Summary report of the GOPIRA Roadmap 2025

<u>Outline</u>

- Background of the GOPIRA Roadmap 2025
- Summary of previous activities in the committee
- Future timeline of the GOPIRA Roadmap 2025

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On behalf of the GOPIRA Roadmap 2025 creation committee roadmap25-comm@gopira.jp

What is GOPIRA?

Group of Optical and Infrared Astronomers (GOPIRA) established in 1980

The number of members: <u>355</u> (as of Nov. 2025)

 GOPIRA contributed to come true the Subaru telescope, and encouraged projects for optical and infrared astronomy

GOPIRA Future Planning Subcommittee

 established in 2021 and aims to discuss future plans (i.e., roadmap) of GOPIRA

 The previous subcommittee (Oct. 2021- Sep. 2023, chair: Masami Ouchi, vice-chair: Norio Narita) heard stories about how roadmaps in other research fields were developed, and intensively discussed how to develop a GOPIRA roadmap

 The framework of the GOPIRA roadmap was presented in the GOPIRA symposium 2023 (September 2023) and published to the GOPIRA members in the GOPIRA website

Purposes of the GOPIRA Roadmap

- 光赤天連で目指す大きな科学目標と計画を内外に示す
 - Demonstrate major scientific goals and plans of the GOPIRA to both internal and external stakeholders

- 光赤天連における多様な科学目標と計画を促し支援する
 - Encourage and support diverse scientific goals and plans within GOPIRA

Categories in the GOPIRA Roadmap

- 科学目標のもと、光赤天連に関係する計画について、以下の2つにま とめる
 - Under the scientific goals, summarize the plans related to GOPIRA into the following two categories
- 1. 光赤天連に大きな影響を与える大型計画(目安として約10億円以上の計画)で、優先順位を明示すべきもの
 - Big projects (total costs with 1 billion yen or more) with significant impact on GOPIRA that should explicitly demonstrate priority
- 2. 1.に当てはまらないあらゆる規模の計画で優先順位をつけないもの
 - Projects of any scale that do not fall under the previous category and do not require prioritization

Framework of the GOPIRA Roadmap

Frequency of creation: Approximately once every 3 years

- Individuals involved in the creation = members of the Roadmap creation committee
 - Internal members: GOPIRA Future Planning Subcommittee members (~10)
 - External members: experts considering balanced gender, ages, research fields (~10)
 - Observers (one representative each from NAOJ and JAXA/ISAS)

- 2023 Oct.-Dec.: Prepared the proposal format and the call for proposals
- 2023 Dec. 18: The call for proposals was issued
- 2024 Jan.-Feb.: Organized the GOPIRA Roadmap 2025 Creation Committee

Proposal of an astronomical projecter for the GOPIRA Roadmap 2025 投表 光赤天連ロードマップ 2025 掲載プロジェクト提案書

GOPIRA Roadmap 2025 Creation Committee Members

Future Planning Subcommittee members

- Akio Inoue (Waseda)
- Hidehiro Kaneda (Nagoya)
- Hajime Kawahara (JAXA/ISAS)
- Yusei Koyama (NAOJ)
- Mikio Kurita (Kyoto)
- Sigeyuki Sako (UTokyo/loA)
- Masahiro Takada (UTokyo/IPMU)
- Masaomi Tanaka (Tohoku: Vice-chair)
- Norio Narita (UTokyo/Komaba: Chair)
- Yuichi Harikane (UTokyo/ICRR)
- Yoshiki Matsuoka (Ehime)

External members

- Masanori Iye (NAOJ/Emeritus)
- Kiyoshi Ichimoto (Kyoto/Emeritus)
- Hideyo Kunieda (Nagoya/Emeritus)
- Chiaki Kobayashi (U. Hertfordshire)
- Nami Sakai (RIKEN)
- Takayuki Tomaru (NAOJ)
- Takao Nakagawa (JAXA/ISAS)
- Hideko Nomura (NAOJ)
- Michiko Fujii (UTokyo/Hongo)
- Tadahito Micutani (JAXA/ISAS)
- Fumi Yoshida (U. of Occupational and Environmental Health)

Observers (changed from April 2024)

Kentaro Motohara → Michitoshi Yoshida (NAOJ)

Toru Tamada → Noriko Yamasaki (JAXA/ISAS)

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- 2024 Feb. 29: The deadline of proposals
 - 8 big projects and 12 other projects were proposed
 - 8 big projects are as follows (alphabetical order):
 - GREX-PLUS
 - Habitable Worlds Observatory (HWO)
 - HiZ-GUNDAM
 - JASMINE
 - LAPYUTA
 - PRIMA
 - TMT
 - ULTIMATE-Subaru

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- 2024 April: Organized evaluation subcommittee for each big project
- 2024 April-June: Reviewing proposals, sending questions to the big projects
- 2024 July-August: Interviews of the big projects
- 2024 Sep. 2: Meeting for evaluation reports from each subcommittee and for discussing how to prioritize the big projects
- 2024 Sep. 19: Interim report at the GOPIRA Symposium 2024

What we have decided

- 大型計画の順位付けは行わない
 - The Committee will not "rank" the big projects (from 1st to 8th)
- 最優先(1つか2つ)の大型計画は何かを決める
 - The Committee will identify top priority big project(s) (1 or 2)
- 最優先とする判断基準は、予算規模が特に大きく、将来光赤天連コミュニティの多くの人が関わるかどうか
 - Judging criteria are whether (1) budget scale is especially big, and (2) many
 GOPIRA community members will be involved

What we have decided

- 以下の3プロジェクトを「最優先の候補」として絞り込んだ。
 - The committee identified the following 3 projects as "candidates of top priority projects" (alphabetical order)
 - GREX-PLUS
 - HWO
 - TMT
- 全ての大型計画に対して計画をより良くしてもらうためのフィードバックコメントを返す
 - The committee will send feedback to all the proposed big projects to be conductive to improve the projects

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- 2024 Dec. 27: GOPIRA Town meeting

What we have decided

- 最優先の候補のプロジェクトがまだ十分にコミュニティ(特に大学院生やポスドクなどの若手研究者)に周知されていないこと、コミュニティからの意見を広く伺う場が必要と考え、2024年12月27日にタウンミーティングを開催した
 - The committee held a town meeting on Dec 27, 2024 to inform the details of the candidates of top priority projects to the GOPIRA community (especially young researchers such as graduate students and postdocs) and to hear various opinions from the community
 - ~100 GOPIRA members participated (in person / online)
- 全ての最優先候補プロジェクトの代表者に、2025年1-3月に行うロードマップ 作成委員会の集中的議論にメンバーとして加わってもらうこととした
 - The committee will add all the representatives of the candidates of top priority projects as committee members for upcoming intensive discussions in Jan.-Mar., 2025

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- 2025 Jan.-Mar.: Intensive discussions (4 Roadmap committee meetings)

Results of the discussions

- We discussed the matter thoroughly until a consensus of the 26 committee members was reached
- The Role of the Roadmap
 - GOPIRA will strongly support the promotion of all proposed plans
 - Regarding accountability, GOPIRA cannot be held responsible for all aspects, such as budget, positions, and the down-selection of missions
 - GOPIRA intends for this roadmap to clearly demonstrate a strong commitment to how future plans will be advanced
 - While there is a possibility that the roadmap may not be followed exactly, this document represents the best estimate of the future vision at the present time
 - Note that the roadmap is subject to revision every three years, and necessary amendments will be made as circumstances change

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- 2025 Sep.: GOPIRA general meeting
- 2025 Oct.: Resumed the process (2 Roadmap committee meetings)
- 2025 Nov.: Presented outcomes of the Roadmap committee meetings at the GOPIRA symposium 2026, and reached a consensus

The outcomes of the discussions 1

- TMTが光赤天連の最優先計画であるという位置付けを維持し、コミュニティ団体として実施機関である国立天文台を全力で支援することを継続する
 - ただし、スケジュールの遅延を注視し、次期以降の将来計画検討専門委員会によるロードマップの改訂時に再度の確認と判断を行う

- GOPIRA will maintain TMT's position as the top priority project of the GOPIRA community and continue to fully support NAOJ as the implementing organization
 - However, we will closely monitor the schedule delays, and conduct a confirmation and reassessment during the revision of the roadmap by the next and subsequent Future Planning Subcommittee

The outcomes of the discussions 2

- ここでいう「TMT」はサイト(ハワイかラパルマか)によらない
 - ハワイが今も優先であることは変わらないが、代替地であるラパルマで進む可能性もある
 - 今回のロードマップではサイトを最優先の条件にはしない
 - ラパルマで進めるということになる前には、TMTプロジェクト室(国立天文台)から 日本のコミュニティ(光赤天連)に説明と確認を取っていただく
- The conclusion is regardless of the construction site of TMT (either Hawaii or La Palma)
 - Hawaii is still preferred, but the project may proceed at the alternative site,
 La Palma
 - The construction site is not the top priority criterion in this roadmap
 - Prior to moving forward with La Palma, if it happens, GOPIRA will ask
 NAOJ to explain the situation to GOPIRA and obtain our confirmation

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- 2025 Nov.: Prepared executive summary of the GOPIRA Roadmap 2025 and solicited public comments

Future Timeline and Planned Activities

- 2025 Dec.: Receive public comments and revised proposals
- 2026 Jan. February: Implementing public comments, editing the Roadmap (by a designer), and final confirmation by the Roadmap 2025 creation committee
- 2026 Mar.: Publish the GOPIRA Roadmap 2025 online, and announce it at the GOPIRA general meeting