Grus, the Crane and Toucana, the Toucan.

Whilst most of these constellations are lacking in bright stars there are many interesting galaxies and groups of galaxies in Sculptor and Fornax, and planetary nebulae in Aquarius and Eridanus. The galaxy NGC 253 in Sculptor is regarded as the brightest after M31 - the Andromeda galaxy - and is situated at R.A. 00h 45, and Dec -25°34'. This galaxy can be seen in binoculars and in a long bright streak in the telescope.

Planets. Saturn remains a conspicuous object in the evening sky with the ring system wide open. With good steady seeing conditions

at high power it is possible to see the elusive 'crepe' ring on the inner edge of the main ring system, markings on the body of Saturn, and in mid-August the perspective showed the shadow of the planet on the north east portion of the rings.

Jupiter is now coming into position for evening viewing and as always provides a wealth of observational changes.

A project on timings of occultations and eclipses of Jupiter's satellites is under the organization of Alfred Kruijshoop of ASV, and members interested in taking part can contact Peter Norman, Bruce Tregaskis or Key Bryant for information.

Mercury is favourably placed for evening observation in September and may be located in the west after sunset, whilst Venus, still close to the Sun, will become a bright evening object later in the year.

THE MOON

New Moon	Sept 23	Oct 23
First Quarter	Sept 30	Oct 30
Full Moon	Sept 8	Oct 7
Last Quarter	Sept 15	Oct 15

President	Peter Norman	(059) 75-3040
Vice President	Bruce Tregaskis	787-2444
Treasurer	Peter Brown	789-5679
Secretary	Don Leggett	(059) 85-4927

"Daryl Martin, the Victorian co-ordinator of the National Association of Planetary Observers Meteor Section, extends his apologies to the members who requested "Meteor Observing Kits" at the February meeting. Problems developed with photocopying the large amount of material that constitutes the kits; however, everyone should have received their kits by now. Members are also reminded that their observations should be received at the beginning of each month by Daryl or his assistant."

Chinese jets chase UFO

30/8/81

PEKING, Sat. Reuter — Chinese fighter pilots tracked an unidentified flying object that appeared over Shanghai on Thursday night for seven minutes before it vanished in the East China Sea, the China Daily said today.

The UFO was described by one of many witnesses as looking at times like an oval plate and at others like a comet with an umbrella-shaped tail.

China Daily said its staff member Yao Kang saw the UFO above People's Square in central Shanghai while he was walking with his wife and baby shortly before eight o'clock on Thursday night.

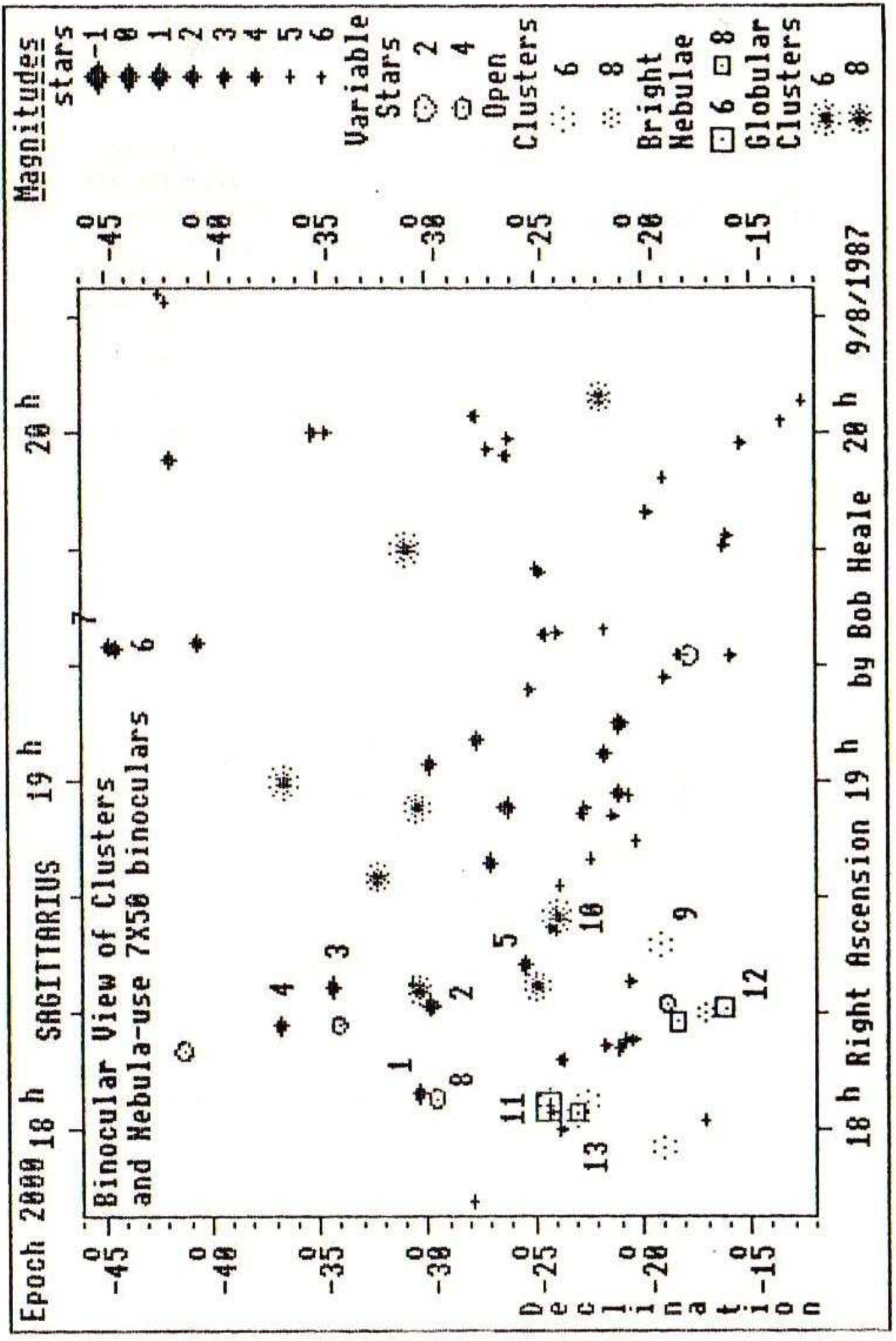
"I looked up and saw an amazing reddish orange basin-shaped luminary hanging in the sky over the south-west of the square," he said.

Shu Jiaxin, chief engineer of the Shanghai Meteorology Bureau, said the UFO was probably caused by meteoric ice.

SAGITTARIUS-Interesting objects visible to the unaided eye or visible in 7X50 binoculars or an astronomical telescope
All telescope magnifications have been calculated assuming an average 40 degree ocular or eye-piece is used.
1 Gamma,a mag.3,yellowish single star in a fine region of the Milky Way.50' du north is object 8.
2.Delta,a mag.3 yellowish single star.
3.Epsilon,a mag.2 bluish-white,single star,a small telescope shows the interesting colour contrast of Epsilon with the bright yellow tint of both Delta and Gamma.
4.Eta,a mag.3,orange,single star,which appears as brilliantly orange,with a white companion star nearby.
5.Lambda,a mag.3,yellow,single star lying in a delightful Milky Way field.
6.Beta 1 Sagittarii and 7.Beta 2 Sagittarii appear as a visual double star.Beta 1 is blue,Beta 2 is yellow-white.However Beta 1 Sagittarii is a double star, visible only in a large telescope.
8.W Sagitta,a mag.4-5,yellow-orange,Cepheid Variable star.
9.M25,a galactic star cluster,bright(mag.6),small and quite scattered(32'in length),so it requires 75X magnification to see it fully.
10.M22,a mag6,globular star cluster,24'in diammeter,requiring 100X to see its structure.Wonderful,containing several hundred thousand stars.
11.M8,the Lagoon Nebula,one of the finest diffuse nebula,visible to the unaided eye as a glowing comet like patch.It is 90'X40'so using 26X in a telescope will show the irregular nebulosity.Higher magnification will show a scattered open cluster NGC6530 within the nebula region.
12.M17,the Swan or Omega Nebula,a most prominent diffuse nebula,appearing like the tail of a comet to the unaided eye.It is 45'X35' so use 53X to see its full beauty.
13.M20,the Trifid Nebula,so named for its 3-lobed appearance,a fairly prominent diffuse nebula,bright(mag.8) and easily visible in 7X50 binoculars.It is 29'X27' so use 82X to see it fully.It contains the open cluster NGC6514.

Bob Heale 9/8/1987

Mornington Peninsula Astronomical Society


Epoch 2000
18 h
SAGITTARIUS
19 h
20 h
Binocular View of Clusters
and Nebula-use 7X50 binoculars
Declination
-45°
-40°
-35°
-30°
-25°
-20°
-15°
18 h
Right Ascension
19 h
20 h
by Bob Heale
9/8/1987
Magnitudes
stars
-1
0
1
2
3
4
5
6
Variable
Stars
2
4
Open
Clusters
6
8
Bright
Nebulae
6
8
Globular
Clusters
6
8
1
2
3
4
5
6
7
8
9
10
11
12
13