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 –
Sunday, November 4, 2007
Unitarian Universalist Fellowship of Wilmington
4313Lake Avenue
The business meeting of
the Cape Fear Astronomical Society
will begin at 7:00 pm.
The general meeting will begin at 7:45 pm.

Gastronomy!

Please join us for dinner before the meeting at Something Fishy, on College near Pine Valley Dr, at 5:15pm!

CAPE FEAR SKIES
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CAPE FEAR ASTRONOMICAL SOCIETY
WILMINGTON, NORTH CAROLINA

Cape Fear Astronomical Society

No meeting minutes provided to Editor

Event Calendar for November 2007

Nov 1	Last quarter Moon, 5:18 pm EDT
Nov 2/3	**CFAS Group Viewing Sessions**
Nov 3	EST begins 2:00 am – Turn clocks back one hour
Nov 4	**CFAS November Meeting 7:00 pm**
Nov 8	Mercury at max western elongation (19º), 4 pm
Nov 9	Moon at apogee, 7:32 am, 252,694 miles
	New Moon, 6:03 pm
Nov 9/10	**CFAS Group Viewing Sessions**
Nov 11	Moon passes .4º south of Antares, 4 pm
Nov 12	Moon passes 5º south of Jupiter, 5 pm
Nov 17	First quarter Moon, 5:33 pm
	Leonid meteor shower peaks
Nov 22	**Thanksgiving Day**
Nov 23	Moon at perigee, 7:13 pm, 221,950 miles
Nov 24	Full Moon, 9:30 am
Nov 27	Moon passes 1.7º north of Mars, 1 am
Nov 28	Venus passes 4º north of Spica, 5 pm
Nov 30	Moon passes .3º south of Regulus, 3 pm

All times are EST unless otherwise noted

News Cluster

► The next meeting of the Cape Fear Astronomical Society is November 4 starting at 7:00 pm. The meeting will be held at the Unitarian Universalist Fellowship of Wilmington (UUFW for short). The program after the meeting will be another episode of "The Universe" on DVD.

► Nominations for the 2008 CFAS officers continues in November. The officer positions are: President, Vice President, Associate Vice President, Treasurer, Secretary and Editor. If your interested or know someone who is by all means come to the November meeting and nominate.

► For those that were unable to attend the October meeting, Ron has received more info on the use of Morton Hall for club meetings. The use of UNCW facilities are summarized as follows: Bryan Auditorium for $120 a meeting, or a classroom that seats 40-90 people for $50 a meeting, or, a classroom that seats about 30 people for $25 a meeting. Let's discuss the Clubs options at the November meeting.

► It's that time of the year again (almost that time). The clubs annual Christmas party, where will it be this year?

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 November

Date	Milestone
Nov 1 1917	First light through the 100 inch reflecting telescope at Mount Wilson Observatory, Ca. Edwin Hubble discovers expansion of the universe with this instrument.
Nov 2 2002	Encounter of NASA's Stardust probe with asteroid Annefrank at a distance of 2000 miles (3,300 km)
Nov 3 1957	Launch of Sputnik 2 carrying the dog Liaka, the first living thing to orbit earth
Nov 5 1992	Jan Oort, Dutch astronomer after whom the Oort comet cloud is named, dies
Nov 10 1967	Soft landing on the Moon of NASA's Surveyor 6, which took pictures and analyzed the composition of the lunar soil

Planets in November 2007

Planet	Nov	Elong.	Mag.	Dia.	Illum.	Dist.
Mercury	1st	15º Mo	+0.8	8.6"	22%	0.786
	11th	19º Mo	-0.7	6.4"	66%	1.047
	21st	15º Mo	-0.7	5.3"	88%	1.258
	30st	10º Mo	-0.8	4.9"	95%	1.376
Venus	1st	46º Mo	-4.5	23.2"	52%	0.717
	11th	46º Mo	-4.4	21.0"	57%	0.793
	21st	45º Mo	-4.3	19.2"	62%	0.867
	30st	44º Mo	-4.3	17.9"	65%	0.932
Mars	1st	117º Mo	-0.6	12.2"	91%	0.770
	16th	131º Mo	-1.0	13.7"	94%	0.685
	30st	146º Mo	-1.3	15.0"	97%	0.624
Jupiter	1st	41º Ev	-1.9	33.0"	100%	5.973
	30st	18º Ev	-1.8	31.9"	100%	6.186
Saturn	1st	62º Mo	+0.8	17.2"	100%	9.680
	30st	89º Mo	+0.7	18.0"	100%	9.219
Uranus	16th	112º Ev	+5.8	3.6"	100%	19.710
Neptune	16th	86º Ev	+7.9	2.3"	100%	30.095
Pluto	16th	35º Ev	+14.0	0.1"	100%	32.180

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

IT Came From Vesta

October 29, 2007 (http://www.jpl.nasa.gov/news/)

Their infiltration began - like so many other infiltrations - with a tell-tale contrail of smoke and flame creating a supersonic slash across the afternoon sky. But this time they would not go unnoticed. This time, two Australian station workers, just going about their job, opening a gate to a boundary fence, witnessed their arrival. The eyewitnesses later said they observed a "fireball with sparks coming off," streaking from the south to the north, make its descent into a hummock of spinifex grass. It would be another 10 years before they told their story. A decade before the world realized -- the Eucrites had arrived.

"Most people do not realize there are eucrites all are over the planet," said Dr. Christopher Russell of UCLA. "How they get here is something of a mystery but we believe they came from Vesta."

For those of you who are not geophysicists with four decades of service to the cause, Vesta is the brightest asteroid in the night's sky and the only one visible from Earth to the naked eye. The planetoid was discovered in 1807 by Heinrich Olbers and named after the ancient Roman goddess of the hearth - Vesta. But perhaps most important to this tale is the fact that the 330-mile-wide space rock has a 285-mile-wide gouge out of its south pole.

"We believe it was caused by a collision of protoplanetary bodies that caused a release of energy far beyond that of any atomic weapon known to man," said Russell.

It was this clash of celestial titans that gouged out an eight-mile-deep hole in the asteroid. On that fateful day, eons ago, one percent of Vesta's volume was believed to be blasted into the cold blackness of interplanetary space -- over one-half million cubic miles of its insides -- and outsides. It was on Vesta's outsides that the eucrites made their home.

But as awesome in scope as that deep space blast was, it cannot solely explain the appearance of eucrites on Earth. After all, the orbit of Vesta is more than twice as far from the sun as Earth's. The other major factor in the equation belongs to the planetary body named after the Roman ruler of all the gods - Jupiter.

"There is a gap in the asteroid belt where objects floating around inside it are greatly affected by Jupiter's gravity," said Russell. "Over the centuries, this gravitational tugging can modify these objects' trajectories about the sun. They could end up on a longer, narrower orbit, and some of those could cross Earth's path."

So just what are these eucrites? Simply put, they are survivors. They survived a stupendous deep space explosion. Then, they survived a multi-billion-mile journey across the solar system, and they survived a 3,200-degree-Fahrenheit plunge through Earth's atmosphere.

"Meteorites are hardy objects indeed," said Russell. "Eucrites are a specific type of meteorite that the science community is confident came from Vesta's surface. We believe that when Vesta was forming, there was molten rock that flowed onto its surface that cooled rapidly. That rapid cooling created small crystals."

It was the unique composition of the eucrites that allows scientists like Russell to trace the meteorites back to their parent body, asteroid Vesta. The meteorites' chemical identity points to Vesta because they have the same unique spectral signature. Isotopes, oxygen atoms with varying numbers of neutrons, in eucrites are unlike the isotopes found for all other rocks of Earth, Moon and most other meteorites. But when astronomers turn their spectrometers on Vesta, the signatures are the same.

"That is why we are quite confident to say eucrites came from Vesta," said Russell. "Simply put, we cannot find another place in the solar system they could be from. I believe when you discover a eucrite meteorite, you can say with confidence -- "It Came From Vesta."

One final thing. There is a mission that will tell us more, so much more, about eucrites and the last unexplored region of our solar system. NASA's Dawn spacecraft is a deep space probe that will journey into the heart of the asteroid belt on an eight-year odyssey to asteroid Vesta and the dwarf planet Ceres. Dawn is on an exploration that may help unravel these mysteries and perhaps provide some of the missing pieces into who we are in the universe.

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

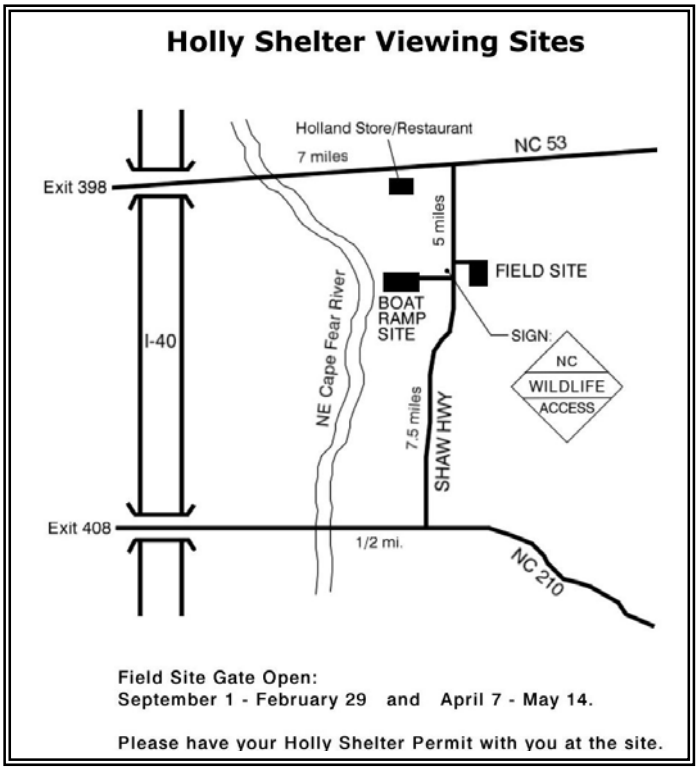
Group Viewing Sessions 5194

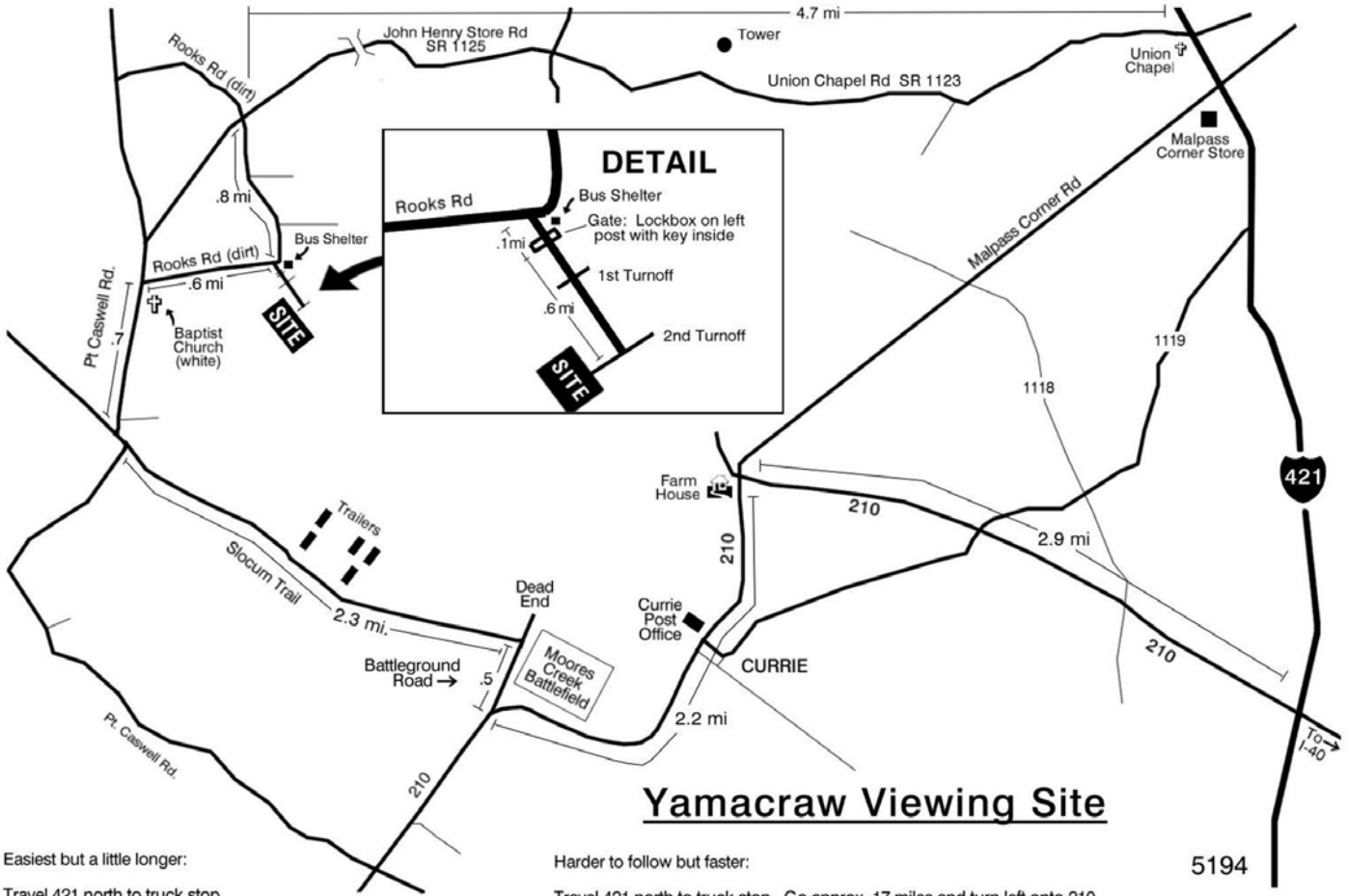
Call Ron Hawes at 762-1033 or check our email list to confirm a formal viewing session. Listed below are moonless nights so you can schedule a good viewing. All group viewing sessions will be at the Holly Shelter boat ramp site, unless otherwise specified. Time: Dusk until ?

Friday, November 2 Saturday, November 3

Friday, November 9 Saturday, November 10

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.