

Supplementary Materials for:
Observation of the Preparation Phase Associated with
Mw = 7.2 Haiti Earthquake on 14 August 2021
from a Geophysical Data Point of View

by Dedalo Marchetti

List of content:

1. **Figure S1:** Atmospheric analysis of humidity_____pag. 2
2. **Figure S2:** Atmospheric analysis of temperature_____pag. 2
3. **Figure S3:** Atmospheric analysis of OLR_____pag. 3
4. **Figure S4:** Swarm and CSES Ne on 5 July 2021_____pag. 3
5. **Figure S5:** Swarm and CSES Ne on 6 August 2021_____pag. 4

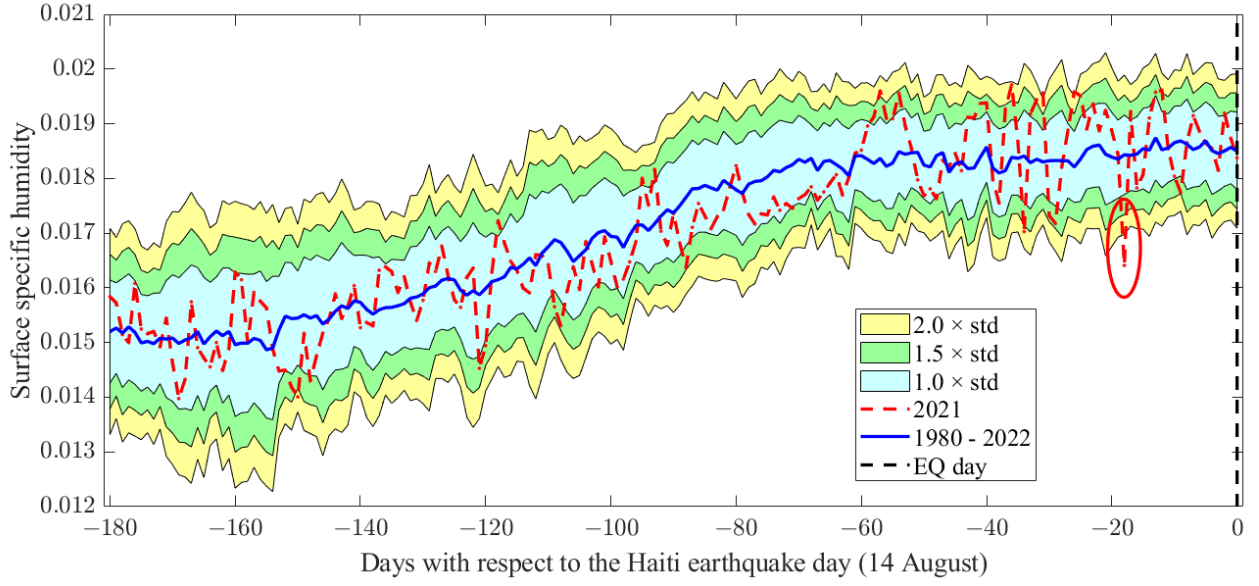


Figure S1. Surface specific humidity investigation in the six months before the Haiti 2021 earthquake in a 3° side square box area centred on the epicentre.

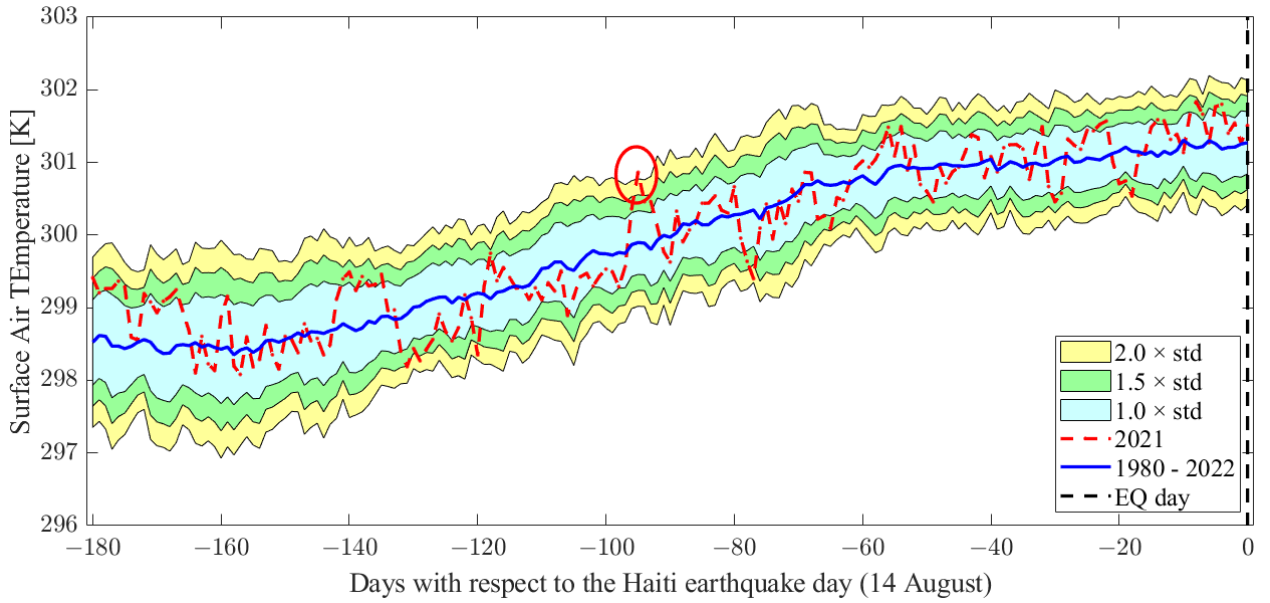


Figure S2. Surface air temperature (i.e., the temperature at 2 meters above the surface) investigation in the six months before the Haiti 2021 earthquake in a 3° side square box area centred on the epicentre.

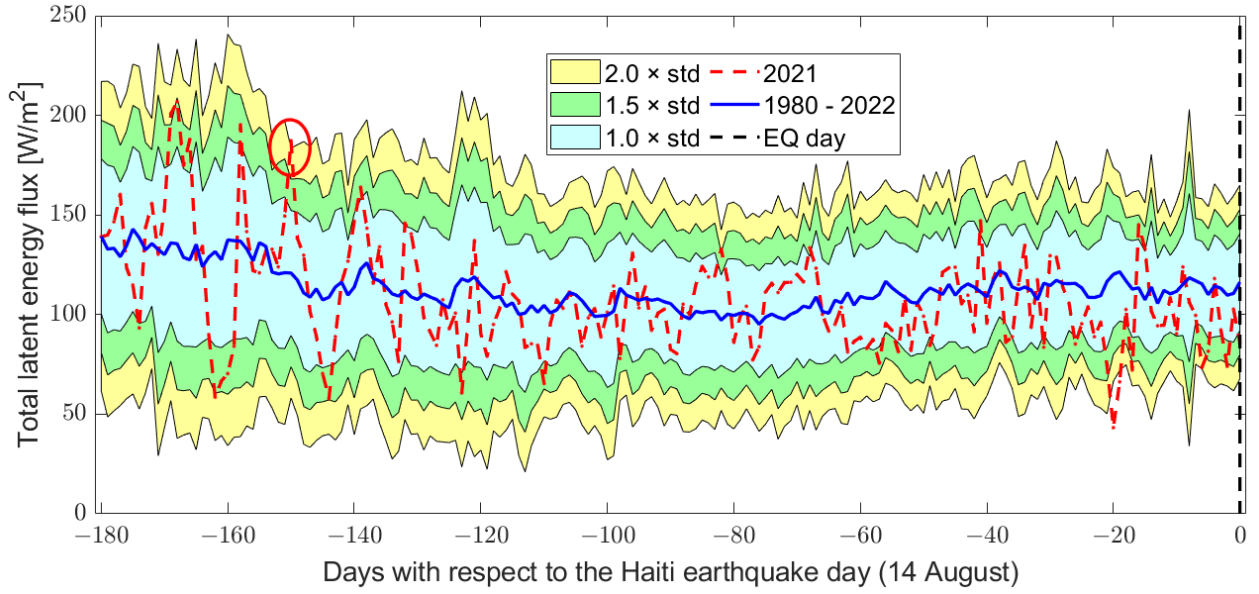


Figure S3. Total Latent Heat flux at the top of atmosphere (i.e., the outgoing longwave radiation) investigation in the six months before the Haiti 2021 earthquake in a 3° side square box area centred on the epicentre.

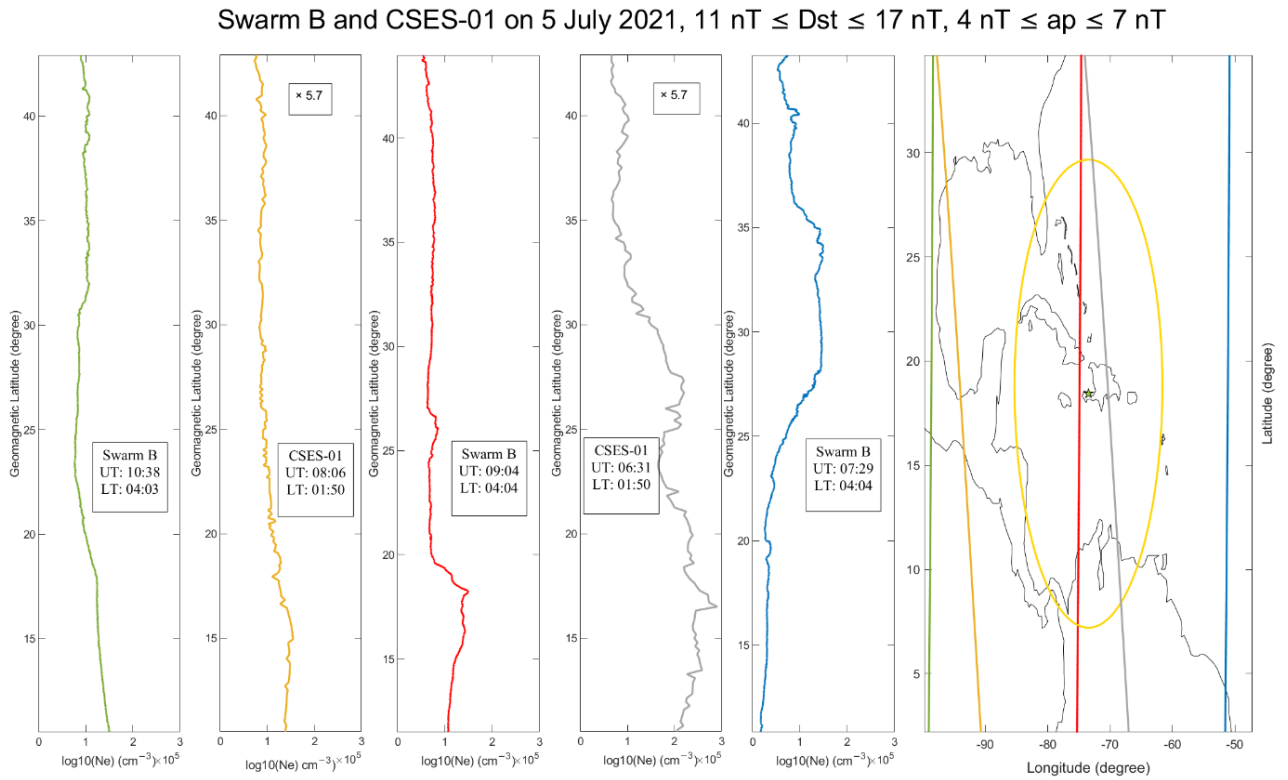


Figure S4. Swarm Bravo and CSES-01 in the night of 5 July 2021 Tracks inside and outside the Dobrovolsky's area are shown for comparisons. Local time of the same satellite is equal and Swarm Bravo and CSES-01 had a not so large difference in local time (2 hours and 15 minutes). The CSES-01 tracks have been amplified to match the same value of Swarm Bravo in apparent crossing point (at the Northern edge of the map). The factor is due also to the different local time and to different calibration of the satellites.

Swarm A and CSES-01 on 6 August 2021, $4 \text{ nT} \leq \text{Dst} \leq 10 \text{ nT}$, $4 \text{ nT} \leq \text{ap} \leq 7 \text{ nT}$

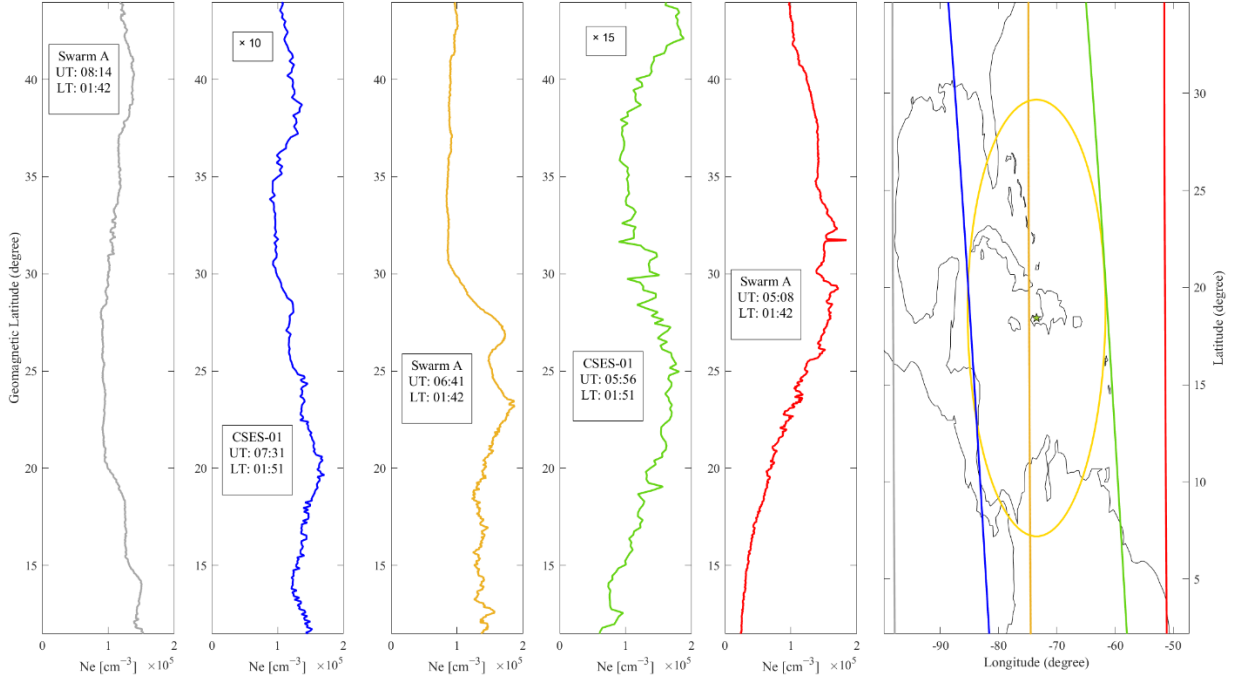


Figure S5. Swarm Alpha and CSES-01 in the night of 6 August 2021 (8 days before the earthquake). Tracks inside and outside the Dobrovolsky's area are shown for comparisons. At this time the local time of the both satellites was very similar. Due to different altitude the track of CSES-01 have been largely amplified.