

Abstract Submitted
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Design and Construction of a Telescope Mounted Spectrograph

LONDON BORTELL, CRAIG HOWALD, Marietta College — For this project, a spectrograph intended for measuring emissions of variable stars was designed and constructed. The design is composed of a single slit, a collimator, a diffraction grating, a camera lens, and an imager which are all mounted on an aluminum extrusion rail. Design calculations were performed to find reasonable parameters for each part based on commercial availability and the desired capabilities of the spectrograph. Sample spectra of emission lamps were used to verify acceptable performance of this spectrograph. Soon the spectrograph can be attached to our 14 inch reflecting telescope to begin astronomical measurements.

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