

“HETDEX: Optical Alignment Of The Virus Spectrographs”

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HETDEX Collaboration

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We present an optical alignment procedure for the Visible Integral-Field Replicable Unit Spectrograph (VIRUS) collimator. Texas A&M is helping to build the VIRUS spectrographs, designed in collaboration with The University of Texas at Austin. The Hobby Eberly Telescope Dark Energy Experiment (HETDEX) will use as many as 192 units of this instrument to search for answers regarding Dark Energy. Texas A&M is currently assembling the collimators for VIRUS and designing alignment fixtures to aid in the assembly. We used ZEMAX models of VIRUS optics made by UT engineers to analyze various alignment methods we have considered. Our current plan uses two steps to properly align the collimator within the tolerance of 0.1-degrees. This will permit interchangeability among the various VIRUS parts.