



SCORPIUS

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

Reg. No. A268

Volume IX, No. 2 2000

(Mar - Apr)

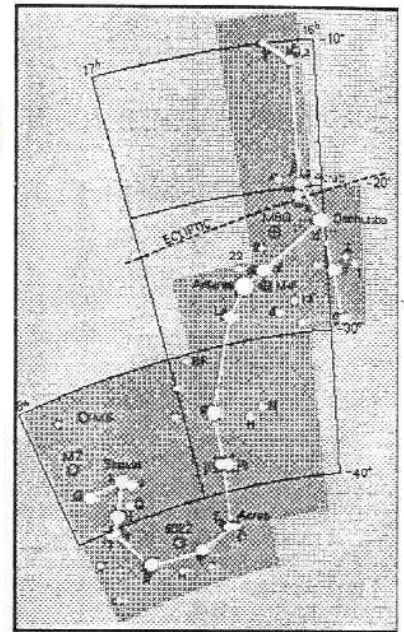
The Astronomical Society of Frankston was founded in 1969 with the aim of fostering the study of Astronomy by amateurs and promoting the hobby of amateur Astronomy to the general public. The Society holds a General Meeting each month for the exchange of ideas and information. Regular observing nights, both private and public are arranged to observe currently available celestial objects. For decades the Society has provided *Astronomy on the Move* educational presentations and observing nights for schools and community groups exclusively in the Peninsula and surrounding regions to Moorabbin, Dandenong & Tooradin.

Meeting Venue: Peninsula School, Wooralla Drive, Mt. Eliza (Melways map 105/F5) in the Senior School at 8pm on the 3rd Wednesday of each month except December.

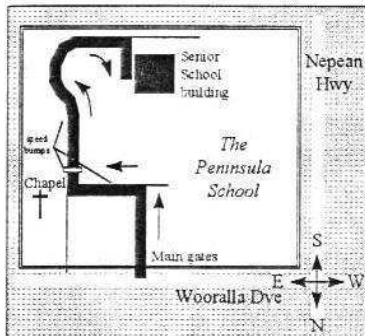
Phone: 0419 253252

Internet: <http://www.peninsula.starway.net.au/~aggro/index.html>

Email: aggro@peninsula.starway.net.au



Visitors are always welcome!



Annual Membership

Full Member	\$30
Pensioner	\$25
Student	\$20
Family	\$40
Family Pensioners	\$35
Newsletter Only	\$15

President & Acting Editor

Ian Porter (03) 59 854203

Vice President & Loan Instruments

Richard Pollard (0419) 100 802

Treasurer

Bob Heale (03) 9787 1748

Secretary

Roger Giller (03) 9702 2685

Committee of Management

John Cleverdon, Don Leggett, Peter Lowe,
Peter Skilton, Sally Zetter

All phone calls before 8:30pm please.

General Meetings:

Wed 19th APR 2000 At the Peninsula School

Session 1: Beginners introduction session.

Session 2: Loan telescope outside if weather is clear.

Session 3: Forum/chat/Video

Viewing Nights:

Members Only:

Sat Apr 29, May 6/27 June 3 all at *The Briars*, Nepean Hwy, Mt. Martha (Melways 151/E1).

If weather forecast for the Saturday looks bad, the Friday before may be used instead. New attendees must always confirm with Ian Porter on 5985 4203 before attending. Remember for security reasons you can only attend on planned Members' Nights, unless by prior arrangement with Ian who will liaise with *The Briars* accordingly. Last person out must switch on the shed security light.

Public, School & Community Groups Viewing/slide nights:

If you can assist, please contact the

Secretary.

- The once-a-month basic public viewing nights at *The Briars* will continue on the first Friday of each month. The next nights are on Fri 7th Apr and Fri 5th May, all at 8pm. Assistants are required.
- St Francis Primary School, Camp Manyung, May 8th and 10th. Please put your name on the sheet at the meetings if you can make it to one of these nights.

Phenomenal Events:

- Look out, the end is coming! Keep an eye out in the news for references to the planetary alignment occurring in May. Predictions of earthquake, flood volcanoes and general disasters will certainly abound! What is the truth? Well, a copy of *ASTRONOMY 2000*, Available for \$16 to members will get you started!

Social Events

- The Planetarium has told us it will be able to offer an appropriate show to us some time in the mid

year, so stay tuned.

- NACAA 2000. The 19th National Australian Convention of Amateur Astronomers is to be held in Perth over Easter (Apr 21-24) next year, and the 2nd circular has now been issued, calling for registration and papers. For more information, see any Committee member for details.

YOUR SOCIETY

NEW MEMBERS

Welcome to the following new Society members:

David Stock
Garry Thompson

The ASF is one of the largest astronomy groups in Australasia. Membership is currently at 162. Please feel free to say hello at general meetings. Specialised badges, windcheaters, T-shirts, books & posters are available at meetings. Society name tags are free to new members who attend meetings. Members are able to borrow library books and are entitled to attend special viewing nights at *The Briars* where you can discover the secrets and glories of the night sky.

HELP NEEDED

Articles, features, book reviews, member observations and points of general interest for this journal are always welcome. New contributors are encouraged. For example do a bit of reading and pass on some information, but remember not to plagiarise. Hand written material is fine; computer text files are perfect. The editor will even correct any mistakes you might make, so don't be bashful.



RECENT MEETINGS

- The first few meetings of this year have been held in trying circumstances due to the renovations to the Peninsula school venue. January and February meetings were held in the Briars Visitors centre. Despite the lack of our usual facilities we managed to muddle through and have some fun. Thanks to the Vice-President for ably chairing the Feb meeting.
- March's meeting saw a return to the newly refurbished venue, and

I must say that when I saw the new facilities, I felt that it was all worth it. With a fantastic lecture theatre and other facilities now available to us, the new year looks good. The meeting started with the usual society business and regular presentations of "Sky for the Month" and "What goes up". Richard Pollard had photographic plates from the UK Schmidt telescope at Siding Springs on display. The plates were swapped for an ASF windcheater! Obviously, our fame has preceded us. The raffle prize of a Tektite (a fragment of earth, melted and shaped by a large meteor impact), drew a great response. After the break, Trent Veitch showed a number of members around the sky with the loan telescope, and a forum discussion about the possible colonisation of Mars was held in the lecture theatre.

- On the 24th of March 25 members gathered at the Baxter Tavern for dinner. It has become somewhat of a tradition to hold social dinners at the spring and Autumnal equinoxes. The equinox is the day the length of night and day are equal, and usually occurs around March 21 and September 21. This year the March equinox occurred at 6pm on 20th of March, a fact drawn for the pages of ASTRONOMY 2000, on sale for \$16 dollars to members!

AURORA NETWORK

Recent auroral activity proved to be the first test of the societies network to alert members to aurora. Several members reported on their observations at the last meeting.

If you are interested in finding out more about this network for members, please contact Roger Giller on (03) 9702 2685 who is co-ordinating it.

SECRETARY'S JOTTINGS

- The society now has a mobile phone to act as the main contact number. This should alleviate the problems with the constant changing of numbers as members

take on new positions or move on. The number is

0419 253252.

- The number should be used for all contacts, unless you specifically wish to speak to someone. In particular, please give this number to people who wish to book for public nights, or have general enquires.
- Continuing thanks to all who participated in the school and public nights, particularly to Richard and Bob, who shoulder the bulk of the organisation for these nights.

LIBRARY MATTERS

The library has acquired some more material from the sale of Astronomy 2000 almanacs. These are available for borrowing by full members. Our librarian, Kathy Stabb, is more than willing to show you what is available. Members are reminded that borrowings are for a period of **one month** only, and can be reissued if necessary if you take the courtesy of phoning Kathy or any of the committee members who will relay the request.

Philip's Atlas of the Universe by Patrick Moore. This excellent latest edition hardback is a definitive reference to the stars, planets and the universe at large, containing hundreds of photographs from ground-based and space-based telescopes. It is divided into main themes of exploring the universe, the solar system, the sun, the stars, the universe, star maps and the practical astronomer.

Philip's Epoch 2000 Colour Star Atlas by John Cox & Richard Monkhouse. These A2-sized, star maps show all stars visible to the naked eye, colour coded by spectral type, with an explanation of the observable properties of stars in the sky. This atlas is ideal for beginners whose only instrument may be binoculars or even just their own eyes.

Philip's Southern Stargazer Map & Guide Pack, by Robin Scagell. This field observing kit includes a high quality planisphere, a guide to the southern constellations and a full size star map in wall chart format.

The Planets video, by BBC Worldwide video. This is the truly magnificent boxed double video that accompanies the book donated to the library last year by Sally & Jason Zetter. It employs state-of-the-art computer graphics, unseen space race material, and interviews with scientists involved in space exploration. The episodes include different worlds (a look at space travel), terra firma (the missions to our neighbours in space), giants (the giant planets of our solar system), moon, star (the latest on our star, the Sun), atmosphere (a voyage through the skies of the planets of our solar system), life (a look at the search for it outside Earth) and destiny (what will happen to the planets over the next 4 billion years)

The Sun: Seeing the Light, by ABC video. This excellent up-to-date video documentary traces the history of our Sun's life and our efforts to understand it from afar. This is particularly good viewing as our Sun enters the active period of its 11 year solar cycle, when flares become more common and aurorae appear in our skies.

Three Minutes to Impact, by Village Roadshow. This factual documentary details the frightening reality of possible cometary and asteroidal impacts on the Earth today, much as happened to the hapless dinosaurs 65 million years ago. This video

employs graphic computer generated images and simulations to make the threat vividly apparent, and includes plenty of material from Australia, and hitherto not well reported incidents.

Cosmos, by Carl Sagan. This is the classic story of 15 billion years of cosmic evolution transforming matter and life into consciousness, of how science and civilisation grew up together, and of the forces and individuals who helped shape modern science, as told by the late, great Carl Sagan.

Prisons of Light: Black Holes, by Kitty Ferguson. This is a comprehensive and detailed look at what is a black hole and how does it work, and what would we find if we ventured inside. The author uses plenty of analogies so as to aim it at as wide an audience as possible.

Stephen Hawking for Beginners, by J.P. McEvoy and Oscar Zarate. This book is presented in comic book layout as written by a journalist, with simple explanations of the physics and metaphysics behind Hawking's ideas on the universe and how it works. It complements and introduces for beginners other works by Hawking in the library, such as *A Brief History of Time*.

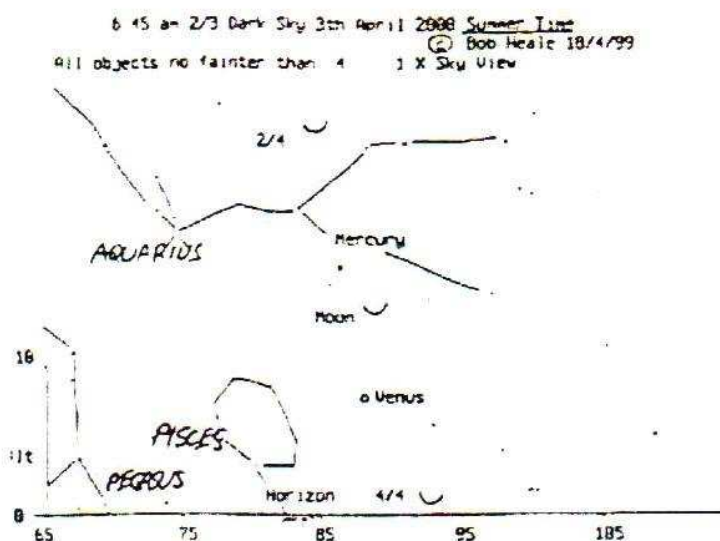
Eclipse: The Celestial Phenomenon which has Changed the Course of History, by Duncan Steel. This book

explains everything you are ever likely to want to know about eclipses, their science and their significance to humankind over the ages, including many of the deceptions that have been perpetrated by those who knew of an impending eclipse when visiting less sophisticated peoples.

Making & Enjoying Telescopes: 6 Complete Projects & a Stargazer's Guide, by Robert Miller and Kenneth Wilson. This book contains complete instructions for the novice on how to make six different sizes and styles of home-made telescopes. All are made with readily available materials. This book also traces the development of the telescope, and teaches the principles of design, construction, collimation and repair, as well as imparting many a tip and idea, as well as how to take photographs through a telescope. This is ideal for the beginner who would like to take their first step into instrument making. The six projects include a star tracker for your camera, a simple 4.5 inch rich field reflector, a 4.25 inch rich field reflector with a wooden tube, a six inch f/3.3 equatorially mounted reflector, an 8 inch f/5 reflector, and a 10 inch Dobsonian telescope.

National Geographic, October 1999. This millennium special edition contains maps of the universe, together with latest reports from Mauna Kea Keck observatory.

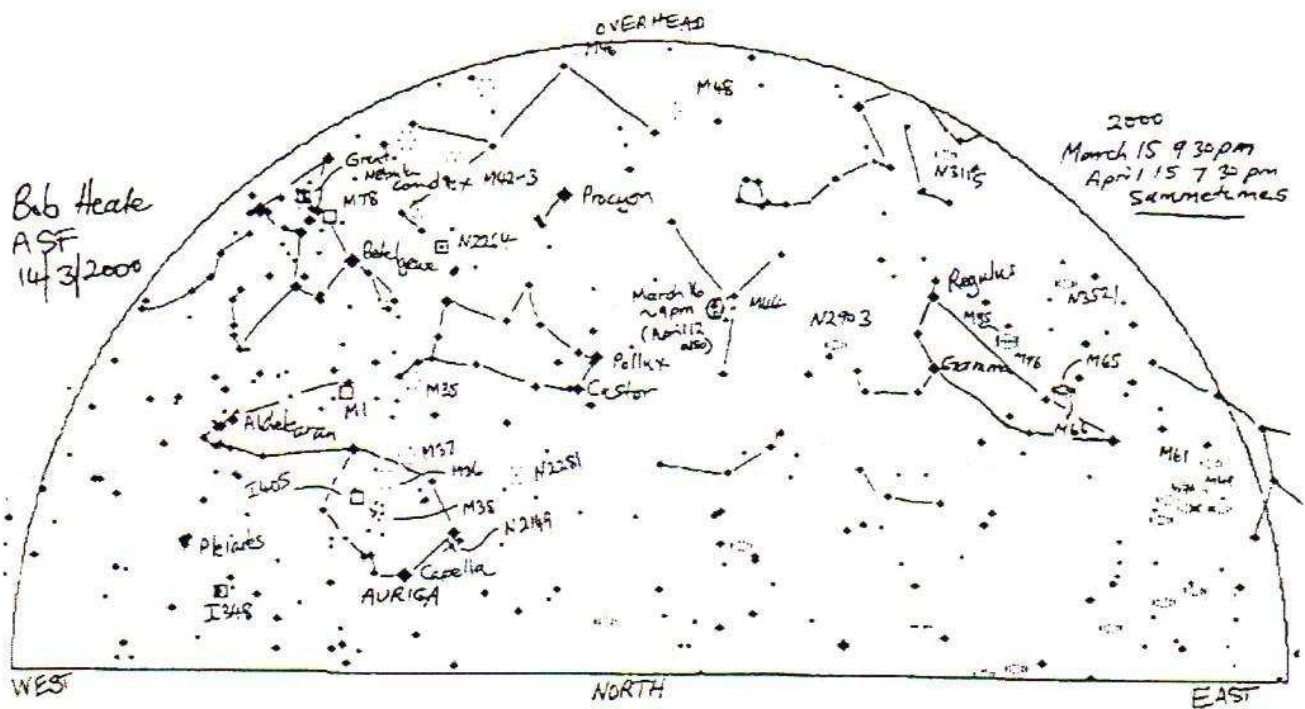
Sky for the Month



View to the West 6:45 am 3rd April 2000

No very early morning planets or night sky either, and it's not much better from view position of unknown planet! On north chart below, try for AURIGA objects while we have the chance (open clusters M36, M37 and M38 should be easy, anyone seen planetary NGC2149?).

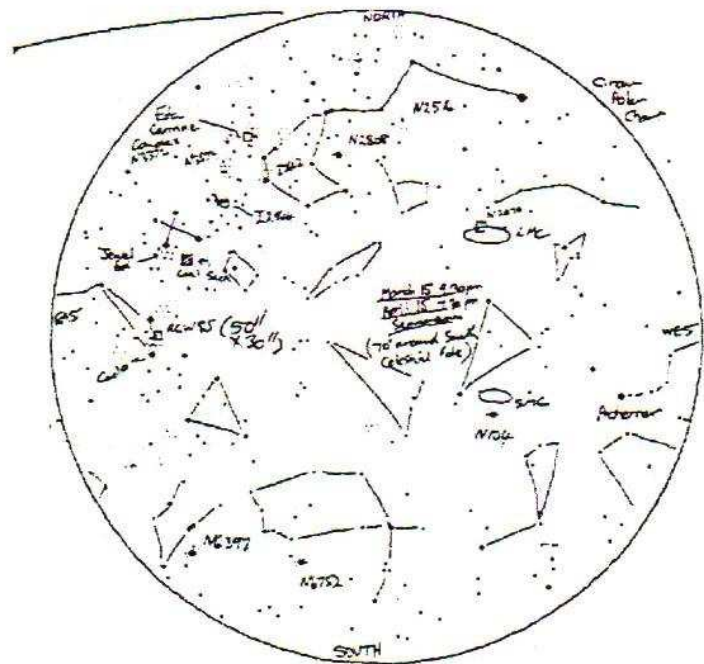
Galaxies NGC2903, NGC3114, M95, M96, M65, M66, M61 are easy. Obvious doubles are on chart. Gibbous moon goes for Beehive open cluster M44 on March 16 ~ April 12. No Bright Comets.



View to south centred on south celestial pole

Fast Challenges

Some objects between "pointer" stars Alpha Centauri and Beta Centauri. Nearly exactly midway between them is IC 4400 – small trapezium of 4 faint stars which appears to be nebulous in small scope. Move 40' SW to find Mag 5 star 9' S to curious emission nebula RCW 85, easy to find. In same low power field within 30' of mag 5 star is Lynga 2, easy any telescope – wedge shape outline and mag 7.5 star on S edge.



Bob Heale

END OF THE IRIDIUMS

You may have heard on the news about the forthcoming demise of the IRIDIUM mobile phone satellites. These satellites have provided spectacular optical flares over the

past 2 years, and have been a big hit at public nights, and for the general public. The company has gone into receivership, and has not been able

to arrange a buyer. At this point it seems the entire constellation of satellites, representing an investment of around 3-5 Billion US dollars will be placed in low orbit where they will quickly decay over the next few years. Unlike the President of the ASV, quoted in the newspaper as applauding the demise, I cannot help feeling we will be losing a terrific way of getting people to look up and see the sky. **Ian Porter**

DRAGNET

[NOTES FROM THE NET AND OTHER SOURCES]

THE SHADOW OF A PLANET slipping across the face of a distant star has been detected, for the first time, by veteran extrasolar-planet stalkers Geoffrey Marcy of UC Berkeley and Paul Butler of the Carnegie Institution, working with Greg Henry of Tennessee State University.

Prior in direct "sightings" of extrasolar planets consisted of small feints in the apparent position of the stars caused by the suspected gravity pull of an orbiting planet. Astronomers have felt that from among the growing sample of such planets (up to 25 as of now) a few (whose orbits would be viewed at Earth edge-on) might be detected directly as they pass in front of the star.

One such candidate was HD 209458. Prediction of a planetary transit for the night of November 7 proved accurate and a 1.7% dimming in the star's light was seen. (Announcement made in an International Astronomical Union circular.)

IO SODIUM JET. Astronomers have previously known of a sodium cloud which precedes the moon Io in its orbit around Jupiter. The cloud is believed to arise from slow escape of sodium from Io. Now the Galileo spacecraft is providing details of another sodium feature at Io, more of a fast-escaping spray or jet, thought to come about when Io plows through Jupiter's potent magnetic field, a process which

induces mega-amp currents through Io's atmosphere (see schematic at www.aip.org/physnews/graphics). New pictures, reported by scientists at the University of Colorado (Matthew Burger, burger@ganesh.colorado.edu, 303-492-3395, and Nicholas Schneider) and Boston University (Jody Wilson), localize the source of the sodium to a region smaller than Io's diameter, suggesting that Io's atmosphere might not be global; that is, the atmosphere might be patchy and not extend all the way to the poles. (Geophysical Research Letters, 15 November.)

ORIGIN OF RADIO JETS NEAR A BLACK HOLE. Black holes don't just sit there spiderlike swallowing stars. They also fling out vast plumes of light-emitting material; these collimated streams can stretch for hundreds of thousands of light years. One of the closest of these conspicuous jets is to be found at the heart of galaxy M87, about 50 million light years away from Earth.

Presumably the jet originates at an accretion disk surrounding a supermassive black hole. Previously, radio mapping of this spot in the sky did not possess sufficient resolving power to see precisely where the jet begins. But now, by pooling the extended radiowave gathering power of the Very Long Baseline Array (VLBA), the Very Large Array (VLA), and telescopes in Italy, Sweden, Finland, Germany, and Spain, astronomers have nailed down the jet origin to within tenths of a light year of the black hole's location. The resulting image (see www.aip.org/physnews/graphics) shows that the jet's initial opening angle is 60 degrees, the widest ever seen for a jet, although the jet becomes much more focused (6 degrees) further downstream. (Junor et al., Nature, 28 Oct.)

MIR REACTIVATED

A privately financed manned space flight to reactivate the Mir station and open it for commercial use will

blast off on April 4, delivering its cosmonaut crew to the orbital facility two days later.

MirCorp, the private company that holds a lease agreement for commercial operation of the Russian-built and owned station, today confirmed the timeline of this historic flight.

"The April 6 docking will fulfill MirCorp's promise to reactivate Mir, preparing it for commercial operations that are expected to range from industrial production and scientific experimentation to space tourism and in-orbit advertising," MirCorp President Jeffrey Manber said. "Mir will be the only real conduit to manned space commercialization for many years to come."

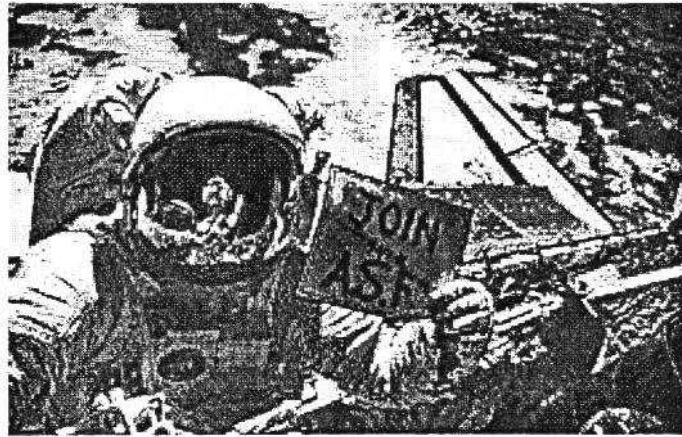
Mir has been unoccupied since 1999, and Russia would have been forced to allow the massive space station to burn up in the Earth's atmosphere if MirCorp had not provided private financing to maintain it.

Two Russian cosmonauts are to be launched April 4 from Kazakhstan's Baikonur Cosmodrome aboard a Soyuz transport spacecraft, and will spend two days orbiting the Earth as they "catch up" to the Mir station. The Soyuz docking with Mir on April 6 will deliver the cosmonauts for a stay of more than 40 days on the station during which they will bring Mir to a fully operational status.

A live television broadcast is to provide real-time images of the Soyuz/Mir docking on April 6 and of the cosmonauts' entry into the Mir station.

Holland-based MirCorp was formed earlier this year to operate as the direct link between commercial users of Mir and the space station's Russian operators.

[Spaceflight Now]



If your name and address details have changed or are incorrectly shown on this label, please send your updated details to the above PO Box number.

Richard Pollard

If **undeliverable**, please return to
Astronomical Society of Frankston Inc.,
PO Box 596, Frankston, Victoria 3199.

Photos Right & Below

Society Dinner at Baxter Tavern 24th March 2000

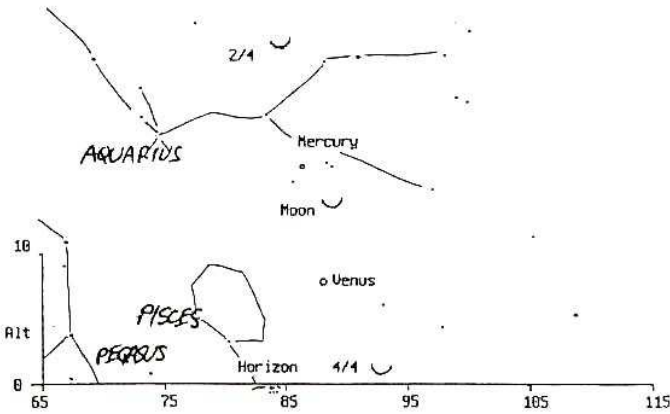
Taken by John Cleverdon



Kindly reproduced by the efforts of Ken Bryant, and collated/posted by Sally Zetter.

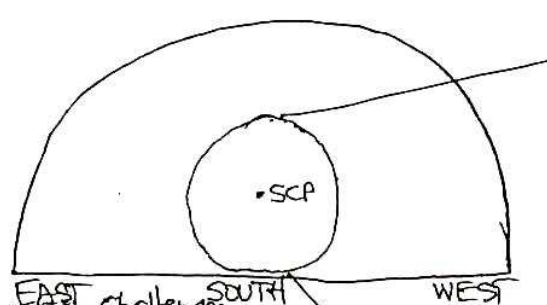
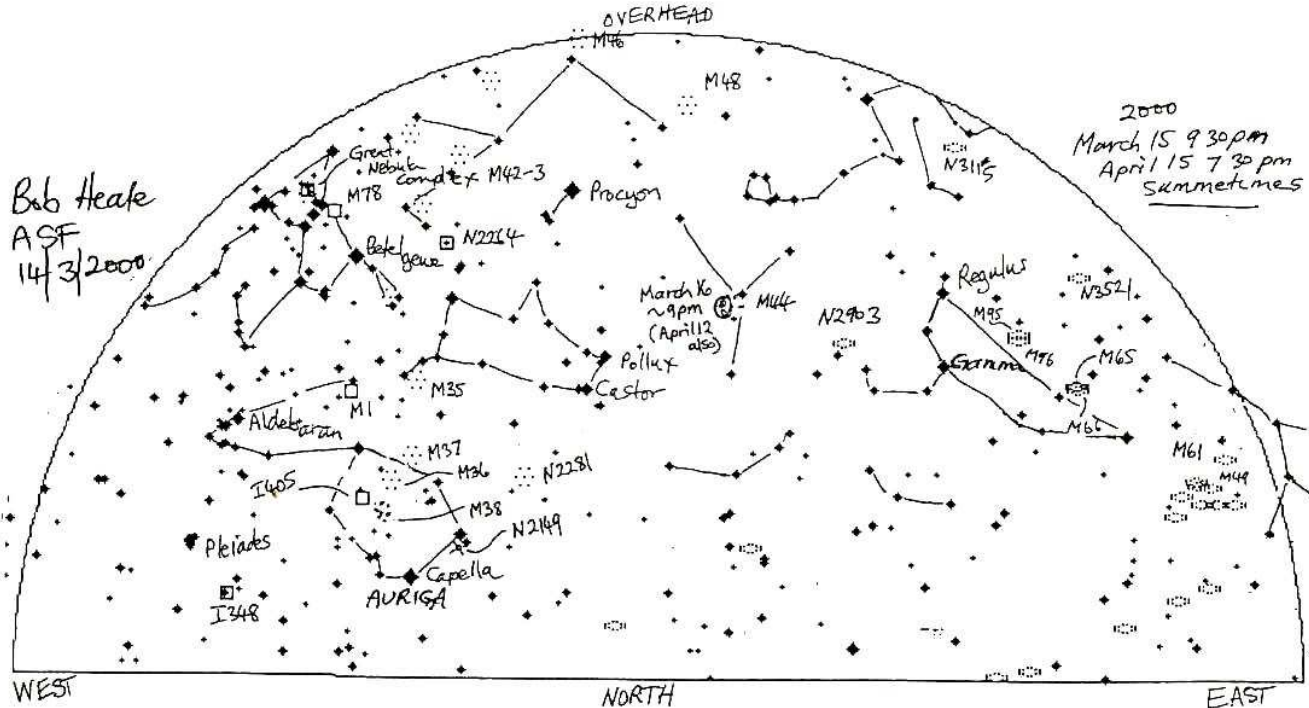
Sky For The Months March 15 - April 18, 2000 (inclusive)

6:45 am 2/3 Dark Sky 3th April 2000 Summer Time
 © Bob Heale 18/4/99
 All objects no fainter than 4 1 X Sky View

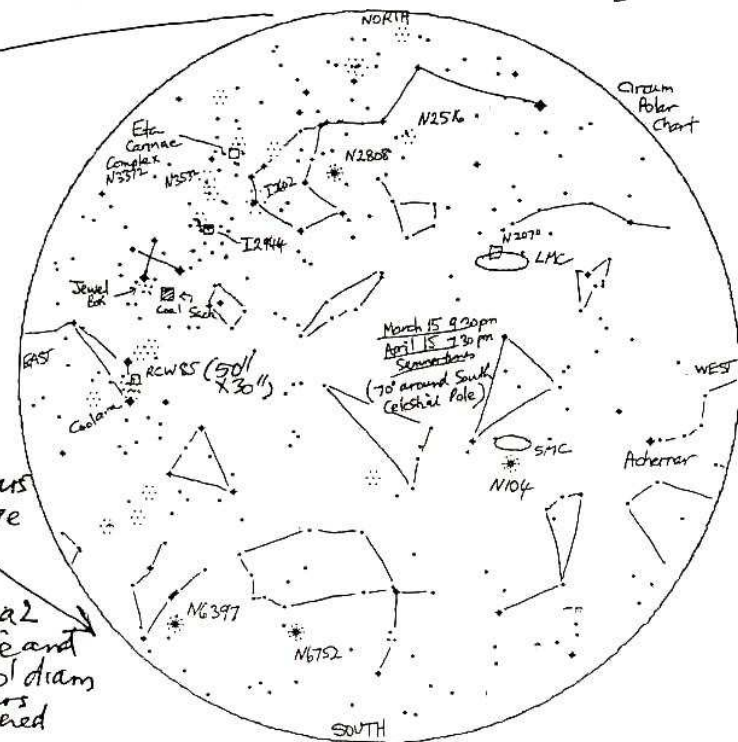


No very early morning planets or night sky either, and it's not much better from view position of unknown planet.

On North chart below, try for AURIGA objects while we have the chance (open clusters M36, M37 and M38 should be easy, anyone seen planetary N2149?). Galaxies N2903, N3115, M95, M96, M65, M66, M61 are easy. Obvious doubles are on chart. Gibbous Moon goes for Beehive open cluster M44 on March 16 and ~April 12. No bright enough comets



Some objects between 'Pointer' stars Alpha Centauri (Codara) and Beta Centauri - Nearly exactly midway between them is IC 4400 - small trapezium of 4 faint stars which appears nebulous in small scope. Move 40' SW to find mag 5 star, 9' S is curious emission nebula RCW 85, easy to find. In same low power field 30' of mag 5 star is Lynga 2 easy any telescope - wedge shape outline and mag 1.5 star on S edge. Trumper 22, 6' diam mag 10-12 stars largish + scattered 10' diam

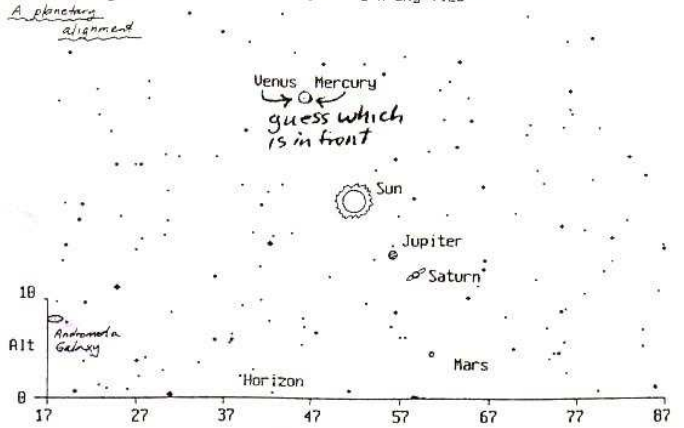
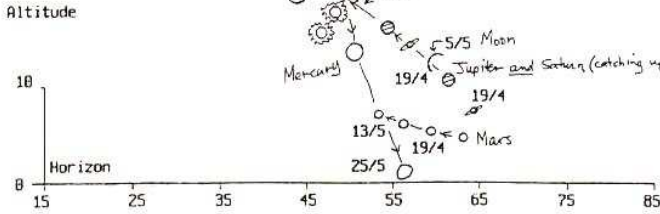
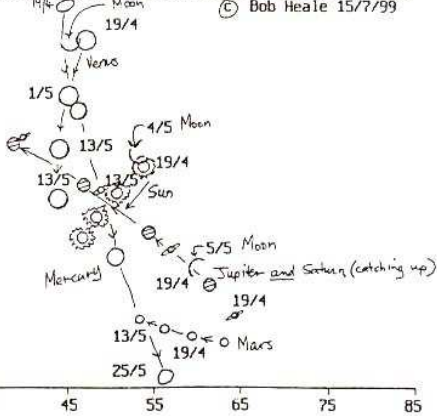


SKY FOR THE MONTH 19th APRIL - 16th MAY, 2000

Daylight Sky 8 55 am, Apr-May, 2000
 LARGE Binocular View or Telescope View (Phases upside down, reversed or both)
 © Bob Heale 15/7/99

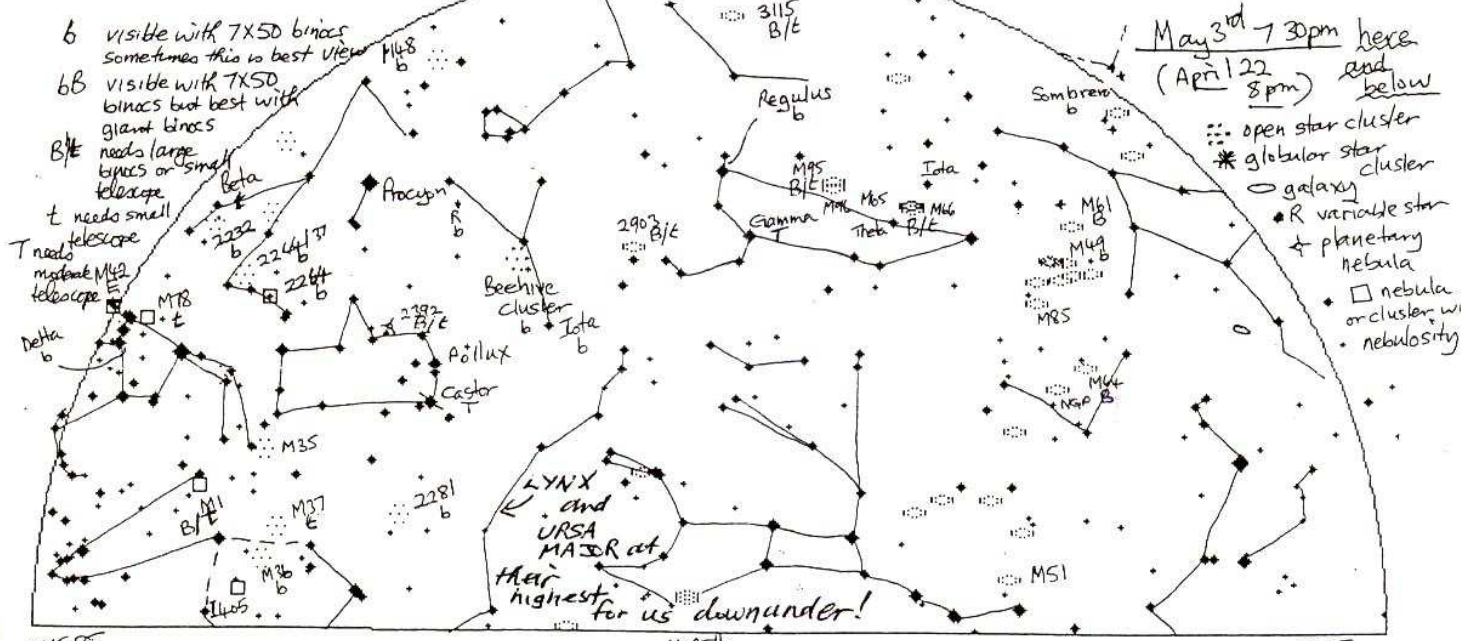
8 55 am Daylight Sky 29th April 2000 Standard Time
 © Bob Heale 18/4/99
 All objects no fainter than 5 1 X Sky View

I think this indicates no night sky planets for the month.



All labelled objects on north and south charts are worthwhile and easy objects; doubles and variables are included.

OVER HEAD, maybe a satellite one day - working on it heavens above!



WEST NORTH OVER HEAD EAST
 No bright enough comets

17/4/2000
 Bob Heale
 ASF

