

OBSERVATIONAL PROGRAMS

NATIONAL OPTICAL ASTRONOMY OBSERVATORY

NOAO 2004A Proposals Due 30 September 2003

Todd Boroson

Proposals for observing time for semester 2004A (February–July 2004) with the Gemini North and South telescopes, the Cerro Tololo Inter-American Observatory (CTIO), the Kitt Peak National Observatory (KPNO), and community access time at the Hobby-Eberly Telescope (HET) and the Keck I and II telescopes are **due by Tuesday evening, 30 September 2003, midnight MST**.

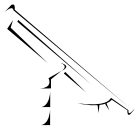
Proposal materials and information are available on our Web page (www.noao.edu/noaoprop/). There are three options for submission:

- **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, and that 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



Update on the SMARTS Telescopes at CTIO

The SMARTS Consortium now operates three small telescopes at Cerro Tololo Inter-American Observatory (CTIO): the 1.5-meter with Cass Spectrograph, the 1.3-meter (ex-2MASS) with Andicam in queue-scheduled mode, and the 0.9-meter with the usual SITe 2K imager. The Montreal 2K IR Imager CPAPIR will replace the RC Spec on the 1.5-meter from April through the end of the 2004A semester for a dedicated survey by a consortium member. A small amount of time with this instrument may be available for service observations at the beginning and ends of nights during this period. A new 4K imager on the 1.0-meter telescope may also become available sometime during the 2004A semester. Please check the NOAO Web site in September for the latest information on resources available for proposals by the general community in 2004A.

Community Access Time at the Keck and HET Observatories

Todd Boroson & Dave Bell

As a result of awards made through the National Science Foundation's Telescope System Instrumentation Program (TSIP), 53 nights of classical observing time are available for allocation to the general astronomical community on the two 10-meter telescopes of the W.M. Keck Observatory on Mauna Kea. These 53 nights are being allocated over five semesters, with 12 nights to be scheduled in 2004A. The nights will be divided evenly between the two telescopes and distributed over lunar phases. 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, see www.noao.edu/gateway/keck/.

About 16 equivalent clear nights of community-access queue observations per year are available on the Hobby-Eberly Telescope (HET) at McDonald Observatory, under

a six-year agreement with the National Science Foundation. During 2004A, about 43 hours are expected to be available for integration and set-up time. Available instruments include the High-, Medium-, and Low-Resolution Spectrographs. For the latest information on HET instrumentation and instructions for writing observing proposals, see NOAO's HET Web page at www.noao.edu/gateway/het/.

There are 162 nights of observing time on the 6.5-meter telescope of the MMT Observatory being allocated to the general community under an agreement with the National Science Foundation. These nights are being allocated over a period of at least six years. Due to a large backlog of programs that were awarded time in previous semesters that have not yet been scheduled, no new MMT proposals will be accepted for the upcoming 2004A semester.

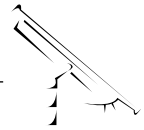
A New Era in Data Access

Todd Boroson

The NOAO Science Archive (NSA), serving data primarily from the NOAO survey programs for the past 18 months, is about to enter a new phase of development. Work is now focusing on the goal of making all raw data from NOAO-granted time available to the community after a proprietary period. This entails the development of new capabilities for the NSA itself so that access can be regulated, as well as the creation and

installation of a new software network—the Data Transport System (DTS)—that will enable the automatic flow of raw data from the instruments into the archive. Auxiliary benefits from this new system include the ability for observers to retrieve their data at any time from the archive, and replacement of the save-the-bits tape storage. Copies of the data will be maintained in two places, Tucson and La Serena, and the two copies will be synchronized regularly.

continued



New Era in Data Access continued

NOAO has long had a data rights policy, but now that there is a mechanism for providing access, it has been necessary to clarify some aspects of it. The policy states that the nominal proprietary period is 18 months from the date of the observation. Observers may offer a shorter period in their observing proposal or they may request a longer period from the NOAO Director with appropriate justification in their proposal. All calibration data and metadata (information

describing each observation) will have no proprietary period and will be made immediately accessible through the NSA.

It is expected that raw data will start flowing to the NSA sometime in the next year, and observers will be notified when the system begins its operation.

The NOAO Survey Program in 2003

Tod R. Lauer

The NOAO Survey Program continues to support large observational surveys using NOAO telescopes. The Survey Program was initiated in 1999 to allow for observational programs that uniquely required extensive allocations of telescope time to address problems that were poorly addressed by the more standard allocations of time awarded in the regular Time Allocation Committee (TAC) process. A key aspect of survey programs is their generation of large uniform data sets that are likely to be of strong interest to the community, beyond the goals of the survey programs themselves. A condition for the award of survey time is that these data sets be made publicly available.

As of spring 2002, NOAO had awarded time to 15 survey programs through four annual calls for proposals, on topics ranging from deep cosmological “blank-sky” surveys to searches for Kuiper Belt Objects. A full list of the programs can be found at www.noao.edu/gateway/surveys/programs.html. The large majority of programs have made heavy use of the Mosaic cameras at the CTIO and KPNO 4-meter telescopes, but there has been substantial use of the smaller telescopes as well, particularly with the FLAMINGOS infrared instrument. Overall, the survey programs use approximately 25 percent of the total telescope time available from

NOAO facilities (the Gemini 8-meter telescopes are not available through the Survey Program).

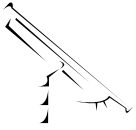
Survey programs may span several semesters, as is required to achieve the survey goals stated in the original proposal. Total run time is limited to five years, although most surveys request a shorter program length. The complete time allocation needed is requested in the original proposal; however, as this does not allow for instrument failures or weather losses, the survey programs had been allowed to apply to the annual Survey TAC for augmentation time. In practice, no survey was able to complete their program within the time span and allocations originally proposed. Unfortunately, the reasonable desire to offer augmentation time to already existing surveys does limit the resources that can be offered to newly proposed surveys.

Thus, in 2003 we decided to focus completely on older surveys rather than trying to fit in any new programs within the limited margin between time already allocated for existing surveys and the total resources available to the program. The task of the 2003 Survey TAC was thus to evaluate the progress of the ongoing surveys and to adjudicate their requests for augmentation time. This latter task was also proscribed by a new policy to limit the availability of augmentation time to those surveys approaching the

final year of their original time span. Previously, the ongoing surveys could request augmentation time on an annual basis from the Survey TAC. In practice, the Survey TACs generally were not interested in awarding augmentation time until such a time as the surveys were close enough to completion that the need could be most clearly evaluated.

In 2003, six of the seven surveys eligible for augmentation were awarded some (but not always all) of the augmentation time requested. Five additional older surveys are also now considered to be completed. We are presently evaluating the total resources that will be available to new surveys starting in the second semester of 2004, and will be preparing a new call for proposals for release by December 2003.

Meanwhile, the existing surveys have been highly productive at generating the uniform data sets that they proposed. NOAO has initiated an ongoing process to make this data available to all interested parties through the NOAO Science Archive at archive.noao.edu/nsa/. The forms available at this page allow the search of data by a variety of parameters, and transfer images from NOAO via FTP. Several interesting data sets are already available, and the offerings will be augmented as the survey programs continue.

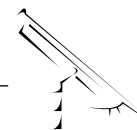


Observational Programs

Observing Request Statistics for 2003B 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								
Gemini North	65	107.63	1.66	39.68	3	0	39.68	2.71
Gemini South	58	107.04	1.85	39.03	0	0	39.03	2.74
CTIO								
CTIO 4-m	83	268.5	3.23	103	7.5	2	101	2.66
CTIO 1.5-m	6	34	5.67	45	0	13	32	1.06
CTIO 1.3-m	12	59.98	5	29.31	0	0	29.31	2.05
CTIO 0.9-m	15	97	6.47	65	0	4	61	1.59
KPNO								
KPNO 4-m	81	241.05	2.98	91.5	0	0	91.5	2.63
WIYN 3.5-m	46	134	2.91	42.25	1	7.5	34.75	3.86
KPNO 2.1-m	27	135.2	5.01	100	0	0	100	1.35
WIYN 0.9-m	8	34	4.25	26	0	0	26	1.31
Keck/HET/MMT								
Keck I	12	18	1.5	6	0	0	6	3.00
Keck II	19	32	1.68	6	0	0	6	5.33
HET	4	7.25	1.81	5.25	0	0	5.25	1.38
MMT	8	20	2.5	11	0	0	11	1.82

*Nights allocated by NOAO Director



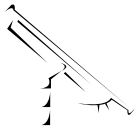
KPNO Instruments Available for 2004A

Spectroscopy	Detector	Resolution	Slit	Multi-object
Mayall 4-m				
R-C CCD Spectrograph	T2KB/LB1A CCD	300–5000	5.4'	single/multi
Cryocam/MARS Spectrograph	LB CCD (1980×800)	300–1500	5.4'	single/multi
Echelle Spectrograph	T2KB CCD	18000–65000	2.0'	
FLAMINGOS	HgCdTe (2048×2048, 0.9–2.5 μ m)	1000–3000	10'	single/multi
WIYN 3.5-m				
Hydra + Bench Spectrograph	T2KC CCD	700–22000	NA	~100 fibers
DensePak ¹	T2KC CCD	700–22000	IFU	~90 fibers
SparsePak ²	T2KC CCD	700–22000	IFU	~82 fibers
2.1-m				
GoldCam CCD Spectrograph	F3KA CCD	300–4500	5.2'	
FLAMINGOS	HgCdTe (2048×2048, 0.9–2.5 μ m)	1000–3000	20'	

Imaging	Detector	Spectral Range	Scale (" / pixel)	Field
Mayall 4-m				
CCD Mosaic	8K×8K	3500–9700 \AA	0.26	35.4'
SQIID	InSb (4-512×512)	JHK + L (NB)	0.39	3.3' circular
FLAMINGOS	HgCdTe (2048×2048)	JHK	0.3	10'
WIYN 3.5-m				
Mini-Mosaic	4K×4K CCD	3300–9700 \AA	0.14	9.3'
WTTM	4K×2K CCD	3700–9700 \AA	0.11	4.6'×3.8'
2.1-m				
CCD Imager	T2KA CCD	3300–9700 \AA	0.305	10.4'
SQIID	InSb (4-512×512)	JHK +L(NB)	0.68	5.8' circular
FLAMINGOS	HgCdTe (2048×2048)	JHK	0.6	20'
WIYN 0.9-m				
CCD Mosaic	8K×8K	3500–9700 \AA	0.43	59'

¹ Integral Field Unit: 30"×45" field, 3" fibers, 4" fiber spacing @ $f/6.5$; also available at Cass at $f/13$.

² Integral Field Unit, 80"×80" field, 5" fibers, graduated spacing



Observational Programs

CTIO Instruments Possibly Available for 2004A*

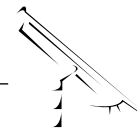
Spectroscopy	Detector	Resolution	Slit
4-m			
Hydra + Fiber Spectrograph	SiTe 2K CCD, 3300–11000Å	300–2000	138 fibers, 2" aperture
R-C CCD Spectrograph	Loral 3K CCD, 3100–11000Å	300–5000	5.5'
Echelle + Long Cameras	SiTe 2K CCD, 3100–11000Å	60000	5.2'
1.5-m			
Cass Spectrograph	Loral 1200×800 CCD, 3100–11000Å	<1300	7.7'

Imaging	Detector	Scale ("/pixel)	Field
4-m			
Mosaic II Imager	8K×8K CCD Mosaic	0.27	36'
ISPI IR Imager	HgCdTe (2048×2048, 1.0–2.4μm)	0.3	11'
1.5-m			
CPAPIR	Hawaii II 2K IR	0.88	30'
1.3-m			
ANDICAM Optical/IR Camera	Fairchild 2K CCD	0.17	5.8'
	HgCdTe 1K IR	0.11	2'
1-m			
Direct Imaging	4K CCD	0.29	20'
0.9-m			
Cass Direct Imaging	SiTe 2K CCD	0.4	13.6'

Gemini Instruments Possibly Available for 2004A*

GEMINI NORTH	Detector	Spectral Range	Scale ("/pixel)	Field
NIRI	1024×1024 Aladdin Array	1–5μm R~500–1600	0.022, 0.05, 0.116	22.5", 51", 119"
GMOS-N	3-2048×4608 CCDs	0.36–1.1μm R~670–4400	0.072	5.5'
Michelle	256×256 Si:As IBC	8–25μm R~200, 1000, 3000	0.10 img, 0.18 spec	~25"×25"
Altair (fed to NIRI)	1024×1024 Aladdin Array	1–2.5μm	0.022, 0.05, 0.116	22.5", 51", 119"
GEMINI SOUTH	Detector	Spectral Range	Scale ("/pixel)	Field
Phoenix	512×1024 InSb	1–5μm R≤70000	0.1	14" slit length
T-ReCS	320×240 Si:As IBC	8–25μm R~100, 1000	0.09	28"×21"
Acquisition Camera	1K×1K frame-transfer CCD	BVRI	0.12	2'×2'
GMOS-S	3-2048×4608 CCDs	0.36–1.1μm R~670–4400	0.072	5.5'

* Please refer to the NOAO Proposal Web pages in September 2003 for confirmation of available instruments.



Keck Instruments Available for 2004A

	Detector	Resolution	Spectral Range	Scale ("/pixel)	Field
Keck I					
HIRESb/r (optical echelle)	Tek 2048×2048	30k–80k	0.35–1.0 μ m	0.19	70" slit
NIRC (near-IR img/spec)	256×256 InSb	60–120	1–5 μ m	0.15	38"
LWS (mid-IR img/spec)	128×128 As:Si BIB	100, 1400	3–25 μ m	0.08	10"
LRIS (img/lslit/mslit)	Tek 2048×2048	300–5000	0.31–1 μ m	0.22	6×7.8'
Keck II					
ESI (optical echelle)	MIT-LL 2048×4096	1000–6000	0.39–1.1 μ m	0.15	2×8'
NIRSPEC (near-IR echelle)	1024×1024 InSb	2000, 25000	1–5 μ m	0.18 (slitcam)	46"
NIRSPAO (NIRSPEC w/AO)	1024×1024 InSb	2000, 25000	1–5 μ m	0.18 (slitcam)	46"
NIRC2 (near-IR AO img)	1024×1024 InSb	5000	1–5 μ m	0.01–0.04	10–40"
DEIMOS (img/lslit/mslit)	8192×8192 mosaic	1200–10000	0.41–1.1 μ m	0.12	16.7×5'

HET Instruments Available for 2004A

	Detector	Resolution	Slit	Multi-object
LRS (Marcario low-res spec)	Ford 3072×1024 4100–10000 \AA or 4300–7400 \AA	600 1300	1.0"–10"×4' 1.0"–10"×4'	13 slitlets, 15"×1.3" in 4'×3' field
MRS (med-res spec)	2-2K×4K, visible 1K×1K HgCdTe, near-IR	5000–20000 5000–10000	1.5" or 2" fibers (synth long-slit)	9 objects (not offered in 2004A)
HRS (high-res spec)	2-2K×4K 4200–11000 \AA	15000–120000	2" or 3" fiber	single