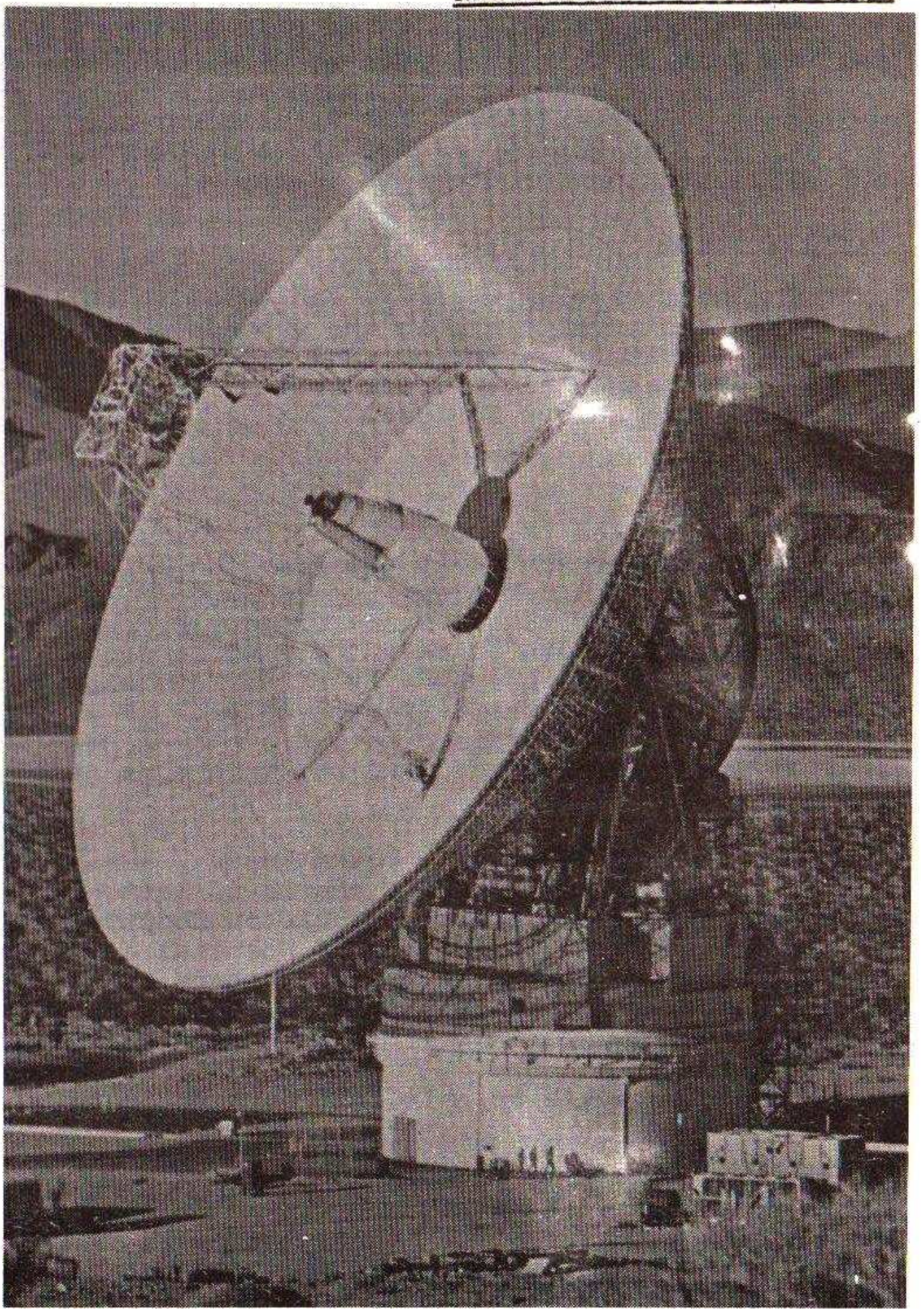
Astronomical Society of Frankston

NEWSLETTER - AUGUST, 1983



Meeting Wednesday, August 24th

The Society's meeting for August will be held on Wednesday, August 24th in Room Bl.37 of the Chisholm Institute of Technology, McMahon's Rd., Frankston. The speaker for the evening will be Society member Steve Wilbourne, who will speak on Computers in Astronomy.

Viewing Night

The next viewing night is schedules to be held, weather permitting, in the grounds of the Chisholm Institute on Friday, 2nd September. Members are requested to bring portable telescopes and binoculars for use.

Society News

The scheduled talk on Radio Astronomy, intended to be presented at the July meeting by Mal Wilkinson of A.S.V., was unable to be delivered. In its place, Bruce Tregaskis, our Society Vice-President, presented a slide show of his astronomical photographs of various star fields, identifying the different objects of interest and providing information on the types of film and exposures required for this type of photography.

Our Society President, Peter Norman, was suddenly taken ill during the course of last month and spent some time in Frankston Hospital as a result. Peter is now out of hospital and convalescing and on behalf of all members is wished a speedy return to his normal health and fitness.

Bruce Tregaskis reports that he expects to

be participating with a small group of Astronomical Society of Victoria members in a week-long visit to Mt. Stromlo Observatory in October. During this period the group will have the use of an Observatory 75 cm reflector and associated electronic equipment for observations of some special types of variable star. This visit follows a similar visit of the same type by A.S.V. members earlier in the year.

Charts and Observing Manuals for the Amateur Astronomer

A wide range of publications is currently available to the amateur looking for assistance in learning the patterns of stars at different times of the year and in identifying those objects of interest which can be viewed by naked eye, binoculars or small telescope. Of these, one in particular has stood the test of time through many editions and can fairly be described as the single most useful manual for the amateur astronomer. This is Nortons Star Atlas and Reference Handbook, first published 1910 and now in its 17th edition as of 1978. The first part of the book consists of over 100 pages of reference material on basic astronomy, both theoretical and observational. This is followed by a total of 16 sky charts showing stars to 6th magnitude, the Milky Way, and altogether over 8,000 objects from double and variable stars to clusters, nebulae and galaxies. In addition, there are maps of the Moon and the surface of Mars.

For observers requiring more details of fainter stars and other objects, there is also the Skalnate Pleso Atlas of the Heavens, published by the Czechoslovak Academy of Sciences in two editions with English text, a deluxe edition using various colours on a white

background, and a field edition of smaller size, white on black background, for use at the telescope. Stars in the Skalnate Pleso are plotted to 7.75 magnitude and numerous other objects are identified on the 16 charts. In addition, there is available a separate "Atlas Catalogue" providing all sorts of interesting information on the individual stars and other objects on the charts.

Another useful publication from Czechoslovakia is the book The Amateur Astronomer, first published 1979. This contains a basic introduction to astronomy, and in addition to eight somewhat simple star maps has excellent maps of the Moon's surface and good observational maps of Mars, and also Mercury. At the rear of this book is a section giving the position of the planets and phases of the Moon from 1979 to 2000, including also eclipses of the Sun and Moon.

For observers of the Universe outside the Solar system, a great wealth of information on every type of celestial object is to be found in Burham's Celestial Handbook, a three volume publication of American origin. The text is arranged by constellation and provides much detail and cultural and historical perspectives for stars, clusters, nebulae and galaxies. For the observer wishing to understand what is to be seen in the sky there is really no better publication than 'Burnham's'.

Sky Notes

As winter progresses into spring so the bright Milky Way constellati ons of Scorpius and Sagittarius move away from the zenith towards the west, to be succeeded by the constellations of Girus, the Crane, Piscis Australis, the Southern Fish, and below them to the north the Zodiacal constellations of Capricornus and Aquarius. The bright star Alpha Capricornii is noticeable as a naked eye double star. However, the two stars are not physically related but merely in the same line of sight, one star being about 100 light years distant and the other about 500 light years away. Below, and to the right of the group of stars known as the 'Water Jar' in Aquarius, is the large star grouping known as the Great Square of Pegasus, formed by four bright stars, one of which is actually in the neighbouring constellation of Andromeda.

Late August and September this year provides a good opportunity for identification of the planet Mercury, nearest planet to the Sun, in the west after sunset. This rapidly moving bright planet can be seen to change position relative to the stars over the space of a day or so, and replaces Venus as a bright "Evening Star" as the month progresses.

Detailed investigation of the surface of Mercury was begun in the years 1974—1975, when the US space probe Mariner 10 flew past the planet three times and transmitted to Earth television photos and the results of physical measurements. The best photographs made by Mariner 10 have a resolving power of 50—100 metres, which is approximately 10,000 times greater than can be attained from the Earth. The space probe passed over the day as well as the night side of Mercury, always under identical conditions of illumination by the Sun; in all, it succeeded in mapping in detail approximately 40 per cent of the planet's surface.

Higher in the sky, Jupiter and Saturn remain visible in the evening for another month or so, Jupiter remaining in the vicinity of Uranus in Scorpius.

The Moon

New Moon	Aug 9	Sept 7
First Quarter	" 15	" 14
Full Moon	" 24	" 22
Last Quarter	" 31	" 30