

Z112b VERTECS: Progress Report on the Development of the Visible Light Telescope

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The VERTECS project aims to develop a visible light telescope for the observation of Extragalactic Background Light (EBL) using a microsatellite platform. The primary objective is to capture multi-band imaging data in the 400-800 nm range, focusing on both testing the Intra-Halo Light model and searching for emissions from the Epoch of Reionization. To achieve this, the telescope must meet stringent system requirements, including high throughput, excellent image quality, and effective stray light rejection. Significant progress has been made in the development phases, with the design for the Engineering Model (EM) of the baffle, lens optics, and lens holding barrel completed by the Preliminary Design Review stage. The EM telescope is expected to be delivered by June 2024. Subsequent standalone evaluation tests will be completed by July 2024, followed by comprehensive tests involving the entire satellite by September 2024. This project is on track for a 2025 launch, with ongoing efforts to ensure that the telescope meets all performance criteria and system requirements. In this presentation, we will report on the investigations and tests conducted up to the EM design phase and how we completed the design specifications to meet the mission and system requirements. Further updates will be provided as the project advances through its final stages of integration and testing.