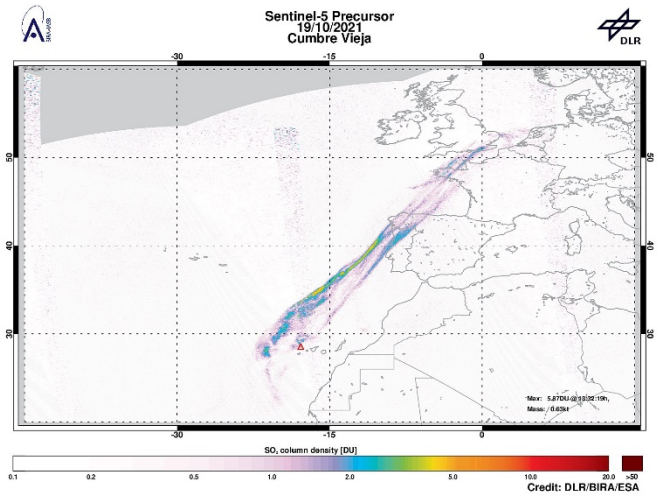
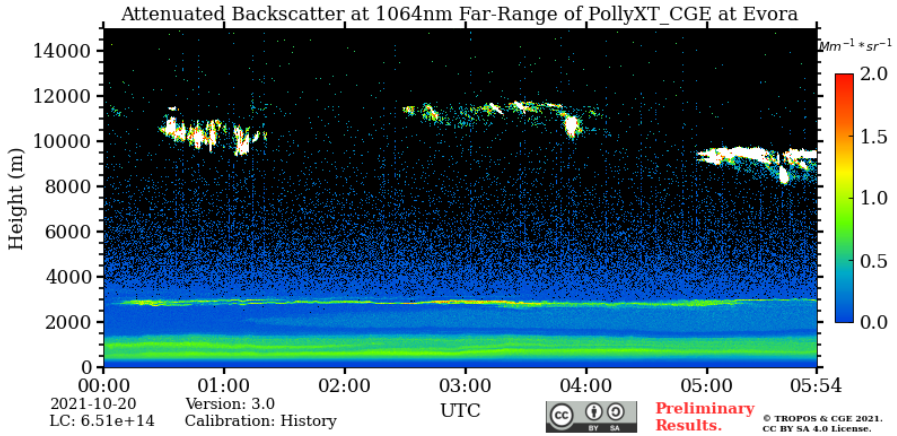
# Insights into Volcanic Processes and Risk from PlumeTraj Trajectory Analysis of TROPOMI $SO_2$ Imagery

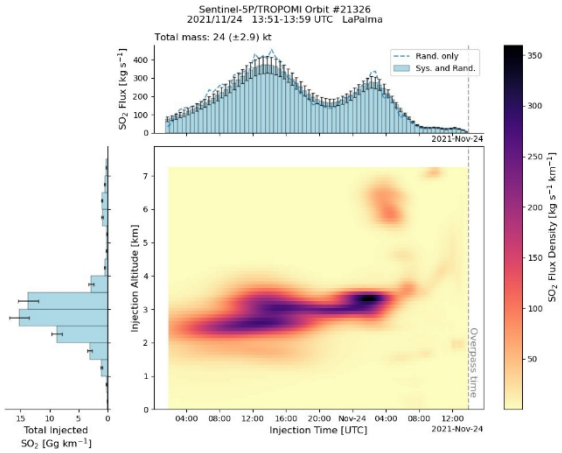


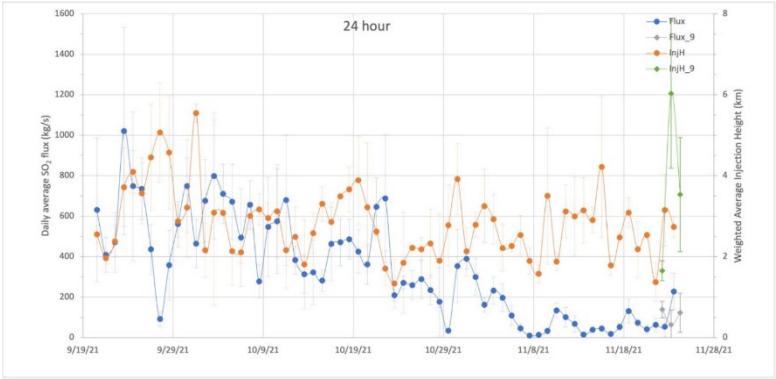

TROPOMI has demonstrated a capacity to detect volcanic eruption clouds multiple times, but the Cumbre Vieja eruption of La Palma has allowed a demonstration of its capacity to assist in near real-time volcano monitoring during an eruptive crisis.

With the PlumeTraj approach we have been able to derive high temporal resolution (2-3 hour) time series of SO2 flux and plume height, 24 hours a day, which is a remarkable breakthrough for volcano monitoring during a crisis.

The longevity of the plume from la Palma also has allowed ground-based validation of plume heights with the LIDAR networks in continental Europe.

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