

Agenda for the CCMI 2023 Science Workshop

October 3 – 5, 2023

Centre International de Conférences

Météo-France, Toulouse

All times are listed as Central European Summer Time (CEST) - UTC + 2 hours

Tuesday 3rd October

Session 1: CCMI Workshop Overview		
09:00-09:10	Météo-France and the LOC	Welcome
09:10-09:30	CCMI Co-chairs	Introduction / Goals of the workshop
09:30-09:50	Charlotte Pascoe	Behind the scenes of the CCMI-2022 archive at CEDA
09:50-10:10	Birgit Hassler	Earth System Model Evaluation Tool (ESMValTool): analyzing CMIP data made easy
10:10-10:30	Daan Hubert	The ozone CCI / C3S Climate Data Records portfolio and recent science results
10:30-10:50	Gabriel Chiodo	Emerging divergence of observed and modeled ozone in the tropical stratosphere and troposphere
10:50-12:30	Poster Session 1 – with Coffee/Tea	
12:30-13:30	Lunch	
Session 2: CCMI and other collaborative projects		
13:30-13:50	Fiona O'Connor	AerChemMIP2: Advancing our understanding of the role of trace gases and aerosols in climate
13:50-14:10	Jonathon Wright	The SPARC-Reanalysis Intercomparison Project: Summary of Phase 1 and Plans for Phase 2 (S-RIP2): Chemical Reanalyses & Air Quality, Tropospheric Circulation, Extreme Events, and More
14:10-14:30	Tim Butler	Planning the next round of HTAP multi-model experiments (HTAP3)
14:30-14:50	Clara Orbe	Understanding Ozone-QBO Feedbacks: A New Joint SPARC Quasi-Biennial Oscillation Initiative (QBOi) and Chemistry Climate Modeling Initiative (CCMI) Activity
14:50-15:10	Bill Collins	The Tropospheric Ozone Assessment Report (TOAR) ozone radiative forcing working group: Progress and Plans
15:10-15:30	Alexander Archibald	An ace in the hole or a house of cards: In search of a DeCK experiment for Chemistry and Aerosols
15:30-16:00	Coffee/Tea	
16:00-18:00	Discussion: Planning a new set of CCMI experiments	
18:00-20:00	Icebreaker – Conference centre lobby	

Wednesday 4th October

Session 3: Ozone and Climate		
09:00-09:20	Timofei Sukhodolov	Stratospheric ozone-climate interactions in idealized DECK experiments
09:20-09:40	William Collins	Past and future climate forcing from ozone depleting substances
9:40-10:00	Marina Friedel	The influence of future changes in springtime Arctic ozone on stratospheric and surface climate
10:00-10:20	Peter Colarco	Evaluation of the NASA GEOS Chemistry-Climate Model Coupled Atmosphere-Ocean Configuration
10:20-10:50	Coffee/tea	
Session 4: Tropospheric Chemistry		
10:50-11:10	Mathew Evans	External forcing of tropospheric ozone budget
11:10-11:30	Lee Murray	Forecasted climate penalties to surface ozone and PM2.5 across the 21st century under different SSP scenarios
11:30-11:50	Mariano Mertens	Analysis of the differences in tropospheric ozone and methane lifetime between CCMI1 and CCMI2 simulations
11:50-12:10	Daniel C. Anderson	Constraining tropical hydroxyl radical abundance with satellite observations of its drivers
12:10-12:30	Joowan Kim	Uncertainty in TTL processes and their impact on Stratospheric Water Vapor in CCMI simulations
12:30-12:50	Qing Liang	The Impact of Asian Summer Monsoon on Transport of Very-Short-Lived Chlorocarbons to the Stratosphere
12:50-14:10	Lunch	
Session 5: Effects of Hunga Tonga – Hunga Ha’apai		
14:10-14:30	Paul Newman	The SPARC Hunga Tonga-Hunga Ha’apai Special Report
14:30-14:50	Martyn Chipperfield	Ongoing impact of the Hunga Tonga - Hunga Ha’apai Eruption on Stratospheric Ozone in 2023 (and beyond)
14:50-15:10	William Randel	Hunga-Tonga impacts on the stratosphere from WACCM ensemble simulations
15:10-15:30	Jun Zhang	Chemistry contribution to stratospheric ozone depletion after the unprecedented water rich Hunga Tonga eruption
15:30-15:50	Xin Zhou	The influence of internal climate variability on stratospheric water vapour increases after large-magnitude explosive tropical volcanic eruptions
15:50-17:30	Poster session 2 - with Coffee/Tea	
From 19:00*	Conference dinner – Ma Biche sur Le Toit	

* Sunset at 19:30

Thursday 5th October

Session 6: Chemistry-Climate Interactions		
09:00-09:20	Frederik Harzer	How well do CCMI models represent interannual polar vortex-ozone co-variability during northern hemispheric winter?
09:20-09:40	Marina Friedel	Weakening of springtime Arctic ozone depletion with climate change
09:40-10:00	Marta Abalos	What determines the spread in Arctic ozone recovery rates?
10:00-10:20	Ewa Bednarz	Injection strategy – a driver of atmospheric circulation and ozone response to stratospheric aerosol geoengineering
10:20-10:40	Andrin Nico Jörmann	The future of the ozone layer in a stratospheric aerosol injection scenario
10:40-11:10	Coffee/tea	
Session 7: Observations and Models		
11:10-11:30	Sandip Dhomse	Construction of daily gap-free long-term stratospheric trace gases data set using machine learning
11:30-11:50	Kleareti Tourpali	CCMI-2022 Ref-D1 and Ref-D2 stratospheric ozone profiles: trends, natural variability and comparison to observations and CCMI-1 Ref-C2
11:50-12:10	Andreas Chrysanthou	The conundrum of the recent variations in stratospheric ozone: An update
12:10-13:30	Lunch	
13:30-15:00	Discussion: Planning a new set of CCMI experiments – Next steps	
15:00	Close of the Meeting	

Posters

For display from 08:00 October 3rd to 14:00 October 5th

Abstract No.	Last Name	First Name	Title
103	Yamashita	Yousuke	The role of sea-surface conditions in Antarctic polar-vortex and associated wave forcing with a multi-member ensemble simulation of the CCSR/NIES-MIROC3.2 CCM
104	Nayeem	Abdullah Al	OMI derived tropospheric NO ₂ trends over urban areas of Bangladesh from 2015-2022
111	Tariq	Salman	Remote sensing of air pollution due to Hunga Tonga eruption
119	Kuchar	Ales	Impacts of the Hunga Tonga-Hunga Ha'apai Eruption: Insights from the SOCOLv4 ESM
121	Chau	Chun Hang	Simulated mixing in the upper troposphere by small scale turbulence
123	Solanki	Ranjitkumar	Effect of Lockdown on Aerosol Optical Depth using Satellite (MODIS Aqua and Terra), based observation over Surat
125	Liang	Qing	The impact of January 2022 Eruptions of Hunga Tonga-Hunga Ha'apai on Stratospheric Ozone in the NASA GEOS Earth System Model
126	Akiyoshi	Hideharu	Dependence of column ozone on future ODSs and GHGs in the variability of 500-ensemble members
132	Kumar	Pavan	Nitrogen dioxide as Proxy Indicator of Air Pollution from Fossil Fuel Burning in New Delhi: Impact on Weather as Revealed by Sentinel-5 Precursor (5p) Spectrometer Sensor
133		Aishwarya	Blue-Red-NIR Model for Chlorophyll- a Retrieval in Highly Turbid Inland Densu River Basin in South-East Ghana, West Africa using Landsat-8 Optical Sensor Data
137	Li	Yang	The impact of El Niño-Southern Oscillation on the total column ozone over the Tibetan Plateau
141	Kerzenmacher	Tobias	O3as Plotting Tool: Unveiling Ozone Trends and Stratospheric Ozone Recovery
144	Zilker	Franziska	Stratospherically induced circulation changes under the extreme conditions of the No-Montreal-Protocol scenario

146	Wright	Jonathon	Aerosol Effects on Heating in the Asian Monsoon Tropopause Layer
149	Shahid	Muhammad Zeeshaan	Long-Term Variability of Aerosol Concentrations and Optical Properties over South Asia
150	Verma	Sunita	Spatiotemporal variations of ozone concentration over IGP, India
202	O'Connor	Fiona	AerChemMIP2 in CMIP7: Quantifying the role of short-lived climate forcers in climate change and air quality