



2009A Observing Proposals Due 30 September 2008; Survey Proposals Due 15 September 2008

Dave Bell

Standard proposals for NOAO-coordinated observing time for semester 2009A (February - July 2009) are **due by Tuesday evening, 30 September 2008, midnight MST**. Proposals for new Survey programs are due by 15 September 2008, and require a letter of intent to have been sent in July. 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 the 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 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 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 which 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

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

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

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Community Access Time Available in 2009A with Keck, Magellan, and MMT

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As a result of awards made through the National Science Foundation Telescope System Instrumentation Program (TSIP) and a similar earlier program, telescope time is available to the general astronomical community at the following facilities in 2009A:

• **Keck Telescopes**

A total of fourteen nights of classically scheduled observing time will be available with the 10-meter telescopes at the W. M. Keck Observatory on Mauna Kea. All facility instruments and modes are available. For the latest details, see www.noao.edu/gateway/keck/.

• **Magellan Telescopes**

A total of eight 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 avail-

able instrumentation and proposal instructions, see www.noao.edu/gateway/magellan/.

• **MMT Observatory**

Fourteen nights of classically-scheduled observing time to be available with the 6.5-meter telescope of the MMT Observatory. 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 2009B 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.

Observing Request Statistics for 2008B 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	112	123.45	1.1	66.173	0	0	66.173	1.87
GEM-S	61	77.66	1.27	48.08	0.8	0	48.08	1.62
CTIO								
CT-4-meter	47	161.5	3.44	110	2	0	110	1.47
SOAR	13	43.6	3.35	29.5	3	0	29.5	1.48
CT-1.5-meter	7	51	7.29	21.7	0	6	15.7	3.25
CT-1.3-meter	7	26.5	3.79	6.89	0	0	6.89	3.85
CT-1.0-meter	8	59	7.38	73	0	6	67	0.88
CT-0.9-meter	18	91.9	5.11	67.1	0	0	67.1	1.37
KPNO								
KP-4-meter	47	203	4.32	77.5	6	14	63.5	3.2
WIYN	20	67.5	3.38	49.5	0	2	47.5	1.42
KP-2.1-meter	28	152	5.43	133	0	0	133	1.14
WIYN-0.9-meter	2	6	3	6	0	0	6	1
Keck, MMT, Magellan								
Keck-I	21	38.3	1.82	11	0	0	11	3.48
Keck-II	30	35	1.17	8	0	0	8	4.38
Magellan-I	7	15	2.14	4	0	0	4	3.75
Magellan-II	5	11	2.2	4	0	0	4	2.75
MMT	11	18.7	1.7	15.5	0	0	15.5	1.21

*Nights allocated by NOAO Director

CTIO Instruments Available for 2009A

Spectroscopy	Detector	Resolution	Slit
4-meter 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-meter 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-meter[3]			
Cass Spectrograph	Loral 1200×800 CCD, 3100-11,000Å	<1300	7.7'
Fiber echelle spectrograph	SiTe 2K×2K CCD, 4020-7300Å	20000-42000	2.4" fiber
Imaging	Detector	Scale ("/pixel)	Field
4-meter BLANCO			
Mosaic II Imager	8K×8K CCD Mosaic	0.27	36'
ISPI IR Imager	HgCdTe (2K×2K 1.0-2.4mm)	0.3	10.25'
4-meter 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-meter2 [3,4]			
ANDICAM Optical/IR Camera	Fairchild 2K×2K CCD	0.17	5.8'
	HgCdTe 1K×1K IR	0.11	2.0'
1.0m[5]			
Direct Imaging	Fairchild 4K×4K CCD	0.29	20'
0.9-meter[6]			
Direct Imaging	SiTe 2K×2K CCD	0.4	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.

[3] Service observing only. The Fiber Echelle is a new capability, see the NOAO Proposals Web page and this newsletter for more information.

[4] Proposers who need the optical only will be considered for the 1.0m 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 1.3m. 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 7-night runs. If proposing for classical observing, requests for 7 nights are strongly preferred.

Instruments Expected to be Available for 2009A

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	1-2.5μm 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	3×2048×4608 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"
NICI	1024×1024 (2 det.) Aladdin III InSb	0.9-5.5μm Narrow Band Filters	0.018	18.4" × 18.4"

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

KPNO Instruments Available for 2009A

Spectroscopy	Detector	Resolution	Slit Length	Multi-object
Mayall 4-meter				
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 3.5m[3]				
Hydra + Bench Spectrograph[9]	STA1 CCD	700-22000	NA	~85 fibers
SparsePak[4]	STA1 CCD	700-22000	IFU	~82 fibers
2.1-meter				
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	Fiber (2.5")	
Imaging	Detector	Spectral Range	Scale	Field
Mayall 4-meter				
CCD MOSAIC-1	8K×8K	3500-9700 Å	0.26	35.4'
NEWFIRM[6]	InSb (mosaic, 4-2048×2048)	1—2.3μm	0.4	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-meter				
Mini-Mosaic[7]	4K×4K CCD	3300-9700 Å	0.14	9.3'
OPTIC[7]	4K×4K CCD	3500-10000 Å	0.14	9.3'
WHIRC[8]	VIRGO HgCdTe (2048×2048)	0.9-2.5μm	0.10	3.3'
2.1-meter				
CCD Imager[10]	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-meter				
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. Optic may not be available in 2009A. If it is, availability begins in June 2009.

[8] WHIRC, built by Dr. Margaret Meixner (STScI) and collaborators, will be available for use during 2009A (no WTTM). It will be available for shared-risk use with the WTTM module.

[9] STA1 is the offered Bench CCD. A 3300 l/mm VPH grating will be available in shared-risk mode. Assuming successful commissioning in fall 2008, a new collimator will also be in use. Observers should plan for the same dispersion and wavelength range, but a factor of ~2 increase in throughput. Depending on the configuration, there may be up to a 20% reduction in the instrumental resolution. Observers are encouraged to view www.wiyn.org/instrument/bench_upgrade.html for further details to help plan observations.

[10] 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. If T2KB is unavailable, CFIM may be offered with T2KA (scale 0.305"/pix, 10.4' field) or with F3KB to best match proposal requirements. www.noao.edu/kpno/ccdchar/ccdchar.html

MMT Instruments Available for 2009A

	Detector	Spectral Range	Scale ("/pixel)	Field
BCHAN (spec, blue-channel)	Loral 3072 × 1024 CCD	0.32-0.8μm	0.3	150"
RCHAN (spec, red-channel)	Loral 1200 × 800 CCD	0.5-1.0μm	0.3	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 AI camera, PI)	320×256 InSb	H,K,L,M	0.05	16×13"
MAESTRO (optical echelle, PI)	4096×4096	0.32-1.0μm	0.15	

Magellan Instruments Available for 2009A

	Detector	Resolution	Spectral Range	Scale ("/pixel)	Field
Magellan I (Baade)					
PANIC (IR imager)	1024×1024 Hawaii		1-2.5μm	0.125	2'
IMACS (img/slslit/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~22000-83000	0.32-1.0μm	0.12-0.13	

Keck Instruments Available for 2009A

	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/slslit/mslit)	Tek 2K×4K, 2×E2V 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	0.01-0.04	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/slslit/mslit)	8192 × 8192 mosaic	1200-10000	0.41-1.1μm	0.12	16.7×5'

Interferometer

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