

# OBSERVATIONAL PROGRAMS

NATIONAL OPTICAL ASTRONOMY OBSERVATORY

## NOAO 2004B Proposals Due 31 March 2004

*Todd Boroson*

Proposals for NOAO-coordinated observing time for semester 2004B (August 2004 – January 2005) are **due by Wednesday evening, 31 March 2004, midnight MST**. The facilities available this semester include the Gemini North and South telescopes, the Cerro Tololo Inter-American Observatory, the Kitt Peak National Observatory, and community-access time with the Keck I and II telescopes, the Hobby-Eberly Telescope, and the 6.5-meter telescopes of the Magellan and MMT Observatories.

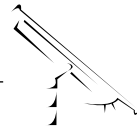
Proposal materials and information are available on our Web page ([www.noao.edu/noaoprop/](http://www.noao.edu/noaoprop/)). There are three options for submission:

- **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](http://www.gemini.edu/sciops/P1help/p1Index.html).

Note that proposals for Gemini time may also be submitted using the standard NOAO form, and 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](http://www.noao.edu/noaoprop/help/pit.html).

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

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



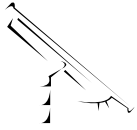
## Community Access Time Available in 2004B with Keck, HET, Magellan, and MMT

*Todd Boroson & Dave Bell*

As a result of awards made through the National Science Foundation's Telescope System Instrumentation Program (TSIP) and a similar earlier program, telescope time is available to the general astronomical community at the following facilities in 2004B:

- **W.M. Keck Observatory**  
A total of 11 nights will be available for classically scheduled observing programs with the 10-meter Keck I and II telescopes on Mauna Kea. All facility-class instruments and modes are available to the community. The interferometer is in shared-risk mode in 2004B and thus not offered, but it might be available in a future semester. For further details on Keck community-access time, see [www.noao.edu/gateway/keck/](http://www.noao.edu/gateway/keck/).
- **Hobby-Eberly Telescope**  
About 16 clear nights of community-access queue observations per fully scheduled year are available with the 9.2-meter-effective-aperture Hobby-Eberly Telescope (HET) at McDonald Observatory. During 2004B, 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 [www.noao.edu/gateway/het/](http://www.noao.edu/gateway/het/).
- **Magellan Telescopes**  
A total of six nights will be available for classically scheduled observing programs with the 6.5-meter Baade and Clay telescopes at Las Campanas Observatory. For updated information on available instrumentation and proposal instructions, see [www.noao.edu/gateway/magellan/](http://www.noao.edu/gateway/magellan/).
- **MMT Observatory**  
Twelve nights of classically scheduled observing time will be available with the 6.5-meter telescope of the MMT Observatory in 2004B. For further information, see [www.noao.edu/gateway/mmt/](http://www.noao.edu/gateway/mmt/).

A list of instruments we expect to be offered in 2004B can be found at the end of this section. As always, investigators are encouraged to check the NOAO Web site for any last-minute changes before starting a proposal.

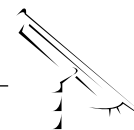


# Observational Programs

## Observing Request Statistics for 2004A 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
<b>GEMINI</b>								
Gemini North	90	171.71	1.91	74.525	2.3	0	74.525	2.30
Gemini South	65	129.36	1.99	53.655	0	0	53.655	2.41
<b>CTIO</b>								
CTIO 4-m	99	298.25	3.01	121.55	5	2	119.55	2.49
CTIO 1.5-m	9	38.5	4.28	25	0	0	25	1.54
CTIO 1.3-m	16	64.22	4.01	32	0	0.55	31.45	2.04
CTIO 1.0-m	6	33	5.5	44	0	0	44	0.75
CTIO 0.9-m	16	93	5.81	50	0	0	50	1.86
<b>KPNO</b>								
KPNO 4-m	66	227.8	3.45	109	0	4.5	104.5	2.18
WIYN 3.5-m	42	144.25	3.43	51.25	0	2	49.25	2.93
KPNO 2.1-m	34	169.2	4.98	112.5	0	0	112.5	1.50
WIYN 0.9-m	4	25	6.25	22.5	0	0	22.5	1.11
<b>Keck/HET</b>								
Keck I	13	21	1.62	7	0	0	7	3.00
Keck II	25	39.5	1.58	6	0	0	6	6.58
HET	4	7.5	1.88	6	0	0	6	1.25

\*Nights allocated by NOAO Director.



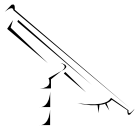
## KPNO Instruments Available for 2004B

Spectroscopy	Detector	Resolution	Slit	Multi-object
<b>Mayall 4-m</b>				
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, 0.9–2.5μm)	1000–3000	10'	single/multi
<b>WIYN 3.5-m</b>				
Hydra + Bench Spectrograph	T2KC CCD	700–22000	NA	~100 fibers
DensePak <sup>1</sup>	T2KC CCD	700–22000	IFU	~90 fibers
SparsePak <sup>2</sup>	T2KC CCD	700–22000	IFU	~82 fibers
<b>2.1-m</b>				
GoldCam CCD Spectrograph	F3KA CCD	300–4500	5.2'	
FLAMINGOS	HgCdTe (2048×2048, 0.9–2.5μm)	1000–3000	20'	

Imaging	Detector	Spectral Range	Scale ("/pixel)	Field
<b>Mayall 4-m</b>				
CCD Mosaic	8K×8K	3500–9700Å	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'
<b>WIYN 3.5-m</b>				
Mini-Mosaic	4K×4K CCD	3300–9700Å	0.14	9.3'
WTM	4K×2K CCD	3700–9700Å	0.11	4.6'×3.8'
<b>2.1-m</b>				
CCD Imager	T2KA CCD	3300–9700Å	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'
<b>WIYN 0.9-m</b>				
CCD Mosaic	8K×8K	3500–9700Å	0.43	59'

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

<sup>2</sup> Integral Field Unit, 80"×80" field, 5" fibers, graduated spacing.



# Observational Programs

## CTIO Instruments Available for 2004B\*

Spectroscopy	Detector	Resolution	Slit
<b>4-m</b>			
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'
<b>1.5-m</b>			
Cass Spectrograph	Loral 1200×800 CCD, 3100–11000Å	<1300	7.7'
Imaging	Detector	Scale ("/pixel)	Field
<b>4-m</b>			
Mosaic II Imager	8K×8K CCD Mosaic	0.27	36'
ISPI IR Imager	HgCdTe (2048×2048, 1.0–2.4μm)	0.3	11'
<b>1.5-m</b>			
CPAPIR	Hawaii II 2K IR	0.88	30'
<b>1.3-m</b>			
ANDICAM Optical/IR Camera	Fairchild 2K CCD HgCdTe 1K IR	0.17 0.11	5.8' 2'
<b>1-m</b>			
Direct Imaging	4K CCD	0.29	20'
<b>0.9-m</b>			
Cass Direct Imaging	SiTe 2K CCD	0.4	13.6'

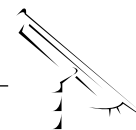
\* Please refer to the NOAO Proposal Web pages in March 2004 for confirmation of available instruments.

## Gemini Instruments Possibly Available for 2004B\*

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 (feed to NIRI)	1024×1024 Aladdin Array	1–2.5μm R~500–1600	0.022	22.5"
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'
GNIRS <sup>1</sup>	1K×1K Aladdin Array	1–5.5μm R~1700, 6000, 18000	0.05, 0.15	3"–99" slit length

\* Please refer to the NOAO Proposal Web pages in September 2004 for confirmation of available instruments.

<sup>1</sup> Not all configurations will be offered in 2004B.



## Keck Instruments Available for 2004B

	Detector	Resolution	Spectral Range	Scale (" / pixel)	Field
<b>Keck I</b>					
HIRESb/r (optical echelle)	Tek 2048×2048	30k–80k	0.35–1.0 $\mu$ m	0.19	70" slit
NIRC (near-IR img/spec)	256×256 InSb	60–120	1–5 $\mu$ m	0.15	38"
LWS (mid-IR img/spec)	128×128 As:Si BIB	100, 1400	3–25 $\mu$ m	0.08	10"
LRIS (img/lslit/mslit)	Tek 2048×2048	300–5000	0.31–1 $\mu$ m	0.22	6×7.8'
<b>Keck II</b>					
ESI (optical echelle)	MIT-LL 2048×4096	1000–6000	0.39–1.1 $\mu$ m	0.15	2×8'
NIRSPEC (near-IR echelle)	1024×1024 InSb	2000, 25000	1–5 $\mu$ m	0.18 (slitcam)	46"
NIRSPA0 (NIRSPEC w/AO)	1024×1024 InSb	2000, 25000	1–5 $\mu$ m	0.18 (slitcam)	46"
NIRC2 (near-IR AO img)	1024×1024 InSb	5000	1–5 $\mu$ m	0.01–0.04	10–40"
DEIMOS (img/lslit/mslit)	8192×8192 mosaic	1200–10000	0.41–1.1 $\mu$ m	0.12	16.7×5'

## MMT Instruments Available for 2004B

	Detector	Spectral Range	Scale (" / pixel)	Field
BCHAN (spec, blue-channel)	Loral 3072×1024 CCD	0.32–0.8 $\mu$ m	0.3	150"
RCHAN (spec, red-channel)	Loral 1200×800 CCD	0.5–1 $\mu$ m	0.3	150"
MIRAC3 (mid-IR img, PI inst)	128×128 Si:As BIB array	2–25 $\mu$ m	0.14, 0.28	18.2, 36"
MiniCam (optical img)	2-EEV 2048×4608 CCDs	UBVRI	0.05	3.7'
SPOL (img/spec polarimeter, PI)	Loral 1200×800 CCD	0.38–0.9 $\mu$ m	0.2	20"

## HET Instruments Available for 2004B

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

## Magellan Instruments Available for 2004B

	Detector	Resolution	Spectral Range	Scale (" / pixel)	Field
<b>Magellan I (Baade)</b>					
PANIC (IR img)	1024×1024 Hawaii		1–2.5 $\mu$ m	0.125	2'
IMACS (img/lslit/mslit)	8192×8192 CCD	R~2100–28000	0.34–1.1 $\mu$ m	0.11, 0.2	15.5', 27.2'
<b>Magellan II (Clay)</b>					
MagIC (optical img)	2048×2048 CCD		BVRI, u'g'r'i'z'	0.07	2.36'
BCSpec (lslit)	2048×515 CCD	R~1000–6000	0.31–1 $\mu$ m	0.25	72" slit
LDSS2 (mslit spec/img)	2048×2048 CCD	R~200–1000	0.4–0.8 $\mu$ m	0.38	6.4'
MIKE (echelle/multi spec)	2K×4K CCD	R~19000–65000	0.32–1 $\mu$ m	0.14	30' (~200 fibers)