Title

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I. INTRODUCTION

II. DATA ACQUISITION AND SETUP

Observations were made on at the Zaffarano Hall observation deck in Ames, Iowa. The night was mostly clear and the ambient temperature was around 12 °C. The moon was full that night which caused higher than usual lunar presence. Observations were made using a Meade 8" reflector telescope with an SBIG ST-402ME CCD camera with internal V, B, and I filters.

Setting up the telescope was the same as previous observations made with the 8" Meade telescope at Zaffarano Hall. An obstacle we faced with alignment and slewing was the misalignment of our sight by a significant amount. To combat this, we shined a laser through the eyepiece to roughly show the target of the main mirror.

We took 15 frames of data at 13 s at two locations in the sky. Of those 15, 5 were with photometric V, 5 were with photometric B, and 5 were dark frames. The first target contained M39 objects x3 and x5, however this data was deleted by accident and was not used for analysis. The second target contained objects x1, x4, x7, and x9, all of which are recorded in Table I. Of these images, another issue we encountered was centering the images as the telescope shifted according to its tracking movements. Because of this, a few of the images do not contain a clear view of M39 x4.

III. DATA ANALYSIS

IV. RESULTS

V. CONCLUSIONS

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Appendix A: Observation Log

TABLE I. Observed 06 September 2017 by Miles Lucas and John Brandon

Time	File	N Frames	Object	Filter	Exposure	Camera Temp.	Notes
21:39	M39_2_V_13s_	5	M39 Objects x1, x4, x7, and x9; stars E, D	V	13 s	5.33 °C	
21:41	M39_2_V_13s_dark_	5	M39 Objects x1, x4, x7, and x9; stars E, D	V	13 s	5.33 °C	Dark frames
21:43	M39_2_B_13s_	5	M39 Objects x1, x4, x7, and x9; stars E, D	B	13 s	5.33 °C	

Appendix B: Analysis Scripts