

Apr 14, 2015

## Call for Observing Proposals: Semester 2015B (July 2015 -- December 2015)

Observing proposals for the 188-cm reflector<sup>1</sup> at Okayama Astrophysical Observatory (OAO) are invited<sup>2</sup> for the observing season from July 2015 to December 2015, semester 2015B.

**The proposal deadline is 10:00(JST) May 14, 2015.**

### How to prepare and submit your proposal

There are three categories of observations, namely, "Normal", "Project" and "Student". Foreign observers can apply to only "Normal" observations as principal investigators.

We ask applicants to fill out the application form of three pages and to attach scientific justification. The scientific justification including figures, tables and references should not be more than two pages in length. A template application form and a LATEX style file can be downloaded from the English web page of our observatory (<http://www.oao.nao.ac.jp/en/>).

A graduate student can be a PI, but the supervisor or the equivalent who is responsible for the student should come together for observations.

Since observers are requested to perform their observations mostly by themselves, we ask applicants who do not speak Japanese and are not familiar with the telescope and instruments, to have a Japanese collaborator who is familiar with them. When a foreign applicant finds difficulties in finding a Japanese collaborator, please contact the observatory ([cfp-consult@oao.nao.ac.jp](mailto:cfp-consult@oao.nao.ac.jp)).

The submission of a proposal should be made via e-mail. Please send both of (1) a TEX PDF file of the application form and (2) a PDF file of the scientific justification (within two pages) to [proposal@oao.nao.ac.jp](mailto:proposal@oao.nao.ac.jp) as e-mail attachment files. We notify you of receiving your proposal via e-mail (to the e-mail address written in the application form) within two working days. If you do not receive any response from us for more than two working days, please contact us via e-mail ([proposal@oao.nao.ac.jp](mailto:proposal@oao.nao.ac.jp)), telephone or fax.

1: The telescope is located at 133d35' 38"(E), +34d34'37"(N) and at an altitude of 372m. Its observing sec Z range is between 3 and 1. Objects with declination < -35.5 deg. will never be observed.

2: The applicants need to be completely free to publish the whole observational results.

Hideyuki Izumiura  
Director

Okayama Astrophysical Observatory  
National Astronomical Observatory of Japan  
3037-5 Honjo, Kamogata, Asakuchi,  
Okayama 719-0232, Japan

phone +81-865-44-2155

fax +81-865-44-2360

e-mail: [cfp-consult@oao.nao.ac.jp](mailto:cfp-consult@oao.nao.ac.jp)

## Status Report for Common User Observations (July 2015 — December 2015)

Okayama Astrophysical Observatory, NAOJ

As of Apr 14, 2015

### **HIDES (high dispersion echelle spectrograph, observatory instrument):**

HIDES is a cross-dispersed echelle spectrograph, placed at the coudé focus of the 188-cm reflector. It works at optical wavelengths from 360 nm to 900 nm. The detector is a mosaic of 3 identical CCDs from EEV with 2048x4100 pixels each (#1). Read out noises are about  $5e^-$  and the gains are 2.5–3  $e^-/ADU$  for the three CCDs. Total read out time is about 40 seconds. Instantaneous wavelength coverages are 375 nm and 234 nm with the Red and Blue cross-disperser gratings, respectively. The maximum spectral resolution ( $\lambda/\Delta\lambda$ ) of 110,000 is achieved when the slit width is 0.38 arcsec. Details of the mosaic CCD camera can be found at [http://www.oao.nao.ac.jp/~hides/wiki/index.php?Mosaic\\_CCD\\_en](http://www.oao.nao.ac.jp/~hides/wiki/index.php?Mosaic_CCD_en). Either “HIDES-Slit” or “HIDES-Fiber” (see below) is selected in the item 11 (11.Instrument) of the application form. Both can be chosen at the same time. In that case, however, the reason should be given in the item 17 (17.Technical Description).

#### **\* HIDES-Slit:**

An observing mode with a mechanical slit at the coudé focus. The maximum spectral resolution ( $\lambda/\Delta\lambda$ ) of 110,000 is achieved when the slit width is 0.38 arcsec. Three optional functions are available: iodine cell, image rotator, and offset guider (#2). Observers who plan to use these functions should give a description about the usage in the item 16 (16. Requests Concerning Instruments) of the application form. Note that the iodine cell and the image rotator cannot be used at the same time. Please feel free to send any questions on HIDES to [izumiura@oao.nao.ac.jp](mailto:izumiura@oao.nao.ac.jp).

#### **\* HIDES-Fiber:**

A high efficiency mode of the fiber-feeding system that has been developed at OAO for HIDES. The fiber-feeding system sends the incident light at the Cassegrain focus of the 188-cm reflector through an optical fiber to the entrance of HIDES. Under typical seeing condition observers can expect one magnitude better sensitivity with this system than that with the coudé optical train (#3). An iodine cell is also available that is prepared for the fiber-link system. Observers who plan to use the iodine cell should give a description about the usage in the item 16 (16. Requests Concerning Instruments) of the application form. Neither an image rotator nor an offset guider is available. Any questions concerning the fiber-feeding system can be directed to the instrument PI, Dr. Eiji Kambe ([kambe@oao.nao.ac.jp](mailto:kambe@oao.nao.ac.jp)).

#1: The mosaic CCD camera was developed under collaboration between Dr. H. Nakaya (NAOJ) and OAO.

#2: The wide-field acquisition scope that has been used since semester 2009B does not have any offset guiding function. The function is available only at the slit viewer.

#3: The mode we open for the observing in this semester is the one with a spectral resolving power ( $\lambda/\Delta\lambda$ ) of 50,000. With this mode, an improved sensitivity of one magnitude can be expected in the wavelength range longer than 440 nm, compared to the one with the coudé optical train. However, there are a few limitations in this mode, including that an achievable S/N ratio of a spectrum is slightly limited due to fiber modal noise. More information on the fiber-link system will be found in the following URL: <http://www.oao.nao.ac.jp/~hides/wiki/>.

### **ISLE (near-infrared camera and low-dispersion spectrograph):**

ISLE is a near-infrared (1.0 - 2.5 $\mu$ m) imager and spectrograph for the Cassegrain focus (<http://www.oao.nao.ac.jp/~isle/>). The detector is a HAWAII Array (HgCdTe 1K X 1K), which covers 4.2 X 4.2 arcmin<sup>2</sup> field of view with a pixel scale of 0.25 arcsec/pixel. ISLE also provides low to medium

resolution ( $\lambda/\Delta\lambda= 200 - 4000$ ) long-slit (4 arcmin long) spectroscopic capabilities using reflection gratings. Both imaging mode and spectroscopy mode are available.

Any questions related to observations and proposal preparation should be addressed to [yanagi@oao.nao.ac.jp](mailto:yanagi@oao.nao.ac.jp)

**KOOLS (Kyoto-Okayama Optical Low-dispersion Spectrograph, PI-type instrument):**

KOOLS offers two basic observing modes, namely, imaging and long-slit spectroscopy, in optical wavelength for the OAO 188-cm telescope. From 2008A the instrument has been open to common use as a PI-type instrument on a shared-risk basis. Applicants who want to use the instrument should contact Dr. I. Iwata ([ikuru.iwata@nao.ac.jp](mailto:ikuru.iwata@nao.ac.jp)) prior to the submission of the proposal, at least one week earlier to the deadline. His admittance is mandatory for the proposal submission; any proposal without his admittance will be declined. Specifications of the instrument and results of past test observations are available on the instrument web page (<http://www.oao.nao.ac.jp/~kools/>).

Please also see the home page of the observatory for more details of the 188-cm reflector and the instruments (<http://www.oao.nao.ac.jp/en/>).

## Notes on the OAO Proposal Application Form

The OAO observing proposal application form is based on L<sup>A</sup>T<sub>E</sub>X. Please see the observatory web page (<http://www.oao.nao.ac.jp/en/>) for general information on open use observations. A proposal that does not follow the guidelines below may not be considered. If you encounter problems, please contact [cfp-consult@oao.nao.ac.jp](mailto:cfp-consult@oao.nao.ac.jp).

### General Instructions:

- Download both (1) style file (oaoprop14b.sty) and (2) template L<sup>A</sup>T<sub>E</sub>X-file (template.tex) from the observatory web page. The term 2014B shall be deemed to be replaced to 2015B.
- Three pages of cover sheet and maximum two pages of scientific justification (SJ), including figures, tables and the reference list, are required for normal program.
- Check if all things in your application form fall within the form. Font size must be larger than 10 pt.
- Do not include figures or tables from page 1 to 4.
- Send both of (1) a TEX PDF file of the application form and (2) a PDF file of the scientific justification (within two pages) to [proposal@oao.nao.ac.jp](mailto:proposal@oao.nao.ac.jp) as e-mail attachment files. We will notify you of receiving your proposal via e-mail (to the e-mail address written in the application form) within two working days. If you don't receive any response from the observatory for more than two working days after the submission, please contact the observatory (via either e-mail, fax or phone).
- The subject of the e-mail and the files should be named using the family name of PI and the semester, e.g., `einstein_2015b.pdf`, `einstein_2015b_sj.pdf`, subject: `einstein_2015b`. When you submit two or more proposals, the names of the files should be like `einstein_2015b_1`, `einstein_2015b_2`, and so on.
- Proposals are reviewed by Time Allocation Committee of the observatory (which consists of six Japanese astronomers outside of the observatory and one observatory staff member), based on assessment by anonymous referees.
- In SJ you may include colored figures and tables if necessary. Figures and tables must be clear and be easy to read for everyone: check whether numbers and axis labels are clear and large enough. Also, please check the application form and SJ can be correctly printable.
- Applicants, who require multiple semesters to accomplish their program, should describe "Overall observation plan" and "Plan for the next semester" in SJ. In addition, applicants, who have already observed in the same program, need to write "Current status of the program" in SJ.

### Instructions for filling out the application form:

- **1. Category:** Write "N"(normal) which is the only category allowed for foreign investigators. Specify the attribute of your program, "N"(new) or "C"(continuation), in the next box.
- **2. Principal Investigator:** Write "Yes" if your proposed observation is planned to be a part of your thesis.
- **5. Collaborators:** Write all of your co-investigator names, institutions and positions.
- **6. Past Observations:** List previous use of the OAO 188-cm telescope, if any.
- **8. Supervisor:** If PI is a graduate student, the supervisor should fill out entries in section 8. Also, if the program is accepted, the supervisor must visit observatory along with PI.
- **11. Instrument:** "1 HIDES-Slit" specifies observations at the conventional coudé focus using a mechanical slit, while "2 HIDES-Fiber" does those using an optical fiber feeding from the Cassegrain

focus. One can choose both 1 and 2 at the same time. In that case, however, the reason should be given in “17. Technical Description.”

- **12. List of Objects:** If you have 13 or more target objects, please attach a separate target list along with the scientific justification.
- **14. Preferred Dates:** Please indicate your preferred dates for observations. Three parentheses in each month indicate first, second and last parts of the month, respectively. 'U's indicate those periods are unavailable.

⌘PreferredDatesA{⌘submonth{U}{U}{--}} %July

{⌘submonth{--}{--}{--}} % Aug

{⌘submonth{--}{--}{--}} % Sept

{⌘submonth{X}{--}{--}} % Oct

{⌘submonth{--}{--}{X}} % Nov

{⌘submonth{--}{--}{--}} % Dec

Indicate whether you accept shared night observation using Yes / No.

- **15. Requests concerning scheduling:** Enter your requests for scheduling, including moon phases.
- **16. Requests concerning instruments:** If your observation plan needs special instrument setting, describe details of the setting and the items to be prepared before the observation dates. If you need special assistance of the observatory staff, please contact the observatory in advance.
- **17. Technical Description:** Describe clearly the technical feasibility on observations and data analyses of your proposed plan.