

2019年度光赤天連シンポジウム (2019.9.26)

すばる国際パートナーシップのその後

すばるSAC委員長 児玉 忠恭

すばる国際共同運用の枠組み決定の経緯

- すばる国際共同運用の枠組みについて、すばるUMでの議論やコミュニティーアンケートの結果などを参考に、集中的に検討を行った。
- その結果、従来議論してきたシェアードタイムという枠組みは見直し、パートナー間の自由な連携に任せ、パートナーは自分たちの割り当て時間を持ち寄って連携すること(マルチ・パートナー・プログラム)を新たな方針とした。
- 様々な詳細も詰めて国立天文台長に答申した。執行部でさらに議論し変更を加え、最終的に文書に取りまとめられた(2019.9.5)。
- 旧枠組みで交渉を行っていたEAOとの連携は現時点ではなくなった。
- 現在パートナー候補(中国、インド、カナダ、Dawn-ORIGINSチーム)と協議中。

以前の観測所案

BENEFIT AND RESPONSIBILITY OF EACH PARTNER

		Full Partner	Semi partner
Telescope time	Regional time	○	○
	Shared time	○	○
	SSP (or equivalent large program)*	○	
Governance	Time Allocation Committee (TAC)	○	○
	Science and Technology Committee (STC)	○	observer
	Board	○	observer
Contribution		> 200 M JYEN (inc. in-kind up to 20%?)	> 50 M JYEN (in cash only)
Term		4 years (renewable)	2 years (up to 4 years?)

*The current SSP using HSC and the next SSP using PFS are excluded

以前の観測所案

OF NIGHTS FOR EACH PARTNER

Just an example, and all the numbers are TBD

Annual total operation cost; 20M USD, Annual total nights for science operations; 240

	Contribution (M USD)	fraction	PT	SSP/LP	Shared Time	GT
semi-partner A	0.5	0.025	6	0	-1.2 (20%)	4.8
full partner B	2	0.10	24	6.2	-3.6 (15%)	14.2
Japan	17.5	0.875	210	53.8	-31.5 (15%)	124.7
total	20	1.00	240	60	†36.3	143.7

† This will be shared by all the partners.

MULTI-PARTNER PROGRAM (MPP)

新しい枠組み

- MPP is a science program that multiple Partners/Associates (≥ 2) participate in with PI/Co-PI's.
- MPP can be any of Normal Program, Intensive Program or Large Program.
- The number of nights are taken from each Partner/Associate's PGT in proportional to the number of PI/Co-PI's.
- Partners/Associates that participate in a MPP must have enough PGT and a contract of partnership until the completion of the MPP.
- In order to promote collaborations among Partners/Associates, up to 5 nights per semester may be reserved from the open-use time to assign buffer nights to some highly ranked MPP's in case of loss of their telescope times due to bad weather, etc. (SAC recommendation)

TWO CATEGORIES OF PARTNERSHIP

新しい枠組み

- **Subaru Partner (SP):**

SAC案をさらに執行部が調整して決定(2019.9.5)

- Access to **Normal, Intensive, Large Programs**, and future **SSP (after PFS)**.
- Can apply for **Multi-Partner Program (including Large Program)**
- **Participation** in **decision-making process (TAC and SAC)**
- **More than 2 M USD** in-cash contribution per year
- **Additional in-kind contributions** may be accepted up to **25%** of their cash contribution
- **Term \geq 3yrs**

- **Subaru Associate (SA):**

- Access to **Normal and Intensive Programs**
- Can apply for **Multi-Partner Program (excluding Large Program)**
- **Observer participation** in the TAC.
- **More than 400 K USD** in-cash contribution per year
- **In-kind contributions may *not* be accepted**
- **Term \geq 2yrs**

***Unit** can be any of a country, a multi-country organization, an institute, or a multi-institute consortium.

HOW TO CALCULATE THE NUMBER OF NIGHTS FOR PARTNER GUARANTEED TIME

- Partner's guaranteed time (PGT) is allocated to each partner/associate based on the fraction of total contributions from each partner to the value of Subaru:

Value of Subaru: **20 M USD (~2.2 B JPY)**, considering the past 20 yrs of operations

Total available nights for science operations: S

Partner/Associate's contribution (M USD): P

$$\text{Number of PGT} = S * P / 20$$

Note: Total available nights for science operations (typically ~220-240 nights) are calculated as:

$$S = 365 - (\text{down time} + \text{UH time} + \text{open-sky time} + \text{DDT} + \text{engineering})$$

If S is 220-240 nights and P is 2 M USD, No. of PGT is 22~24 nights / yr.

If P is 0.4 M USD, No. of PGT is 4.4~4.8 nights / yr.

Those nights will be roughly evenly breakdown into dark/gray/bright nights.

SUMMARY

- Subaru Partner
 - > 2 M USD /yr in-cash contribution → > 22-24 nights / yr
- Subaru Associate
 - > 400 K USD /yr in-cash contribution → > 4.4-4.8 nights / yr
- In-kind contribution can be accepted for Partners only, and is additional and <25% of their cash contribution
- We introduce “Multi-partner program” which can be organized freely among partners/associates using their own telescope times, in proportional to the # of PI/Co-PI's.
- In order to promote MPP, up to 5 nights may be reserved to assign buffer nights to highly ranked MPP's in case of loss of nights (SAC recommendation). SAC案。協定書には書かないが、運用上で考慮する可能性。