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Near ultraviolet observations of WASP- 189b with CUTE telescope

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Ultraviolet observations of Ultra-hot Jupiters (UHJs; $T_{\text{eff}} > 2000$ K) provide us with an opportunity to investigate previously unexplored parameters of exoplanet atmospheres. WASP-189b is one of the hottest planets discovered to date with a day side temperature of about 2640 K. It orbits a bright ($V = 6.64$) A-type star every 2.7 days and has a radius of about 1.4 Jupiter radii. We present preliminary results of observations of WASP-189b conducted with the CUTE SmallSat. CUTE, launched in September of 2021 to a low earth orbit, is a 6U NASA-funded SmallSat carrying on-board a near ultraviolet low-resolution spectrograph. WASP-189b was one of the CUTE early science targets and was observed during April and May 2022. We present data reduction, analysis, and initial results, which indicates significant atmospheric absorption at near-ultraviolet wavelengths when compared to the optical, suggestive of the presence of an extended, possibly escaping, atmosphere.