



# SCORPIO

The Journal of the  
Astronomical Society of Frankston Inc.  
P.O. Box 596, Frankston, Victoria 3199

Volume IV No. 5 1995

The Astronomical Society of Frankston was founded in 1969 with the aim of fostering the study of Astronomy by amateurs and promoting the hobby of amateur Astronomy to the general public. The Society holds a General Meeting each month for the exchange of ideas and information. Regular observing nights, both private and public are arranged to observe currently available celestial objects. In addition, the Society provides the services of its members for educational presentations or observing nights for schools and local community groups.

Meeting Venue:  
The Peninsula School  
Wooralla Drive, Mt Eliza  
(Melways Map 105, F5)

Room F6 at 8:00pm on the third  
Wednesday of each month  
except December.

Visitors always welcome

Annual Membership Fees  
Full Members \$20  
Concession Members \$15  
Family Members \$30  
Family Pensioners \$25  
Newsletter Only \$10

Membership fees are due  
1st January each year.

President  
Peter Lowe 018 318 920

Vice President & Editor  
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Peter Brown (03) 9789 5679

Secretary  
Don Leggett (059) 85 4927

## FUTURE EVENTS

### General Meetings:

#### **Wed 18th October**

Session 1: Video on *Comets*, due to the recent new discoveries. Note the topic change.

Session 2: David Girling & Bob Heale on *Practical Astronomy*.

#### **Wed 15th November**

Annual General Meeting (15 minutes long is the target!).

Nominations are hereby called for Committee for 1996. Use the back page or take a photocopy.

Session 1: Background on Jupiter to herald Galileo soon to arrive. Video of *The Christmas Star* for those who missed it last time.

Session 2: David Girling & Bob Heale on *Practical Astronomy*.

#### **December**

Remember, no meeting this month! Next in January.

#### **Wed 17th January 1996**

Session 1: Talk on *Vermin of the Sky* by Peter Lowe.

Session 2: David Girling & Bob Heale on *Practical Astronomy*.

#### **Wed 21st February 1996**

Session 1: Talk on *From the Smallest to the Biggest in the Universe* by Peter Skilton.

Session 2: David Girling & Bob Heale on *Practical Astronomy*.

### Viewing Nights:

#### Members Only:

Sat 21st & 28th October, 18th & 25th November, 16th December all at *The Briars*, Nepean Hwy, Mt. Martha (Melways 145, E12). If weather forecast for the Sat looks bad, the Friday before may be used instead. Always confirm with David Girling on (059) 76-2806 before attending. Meet at the Briars' Visitor Centre at 7 pm sharp (or 8 pm with Daylight Savings).

#### Public:

None advised.

#### School/Community Groups

Viewing nights or slide nights:

None advised.

### Social Events:

- Film night for "Apollo 13" is still up in the air (pardon the pun). Details will be provided at monthly meeting.
- Guy Fawkes Car Rally & Sausage Sizzle, Sun 5th Nov from 1 pm to 4 pm. Cost will be \$5 a head (sausages included). Details provided at monthly meeting. Come join the fun.
- Christmas Breakup, Mt. Martha Park, Sat 2nd December, 4pm in the picnic area. Melways 150, H7.

### Phenomenal Events:

- *Orionids* meteor shower is from Oct 2 to Nov 7. If you can find Orion, you can find it. If not, ask in the Practical Session at meetings.
- *Lunar eclipse* visible on Monday, Oct 9, reported in last edition.
- *Remember: Daylight Savings* begins overnight on Oct 28/29. Clocks go forward 1 hour.

### **NEW MEMBERS**

A warm Solstice welcome to the following new members of our Society:

Susan & John Fraser  
Adrienne, Robyn, Simon  
& Trevor Meyer  
Christopher Turner

Total membership is 70 at the moment, keeping us the 2nd largest Society in Victoria. Please feel free to say hello at general meetings, where your name tag will be made available. Society badges showing the logo, Planispheres and Astronomy books & posters are also available at monthly meetings.

### **HELP NEEDED**

Is your mailing label correct? If you wish any changes, no matter how minor, please pass them on to the Secretary at meetings.

### **COMMITTEE NEWS**

Due to lack of offers of help from the last meeting, the fund raising drive for the Observatory has been put on hold.

The question of our hosting the next VASTROC in 1997 was raised again. Feedback from previous hosts was not overly encouraging as the workload and costs can be onerous - something we don't particularly relish when establishing an Observatory. Committee will investigate the costs further. However, in principle favourable noises were made.

The annual question of subscription rates was raised as the AGM is the only time that changes are permitted. Due to the running costs of the Society increasing significantly this year (particularly insurance), and the fact that no increase has occurred for very many years now, it was decided to discuss this further. Members will be aware of the fact that we are one of the cheapest Societies in Australia to join. New members of course will be pro rata'd. If any members are particularly adverse to this due to severe hardship, please approach a Committee member at meetings.

It was decided to have a basic Astronomy lecture twice a year for absolute beginners.

Don Leggett

### **AUGUST MEETING**

The meeting was well attended with over half our membership there. The planned talk on Asteroids did not go ahead as the speaker was unable to get away from work on the night. This will now be heard in January next year. Nevertheless, handout sheets for the talk were distributed. David Girling held the fort and talked on different types and sizes of eyepieces used in telescopes. This was an interesting subject for those wishing to get the best use of their telescope. Bob Heale presented on what is in the night sky at the moment, providing data on the new comets and how to find them. Many other interesting discussions ensued over coffee and biscuits.

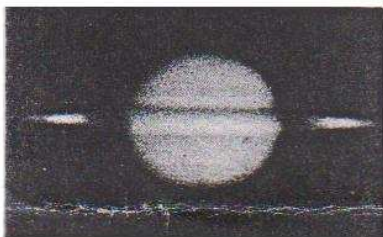
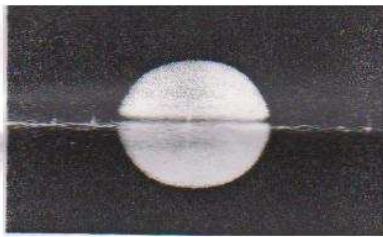
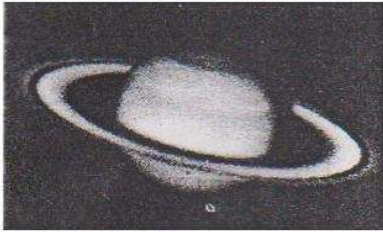
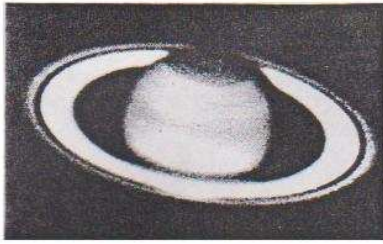
Ros Skilton

### **JUST FOR STARTERS**

#### ORIGIN OF SOCIETY LOGO

A number of newer members have asked me about the origin and meaning of the Society's logo, also shown on the front page of each newsletter. As the designer, in conjunction with Ros Skilton, they picked the right person to ask. About 5 years ago now, there was a competition held within the ASF for a design that would best characterise the Society and its aims. It was a closely fought contest with several designs forthcoming.

The logo shows an unmistakable aerial view of Port Phillip bay and its surrounds, with Frankston naturally at the centre. The map is superimposed by the 60 degree parallel of declination which has its centre (the South



## TALL TALES AND TRUE?

It is not possible to see normally invisible stars with your eyes during the daytime by looking up a long well or tall chimney. It is a myth that has grown over the years that you can do this.

Since stars are visible at night, it seems reasonable to suppose that if you looked up a dark well or chimney it would be the same as looking at a night sky. But it isn't. The small patch of day sky around a star is just as bright when viewed through a long chimney or well of any length, as when you are standing in an open field. When you are looking at a star, only blue light that is being scattered in a small patch around the star actually enters the front of your eye and hence reduces the contrast for seeing the star. If you put a brick wall around this column of light coming from particles high in the air it makes no difference since the same amount of light still reaches your iris. The star stays invisible since your eye has a magnification of one.

Viewing a star in daylight through a telescope is a different matter since it has a large magnification. As magnification increases, contrast increases and the background sky gets darker.

To see how this occurs, imagine a star being viewed against a portion of sky the size of your fist. It is invisible, say, if you look at it with your eye. If the magnification becomes  $\times 100$  by using a telescope, the star still stays a pinpoint of light because it is just far too far away to be resolved. However, the patch of sky the size of your fist is magnified to 100 times this size,

and the photons of light that were coming from it are now spread thinly over this much larger area. Since the telescope is still looking at a small patch of sky the size of your fist, the number of photons of light reaching your eye from this patch is now very much reduced. The contrast has therefore improved enormously and the star becomes visible.

A few years ago, Peter Lowe tried looking up a tall furnace chimney where he works to test this out. His report was given in the *September 1993* newsletter.

## FINAL PRONOUNCEMENT - BETELGEUSE

This red supergiant star is the brightest star in the constellation Orion, and is one of the largest stars of its type known. Speckle interferometry has actually directly measured the diameter of this star to be 800 times the size of our Sun, and images taken show large Starspots, analogous to our own Sunspots. The star is 20 times the mass of our Sun, and its brightness varies from Magnitude 0.4 to 0.9 every five years, making it an easy naked eye variable star. Its name is pronounced as "bett-ell-juice". Details of this star were provided in a feature article in the *January 1992* edition of the newsletter.

If you have any Astronomical word that has been niggling you for years, drop it in the question box at a General Meeting and let us look into it for you?

## BACK ISSUES

Copies of past editions of the ASF Newsletter are available at \$3 each from the Editor.

Observing Period 15th November,1995 - 16th January,1996

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 Nov 15 twilight ends 9 50 p.m.,begins 4 15 a.m. Summer Times  
 Jan 16 twilight ends 10 35 p.m.,begins 4 30 a.m. Summer Times  
 Interval between seeing Sun and all stars is about 90 minutes.

The planets

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 As of 15/11,Mercury is in the morning sky but too close to the Sun.No Mercury observing until around 6/12 and after 8 35 pm,when it begins to rise into WSW evening sky,reaching its highest altitude of 14 degrees on 27/12 and reaches GEE on 8/1 of around 14 degrees.Good high path and pretty passage over and above SAGITARRIUS teapot and clusters from 12/12 to 17/12.

As of 30/10,Venus is in western evening sky away from the Sun,reaching its highest altitude of 32 degrees,due west around 29/12.It hangs around here until 22/1 at phase of .7 Pretty passage from 3/12 to 10/12 similar to Mercury.

Mars is still in western evening sky,altitude 14 degrees and descending fast after 17/12.Pretty passage 12/12 to 27/12 similar to Mercury.Probably too close to the Sun by 10/1 and moving into the morning sky for March.

Jupiter is still in western evening sky,descending faster than Mars.Too close to the Sun by 5/12-be quick.Moving into eastern morning sky in March .

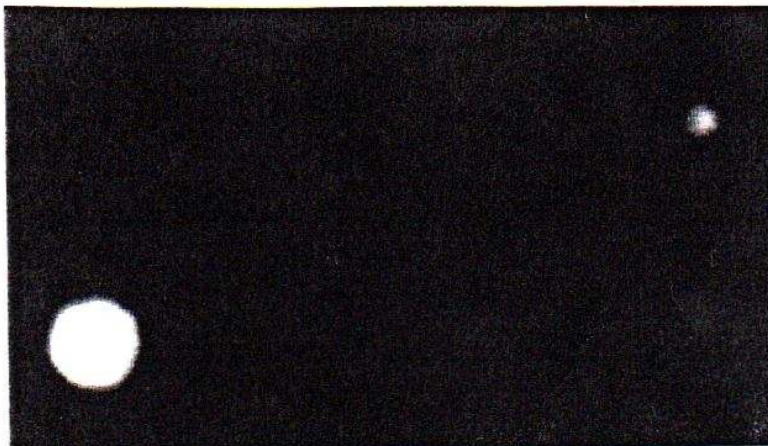
Saturn is high in due north night sky,around 50 degrees altitude,east of red Phi Aquarii and reverses its motion around 23/11,moving back into PISCES.An uninspiring path,but planet looks great (rings coming back after computers were on line for a while,but now computers are going quite off).Visible all night until mid-January.

Events

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 15/11 11 pm Last Quarter Moon  
 16/11 and  
 19/11 8 pm or later Mars,Jupiter and Venus close WSW,15 degrees altitude  
 22 to  
 22/11 8 pm or touch later Mars and Venus close WSW,15 degrees altitude  
 23/11 3am New Moon 28/11 Venus near SAG oc N6530  
 24/11 5 pm First Quarter Moon 7/12 12 pm Full Moon  
 12/12 Mercury passes SAG oc N6530 15/12 5 pm Last Quarter Moon  
 17/12 Mercury passes SAG gc N6656  
 22/12 1 pm New Moon and 7 pm Summer Solstice  
 23/12 6 pm Mars 6 degrees south of Moon 8 pm Mercury 1.1 degree south of Mars  
 24/12 9 pm Venus 7 degrees south of Moon 29/12 6 am First Quarter  
 5/1 Near Full Moon,phase .996 rises 8 pm ENE  
 9/1 Gibbous Moon phase .7 ,rises 10 27 pm,a touch north of east  
 10/1 Venus very slightly NW Delta Capricornii  
 13/1 Near Last Quarter Moon,phase .61,rises 12 35 am (early morning),10 degrees south of east

Bob Heale ASF 11/11/95

The best image ever taken of Pluto and its smaller moon Charon, as taken by the Hubble Space Telescope in Earth orbit. Pluto is roughly 100 pixels across, while Charon is about a tenth of this resolution. Pluto is currently the 8th planet out from the Sun, with Neptune being the 9th. This is due to the highly eccentric orbit of Pluto compared with that of Neptune. In 1999, Pluto will again take its rightful place as the 9th planet from our Sun.



If **undelivered**, return to Astronomical Society of Frankston Inc.,  
GPO Box 596, Frankston, Victoria 3199.



Note: If this box is ticked then membership has lapsed and this will be your last edition of the newsletter. Please contact the Treasurer in this case.

### **ASF Inc. Annual General Meeting Elections**

Nominee: \_\_\_\_\_

Position (circle 1 or more):

President, Vice President, Treasurer, Secretary, Public Officer,  
Ordinary Committee Member (5), Editor, Librarian, Public Relations Officer,  
Viewing Night Co-ordinator, Phenomena/Observations Officer.

Secunder: \_\_\_\_\_

Acceptance Signature of Nominee: \_\_\_\_\_ **Return to Secretary  
by end October.**