

Summary of Subaru International Partnership Science and Instrumentation Workshop

Hwang, Ho Seong (KIAS)

June 28, 2017

The 6th Survey Science Group Workshop



Subaru International Partnership Science and Instrumentation Workshop

March 22(Wed) - 24(Fri), 2017
at Mitaka Campus, NAOJ

Why do I talk about Workshop summary here?

PURPOSE

Towards Subaru partnership, some representative researchers from potential partner countries will meet and discuss collaborations. This is the first such official occasion and we aim to first of all know each other, identify common interests in science and instrumentation, and extend on-going collaborations and/or seek for new potential collaborations.

Why do I talk about Workshop summary here?

ORGANIZERS

Australia: Chris Lidman (AAO)

Canada: Luc Simard (NRC)

EAO member countries: Jessica Dempsey (EAO), Lei Hao (Shanghai), Byeong-Gon Park (KASI),
Shiang-Yu Wang (ASIAA)

Japan: T. Kodama (NAOJ; Chair), Y. Niino (NAOJ), Y. Takagi (NAOJ), N. Yamada (NAOJ), Ikuru Iwata
(Subaru), Y. Koyama (Subaru), Y. Minowa (Subaru), N. Ohashi (Subaru), T. Nagao (Ehime), M. Yoshida
(Hiroshima)

Who were there?

Invited speakers and coordinators:

<<<EAO member countries>>> EAO coordinator: Jessica Dempsey (EAO)

<<China>> Coordinator: Lei Hao (CN, Shanghai)

Lei Hao (CN, Shanghai)

Gregory Herczeg (CN, Beijing)

Jiasheng Huang (CN, NAOC)

<<Korea>> Coordinator: Byeong-Gon Park (KR, KASI)

Ho Seong Hwang (KR, KIAS)

Minjin Kim (KR, KASI)

Sungho Lee (KR, KASI)

Byeong-Gon Park (KR, KASI)

<<Taiwan>> Coordinator: Shiang-Yu Wang (TW, ASIAA)

Yen-Ting Lin (TW, ASIAA)

Keiichi Umetsu (TW, ASIAA)

Shiang-Yu Wang (TW, ASIAA)

<<Japan>> Coordinator: Taddy Kodama (JP, NAOJ)

Masayuki Akiyama (JP, Tohoku)

Wako Aoki (JP, NAOJ)

Yusei Koyama (JP, Subaru)

Takayuki Kotani (JP, NAOJ)

Masayuki Kuzuhara (JP, NINS-ABC)

Yuichi Matsuda (JP, NAOJ)

Yosuke Minowa (JP, Subaru)

Tohru Nagao (JP, Ehime)

Masahiro Takada (JP, Kavli-IPMU)

Masaomi Tanaka (JP, NAOJ)

<<Australia>> Coordinator: Chris Lidman (AUS, AAO)

Joss Bland-Hawthorn (AUS, USyd)

Julia Bryant (AUS, AAO/USyd)

Jeffe Cooke (AUS, Swinburne)

Sanjb Sharma (AUS, USyd)

Chris Tinney (AUS, UNSW)

Michele Trenti (AUS, UMelb)

<<Canada>> Coordinator: Luc Simard (CAN, NRC-Herzberg)

Patrick Cote (CAN, NRC Herzberg)

Alan McConnachie (CAN, NRC Herzberg)

Stan Metchev (CAN, Western Ontario)

Marcin Sawicki (CAN, St Mary's)

➤ **We were not official representatives of Korean community!**

➤ **There were many talks, but...**

What did Subaru people want from us?

➤ Guideline for speakers:

- (1. Yourself) What are your science interests and what projects are you working on?
- (2. On-going) Is there any current on-going collaborations on Subaru or with other potential partner countries?
- (3. Short/Long term) What are the potential future collaborations with Subaru (in short term <5yrs and long term >5yrs)?
- (4. Size) What amount of Subaru nights are required to complete your programs? Does that fit in the current Subaru open-use programs (intensive/normal/service)?
- (5. Instrument) What Subaru instruments will be used (current and future)? Request of any new instruments?
- (6. Operation) Any request to Subaru science operation from scientific perspectives?

➤ Discussion items:

- * Define some model cases of collaborations (both science and instrumentation)
- * How do we organize medium-to-large class programs other than SSPs? Or do we just follow the current open-use scheme?
- * Feedback to Subaru instrumentation and operation from scientific perspectives?
- * Improve awareness of the Subaru partnership in the communities
- * How do we deal with ToO programs?
- * Launch science working group in each category for further discussion/contact/mini-workshop?

What did Subaru people want from us?



Background Information for speakers of Subaru International Partnership Science & Instrumentation Workshop

Ikuru Iwata (Subaru Telescope)

March 21, 2017

https://www.naoj.org/Projects/partnership/SubaruWS2017/files/WS_basic_information.pdf

What did Subaru people want from us?

Basic framework of partnership

- Subaru/NAOJ would like to pursue 'partnership' rather than providing telescope time on nightly basis
 - To create broader 'Subaru community' to enable:
 - Future collaborative science programs
 - Coherent future strategy
 - To promote strong science cases
 - Joint technical development programs
- In the current scope, Subaru Telescope will continue to be a part of NAOJ, with contributions from partners.
 - Assuming more than half of operation budget will come from NAOJ.

What did Subaru people want from us?

Information provided in this document

1. Telescope time access framework
 2. Contributions
 3. Governance / Organization
 4. Timeline
- Note: all the ideas on the Subaru Telescope partnership in this document is still under discussion and may change.

What did Subaru people want from us?

1. Telescope time access framework

- Telescope time categories
 1. Regular open-use time
 - Includes Time Exchange Programs and Guaranteed Time for instrument developers
 2. Subaru Strategic Programs (SSPs)
 3. University of Hawaii (UH) time
 4. Director's Discretionary Time (DDT)
 - 25% of nights for SSPs
 - Engineering time
 - Staff time

What did Subaru people want from us?

Subaru Strategic Programs

- Basically, the existing SSPs have their own collaboration framework, and Subaru partners will not 'automatically' join these collaborations.
- HSC SSP (2014-2019?)
 - Collaboration of Japan, Taiwan, Princeton.
 - Having new institutional partners have not been considered.
 - The first public data release was just made.
- PFS SSP (2020?-2025?)
 - Large international PFS collaboration
 - PFS collaboration is still looking for new institutional members
 - Access to PFS SSP will only be made with agreement with PFS collaboration
- IRD SSP (2018?-)
 - No detail of membership has been discussed yet.
- In Subaru partnership perspective, we exclude these SSP nights from nights accessible by partners.
- However, we should think about future framework of large-scale programs with Subaru partners, to maximize the science outputs from the enlarged 'Subaru community'.

What did Subaru people want from us?

1. Telescope time access framework: Current rules

- 65% of available nights will be open-use (including SSPs, time exchange programs, etc.)
- 52 nights / year goes to UH time
 - If there's significant downtime UH has cooperated to reduce number of nights
- 20% of available nights to DDT (including 25% of SSPs)
- We assume regular open-use time will be shared with partners.
 - excluding time exchange with Gemini and Keck – unless partners want to have access to these telescopes through Subaru time exchange programs.

What did Subaru people want from us?

1. Telescope time access framework: Telescope time allocation (draft)

- Single TAC
 - Programs are selected based on scores by external reviewers.
- Partner shares will be determined by their contributions. (see '2. Contributions')
 - Some fluctuations per semester need to be allowed, due to scheduling constraints and scientific evaluation.
 - International programs (i.e., proposals from non-partner countries) will be allowed with some upper limit.

What did Subaru people want from us?

2. Contributions: How telescope time is related (draft)

- Fraction of Japanese contribution among the total operation budget will determine the fraction of Japanese PI time:

Japanese contribution:

$$\frac{\sum \left(\text{Cash} \quad \text{Tech} \right)}{\sum \left(\text{Cash} \quad \text{Tech} \quad \text{Cash} \quad \text{Tech} \quad \text{Cash} \quad \text{Tech} \right)}$$

JP Partner A Partner B

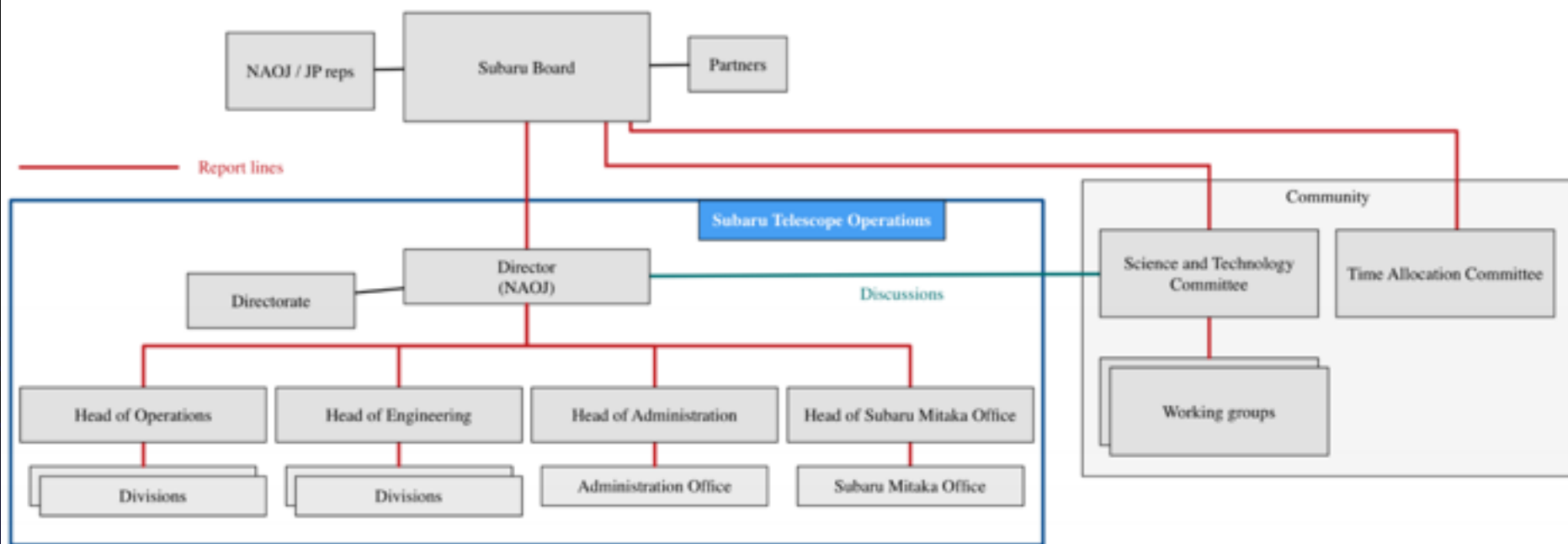
- In the above equation, capital investment made by Japan is not included. Currently it is suggested that partners will be asked to pay 'membership fee' to be a Subaru Partner, which will be based on acknowledgement of current Subaru Telescope's value made possible by the Japanese investment.
- Time for SSPs will be included in 'Japanese PI time'. This means that partners are not asked to share operation cost required to run SSPs.

3. Governance / Organization

- The board
 - NAOJ director general and Japanese representatives
 - Partner representatives
 - Make high-level decisions on budget, strategic plan, and organization
- NAOJ director general
 - Has superior power over the board in some areas, such as appointment of Subaru Telescope director (who is NAOJ professor) and the existence of the project
- Roles of the board and NAOJ DG should be clearly defined.

What did Subaru people want from us?

Organization with partners (Draft)



What did Subaru people want from us?

4. Timeline

■ 2017

- S17A and S17B: EAO time from DDT
- Written agreement with AAL on short-term access
- Technical collaboration with Australia
- March 22-24: the first Partnership Science WS in Mitaka
- Outline of long-term collaboration with Australia to be determined for funding process in Australia

■ 2018

- S18A, S18B, (S19A): Australia time from DDT
- Agreement with Australia?

■ 2019

- S19B?: Long-term partnership starts with Australia?
- Agreement with other partner candidates?
- Partnership agreement will be made and renewed for about 5-years, although we should consider future strategy in 10-years time scale.

Unofficial and Informal Lunch meeting discussion among EAO countries

➤ Subaru Time Opportunity in 2017A (3 nights) and 2017B (3 nights)

Total of 2017A Subaru proposals from EA regions via EAO program: 14 (21.7 nights)

Japan	2 proposals	3.5 nights
Taiwan	5 proposals	6.8 nights
Korea	1 proposal	3 nights
China	6 proposals	8.4 nights

Total of 2017B Subaru proposals from EA regions via EAO program: 6 (9 nights)

Japan	1 proposal	2 nights
Taiwan	1 proposal	2 nights
Korea	0 proposal	0 night
China	4 proposals	5 nights

➤ Why were there few proposals from EAO countries?

➤ Do we still need to seek to continue access to Subaru?

Unofficial and Informal Lunch meeting discussion among EAO countries

- **Working together as EAO is a good thing, but each community does not appreciate the importance or the concept of EAO yet.**
- **Good to continue the access to the Subaru time as EAO time.**
- **Better to organize the EAO time to make a single larger program?**
- **Necessary to coordinate proposals before the submission**
- **Useful for having a face-to-face meeting**

Any questions or Comments?