



Observing The Universe As It Passes By



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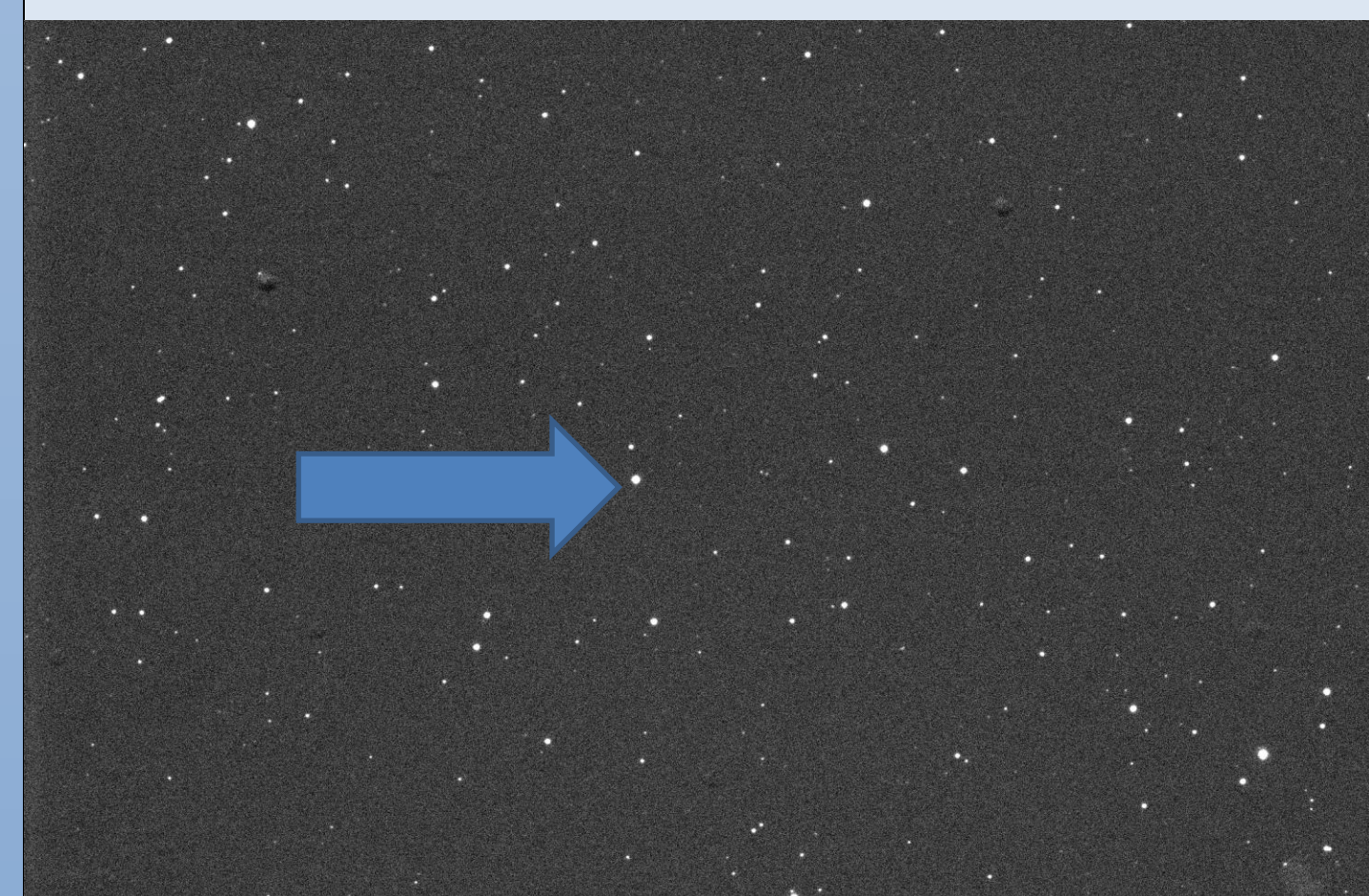
Scholars Program: Science, Discovery, and the Universe
Major: Math and Physics

Introduction

Ever since I was a kid, I have dreamed of exploring the universe. However, after I found out the events of Star Trek were considered “science fiction”, I realized I would need to find another way. Astronomy was the obvious choice as it allows me to explore the universe without advanced sci-fi technology. I used the Capstone project as an outlet for my passion for exploration. I worked with the UMD Observatory to observe and analyze an exoplanet transit.

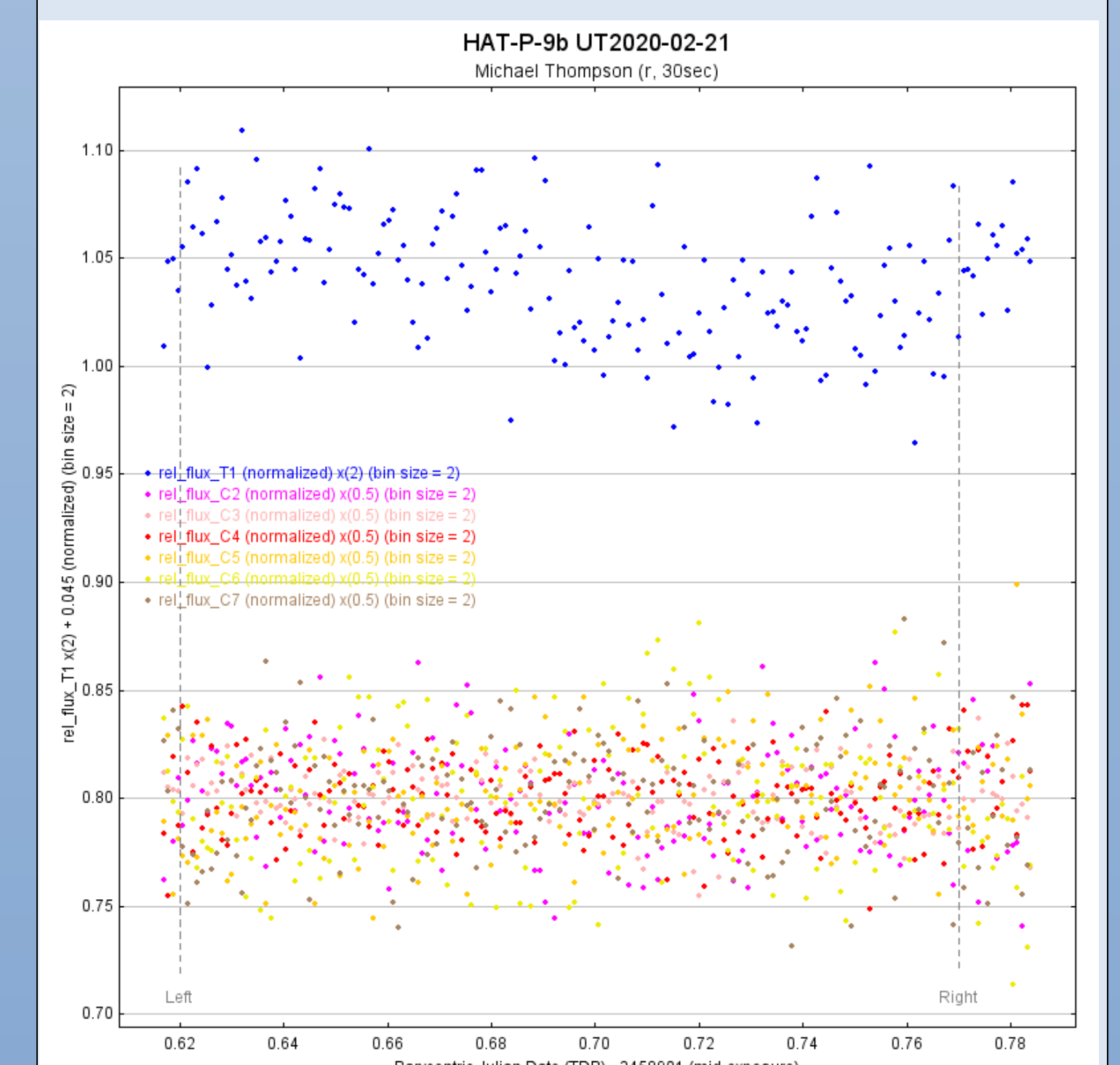
My Images

Here I have provided an example of an image taken during the transit. The arrow indicates the star HAT-P-9 for which we observed a transit. Although it is indistinguishable by eye, the light emitted will continue to vary throughout the transit.



Findings

Here I have attached the light curve for the transit. It is depicted in blue and the reference stars are the other colors. The transit is apparent as the brightness of the star decreases as predicted.



Methods

I worked at the University of Maryland Observatory with a partner. We used the telescope on site to observe the transit of a star. Then we used the program AstrolmageJ to process the pictures we obtained and produce a light curve. Our goal was to observe multiple transits however, quarantine cut our research short.



7" Astro-Physics Refractor

Conclusions

Following my observations, I have developed a desire to continue exploring the universe. I feel as though I would enjoy continuing to research exoplanet transits once quarantine has ended. Moreover, I wish to continue observing other aspects of the universe. Hopefully, exploring space can remain a prevalent part of my life as I progress into the work force.