



CAPE FEAR Skies



*The
Monthly
Newsletter of the
Cape Fear Astronomy Club*

Volume 3 No. 6

Wilmington, NC

June 1988

June Meeting

June 4, 1988
5:00 PM
Fort Fisher State Park

The next meeting of the Cape Fear Astronomy Club will be held on June 4, 1988 at the Fort Fisher State Park.

This meeting will begin with a cook-out and will start at 5:00 PM. When everyone has had a chance to eat we will hold the club's regular business meeting. After the skies get dark we hope to have a club viewing session.

Martin Best; Jane Fountain; and David Maness will be serving as the organization committee for this picnic and will contact the membership by phone about the arrangements.

In the rain date for this event will be the following Sunday June 5th also at 5 PM and at the Fort Fisher State Park. If the weather is bad on Sunday, we will hold just a regular meeting in Bryan Auditorium of Morton hall.

Let's all hope for clear skies.

Meeting Minutes from May

May 1, 1988

Alan Hilburn called the meeting to order at 7PM.

Debbie Petty gave a report on information and suggestions she sought as ALCOR on how other clubs keep their meeting short and interesting. She talked with Barry Simon and Mary Wooten who offered several tips for our club. She also reported on information she had received about Mars.

Paul Petty called the roll. There were 27 members present

at the meeting.

The membership was asked to comment on how our meetings could be made more interesting. There was a lot of response to this question:

Sam Bissette suggested we need more efficiency. He also feels we should schedule 2 or 3 dark sky viewing dates for each month so people can plan ahead to attend. He feels calling the afternoon of a viewing session is not adequate notice. Also, he thinks meetings scheduled for 6PM interferes with the dinner hour.

Julie Bowen wants viewing sessions scheduled perhaps during the week as she works weekends.

Kevin Dunay feels we should have at least one telescope set-up for any activity.

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Southern Star 88

On April 22-24, the 2ed Annual Southern Star Amateur Astronomy Convention was held at the Wildacres Retreat in the mountains of North Carolina. Six members of the Cape Fear Astronomy Club attended. These included: Julie Bowen; Robert Burriss; Ronnie Hawes; Alan Hilburn; Tom Jacobs; and Conrad Pope. Several other clubs from the southeast were represented. Among the clubs present were: Catawba Valley of Hickory North Carolina; Clemson South Carolina; Jackson Mississippi; Roanoke Virginia; and, hosting the event, the club from Charlotte North Carolina.

There was much to do and see during the weekend. Our club members arrived around 5PM Friday evening. After dinner, several telescopes were set up for viewing the Sun, Moon and Venus. Later we had several informal presentations and talks given by some the Amateur Astronomers present. Johnny Horne gave another great slide show, the kind only Johnny can give! Then under less that ideal conditions there was a little more viewing until the wee hours of the morning.

After breakfast Saturday morning, the first of 3 lectures was given by Doctor Robert Manning of Davidson. His topic was what we have learned from Supernova 1987A. He stressed the importance of this the first bright supernova since the development of the telescope.

After Doctor Manning's talk there was an equipment display and astrophotography contest judged by Dennis di Cicco of Sky and Telescope magazine and by Johnny Horne of Fayetteville. Then more telescope displays and Stuff swaps followed by lunch.

Later, under threatening skies, the telescopes and other displays were put up in time for the next lecture. A very good thing because it began to rain during the talk and slide show by Dennis di Cicco. His topic was the Skies of the Southern Hemisphere and he finished just in time for dinner.

After dinner it was time for another talk this time given by Doctor Fred Hess of the Hyden Planetarium about the eclipses of the Sun he has seen. A very interesting and enjoyable presentation.

After Doctor Hess's talk and a short break, the results of the photograph contest were announced. One of our Cape Fear Astronomy Club members, Conrad Pope, won 2ed place with one of his photos of the moon.

Later Saturday night some telescopes were setup under a fairly clear moonlit sky. This observing session lasted until the sky started to cloud up and the wind began to blow. Most of the people present went inside the lodge, built a fire in the fireplace and enjoyed the conversations of fellowship.

On Sunday morning we woke up the the CLEAREST SKIES of the weekend. A panel discussion was held between Dennis di Cicco; Doctor Hess and the attendants.

But all too soon it was time to leave. After saying our goodbys, we left shortly before Noon.

The Charlotte Club did an excellent job of pulling the Southern Star 88 Convention together. We meet many people who share our love and interest of astronomy and made new friends. Having enjoyed the fellowship made Sunday morning

Meeting Minutes Continued from page 1

Paul suggests having more structured viewing sessions. [Jane Fountain has agreed to be in charge of this and has several posters she made on display at the meeting]. Paul also suggested cutting the breaks to one 5 minute break or having a break before and a break after the general meeting.

Barbara McGowan feels the meetings need more structure as there is too much jumping from one topic to another. As a result little is accomplished. Also, more people need to take an active interest. Too much responsibility is placed on Paul; Alan; and Ronnie. Barbara feels members should sign up for definite times to work at different club activities.

All of these suggestions will be reviewed. We will continue to try to improve the quality of our general meetings.

Ronnie gave the Treasury report.

Members noted on having a combination picnic-meeting on June 4th 1988 at Fort Fisher. This will eliminate the Sunday meeting.

A club viewing session is tentatively scheduled for June 11th.

Paul ordered t-shirts last week and the t-shirts will be in soon.

The business meeting ended at 8PM.

Kevin and Rose Dunay brought their telescope to display. Martin Best explained how to polar align an equatorial mounted telescope. Ronnie gave a brief description of a Dobsonian mount.

- Barbara McGowan

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both a happy and sad time. Happy that the Southern Star Convention had been such a great success. Sad that it was over.

But I look forward to the Southern Star 1989 Amateur Astronomy convention and seeing the old friends and meeting new ones under the skies of the Wildacres Retreat high in the North Carolina mountains.

- Ronnie Hawes

Mars Symposium

Roper Mountain Science Center
Greenville, SC
August 4-6, 1988

This information made it just in time to make this edition of *The Cape Fear Skies*.

I have received information from the Roper Mountain Science Center announcing a symposium on the 1988 opposition of Mars. This event has been titled: "War of the Worlds" Mars Symposium.

Lecture topics include: "Observing Mars with a small telescope"; "Opportunities for Students & Teachers"; and "Mars — Science and Myth". Also included are tours of the Roper Mountain Science Center and Observatory. This observatory currently houses a 23" Clark refractor which will be available for use by the registered delegates.

The registration fee for this symposium is \$20.00 and includes one lunch and one dinner. All other meals are "Dutch Treat" or on you own. Overnight accommodation are available through the Haywood Area Holiday Inn and are \$42.00 per night for single or double occupancy.

I will bring the information I have received to the next general club meeting

- Tom Jacobs

Astronomical League to Elect New Officers

Once again it is time for the Astronomical League to elect new officers for the upcoming year. At our June meeting we will poll the membership for their choice from the slate which follows. Our club will be able to cast two votes for each office in this election. We will cast both of these votes for the person who receives the most votes at our June meeting.

The Nominations for President:

JIM BROWN is supervisor of automation for Delta Airlines, Atlanta, Georgia. He is the current AL President, past Vice President and member of the Atlanta Astronomy Club. Jim has served as Chairman and Regional Representative for the Southeast Region and participated in the AL expedition to Peru to view Halley's Comet. His interest in science education has offered many opportunities to talk to schools and civic organizations about astronomy. In addition he has spoken to many AL member societies around the nation.

KEN WILLCOX is a research chemist for Phillips Petroleum Company, Bartlesville, OK. He is adjunct professor of physics and astronomy at Bartlesville Wesleyan College and current AL Vice-President. Ken is the AL representative on the Hubble Space Telescope Amateur Astronomers Working Group, and is active in promoting

science education through astronomy. He is a member of the Astronomical society of the Pacific, American Astronomical society and serves on the organizing committee for the Phillips Petroleum Science Teachers Workshop.

The Nominations for Vice-President:

GENE DIETZEN has served as AL treasurer since 1986 and will receive his bachelor's degree in industrial arts this May from Washington State University. Gene has served as Regional Chairman for the Northwest Region and is past vice-president for the Spokane Astronomical Society. His Current responsibilities include making arrangements for the 1989 AL National Convention to be held in Seattle, Washington.

JERRY SHERLIN is a forecaster for the National Weather Service in Sioux City, Iowa. He is past president of the AL and currently serves as the AL Book service chairman and ombudsman. He is a member of the Royal Astronomical Society, the Astronomical Society of the Pacific and has served as research associate at Cloudcroft Observatory, Sacramento Peak, Alamogordo, NM and Learmonth Solar Observatory in western Australia.

The Nominations for Treasure:

DEBBIE MORAN is a member of the Houston Symphony Orchestra and serves as treasurer of the Houston Astronomical Society, the largest member society of the Astronomical League. Debbie participated in an expedition to Peru and Chile in 1986 to observe and photograph Halley's Comet and is currently participating in zero-G studies with NASA.

The Nominations for Trust Fund Officer. The Club does not have a direct vote for this position but can make it's wishes known to our regional chairman and representative.

JAMES FOX is a chemical engineer with the 3M Corporation, and he has served a three year term as the treasurer of the 3M Club (recreational organization of 3M). Mr. Fox has been instrumental in founding two clubs, has served as a regional chairman and AL secretary, and he wrote the League manual "Math for Amateur Astronomers".

JEFF LEWIS is a Certified Public Accountant who served for seven years as the League treasurer. He is responsible for the League's present bookkeeping system, and is currently in charge of the League's Certificate of Deposit (an account for the League's regular operating treasury). Mr. Lewis is largely responsible for the League reaching solvency during his term as treasurer. He has had fund raising experience.

BRYAN WHITE is a bank Vice-President. Besides being active on several advisory committees and boards of directors, Mr. White is quite active as a "core group" member in his local astronomy club. He is also active as an organizational fund raiser.

Cape Fear Astronomy Club Membership List

As of May 20, 1988

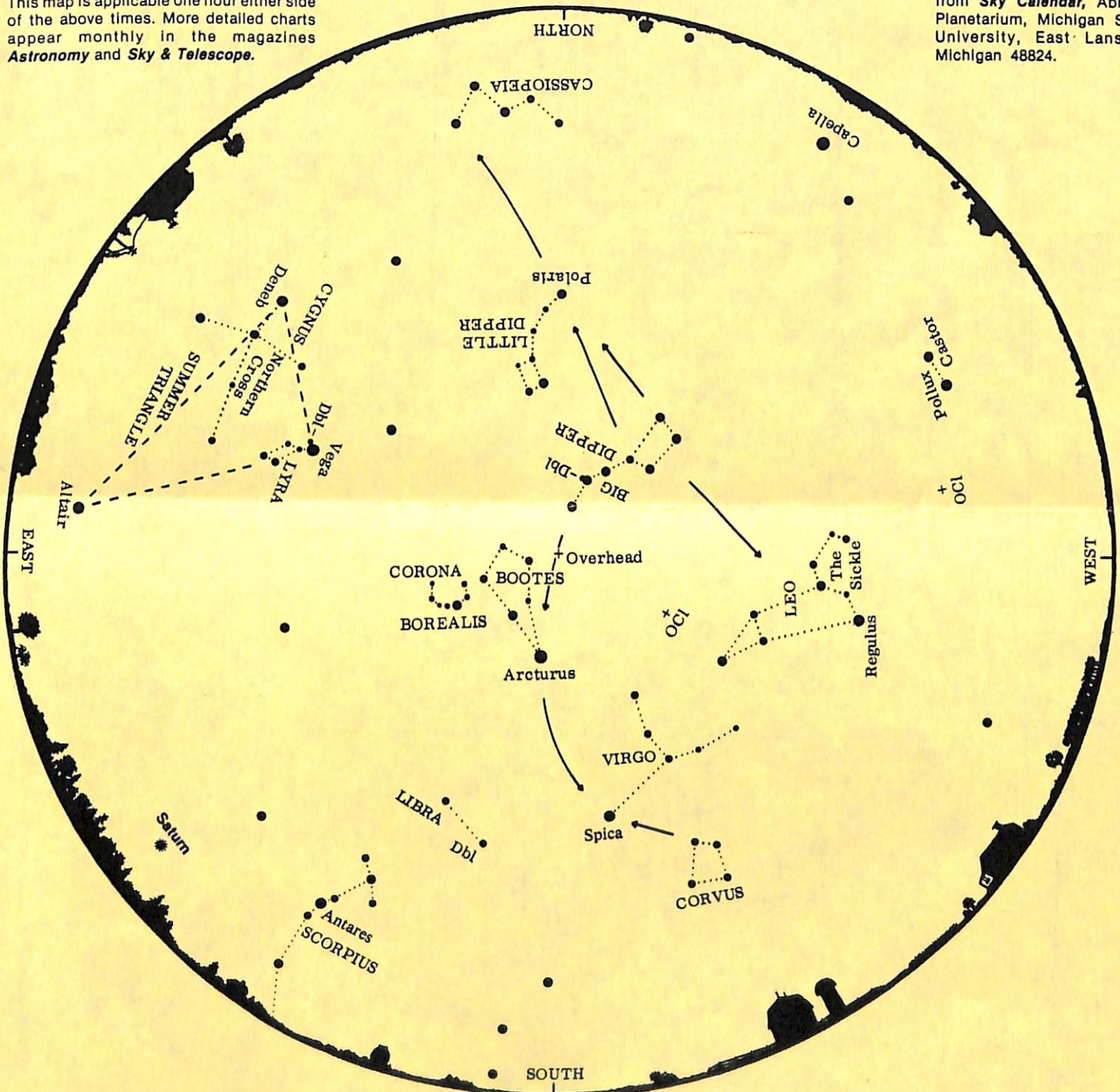
June Evening Skies

This chart is drawn for Latitude 40° north, but should be useful to stargazers throughout the continental United States. It represents the sky at the following local daylight times:

Late May	11 p.m.
Early June	10 p.m.
Late June	9 p.m.

This map is applicable one hour either side of the above times. More detailed charts appear monthly in the magazines *Astronomy* and *Sky & Telescope*.

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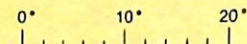
The planet Saturn is plotted for mid-June, 1988. At chart time 10 objects of first magnitude or brighter are visible. In order of brightness they are: Arcturus, Saturn, Vega, Capella, Altair, Antares, Spica, Pollux, Deneb, and Regulus. In addition to stars, other objects that should be visible to the unaided eye are labeled on the map. The double star (Dbl) at the bend of the handle of the Big Dipper is easily detected. The double in Libra is more challenging. Much more difficult is the double star near Vega. The open or galactic cluster (OCI) known

as the "Beehive" can be located between the Gemini twins (Pollux and Castor) and Leo. Coma Berenices, "The hair of Berenice," is another open cluster (OCI) between Leo and Bootes. Try to observe these objects with the unaided eye and binoculars.

—D. David Batch

SKY CALENDAR JUNE 1988

Use this scale to measure angular distances between objects on diagrams below.



CURRENT SKY INFORMATION:
Call (517) 332-STAR

An aid to enjoying the changing sky

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>North is up.</p> <p>Circular field is 3° across.</p> <p>June 14: λ Sgr to Saturn 7¼°; Saturn to Uranus 1.4°</p> <p>• μ (Mu Sagittarii, mag 3.8)</p> <p>Stars shown to mag 6.0.</p> <p>• λ Sgr (Lambda Sagittarii, mag 2.8) = top star of Teapot</p>	<p>58 Oph (mag 4.9)</p> <p>Uranus finder chart.</p> <p>Stars shown to mag 6.0.</p>	<p>On chart at left, 10-pointed star and dot on planet tracks show pos'ns of Saturn & Uranus on June 14. Tracks show their motions June 7-21, when moon is less than half full. Planets are moving west (left to right). See June 8, 9, 19, 26.</p>	<p>June 1, 2½ hours after sunset:</p>	<p>Thursday June 2, evening (midtwilight):</p>	<p>Friday June 4, evening:</p>	<p>Saturday June 11, morning: Besides Jupiter, look for the other planets—Mars well up in SE, and Saturn low in SW. Compare June 30.</p>
<p>Diagrams on last month's calendar and for June 2, 4 show Venus has been getting lower. See Venus for a few more evenings by looking closer to sunset. Here is its pos'n tonight ½ hour after sunset:</p>	<p>5 Morning (midtwilight): SE to SSE.</p> <p>This week, Mars' disk is 11" (arcseconds) across and appears at minimum phase, 85% full.</p>	<p>6 Morning: It is early spring in Mars' S hemisphere. S polar cap appears large and bright.</p> <p>Moon in SE Mars' S pole now tilted 23½° toward Earth and 12° toward Sun.</p>	<p>7 Saturn-Uranus now 1½° apart, near left end of tracks on finder chart above. Chart is oriented correctly as planets pass south, now about 2 a.m. local daylight time and ½ hour earlier each week. Other times: Turn until line from λ Sgr to Saturn on map matches sky. Field of 7x binocs is 6°-7°, twice as large as circle shown.</p>	<p>8 As seen from Sun today, the planet Saturn overtakes Uranus. According to Jean Meeus, the next time this happens will be in July 2032, after Saturn orbits 1½ times around the Sun. Earth overtakes both planets June 19; see that date.</p>	<p>9 Jupiter's disk appears 34" across, large enough to detect with 7-power binoculars.</p>	<p>10 Saturday June 11, morning: Besides Jupiter, look for the other planets—Mars well up in SE, and Saturn low in SW. Compare June 30.</p>
<p>Mercury and Venus both pass inferior conjunction (nearly between Earth and Sun) this evening.</p> <p>Morning: Beautiful sight for binoculars!</p>	<p>12 Morning: Binocs help you find very thin crescent Moon, over 25 hours before New in Maine, to just over 21 hours before New on California coast.</p>	<p>13 New Moon 5:14 a.m. EDT (2:14 a.m. PDT). Will anyone in continental U.S. see tonight's extremely young Moon? Age 30 min after sunset from East Coast, 15½-16 hr; W Coast 18½-19½ hr; Hawaii 20½ hr. Using 'scope, look for breaks in crescent.</p>	<p>14 Evening: Moon easy for unaided eye!</p>	<p>15 Thursday, June 16, evening: Moon has passed the Gemini Twins. Watch for Pollux, Castor, and Capella each evening. On what date will you last see each star?</p>	<p>16 From lat 44° N and northward, Capella is circumpolar and does not set.</p>	<p>17 Saturday and Sunday evenings, June 18 and 19: Moon, Sunday June 19</p>
<p>Tonight, both Saturn and Uranus are at opposition and visible all night. Within 1.4° of each other, they are near the right end of their tracks on finder chart above. They'll be marginally closer as they pass a week from now.</p> <p>Evening:</p>	<p>18 Solstice 11:57 p.m. EDT. Summer begins in Earth's northern hemisphere.</p> <p>Telescope shows Saturn's rings 42" across and inclined 26½° from edge-on.</p> <p>Evening:</p>	<p>19 Have you seen Venus as morning "star" yet? ½ hour before sunrise:</p>	<p>20 As a morning "star", Venus is easy to see in daytime. Just find it before sunup & keep track of it until sun rises. That's a good time to view its crescent with 'scopes & binocs. Venus now 55" (arcseconds) across, 3 percent full. By June 30, Venus shrinks to 50" and waxes to 9% full.</p> <p>Evening: Neptune at opposition to Sun and in conjunction with Moon. Not a good night to see Neptune!</p>	<p>21 Evening: Try to see Moon and 5 bright planets within hour before sunup. See next box right.</p>	<p>22 Evening: Spica • Moon</p>	<p>23 Morning: Besides Jupiter, look for the other planets—Mars well up in SE, and Saturn low in SW. Compare June 30.</p>
<p>Evening:</p> <p>Tonight Saturn 1°21' N of Uranus, the 2nd of their triple conjunction in 1988.</p>	<p>24 Morning: Pleiades • Jupiter</p>	<p>25 Moon nearly ¼ turn left of setting sun.</p> <p>Evening:</p>	<p>26 Evening: Neptune at opposition to Sun and in conjunction with Moon. Not a good night to see Neptune!</p>	<p>27 Morning: Try to see Moon and 5 bright planets within hour before sunup. See next box right.</p>	<p>28 Evening: Spica • Moon</p>	<p>29 Morning: Besides Jupiter, look for the other planets—Mars well up in SE, and Saturn low in SW. Compare June 30.</p>

Robert C. Victor, Jenny L. Pon, Robert D. Miller
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Sky Calendar for June 1988

(All times are Given in UT to convert to EDT subtract 4 hours.)

<u>1st</u>	1:00	Mercury stationary in right ascension.	<u>14th</u>	9:14	New Moon. Lunation number 810
	21:00	Uranus passes 5° north of the Moon.		---	Alpha Scorpiids Meteors. Radiant is located at right ascension 16:52; declination -22°; Slow moving possible fireballs; ZHR ≤ 5.
	22:00	Saturn passes 6° north of the Moon.			
<u>2nd</u>	12:00	Neptune passes 6° north of the Moon.	<u>16th</u>	---	The Soviet Union places the first woman in space on this date in 1963.
	---	Surveyor 1 makes the first American soft-landing on the Moon. Landing in the Ocean of Storms on this date in 1966.	<u>18th</u>	---	Sally Ride becomes the first American woman in space aboard Challenger on this date in 1983.
<u>3rd</u>	---	On this date in 1965 America's first astronaut to walk in space is Edward H. White spending 20 minutes outside of his Gemini 4 spacecraft.	<u>19th</u>	18:00	Regulus passes 1.2° south of the Moon.
	---	Tau Herculis Meteors. Radiant is located at right ascension 15:12; declination +40°; speed very slow 15 km/sec. Parent body is Comet Schwassmann-Wachmann 3.	<u>20th</u>	4:00	Uranus at opposition.
<u>5th</u>	0:00	Moon at perigee.		8:00	Moon at apogee.
	---	Chi Scorpiids Meteors. Radiant is located at right ascension 16:25; declination -12°; slow moving possible fireballs; ZHR ≤ 5.		9:00	Saturn at opposition.
<u>6th</u>	20:00	Mars passes 2° south of the Moon.		---	Ophiuchids Meteors. Radiant is located at right ascension 17:20; declination -23°; ZHR = 8.
<u>7th</u>	6:21	Moon at last quarter.	<u>21st</u>	3:57	Solstice
<u>8th</u>	---	Librids Meteors. Radiant is located at right ascension 15:09; declination -28°; speed 16 km/sec; ZHR = 10. This shower has not been seen since 1937.		4:00	Sun enters constellation of Gemini.
<u>9th</u>	11:00	Venus at descending node.		6:00	Moon at descending node.
<u>11th</u>	6:00	Mercury at aphelion.	<u>22nd</u>	10:23	Moon at first quarter.
<u>12th</u>	3:00	Jupiter passes 6° south of the Moon.	<u>24th</u>	8:00	Spica passes 1.1° north of the Moon.
<u>13th</u>	0:00	Venus in inferior conjunction with the Sun.		23:00	Mercury is stationary in right ascension.
	4:00	Mercury in inferior conjunction with the Sun.	<u>26th</u>	---	Corvids Meteors. Radiant is located at right ascension 12:48; declination -19°; speed 10 km/sec; ZHR = 10. This shower has not been seen since 1937.
	5:00	The equation of time equals 0.	<u>27th</u>	2:00	Saturn passes 1.3° north of Uranus
	---	Theta Ophiuchids Meteors. Radiant is located at right ascension 17:50; declination -28°; speed 30 km/sec; ZHR = 2.		19:00	Antares passes 0.4° north of the Moon.
	---	Pioneer 10 becomes the first spacecraft to leave the Solar System as it passes the orbit of Neptune on this date in 1983.	<u>29th</u>	4:00	Saturn passes 6° north of the Moon.
				4:00	Uranus passes 5° north of the Moon.
				19:46	Full Moon. Called the Rose; Flower or Strawberry Moon.
				20:00	Neptune passes 6° north of the Moon
			<u>30th</u>	10:00	Neptune at opposition.

Upcoming Events for June

Monthly Meeting of the Cape Fear Astronomy Club
June 4, 1988; 5:00 PM
Fort Fisher State Park

Club Viewing Session
June 11, 1988; Dusk until "?" - Pender County Site

Club Viewing Session
June 25, 1988; Dusk until "?" - Pender County Site

Tom Jacobs - Editor
c/o Cape Fear Skies
110 Linville Dr.
Castle Hayne, NC 28429



Alan Hilburn
120 Coventry Rd.
Wilmington, N.C. 28405