2025 VolImpact-SSiRC Workshop – program

Tuesday, April 22, 2025

Icebreaker at L'Osteria (Anklamer Str. 108, 17489 Greifswald), 19:00-21:30

Wednesday, April 23, 2025

Time			
08:30 – 09:00	**Registration**		
09:00 – 09:20	Opening & welcome by Krupp-Kolleg, organizing committee		
09:20 – 10:30	**Science session I: Climate effects of volcanic eruptions I, Convener: Christian von Savigny**		
09:20 – 09:40	Thomas	Aubry	Historical stratospheric aerosol optical properties and volcanic sulfur emissions for CMIP7 Fast Track
09:40 – 10:00	Kirstin	Krüger	Refining volcanic forcing reconstructions: Eruption season modulates Greenland sulphate deposition from northern extratropical eruptions
10:00 – 10:20	Deepashree	Dutta	Climate Responses to Volcanic Eruption Clusters Under Different Boundary Conditions
10:30 – 11:00	**Coffee break**		
11:00 – 12:30	**Science session II: Climate effects of volcanic eruptions II, Convener: Christian von Savigny**		
11:00 – 11:20	Claudia	Timmreck	Studying the climate impact of large volcanic eruptions with a SMILE
11:20 – 11:40	Magali	Verkerk	Using reduced-complexity volcanic aerosol and climate models to produce large ensemble simulations of Holocene temperature (online?)
11:40 – 12:00	Basudev	Swain	Short-Term Cooling Effects of Volcanic Eruptions on Polar Warming: Future Geoengineering Implication
12:00 – 12:20	Zachary	McGraw	Understanding and Quantifying the Precipitation Response to Large Volcanic Eruptions
12:30 – 13:30	**Lunch break**		
13:30 – 15:00	**Science session III: Atmospheric processes I, Convener: Claudia Timmreck**		
13:30 – 13:50	Ulrike	Niemeier	Modelled and observed evolution of a volcanic cloud: what have we learned from VolARC?
13:50 – 14:10	Christian	Löns	Aerosol transport of a stratospheric streamer towards high latitudes in spring 2017
14:10 – 14:30	Johan	Friberg	Simulating volcanic eruptions using SO2 data compiled at sub-kilometer vertical resolution – our recent and near-future studies
14:30 – 14:50	Fatemeh	Zarei	Impact of volcanic aerosols on cloud microphysical processes and cloud hydrometeor behavior
15:00 – 15:30	**Coffee break**		
15:30 – 16:30	**Science session IV: Atmospheric processes II, Convener: Claudia Timmreck**		
15:30 – 15:50	Andrea	Burke	Revisiting the 'transfer function' of stratospheric sulfur loading from volcanic sulfate deposited on polar ice sheets
15:50 – 16:10	Pasquale	Sellitto	The optical properties of stratospheric aerosol layer perturbation of the Hunga volcano eruption of January 15th, 2022
16:10 – 16:30	Christian	von Savigny	Different ways to turn the sky green – volcanic and non-volcanic
16:30 – 18:00	**Poster session**		
19:00 – 20:30	**Evening talk by Andrea Burke, Convener: Christian von Savigny**		

Poster Session:

1	Santiago	Arellano	Synergy of ground-based NOVAC and space-based platforms for global monitoring of volcanic emissions
2	Julia	Bruckert	Modeling the Plume Dynamics and Stratospheric Injections of the 2022 Hunga Eruption with Large Eddy Physics
3	Robert	Damadeo	An empirical characterization of the aerosol Ångström exponent interpolation bias using SAGE III/ISS data
4	Robert	Damadeo	Predicting Stratospheric Aerosol Extinction Coefficients After Perturbed Events Using Space-based observations in the context of GloSSAC (Mahesh Kovilakam)
5	Antonin	Knizek	The Scattering Reference Forward Model
6	Charlotte	Lange	Rapid adjustments after volcanic outbreaks in model and reanalysis data
7	Anna	Lange	Investigating the ability of satellite occultation instruments to monitor possible geoengineering experiments
8	Graham	Mann	Chemical and isotopic analysis of volcanic ash and sea salts in the Hunga volcanic plume (Mathieu Colombier)
9			Using HYSPLIT model to map SAGE III/ISS measurements to Hunga Tonga-Hunga Ha'apos;apai plume (Mary Cate McKee)
10	Viktor Ixion	Mészáros	Comparing Global Space- and Ground-Based Platforms for High-Resolution Monitoring of Volcanic Gas Emissions
11	Melina	Sebisch	How do volcanic eruptions effect cloud hydrometeor properties? A case study of the Raikoke eruption 2019
12	Pasquale	Sellitto	Radiative Heating Rates in Stratospheric Volcanic Plumes: Insights from the 2022 Hunga and 2019 Raikoke plumes (Aurélien Podglajen)
13	Yook	Simchan	The Impact of 2022 Hunga Tonga-Hunga Ha’apai (Hunga) Eruption on Stratospheric Circulation and Climate
14	Salman	Tariq	Investigating the changes in air quality associated with Hunga Tonga eruption using remote sensing
15	Isabelle	Taylor	Ash column heights and ascent rates for the April 2021 La Soufrière eruption estimated with the Advanced Baseline Imager
16	Larry	Thomason	The depiction of El Chichón and Pinatubo in GloSSAC: Shortcomings and improvements
17	Hazel	Vernier	Impact of the April 2024 Ruang volcanic eruption on the Asian Tropopause Aerosol Layer: insights from Balloon measurements
18	Felix	Wrana	Effect of volcanic sulfur dioxide emission strength on stratospheric aerosol size evolution
19	Chen	Xu	The Chemical Impacts of Volcanic Lightning: A Comprehensive Simulation and Assessment Approach

Thursday, April 24, 2025

Time			
09:00 – 10:30	**Session V: Observations of volcanic aerosols and precursor species I, Convener: Kirstin Krüger**		
09:00 – 09:20	Lorenzo	Fabris	Improved TROPOMI SO2 plume height and column density retrievals from 2023-2024 eruptions
09:20 – 09:40	Michael	Lecours	Volcanic aerosols observed by the Atmospheric Chemistry Experiment
09:40 – 10:00	Sergey	Khaykin	Exploring stratospheric aerosol composition and transport with EarthCARE ATLID and ground-based lidars
10:00 – 10:20	Ronald	Eixmann	Stratospheric Aerosol Measurements Using a Frequency Scanning Lidar
10:30 – 11:00	**Coffee break**		
11:00 – 12:30	**Session VI: Observations of volcanic aerosols and precursor species II, Convener: Kirstin Krüger**		
11:00 – 11:20	Philipp	Joppe	The influence of non-stratospheric volcanic eruptions on the stratospheric sulfate aerosol
11:20 – 11:40	Christine	Pohl	Stratospheric aerosol extinction coefficients from limb scattering instruments: Tackling differences in aerosol data products in the aftermath of volcanic eruptions
11:40 – 12:00	Océane	Soares	Constraining optical properties of wildfire and volcanic aerosols using satellite lidar and ground-based lidars
12:00 – 12:20	Hauke	Schmidt	On the State-Dependence of Stratospheric Sulfate Aerosol Clear-Sky Forcing and Feedback
12:20 – 14:00	Lunch break		
14:00 – 16:00	**Excursions**		
19:00 – 21:00	**Conference dinner @ Krupp institute of advanced studies**		

Friday, April 25, 2025

Time			
09:00 – 10:30	**Session VII: Observations of volcanic aerosols and precursor species III, Convener: Ulrike Niemeier**		
09:00 – 09:20	Robert	Damadeo	Empirically Observed and Repeatable Progression of Stratospheric Perturbative Events from SAGE Observations (Kevin Leavor)
09:20 – 09:40	Paul	Ruyneau de Saint-George	Unprecedented growth of volcanic aerosols in vorticized volcanic plume parts from 2019 Raikoke eruption (Kuril Islands)
09:40 – 10:00	Juan Carlos	Antuña-Marrero	SSiRC Data Rescue of Stratospheric Aerosol Measurements: Did the aerosols from the first Mt Agung eruptions on March 17th, 1963 arrived around a month later in White Sands, US, at 32°N?
10:00 – 10:20			
10:30 – 11:00	**Coffee break**		
11:00 – 12:30	**Session VIII: Effects of the Hunga eruption in January 2022 I, Convener: Juan Carlos Antuña-Marrero**		
11:00 – 11:20	Graham	Mann	The progression and global dispersion of the Hunga aerosol cloud, and influence from co-emitted water vapour, aligned to the APARC Hunga impacts report
11:20 – 11:40	Bernard	Legras	The first month of the stratospheric plume of the 2022 Hunga Eruption
11:40 – 12:00	Clair	Duchamp	Aerosol Composition and Extinction Retrievals Using CALIOP: Case Study of the Aerosol Plume from the 2022 Hunga Eruption
12:00 – 12:20	Dimitri	Trapon	Tracking the stratospheric aerosols from Hunga-Tonga volcanic eruption with Aeolus – the first wind lidar in space
12:30 – 13:30	**Lunch break**		
13:30 – 15:00	**Session IX: Effects of the Hunga eruption in January 2022 II, Convener: Julia Bruckert**		
13:30 – 13:50	Giovanni	Souza	Investigating Long-Term Aerosol Plume Dynamics from the Hunga Eruption with In-Situ and Satellites Observations over Brazil
13:50 – 14:10	Akos	Horvath	Transient Darkening of Low-Level Liquid Clouds by the Hunga Lamb Wave Observed in GOES-R Imagery
14:10 – 14:30	Zhihong	Zhuo	Comparing Multi-Model Ensemble Simulations with Observations and Decadal Long Projections of Upper Atmospheric Variations Following the Hunga Eruption
14:30 – 14:50	Sandra	Wallis	The 2022 Hunga eruption and its potential impact on the 2023/24 and 2024 noctilucent cloud seasons
14:50 – 15:20	**Coffee break**		
15:20 – 16:00	**Concluding remarks**		