

# **The Transiting Dust of Boyajian's Star**

**Eva H. L. Bodman**

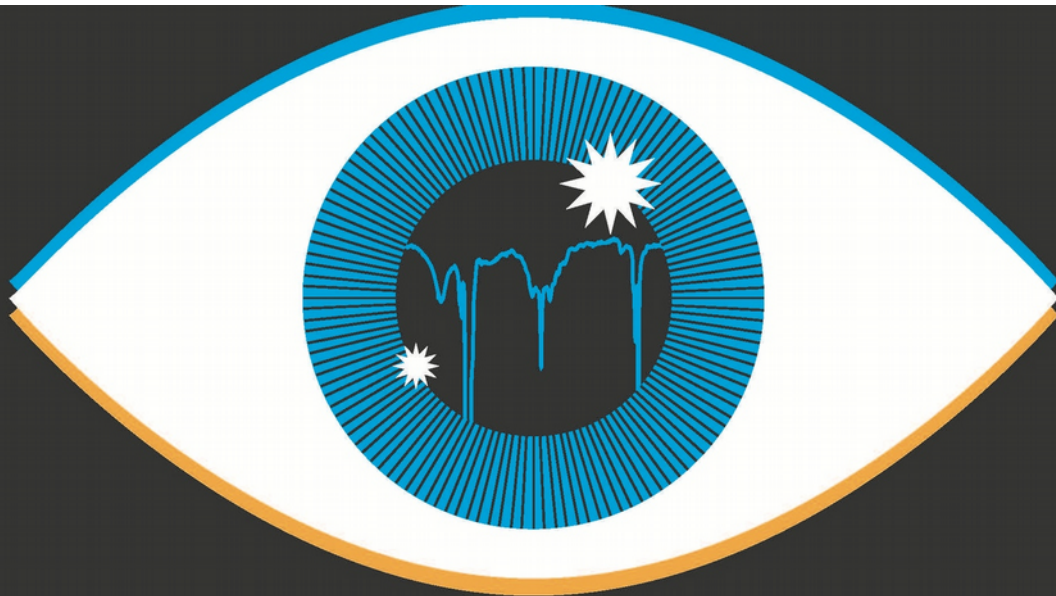
**NASA Postdoctoral Program Fellow in NExSS**

**Arizona State University**

Jason Wright (Penn. State Univ.) and Tabetha Boyajian (Louisiana State Univ.)

Contact email: [ebodman1@asu.edu](mailto:ebodman1@asu.edu)

# LCOGT Data supported by Kickerstarter Backers



WHERE'S THE FLUX?

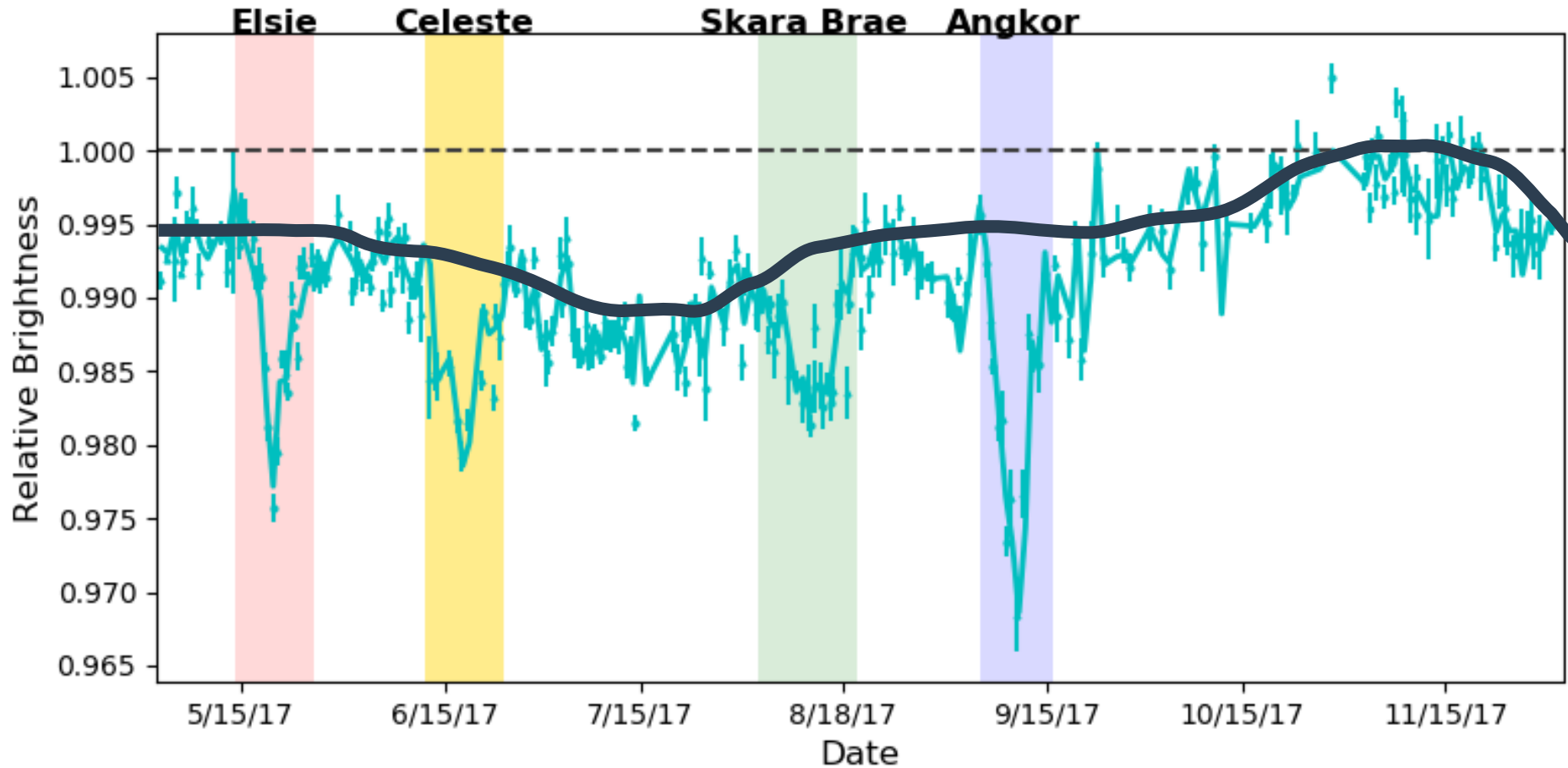
LCO Las Cumbres Observatory  
MANY EYES - ONE VISION



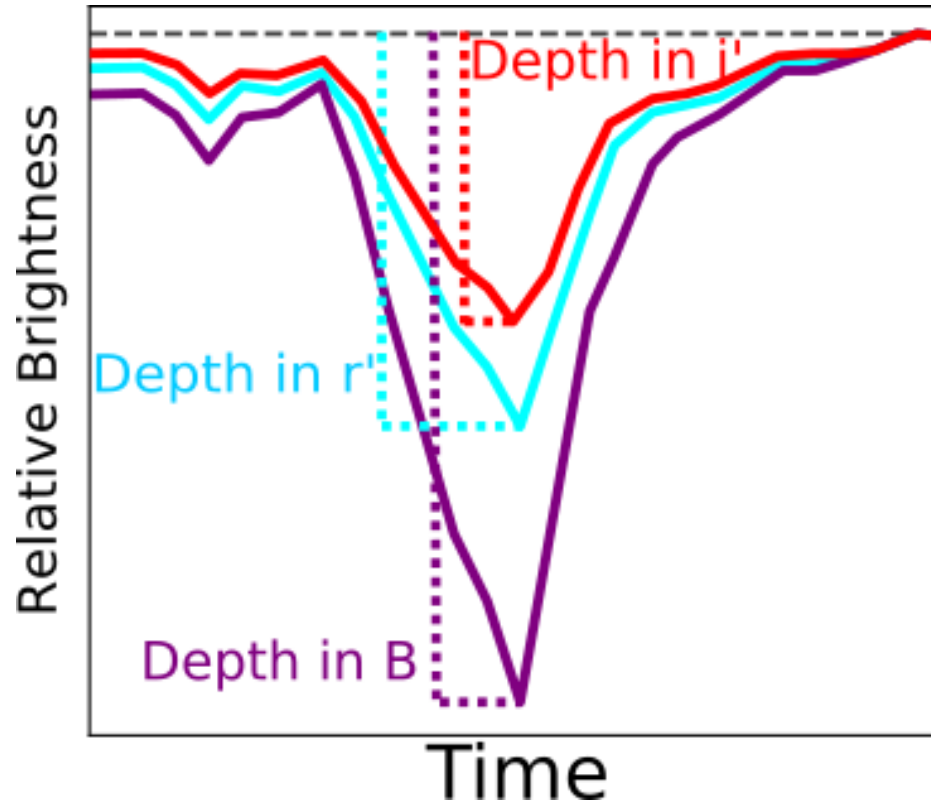
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Thank you!

# The Dips

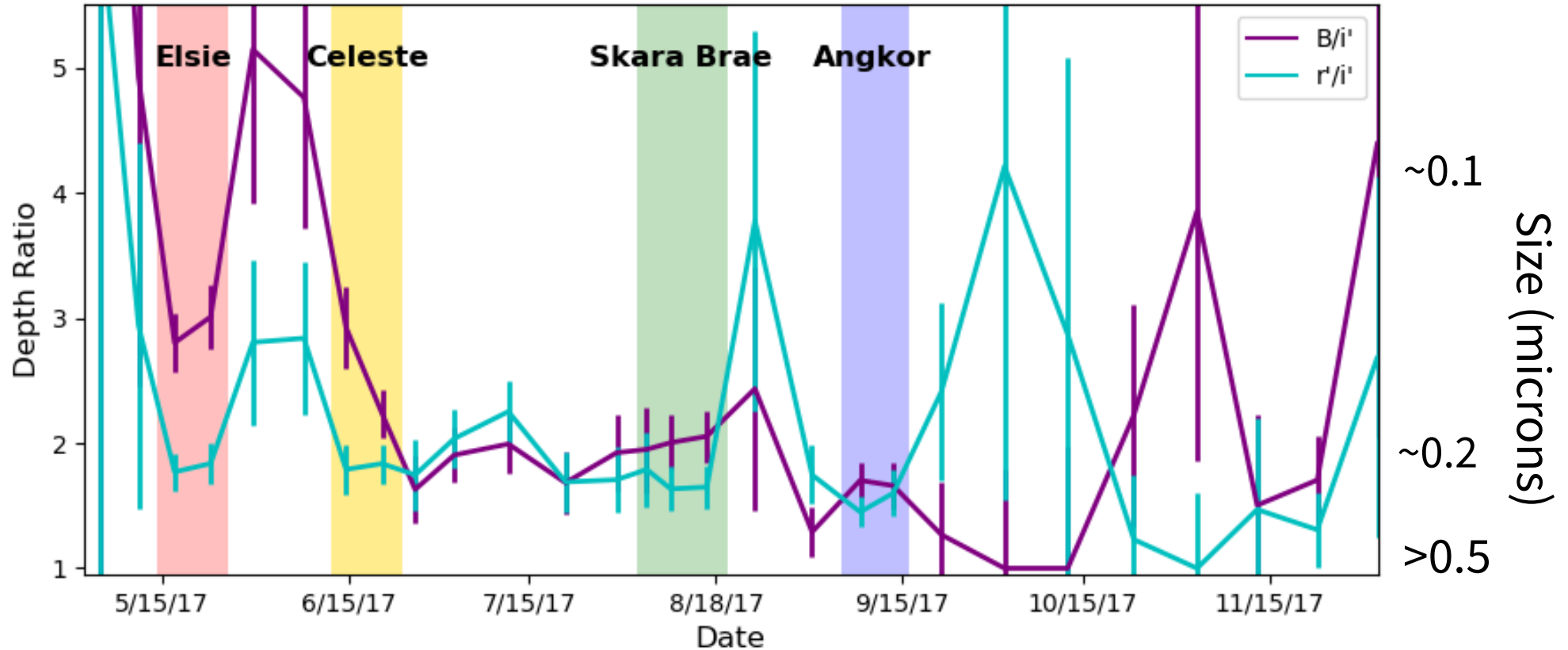


# The 'Color' of the dips



- We measure the ratio of the depth in blue (B) and the depth in red ( $r'$ ) to the depth in the near-infrared ( $i'$ )
- This ratio depends on the size and composition of dust

# Color of the Elsie Dip Family



# What the Color means for Dust

- **The Dust Cloud is Extremely Complex**
  - Different kinds of dust are causing the dips than the secular dimming
  - Each dip is a different kind of dust
  - The secular dimming also is caused by dust of various sizes
- **Dust in the cloud is varying spatially, not in time**
- **All the different kinds of dust are also consistent with ISM dust**
  - ISM dust also comes in many kinds

## What We Know

- The structure of the dust cloud is extremely complex
  - Some variation in the dust is produced
- Small Grain Size
  - Must be newly created

## What We Don't Know

- Composition of the dust
- How the dust is being produced

## **Summary:**

**The dust cloud obscuring Boyajian's Star is very complex and made up of multiple kinds of dust.**

**Contact: [ebodman1@asu.edu](mailto:ebodman1@asu.edu)**