

OBSERVATIONAL PROGRAMS

NATIONAL OPTICAL ASTRONOMY OBSERVATORY

NOAO Nighttime Proposals Due for 2003A

Todd Boroson

Proposals for observing time for semester 2003A (February–July 2003) with the Gemini North and South telescopes, the Cerro Tololo Inter-American Observatory, the Kitt Peak National Observatory, and community access time at the Hobby-Eberly Telescope, the Keck I and II telescopes, and the MMT Observatory telescope are **due by Monday evening, 30 September 2002, midnight MST**.

Proposal materials and information are available on our Web page (www.noao.edu/noaoprop). There are three options for submission:

- **Web submissions**—The Web form may be used to complete and submit all proposals. The information provided on the Web form is formatted and submitted as a LaTeX file, including figures that are “attached” to the Web proposal as Encapsulated PostScript files.
- **E-mail submissions**—As in previous semesters, a customized LaTeX file may be downloaded from the Web proposal form, after certain required fields have been completed. “Essay” sections can then be edited locally and the proposal submitted by e-mail. Please carefully follow the instructions in the LaTeX template for submitting proposals and figures.
- **Gemini’s Phase I Tool (PIT)**—Investigators proposing for Gemini time **only** may optionally use Gemini’s tool, which runs on Solaris, RedHat Linux, and Windows platforms, and can be downloaded from www.gemini.edu/sciops/P1help/p1Index.html.

Note that proposals for Gemini time may also be submitted using the standard NOAO form. Proposals that request time on Gemini plus other telescopes **MUST** use the standard NOAO form. PIT-submitted proposals will be converted to LaTeX at NOAO, and are subject to the same page limits as other NOAO proposals. To ensure a smooth translation, please see the guidelines at www.noao.edu/noaoprop/help/pit.html.

The addresses below are available to help with proposal preparation and submission.

Web proposal materials and information	www.noao.edu/noaoprop/
Request help for proposal preparation	noaoprop-help@noao.edu
Address for thesis and visitor instrument letters, as well as consent letters, for use of PI instruments on the MMT	noaoprop-letter@noao.edu
Address for submitting LaTeX proposals by e-mail	noaoprop-submit@noao.edu
Gemini-related questions about operations or instruments	usgemini@noao.edu www.noao.edu/gateway/gemini/support.html
CTIO-specific questions related to an observing run	ctio@noao.edu
KPNO-specific questions related to an observing run	kpno@noao.edu
HET-specific questions related to an observing run	het@noao.edu
Keck-specific questions related to an observing run	keck@noao.edu
MMT-specific questions related to an observing run	mmt@noao.edu



Community Access to the Keck 10-Meter Telescopes Begins through TSIP

Todd Boroson

As a result of two awards made in the first proposal cycle of the National Science Foundation's Telescope System Instrumentation Program (TSIP), a total of 41 nights of observing time will be allocated to the astronomical community on the two 10-meter telescopes of the W.M. Keck Observatory on Mauna Kea. These nights will be spread over five semesters under an agreement between NOAO, which is administering TSIP, and the California Association for Research in Astronomy (CARA). TSIP was the highest-ranked moderate-sized initiative of the recent Decadal Survey.

Community access will begin in the upcoming 2003A semester, during which 12 classically-scheduled nights will be available. Time will be distributed approximately evenly over lunar phases and will be divided roughly equally between the two 10-meter telescopes. All current facility-class instruments and modes (which excludes interferometry) are available. Any scientist may propose without regard to nationality or preferred access through other channels. For additional information please see NOAO's "Gateway to Keck" Web page at www.noao.edu/gateway/keck/.

Community Access Time on the MMT and HET

Dave Bell

About 27 classically scheduled nights per year of observing time on the MMT Observatory 6.5-meter telescope are available to the astronomical community through the NOAO proposal process, under a six-year agreement with the National Science Foundation. About 12 nights will be available during the February–July 2003 period. For more information, check NOAO's MMT Web page at www.noao.edu/gateway/mmt/ and MMT's public-access instrumentation Web page at sculptor.as.arizona.edu/foltz/www/public_access.html.

About 16 equivalent clear nights of community-access queue observations per year are available on the Hobby-Eberly Telescope at McDonald Observatory. During 2003A, about 50 hours are expected to be available for integration and set-up time. For more information, please see NOAO's HET Web page at www.noao.edu/gateway/het/.



Two New NOAO Survey Programs Approved

Tod Lauer & Dave Bell

The NOAO Survey Time Allocation Committee (TAC) met on 25 April 2002 to discuss the progress of ongoing survey programs and to review and rank 15 new survey proposals, which were submitted in March. The new programs requested a total of 724 nights on the 4-meter-class telescopes and 115 nights on smaller telescopes. With 20% of science time available for surveys, these totals correspond to subscription rates of about 4.9 for the 4-meter-class telescopes and 0.8 for the smaller telescopes.

Two new programs were recommended for scheduling and approved by the NOAO Director:

- **The w Project: Measuring the Equation of State of the Universe**

PI: Nicholas Suntzeff, NOAO

Abstract: We propose to find and follow ~200 Type Ia supernovae with the Mosaic Imager on the Blanco 4-meter telescope over a five-year period. This search is designed to find supernovae distributed evenly over the redshift range (0.15, 0.75). The survey will obtain VRI photometry which we will supplement with zJ photometry and spectra using Keck, MMT, Magellan, Gemini, and the VLT. We aim to answer a simple, but very important, question: is the dark energy of the Universe consistent with a cosmological constant ($w = -1$)? If not, the dark energy must be a more general energy field such as "quintessence." This survey should determine w to ± 0.1 (one-sigma). We propose to use the other half of the 30 half-nights per year already assigned to the SuperMacho Team. We will exploit the same data reduction pipelines already developed for SuperMacho to find supernovae and to measure their light curves. By merging the two projects, we can use the same software, hardware, and people for two important investigations of matter and energy in the Universe.

- **The EXPLORE Project: A Deep Search for Transiting Extrasolar Planets**

PI: Gabriela Mallen-Ornelas, Princeton University

Abstract: We propose a search for transiting short-period extrasolar planets using the MOSAIC wide-field imagers on the KPNO and CTIO 4-meter telescopes. Our goal is to detect transiting planets and to derive statistics of planet frequency, radius, and mass for star types ranging from early G to late K. Planet transits will be detected via 1% photometric precision lightcurves with 3-minute time sampling spanning 18 nights per run. Transit searches will mark a new era in planetary discovery and characterization. Planetary radii, which provide constraints on composition, evolution, and migration history, can only be measured for transiting planets. In addition absolute planet mass can be determined with follow-up radial velocity measurements. Our 2001 search with the CTIO 4-meter telescope demonstrated our technique: we have reached a relative photometric precision of 0.2-1% on 37,000 stars. Our lightcurve database will have unprecedented time sampling and very high photometric precision for hundreds of thousands of stars, enabling new research on variable and binary stars, short microlensing events, and moving objects such as asteroids.

For information on these programs, and a list of the 13 surveys that have been previously approved, see www.noao.edu/gateway/surveys/programs.html.



Observing Request Statistics for 2002B Standard Proposals

	No. of Requests	Nights Requested	Average Request	Nights Allocated	DD Nights (*)	Nights Previously Allocated	Nights Scheduled For New Programs	Over-subscription For New Programs
GEMINI								
GEM-N	74	103.16	1.39	34.89	2		34.89	2.96
GEM-S	55	78.34	1.42	17.95			17.95	4.36
CTIO								
CT-4m	92	313.7	3.41	95.5			95.5	3.28
CT-1.5m	21	110	5.24	123		11	112	0.98
YALO	6	17.45	2.91	17.45			17.45	0.34
CT-0.9m	20	134	6.7	134			134	0.91
KPNO								
KP-4m	74	252.8	3.42	90			90	2.81
WIYN	34	117	3.44	61.5	4	0.5	61	1.92
KP-2.1m	34	175.7	5.17	118		3	115	1.53
KP-0.9m	5	23	4.6	15		8	7	3.29
HET/MMT								
HET	9	15.55	1.73	6			6	2.59
MMT	13	28.5	2.19	13.5			13.5	2.11

*Nights allocated by NOAO Director



Instruments Available in 2003A

The following tables list available resources for all NOAO-coordinated facilities in the US observing system, which include KPNO, CTIO, Gemini North and South, and community-access time with HET, MMT, and Keck. For the latest updates and other information pertinent to submitting proposals for observing time, see www.noao.edu/noaoprop/help/facilities.html.

KPNO Instruments Available for 2003A

Spectroscopy	Detector	Resolution	Slit	Multi-object
Mayall 4m				
R-C CCD Spectrograph	T2KB/LB1A CCD	300-5000	5.4'	single/multi
Cryocam/MARS Spectrograph	LB CCD (1980x800)	300-1500	5.4'	single/multi
Echelle Spectrograph	T2KB CCD	18000-65000	2.0'	
FLAMINGOS ¹	HgCdTe (2048x2048, 0.9-2.5 μ m)	1000-3000	10'	single/multi
WIYN 3.5m				
Hydra + Bench Spectrograph	T2KC CCD	700-22000	NA	~100 fibers
DensePak ²	T2KC CCD	700-22000	IFU	~90 fibers
SparsePak ³	T2KC CCD	700-22000	IFU	~82 fibers
2.1m				
GoldCam CCD Spectrograph	F3KA CCD	300-4500	5.2'	
FLAMINGOS ¹	HgCdTe (2048x2048, 0.9-2.5 μ m)	1000-3000	20'	single/multi
Imaging	Detector	Spectral Range	Scale ("'/pixel)	Field
Mayall 4m				
CCD Mosaic	8Kx8K	3500-9700 \AA	0.26	35.4'
SQIID	InSb (4-512x512)	JHK + L (NB)	0.39	3.3' circular
FLAMINGOS ¹	HgCdTe (2048x2048)	JHK	0.3	10'
WIYN 3.5m				
Mini-Mosaic	4Kx4K CCD	3300-9700 \AA	0.14	9.3'
WTTM	4Kx2K CCD	3500-9700 \AA	0.11	4.6'x3.8'
2.1-m				
CCD Imager	T2KA CCD	3300-9700 \AA	0.305	10.4'
SQIID	InSb (4-512x512)	JHK +L(NB)	0.68	5.8' circular
FLAMINGOS ¹	HgCdTe (2048x2048)	JHK	0.6	20'
WIYN 0.9m				
CCD Mosaic	8Kx8K	3500-9700 \AA	0.43	59'

¹ Available February-May only

² Integrated Field Unit: 30"x45" field, 3" fibers, 4" fiber spacing

³ Shared use, 80"x80" field, 5" fibers



CTIO Instruments Available for 2003A

Spectroscopy	Detector	Resolution	Slit
4-m			
Hydra + Fiber Spectrograph	SiTe 2K CCD, 3300-11,000Å	300-2000	138 fibers, 2" aperture
R-C CCD Spectrograph	Loral 3K CCD, 3100-11,000Å	300-5000	5.5'
Echelle + Blue Air Schmidt	Loral 3K CCD, 3100-11,000Å	15,000	5.2'
Echelle + Long Cameras	SiTe 2K CCD, 3100-11,000Å	98,000	5.2'
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1.5-m			
Cass Spectrograph	Loral 1200x800 CCD, 3100-11,000Å	<1300	7.7'
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Imaging	Detector	Scale ("/pixel)	Field
4-m			
Mosaic II Imager	8Kx8K CCD Mosaic	0.27	36'
ISPI IR Imager	HgCdTe (2048 ² , 1.0-2.4µm)	0.3	11'
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0.9-m (or 1.0-m)			
Cass Direct Imaging	SiTe 2K CCD	0.40	13.6'
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1.3-m			
ANDICAM Optical/IR Camera	Loral 2K CCD	0.17	5.8'
	HgCdTe 1K IR	0.11	2.0'

NOTE

OSIRIS will not be available on the Blanco 4-m in 2003A, as it will be used for SOAR commissioning. On September 1, we will review this decision, in case the SOAR schedule slips, with any update appearing at www.noao.edu/noaoprop/help/facilities.html.

The **small telescope configuration** (see article by M. Smith and A. Walker in this issue) for 2003A will also be updated on September 1, consult the above-referenced Web page.

Gemini Instruments Possibly Available for 2003A

GEMINI NORTH	Detector	Spectral Range	Scale ("/pixel)	Field
NIRI	1024x1024 Aladdin Array	1-5µm R~500-1600	0.022, 0.050, 0.116	22.5", 51", 119"
GMOS-N	3-2048x4608 CCDs	0.36-1.10µm R~670-4400	0.072	5.5'
Michelle*	256x256 Si:As IBC	8-25µm R~200, 1000, 3000	0.10 img, 0.18 spec	~25"x25"
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GEMINI SOUTH	Detector	Spectral Range	Scale ("/pixel)	Field
Phoenix	512x1024 InSb	1-5µm R ≤70,000	0.1"	14" slit length
T-ReCS	320x240 Si:As IBC	8-25µm R~100,1000	0.09"	28"x21"
Acquisition Camera	1Kx1K frame-transfer CCD	BVRI	0.12"	2' x 2'
GMOS-S*	3-2048x4608 CCDs	0.36-1.10µm R~670-4400	0.072	5.5'

*Possibly available at very end of semester. Please check www.noao.edu/noaoprop/help/facilities.html after 1 September 2002.



Observational Programs

KECK Instruments Available for 2003A

	Detector	Resolution	Spectral Range	Scale ("/pixel)	Field
KECK 1					
HIRESb/r (optical echelle)	Tek 2048x2048	30k-80k	0.35-1.0 μ m	0.19	70" slit
NIRC (near-IR img/spec)	256x256 InSb	60-120	1-5 μ m	0.15	38"
LWS (mid-IR img/spec)	128x128 As:Si BIB	100, 1400	3-25 μ m	0.08	10"
LRIS (img/lslit/mslit)	Tek 2048x2048	300-5000	0.31-1.0 μ m	0.22	6x7.8'
KECK 2					
ESI (optical echelle)	MIT-LL 2048x4096	1000-6000	0.39-1.1 μ m	0.15	2x8'
NIRSPEC (near-IR echelle)	1024x1024 InSb	2000, 25000	1-5 μ m	0.18 (slitcam)	46"
NIRSPA0 (near-IR AO echelle)	1024x1024 InSb	2000, 27000	1-5 μ m	0.01-0.02	1-4" slit
NIRC2 (near-IR AO img)	1024x1024 InSb	5000	1-5 μ m	0.01-0.04	10-40"
DEIMOS (img/lslit/mslit)	8192x8192 mosaic	1200-10000	0.41-1.1 μ m	0.12	16.7x5'

MMT Instruments Available for 2003A

	Detector	Spectral Range	Scale ("/pixel)	Field
Spectrograph --Blue	Loral 3072x1024 CCD	0.32-0.8 μ m	0.3	150"
--Red	Loral 1200x800 CCD	0.5-1.0 μ m	0.3	150"
MIRAC3	128x128 Si:As BIB array	2-25 μ m	0.14, 0.28	18.2, 36"
MiniCam	2-EEV 2048x4608 CCDs	UBVRI	0.05	3.7'
FSPEC (Near IR Spec)	HgCdTe array	JHK	1.2	Resolving Power \leq 3500
SPOL	Loral 1200x800 CCD	0.38-0.9 μ m	0.2	20"

HET Instruments Available for 2003A

	Detector	Resolution	Slit	Multi-object
Marcario Low-Res Spec	Ford 3072x1024 4100-10,000 \AA or 4300-7400 \AA	600 1300	1.0"-10"x4' 1.0"-10"x4'	13 slitlets, 15"x1.3", 4"x3' field
High-Res Spec	2-2Kx4K 4200-11,000 \AA	15,000-120,000	2" or 3" fiber	single