

Chat time: Wednesday, 6 May 2020, 08:30–10:15

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## **Theme 1: Past volcanic event: constraining volcanic forcing and climate response from natural archives and climate models**

**1-** D2211 |

EGU2020-12957

### **Persistent draining of the stratospheric $^{10}\text{Be}$ reservoir after the Samalas volcanic eruption (1257 CE)**

**Mélanie Baroni**, Edouard Bard, Jean-Robert Petit, Sophie Viseur, and Aster Team

**2-** D2224 |

EGU2020-4

### **Where is the Toba eruption in the Vostok ice core? Clues from tephra, O and S isotopes**

**Joel Savarino**, Elsa Gautier, Nicolas Caillon, Emmanuelle Albalat, Francis Albarède, Shohei Hattori, Jean-Robert Petit, and Vladimir Lipenkov

**3-** D2225 |

EGU2020-4131

### **Toba volcano super eruption destroyed the ozone layer and caused a human population bottleneck**

**Sergey Osipov**, Georgiy Stenchikov, Kostas Tsigaridis, Allegra LeGrande, Susanne Bauer, Mohamed Fnais, and Jos Lelieveld

**4-** D2226 |

EGU2020-5038

### **The 4.2 ka cal BP major eruption of Cerro Blanco, Central Andes**

**Jose-Luis Fernandez-Turiel**, Francisco-Jose Perez-Torrado, Alejandro Rodríguez-Gonzalez, Norma Ratto, Marta Rejas, and Agustin Lobo

— **30 min chat** : including 5 min each + 10min overarching questions/discussions on the theme

## **Theme 2: Impact on past societies**

**5-** D2214 |

EGU2020-12338

### **Influence of regional anthropogenic changes over Nile region on the climate system during the late Holocene (~2500 years before present)**

**Ram Singh**, Allegra N. LeGrande, and Kostas Tsigaridis

6- D2215 |

EGU2020-22127

**Volcanic Impacts on Climate and Society in First Millennium BCE Babylonia**

**Francis Ludlow**, Conor Kostick, Rhonda McGovern, and Laura Farrelly

— 20 min chat : including 5 min + 10min overarching questions/discussions on the theme (and linking with previous theme)

**Theme 3: Constraining volcanic forcing and climate response from processes based (chemistry and dynamics) observations and climate modelling**

7- D2244 |

EGU2020-21721

**Recovered measurements of the 1960s stratospheric aerosol layer for new constraints for volcanic forcing in the years after 1963 Agung**

**Graham Mann**, Juan Carlos Antuna Marrero, Amanda Maycock, Christine McKenna, Sarah Shallcross, Sandip Dhomse, Larry Thomason, Beiping Luo, Terry Deshler, and James Rosen

8- D2210 |

EGU2020-8333

**Volcanically induced stratospheric water vapor changes**

**Clarissa Kroll**, Alon Azulay, Hauke Schmidt, and Claudia Timmreck

9- D2212 |

EGU2020-5254

**Large variations in volcanic aerosol forcing efficiency due to eruption source parameters and rapid adjustments**

**Lauren Marshall**, Christopher Smith, Piers Forster, Thomas Aubry, and Anja Schmidt

10- D2230 |

EGU2020-3464

**Interactive stratospheric aerosol model experiments suggest a strong impact of climate change on the aerosol evolution and radiative forcing from future eruptions.**

**Thomas Aubry**, Anja Schmidt, and Jim Haywood

11- D2241 |

EGU2020-8470

## Modelling new particle formation in a passive volcanic plume using a new parameterisation in WRF-Chem - effects on climate-relevant variables at the regional scale

Céline Planche, **Clémence Rose**, Sandra Banson, Aurelia Lupascu, Mathieu Gouhier, and Karine Sellegri

— 35 min chat : including 5 min + 10min overarching questions/discussions on the theme

### Theme 4: Climate variability response to volcanic forcing

#### -Extratropical variability

12- D2243 |

EGU2020-20415

#### Etesian winds after major volcanic eruptions

**Stergios Misios**, Ioannis Logothetis, Mads F. Knudsen, Christoffer Karoff, and Kleareti Tourpali

#### -Tropical variability

13- D2213 |

EGU2020-2067

#### ITCZ shift and extratropical teleconnections drive ENSO response to volcanic eruptions

**Francesco S.R. Pausata**, Davide Zanchettin, Christina Karamperidou, Rodrigo Caballero, and David S. Battisti

— 20 min chat: including 5 min each + 10min overarching questions

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### Theme 5: Large scale atmospheric perturbations by recent moderate volcanic eruptions

1- D2216 |

EGU2020-11246

#### Recent evolution of stratospheric aerosol load from ground-based lidars and satellites: impact of volcanic eruptions and wildfires.

**Sergey Khaykin**, Sophie Godin-Beekmann, Ghassan Taha, Artem Feofilov, Adam Bourassa, Landon Rieger, and Alain Hauchecorne

2-D2217 |

EGU2020-2406

### **Impact of the Ambae, Raikoke and Ulawun eruptions in 2018-2019 on the global stratospheric aerosol layer and climate**

**Corinna Kloss**, Pasquale Sellitto, Bernard Legras, Jean-Paul Vernier, Fabrice Jégou, M. Venkat Ratnam, B. Suneel Kumar, B. Lakshmi Madhavan, Maxim Eremenko, and Gwenaël Berthet

3- D2239 |

EGU2020-7548

### **Raikoke aerosol clouds observed from Tbilisi, Georgia and Halle, Belgium using ground-based twilight sky brightness spectral measurements.**

**Nina Mateshvili**, Didier Fussen, Iuri Mateshvili, Filip Vanhellemont, Christine Bingen, Tamar Paatashvili, Erkki Kyrölä, Charles Robert, and Emmanuel Dekemper

— 20 min chat : including 5 min overarching questions/discussions on the theme

## **Theme 6: Tools for the monitoring and study of volcanic plumes and their impacts: atmospheric modelling**

4- D2218 |

EGU2020-16028

### **Dispersion Model Evaluation for the Sulfur Dioxide Plume from the 2019 Raikoke Eruption using Satellite Measurements.**

**Johannes de Leeuw**, Anja Schmidt, Claire Witham, Nicolas Theys, Richard Pope, Jim Haywood, Martin Osborne, and Nina Kristiansen

D2238 |

EGU2020-7036

### **5- New strategies for chemistry-transport modelling of volcanic plumes: application to the case of Mount Etna eruption in March 18, 2012**

**Mathieu Lachatre**, Sylvain Mailler, Laurent Menut, Solene Turquety, Pasquale Sellitto, Henda Guerhazi, Giuseppe Salerno, and Elisa Carboni

6- D2219 |

EGU2020-4791

### **Update of the volcanic sulfur emission inventory in MOCAGE CTM and its impact on the budget of sulfur species in the atmosphere**

**Claire Lamotte**, Virginie Marécal, and Jonathan Guth

7- D2236 |

EGU2020-2623

## **Volcanic ash chemical aging from multiple observational constraints for the Pinatubo eruption**

**Mohamed AbdelKader**, Georgiy Stenchikov, Christoph Bruhl, and Jos Lelieveld

— **30 min chat** : including 5 min overarching questions/discussions on the theme

## **Theme 7: Tools for the monitoring and study of volcanic plumes and their impacts: remote-sensing observatios**

**8-** D2220 |

EGU2020-797

### **Monitoring volcanic SO<sub>2</sub> emissions with the Infrared Atmospheric Sounding Interferometer**

**Isabelle Taylor**, Elisa Carboni, Tamsin A. Mather, and Roy G. Grainger

D2235 |

EGU2020-1008

### **9- A novel technique for studying volcanic gas chemistry and dispersion on short time scales**

**Christopher Fuchs**, Jonas Kuhn, Nicole Bobrowski, and Ulrich Platt

— **15 min chat** : including 5 min overarching questions/discussions on the theme

## **Theme 8: Impact of volcanic plumes on air quality, health, environment and climate at the regional/local scale**

**10-** D2221 |

EGU2020-16190

### **'This advice is absurd': issues with providing generic advice on community protection from chronic volcanic degassing**

**Claire J. Horwell** and Tamar Elias

**11-** D2223 |

EGU2020-405

### **Spatial and temporal variations in ambient SO<sub>2</sub> and PM<sub>2.5</sub> levels influenced by Kilauea Volcano, Hawai'i, 2007 - 2018**

**Rachel Whitty**, Evgenia Ilyinskaya, Emily Mason, Penny Wieser, Emma Liu, Anja Schmidt, Tjarda Roberts, Melissa Pfeffer, Barbara Brooks, Tamsin Mather, Marie Edmonds, Tamar Elias, David Schneider, Clive Oppenheimer, Adrian Dybwad, Patricia Nadeau, and Christoph Kern

**12-** D2234 |  
EGU2020-162

**Trace element emissions during the 2018 Kilauea Lower East Rift Zone eruption**

**Emily Mason**, Penny Wieser, Emma Liu, Evgenia Ilyinskaya, Marie Edmonds, Rachel C W Whitty, Tamsin Mather, Tamar Elias, Patricia Amanda Nadeau, Christoph Kern, David J Schneider, and Clive Oppenheimer

**13-** D2242 |  
EGU2020-19656

**Self-limiting atmospheric lifetime of environmentally reactive elements in volcanic plumes**

Evgenia Ilyinskaya, **Emily Mason**, Penny Wieser, Lacey Holland, Emma Liu, Tamsin A. Mather, Marie Edmonds, Rachel Whitty, Tamar Elias, Patricia Nadeau, David Schneider, Jim McQuaid, Sarah Allen, Clive Oppenheimer, Christoph Kern, and David Damby

**14-** D2237 |  
EGU2020-4816

**Observation and Quantification of CO<sub>2</sub> passive degassing at sulphur Banks from Kilauea Volcano using thermal Infrared Multispectral Imaging**

Stephane Boubanga Tombet, **Sylvain Gatti**, Andreas Eisele, and Vince Morton

**15-** D2240 |  
EGU2020-8337

**Small-scale volcanic aerosols variability, processes and direct radiative impact at Mount Etna during the EPL-RADIO/REFLECT campaigns**

**Pasquale Sellitto**, Giuseppe Salerno, Alessandro La Spina, Tommaso Caltabiano, Simona Scollo, Antonella Boselli, Giuseppe Leto, Ricardo Zanmar Sanchez, Alessia Sannino, Suzanne Crumeyrolle, Benjamin Hanoune, Chiara Giorio, Salvatore Giammanco, Tjarda Roberts, Alcide di Sarra, Bernard Legras, and Pierre Briole

**16-** D2222 |  
EGU2020-9858

**Solubility of metals in aerosol samples from Mount Etna during the EPL-REFLECT campaign**

**Chiara Giorio**, Sara D'Aronco, Lidia Soldà, Salvatore Giammanco, Alessandro La Spina, Giuseppe Salerno, Alessia Donatucci, Tommaso Caltabiano, and Pasquale Sellitto

— 40 min chat : including 5 min overarching questions/discussions on the theme