

1° Supplementary Materials of Clues of Lithosphere, Atmosphere and Ionosphere alterations possibly related to the preparation of La Palma 19 September 2021 volcano eruption.

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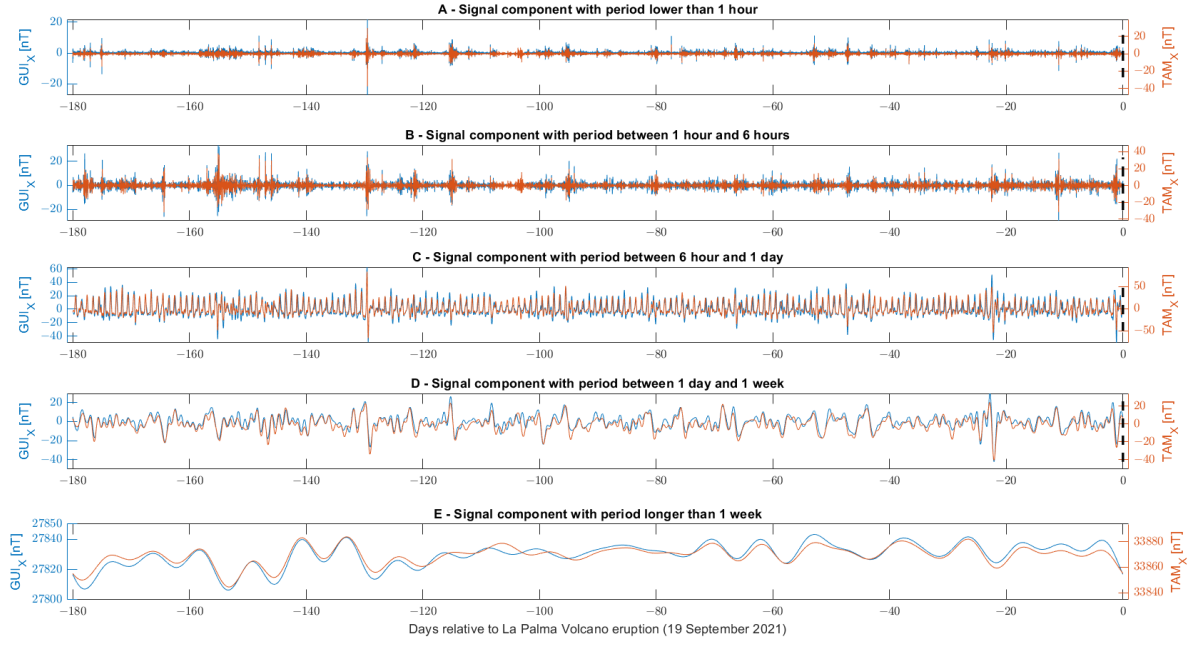


Figure S1. Geomagnetic X (North) component of geomagnetic field measured by GUI and TAM ground observatories. The signal has been filtered into 5 bands defined on A: the period higher than 1 hour; B: the period between 1 hour and 6 hours; C: the period between 6 hours and 1 day; D: the period between 1 day and 1 week and E: the period longer than 1 week.

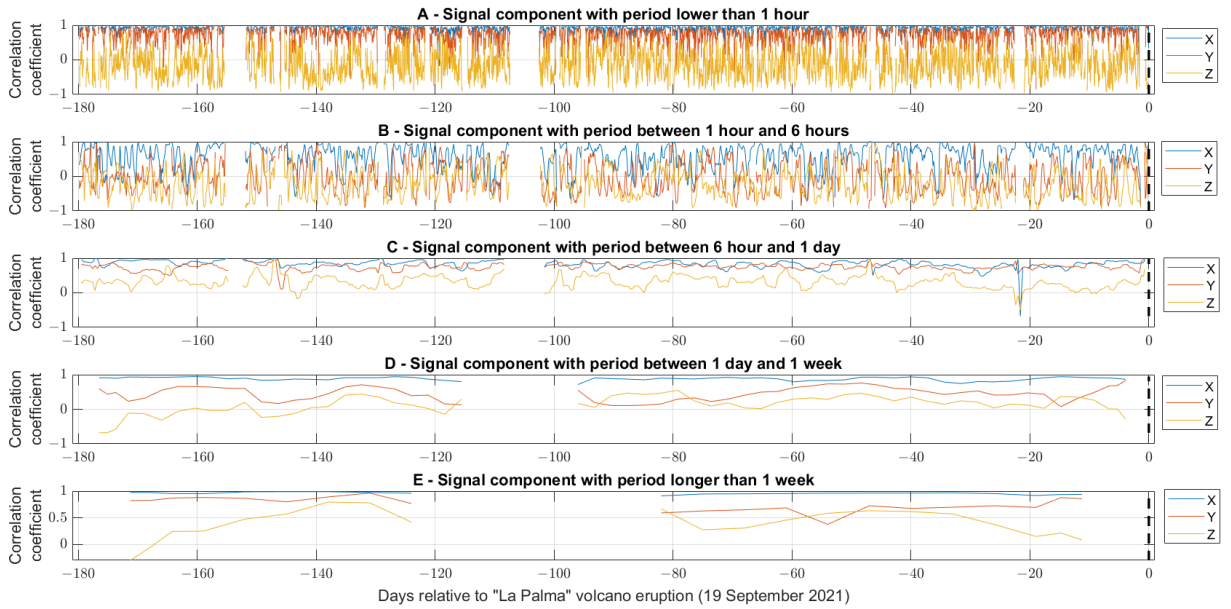


Figure S2. Correlation coefficient calculated by a moving window on geomagnetic field measured by GUI and TAM ground observatories for the 5 bands defined on A: the period higher than 1 hour; B: the period between 1 hour and 6 hours; C: the period between 6 hours and 1 day; D: the period between 1 day and 1 week and E: the period longer than 1 week.

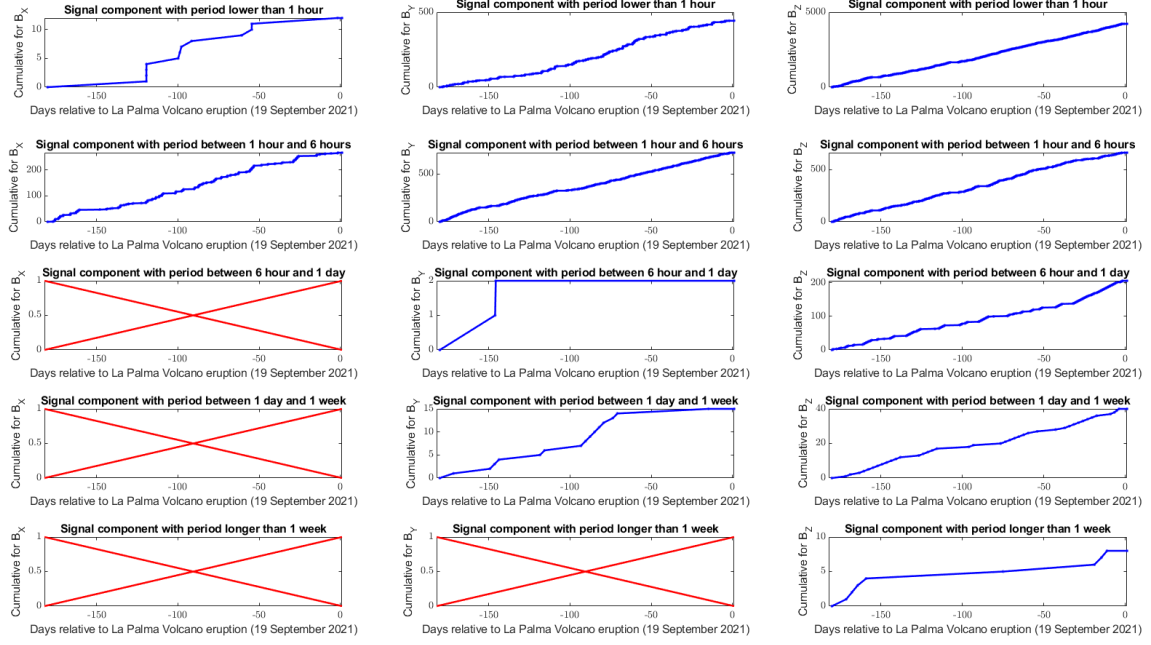


Figure S3. Cumulative graphs of the uncorrelated ($|r| < 0.3$) windows for the three components and the 5 frequency bands. If no uncorrelated windows for a specific component and frequency band are detected, a red cross is represented.

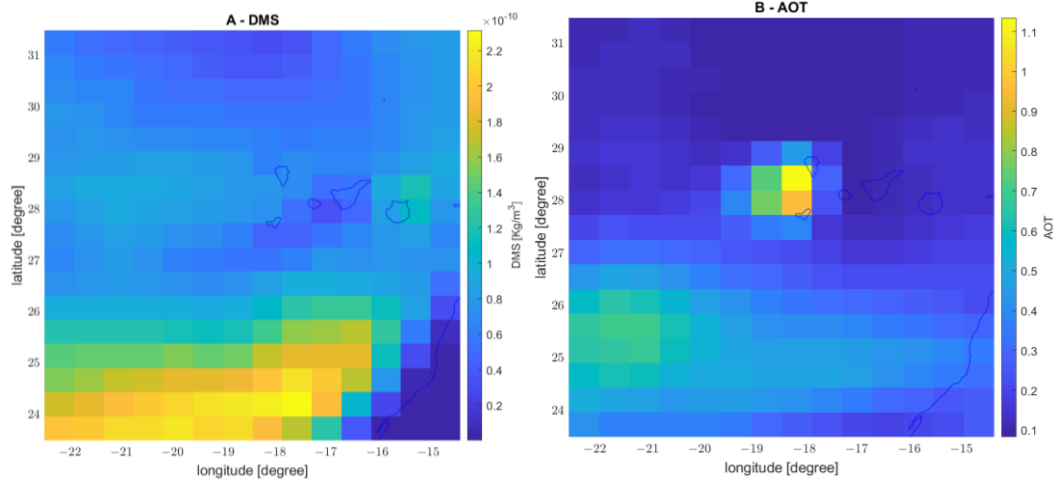


Figure S4. Maps of the atmospheric parameters (A DMS and B aerosol) on the day of the eruption (19 September 2021) at 17 UT.

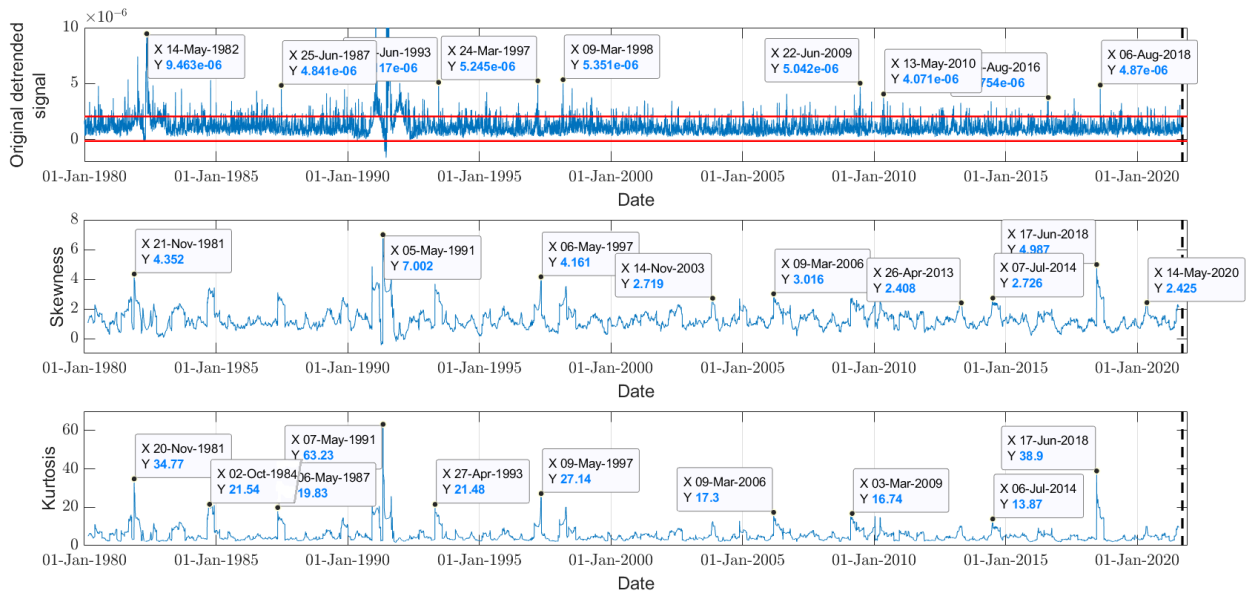


Figure S5. SO₂ long time series investigation after removing seasonal trend from 1980 until La Palma 2021 volcano eruption.

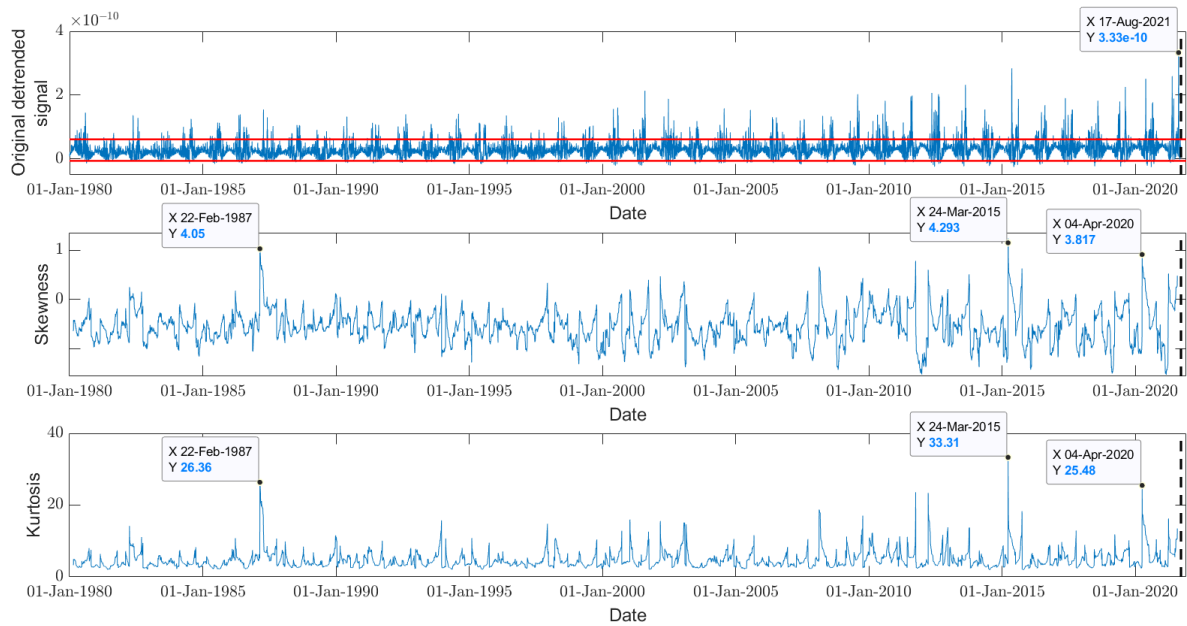


Figure S6. DMS long time series investigation after removing seasonal trend from 1980 until La Palma 2021 volcano eruption.

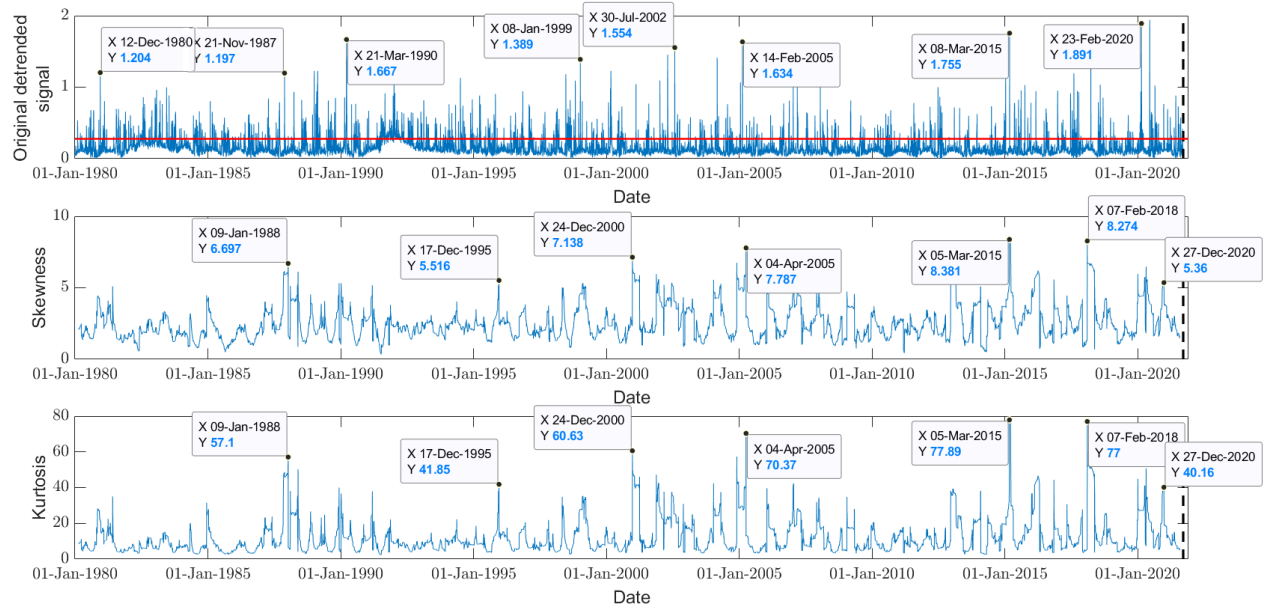


Figure S7. Aerosol long time series investigation after removing seasonal trend from 1980 until La Palma 2021 volcano eruption.