1176-00-237 **D. A. Rudakevych*** (dominic.rudakevych@westpoint.edu), 745 Brewerton Rd., PO Box 3561, West Point, NY 10996, **Genevieve B. Tang** (genevieve.tang@westpoint.edu), 745 Brewerton Road, PO 4077, West Point, NY 10996, and **Mai Tran** and **Diana Loucks**. *The Effects of Ionosphere Scintillation on High-Latitude GPS Performance.* Preliminary report.

The question of ionosphere scintillation and its effects on GPS functionality at high latitudes becomes increasingly pertinent with rising global temperatures and decreased sea ice extent in the Arctic Ocean. Through correlative analyses ran on data gathered from the Illinois Institute of Technology, our team sought to increase modern understanding of ionosphere storms and how increased solar activity affects the precision of satellite-based navigation tools. This process began by collecting and managing large data files from multiple sources. Afterward, the data was cleaned to a format ready for analysis. In order to isolate the effects of scintillation, manipulation was also necessary to account for the effects of other precision-harming processes, such as errors due to satellite configuration (GDOP). Once appropriately cleaned and filtered, the data was then analyzed within RStudio under multiple correlative models to identify where meaningful relationships do and do not exist. (Received January 24, 2022)