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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 Monday, October 15

The next docent meeting will be held on Monday, October 15. 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. Docents who do not have web access may contact Nick Petrosino. 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 120

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MIRROR EXHIBIT IS MAKING PROGRESS

It has been a long time coming and may be a while longer before its completion, but the mirror exhibit is moving along. Thanks to a determined effort by docent Barclay Ward, the various components are taking shape and some should be installed fairly soon.

After removing the two smaller mirror segments from the existing display, maintenance hauled the counter to the carpenter's shop to apply special laminate to the front. A problem occurred and the laminate will have to be replaced, but that might be done in the visitor center. The laminate from Chemetal will give the counter a more industrial look and complement the metallic supports used for other elements in the display.

Plastics Plus in Tucson fabricated a faux mirror segment that will sit atop the mirror core donated by the Steward Observatory Mirror Lab. The core was cut to reveal the inside and the mounting hardware to afford

visitors a realistic look at the mirror making process. The cut-away sections will be covered by Plexiglas to prevent curious hands from touching the core.

Above the core will rise the 1/10 scale model of the WIYN mirror to display the honeycomb back that results from the use of the cores. This portion of the display will provide the docents with a useful tool for educating the public in one aspect of manufacturing modern telescope mirrors.

As does any exhibit, this one will make use of graphics to illustrate the use to which the new generation of mirrors will be put. Highlighting the LSST and GSMT, the display will introduce the public to the amazing capabilities of these two large telescopes and the innovative techniques employed in crafting their mirrors.

Keep an eye on the mirror display as it takes shape. It should start moving quickly.

DOCENTS ENJOYING FAMILY ASTRO TRAINING

Paul Barby, Barbara Glaser, Marlene Hilligoss, and Robert Irwin, have been attending the Family ASTRO Event-leader Training workshops over the past two weeks and appear to be having a good time, which is exactly what Family ASTRO is about. Vance Tanner and Joe Spitler will join the fun for the last two workshops.

Also attending the workshops are teachers from Tucson, Marana, Vail, and Humboldt Unifies School Districts along with a Cub Scout leader. These individuals will return to their respective facilities and host the Family ASTRO events in which they have been trained.

Developed by the Astronomical Society of the Pacific, the program aims at making astronomy education a fun family pastime. In

addition to use in the classical Family ASTRO events, the activities are adaptable to a variety of other situations such as school science nights and large science-oriented events conducted by the Girl and Boy Scouts.

Public Outreach, too, employs Family ASTRO activities and thus the need to have trained volunteers. But there is an additional benefit to having docents as event-leaders; they are available to assist other event leaders, such as teachers, who might lack the support they need at their facilities to properly conduct the events. In this way docents can take astronomy into the community and introduce families to the joy of learning together while bolstering science education at a level where it is most critical.

Points of Interest:

- The docent meeting will resume on Monday, October 15 and will feature dinner and a presentation on the LBT by John Glaspey.
- October 1 to 15: Great World Wide Star Count
- October 4: 50th Anniversary (1957) of Sputnik 1 launch
- October 4 to 10: World Space Week
- October 5 to 7: 8th Annual White Sands Star Party, Alamogordo, New Mexico
- October 9: Draconids Meteor Shower peak
- October 12: Asteroid 2001 CA21 near-Earth flyby at 0.062 AU
- October 21: Orionids Meteor Shower peak
- October 28: Venus at greatest western elongation of 46°

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

Giant Magellan Telescope Site Selected The Giant Magellan Telescope (GMT) Consortium announces that the GMT will be constructed at Cerro Las Campanas, Chile. This location was selected for its high altitude, dry climate, dark skies, and unsurpassed seeing quality, as well as its access to the southern skies. "This decision represents a critical step towards realizing our goal of building the premier next -generation astronomical observatory," said Dr. Wendy Freedman, leader of the GMT Board and director of the Observatories of the Carnegie Institution, which operates Las Campanas.

"The Giant Magellan Telescope represents the dawn of a new age of astronomical exploration," stated Dr. Charles Alcock, director of the Harvard-Smithsonian Center for Astrophysics. "As telescopes get larger, we are able to see fainter, farther, and with more clarity than ever before. We can only predict a fraction of the scientific discoveries that will be made using this enormous telescope and the new insights into the universe that we will gain."

The Las Campanas Observatory is home to the twin Magellan Telescopes, the predecessors of the new instrument. "The GMT builds on the partners' collective experience in constructing and operating world-class telescopes. Locating the telescope at a proven world-class, mountain-top site in Chile will maximize its productivity and cost effectiveness," said Prof. Nicholas Suntzeff, head of the astronomy program at Texas A&M University.

"Excellent science has come from Las Campanas for several decades; the superb astronomical quality of the site is a significant contributor to this success," Freedman said. Scheduled for completion in 2016, the Giant Magellan Telescope will be the first of a new generation of ground-based telescopes. Its large size will offer exceptional resolving power, producing images up to 10 times sharper than the Hubble Space Telescope. The GMT will be composed of seven 8.4-meter (27.5-foot) primary mirrors, six of which will be off-axis encircling the seventh to produce a telescope with an effective aperture of 24.5 meters (80 feet).

The first GMT mirror was cast from molten glass in July 2005 and is currently being polished at the University of Arizona's Steward Observatory Mirror Laboratory. When completed in early 2009, the final surface will be smooth to an accuracy of 1 millionth of an inch and will follow the precise optical prescription needed to produce the best images theoretically possible.

The Giant Magellan Telescope will help answer a number of compelling scientific questions faced by astronomers today. It will open new avenues of scientific exploration, including: Understanding the origin and evolution of planetary systems beyond our own; Witnessing the formation of stars, galaxies and black holes; Exploring the properties of dark matter and dark energy in the cosmos.

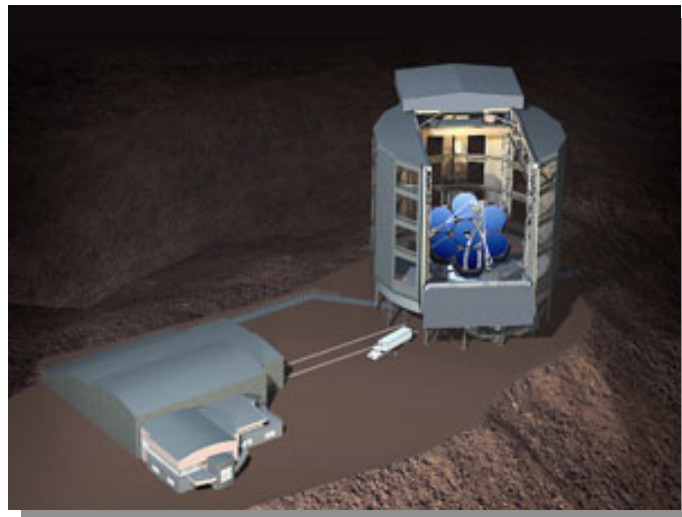
Detailed information about the design of the GMT and the

science that it will perform is located at <http://www.gmto.org/> The GMT consortium includes the Australian National University, University of Arizona, Carnegie Institution, Harvard University, Smithsonian Institution, Texas A&M University, University of Texas at Austin.

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An artist's rendition of the Giant Magellan Telescope at Las Campanas, Chile. (Image courtesy Todd Mason and the Carnegie Observatories.)

October 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 Robert, Larry E.	2 Paul, Barbara	3 Jon, Sheila	4 Joe, Paul <i>Proj. Explor 90</i>	5 Everett	6 Jim O., Ken(?)
7 Larry L.	8 Aubrey	9 Robert, Jon	10 Sheila	11 Everett, Joe	12 Paul, Vance(C)	13 Jim, Eugene
14 Paul, Jack	15 Jon <i>Docent Meeting</i>	16 Joyce	17 Sheila	18 Robert, Joe	19 Vance(C)	20 Jim, Eugene <i>Berkley 40, Cub Scouts 50</i>
21 Ken(?), Jack	22 Aubrey, Jon	23 Joyce, Joe	24 Sheila	25 Paul, Everett	26 Robert, Vance (C)	27 Larry L., Jim <i>Kids' Day</i>
28 Ken(?)	29 Jon	30 Joyce	31 Eugene, Sheila			

GROUPS IN OCTOBER

October is shaping up to be a busy month with most of the action falling on the weekends. On October 20 two groups are scheduled totaling ninety people. Add to that whatever random tourist traffic the visitor center receives, and it could be a very busy day.

The following Saturday is Kids' Day at Kitt Peak, a new program that offers read-aloud sessions, crafts, age appropriate tours, and lunch from the grill to kids ages five to twelve and their parents. Because this program does not require reservations, it is difficult to determine the turnout. Given the various activities, four docents for the Kids' Day program plus one docent to handle random traffic seems reasonable.

For the regular school groups, the large-group schedule is working well. It has proven adaptable to situations in which the group is split into three rather than four smaller groups, and the guides have been able to maintain the schedule while

providing informative tours for the students.

For the Kids' Day event, a different schedule has been developed that will allow guests to arrive at any time and participate in various activities. Sign-up sheets for the classroom activities will be in visitor center. The sheets will prevent over crowding in the classrooms and allow the guests to better plan their day at Kitt Peak. The schedule of activities may be found on the files page of the Kitt Peak Docent Forum.

Kids' Day at Kitt Peak promises to be fun for staff and guests as are the regular school group tours. Public Outreach will place increasing emphasis on programs for students, and docents should anticipate being part of this effort. The Kids' Day program will be an agenda item for the next docent meeting to familiarize the volunteers with the activities and the schedule.