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Supporting Information for

[The X-pattern Merging of the Equatorial Ionization Anomaly Crests]

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Introduction

Supporting information (SI) figure 1 (S1) shows the GOLD nighttime observations of Oxygen-I (OI) 135.6 nm intensities. These are similar examples as that shown in the Figure 1 of the article. Note that these pictures also show various shapes of EIA merging over the equator that happened over different longitudes. The saturated portions, in the western sides, in these images come from the dayglow emissions, which are not important for the current study.

The SI figure 2 (S2) shows the WACCM-X electron density profiles for 3rd January case. This is same as Figure 4 in the manuscript, but for 3rd January (i.e., winter time). Note that in this Figure the single prominent crest starts to develop at 21 UT (17.2 LT).

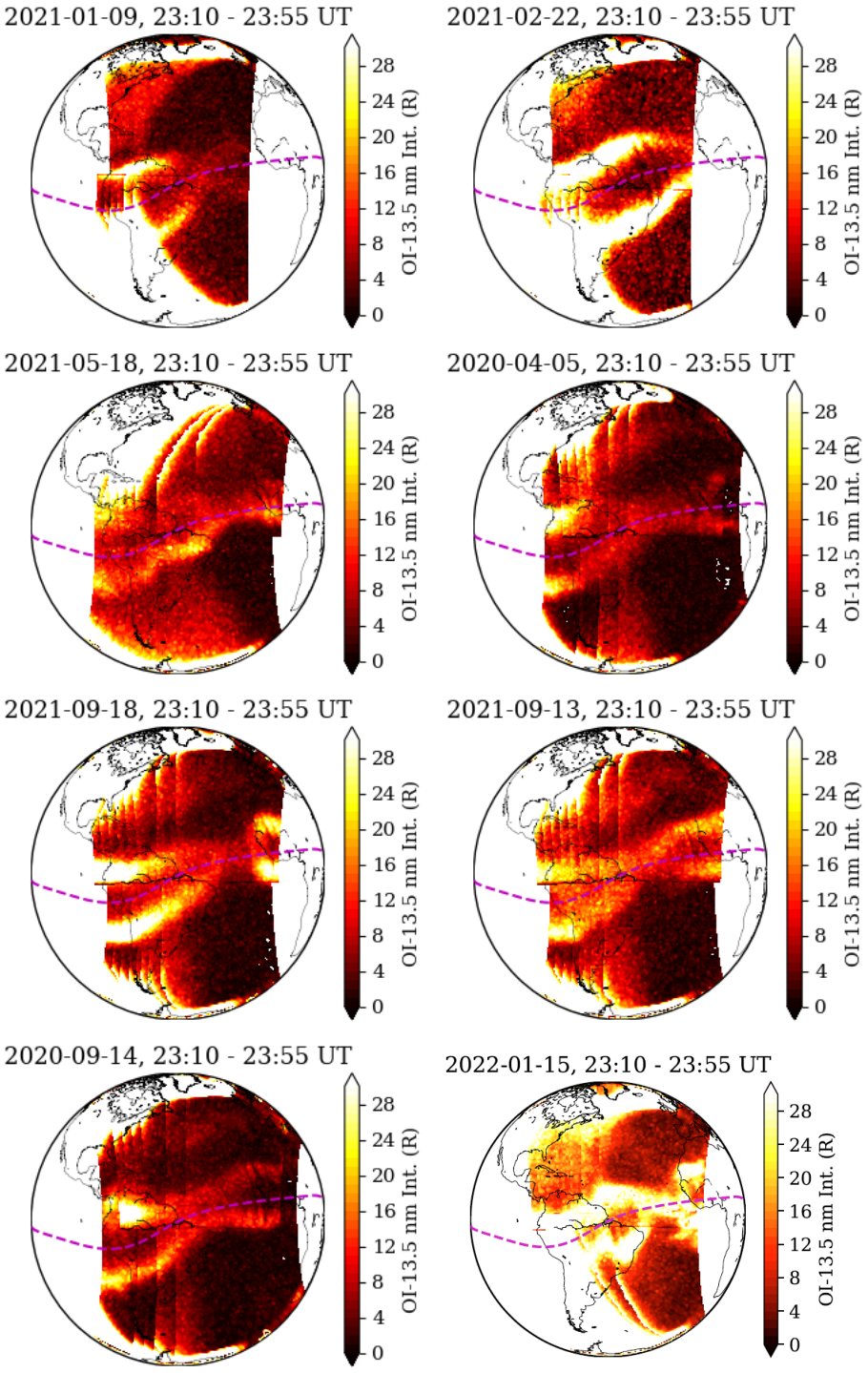

Figure S1. Same as Figure 1 in the main article but for other dates and times. These are just some additional representative examples of the OI-135.6 nm intensities from GOLD. All the scans between 23:10 and 23:55 are overplotted to get a larger longitude coverage.

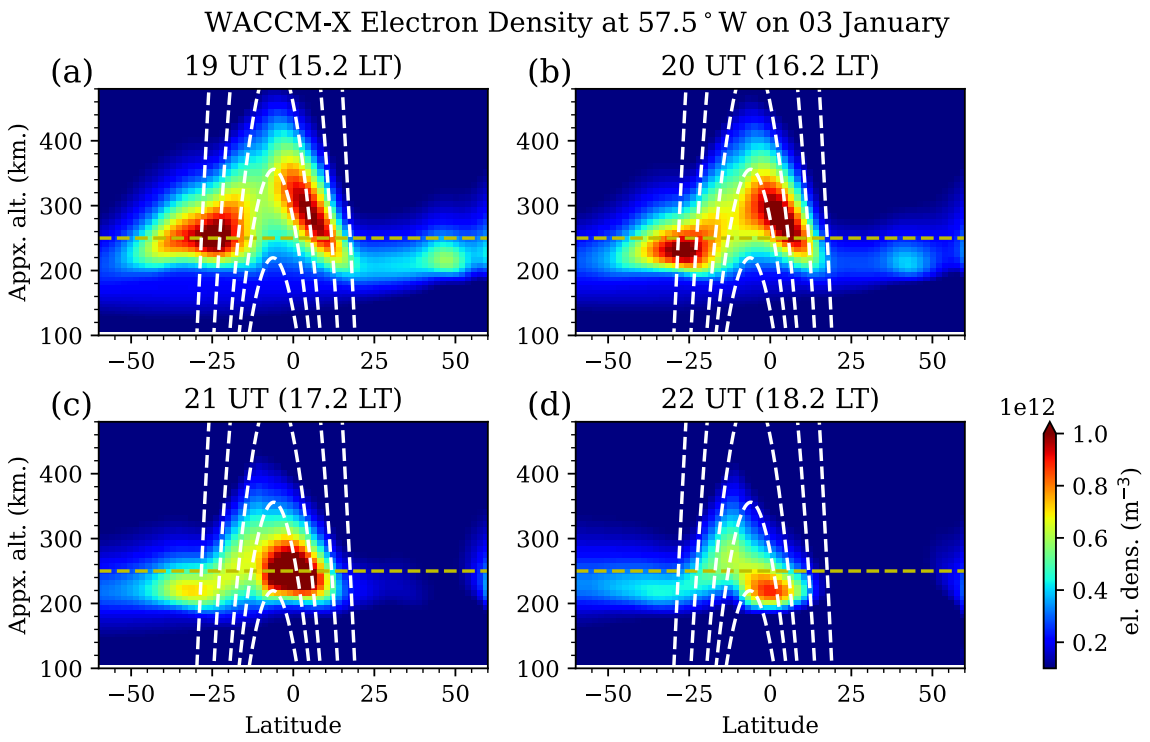

Figure S2. Same as Figure 4 in the manuscript, but for the 3rd January case (i.e., winter time). Note that in this Figure the single prominent crest starts to develop at 21 UT (17.2 LT). Approximate magnetic field lines are shown with dashed curved lines.