Call for Proposals

This document is also available in PDF format.

Semester S09A: Fubruary 1, 2009 -- July 31, 2009

Subaru Telescope, National Astronomical Observatory of Japan

Please refer to http://subarutelescope.org/Observing/index.html for the latest information.

1. INTRODUCTION AND PROPOSAL ACCEPTANCE POLICY

Subaru Telescope invites observing proposals for Semester S09A, which will run from February 1, 2009 until July 31, 2009. For S09A, the following instruments, Faint Object Camera and Spectrograph (FOCAS), High Dispersion Spectrograph (HDS), Subaru Prime Focus Camera (Suprime-Cam), Infrared Camera and Spectrograph (IRCS), Cooled Mid-Infrared Camera and Spectrometer (COMICS), the new Subaru AO188 system (only with IRCS), and Multi-Object Infrared Camera and Spectrograph (MOIRCS) will be available for open use by visiting observers (see also [note 1]).

[note 1] Those who intend to use carry-in instruments are required to make contact with the Director of the Subaru Observatory in advance as early as possible. Any "carry-in instrument" proposals without going through such a procedure (notification or negotiation beforehand) can not be accepted.

The Open Use programs in S09A consist of (1) Open Use Normal Programs, (2) Open Use Intensive Programs, and (3) Open Use Service Programs. As a rule, about 65% of total nights are assigned to the Open Use Programs.

See the individual web pages for descriptions and instructions for submitting your proposal either as an Intensive Program or a Service Program.

Table 1. Important notice for S09A	
Proposal update limited	We newly apply a rule that the number of times for updating a registered proposal should not exceed two (i.e., allowable only up to 2nd revision).
	According to the inter-observatory time-exchange agreement, we accept proposals of observations with Gemini and Keck telescopes, which will be screened by Subaru TAC within the framework of Subaru Call for Proposals.

Time Exchange Programs with Gemini and Keck	• 5 (±1) nights (Gemini), 0-2 nights (Keck I), and 4 nights (keck II) are reserved in S09A for this purpose. • Those who have direct access to Gemini (excluding its international programs) or Keck time must refrain from submitting proposals to this program. • Submitting ToO (Target of Opportunity) proposals to Gemini telescope, except for GRB-related ones has newly become possible. This Gemini ToO program will be executed in the queue mode. Please refer to Subaru/Gemini Time Exchange page and Subaru/Keck Time Exchange page for more details.
AO 188 availability	In S09A, the Subaru new AO system (AO188) is available with IRCS only in the natural guide star (NGS) mode. Since the AO188 is still under commissioning at this moment, some observing modes may not be well tested. Those who submit proposals using AO188+IRCS are required to make contact with the AO188 development team, Dr. Yosuke Minowa minowa[at]naoj.org in advance.
Notice for MOIRCS users	(i) The engineering-grade detector used in channel-1 has been replaced to the scientific-grade one. See the website for more information. (ii) The use of *Y*-band filter with *R*1300 grism is now okay. (iii) MOIRCS/MOS applicants must explicitly describe required the number of masks in Entry 11 (Instrument Requirements of the application form).

Table 2. Summary of three kinds of proposals

Normal Programs	Proposals which require less than or equal to 5 nights within a semester.
Intensive Programs	Proposals which require 6 nights or more with a maximum of 10 nights within a semester. And applicants can request a total of maximum 20 nights over several semesters (4 consecutive semesters at maximum from S09A to S10B).
Service Programs	Proposals which are practicable in a comparatively short time (4 hours at most). All Service Program observations will be executed by the observatory staff. The observing method and technical details must be well described in the proposal.

Table 3. Other relevant notices

Service Programs	For Semester S09A, HDS, Suprime-Cam, and only imaging mode with IRCS, COMICS, and MOIRCS will be available. Please see the web page.
Duplicated Submission Unallowable	An identical proposal using the same instrument/telescope should not be submitted twice at the same time by making use of the time-exchange opportunity. For example, if a proposal using Keck/Gemini was once submitted to Subaru time-exchange program, it should not be applied to the ordinary proposal selection on Keck/Gemini side at the same semester. (And vice versa.)
Indication of Moon-affected unacceptable dates	When one particular source or several sources whose coordinates are concentrated to a particular range are planned to observe in bright or grey nights, observations may be severely affected by the Moon in some particular nights. In such cases, those inconvenient or unacceptable dates should be explicitly indicated in Entry 10 (Schedule Requirements) of the application form.
Remote Observation	Remote observations will be conducted from the Hilo Base Facility, and will be performed for IRCS, HDS, Suprime-Cam, MOIRCS(only imaging mode), and AO188 (only with IRCS). If you wish to perform your observations remotely, please check the box in Entry 10 (Scheduling Requirements) of the application form. Note that your request may not necessarily be granted, depending on the instrument status and/or scheduling limitations.
PI instruments	If you want to use the PI instruments such as CIAO or Kyoto3DII, please make contact with the instrument team in advance. The contact address for CIAO is *ishii@naoj.org* , and for Kyoto3DII is *sugai@kusastro.kyoto-u.ac.jp*
Submission Address	The mailing address for electronic submission is *promstex@optik.mtk.nao.ac.jp* since its change in S08A.
ToO Proposals	For Target of Opportunity (ToO) proposals, please read the ToO policy (Appendix A). You may also submit ToO proposals (excluding GRB observations) to the time-exchange program with Gemini.
Allocation Policy	(i) Instrument changes are not permitted within a night. (ii) While observing time will in principle be awarded in units of 1 (whole) night for Normal Programs, you may request an allocation of half nights (i.e., in units of 0.5 night) if it is really sufficient for your intended purpose. It should be realized, however, that you might have disadvantages in this case, because difficulties are occasionally involved in scheduling half-night programs (i.e., we have to find another complimentary program

	that fills in the other half-night).

There are also some limitations in the schedule and operation of some instruments for Semester S09A, so please read this Call for Proposals carefully before submitting your proposals. Please also refer to the section 7 for the status reports of these instruments.

Although Subaru Telescope is entirely funded by the Japanese government, we also invite proposals from the international community. For the past semesters, about 10% of the available nights were allocated to such international proposals (see [note 2]). In any case, non-Japanese researchers are encouraged to submit their proposals in collaboration with Japanese researchers.

[note 2] International proposals are defined as those submitted by non-Japanese principal investigators (PIs) belonging to non-Japanese institutions.

Any questions about Subaru Telescope Open Use, including proposal submission, should be addressed to
cfp_consult@optik.mtk.nao.ac.jp

2. OVERVIEW OF OPEN USE SCHEDULE

Proposal Deadline:	**September 19, 2008 12:00 (Noon) in Japan Standard Time** (i.e., September 19, 3:00 am in UT) for Normal/Intensive Programs
	October 17, 2008 12:00 (Noon) in Japan Standard Time (i.e., October 17, 3:00 am in UT) for Service Programs
Refereeing:	October 2008
Time Allocation Committee:	early November 2008
Telescope Time Scheduling:	November 2008
Semester S09A:	February 1, 2009 - July 31, 2009

3. PREPARATION AND SUBMISSION OF PROPOSALS

From S05B semester, we accept only electronically submitted proposals. Applicants are requested to fill in LaTex source of the application form and make a PDF file describing the scientific justification; then both files should be sent to us by an e-mail.

The following explanations are intended mainly for those submitting the Normal/Intensive Program proposals. (Some more additional information concerning Intensive Program proposals is also available at the relevant page.)

Applicants of Service Program proposals should consult the specific instruction page, since there are several important points to be remarked.

3-1. Files to Be Prepared

3-1-1. Application Form

The template LaTeX file of the application form and the corresponding style file for this S09A semester are available from the Application form page .

After you have filled in this template LaTeX file (while following the instructions presented as comments in the template), please be sure to confirm that no LaTeX compiling errors are generated and there is no problem with the finally resulting application form. Although you can rename the LaTeX file as you wish, the extention ".tex" must be kept in any case.

3-1-2. Scientific Justification

The PDF file of the Scientific Justification may in principle be freely prepared without any specific format; however, the following conditions should be fulfilled. Proposals violating any of these requirements may be disqualified without being reviewed.

language:	Should be written in English. (see also [note 3])
header information:	At the top of the first page, the title of the proposal and the name of the P.I. (those of co.-I. may be abbreviated by et al.) should be clearly written.
font size:	Use the font of no smaller than 10 point (even in the figure caption or in the reference)
margins:	Keep sufficiently large margins (at least 15 mm) at each of the four sides, so that any missing could be avoided when printed out.
page limitation:	including any figures, tables and references (for A4 or letter size paper) • Normal Program --Maximum 2 pages • Intensive Program--Maximum 5 pages • Service Program--Maximum 1 page
file size:	The file size should not exceed 2MB.
file name:	The name of the file should end with ".pdf".

[note 3: for Japanese proposers] If you wish, extra pages of Jananese direct translation may be appended. In this case, please keep the following rule:
(i) We accept only faithful translation, i.e., neither supplement nor omission in its substance.
(ii) English scientific justification and Japanese scientific justification should be contained in the same PDF file, while the above-mentioned

requirement for the file size equally applies.

3-2. How to Submit the Files

When the preparation has been finished, you should send your LaTex Application Form and your PDF scientific justification to the Proposal Management System, PROMS promstex@optik.mtk.nao.ac.jp by e-mail with any subject name. Any of the following three cases will do:
(1) mail body(LaTeX text file) + one attachment file(PDF file)
(2) mail body(void) + two attachment files(LaTeX text file and PDF file)
(3) mail body only(LaTeX text file and uuencoded text of the PDF file combined)

Please note that the PROMS address has been changed from the S08A semester. Please send your proposals to our e-mail address,
promstex@optik.mtk.nao.ac.jp

If your files have arrived at us, you should soon receive a reply mail, which may prompt you to check the contents of the submitted files on the web, or may request you to resubmit in case there is any trouble. You must confirm that you surely get the e-mail of response from our proposal management system, PROMS. If you don't receive it even an elapse of more than 1 hour, please contact cfp_consult@optik.mtk.nao.ac.jp . (We strongly recommend to avoid submission within a few hours before the deadline.)

Unfortunately, however, there is no guarantee that our automatic processing system is compliant with all type of attached files sent from various mail programs (based on different file-encoding systems). Accordingly, if your trial of mailing files has ended up with an unsuccessful result, we would recommend you to adopt the following procedure (i.e., case(3) above) using the uuencode command of the UNIX system, which has been confirmed to work successfully.

Suppose that your "*.tex" file for the application form and the ".pdf" file for the scientific justification are named as "appform.tex" and "scijust.pdf", respectively. Then in the UNIX machine (or that of analogous OS such as Linux, FreeBSD, cygwin, etc.), move to the directory where these files are placed, and execute as follows in the command line:

```
uuencode scijust.pdf scijust.pdf > scijust.txt
cat appform.tex scijust.txt | mail -s 'any_subject'
promstex@optik.mtk.nao.ac.jp
```

Then, the two files must have been correctly sent to
promstex@optik.mtk.nao.ac.jp
by a mail with a subject name of any_subject.

3-3. How to Revise or Cancel Your Submission

If you want to revise or cancel your submission, please refer to PROMS page.

4. HOW TO COMPLETE THE NORMAL AND INTENSIVE PROGRAM APPLICATION FORMS

4-1. Title of Proposal

Provide a short title for your proposal.

4-2. Principal Investigator

Provide contact details for the PI. The observatory may contact the PI if there are any questions regarding the proposal or observations.

4-3. Scientific Category

Please check one and only one valid category from the 18 listed. Each proposal will be reviewed usually by 5 referees who are experts in the appropriate category.

4-4. Abstract

Provide a clear and concise description of your proposed observations and their scientific importance.

4-5. Co-Investigators

List the names and affiliations of co-investigators. All potential observers should be enumerated here, since limited travel support may be provided (up to 3 persons per observing run of a proposal) for those researchers and graduate students (belonging to Japanese institutions) on this list . For this reason, information of relevant "individuals" should be specified here, and it is not allowed to replace it by the name of a team or group (e.g., COMICS team or SXDS team). You can append the "\CoI" field as many as you like if necessary. (In case that the number of these co-investigators is large, the names of some members may not appear on the formatted cover page. However, this does not have to be worried about, since our database is created from the original LaTeX source.)

4-6. List of Applicant's Related Publications

List (with full citation) publications over the last 5 years related to the proposal.

4-7. Title of Proposal

Duplicate the title of the proposal for technical reviewers.

4-8. Observing Run

List the instruments, requested and minimum acceptable number of nights, preferred and acceptable dates (e.g., "early Apr.-May"), lunar phase (Bright, Gray or Dark), and Observing Modes. Dark time is defined as being within 3 nights of the New Moon, and Bright time is within 3 nights of the Full Moon; Gray time is the remaining part of the lunar cycle. Applicants who request Dark time for infrared observations should justify its necessity in their scientific justification.

4-9. List of Targets

List all the proposed targets. J2000 is recommended for the equinox. Use an additional sheet if necessary. Please check the box if you do not want to expose your target names for the technical review by the support astronomer.

4-10. Scheduling Requirements

Please check the box if you want to carry out your observation remotely from the Hilo Base Facility, which can be done by

uncommenting "\remoteobs" in the LaTeX form. And any other special scheduling requirements should be clearly explained here, especially if you request bright/grey nights and yet there are unacceptable dates affected by the Moon.

4-11. Instrument Requirements

If you are planning to observe in the MOS mode of MOIRCS, the number of required masks must be clearly specified here. Other specific or unusual instrument requirements should be explained here.

4-12. Experience

Describe your experience, ability, and need of any assistance, etc., for observing and data reduction in order for your support astronomer to better help you prepare and make observations.

4-13. Backup Proposal in Poor Conditions

Provide a short description of observations which will be carried out if conditions are not good enough for the main purpose (e.g., poor transparency). Please specify target names.

4-14. Observing Method and Technical Details

Describe your proposed observations. Please explicitly state the instrument configuration (filters, slit width, readout mode) and justify the time requested by describing the details of your proposed observations, with reference to the instrument sensitivities provided on the web site. Please give sufficient information so that the feasibility of the proposed observations can be confirmed, and so that support astronomers can prepare the observations if the proposal is accepted. If you propose AO observations, please describe the nature of the targets (extended or point source) as well as the guide star properties (separation, brightness, acceptable minimum Strehl ratio). Please read carefully the instrument notices in the following section 7.

4-15. Condition of Closely-Related Past Observations

If your proposal is a continuation of (or inextricably related with) the previously accepted proposals, describe how the relevant past observations were carried out by giving the Open Use proposal ID, Title, Weather/Observational condition, Achievement rate [in %] for the planned outcome.

Additional remarks: (a) The proposals described here must be included also in the following "4-16 Post-Observational Status and Publications". (b) The reason why you request observational time in this semester (in spite of the past experience of Subaru observations on a similar/the same theme) has to be briefly described at the end of the "Scientific Justification" (e.g., bad weather/condition, telescope/instrument down time , expansion/improvement of the data, observing targets in different season).

4-16. Post-Observation Status and Publications

Report the status or outcome of your main Subaru Observations carried out in the past. All observations relevant to this proposal (e.g., those enumerated in 4-15) must be included here. Otherwise, only those within last 3 years suffice. Give the date, the Open Use proposal ID (e.g., S01B-999), PI's name, status of data reduction/analysis, and related publications.

4-17. Thesis Work

If the observations will form part of a graduate student's thesis project, please provide the student's name and thesis title.

4-18. Subaru Open Use Intensive Program

Only check this box if you are submitting an Intensive Program, that is if your are requesting 6 nights or more.

5. MEMBERS OF THE TIME ALLOCATION COMMITTEE

Chair: Kazuhiro Shimasaku (University of Tokyo)

Members: Mamoru Doi (University of Tokyo, Structure Formation and Cosmology)
Hideyo Kawakita (Kyoto Sangyo University, Solar System and Extrasolar Planets)
Tadayuki Kodama (NAOJ, Galaxies and Clusters of Galaxies)
Takashi Murayama (Tohoku University, AGN and Galaxies)
Tetsuya Nagata (Kyoto University, Star/Planet Formation and Interstellar Matter)
Takashi Onaka (University of Tokyo, Stars)
Toshikazu Shigeyama (University of Tokyo, General)
Tomonori Totani (Kyoto University, General)

6. STATUS OF TELESCOPE

The latest telescope performance can be found at http://subarutelescope.org/Observing/Telescope/index.html. If you have any specific questions related to your application for S09A, please contact Dr.

Daigo Tomono tomono@naoj.org .

7. STATUS OF INSTRUMENTS

FOCAS, HDS, IRCS, Suprime-Cam, COMICS, and MOIRCS will be available for open use in Semester S09A. Applicants may refer to http://subarutelescope.org/Observing/Instruments/index.html for an overview of the current Subaru instruments. If you have any question, please contact the support astronomer (S.A.) in charge of each instrument.

7-1. IRCS

S.A. Dr. Tae-Soo Pyo pyo@naoj.org

IRCS is available for imaging, grism spectroscopy and echelle spectroscopy on the Nasmyth platform without/with the AO 188 using natural guide stars. Now the thermal background levels show low values comparable to those of 2005 since the image rotator of IR Nasmyth focus has a new coating from May 2008. The sensitivity information given in the IRCS instrument page already takes into account these low thermal background levels.

7-2. FOCAS

S.A. Dr. Takashi Hattori hattori@naoj.org

FOCAS is available for imaging and long-slit spectroscopy. Linear/circular polarimetry are also available for both imaging polarimetry and spectropolarimetry.
Applicants interested in MOS observations must read the instructions at http://subarutelescope.org/Observing/Instruments/FOCAS/spec/mos.html.

A limited number of user filters may be accepted. If you wish to use your own filters, please contact Takashi Hattori for detailed information before submitting your proposal.

7-3. HDS

S.A. Dr. Akito Tajitsu tajitsu@naoj.org

HDS is available for optical high-dispersion echelle spectroscopy. The signal to noise ratios and the spectral formats under your desired settings can be estimated with the HDS Exposure Time Calculator and the HDS Echelle Format Simulator on the web, respectively. An iodine-cell for precise radial velocity measurements is available.

Due to the earthquake in Oct. 2006, there was a significant damage in optical alignment of HDS. It has been completely recovered in Jan. 2007. Now, HDS is achieving its highest spectral resolution (R - 150,000 with 0".2 slit width) over the whole CCDs' surface. But, there is a little change in Echelle dispersion (stretching about 1.2%), compared with the spectral format before the earthquake.

A limited number of user filters for blocking unwanted orders in longslit mode may be accepted; please contact Akito Tajitsu for specifications before submitting your proposal. Please see the instrument web page for the currently available narrow-band filters for the longslit mode.

7-4. Suprime-Cam

S.A. Dr. Hisanori Furusawa furusawa@naoj.org

Suprime-Cam is offered for wide-field optical imaging.
Broad-band filters (Johnson-Cousins *BVRcIc* and SDSS *g'r'i'z'*) and three narrow-band filters (NB711, NB816, and NB921) are offered for Open Use programs, but a limited number of user filters for Suprime-Cam may be accepted. If you wish to bring your own filters, please read the User filter acceptance policy on the Suprime-Cam web pages carefully and submit the required documents (the certificate of actual size measurement and inspection data of optical characteristics) to Hisanori Furusawa by October 31, 2008.

If the total number of filters requested in one observational run exceeds 10, we will not be able to accommodate all the filters in the filter stacker. Please refer to the filter operation policy for details.

Replacement of CCDs and evaluation of the new system is underway. The performance of the new system will be presented in the Call for proposals

for S09B. For S09A, we will offer the Suprime-Cam with the new CCDs on a shared-risk basis only. Please see the instrument page for detailed information.

7-5. COMICS

S.A. Dr. Takuya Fujiyoshi tak@naoj.org

COMICS is available for mid-infrared (8 to 25 μm) imaging and spectroscopy. Diffraction limited images can be obtained both in the *N* (10 μm) and *Q* (20μm) windows. In the *N*-band (8-13 μm), three modes of spectroscopy are available: low- (*R*~250), medium- (~2,500), and high-resolution (~10,000, in the vicinities of the 9.0 μm [Ar III], 10.5 μm [SIV], and 12.8 μm [Ne II] lines). Medium- (~2,500, 17-25 μm) and high resolution (~5,300, near 17 μm) spectroscopy are available in the *Q*-band. Please refer to the instrument web pages for details.

7-6. AO

S.A. Dr. Yosuke Minowa minowa@naoj.org

The AO36 has already been decommissioned. Instead, the AO188 become available from S08B. In the S09A semester, the AO188 will be operated only in the natural guide star (NGS) mode with the IRCS.

The preliminary performance of AO188 with NGS is described in the AO188 www page. Please ensure that you provide sufficient details in Entry 14. "Observing Method and Technical Details" of your proposal. Applicants should describe the nature of the targets, namely whether they are extended or point sources, as well as the natural guide star properties such as separation to a target, brightness, and acceptable minimum Strehl ratio or FWHM. Extended objects cannot be used as guide stars. Non-sidereal objects cannot be used as wavefront reference. It is essential that you consider the important checkpoints listed on the AO web page.

7-7. MOIRCS

S.A. Dr. Ichi Tanaka ichi@naoj.org

MOIRCS is available for wide-field imaging and multi-object (MOS) /long-slit spectroscopy in near-infrared wavelengths. The engineering-grade chip, temporalily used as the channel-1 detector since 2007 October, has been replaced by the scientific-grade one in July 2008. The assessment of the new detector is still under way. Please check the most recent updates through the MOIRCS website.

For the imaging mode, *YJHKs* filters as well as some narrow-band filters are available (note that NO narrow-band filters are available for service observations). We changed the default *K*s-band filter to the wedged "fringe-free" type since July 2008. We are planning to replace the current *J* and *H* filters to the same type. If you want to use the old filters, please explicitly specify the reason in the technical details of your proposal.

For spectroscopy we have low (R~500), medium (R~1300), and high (VPH:R~3000) dispersion modes for both multi-object (MOS) /long-slit spectroscopy. The Y-band window for R1300 grism is now available under the shared-risk operation, as it is not fully tested yet. The R3000 VPH grisms are also to be opened under the shared-risk policy again. Proposers planning the VPH observation are required to understand well about the character of the grisms through the information on the relevant web pages. Please explicitly explain that your observation can be executed under the current setting of the VPH in Entry 14 (Observing Method and Technical Details) of the proposal. Please read carefully the related information on MOIRCS website.

For MOS mode, the number of MOS masks for use should be less than 16 during one contiguous observing run. Proposers planning to use the MOS mode must explicitly describe the number of MOS masks you need to use in Entry 11. Please refer to the instrument web page for details.

8. DATA RIGHTS AND ARCHIVING

Successful applicants will have exclusive access to their data for a period of 18 months from the time of observation, after which the data will be freely available from the Subaru archive. Applicants may request an extension to this proprietary period in their Scientific Justification, but such an extension will only be awarded in exceptional circumstances.

9. NOTES FOR PUBLICATION FROM SUBARU TELESCOPE

We hope that the data you will obtain with Subaru telescope will achieve its intended science goals. We ask all the Open Use observers to follow the Subaru Telescope acknowledgment policy. All papers which make use of data taken with Subaru Telescope facilities should include the following acknowledgment on the title page as a footnote to the title.

Based [in part] on data collected at Subaru Telescope, which is operated by the National Astronomical Observatory of Japan.

We encourage you to release your results obtained from Subaru Open Use to the general public for astronomical educational and outreach purposes through NAOJ. Please refer to the Subaru Web site (http://subarutelescope.org/Observing/Proposals/Publish/index.html) for details.

APPENDIX A: TARGET OF OPPORTUNITY (ToO) POLICY

Applicants may submit proposals for Target of Opportunity (ToO) observations of transient and/or rare phenomena with specific objects and clear observational strategy, such as nearby supernovae, Gamma-Ray Burst follow-up, etc. Proposals should be submitted in the same manner as normal Open Use proposals, described above, making it clear which Subaru instruments can be used to perform the ToO observations and how much time will be required. In addition, all ToO proposals **must** include at least

one member of Subaru Telescope (Hawaii) staff as a Co-I.

In addition, the Director may override scheduled observations to execute ToO observations as an observatory program should an important unexpected celestial event occur. Subaru Telescope will make every effort to compensate observers for time lost due to ToO observations.
