

VolRes: Volcano Response plan to be prepared for the next large volcanic eruption

J.-P. Vernier¹ and C. Timmreck²

¹ *National Institute of Aerospace at NASA Langley Research Center, Hampton, USA*

² *Max-Planck-Institut für Meteorologie, Hamburg, Germany*

Volcanic eruptions are among the largest sources of natural variability of our climate system. From surface temperature cooling to the warming of the stratosphere, they trigger complex radiative, climate, chemical and precipitation impacts which are still not fully understood. In order to raise the science questions which, need to be solved to be better prepared for the next large volcanic eruption, the Volcano Response (VolRes) initiative was created. VolRes includes a group of 120 scientists throughout the world working together to be ready for the next large volcanic eruption through a coordinated response plan involving observational and modelling tools. In this presentation, we will highlight the scientific questions which to be addressed to better understand the interactions/impacts of large volcanic eruption and the earth atmosphere. Through smaller volcanic events, we will show how the VolRes group is coordinating a task force to provide initial estimates of SO₂ for the modelling community with a synergy of Geostationary and Low Earth Orbiting Satellites. Finally, we will discuss plans for rapid deployments to make balloon and ground-based measurements of volcanic clouds.