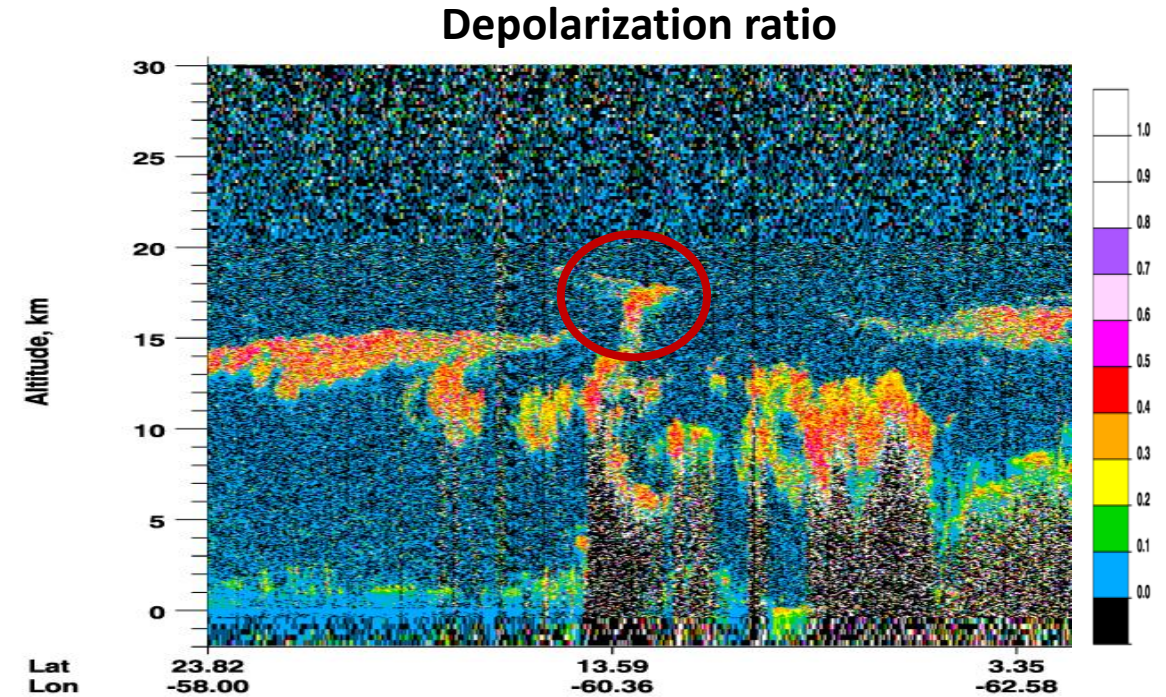
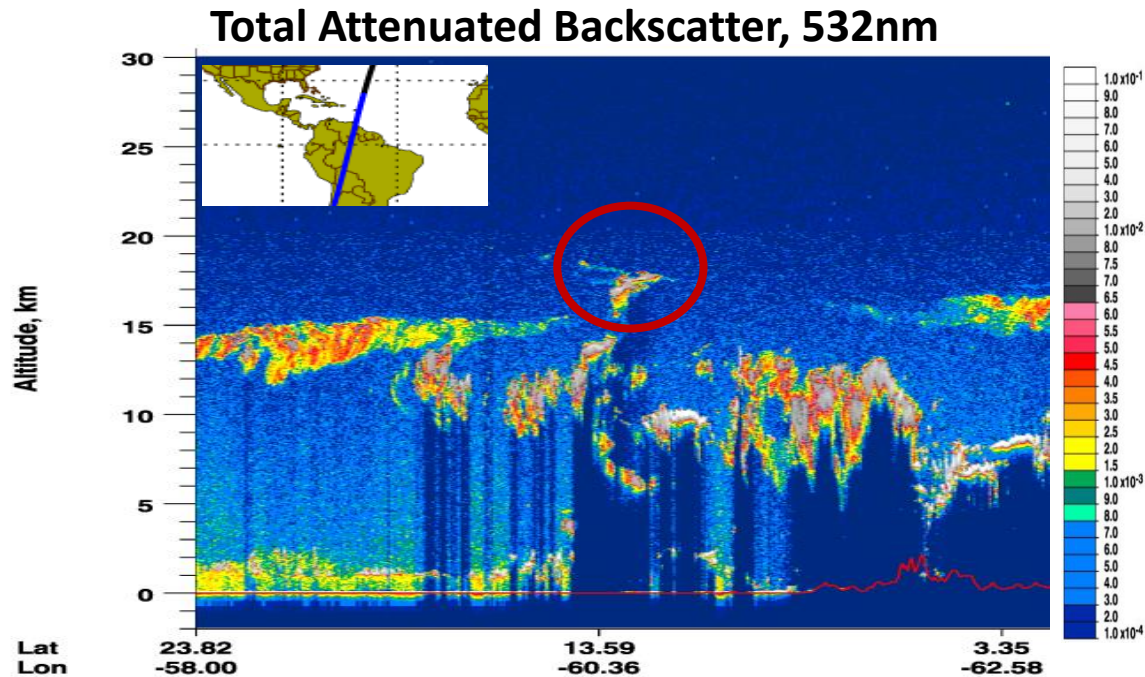


# CALIOP measurements of Soufriere volcanic plume, April 10, 2021

2021-04-10T06-00-00Z



For stratospheric layers (using CALIPSO expedited data– GEOS-5 tropopause):

Mean base altitude = 17.2 km

Mean top altitude = 18.1 km

Mean volume depolarization ratio = 0.32 (ash dominant)

Using just the stratospheric layers and spatial extent from SO<sub>2</sub> plume from Aqua/AIRS, a first estimate of ash mass injected into the stratosphere is ~ 0.07 Tg.

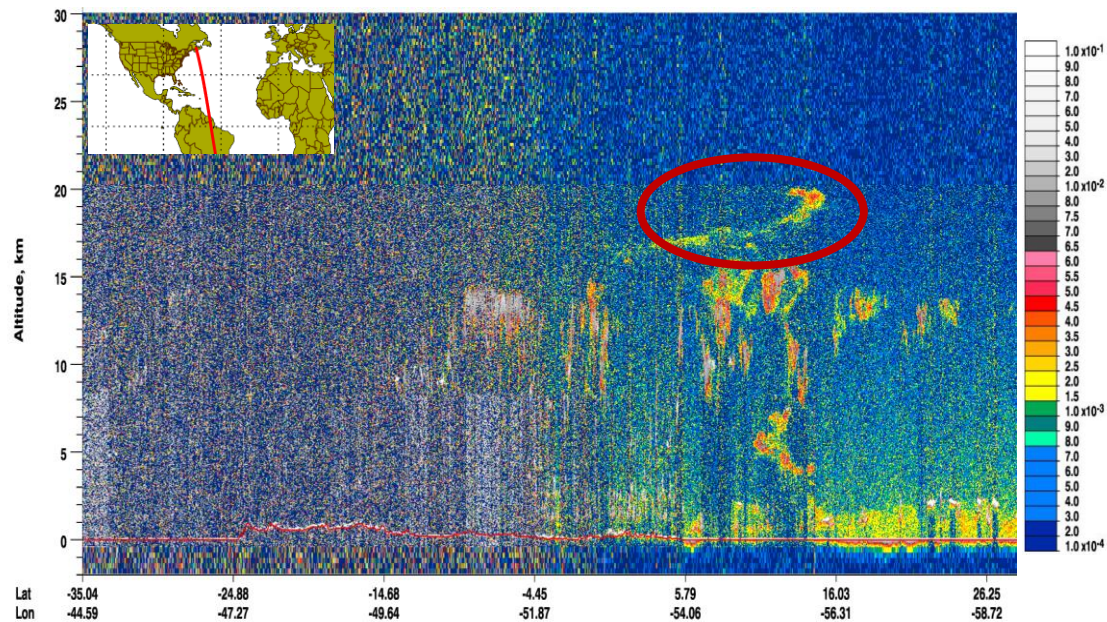


# CALIOP measurements of Soufriere volcanic plume, April 11, 2021

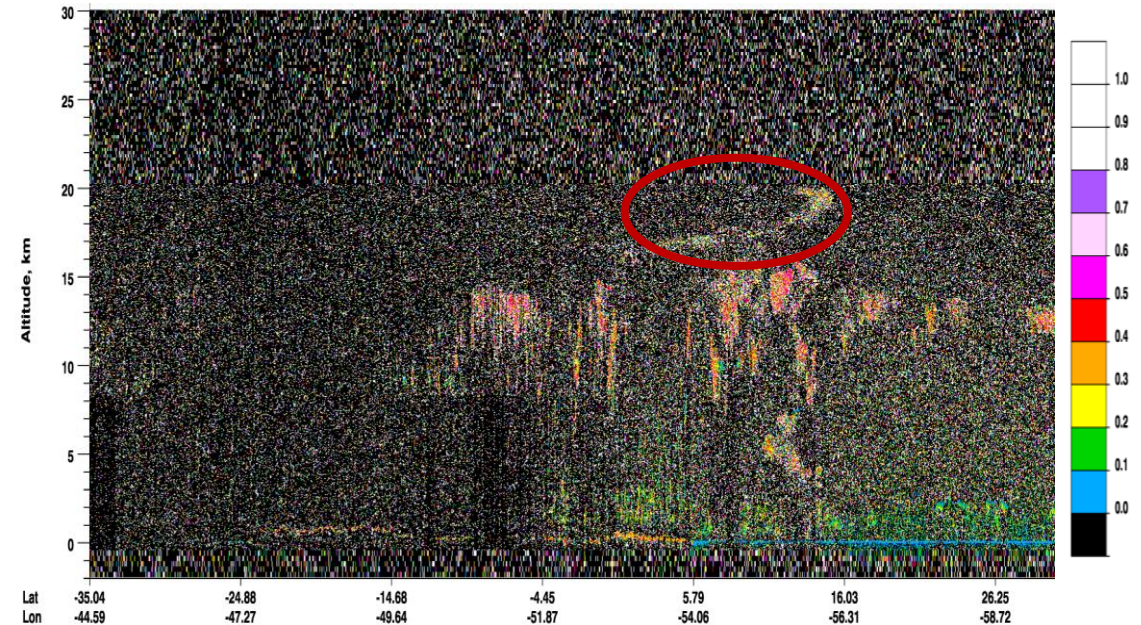
High depolarization suggests presence of ash with significant mass loading in stratosphere

2021-04-11T16-30-00Z

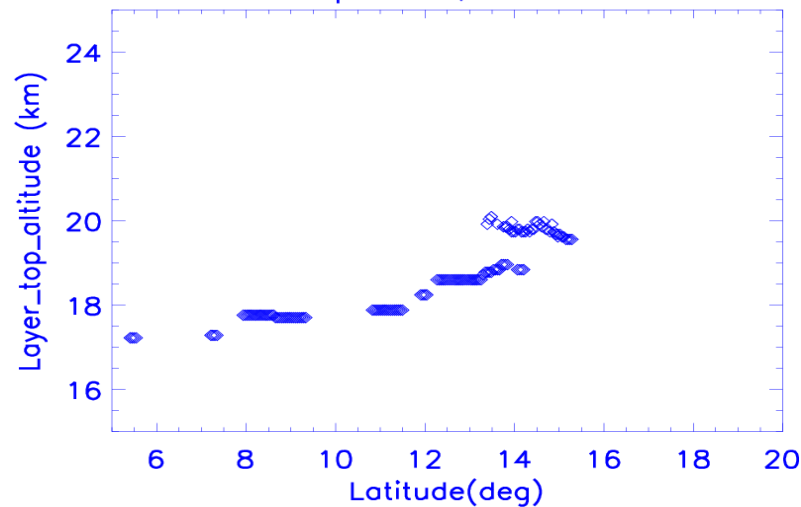
### Total Attenuated Backscatter, 532nm



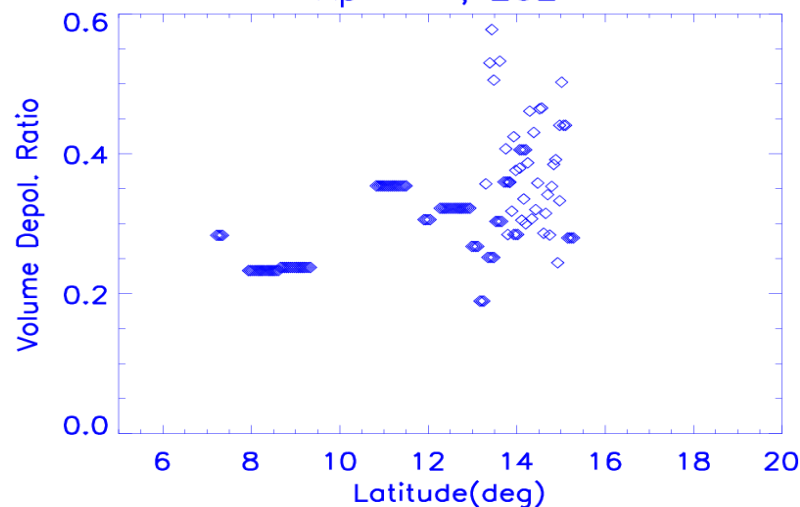
### Depolarization ratio



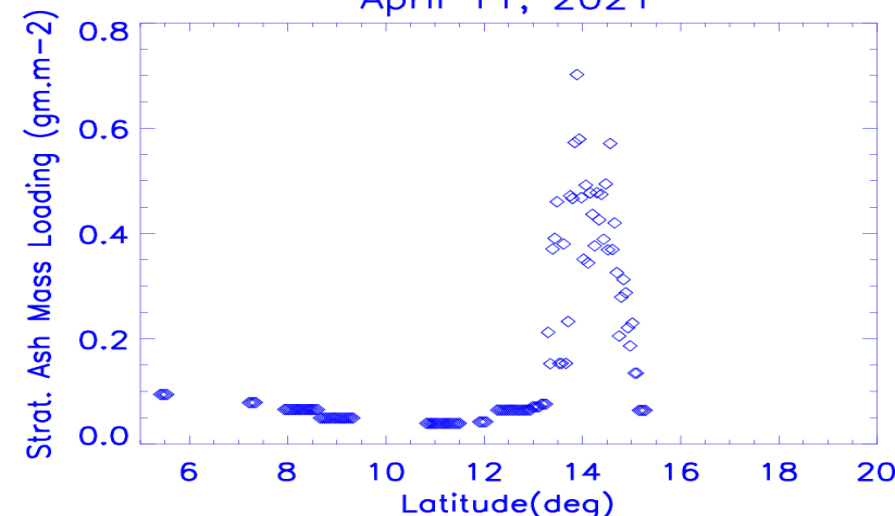
April 11, 2021



April 11, 2021



April 11, 2021



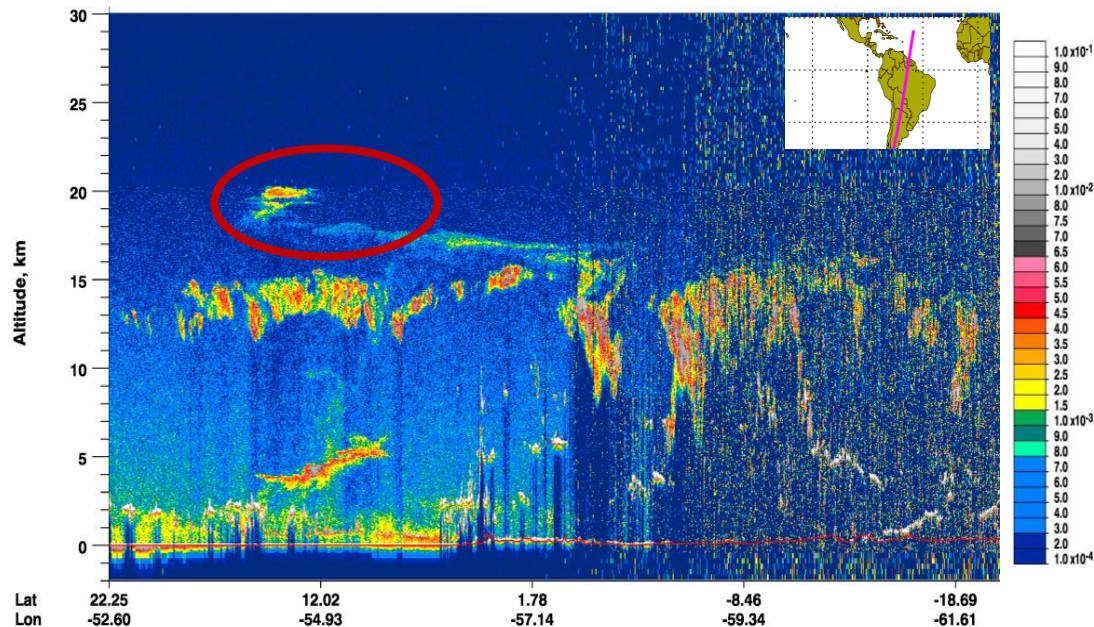


# CALIOP measurements of Soufriere volcanic plume, April 12, 2021

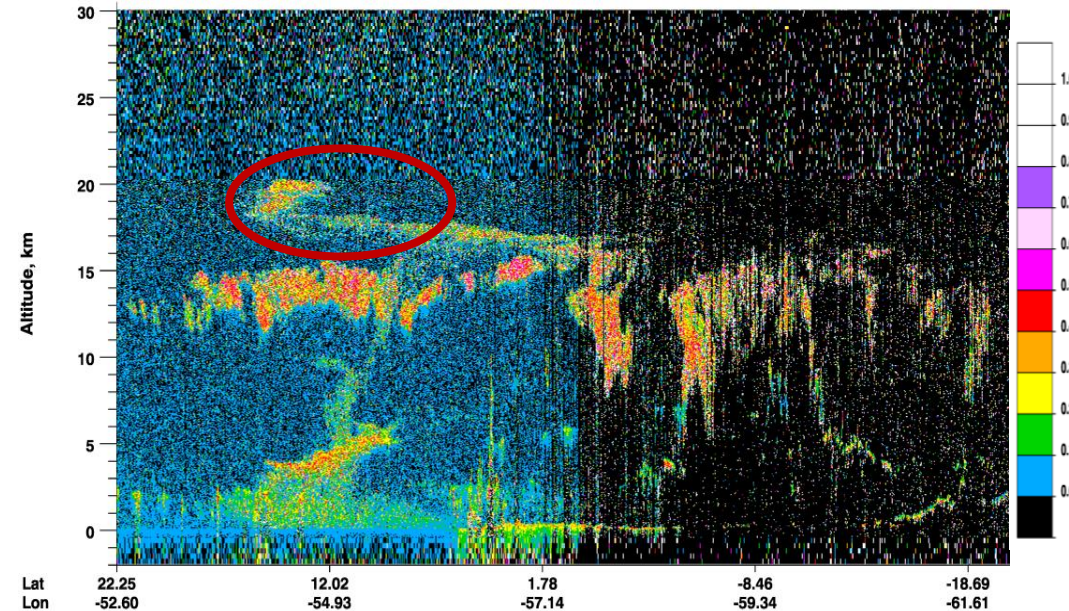
Continued presence of ash with decreased mass loading

2021-04-12T06-00-00Z

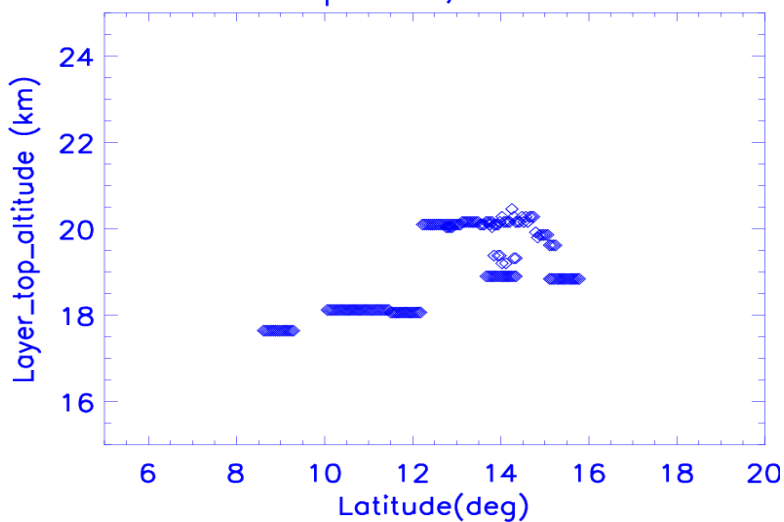
### Total Attenuated Backscatter, 532nm



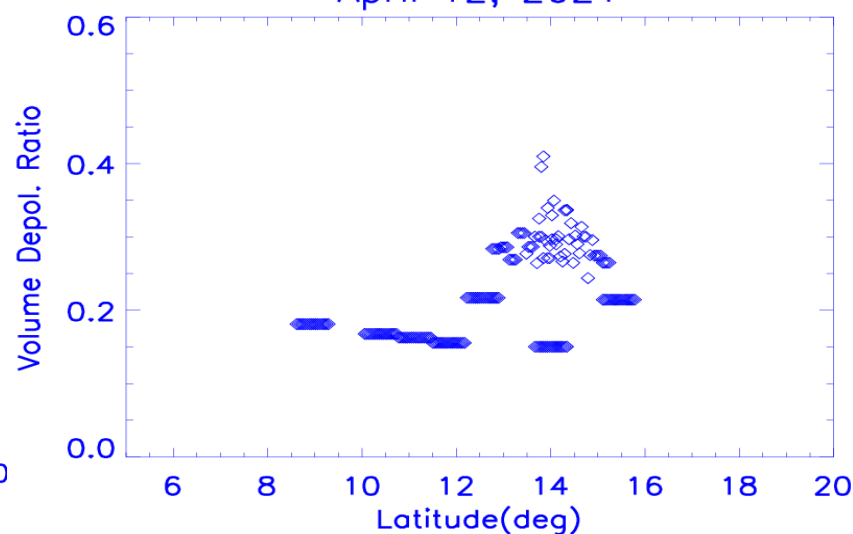
### Depolarization ratio



April 12, 2021



April 12, 2021



April 12, 2021

