



2008B Observing Proposals Due 31 March 2008

Dave Bell

Standard proposals for NOAO-coordinated observing time for semester 2008B (August 2008–January 2009) are **due by Monday evening, 31 March 2008, midnight MST**. The facilities available this semester include the Gemini North and South telescopes, Cerro Tololo Inter-American Observatory (including SOAR), Kitt Peak National Observatory, and community-access time with Keck, Magellan, and MMT.

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.
- **Email 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 email.

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 for printing 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
Request help for proposal preparation
Address for thesis and visitor instrument letters, as well as
consent letters for use of PI instruments on the MMT
Address for submitting LaTeX proposals by email
Gemini-related questions about operations or instruments

www.noao.edu/noaoprop/
noaoprop-help@noao.edu

CTIO-specific questions related to an observing run
KPNO-specific questions related to an observing run
Keck-specific questions related to an observing run
MMT-specific questions related to an observing run
Magellan-specific questions related to an observing run

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Community Access Time Available in 2008B with Keck, Magellan, and MMT

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 2008B:

- **Keck Telescopes**

A total of 16 nights of classically-scheduled observing time will be available with the 10-meter telescopes at the W. M. Keck Observatory on Mauna Kea. This is a 100% increase over what has been offered in recent semesters. All facility instruments and modes are available, including the Interferometer. For the latest details, see www.noao.edu/gateway/keck/.

- **Magellan Telescopes**

A total of at least four 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/.

- **MMT Observatory**

We currently expect up to 16 nights of classically-scheduled observing time to be available with the 6.5-meter telescope of the MMT Observatory. This would represent an increase of four nights over what has been available in the past. Previous requests have disproportionately used our allocation of dark and grey time, so bright-time proposals are particularly encouraged. For further information, see www.noao.edu/gateway/mmt/.

Community-access time at the Hobby-Eberly telescope is no longer available. A list of instruments we expect to be available in 2008B 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.

Two New NOAO Survey Programs

Tod R. Lauer

Two new NOAO survey programs have been initiated, with observations beginning in the first semester of 2008. Given the strong interest in the new near-infrared (NIR) survey capabilities offered by the advent of NEWFIRM, the recent call for NOAO survey proposals was especially competitive; 22 proposals were submitted in response to an announcement of opportunity for new survey programs.

NOAO surveys are observing proposals that require the generation of a large, coherent data set in order to address their scientific research goals. Surveys may run for up to three years and can receive larger blocks of time than are usually awarded in the standard, observing-time allocation process. In return for the large allocation of resources, the survey teams are required to deliver their reduced survey data products to the NOAO Science Archive for follow-on investigations by other interested astronomers.

A key part of the evaluation of the survey proposals is understanding the likelihood that interesting follow-on investigations can be done with the data products that will not be conducted as part of the survey team's primary scientific goals. Overall, the Survey Time Allocation Committee graded the proposals in three categories, with the final grades comprising a weighted sum of 50 percent for quality of the primary scientific goals, 25 percent for the archival-research value of the data products, and 25 percent for the credibility of the survey management plan.

The two new surveys selected are, "The NEWFIRM Medium-Band Survey: Accurate Redshifts for 40,000 K-Selected Galaxies," Principal Investigator (PI) Pieter van Dokkum (Yale University), and "A NEWFIRM Survey of the SDWFS/NDWFS Field," PI Anthony Gonzalez (University of Florida).

The van Dokkum et al. survey will use NEWFIRM at the Kitt Peak Mayall 4-meter telescope to obtain high-precision photometric redshifts of K-band selected galaxies in the COSMOS and AEGIS survey fields. The scientific goals are a broad census of the luminosity function, masses, colors, and spatial distribution of galaxies over roughly $1 < z < 4$. Since most of these galaxies are too faint to be observed with standard NIR spectroscopy, photometric redshifts are critical for determining their properties. A key part of the survey design is to use five medium-band filters to both enhance the redshift precision (in conjunction with the already available optical photometry) and greatly reduce the incidence of "catastrophic" redshift errors.

The Gonzalez et al. survey uses NEWFIRM at the Mayall 4-meter telescope to build on the deep optical and NIR photometry available from the NOAO Deep Wide-Field Survey and the mid-infrared observations obtained from the Spitzer Deep, Wide-Field Survey. Scientific goals include identifying the first generation of galaxy clusters, detecting primordial galaxies, probing the formation of the most massive galaxies, as well as searching for new examples of the Y-class of extremely cold brown dwarfs.

Observing Request Statistics for 2008A 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	156	190.69	1.22	58.44	0	0	58.44	3.26
GEM-S	73	106.67	1.46	51.06	0	0	51.06	2.09
CTIO								
CT-4m	49	161.7	3.3	109.5	4	0	109.5	1.48
SOAR	10	29.1	2.91	29	0	0	29	1.00
CT-1.5m	6	25.3	4.22	27.6	0	7	20.6	1.23
CT-1.3m	4	12.92	3.23	9.19	0	0	9.19	1.41
CT-1.0m	13	94	7.23	92	0	0	92	1.02
CT-0.9m	17	44.51	2.62	28.95	0	0	28.95	1.54
KPNO								
KP-4m	65	234.9	3.61	60	0	2	58	4.05
WIYN	32	107.8	3.37	54	3	0	54	2.00
KP-2.1m	20	108.9	5.45	97	0	0	97	1.12
KP-0.9m	6	27	4.5	12	0	0	12	2.25
Keck/HET/LCO/MMT								
Keck-I	19	27.6	1.45	6.5	0	0	6.5	4.25
Keck-II	22	26.5	1.2	3.5	0	0	3.5	7.57
HET	7	8.4	1.2	8.4	0	0	8.4	1.00
Magellan-I	2	4	2	2	0	0	2	2.00
Magellan-II	6	10	1.67	3	0	0	3	3.33
MMT	12	27	2.25	13	0	0	13	2.08

*Nights allocated by NOAO Director

CTIO Instruments Available for 2008B

Spectroscopy	Detector	Resolution	Slit
4-m Blanco[1]			
Hydra + Fiber Spectrograph	SITe 2K×4K CCD, 3300–11,000Å	700–18000, 45000	138 fibers, 2" aperture
R-C Spectrograph	Loral 3K×1K CCD, 3100–11,000Å	300–5000	5.5'
4-m SOAR[2]			
OSIRIS IR Imaging Spectrograph	HgCdTe 1K×1K, JHK windows	1200, 1200, 3000	3.2', 0.5', 1.2'
Goodman Spectrograph	Fairchild 4K×4K CCD, 3100–8500Å	1400, 2800, 6000	5.0'
1.5-m[3]			
Cass Spectrograph	Loral 1200×800 CCD, 3100–11,000Å	<1300	7.7'
Imaging	Detector	Scale ("/pixel)	Field
4-m BLANCO			
Mosaic II Imager	8K×8K CCD Mosaic	0.27	36'
ISPI IR Imager	HgCdTe (2K×2K 1.0–2.4mm)	0.30	10.25'
4-m SOAR[2]			
Optical Imager	E2V 4K×4K Mosaic	0.08	5.25'
OSIRIS IR Imaging Spectrograph	HgCdTe 1K×1K	0.33, 0.14	3.2', 1.3'
Goodman Spectrograph	Fairchild 4K×4K CCD	0.15	7.2' diameter
1.3-m [3,4]			
ANDICAM Optical/IR Camera	Fairchild 2K×2K CCD	0.17	5.8'
	HgCdTe 1K×1K IR	0.11	2.0'
1.0-m[5]			
Direct Imaging	Fairchild 4K×4K CCD	0.29	20'
0.9-m[6]			
Direct Imaging	SITe 2K×2K CCD	0.40	13.6'

[1] The R-C Spectrograph should be out-performed by the Goodman Spectrograph on SOAR, in general. A comparison guide will be made available at proposal time.

[2] The amount of science time available on SOAR in 2008B will be at least 50%. The spectral resolutions and slit lengths for the OSIRIS imaging spectrograph correspond to its low-resolution, cross-dispersed, and high-resolution modes, respectively. In the cross-dispersed mode, one is able to obtain low-resolution spectra at JHK simultaneously. The Goodman spectrograph is expected to be available in single-slit mode. Imaging mode is also available, but only with U,B,V,R filters.

Please consult the NOAO Proposals Web pages for the latest information.

[3] Service observing only.

[4] Proposers who need the optical only will be considered for the 1.0-m unless they request otherwise. Note that data from both ANDICAM imagers is binned 2×2.

[5] Classical observing only - Observers may be asked to execute up to 1 hr per night of monitoring projects which have been transferred to this telescope from the 1.3-m. In this case, there will be a corresponding increase in the scheduled time. No specialty filters, no region of interest.

[6] Classical or service, alternating seven-night runs. If proposing for classical observing, requests for seven nights are strongly preferred.

Gemini Instruments Expected to be Available for 2008B

GEMINI NORTH	Detector	Spectral Range	Scale ("/pixel)	Field
NIRI	1024×1024 Aladdin Array	1–5μm R~500–1600	0.022, 0.050, 0.116	22.5", 51", 119"
NIRI + Altair (AO- Natural or Laser)	1024×1024 Aladdin Array	1–2.5μm + L Band R~500–1600	0.022	22.5"
GMOS-N	3×2048×4608 CCDs	0.36–1.0μm R~670–4400	0.072	5.5' 5" IFU
Michelle	320×240 Si:As IBC	8–26μm R~100–30,000	0.10 img, 0.20 spec	32"×24" 43" slit length
NIFS	2048×2048 HAWAII-2RG	1–2.5μm R~5000	0.04 × 0.10	3" × 3"
NIFS + Altair (AO- Natural or Laser)	2048×2048 HAWAII-2RG	1–2.5micron R~5000	0.04 × 0.10	3" × 3"

GEMINI SOUTH	Detector	Spectral Range	Scale ("/pixel)	Field
Phoenix	512×1024 Aladdin Array	1–5μm R<70,000	0.085	14" slit length
GMOS-S	3x2048×4608 CCDs	0.36–1.0μm R~670–4400	0.072	5.5' 5" IFU
T-ReCS	320×240 Si:As IBC	8–26μm R~100, 1000	0.09	28" × 21"

*Please refer to the NOAO Proposal Web pages in March 2008 for confirmation of available instruments.

KPNO Instruments Available for 2008B

Spectroscopy	Detector	Resolution	Slit	Multi-object
Mayall 4-m				
R-C CCD Spectrograph	T2KB/LB1A/F3KB CCD	300–5000	5.4'	single/multi
MARS Spectrograph	LB CCD (1980×800)	300–1500	5.4'	single/multi
Echelle Spectrograph	T2KB/F3KB CCD	18000–65000	2.0'	
FLAMINGOS[1]	HgCdTe (2048×2048, 0.9–2.5μm)	1000–1900	10.3'	single/multi
IRMOS[2]	HgCdTe (1024×1024, 0.9–2.5μm)	300/1000/3000	3.4'	single/multi
WIYN 3.5-m[3]				
Hydra + Bench Spectrograph[9]	T2KA CCD	700–22000	NA	~85 fibers
SparsePak[4]	T2KA CCD	700–22000	IFU	~82 fibers
2.1-m[10]				
GoldCam CCD Spectrograph	F3KA CCD	300–4500	5.2'	
FLAMINGOS[1]	HgCdTe (2048×2048, 0.9–2.5μm)	1000–1900	20.0'	
Exoplanet Tracker (ET)[5]	CCD (4K×4K, 5000–5640 Å)	See Note [5]	Fiber (2.5")	
Imaging	Detector	Spectral Range	Scale ("'/pixel)	Field
Mayall 4-m				
CCD Mosaic-1	8K×8K	3500–9700 Å	0.26	35.4'
NEWFIRM[6]	InSb (mosaic, 4–2048×2048)	1–2.3μm	0.40	28.0'
SQIID	InSb (4–2048×2048)	JHK	0.39	3.3'
FLAMINGOS [1]	HgCdTe (2048×2048)	JHK	0.32	10.3'
WIYN 3.5-m				
Mini-Mosaic[7]	4K×4K CCD	3300–9700 Å	0.14	9.3'
OPTIC[7]	4K×4K CCD	3500–11000 Å	0.14	9.3'
WHIRC[8]	VIRGO HgCdTe (2048×2048)	0.9–2.5μm	0.10	3.3'
2.1-m[10]				
CCD Imager[11 & 12]	T2KB CCD	3300–9700 Å	0.305	10.4'
SQIID	InSb (4–512×512)	JHK	0.68	5.8'
FLAMINGOS[1]	HgCdTe (2048×2048)	JHK	0.61	20.0'
WIYN 0.9-m				
CCD Mosaic-1	8K×8K	3500–9700 Å	0.43	59'

[1] FLAMINGOS Spectral Resolution given assuming 2-pixel slit. Not all slits cover full field; check instrument manual. FLAMINGOS was built by the late Richard Elston and his collaborators at the University of Florida. Dr. Steve Eikenberry is currently the PI of the instrument.

[2] IRMOS, built by Dr. John MacKenty and collaborators. Availability will depend on proposal demand and block scheduling constraints.

[3] A new Volume Phase Holographic (VPH) grating, 740 l/mm, is now available for use. Please contact Di Harmer for information.

[4] Integral Field Unit, 80"×80" field, 5" fibers, graduated spacing

[5] Exoplanet Tracker (ET) is an instrument provided by Dr. Jian Ge of the University of Florida and his colleagues. It enables very high precision measurements of radial velocities for suitably bright enough targets. Details regarding this instrument are available via our instrument Web pages. It is capable of providing Doppler precision of 4.4 m/s in 2 minutes for a $V = 3.5$ mag, G8V star.

[6] Please see www.noao.edu/ets/newfirm/ for more information. Permanently installed filters include J, H, and Ks. Please see NEWFIRM Web pages for update on availability/scheduability of other filters.

[7] OPTIC Camera from U of Hawaii is anticipated to be available through an agreement with Dr. John Tonry of the University of Hawaii. This instrument may be assigned to those that request to use Mini-Mosaic if this substitution still meets proposed imaging needs and making such an assignment would further observatory support constraints. Fast-guiding mode of operation of OPTIC is now a supported mode for NOAO users of the instrument.

[8] WHIRC, built by Dr. Margaret Meixner (STScI) and collaborators, will be available for shared-risk use during 2008B. WHIRC is currently undergoing acceptance testing and commissioning with the WTTM module. Using WHIRC with the WTTM module is not likely to be available during 2008B, and those proposing to use the instrument should not depend on the availability of this mode. However, if commissioning is completed in time, we might offer this mode for use in late 2008B. Please watch www.noao.edu/kpno/WHIRC_instrument.htm for updates.

[9] The Bench Spectrograph is undergoing upgrades to a new CCD and a new spectrograph collimator. Proposers should assume existing capabilities for their proposals. Please watch www.wiyn.org/instrument/bench_upgrade.html for updates.

[10] Proposers should note that the 2.1-m will not be available for two weeks in September, during which time some major maintenance work will be performed.

[11] While T2KB is the default CCD for CFIM, use of F3KB may be justified for some applications and may be specifically requested; scale 0.19"/pix, 9.7"×3.2' field.

[12] If T2KB is unavailable, CFIM may be offered with T1KA (scale 0.305"/pix, 5.2' field) or with F3KB to best match proposal requirements. www.noao.edu/kpno/ccdchar/ccdchar.html

MMT Instruments Available for 2008B

	Detector	Spectral Range	Scale ("/pixel)	Field
BCHAN (spec, blue-channel)	Loral 3072 × 1024 CCD	0.32–0.8μm	0.30	150"
RCHAN (spec, red-channel)	Loral 1200 × 800 CCD	0.5–1.0μm	0.30	150"
MIRAC3 (mid-IR img, PI inst)	128 × 128 Si:As BIB array	2–25μm	0.14, 0.28	18.2, 36"
MegaCam (optical imager, PI)	36 2048×4608 CCDs	0.32–1.0μm	0.08	24'
Hectospec (300-fiber MOS, PI)	2 2048×4608 CCDs	0.38–1.1μm	R ~1K	60'
Hectochelle (240-fiber MOS, PI)	2 2048×4608 CCDs	0.38–1.1μm	R ~32K	60'
SPOL (img/spec polarimeter, PI)	Loral 1200 × 800 CCD	0.38–0.9μm	0.2	20"
ARIES (near-IR imager, PI)	1024×1024 HgCdTe	1.1–2.5μm	0.04, 0.02	20", 40"
SWIRC (wide n-IR imager, PI)	2048×2048 HAWAII-2	1.0–1.6μm	0.15	5'
CLIO (thermal-IR AO camera, PI)	320×256 InSb	H, K, L, M	0.05	16×13"

Magellan Instruments Available for 2008B

	Detector	Resolution	Spectral Range	Scale ("/pixel)	Field
Magellan I (Baade)					
PANIC (IR imager)	1024×1024 Hawaii		1–2.5μm	0.125	2'
IMACS (img/lslit/mslit)	8192×8192 CCD	R~2100–28000	0.34–1.1μm	0.11, 0.2	15.5', 27.2'
MagIC (optical imager)	2048×2048 CCD		BVRI, u'g'r'i'z'	0.07	2.36'
Magellan II (Clay)					
LDSS3 (mslit spec/img)	4096×4096 CCD	R~200–1700	0.4–0.8 μm	0.19	8.25' circ.
MIKE (echelle)	2K×4K CCD	R~19000–65000	0.32–1.0μm	0.14	
MagE (echellette)	2K×2K E2V	R=4100	0.31–1.0μm	0.30	

Keck Instruments Available for 2008B

	Detector	Resolution	Spectral Range	Scale ("/pixel)	Field
Keck 1					
HIREsB/r (optical echelle)	3× MM-LL 2K×4K	30k–80k	0.35–1.0μm	0.19	70" slit
NIRC (near-IR img/spec)	256 x 256 InSb	60–120	1–5μm	0.15	38"
LRIS (img/lslit/mslit)	Tek 2K×4K, 2xE2V 2K×4K	300–5000	0.31–1.0μm	0.22	6x8'
Keck 2					
ESI (optical echelle)	MIT-LL 2048 × 4096	1000–6000	0.39–1.1μm	0.15	2x8'
NIRSPEC (near-IR echelle)	1024 × 1024 InSb	2000, 25000	1–5μm	0.18 (slitcam)	46"
NIRSPA0 (NIRSPEC w/AO)	1024 × 1024 InSb	2000, 25000	1–5μm	0.18 (slitcam)	46"
NIRC2 (near-IR AO img)	1024 × 1024 InSb	5000	1–5μm	.01–.04	10–40"
OSIRIS (near-IR AO img/spec)	2048 × 2048 HAWAII2	3900	0.9–2.5μm	0.02–0.1	0.32–6.4"
DEIMOS (img/lslit/mslit)	8192 × 8192 mosaic	1200–10000	0.41–1.1μm	0.12	16.7×5'

Interferometer

IF (See msc.caltech.edu/software/KISupport/)