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Color Variations on Asteroid (101955) Bennu[1] ANTARA SEN, BETH CLARK, Department of Physics and Astronomy, Ithaca College, Ithaca, NY, USA, NASA OSIRIS-REX TEAM — ct- NASA's OSIRIS-REx is a sample return mission to near-Earth B-type [1] asteroid (101955) Bennu [2]. Spectral variations on Bennu are subtle and associated with albedo [3]. We seek to classify the causes behind these spectral variations. By comparing the VIS-NIR spectral parameters of lab analogs [4] to those of Bennu, we find that decreasing grain size leads to spectral reddening and brightening [5]. However, studies predict that solar wind bombardment of organics (confirmed to be found on Bennu [6]) leads to spectral reddening, darkening and flattening [7] along with an upturn in UV albedo [8] – all of which are detected on Bennu [9–11]. We thus infer that solar wind is a likely surface maturation process on Bennu, working against grain size effects. References [1] Clark, B.E. et al. (2011), *Icarus* **216**(2), 462–475. [2] Lauretta, D.S. et al. (2017), *Space Science Reviews* **212**(1-2), 925–984. [3] Clark, B.E. et al. (2019), *EPSC* **2019**, EPSC–DPS2019. [4] Cloutis, E.A. et al. (2020), *EPSC* **2020**, p. 975. [5] Sen, A. et al. (in review), *Meteoritics & Planetary Science*. [6] Simon, A.A. et al. (2020), *Science*, **370**, eabc3522. [7] Moroz, L. et al. (1998), *Icarus* **134**(2), 253–268. [8] Brunetto, R. et al. (2015), *Asteroids IV,* 597–616. [9] Fornasier, S. (2020), Astronomy & Astrophysics, 644, A142. [10] Neumann, G. et al. (2020), LPS LI, (2326), 2032. [11] Hendrix, A.R. & Vilas, F. (2019), *Geophysical Research Letters* **46**(24), 14307–14317.

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