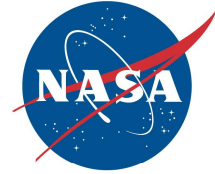


National Aeronautics and Space Administration

**Mary W. Jackson NASA Headquarters**  
Washington, DC 20546-0001



April 11, 2023

Reply to Attn of: Astrophysics Division

**Dear Colleague Letter to Solicit Nominations for participation in the  
Great Observatory Maturation Program (GOMAP)  
Science, Technology, Architecture Review Team (START)  
for the Habitable Worlds Observatory (HWO) Mission**

Dear Colleague,

NASA is soliciting self-nominations from interested individuals to participate as members of the Science, Technology, Architecture Review Team (START) for the Habitable Worlds Observatory (HWO).

**Background:**

The 2020 Decadal Survey on Astronomy and Astrophysics (hereafter [Astro2020](#)) recommended (p. S-2, Table S-5, and p. 7-11) a “Great Observatories Mission and Technology Maturation Program” as its highest priority in *Enabling Programs for Space*. Astro2020 further recommended (p. S-2, Table S-5, and p. 7-17) that the first mission to enter the maturation program be an infrared-optical-ultraviolet (IR/O/UV) space telescope.

In response to these recommendations, NASA has established the Great Observatory Maturation Program (GOMAP). Consistent with the guidance from Astro2020, the first entrant into GOMAP will be the Habitable Worlds Observatory, a space-based IR/O/UV telescope. As part of GOMAP, NASA will form and coordinate a series of groups whose collective activities will perform and document analyses that advance HWO's concept maturity. These analyses will inform a future pre-phase A project's decisions on HWO science, technology, and architecture trades. One of the groups being formed is the START.

The START will translate the Astro2020 science objectives and goals into quantified observational capabilities for HWO. Specifically, the START will:

- analyze Astro2020 and identify the science goals and objectives relevant to HWO;
- describe the kinds of science observations needed to realize those objectives;
- identify observatory/instrument performance capabilities to enable those observations;
- quantify relationships - including breakpoints (i.e., scientific cliffs vs. graceful degradations) - between potential instrument/observatory parameters and performance against goals and objectives;
- project the performance of strawman architecture and instrument options; and
- for each science objective, assess the fidelity of models needed to execute future trades.

The START will do this in the context of findings from prior reports for exoplanet and general astrophysics missions, mission concepts, as well as work by current technology roadmapping groups, industry studies, and potential future groups as needed.

For further information on prior reports, general information on parallel activities by other relevant groups, the

START's relationship to them, additional START context and activities, please see the co-released HWO START Terms of Reference. The START will incorporate information from Astro2020, these and other sources as part of its considerations for HWO. This Dear Colleague Letter, the Terms of Reference, and other supporting information and documentation can be found on the NASA Astrophysics GOMAP webpage: <https://science.nasa.gov/astrophysics/programs/gomap>

The START will document its analyses in a final report delivered to NASA.

**Inclusion, Diversity, Equity, and Accessibility (IDEA):**

Astro2020 provided State of the Profession and Societal Impacts (SoPSI) recommendations. Consistent with those recommendations, and recognizing the scale of HWO as a multi-generational flagship mission, NASA plans to establish a GOMAP SoPSI working group that will create a plan for incorporating Astro2020 SoPSI recommendations in a manner consistent with NASA Science Mission Directorate strategic priorities for IDEA. At a minimum, and subject to the guidance of that working group, the START will include a mentorship program that will provide career development, immersion, and networking opportunities for future HWO experts. That program will be defined once selections are made. Successful START applicants will act as mentors, as outlined below.

**Team Membership:**

NASA is seeking a diversity of expertise in the following areas: astrophysics, exoplanets, solar system science, science instrumentation, observatory design and development. Scientists, engineers, and technologists from research and academic institutions, industry, science centers, NASA centers, government laboratories, and FFRDCs are eligible to self-nominate. Community members past their terminal degree in their career path are eligible to be on the START and are encouraged to apply. Two co-chairs for the START will be selected. To be considered for a co-chair role, applicants should indicate their interest in their cover letter.

**Self-Nomination Process, Expectations, and Support:**

Self-nominations to be considered for participation as a member or co-chair of the START are due to NASA no later than June 5, 2023, 11:59PM (EST). Self-nominations should be submitted via email to the GOMAP Program Executive, Julie Crooke ([Julie.A.Crooke@nasa.gov](mailto:Julie.A.Crooke@nasa.gov)) with "HWO START Self-Nomination" as the email subject line. Self-nominations should consist of a cover letter and a resume. The resume should be a maximum of two pages, including relevant activities and publications. The cover letter (maximum two pages) should include:

1. Interest in being a member or co-chair
2. Expertise, capabilities, and experience that the submitter would bring to the START
3. Intended contributions and available level of effort to START activities. At a minimum, START members are expected to attend/participate in quarterly hybrid meetings (preferably in-person), more frequent remote meetings on a TBD cadence, and contribute to the final report. Additionally, START analyses and assessments may be performed by START members and/or their immediate colleagues/team members.
4. Commitment to incorporating NASA's core values of IDEA as a member or co-Chair
5. Commitment to act in a manner consistent with the NASA Astrophysics Division's Statement of Principles.
6. Interest, ability, availability, and experience to mentor an early career individual

START members will have their travel expenses to meetings covered, and recognized with honoraria for their participation in meetings, contributions to the final report, and any analyses the START asks them to conduct between meetings.

Self-nominating does not commit the submitter to serve on the START and does not prevent the submitter from

submitting responses to any NASA solicitations.

Self-nominations to be a member are solicited from “U.S. persons” defined as U.S. citizens or U.S. legal permanent resident individuals at U.S.-based research and academic institutions, NASA centers, science centers, government laboratories, industry, FFRDCs, and from private individuals.

**Selection Process, Timeline, and Virtual Town Hall:**

Selections will be based on the relevance of the expertise of individual candidates to START activities, and the diversity of backgrounds and expertise across the team needed for successful delivery of the START's products. The START will have approximately 15-20 members.

START activities will begin in Summer 2023. START Co-chairs and members will report to the GOMAP HWO Program Scientist, Shawn Domagal-Goldman ([Shawn.Goldman@nasa.gov](mailto:Shawn.Goldman@nasa.gov)). The duration of the HWO START activities is anticipated to last ~18-36 months. START membership may be adjusted over time depending on programmatic needs and individual circumstances. If new members are needed, a new call will be released.

NASA will host a Virtual Town Hall [Click here to join the meeting](#) Friday, May 5, 2023, 11:30 AM - 12:30 PM (EST), ~ 3 weeks after the release of this DCL to answer questions from the community. Please check the GOMAP website for additional information.

Questions may be addressed to Julie Crooke ([Julie.A.Crooke@nasa.gov](mailto:Julie.A.Crooke@nasa.gov))

**Mark Clampin** Digitally signed by Mark Clampin  
Date: 2023.04.11 08:54:43 -04'00'

---

Dr. Mark Clampin  
Astrophysics Division Director, NASA Headquarters