Cape Fear Skies

The Official Newsletter of the
Cape Fear Astronomical Society
Wilmington, North Carolina

A Member Society of the Astronomical League

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www.capefearastro.org

CAPE FEAR ASTRONOMICAL SOCIETY
WILMINGTON, NORTH CAROLINA

This Month's Meeting / CFAS Annual Christmas Party Sunday, December 2, 2007

At the Kidney Residence
1206 Beeston Court
Wilmington, NC

The Cape Fear Astronomical Society 2006 Christmas Party will begin at 6:30 pm with the general meeting to follow.

Directions to the Kidney Residence:

From College Road - Exit on to Gordon Rd 420A. At the bottom of the ramp turn right onto Gordon Rd. At the 1st traffic light make a left onto Harris Rd. Go 1.1 mile and make a right onto Shire Lane. Make your 2nd left onto Beeston Court.

From Market St. heading toward downtown - Make a right onto Gordon Road. Go to the 3rd traffic light and make a right onto Harris Rd. Go 1.1 mile and make a right onto Shire Lane. Make your 2nd left onto Beeston Court.

CAPE FEAR SKIES
Editor: Ric Longren
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CAPE FEAR ASTRONOMICAL SOCIETY
WILMINGTON, NORTH CAROLINA

Cape Fear Astronomical Society

No meeting minutes provided to Editor

Event Calendar for December 2007

Dec 1	Last quarter Moon, 7:44 am
Dec 2	**CFAS Annual Christmas Party, 6:30 pm**
Dec 5	Moon passes 7º south of Venus, 8 pm
Dec 6	Moon at apogee, 11:53 am, 252,423 miles
Dec 7/8	**CFAS Group Viewing Sessions**
Dec 9	New Moon, 12:40 pm
Dec 14	Geminid meteor shower peaks
Dec 14/15	**CFAS Group Viewing Sessions**
Dec 17	First quarter Moon, 5:18 am
Dec 18	Mars is closest to Earth, 7:00 pm, 54.8 million miles
Dec 22	Winter solstice occurs, 1:08 am Moon at perigee, 5:14 am, 224,200 miles
Dec 23	Full Moon, 8:16 pm
Dec 24	Mars is at opposition 3 pm
Dec 25	**Merry Christmas**
Dec 27	Moon passes .6º south of Regulus, midnight
Dec 31	Last quarter Moon, 2:51 am

All times are EST unless otherwise noted

News Cluster

► The CFAS annual Christmas Party will be hosted for the 4th year in a row by Billy and Kristy Kidney on December 2 starting at 6:30 pm. (directions on the front of Newsletter). Bring your family and a covered dish. Please email Billy and let him know if you and your family will be attending and if possible what you are bringing. Billy will be serving ham for all to enjoy.

► During the party there will be a short meeting to elect the 2008 CFAS Officers. Nominations are as follows:

President	Ronnie Hawes
Vice President	Terry Herrin
Associate Vice President	Alan Hilburn
Secretary	?
Treasurer	Ben Steelman
Newsletter Editor	?

Write-in votes will be accepted on the ballot provided.

News from Our Sister Society Down Under

Astronomical Society of Albury - Wodonga

For the latest news from down under, check out our sister society's web site at www.asaw.org.au.

Astronomical History During the Month of December

Date	Milestone
Dec 11 1972	Landing of Apollo 17 lunar module, last of the Apollo lunar landing missions
Dec 14 1962	Flyby of Venus by NASA's Mariner 2, the first successful probe to another planet, which passed within 22,000 miles of Venus
Dec 16 1857	Birth of E. E Barnard, discoverer of the fastest moving star known as Barnard's star
Dec 20 2002	Grote Reber pioneer radio astronomer dies
Dec 25 1642	Birth of Isaac Newton, discoverer of the laws of gravity
Dec 28 1882	Birth of Sir Author Eddington, British astrophysicist who studied the internal structure and evolution of stars

Planets in December 2007

Planet	Dec	Elong.	Mag.	Dia.	Illum.	Dist.
Mercury	1st	9º Mo	-0.8	4.9"	97%	1.385
	11th	4º Mo	-1.1	4.7"	100%	1.443
	21st	2º Ev	-1.2	4.7"	100%	1.442
	31st	8º Ev	-0.9	4.9"	97%	1.382
Venus	1st	44º Mo	-4.2	17.8"	66%	0.939
	11th	42º Mo	-4.2	16.5"	70%	1.010
	21st	41º Mo	-4.1	15.5"	73%	1.078
	31st	39º Mo	-4.1	14.6"	76%	1.144
Mars	1st	148º Mo	-1.3	15.1"	97%	0.621
	16th	167º Mo	-1.6	15.9"	100%	0.590
	31st	171º Ev	-1.5	15.5"	100%	0.605
Jupiter	1st	18º Ev	-1.8	31.8"	100%	6.191
	31st	6º Mo	-1.8	31.7"	100%	6.225
Saturn	1st	90º Mo	+0.7	18.1"	100%	9.203
	31st	120º Mo	+0.6	19.0"	100%	8.729
Uranus	16th	81º Ev	+5.9	3.5"	100%	20.220
Neptune	16th	56º Ev	+7.9	2.2"	100%	30.580
Pluto	16th	8º Ev	+14.0	0.1"	100%	32.362

Elong. – elongation from the Sun: morning (Mo) and evening (Ev)
Dist. – distance from Earth in astronomical units

Photo Gallery

The following photos of comet Holmes were taken by Billy Kidney using a piggy back Canon 400D @ 400 ISO. Good work!

Astronomers Say Moons Like Ours Are Uncommon

(www.jpl.nasa.gov)

November 20, 2007

The next time you take a moonlit stroll, or admire a full, bright-white moon looming in the night sky, you might count yourself lucky. New observations from NASA's Spitzer Space Telescope suggest that moons like Earth's - that formed out of tremendous collisions - are uncommon in the universe, arising at most in only 5 to 10 percent of planetary systems.

"When a moon forms from a violent collision, dust should be blasted everywhere," said Nadya Gorlova of the University of Florida, Gainesville, lead author of a new study appearing Nov. 20 in the Astrophysical Journal. "If there were lots of moons forming, we would have seen dust around lots of stars - but we didn't."

It's hard to imagine Earth without a moon. Our familiar white orb has long been the subject of art, myth and poetry. Wolves howl at it, and humans have left footprints in its soil. Life itself might have evolved from the ocean to land thanks to tides induced by the moon's gravity.

Scientists believe the moon arose about 30 to 50 million years after our sun was born, and after our rocky planets had begun to take shape. A body as big as Mars is thought to have smacked into our infant Earth, breaking off a piece of its mantle. Some of the resulting debris fell into orbit around Earth, eventually coalescing into the moon we see today. The other moons in our solar system either formed simultaneously with their planet or were captured by their planet's gravity.

Gorlova and her colleagues looked for the dusty signs of similar smash-ups around 400 stars that are all about 30 million years old - roughly the age of our sun when Earth's moon formed. They found that only 1 out of the 400 stars is immersed in the telltale dust. Taking into consideration the amount of time the dust should stick around, and the age range at which moon-forming collisions can occur, the scientists then calculated the probability of a solar system making a moon like Earth's to be at most 5 to 10 percent.

"We don't know that the collision we witnessed around the one star is definitely going to produce a moon, so moon-forming events could be much less frequent than our calculation suggests," said George Rieke of the University of Arizona, Tucson, a co-author of the study.

In addition, the observations tell astronomers that the planet-building process itself winds down by 30 million years after a star is born. Like our moon, rocky planets are built up through messy collisions that spray dust all around. Current thinking holds that this process lasts from about 10 to 50 million years after a star forms. The fact that Gorlova and her team found only 1 star out of 400 with collision-generated dust indicates that the 30-million-year-old stars in the study have, for the most part, finished making their planets.

"Astronomers have observed young stars with dust swirling around them for more than 20 years now," said Gorlova. "But those stars are usually so young that their dust could be left over from the planet-formation process. The star we have found is older, at the same age our sun was when it had finished making planets and the Earth-moon system had just formed in a collision."

For moon lovers, the news isn't all bad. For one thing, moons can form in different ways. And, even though the majority of rocky planets in the universe might not have moons like Earth's, astronomers believe there are billions of rocky planets out there. Five to 10 percent of billions is still a lot of moons.

Other authors of the paper include: Zoltan Balog, James Muzerolle, Kate Y. L. Su and Erick T. Young of the University of Arizona, and Valentin D. Ivanov of the European Southern Observatory, Chile.

NASA's Jet Propulsion Laboratory, Pasadena, Calif., manages the Spitzer Space Telescope mission for NASA's Science Mission Directorate, Washington. Science operations are conducted at the Spitzer Science Center at the California Institute of Technology, also in Pasadena. Caltech manages JPL for NASA.

For more information about Spitzer, visit http://www.nasa.gov/spitzer and http://www.spitzer.caltech.edu/spitzer

Meetings of the CFAS are held on the first Sunday of The month (if holiday weekend or special event, second Sunday) at

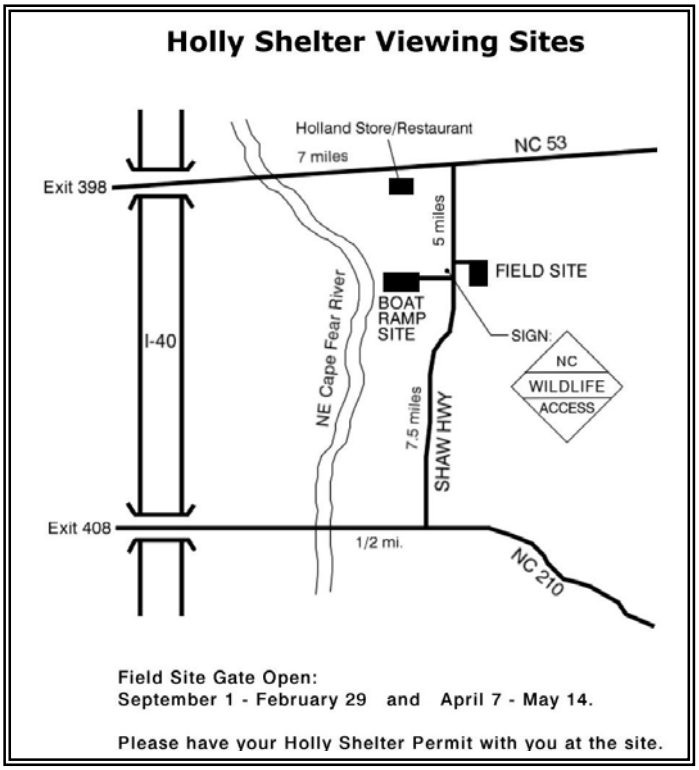
7:00pm – Unitarian Universalist Fellowship of Wilmington

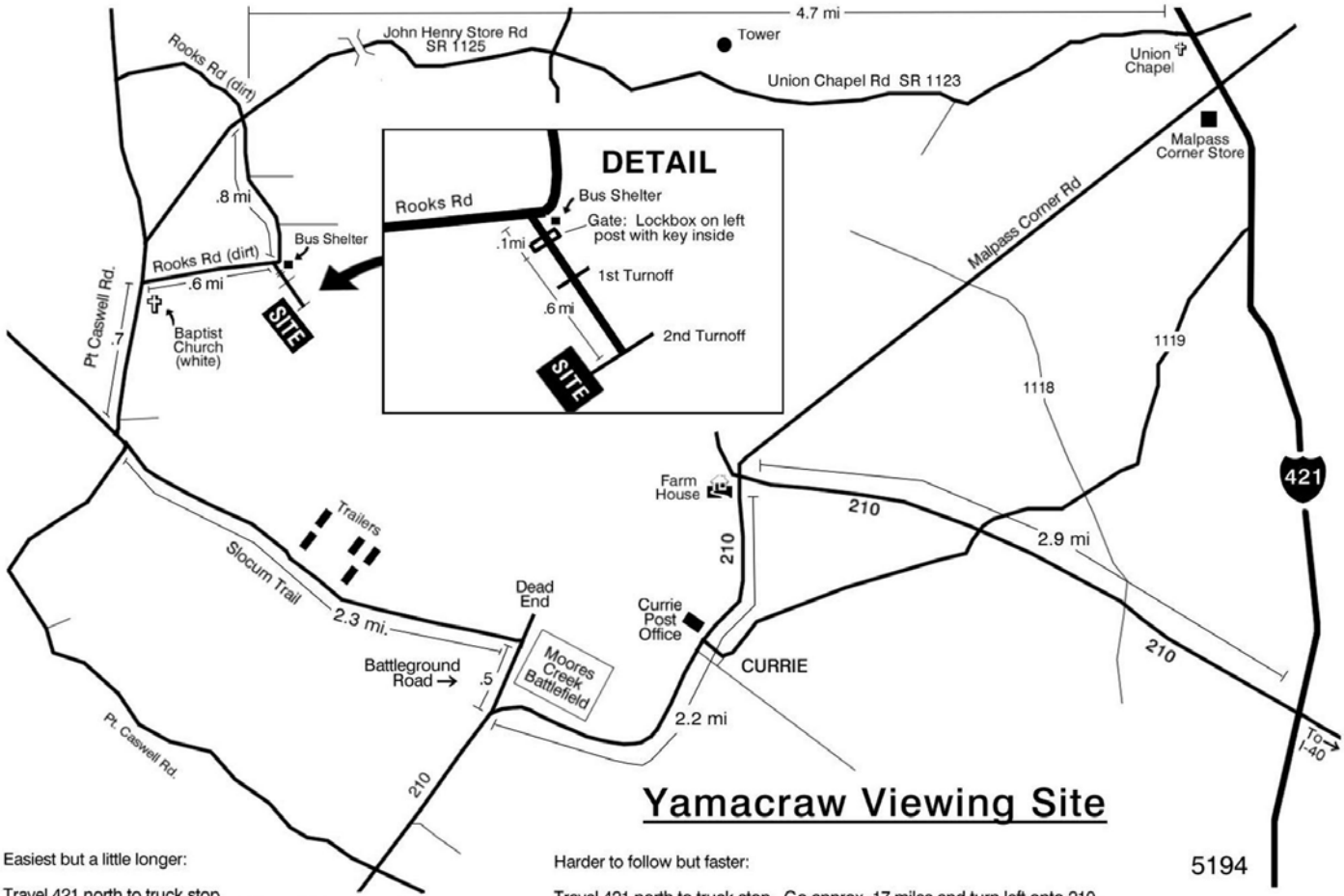
Group Viewing Sessions 5194

Call Ron Hawes at 762-1033 or check our email list to confirm a formal viewing session. Listed below are moonless nights so you can schedule a good viewing. All group viewing sessions will be at the Holly Shelter boat ramp site, unless otherwise specified. Time: Dusk until ?

Friday, December 7	Saturday, December 8
Friday, December 14	Saturday, December 15

Please be cautious of unusual wildlife behavior while observing. A golf club or stick could be useful to keep nearby.





Yamacraw Viewing Site

5194

Easiest but a little longer:

Travel 421 north to truck stop.
Go approx. 20.5 miles and turn left onto Union Chapel Road.
Follow for 4.7 miles (becomes John Henry Store Road) and take left onto Rooks Road (dirt).
Follow Rooks Road .8 miles around curve, pass bus shelter and take left onto our site's road.
Travel .1 mile, unlock/relock gate, travel .6 miles, take 2nd right.

Harder to follow but faster:

Travel 421 north to truck stop. Go approx. 17 miles and turn left onto 210.
Follow 210 for 2.9 miles to intersection (stop sign and big white farm house), turn left onto 210 W.
Follow 210 W past Currie Post Office and Battlefield, turn right onto Battleground Rd.
Follow Battleground Rd .5 miles, take sharp left onto Slocum Rd, follow for 2.3 miles.
Take a right onto Pt. Caswell Rd, follow .7 miles past Church, take right onto Rooks Road (dirt).
Follow Rooks Rd .6 miles, turn right onto our site's road. (If you see the bus shelter, you've gone too far.)
Travel .1 miles, unlock/relock gate, travel .6 miles, take the 2nd road on the right to our site.