

---

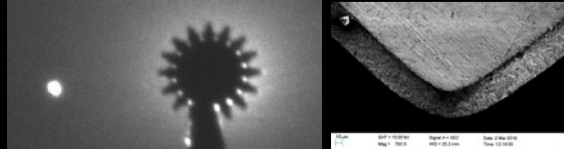
# Starshade Technology Gaps

**Brendan Crill**  
ExEP Deputy Program Chief Technologist  
Jet Propulsion Laboratory, California Institute of Technology

**Towards Starlight Suppression for the Habitable Worlds  
Observatory Workshop  
August 9, 2023**

# Starshade Technology Gaps

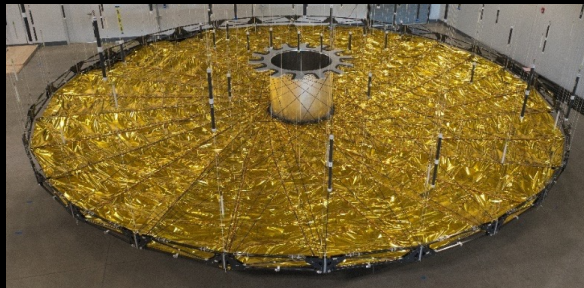
## Starlight Suppression and Model Validation



Suppressing scattered light off petal edges from off-axis Sunlight

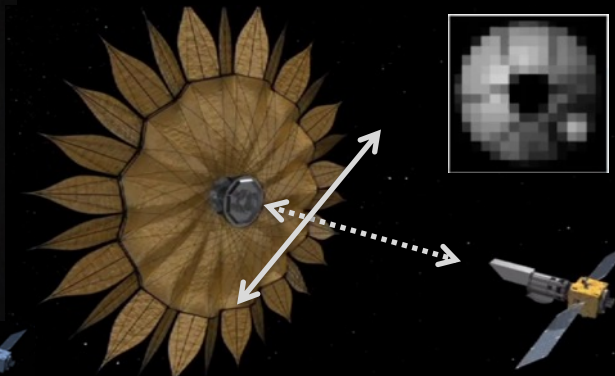
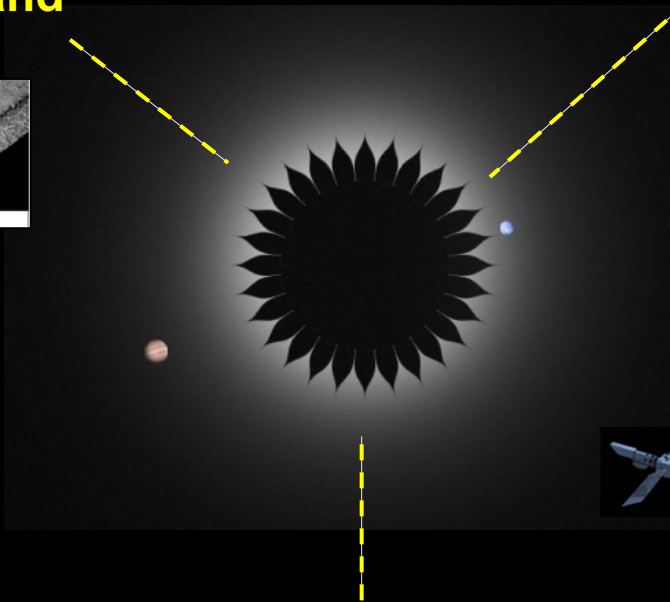


Suppressing diffracted light from on-axis starlight



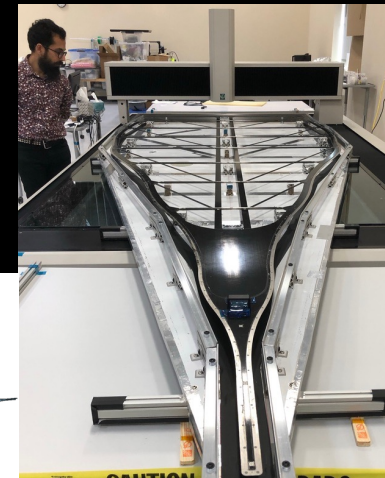
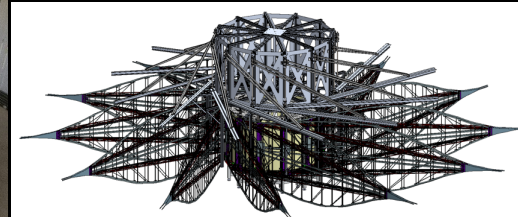
Positioning the petals to high accuracy, blocking on-axis starlight, maintaining overall shape on a highly stable structure

## Formation Sensing



Sensing the lateral offset

## Deployment Accuracy and Shape Stability



Fabricating the petals to high accuracy