

# CAPE FEAR



# Skies

*The  
Monthly  
Newsletter of the  
Cape Fear Astronomical Society*

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Wilmington, NC

May 1990

## May Meeting Announcement

Sunday  
May 6, 1990  
7:00 PM  
Bryan Auditorium  
Morton Hall  
UNCW Campus

The next meeting of the Cape Fear Astronomical Society will be held on Sunday May 6, 1990 in the Bryan Auditorium of Morton Hall on the UNCW Campus. The Business meeting will begin at 7:00 PM EST.

The general meeting will begin at 7:30 PM. The topic for this month's general meeting will be a program on the constellations of spring. This program will be presented by society members Alan Hilburn; Ronnie Hawes; and Martin Best.  
Clear Skies.

be as bright as once thought. At the time of this writing, Comet Austin may be about 4.5 magnitude at it's brightest. Well, we'll have to wait and see.

Wayne Teachey informed the membership that we have \$138.81 in the checking account and \$113.43 in the observatory fund. Alan reported that the Hubble Space Telescope would be sent up April 12th, (launching of the shuttle Discovery with the HST aboard was rescheduled for April 10th).

Sam talked about the Hampstead site and trash at the site and some trees that might hinder the view of Comet Austin. Alan again said we will have a yard sale, the others have been canceled due to the weather.

Ronnie said that we have been asked by the Carolina Beach State Park to have a public star party on Saturday June 2nd from 8 until 11pm. Rain date will be Saturday June 16th, same time and place. The May issue of Astronomy magazine has this star party listed in their calendar of astronomical gatherings.

Alan showed a letter from Doug Rhodes. The society members present signed a card to be sent to Doug. The card was prepared by member Sam Bisette and featured the Moon setting at the Hampstead site.

After a break, society member Tom Jacobs presented the main program for the evening: *Jupiter, the*

## Meeting Minutes From April

Sunday, April 4, 1990

The April meeting of the Cape Fear Astronomical Society was called to order at 7:08pm.

Alan reminded everyone about Southern Star, April 27th through 29th.

Martin and Alan said that Comet Austin may not

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# Two Kinds of Planets in the Sky

The ancient astronomers realized that there were two kinds of planets moving around the Earth's sky. Even today, after having changed our model of the solar system from that of Ptolemy to Copernicus, we continue to recognize these two classification of planets.

These two kinds of the planets visible in our sky are based on the planet's orbit in relation to the orbit of the Earth. The planets which orbit inside of the Earth's orbit are called inferior planets. The planets which have orbits that are larger than the Earth's orbit are called superior planets.

This terminology of inferior and superior planets comes from the earliest astronomers. We continue to use this terminology today.

The ancient astronomers also located the planets using the relationship between the planets and the Sun

and Earth.

Figure 1 is a model of the Solar system showing the planets in orbit about the Sun. (Figure 1 is on the left; please note that nothing is shown to scale.)

In Figure 1 the inner most planet is shown directly in line between the Earth and the Sun. This configuration of the two planets and the Sun is referred to as inferior conjunction.

The Sun is directly in line with the other inferior planet and the Earth. This configuration is called superior conjunction.

The Sun is directly in line between the superior planet labeled "X" in figure 1 and the Earth. This configuration places "X" at conjunction.

The Earth is directly in line between the superior planet labeled "Y" in figure 1 and the Sun. This configuration places "Y" at opposition.

The superior planet labeled "Z" is at a 90° angle from the Sun as seen from Earth. This 90° angle places the planet "Z" at quadrature.

Both opposition and conjunctions are important to planetary observers; marking the points when the planets move between morning and evening sky.

POP QUIZ: Now that you all understand the meaning of opposition and conjunction, on figure 1 mark the location of Pluto during the early morning hours of Monday May 7, 1990. Can you see Pluto at this time? (Answers in a later issue of *Cape Fear Skies*.)

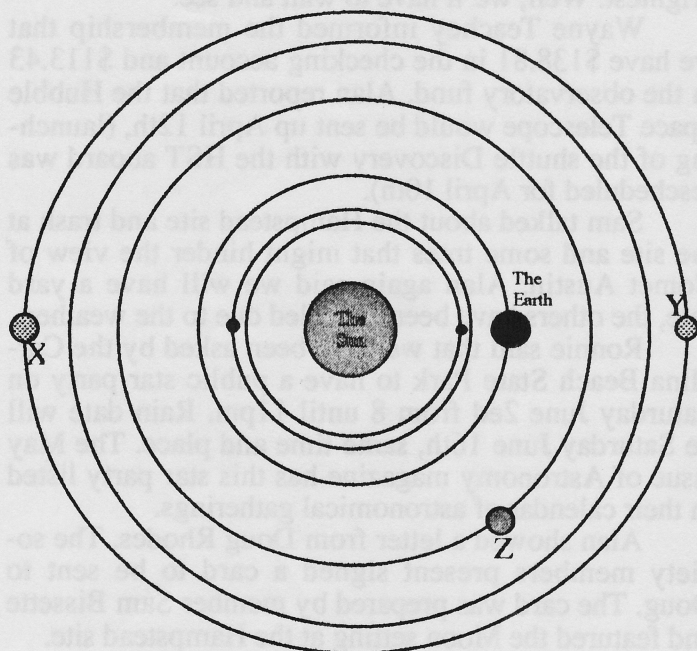


Figure 1 — The Solar System

(April Meeting Minutes from page 1)

star that failed. Using slides, Tom gave an interesting presentation. After the main program he gave a sneak preview of a slide program on our Hampstead site to be given at Southern Star.

There were 12 members and 6 visitors present.

— Ronnie Hawes

## For Sale

Back Issues of

*Sky & Telescope* 1982 - 1989  
\$100.00

Also

*Scientific American* 1970 - 1989  
\$230.00

T. D. Jacobs  
P. O. Box 4245  
Wilmington, NC 28406  
(919) 392-4853

I pay shipping anywhere in US.



# Sky Calendar for May 1990

(All times are given in Eastern Time. Times preceded with the "±" symbol are ±30 minutes of the time listed.)

## Tuesday: May 01

4:48 Astronomical twilight begins.  
6:21 Sunrise.  
16:18 Moon at first quarter.  
19:55 Sunset.  
21:27 Astronomical twilight ends.  
— Alpha Scorpiids Meteor several possible radiant. Right ascension 16:32; declination -24° and 16:04; -24°; ZHR = 8; velocity 35 km/sec.  
— Phi Bootids Meteor radiant is right ascension 16:00; declination +51°; ZHR = 2; velocity 12-16 km/sec.

## Wednesday: May 02

4:47 Astronomical twilight begins.  
6:20 Sunrise.  
19:55 Sunset.  
21:28 Astronomical twilight ends.

## Thursday: May 03

4:46 Astronomical twilight begins.  
6:19 Sunrise.  
19:56 Sunset.  
±20:00 Mercury is at inferior conjunction; moves into the morning sky.  
21:29 Astronomical twilight ends.

## Friday: May 04

4:44 Astronomical twilight begins.  
6:18 Sunrise.  
19:57 Sunset.  
21:30 Astronomical twilight ends.  
±22:00 Saturn is stationary in right ascension; begins retrograde motion.  
— Eta Aquarids Meteor radiant is right ascension 22:20; declination -1°; ZHR = 21; velocity 67 km/sec.

## Saturday: May 05

4:43 Astronomical twilight begins.  
6:17 Sunrise.  
19:58 Sunset.  
21:32 Astronomical twilight ends.  
— Alan Shepard becomes America's first astronaut in space aboard his Mercury spacecraft Freedom 7 on this date in 1961. His flight was a 15 minute suborbital mission launched by a redstone booster.

## Sunday: May 06

4:42 Astronomical twilight begins.  
6:16 Sunrise.  
19:59 Sunset.  
21:33 Astronomical twilight ends.

## Monday: May 07

±1:00 Pluto is at opposition; moves into the evening sky.  
4:41 Astronomical twilight begins.  
6:15 Sunrise.  
19:59 Sunset.  
21:34 Astronomical twilight ends.  
±23:00 Juno is at opposition; moves into the evening sky.

## Tuesday: May 08

4:39 Astronomical twilight begins.  
6:14 Sunrise.  
20:00 Sunset.  
21:35 Astronomical twilight ends.

## Wednesday: May 09

4:38 Astronomical twilight begins.  
6:13 Sunrise.  
15:31 Full Moon called the "planting" or "milk" moon.  
±20:00 Moon at apogee. Distance from the

Earth is 63.7 Earth-radii.

20:00 Sunset.  
21:36 Astronomical twilight ends.

## Thursday: May 10

4:37 Astronomical twilight begins.  
6:12 Sunrise.  
20:01 Sunset.  
21:37 Astronomical twilight ends.

## Friday: May 11

4:36 Astronomical twilight begins.  
6:12 Sunrise.  
±9:00 Antares passes 0.2° south of the Moon. Occultation.  
20:02 Sunset.  
21:38 Astronomical twilight ends.

## Saturday: May 12

4:35 Astronomical twilight begins.  
6:11 Sunrise.  
20:03 Sunset.  
21:39 Astronomical twilight ends.

## Sunday: May 13

4:33 Astronomical twilight begins.  
6:10 Sunrise.  
±20:00 Uranus passes 2° north of the Moon.  
20:03 Sunset.  
21:40 Astronomical twilight ends.

## Monday: May 14

4:32 Astronomical twilight begins.  
±6:00 Neptune passes 4° north of the Moon.  
6:09 Sunrise.  
20:04 Sunset.  
21:42 Astronomical twilight ends.  
— Skylab is placed in orbit on this date in 1973 by the last of the Saturn 5 boosters.

## Tuesday: May 15

±4:00 Saturn passes 1.5° north of the Moon.  
4:31 Astronomical twilight begins.  
6:08 Sunrise.  
20:05 Sunset.  
21:43 Astronomical twilight ends.

## Wednesday: May 16

±3:00 Mercury is stationary in right ascension; begins retrograde motion.  
4:30 Astronomical twilight begins.  
6:08 Sunrise.  
20:06 Sunset.  
21:44 Astronomical twilight ends.

## Thursday: May 17

4:29 Astronomical twilight begins.  
6:07 Sunrise.  
15:45 Moon at last quarter.  
20:07 Sunset.  
21:45 Astronomical twilight ends.

## Friday: May 18

4:28 Astronomical twilight begins.  
6:06 Sunrise.  
20:07 Sunset.  
21:46 Astronomical twilight ends.  
— Two comets at perihelion today. P/Russell 3 (2.52 au. from the Sun) and P/Schwassmann - Wachmann 3 (0.94 au from the Sun).

## Saturday: May 19

4:27 Astronomical twilight begins.  
6:06 Sunrise.  
±16:00 Mars passes 6° south of the Moon.  
20:08 Sunset.  
21:47 Astronomical twilight ends.

## Sunday: May 20

4:26 Astronomical twilight begins.

6:05 Sunrise.  
20:09 Sunset.  
21:48 Astronomical twilight ends.

## Monday: May 21

4:25 Astronomical twilight begins.  
6:04 Sunrise.  
±16:00 Venus passes 7° south of the Moon.  
20:09 Sunset.  
21:49 Astronomical twilight ends.

## Tuesday: May 22

4:24 Astronomical twilight begins.  
6:04 Sunrise.  
20:10 Sunset.  
21:50 Astronomical twilight ends.  
±23:00 Mercury passes 9° south of the Moon.

## Wednesday: May 23

4:23 Astronomical twilight begins.  
6:03 Sunrise.  
20:11 Sunset.  
21:51 Astronomical twilight ends.  
±23:00 Moon at perigee. Distance from the Earth is 56.1 Earth-radii.

## Thursday: May 24

4:23 Astronomical twilight begins.  
6:03 Sunrise.  
7:47 New Moon. Lunation number 834.  
20:12 Sunset.  
21:52 Astronomical twilight ends.

## Friday: May 25

4:22 Astronomical twilight begins.  
6:02 Sunrise.  
±7:00 Pallas in conjunction; moves into the morning sky.  
20:12 Sunset.  
21:53 Astronomical twilight ends.

## Saturday: May 26

4:21 Astronomical twilight begins.  
6:02 Sunrise.  
20:13 Sunset.  
21:54 Astronomical twilight ends.  
±22:00 Jupiter passes 2° south of the Moon.

## Sunday: May 27

4:20 Astronomical twilight begins.  
6:01 Sunrise.  
20:14 Sunset.  
21:55 Astronomical twilight ends.

## Monday: May 28

4:19 Astronomical twilight begins.  
6:01 Sunrise.  
20:14 Sunset.  
21:56 Astronomical twilight ends.  
— Memorial Day

## Tuesday: May 29

4:19 Astronomical twilight begins.  
6:01 Sunrise.  
20:15 Sunset.  
21:57 Astronomical twilight ends.

## Wednesday: May 30

4:18 Astronomical twilight begins.  
6:00 Sunrise.  
20:15 Sunset.  
21:58 Astronomical twilight ends.  
±23:00 Mercury at it's greatest western elongation 25°.

## Thursday: May 31

4:11 Moon at first quarter.  
4:18 Astronomical twilight begins.  
6:00 Sunrise.  
20:00 Current Julian date is 244 8042.5  
20:16 Sunset.  
21:59 Astronomical twilight ends.

# Upcoming Events for May 1990

**Monthly Meeting of the Cape Fear Astronomical Society**  
**Sunday May 6, 1990; 7:00 PM - Bryan Auditorium; Morton Hall**

**Club Viewing Session**  
**Saturday May 19, 1990; Dusk until "?" - Hampstead Site**

**Club Viewing Session**  
**Saturday May 26, 1990; Dusk until "?" - Hampstead Site**

**Deadline for the June issue of *Cape Fear Skies*.**

***Cape Fear Skies***  
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