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Kitt Peak Docent Program

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Docent Forum: <http://groups.yahoo.com/group/docentforum/>

Docent Calendar: <http://groups.yahoo.com/group/docentforum/>

Volunteering at Kitt

Peak: <http://www.noao.edu/outreach/kpoutreach.html>

www.noao.edu



Next Docent Meeting April 18

The next docent meeting will be held on Monday, April 18. The meeting will convene at 6:00 in the main conference room and will feature dinner and a speaker. Docents should visit the docent forum calendar to schedule their hours for May prior to the April meeting. See the URL for the docent calendar at lower left.

«First Name» «Last Name»
«Mailing Address»
«City» «State» «Zip Code»

Kitt Peak Docent Program

DOCENT NEWS

Number 90

April 2005



DOCENTS HAVE DATABASE ACCESS AGAIN

Points of Interest:

- The docent meeting will be held Monday, April 18, featuring dinner and a speaker.
- April 2 to 9: 1st Moon/Mars Habitat Design Workshop, the Netherlands.
- April 3: Jupiter at opposition.
- April 6: Asteroid 2005 EE169 near-Earth flyby at 0.015 AU.
- April 6 to 8: International Dark-Sky Assoc. Annual Meeting and Conference, Tucson.
- April 9: Moon occults Venus.
- April 16: Astronomy Day
- April 22: Lyrids Meteor Shower peak.
- April 22: Moon occults Jupiter.
- April 26: Mercury at greatest western elongation of 27°.

For additional information about these points of interest, visit <http://www2.jpl.nasa.gov/calendar/>.

Beginning in April, docents will no longer have to stand at the gift-shop counter waiting to be signed in. The docent database is fully accessible on the heliostat computer, located in the AV cabinet in the theater.

To access the database, find the star icon that says "enter tours here" on the desk top. Double click on that icon and the database will appear. Then click the button that says "Docent sign in." Make sure the cursor is active in the name field. Typing the first few letters of the last name will cause it to appear in the field. Then just click the "Sign In!!" button.

When it comes time to enter tour totals, docents may click the "Add tour totals" button to open that screen. Select either regular or school group and the tour time. Then type in the number of people who went on the tour.

It is critical that the numbers be accurate because they must be reported to the NSF every quarter. Docents should have some-

thing to write on and record the tour count to lessen the chance that the number will be forgotten.

After entering information, the database screen may be minimized to keep the monitor clear for heliostat adjustments. When the database is needed again, clicking once on it in the toolbar at the bottom of the screen will open it.

Visitor center staff will remind docents that they do not have to wait at the counter to sign in or report tour numbers. This should reduce some of the stress that results from too much information being funneled to one person and eliminate some of the crowding at the counter. Visitor center staff will continue to input numbers from the receipts.

Questions about the docent database and its operation should be directed to Robert Wilson at 318-8440 or rwilson@noao.edu.

DOCENTS SOON TO HAVE PORTABLE SPEAKER

Public Outreach recently purchased a hand-held speaker system for use by the docents when giving tours. The system employs a hand-held speaker with a microphone that plugs into it. The speaker can be suspended from the shoulder with a strap to keep the docent's hands free and the microphone can be placed in a holder on the top of the speaker when it is not being used.

The department once investigated portable speakers with wireless microphones but the NRAO quashed the prospect, fearing that the radio transmissions would interfere with the radio telescopes.

The present arrangement should eliminate

that possibility while easing the strain on docents' voices when they have large groups to address or have to talk outside during windy conditions.

The unit is powered by nine C size batteries. A supply of batteries will be kept in the visitor center office along with the unit itself. Docents who wish to use the PA system may request it from visitor center staff.

Care should be taken to return the unit to the visitor center after use and not inadvertently leave it at one of the telescopes or somewhere on the observatory grounds.

NASA RELEASES DEEP IMPACT MISSION STATUS REPORT

NASA's Deep Impact spacecraft completed the commissioning phase of the mission and has moved into the cruise phase.

Deep Impact mission planners have separated the spacecraft's flight operations into five mission phases. Cruise phase will continue until about 60 days before the encounter with comet Tempel 1 on July 4, 2005.

Soon after launch on Jan. 12, 2005, Deep Impact entered the commissioning phase. During that phase, the mission team verified the basic state of health of all subsystems and tested the operation of science instruments. The spacecraft's autonomous navigation system was activated and tested using the moon and Jupiter as targets.

The spacecraft's high gain antenna, which will relay images and data of the cometary collision, was activated and is operating properly. A trajectory correction maneuver was performed, refining the spacecraft's flight path to comet Tempel 1. The maneuver was so successful that a second one planned for March 31 was cancelled.

Another event during commissioning phase was the bake-out heating of the spacecraft's High Resolution Instrument (HRI) to remove normal residual moisture from its barrel. The moisture was a result of absorption into the structure of the instrument during the vehicle's last hours on the launch pad and its transit through the atmosphere to space.

At completion of the bake-out procedure, test images were taken through the HRI. These images indicate the telescope has not reached perfect focus. A special team has been formed to investigate the performance and to evaluate activities to bring the telescope the rest of the way to focus. Future calibration tests will provide additional information about the instruments' performance.

The Deep Impact spacecraft has four data collectors to observe the effects of the collision: a camera and infrared spectrometer comprise the High Resolution Instrument; a Medium Resolution Instrument (MRI); and a duplicate camera on the Impactor Targeting Sensor (ITS). They will record the vehicle's final moments before it is run over by comet Tempel 1 at approximately 23,000 mph. The MRI and ITS are performing as expected.

"This in no way will affect our ability to impact the comet on July 4," said Rick Grammier, Deep Impact project manager at NASA's Jet Propulsion Laboratory (JPL), Pasadena, Calif. "Everyone on the science and engineering teams is getting very excited and looking forward to the encounter."

Dr. Michael A'Hearn of the University of Maryland, College Park, Md., added, "We are very early in the process of examining the data from all the instruments. It appears our infrared spectrometer is performing spectacularly, and even if the spatial resolution of the High Resolution Instrument remains at present levels, we still expect to obtain the best, most detailed pictures of a comet ever taken."

Deep Impact is comprised of two parts, a flyby spacecraft and a smaller impactor. The impactor will be released into the comet's path for the planned high-speed collision. The crater produced by the impactor is expected to range from the width of a house up to the size of a football stadium and be from two to 14 stories deep. Ice and dust debris will be ejected from the crater revealing the material beneath.

Along with the imagers aboard the spacecraft, NASA's Hubble, Spitzer and Chandra space telescopes, along with the largest telescopes on Earth, will observe the effects of the material flying from the comet's newly formed crater.

An intimate glimpse beneath the surface of a comet, where material and debris from the formation of the solar system remain relatively unchanged, will answer basic questions about the formation of the solar system. The effects of the collision will offer a better look at the nature and composition of these celestial travelers.

The University of Maryland provides overall mission management for this Discovery class program. Project management is handled by JPL. The spacecraft was built for NASA by Ball Aerospace & Technologies Corporation, Boulder, Colo.

For more information about Deep Impact on the Internet, visit: <http://www.nasa.gov/deepimpact>

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Artist's conception of Deep Impact. Image credit: NASA

April 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 Doug, Don	2 Ken, Jim O.
3 Need Docent	4 Fred, Jim M.	5 Joyce, Eugene, Laura Sch. Grp. 35	6 Punch, Sheila Sch. Grp. 125	7 Gene	8 Doug, Don	9 Jim O.
10 Ken,	11 Jim M.	12 Jessica, Bob, Richard Sch. Grp. 20	13 Punch, Sheila	14 Gene Sch. Grp. 35 T.O.	15 Doug, Don	16 Jim O., Marlene Family Night
17 Need Docent	18 Bob Docent Meeting	19 Joyce, Larry, Lee	20 Punch, Sheila	21 Gene	22 Doug, Don, Rich	23 Jim O.
24 Need Docent	25 Jessica Sch. Grp. 25	26 Eugene, Lee, Joyce	27 Sheila, Larry	28 Laura	29 Doug, Don	30 Jim O.

DOCENT STAR PARTY IN MAY

The department is considering another docent star party in May. Previous efforts at star parties have proven to be less than fruitful, both in terms of observing and attendance.

Initially, the turn out was good. But subsequent star parties saw fewer and fewer participants. At the last such event, only two people attended, one docent and one staff.

Wind typically plagued the star parties, which were held in the visitor center parking lot. For those with SCTs on German equatorial mounts or fork mounts, the wind was not quite the problem it was for folks with Newtonian reflectors. When placed on a dobsonian mount, the telescope reacts like a weather vane when hit by a gust of wind. Unfortunately, for many of these star parties, the wind sock was stretched straight out from the pole, effectively precluding observing for some participants.

This year the star party will be moved to the picnic area.

Not only might it provide a bit of shelter from the wind but also the ramada and numerous tables at which to eat. In the past, some docents have brought food and the pot luck idea still has merit.

The only question remaining concerns attendance. Would the docents like to have a star party? They may bring family and friends, food and drinks (non alcoholic of course) and enjoy an evening under the stars. One need not have a telescope to participate; just show up and look through someone else's. For those with telescopes, observing would conclude at midnight.

Two possible dates are May 14, two days before first quarter, and May 28, five days after full moon. Preferences for a date and general interest in the event should be communicated to Robert Wilson at 318-8440 or rwilson@noao.edu.