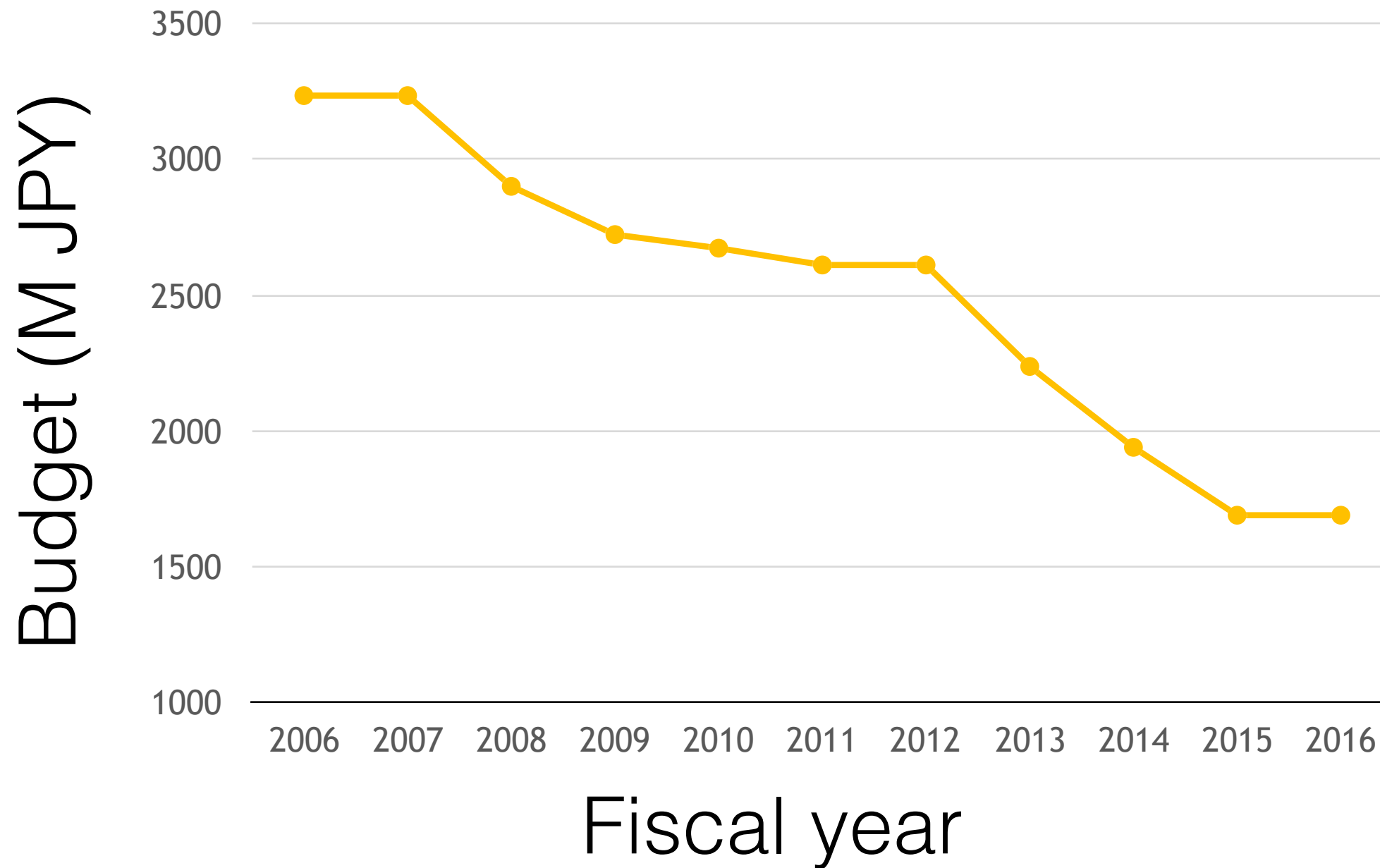


# Background Information

May 24, 2016  
Internal Symposium

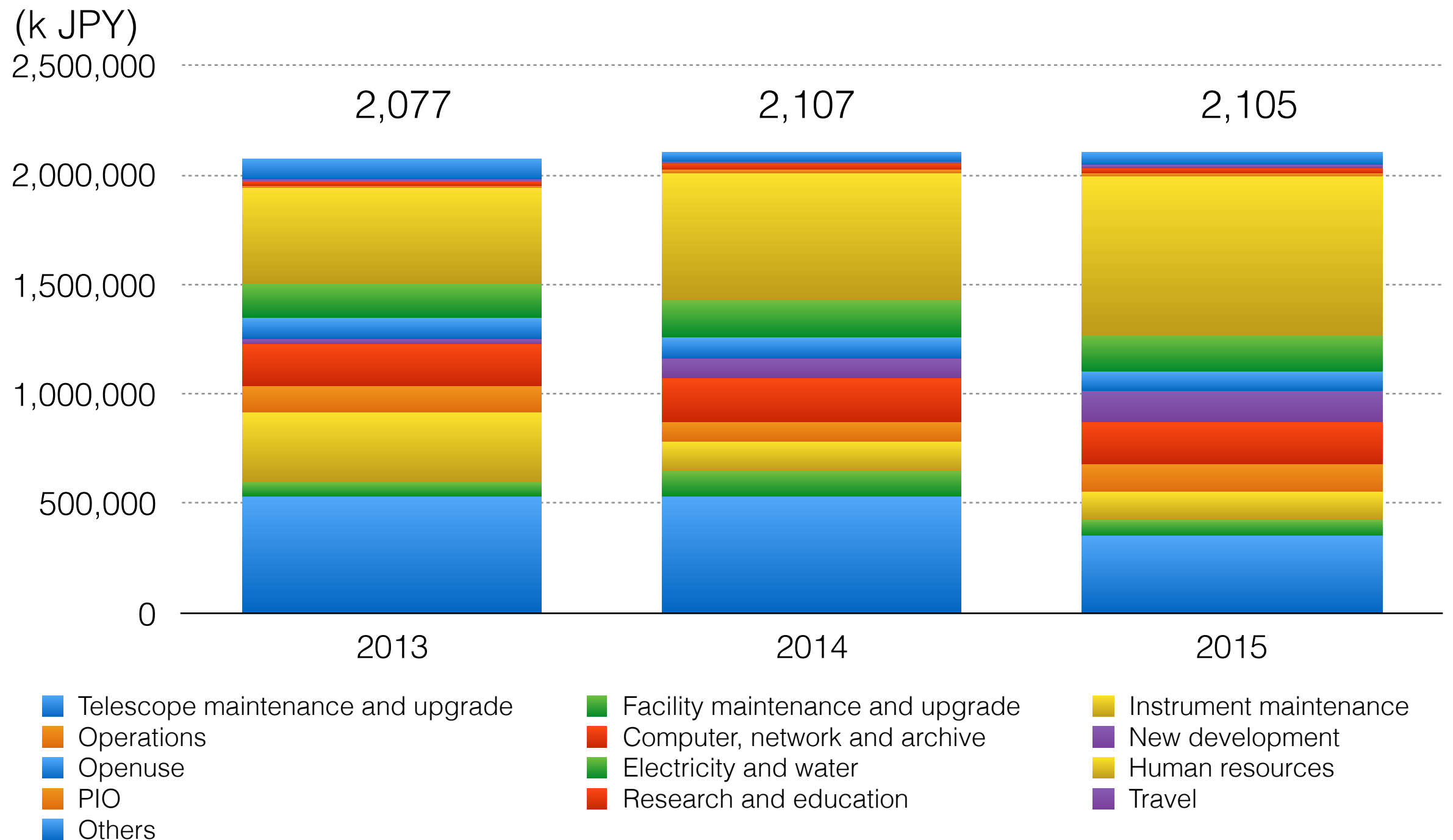
# Budget Status

# ‘Subaru Telescope Project’ budget allocation over years



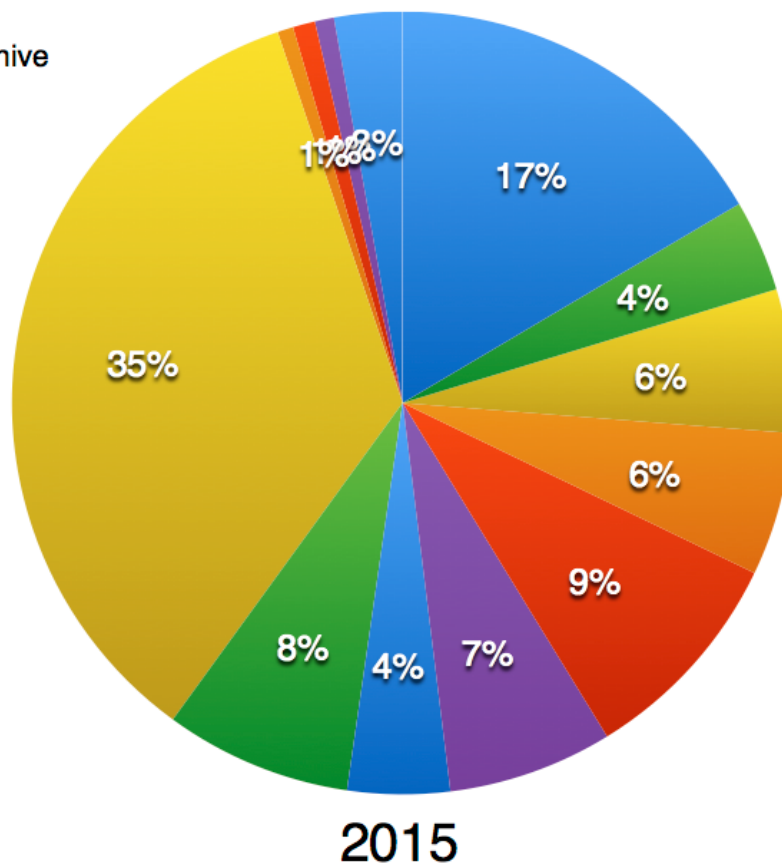
Budget allocated for Subaru Telescope project.  
From 2014 there are additional inputs from NAOJ.

# Budget 2013-2015

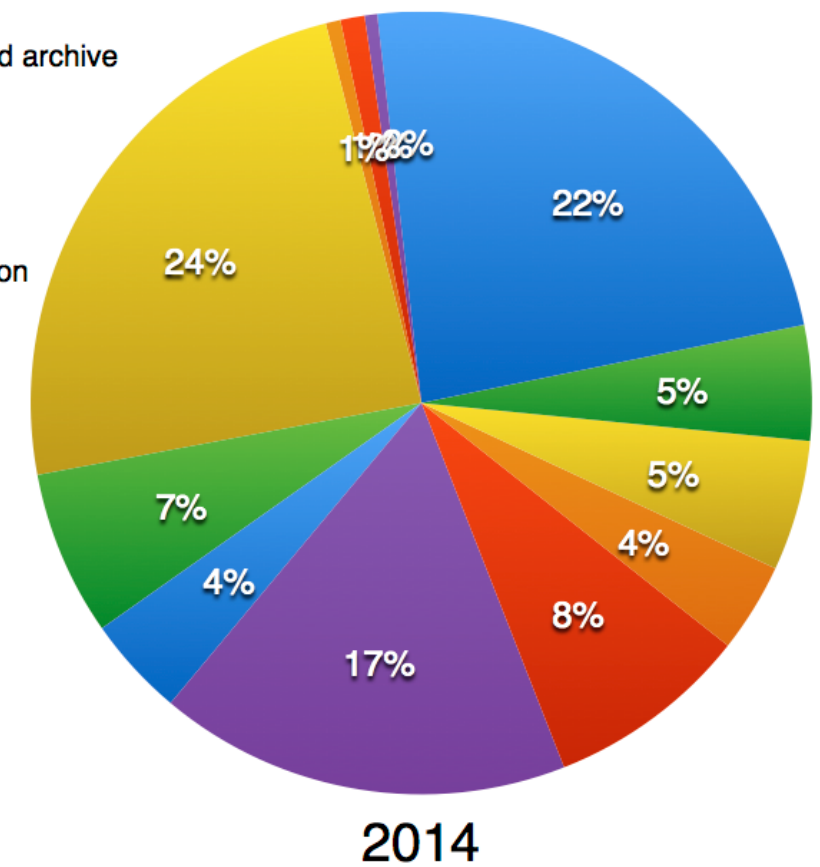


# Budget Pi-chart

- Telescope maintenance and upgrade
- Facility maintenance and upgrade
- Instrument maintenance
- Operations
- Computer, network and archive
- New development
- Openuse
- Electricity and water
- Human resources
- PIO
- Research and education
- Travel
- Others

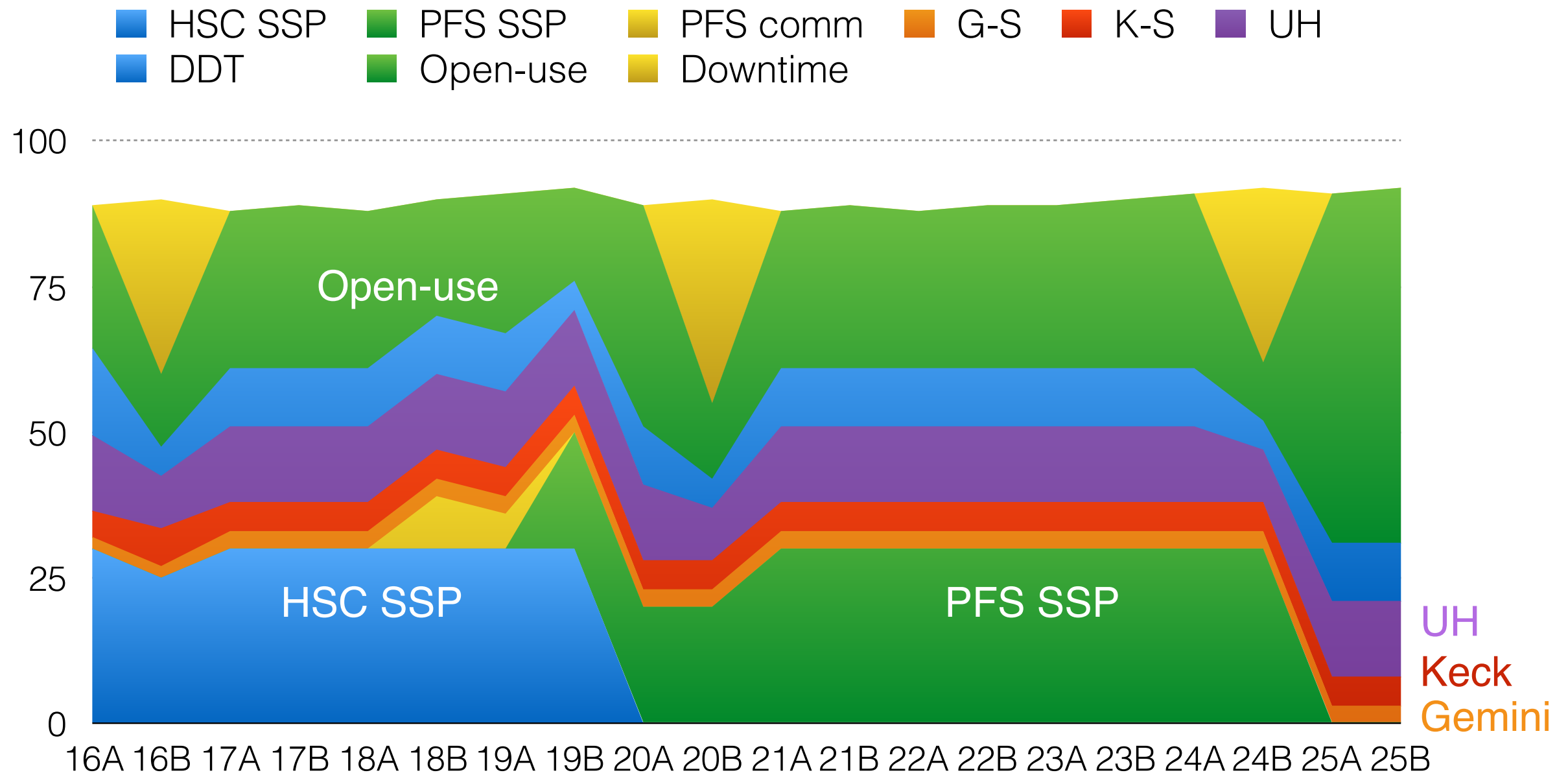


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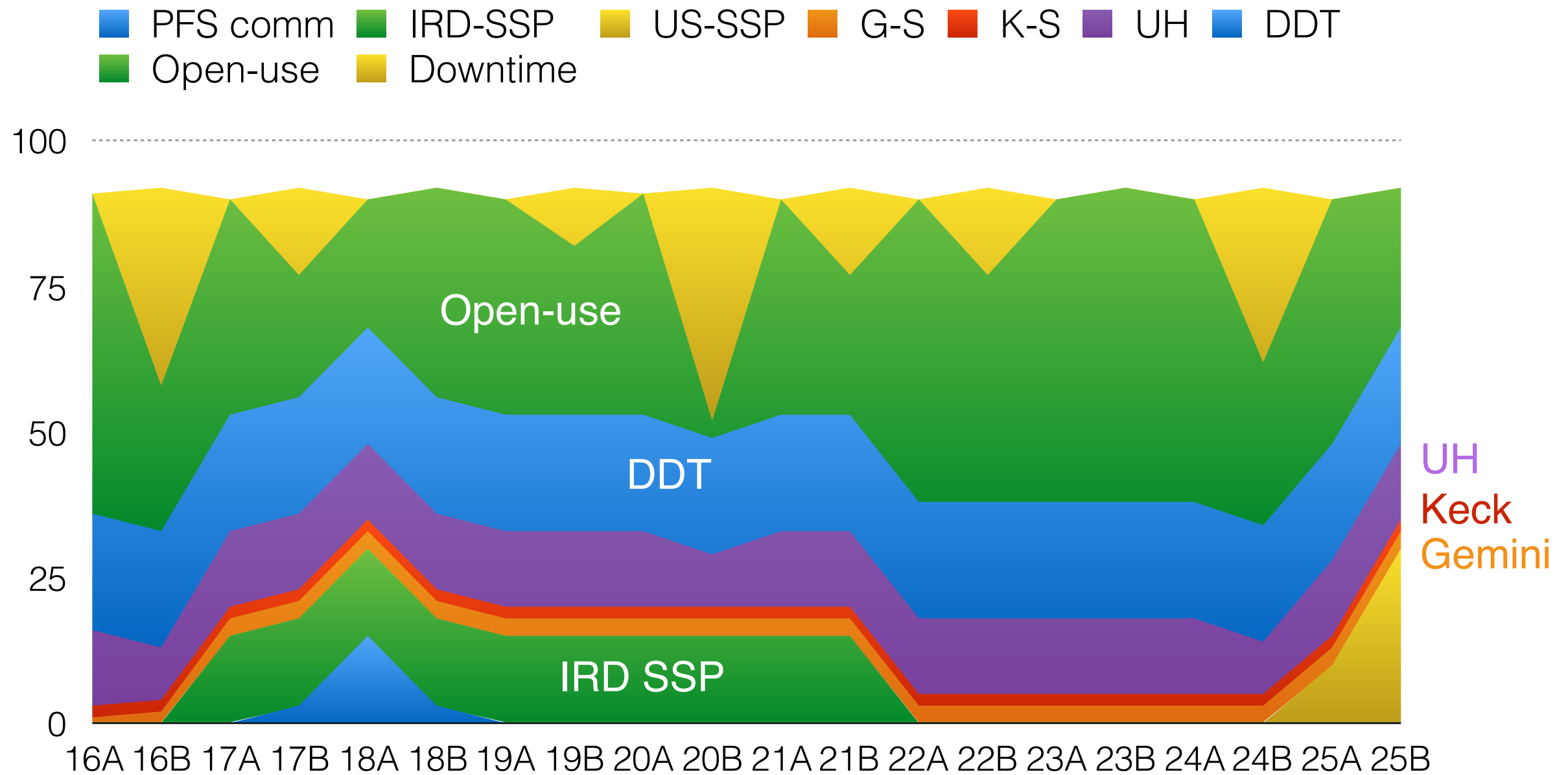
Telescope Time

# Dark Nights



Open-use: 12 - 40 nights / semester

# Bright Nights



Open-use: 3 - 50 nights / semester



Seeking for Partners

# Why partners, not just selling telescope time?

- Subaru should pursue the way to be scientifically most productive. Combining telescope time to organize competitive large surveys rather than splitting telescope time into segmented small programs could be more productive.
  - However, we should always keep in mind that having small but unique science programs is critically important to maintain diversity.
- Some partners are seeking for long-term, stable access and participation in decision making process. It could be also beneficial to have international agreements on partnership for coming years to secure funding from Japan.

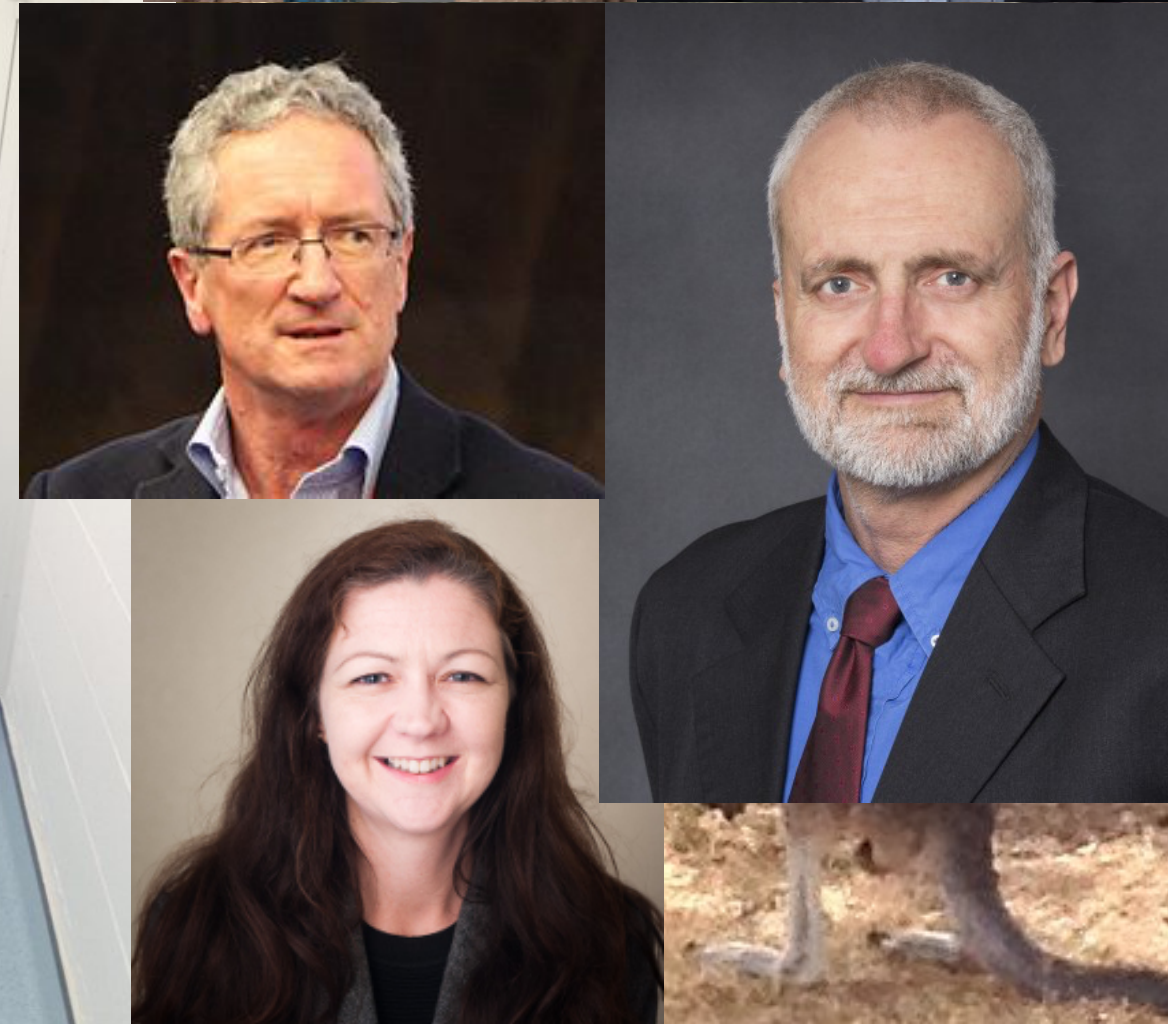
# East-Asian Countries

- See Arimoto-san's talk



# Australia

- Dec. 2015 Director Arimoto and ANU, USyd, AAL







# Australia

## from Mark McAuley, CEO of AAL (Astronomy Australia Limited)



NATIONAL COMMITTEE  
FOR ASTRONOMY

AUSTRALIAN  
ACADEMY OF SCIENCE | JULY 2015

- *Objectives of Australia's intention to have stable access to 8-10m class telescopes?*
- *Timescale of possible partnership: when do you want to start and how long do you want to keep the access?*
- **On behalf of the Australian astronomical community, AAL are seeking to secure a long-term, stable, scientific and technical engagement with a 8m-class telescope by the end of 2017.** The Australian astronomy decadal plan notes, “Securing long-term partnership at a level equivalent to 30% of an 8-metre class telescope is necessary to answer the most fundamental science questions, and is the most pressing unresolved issue for the Australian astronomical community.”
- **The Subaru Telescope is one of the world’s most scientifically productive observatories and many Australian astronomers have productive scientific relationships with astronomers in Japan.** AAL is therefore seeking to determine if the Subaru Telescope can assist Australia astronomers to access large optical telescopes. Please note, AAL currently has arrangements to access the Keck and Magellan telescopes; however, **we seek a deeper relationship that would include the opportunity to make technical contributions to an observatory, in addition to cash contributions towards observatory operations.**

## Australia in the era of global astronomy

The decadal plan for  
Australian astronomy  
2016–2025





# Australia

from Mark McAuley, CEO of AAL  
(Astronomy Australia Limited)

- *What are the advantages of Subaru Telescope among 8-10m class telescope from the viewpoint of astronomical community of Australia?*
- **The main advantages from the Australian perspective is Subaru's instrument suite, reliable operations, and high level of scientific productivity.**
- *Subaru Telescope is pushing itself into more survey-oriented operations. For Australian community, what kind of telescope use is ideal? We assume participation to the large surveys is expected by Australian community, but do you also want to secure telescope time for small-sized, individual programs with Subaru Telescope?*
- **We understand that Subaru intends to streamline operations, progressively decommission a number of the instruments and move to a focus on surveys. Already, perhaps half of Australian astronomers primarily use data from surveys, and **once PFS and ULTIMATE are commissioned would be happy to access Subaru in such a survey-optimised mode.****
- *Can you provide us approximate size of budget as a contribution to Subaru Telescope?*
- **We understand from your visit last December that Subaru are looking to cover a **~US\$3M** shortfall in your operations budget, in exchange for **~15% access** to the telescope. We would seek to secure the funds to meet this shortfall, to be contributed via a **combination of cash and technical deliverables.****





# Canada

- Collaboration in RAVEN and ULTIMATE-Subaru
- Iwata visited HIA and major universities in 2015-2016
- Arimoto and Iwata will participate CASCA2016, having joint Gemini-Subaru session





# Canada

## Long Range Plan Mid-Term Review 2015

- The MTRP (Mid-Term Review Committee) recommends that Canada's participation in Gemini continue to be supported beyond the end of the 2016-21 International Agreement. **The nature and level of that participation must be considered within the context of a coordinated plan for funding the operation of our ground-based facilities, together with any opportunities for broader access to the landscape of 8-10m optical/IR telescopes.**



# Timeline

- May 13: Division Chief Meeting
- May 24: Internal Symposium
- June 15 (JST): Community Meeting in Mitaka
- June - July: Discussion with NAOJ management
- July - August: Starting negotiations