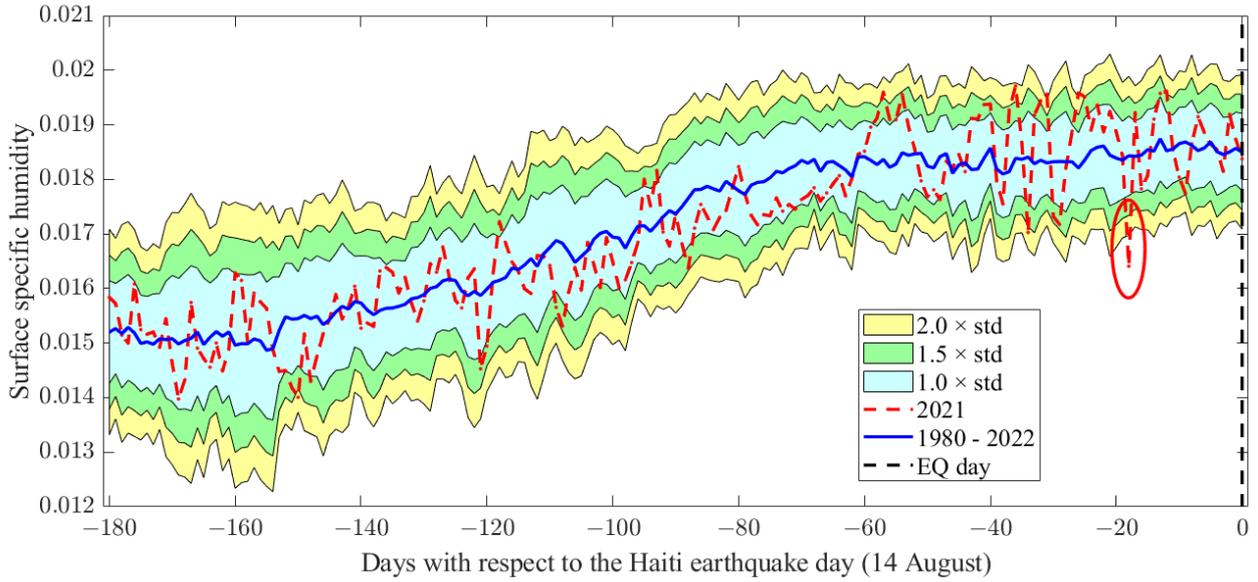


**Supplementary Materials for:**  
**Observation of the Preparation Phase Associated with**  
**Mw = 7.2 Haiti Earthquake on 14 August 2021**  
**from a Geophysical Data Point of View**

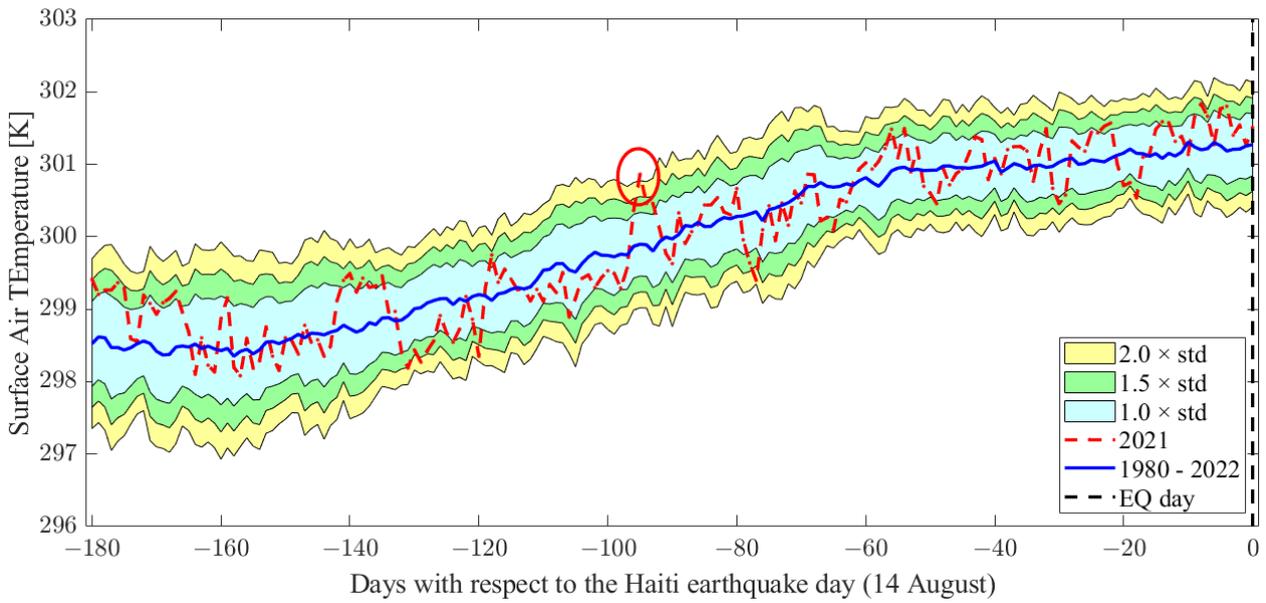
by Dedalo Marchetti

**List of content:**

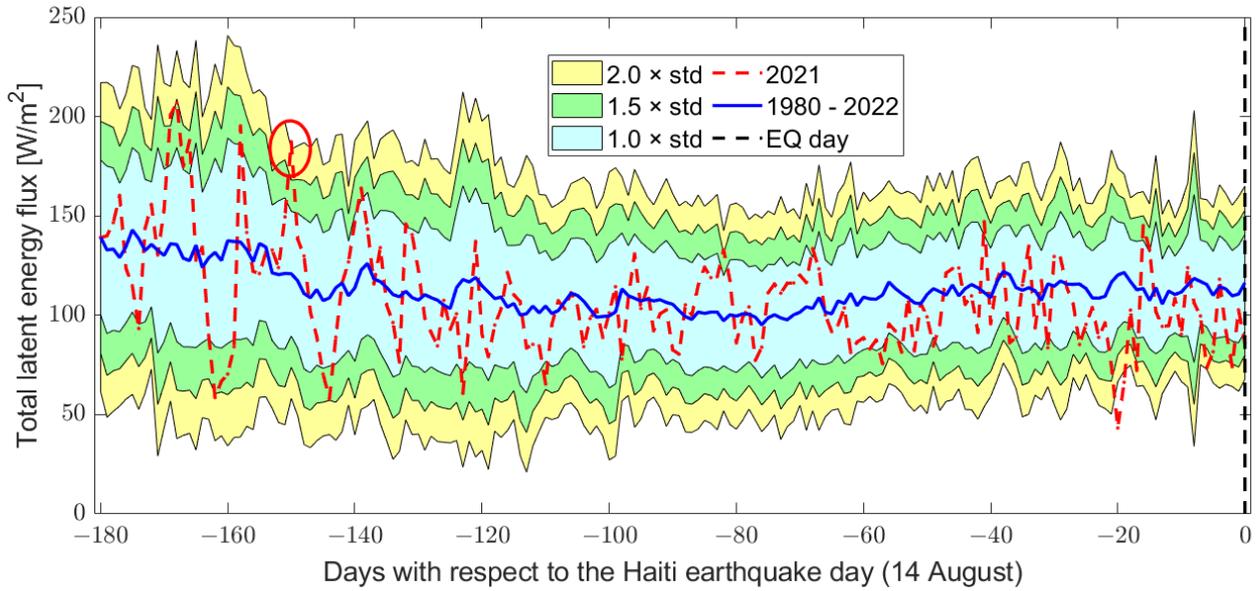
1. **Figure S1:** Atmospheric analysis of humidity\_\_\_\_\_pag. 2
2. **Figure S2:** Atmospheric analysis of temperature\_\_\_\_\_pag. 2
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**Figure S1.** Surface specific humidity investigation in the six months before the Haiti 2021 earthquake in a  $3^\circ$  side square box area centred on the epicentre.

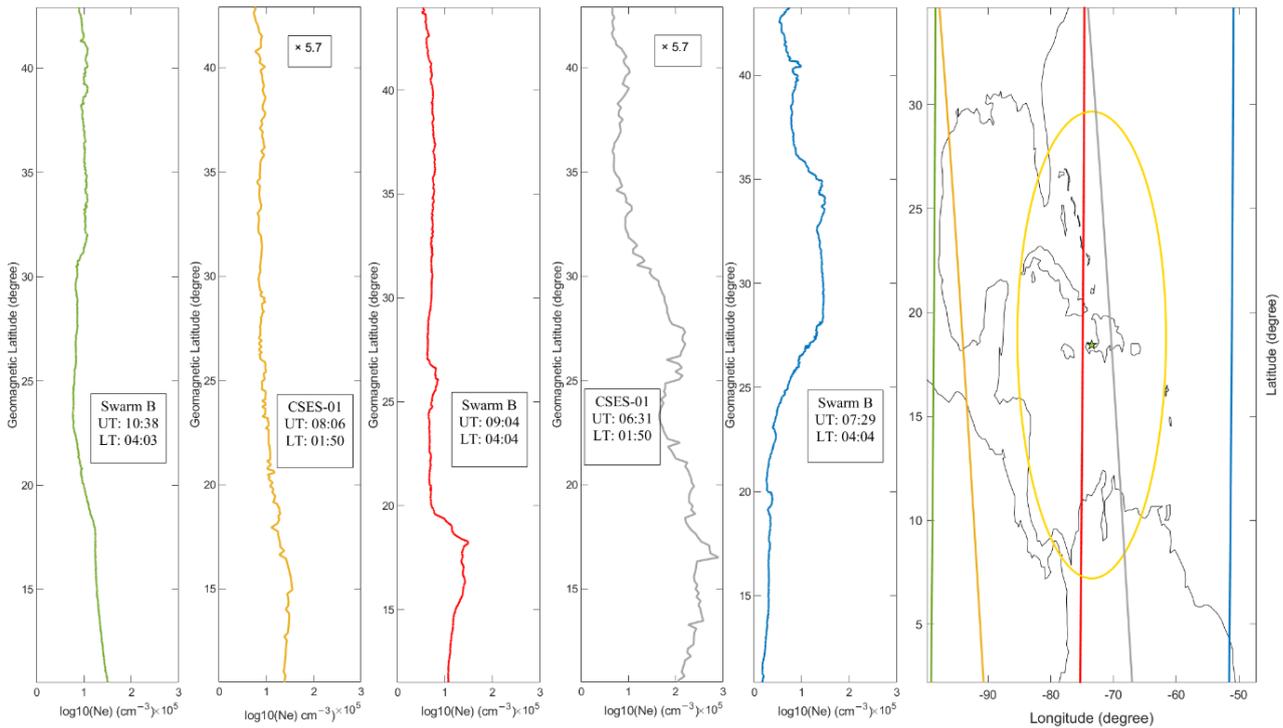


**Figure S2.** Surface air temperature (i.e., the temperature at 2 meters above the surface) investigation in the six months before the Haiti 2021 earthquake in a  $3^\circ$  side square box area centred on the epicentre.



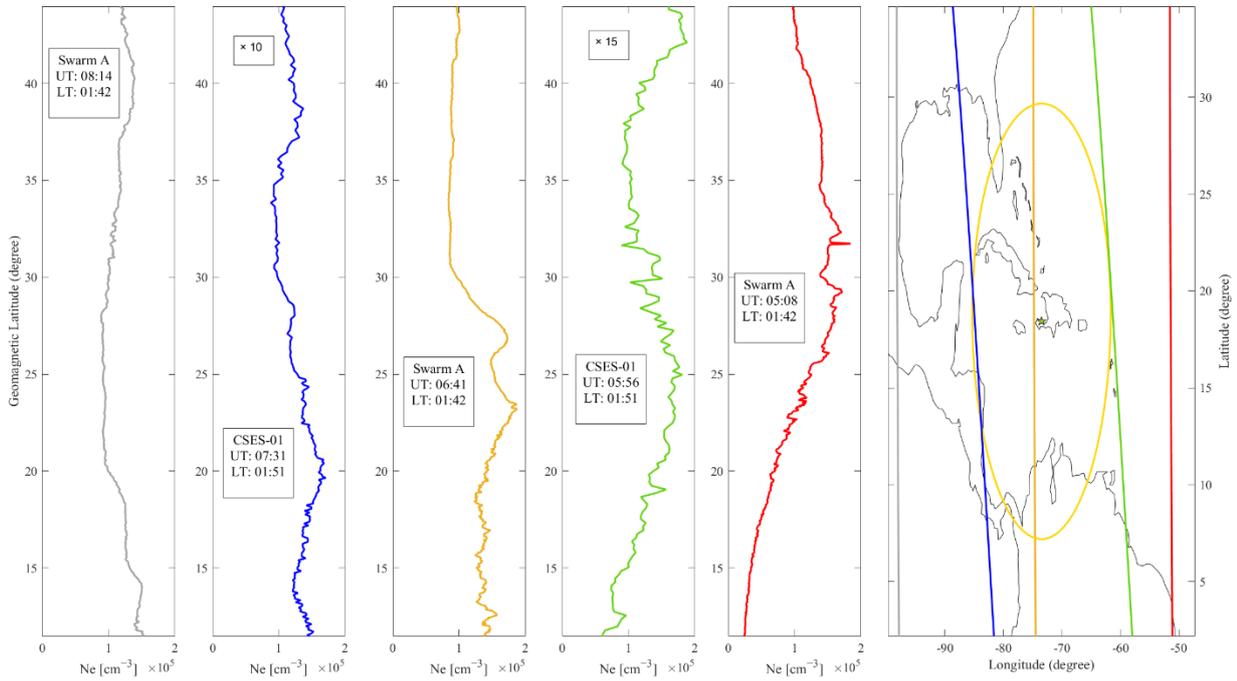
**Figure S3.** Total Latent Heat flux at the top of atmosphere (i.e., the outgoing longwave radiation) investigation in the six months before the Haiti 2021 earthquake in a  $3^\circ$  side square box area centred on the epicentre.

Swarm B and CSES-01 on 5 July 2021,  $11 \text{ nT} \leq \text{Dst} \leq 17 \text{ nT}$ ,  $4 \text{ nT} \leq \text{ap} \leq 7 \text{ nT}$



**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.