

# CAPE FEAR *Skies*



A MONTHLY NEWSLETTER  
OF THE  
CAPE FEAR ASTRONOMY CLUB

VOLUME 1, No. 4

OCTOBER 1986

## MEMBERS:

OCTOBER WILL BE A BUSY MONTH FOR THE CLUB. WE HAVE SEVERAL EVENTS PLANNED.

FIRST THOUGH, I WANT TO REMIND YOU OF THE PARTIAL SOLAR ECLIPSE ON FRIDAY THE 3rd. THIS IS AN ANNULAR/TOTAL ECLIPSE OVER NORTH AMERICA. VIEWING IN OUR AREA WILL BE LIMITED TO ABOUT 40% COVERAGE. IT IS INTERESTING TO NOTE HOWEVER, THAT AS CLOSE AS THE OUTER BANKS AND NORTHWARD THE COVERAGE WILL BE AS MUCH AS 60%. SO IF YOU PLAN TO BE IN THAT AREA, YOU MIGHT SEE A MUCH BETTER EXAMPLE OF AN ECLIPSE THAN WE WILL IN THIS AREA

PLEASE REMEMBER, NO MATTER HOW MANY FILTERS YOU HAVE ON YOUR CAMERA OR TELESCOPE, IT IS NOT SAFE FOR YOU TO LOOK DIRECTLY AT THE SUN. DOING SO CAN CAUSE PERMANENT EYE DAMAGE OR EVEN TOTAL BLINDNESS. IF YOU WANT TO OBSERVE THE ECLIPSE SAFELY, HERE ARE A FEW THINGS YOU CAN DO.

- 1) PUNCH A TINY PINHOLE IN A PIECE OF HEAVY-DUTY ALUMINUM FOIL WITH A THIN NEEDLE. HOLD THE FOIL FACING THE SUN AND LOOK ON THE GROUND WHERE THE FOILS SHADOW FALLS. YOU WILL SEE A TINY SUN WITH A PIECE BITTEN OUT OF IT. (DON'T LOOK THROUGH THE PINHOLE.)
- 2) IF YOU ARE USING YOUR SCOPE WITH A SOLAR FILTER, YOU CAN PROJECT THE IMAGE ONTO A PIECE OF PAPER BY HOLDING IT OVER THE EYEPIECE. REMEMBER THAT THE INTENSITY AND HEAT OF THE SUN CAN DAMAGE YOUR TELESCOPE TOO, SO BE CAREFUL.

WE HAVE A CLUB PICNIC PLANNED FOR SUNDAY OCTOBER 5th. (RAIN OR CLOUDY DATE IS OCT 12th.) AT 5:30. THIS IS GOING TO BE A COVERED DISH PICNIC. THE CLUB IS SUPPLYING THE PLATES AND UTENSILS. WE WILL ALSO HAVE OUR REGULAR MEETING AFTER WE EAT AND THEN WE PLAN TO DO SOME STAR-GAZING SO COME PREPARED. PLEASE CONTACT DEBBIE PETTY AT 675-1952 AND LET HER KNOW WHAT KIND OF FOOD YOU ARE PLANNING TO BRING SO WE DON'T HAVE EVERYONE BRINGING THE SAME KIND OF FOOD. SEE YOU THERE.

*You may reach Debbie at work 675-2222*

WE TURNED IN OUR APPLICATION FOR SPACE IN THE MALL AND WERE ACCEPTED FOR THE DAYS WE HAD PLANNED. SATURDAY OCT 18th AND SUNDAY OCT 19th. THIS IS A VERY EXCITING EVENT FOR OUR CLUB. IT MEANS WE WILL HAVE AN EXCELLENT OPPORTUNITY TO MAKE THE GENERAL PUBLIC AWARE OF WHAT WE DO AND HOPEFULLY SIGN SOME MORE MEMBERS TO THE CLUB.

WE WILL HAVE OUR TELESCOPES ON DISPLAY IN CENTER COURT OF THE MALL AS WELL AS PICTURES TAKEN BY CLUB MEMBERS OFFERED FOR SALE TO THE PUBLIC. RONNIE WILL HAVE HIS MODELS OF THE SOLAR SYSTEM AS WELL AS THE OTHERS HE HAS ON DISPLAY. WE WILL HAVE A DONATION BOX SET UP FOR CONTRIBUTIONS AND WE MAY HAVE A RAFFLE FOR A TELESCOPE DONATED BY STEVE REYNOLDS.

WE NEED MEMBER TO VOLUNTEER THEIR TIME ON BOTH OF THESE DAYS TO BE IN THE MALL AND HELP OUT. PLEASE CALL RONNIE (762-1033) AND LET HIM KNOW WHEN YOU CAN BE THERE. HE WILL BE THERE BOTH DAYS. IT IS IMPORTANT THAT WE HAVE AS MANY MEMBERS AS POSSIBLE SHOW UP SO PLEASE TRY TO COME.

IF ANY OF YOU HAVE PICTURES YOU WANT DISPLAYED, PLEASE GET THEM TO PAUL BY OCTOBER 9th. THEY MUST BE 8 x 10. YOU CAN REACH HIM AT 675-4932.

#### METEOR REPORT

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THE ORIONID METEOR SHOWER WILL PEAK ON OCTOBER 21st. UNFORTUNATELY THE MOON WILL INTERFERE, BUT TRY ANYWAY. YOU COULD SEE AS MANY AS 25 PER HOUR. THEY WILL ORIGINATE FROM ORION'S CLUB.

DID YOU KNOW..... THAT A HALO AROUND THE MOON MEANS RAIN. IF THERE ARE STARS IN THE HALO IT WILL RAIN AS MANY DAYS AS THERE ARE STARS, OR RAIN WILL COME AFTER THAT MANY DAYS. FIVE STARS OR MORE IN THE RING MEANS COLD WEATHER; FEWER STARS MEANS WARM WEATHER.

#### ASTRONOMICAL GLOSSARY

ANNULAR ECLIPSE- A SOLAR ECLIPSE IN WHICH A RING -AN ANNULUS- OF SOLAR PHOTOSPHERE REMAINS VISIBLE.

CHROMOSPHERE- A LAYER IN THE SUN AND MANY OTHER STARS JUST ABOVE THE PHOTOSPHERE. DURING ECLIPSES, THE SOLAR CHROMOSPHERE GLOWS REDDISH FROM HYDROGEN EMISSION.

MAGNITUDE- A LOGARITHMIC SCALE OF BRIGHTNESS, IN WHICH EACH CHANGE OF FIVE MAGNITUDES IS EQUIVALENT TO A CHANGE BY A FACTOR OF 100. ADDING ONE MAGNITUDE CORRESPONDSTO A DECREASE IN BRIGHTNESS BY A FACTOR OF 2.512

NOVA- A NEWLY VISIBLE STAR, OR ONE THAT SUDDENLY INCREASES DRASTICALLY IN BRIGHTNESS.



## ASTRONOMICAL GLOSSARY cont'd

RIGHT ASCENSION- THE ANGLE OF AN OBJECT AROUND THE CELESTIAL EQUATOR, MEASURED IN HOUR, MINUTES, AND SECONDS EASTWARD FROM THE VERNAL EQUINOX.

VERNAL EQUINOX- THE INTERSECTION OF THE ECLIPTIC AND THE CELESTIAL EQUATOR THAT THE SUN PASSES ON ITS WAY TO NORTHERN (POSITIVE) DECLINATIONS.

ZENITH- THE POINT DIRECTLY OVERHEAD (WHEREVER AND OBSERVER IS), 90 DEGREES ABOVE THE HORIZON.

## ORIGINS OF THE CONSTELLATIONS

SAGITTARIUS THE ARCHER- THIS CONSTELLATION HAS BEEN ASSOCIATED WITH CHIRON THE CENTAUR WHO WAS KNOWN FOR HIS MARKSMANSHIP AS WELL AS HIS EXPERTISE IN MUSIC AND MEDICINE. OTHER LEGENDS SAY CHIRON WAS TO CIVILIZED A MODEL FOR SAGITTARIUS AND THAT HE IS ASSOCIATED WITH IT BECAUSE HE HELPED IDENTIFY IT IN THE SKY TO JASON AND HIS ARGONAUTS ON THEIR VOYAGE TO THESSALY.

CAPRICORN THE GOAT- CAPRICORN, AQUARIUS AND PISCES ARE IN THE AREA OF THE SKY KNOWN AS THE SEA. FROM EARLY TIMES THE GOAT HAS BEEN DEPICTED WITH THE TAIL OF A FISH. ACCORDING TO ONE INTERPRETATION, THE GOAT BODY, AN EXPERT CLIMBER, REPRESENTS THE SUN'S CLIMB FROM ITS LOWEST POSITION IN THE SKY, WHICH IS IN THE CONSTELLATION BOUNDARIES. THE FISH TAIL MAY REPRESENT THE SEASONAL RAINS.

AQUARIUS THE WATER BEARER- EARLY ARTIFACTS DEPICT THIS CONSTELLATION AS A MAN POURING WATER FROM A JAR. ALSO REPRESENTING THE RAINY SEASON.

PISCES THE FISH- VENUS AND CUPID ESCAPED FROM THE MONSTER TYPHON BY DISGUIISING THEMSELVES AS FISH AND JUMPING INTO THE EUPHRATES RIVER.

THIS COMPLETES THE CONSTELLATIONS IN THE ZODIAC. NEXT MONTH I WILL START ON OTHER CONSTELLATIONS CATALOGED BY PTOLEMY.

## THE OCTOBER SKY CONSTELLATIONS

CEPHEUS	CASSIOPEIA	PERSEUS	ANDROMEDA
AURIGA	SAGITTARIUS	CAPRICORN	AQUARIUS
PEGASUS	ARIES	TAURUS	CETUS

MAKE SURE YOU CHECK OUT THE DOUBLE CLUSTER IN PERSEUS AS WELL AS M-31 THE GREAT GALAXY IN ANDROMEDA VISIBLE TO THE NAKED EYE ON CLEAR DARK NIGHTS. THIS GALAXY IS OUR CLOSEST NEIGHBORING GALAXY AT A SHORT 2.5 MILLION LIGHT YEARS DISTANCE. ALSO TRY FOR M-33, A SPIRAL GALAXY IN TRIANGULUM. IT'S HARD TO SEE SO USE BINOCULARS. IT'S A FACE-ON GALAXY SO LOOK FOR THE SPIRAL ARMS SPREADING OUTWARD. IT'S ABOUT THE SAME SIZE, AREA WISE, AS THE FULL MOON, BUT VERY VERY DIM. TRY ON A REAL DARK NIGHT.

# SPECIAL REPORT

## FORECASTING WEATHER BY THE MOON

"THIS TABLE AND ACCOMPANYING REMARKS ARE THE RESULTS OF MANY YEARS OF ACTUAL OBSERVATION, THE WHOLE BEING CONSTRUCTED ON A DUE CONSIDERATION OF THE ATTRACTION OF THE SUN AND MOON, IN THEIR SEVERAL POSITIONS RESPECTING THE EARTH, AND WILL, BY SIMPLE INSPECTION, SHOW THE OBSERVER WHAT KIND OF WEATHER WILL MOST PROBABLY FOLLOW THE ENTRANCE OF THE MOON INTO ANY OF ITS QUARTERS, AND THAT SO NEAR THE TRUTH, AS TO BE SELDOM OR NEVER FOUND TO FAIL." -FRANCIS H. BUZZACOTT, THE COMPLETE AMERICAN AND CANADIAN SPORTSMAN'S ENCYCLOPEDIA OF VALUABLE INSTRUCTION, 1913.

IF THE NEW MOON,  
1st QUARTER, FULL,  
MOON, OR LAST  
QUARTER, OCCURS:

	IN SUMMER	IN WINTER
BETWEEN MIDNIGHT AND 2 AM	FAIR	FROST, UNLESS WIND FROM SOUTHWEST
2 AND 4 AM	COLD & SHOWERS	SNOW AND STORMY
4 AND 6 AM	RAIN	RAIN
6 AND 8 AM	WIND AND RAIN	STORMY
8 AND 10 AM	CHANGEABLE	COLD RAIN IF WEST WIND, SNOW IF EAST.
10 AND 12 AM	FREQUENT SHOWERS	COLD AND HIGH WIND
12 AND 2 PM	VERY RAINY	SNOW OR RAIN
2 AND 4 PM	CHANGEABLE	FAIR AND MILD
4 AND 6 PM	FAIR	FAIR
6 AND 8 PM	FAIR, IF NORTH WIND	FAIR & FROSTY IF NORTH OR NORTH- EAST WIND.
8 AND 10 PM	RAINY IF SOUTH OR SOUTH WEST WIND	RAIN OR SNOW IF SOUTH OR SOUTH- WEST WIND
10 AND MIDNIGHT	FAIR	FAIR AND FROSTY



THE OCTOBER SKY

- 1st VENUS GREATEST BRILLIANCY
- 3rd NEW MOON, 2:55 PM  
ANNULAR/TOTAL SOLAR ECLIPSE OVER NORTH AMERICA  
VESTAS AT OPPOSITION
- 4th SPUTNIK 1 LAUNCHED, 1957
- 5th MERCURY 0.4 DEGREES SOUTH OF MOON  
OCCULTATION  
EDWIN HUBBLE IDENTIFIES CEPHEID VARIABLE IN M-31, 1923
- 6th VENUS 4 DEGREES SOUTH OF MOON
- 7th MOON AT PERIGEE 6 AM  
SATURN 5 DEGREES NORTH OF MOON  
ANTARES 0.6 DEGREES SOUTH OF MOON. OCCULTATION  
DRACONID METEORS
- 8th URANUS 4 DEGREES NORTH OF MOON  
DRACONID METEORS
- 9th NEPTUNE 6 DEGREES NORTH OF MOON  
DRACONID METEORS
- 10th FIRST QUARTER MOON 9:28 AM  
WILLIAM LASSELL DISCOVERS TRITON, MOON OF NEPTUNE 1846
- 11th MARS 2 DEGREES NORTH OF MOON
- 14th JUPITER 1.9 DEGREES SOUTH OF MOON
- 15th VENUS STATIONARY
- 17th FULL MOON 3:22 PM  
TOTAL LUNAR ECLIPSE OVER EASTERN HEMISPHERE
- 18th MERCURY 4 DEGREES NORTH OF VENUS
- 19th ORIONID METEORS
- 20th ORIONID METEORS
- 21st MERCURY AT GREATEST EASTERN ELONGATION (24 DEGREES)  
ORIONID METEORS
- 22nd FIRST RECORDED SOLAR ECLIPSE , CHINA 2136 BC
- 23rd MOON AT APOGEE 2 AM
- 25th LAST QUARTER MOON 6:26 PM
- 26th DAYLIGHT SAVINGS TIME ENDS.
- 29th EDMUND HALLEY BORN 1656]
- 30th PLUTO IN CONJUNCTION WITH THE SUN.