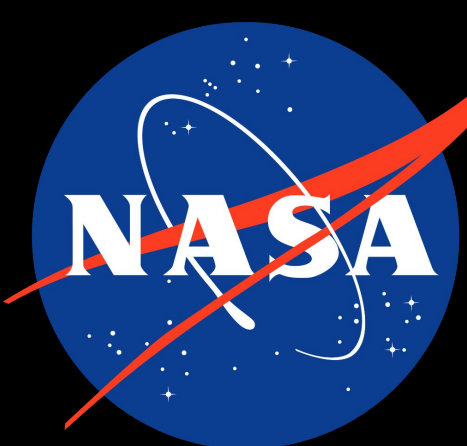




Summarizing the Technology of the Habitable Worlds Observatory (HWO) for the Enrichment of the Public

HABITABLE
WORLDS
OBSERVATORY

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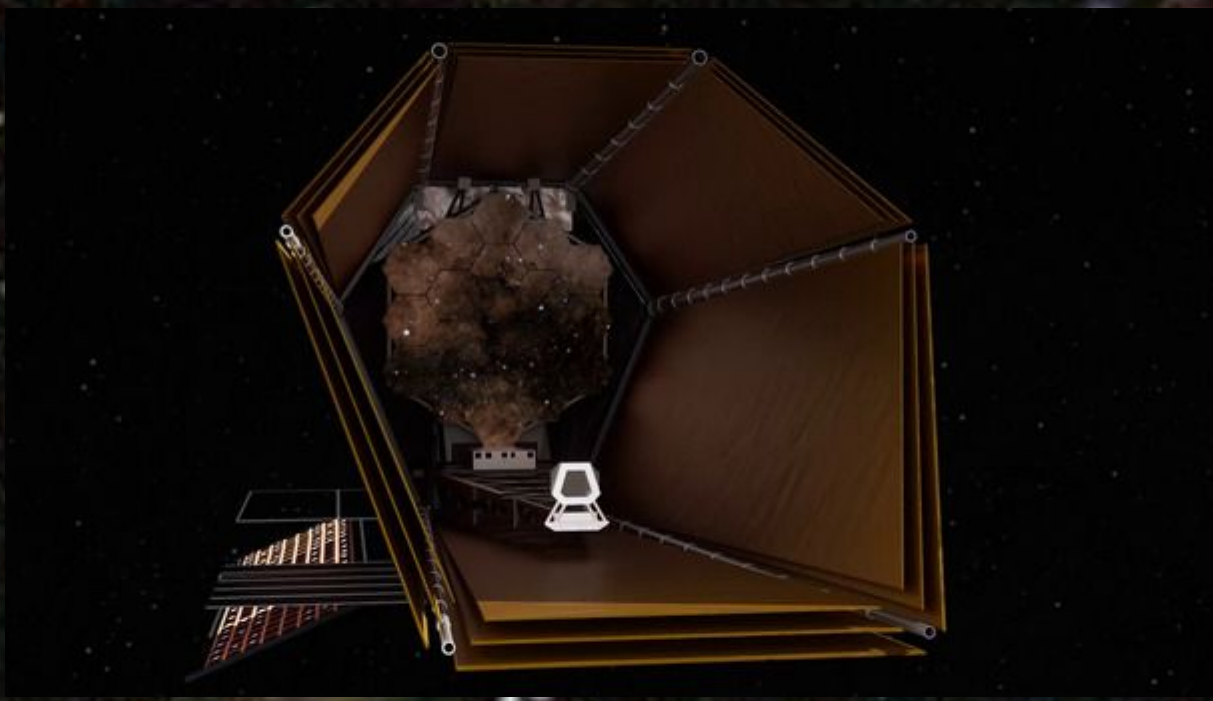
College Park Scholars Academic Showcase, May 1, 2026



Introduction:

The Habitable Worlds Observatory (HWO) is NASA's next-generation flagship space telescope, designed to directly image Earth-like exoplanets and answer major questions about the universe. However, the complexity of its engineering and science makes it difficult for the general public to understand.

This practicum focused on translating highly technical concepts into clear, engaging science communication. The goal was to make HWO's technologies, challenges, and scientific importance accessible to non-expert audiences while maintaining accuracy.



Activities:

During this practicum, I focused on creating accessible science communication content for a general audience. My work included:

- Researching HWO technologies using scientific literature and NASA resources
- Conducting interviews with NASA scientists and engineers to clarify complex topics
- Writing and revising "Science and Engineering Bites," short articles explaining key concepts
- Collaborating with mentors and peers to improve clarity and accuracy
- Designing content for an interactive "HWO Breakdown" tool for the NASA website

Impact:

This project contributes to making NASA science more accessible to the public by:

- Creating educational content that explains advanced space technologies
- Supporting outreach efforts for a major future NASA mission
- Helping audiences understand the importance of exoplanet research and space exploration

The materials developed may be published on the official NASA HWO website, reaching a broad audience.

Site Information:

NASA Goddard Space Flight Center / NASA Headquarters

- **Supervisors:**
Julie Crooke, Natasha Latouf
- **Site Mission:**
NASA's mission is to advance scientific knowledge, explore space, and share discoveries with the public.
- **Project Goal:**
To develop public-facing science communication materials that explain the technologies and purpose of the Habitable Worlds Observatory.

Issues Confronting the Site:

One of the main challenges in this project was bridging the gap between highly technical scientific research and public understanding.

- HWO involves complex engineering concepts (e.g., coronagraphs, wavelength ranges, ultra-stability)
- Public audiences often lack background knowledge in astrophysics or engineering
- Communicating accurately while keeping content engaging and simple requires careful balance



Future Work:

The project will continue to evolve alongside the HWO mission.

- The interactive HWO Breakdown tool will be updated as the mission develops
- Additional Science Bites may be created on new technologies or deeper topics
- Future work could include multimedia formats such as videos or interactive visuals

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