



CAPE FEAR

Skies



The
Monthly
Newsletter of the
Cape Fear Astronomy Club

Volume 3 No. 10

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October 1988

October Meeting Announcement

October 2, 1988

7:00 PM

Bryan Auditorium

Morton Hall

UNC-W Campus

The next meeting of the Cape Fear Astronomy Club will be held on October 2, 1988 in the Bryan Auditorium of Morton Hall on the UNC-W Campus. The Business meeting will begin at 7:00 PM EDT.

The general meeting will begin at 8:00 PM. This month we will have our last Mars Watch '88 program. There will be a slide presentation reviewing the "War of the Worlds" Mars symposium held during early August at the Roper Mountain Science Center in Greenville, South Carolina. At the Roper Mountain Science Center there is a 23 inch Clark refractor telescope. I will can assure you that it provides a wonderful view of the sky.

Meeting Minutes Missing

Due to communication problems last months meeting minutes were not available in time for publication in this months newsletter.

I hope to include the meeting minutes from the September and the October meetings will appear in the November issue of *Cape Fear Skies*.

- Editor

What is Lunation?

If you have looked closely at the sky calendar that appears each month within *Cape Fear Skies* you will have noticed that at each time a new moon occurs the is included a number called lunation. (For this month's new moon, on the 10th, the lunation number is 814.) If you don't know just what a lunation is or what lunation number 814 really means; then this article should help solve this mystery of the universe for you.

A lunation is the period of time that it takes the moon to go through it's monthly phases. This makes the lunation similar to the synodic month. Both the synodic month and a lunation average out to be the same amount of time. The difference between a lunation and the synodic month is that a lunation runs from new moon to new moon. A synodic month runs from full moon to full moon.

So if a lunation is the period from new moon to new moon then Lunation 814 must be the eight hundred fourteenth new moon to new moon cycle. This is

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The Greek Alphabet

The Greek alphabet is used several places within astronomy. The most visible of which is the naming of stars within a constellation.

The stars in a constellation are first ordered from the brightest to the faintest. The brightest star will be referred to by the first letter of the Greek alphabet. This is the letter called "alpha" and written as "α". The second brightest star will be referred to by the second letter of the Greek alphabet. The second letter is called "beta" and is written "β".

The clearest example of this are the stars Castor and Pollux in the constellation of Gemini. Castor is the brightest star in the constellation of Gemini and Pollux is the second most bright. Therefore, Castor can also be referred to as "Alpha Geminorum" and written as α Geminorum. Pollux can be referred to as "Beta Geminorum" and written as β Geminorum.

When writing the Greek letter instead of the letter's "name" the lower case form of the letter is always used.

The table below gives both the upper case and lower case form of the Greek alphabet followed by the name of each letter.

A α alpha	N ν nu
B β beta	Ξ ξ xi
Γ γ gamma	Ο ο omicron
Δ δ delta	Π π pi
E ε epsilon	P ρ rho
Z ζ zeta	Σ σ sigma
H η eta	T τ tau
Θ θ theta	Υ υ upsilon
I ι iota	Φ φ phi
K κ kappa	X χ chi
Λ λ lambda	Ψ ψ psi
M μ mu	Ω ω omega

- Tom Jacobs

What is a Lunation? (Continued from page 1)

correct and is to me something of a surprise.

The moon is the brightest and most observed object in the night time sky. The surprise is that astronomers have only counted 814 "lunar" months.

With a calendar that was based on the Sun and seasons western man did not create a system of tracking the phases of the moon until almost the middle of the 20th century. (Dare I call this a "*glaring*" oversight of the moon?)

The practice of counting lunations was started in January 1923 by astronomer E. W. Brown. Lunation number 1 started with the new moon of January 16, 1923. This month the moon will start the 814th cycle of it's phases.

- Tom Jacobs

(Sky Calendar - from page 3)

		tion of 18°.
<u>27th</u>	12h	Jupiter passes 6° south of the Moon.
<u>29th</u>	-----	Edmund Halley born this day in 1656.
<u>30th</u>	6:00	Eastern Standard Time is resumed. Set your clocks back 1 hour.
	14h	Mars is stationary in right ascension resumes forward (eastward) motion.
	14h	Sun enters the constellation of Libra.
<u>31st</u>	10h	Mercury at it's greatest northern latitude +7°.

Sky Calendar for October 1988

All times are Given in UT to convert to EST subtract 5 hours; for EDT subtract 4 hours.)

<u>2ed</u>	11h	Vesta is conjunction with the Sun.			at right ascension 01:44; declination +14°; ZHR = 5; slow moving about 27km/sec.
	16:58	Moon at last quarter.			
<u>3rd</u>	-----	First successful flight test of a V-2 rocket made on this date in 1942.	<u>14th</u>	-----	First supersonic flight made on this date in 1947 by Chuck Yeager in the X-1 rocket plane.
	-----	Andromedids Meteor. This stream is sometimes referred to as the Epsolon Piscids. The radiant is located near right ascension 00:20; declination +8°; slow moving; red in color; ZHR about 1 or 2.	<u>15th</u>	2h	Antares passes 0.6° north of the Moon.
<u>4th</u>	8h	Venus passes 0.2° south of Regulus. The Soviet Union launches the world's first artificial satellite Sputnik 1 on this date in 1957.	<u>16th</u>	12h	Saturn passes 6° north of the Moon.
<u>5th</u>	18h	Mercury passes 1.2° south of Spica magnitudes of 2.5 and 1.0.		12h	Uranus passes 5° north of the Moon.
<u>6th</u>	20h	Regulus passes 1.0° south of the Moon. Occultation		13h	Mercury at ascending node.
<u>7th</u>	3h	Venus passes 0.6° south of the Moon.	<u>17th</u>	5h	Neptune passes 6° north of the Moon.
	20h	Moon at Apogee distance is 63.7 Earth-radii.		-----	Epsilon Geminid Meteors. The radiant is located at right ascension 06:50; declination +27°; fast moving 70km/sec.
<u>8th</u>	1h	Moon at descending node.	<u>18th</u>	2h	Saturn passes 1.1° north of Uranus.
	-----	Draconids Meteor. The radiant is located at right ascension 17:28; declination +54°; speeds slow 21 km/sec. Derived from comet Giacobini-Zinner; last returned in 1985. Meteoroids travel in a swarm close to the comet. Shower can become a storm in the year of the comets return.		13:01	magnitudes of 0.6 and 5.7 respectively.
<u>10th</u>	21:49	New Moon. Lunation number 814.		-----	Moon at first quarter.
<u>11th</u>	7h	Mercury in inferior conjunction with the Sun moves into the morning sky. Wally Schirra; Donn Eisele; and Walt Cunningham make the first space flight test of the Apollo Command and Service Modules on this date in 1968.	<u>19th</u>	16h	First images of the far side of the Moon are made by the Soviet probe Luna 3 on this date in 1959.
<u>12th</u>	5h	Comet Longmore at perihelion.			
<u>13th</u>	-----	Piscids Meteors. The radiant is located	<u>20th</u>	-----	Orionids Meteors. The radiant is located at right ascension 06:20; declination +15°; ZHR varies between 10 and 70 (expect around 25 this year). Fast moving 67km/sec many different colors but faint. Derived from Comet Halley.
			<u>21st</u>	5h	Mercury at perihelion distance is .31 a.u. from the Sun.
				22h	Moon at ascending node.
			<u>23rd</u>	4h	Mars passes 5° south of the Moon.
				12h	Moon at perigee distance is 56.6 Earth-radii.
			<u>25th</u>	4:35	Full Moon. Called the Hunters moon as it is the first full moon after the Harvest Moon.
			<u>26th</u>	21h	Mercury at it's greatest western elonga-

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Upcoming Events for October 1988

Monthly Meeting of the Cape Fear Astronomy Club
October 2, 1988; 7:00pm - Bryan Auditorium; Morton Hall; UNC-W

Club Viewing Session
October 8, 1988; Dusk until "?" - Pender County Site

Club Viewing Session
October 22, 1988; Dusk until "?" - Pender County Site

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