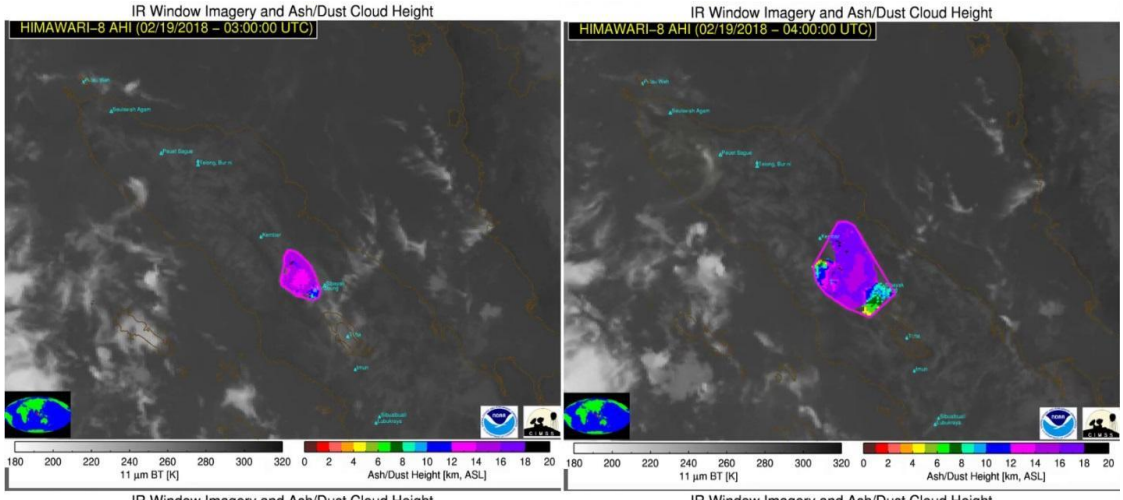
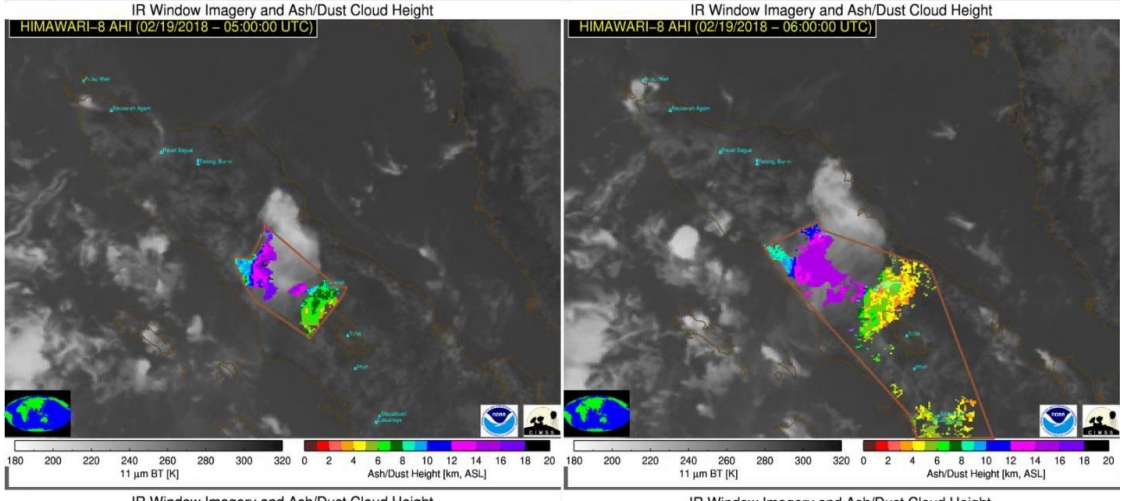
Analysis of properties of the 19 February 2018 volcanic eruption of Mount Sinabung in S5P/TROPOMI and Himawari satellite data

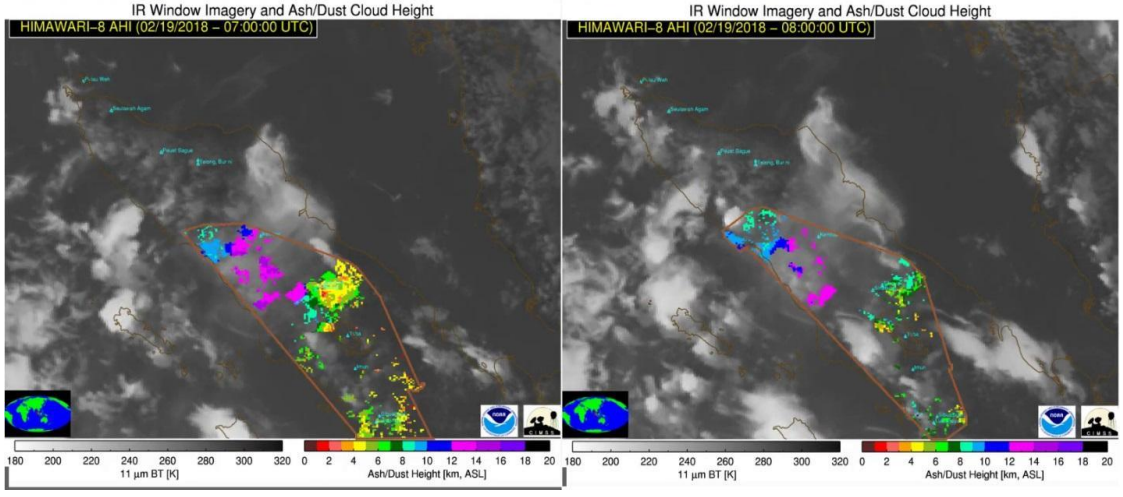
Supplementary information


IR Window Imagery and Ash/Dust Cloud Height
HIMAWARI–8 AHI (02/19/2018 – 03:00:00 UTC)
180 200 220 240 260 280 300 320
11 µm BT [K]
0 2 4 6 8 10 12 14 16 18 20
Ash/Dust Height [km, ASL]

IR Window Imagery and Ash/Dust Cloud Height
HIMAWARI–8 AHI (02/19/2018 – 04:00:00 UTC)
180 200 220 240 260 280 300 320
11 µm BT [K]
0 2 4 6 8 10 12 14 16 18 20
Ash/Dust Height [km, ASL]


IR Window Imagery and Ash/Dust Cloud Height
HIMAWARI–8 AHI (02/19/2018 – 05:00:00 UTC)
180 200 220 240 260 280 300 320
11 µm BT [K]
0 2 4 6 8 10 12 14 16 18 20
Ash/Dust Height [km, ASL]

IR Window Imagery and Ash/Dust Cloud Height
HIMAWARI–8 AHI (02/19/2018 – 06:00:00 UTC)
180 200 220 240 260 280 300 320
11 µm BT [K]
0 2 4 6 8 10 12 14 16 18 20
Ash/Dust Height [km, ASL]


IR Window Imagery and Ash/Dust Cloud Height
HIMAWARI–8 AHI (02/19/2018 – 07:00:00 UTC)
180 200 220 240 260 280 300 320
11 µm BT [K]
0 2 4 6 8 10 12 14 16 18 20
Ash/Dust Height [km, ASL]

IR Window Imagery and Ash/Dust Cloud Height
HIMAWARI–8 AHI (02/19/2018 – 08:00:00 UTC)
180 200 220 240 260 280 300 320
11 µm BT [K]
0 2 4 6 8 10 12 14 16 18 20
Ash/Dust Height [km, ASL]

Figure S1. Hourly HIMAWARI-based brightness temperatures (11 μm) and ash/dust heights on 19 February 2018 over Sumatra between 03:00-08:00 UTC. Ash dust heights from NOAA/CIMSS, imagery obtained from the NOAA/CIMSS Volcanic Cloud Monitoring Web Portal (https://volcano.ssec.wisc.edu/). The brownish outline is an automatically generated contour.

Figure S2a. MODIS-Terra pseudo visible color images on 19 February 2018 over northern Sumatra, approximately 10:30 local time. Image obtained from https://worldview.earthdata.nasa.gov/.

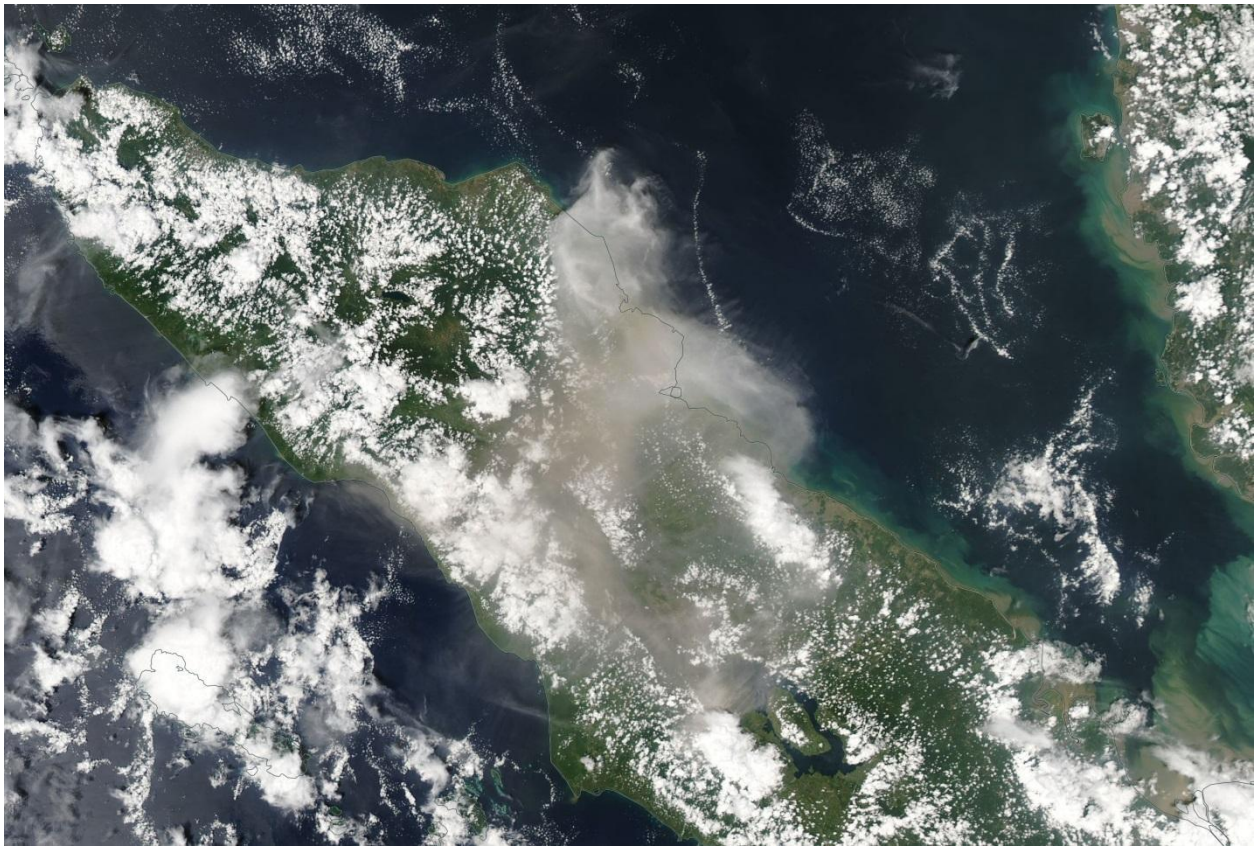


Figure S2b. As figure S2a but for the VIIRS satellite instrument and at approximately 13:30 local time. Image obtained from https://worldview.earthdata.nasa.gov/.

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