

# Nobeyama plan for 2026

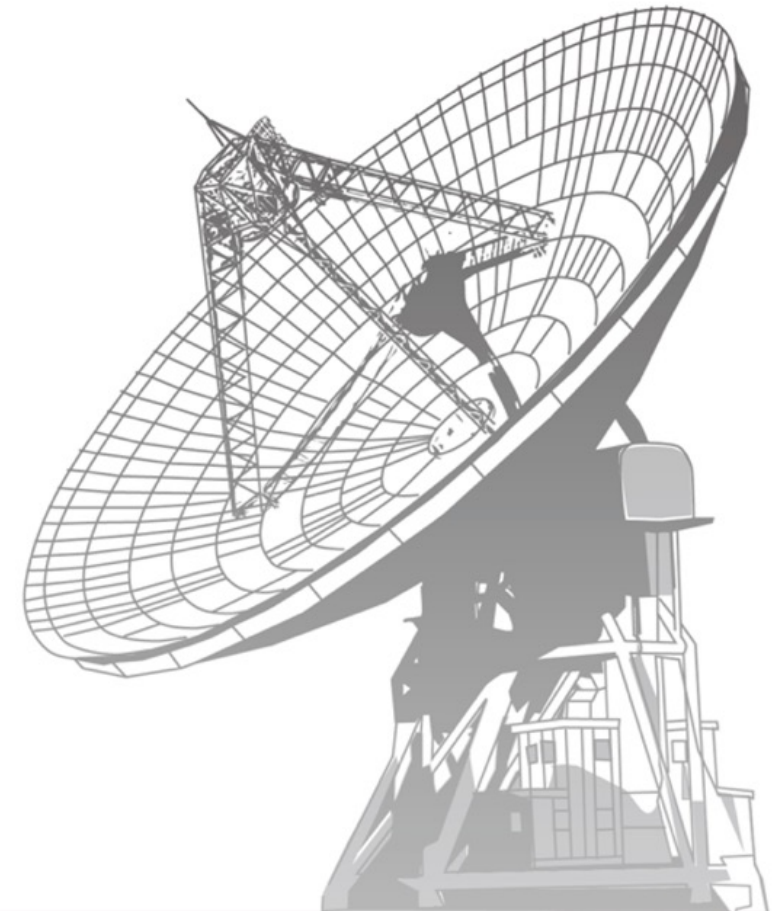


Nishimura, Atsushi  
(Nobeyama Radio Observatory)



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- This report:
  - 1. 2025 news
  - 2. Monetary situation
  - 3. 2026 plan



# 1.1. New members

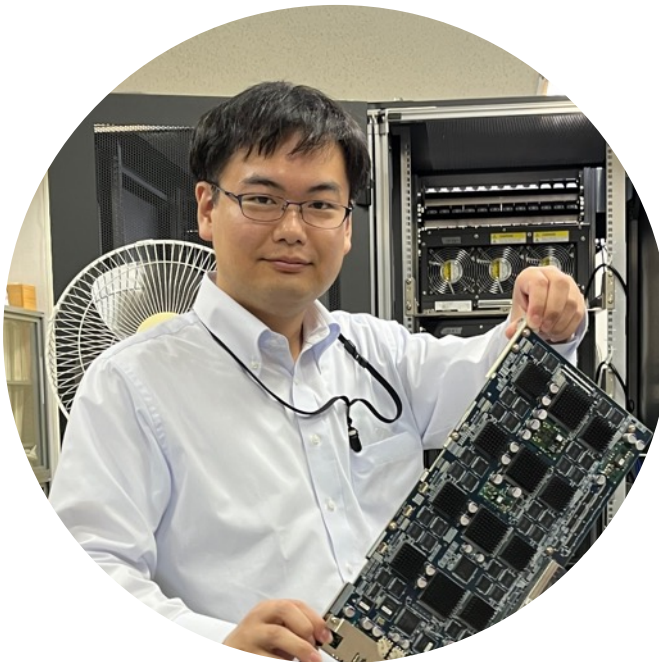
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**Atsushi  
Nishimura**  
Associate Prof.

Director  
Manager of science operation  
Manager of computers  
Manager of PR

**+5 engineers  
+5 admin staffs**



**Rin Yamada**  
Proj. Assistant Prof. 10/1-

Manager of CSV  
Science promotion



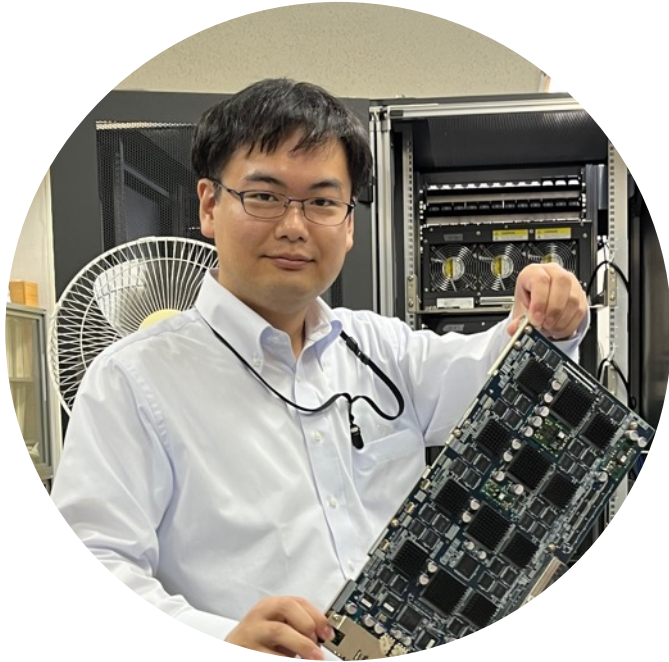
**Madoka  
Hoshimi**

Research Affiliate  
(特別客員研究員)  
4/1-



# Announcement (1)

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**Rin Yamada**

**Proj. Assistant Prof. 10/1-**

Manager of CSV  
Science promotion

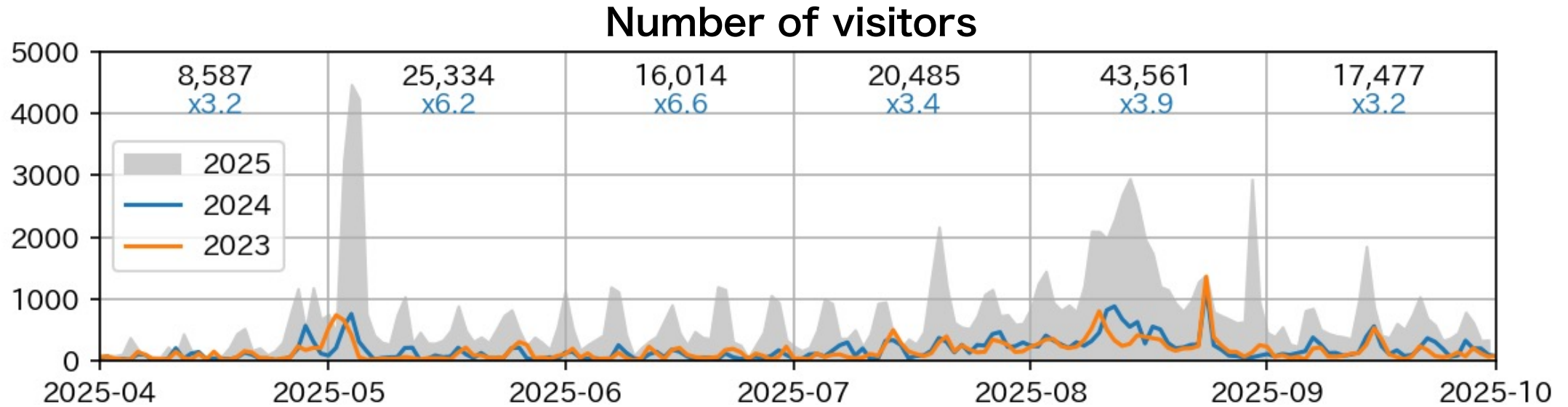
## Colloquium and/or Tutorial

- Aim: widen NRO45 users
- Target: anywhere
  - (Done) ASIAA
  - (Under coordination) UTokyo IoA, South Affrica, India
- Please let us know:
  - If you want us to hold (onsite/online)
  - If you have good examples of science demonstration
- Tutorial details:
  - Radio astronomy basics
  - How to plan proposals
  - How to prepare observations
  - How to analyze raw data
  - etc.



# 1.2. Animation movie effect

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x4.2 visitors for pilgrimage (聖地巡礼)



# 1.2. Animation movie effect

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## Tourism business

- Tours, merchandise sales
  - Under the cooperation between local government, new company named INTO-ARCS (CEO: Hiroyuki Kaneko) was founded. Part of their profit is paid to NRO.
- #Participants (FY2025)
  - Daytime tours: (short) 8536, (full) 2273
  - Mini-lectures: 2090
  - Night tours: ~250
- Good opportunity of science communication for staffs and also graduate/undergraduate students!

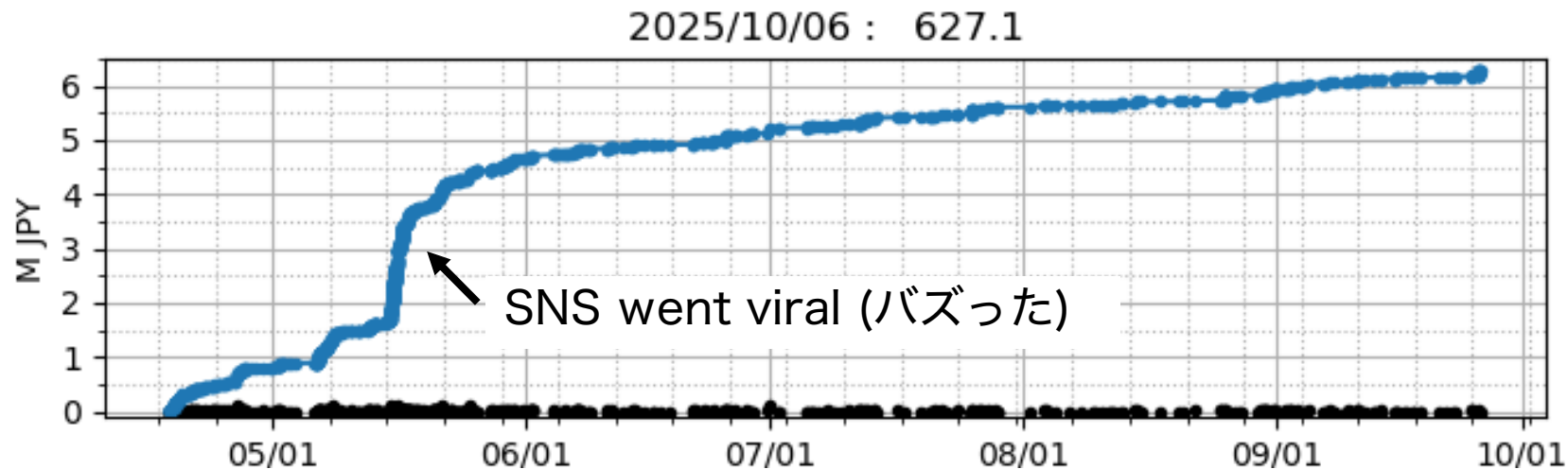




# 1.2. Animation movie effect

## Donation

- Nobeyama kikin started on 18 Apr.
  - Wide range of return gifts
  - After the 6 month, >6M JPY had been raised
  - (will be) used for PR, students support etc.



# 1.2. Animation movie effect

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## Road show (巡回展) 野辺山天文台展

- Started on 16 July
  - Supported by Nobeyama-kikin
  - NRO send following items:
  - Radio astronomy panels
  - Photospots, etc.
- 51 institutes, 252k participants
  - 2 more institutes are planned next year
  - 15 science museums,
  - 4 open observatories,
  - 4 planetariums,
  - 17 schools, etc.

## Report

- Animation effects will be reported in next ASJ meeting by Hoshimi-san



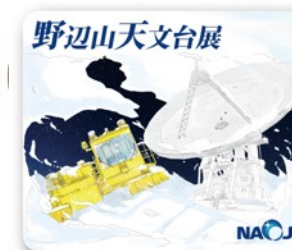
#1: 電波で宇宙を見る



#2: 野辺山天文台ってどんなところ?



#3: 野辺山天文台丸わかりマップ



#4: 45m望遠鏡のヒミツ



#5: 長年最前線で活躍できる理由



#6: 移動し組み合わせる望遠鏡



#7: 太陽を見る小さなアンテナたち



#8: 野辺山のアンテナが見えている宇宙



#9: こんな装置、本当にある? ない?



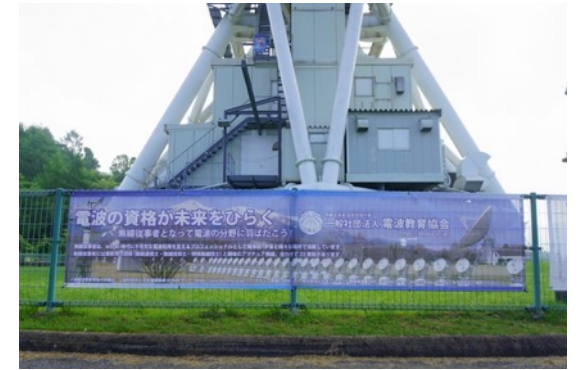
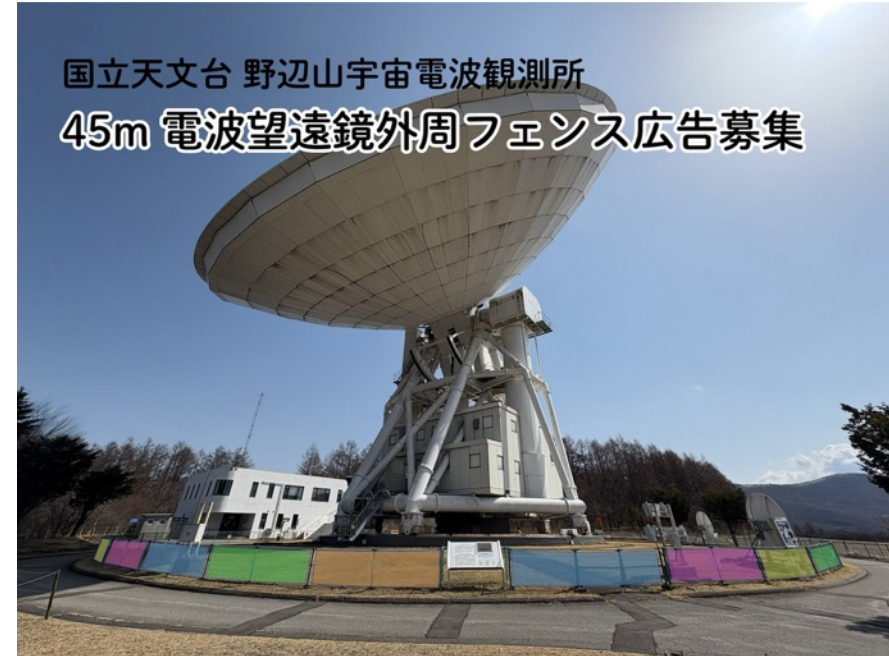
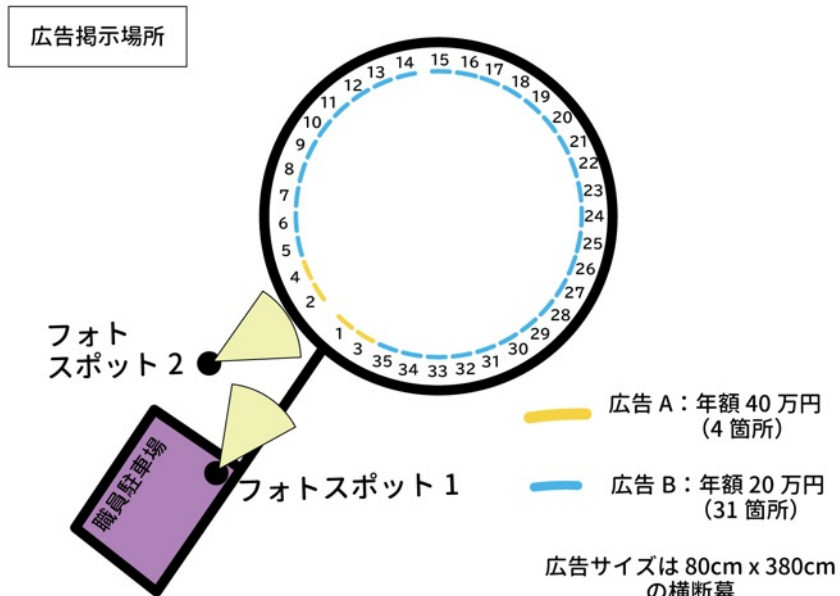


# 1.3. Others

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## Advertisements in campus

- Started on 11 April
  - Place ads around the antenna
  - 400k or 200k JPY/year
  - If all places are sold, income will be 7.8M JPY
  - This year, 2 places were sold

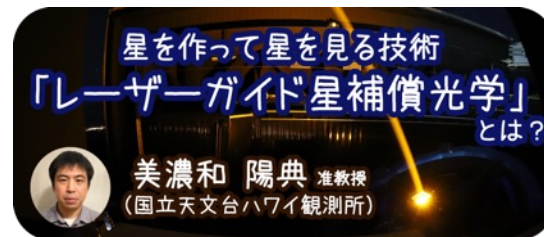
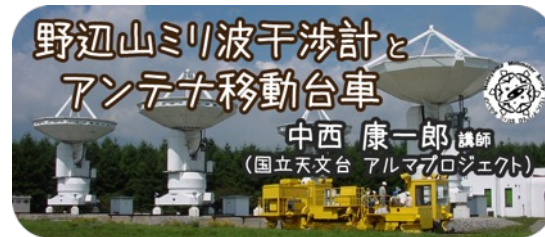


# 1.3. Others: Open day

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## Online

- 26 July, 2025
  - 6 lectures, 8 mini-lectures, 6 posters
  - 19 university lab posters
  - #visitors
    - Youtube: 14k, Niconico: 10k
    - Gather: ~300-400



## Onsite

- 30 Aug., 2025
  - 11 mini-lectures, 10 posters
  - 15 booths
  - #visitors: 2935





# 2. Monetary situation

Necessary cost			Income (FY2025)	
Total: 140M JPY				
Maintenance ~53M JPY	Antenna	30M	Unkokin (運営費交付金) ~100M Further pressure to reduce	
	Cooler	5M		
	Receiver	2.5M	Telescope charge ~20M More space to sale, especially to foreign institutes	
	Computer	10M		
Electricity ~30M JPY				
Others	Cleaning, Facility management	7M	Donation ~6M FY2025 spotlighted than never before, but it should be decreased FY2026.	
	Legal inspection (法定点検)	5M		
	Facility maintenance	5M		
	Weeding (除草), snow removal	3.3M	Tourism business ~2M Growing x2 every year over the past 4 years, but not expected to continue FY2026	
	Heating	3M		
	Open day	1M		
Repair of unexpected broken		10M	Ad ~0.4M Potential to grow up to ~8M	

## 2. Monetary situation: unexpected repair

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### Building heater replace ~50M JPY

- NRO uses boilers(ボイラー). Due to aging, we have to replace it. Considering current situation of short staffing, boiler engineer required by law is difficult to secure. Therefore, replacing heating system to air conditioners are only solution. However, by replacing it, we also have to replace ventilation and humidification system (換気加湿システム) which originally included in the boiler system. This is why it becomes expensive.

### 45m air conditioner replace ~6.6M JPY

- Due to aging, air conditioner in NRO45 is starting to fail more often. At this moment, it doesn't affect observation accuracy, while we have to replace it in near future.

### Leaking roof of Exhibition Bldg. (IB) ~7M JPY

- Interferometer Bldg. (IB) is now used as an exhibition room. Leaking of rain has been found and some rooms are unusable. We have to repair waterproof sheet on the roof.



# 3. Plan for 2026

## Main concerns

- Need more money

## How to realize...

- Increase sales of telescope time
  - Extend community
  - Improve user support
- Increase donation
  - Encourage community to increase their visibility for public

# 3. Plan for 2026

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## Increase sales

- Keep instruments competitive → development proposals working very well
- Stimulate and extend community
- NRO Colloquium and/or Tutorial
  - Please contact us!
- NRO support astronomers (SA)
  - We will start recruitment of researchers as cross appointment staff (effort ~5%)
  - Duty: user support of proposal preparation and observations, NRO promotion, etc.
  - SA will get research funding from NRO
- Refer-a-Friend (友達紹介) program (draft)  **Announcement (2)**
  - Target: Researcher who has never purchased NRO45 time. (including students)
  - Bonus: User who invite a friend will get 20% of telescope time of new user's purchase (up to 50 hours per 1 invitation). Bonus time can be carried over next seasons.



## Increase donation

- Visibility of NRO → improved very much in FY2025
- Visibility of individual astronomers



### Announcement (3)

- Cloud-funding-like donation for NRO observation projects (draft)
  - Idea:
    - NRO prepares donation platform (platform fee 15%; Keep-it-All style)
    - NRO calls for project creators (PCs) from the community
    - NRO calls for donation toward citizens through SNS and media
    - PCs prepare observation plan. The science merit should be understood by citizens. Back up plan when donation isn't fully raised as planned should be included.
    - PCs prepare rewards for donor (e.g., original goods, insert names to acknowledgement of the paper, join and look actual observations)
    - PCs can use funds raised for NRO45 observations, travel fee, and purchasing goods
  - Schedule (2026):
    - Call for PCs (15 June)
    - Deadline of call for PCs (1 July)
    - Online event (25 July)
    - Deadline of donation (28 July)

## Maser survey to renew the pointing catalog



### Announcement (4)

- Pointing catalog NRO provides to observers are old (observed 10 years ago)
- NRO is now planning renew it, but there is no manpower
- So, NRO would like to ask the community to help us
- Idea:
  - NRO call for contributors and organize a project team
  - NRO allocates internal telescope time for this project
  - Contributors conduct observations
  - Results (peak intensity of masers) will be summarized by NRO and shared to NRO users
  - Contributors have priority rights to use results to conduct their science research
  - If science conflict happen, team member should handle it with discussion



Please let us know your voice !

- Discord Nobeyama45 server
  - Invitation code: <https://discord.gg/HtkrmpK5Sw>
- User's Voice form
  - <https://forms.office.com/r/ivRXg1JZ7N>
- Mail to us
  - nro-45m-sciopoe@ml.nao.ac.jp

