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, July 13, 2008

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 Indochine, 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 for June

Event Calendar for July 2008

July 1	Moon at perigee, 9:21 pm, 223,391 miles
July 2	New Moon, 10:19 pm
July 4	Earth at aphelion, 4 am, 94.5 million miles
July 6	Moon passes 3° south of Saturn, 6 pm
July 9	Jupiter reaches opposition, 4 am
July 10	First Quarter Moon, 12:35 am
July 11	Mars passes 0.7° south of Saturn, 2 am
July 13	**CFAS April Meeting 7:00 pm**
July 14	Moon at apogee, 12:14 am, 251,396 miles
July 17	Moon passes 3° south of Jupiter, 8 am
July 18	Full Moon, 3:59 am
July 25	Last Quarter Moon, 2:42 am
July 25/26	**CFAS Group Viewing Sessions**
July 27	Southern Delta Aquarid meteor shower peaks
July 29	Moon at perigee, 7:23 pm, 226,106 miles
July 31	Moon passes 0.9° south of Ceres, 1 am

All times are EDT unless otherwise noted

News Cluster

► The next meeting of the Cape Fear Astronomical Society is July 13 starting at 7:00 pm. The meeting will be held at the Unitarian Universalist Fellowship of Wilmington (UUFW for short). The speakers for this meeting are Ben Steelman and Mitch Odess. They will present an overall and object review respectively for the Constellation Cygnus. This is the first installment in a series of constellation presentations.

►The following thank you was received from Clint North for the fine job Thad and Mitch did at the Cub Scout overnight camping event: "I would like to let you know that both Thad Coin and Mitch Odess did an excellent job at Cub Scout Pack 730's overnight camping event. It was held at the Moores Creek National Battlefield on Sat. May 24th. We had well over 30 viewers and campers that night who were dazzled by Mars, Saturn and M13. Please let your club know what good work you do by providing your time, effort and equipment so that others may enjoy an incredible view into the heavens. THANKS!! -- Clint North."

Solar System in July 2008						
Planet	Nov	Elong.	Mag.	Dia.	Illum.	Dist.
Sun	1st	----	-26.8	31'28"	----	1.017
	31st	----	-26.8	31'31"	----	1.015
Mercury	1st	22º Mo	+0.4	8.2"	35%	0.823
	11th	19º Mo	-0.6	6.4"	62%	1.046
	21st	10º Mo	-1.4	5.4"	91%	1.251
	31st	2º Ev	-2.0	5.0"	100%	1.345
Venus	1st	6º Ev	-3.9	9.7"	99%	1.722
	11th	9º Ev	-3.9	9.8"	99%	1.706
	21st	12º Ev	-3.9	9.9"	98%	1.684
	31st	14º Ev	-3.9	10.1"	97%	1.658
Mars	1st	50º Ev	+1.6	4.4"	94%	2.111
	16th	45º Ev	+1.7	4.2"	95%	2.204
	31st	40º Ev	+1.7	4.1"	96%	2.284
Jupiter	1st	171º Mo	-2.7	47.2"	100%	4.174
	31st	157º Ev	-2.7	46.7"	100%	4.222
Saturn	1st	55º Ev	+0.8	16.9"	100%	9.861
	31st	30º Ev	+0.8	16.3"	100%	10.194
Uranus	16th	121º Mo	+5.8	3.6"	100%	19.551
Neptune	16th	150º Mo	+7.8	2.3"	100%	29.152
Pluto	16th	155º Ev	+13.9	0.1"	100%	30.471

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

NASA's Phoenix Lander Delivers Soil-Chemistry Sample

July 07, 2008 (www.jplnasa.gov)

TUCSON, Ariz. -- NASA's Phoenix Mars Lander used its Robotic Arm to deliver a second sample of soil for analysis by the spacecraft's wet chemistry laboratory, data received from Phoenix on Sunday night confirmed.

Results from testing this sample will be compared in coming days to the results from the first Martian soil analyzed by the wet chemistry laboratory two weeks ago. That laboratory is part of Phoenix's Microscopy, Electrochemistry and Conductivity Analyzer.

The main activity on the lander's schedule for today is testing a method for scraping up a sample of icy material and getting it into the scoop at the end of the Robotic Arm. Photography before, during and after the process will allow evaluation of this method. If the test goes well, the science team plans to use this method for gathering the next sample to be delivered to Phoenix's bake-and-sniff instrument, the Thermal and Evolved-Gas Analyzer.

The Phoenix mission is led by Peter Smith of the University of Arizona with project management at JPL and development partnership at Lockheed Martin, located in Denver. International contributions come from the Canadian Space Agency; the University of Neuchatel, Switzerland; the universities of Copenhagen and Aarhus, Denmark; Max Planck Institute, Germany; and the Finnish Meteorological Institute.

Sample-Collection Tests by NASA's Phoenix Lander Continue

July 08, 2008 (www.jplnasa.gov)

TUCSON, Ariz. -- NASA's Phoenix Mars Lander's science and engineering teams are testing methods to get an icy sample into the Robotic Arm scoop for delivery to the Thermal and Evolved Gas Analyzer (TEGA).

Ray Arvidson of Washington University in St. Louis, Phoenix's "dig czar," said the hard Martian surface that Phoenix has reached proved to be a difficult target, comparing the process to scraping a sidewalk.

"We have three tools on the scoop to help access ice and icy soil," Arvidson said. "We can scoop material with the backhoe using the front titanium blade; we can scrape the surface with the tungsten carbide secondary blade on the bottom of the scoop; and we can use a high-speed rasp that comes out of a slot at the back of the scoop."

"We expected ice and icy soil to be very strong because of the cold temperatures. It certainly looks like this is the case and we are getting ready to use the rasp to generate the fine icy soil and ice particles needed for delivery to TEGA," he said.

Scraping action produced piles of scrapings at the bottom of a trench on Monday, but did not get the material into its scoop, information returned from Mars on Monday night confirmed. The piles of scrapings produced were smaller than previous piles dug by Phoenix, which made it difficult to collect the material into the Robotic Arm scoop.

"It's like trying to pick up dust with a dustpan, but without a broom," said Richard Volpe, an engineer from NASA's Jet Propulsion Laboratory, Pasadena, Calif., on Phoenix's Robotic Arm team.

Images from the lander's Robotic Arm Camera showed that the scoop remained empty after two sets of 50 scrapes performed earlier Monday were collected into two piles in the trench informally named "Snow White." These activities were a test of possible techniques for collecting a sample of ice or ice-rich soil for analysis.

The mission teams are now focusing on use of the motorized rasp within the Robotic Arm scoop to access the hard icy soil and ice deposits. They are conducting tests on Phoenix's engineering model in the Payload Interoperability Testbed in Tucson to determine the optimum ways to rasp the hard surfaces and acquire the particulate material produced during the rasping. The testbed work and tests on Mars will help the team determine the best way to collect a sample of Martian ice for delivery to TEGA.

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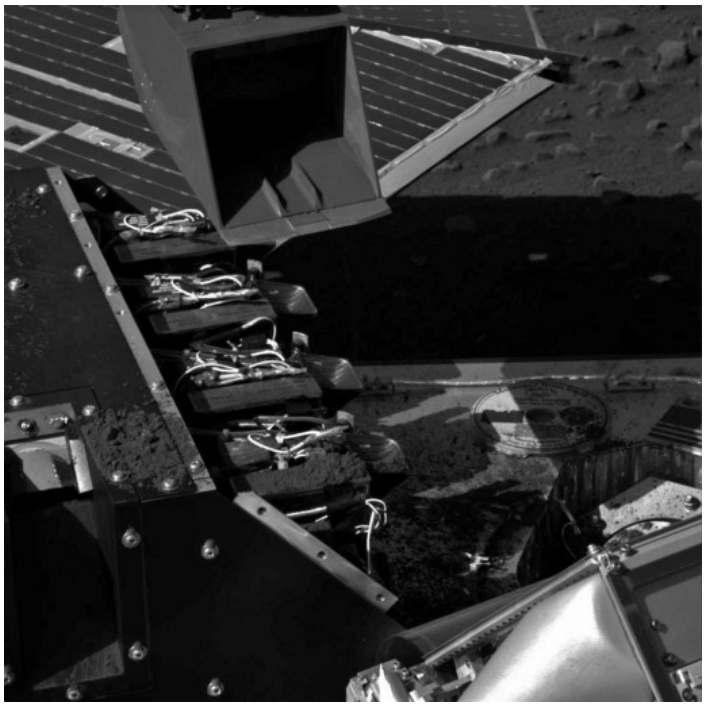
This image was acquired by NASA's Phoenix Mars Lander's Surface Stereo Imager on the 44th Martian day of the mission, or Sol 43 (July 7, 2008), after the May 25, 2008, landing, showing the current sample scraping area in the trench informally called "Snow White." Image credit: NASA/JPL-Caltech/University of Arizona/Texas A&M University



This image taken by the Surface Stereo Imager on NASA's Phoenix Mars Lander shows the lander's Robotic Arm scoop positioned over the Wet Chemistry Lab Cell 1 delivery funnel on Sol 41, the 42nd Martian day after landing, or July 6, 2008, after a soil sample was delivered to the instrument.

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

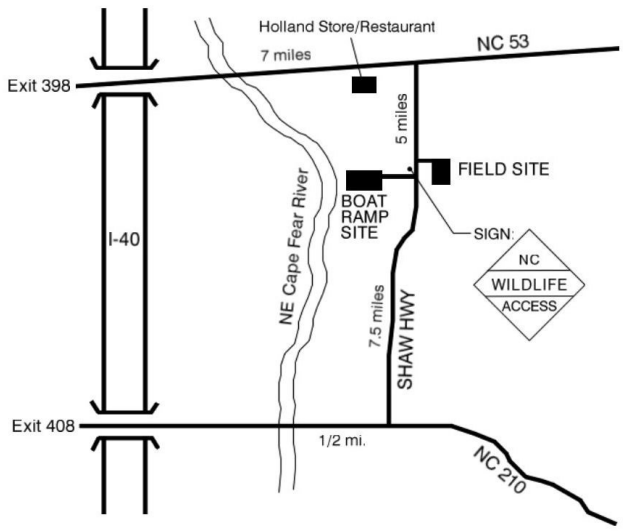
Group Viewing Sessions 5194

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, July 25 Saturday, July 26

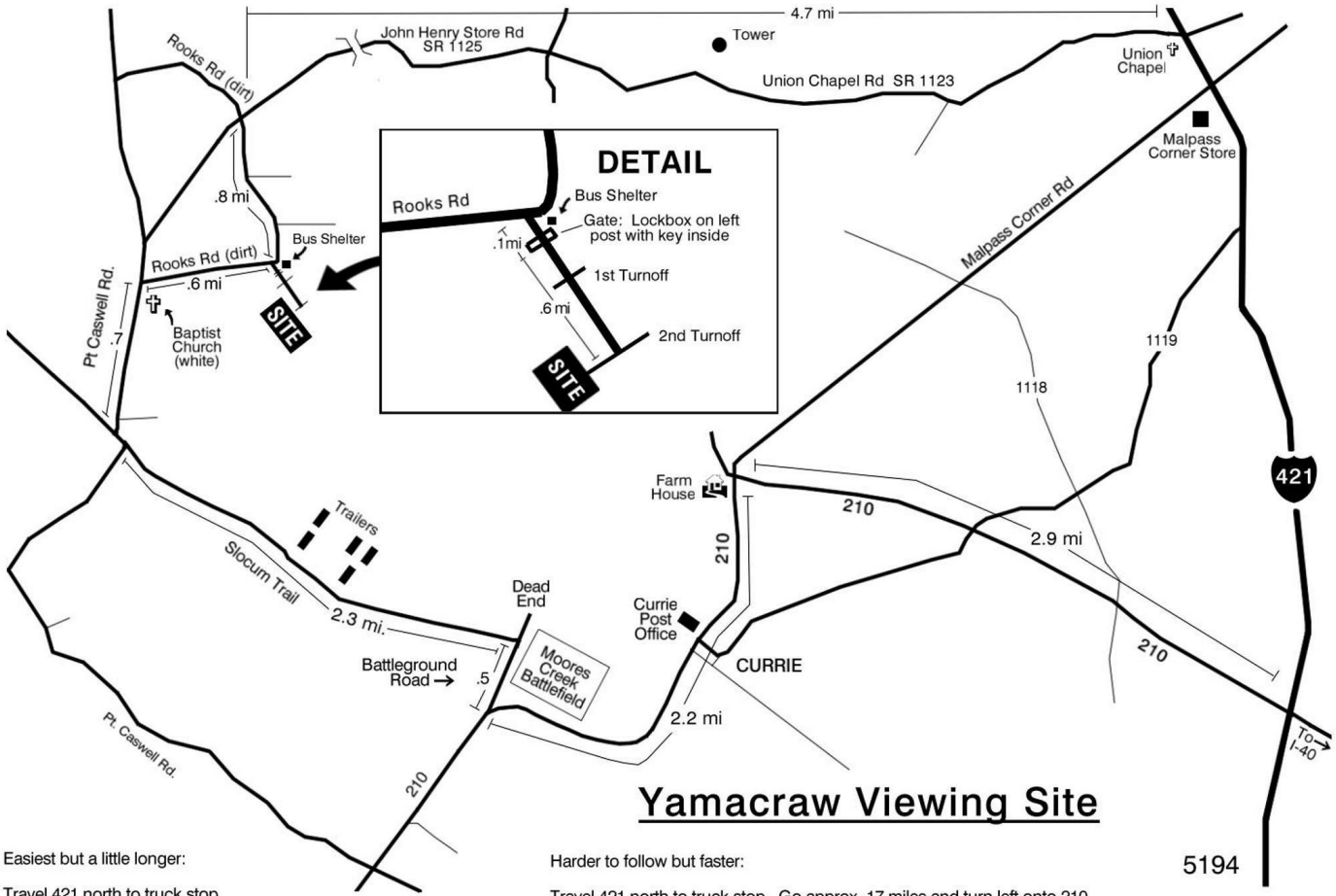
Please be cautious of unusual wildlife behavior while observing. A golf club or stick could be useful to keep nearby.

Holly Shelter Viewing Sites



Field Site Gate Open:
September 1 - February 29 and April 7 - May 14.

Please have your Holly Shelter Permit with you at the site.



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.