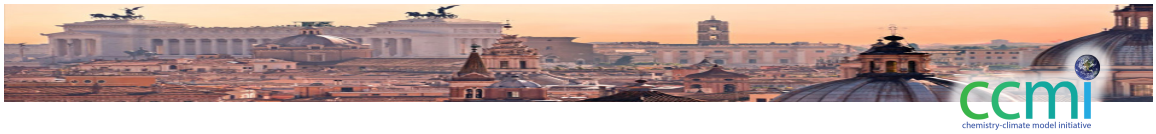

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TUESDAY - 6 OCTOBER: CLOSED IGAC/SPARC CCMI SCICENTIFIC STEERING GROUP MEETING START 18:00

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WEDNESDAY - 7 OCTOBER: Joint AeroCom/CCMI AerChemMIP Science Day at ESRIN

Buses leave Frascati for ESRIN at 8:00 AM

08:30 ***Registration opens***

AerChemMIP BACKGROUND SESSION

09:00	Welcome	*ESA*
09:10	Goals and status of CMIP6	*Veronika Eyring (**INVITED**)*
09:30	Overview of AerChemMIP	*AerChemMIP co-chairs*
09:50	RFMIP	*Piers Forster (**INVITED**)*
10:10	**Discussion**	*AerChemMIP co-chairs*

11:00 ***COFFEE BREAK***

SESSION ON EMISSIONS

11:30	Historical and future emissions	*Steven Smith* (***INVITED***)
12:00	Tropospheric and stratospheric ozone database	*Michaela Hegglin*
12:15	**Discussion**	*AerChemMIP co-chairs*

SESSION ON AEROSOL FORCING FIELDS

12:45	Aerosol model median database	*Gunnar Myhre* (***INVITED***)
13:00	Aerosol plume climatology	*Stephanie Fiedler* (***INVITED***)

13:15 ***LUNCH BREAK***

SESSION ON AerChemMIP SIMULATION PLAN

14:30	**Discussion** AerChemMIP experiments & diagnostics	*AerChemMIP co-chairs*

15:30 ***COFFEE BREAK***

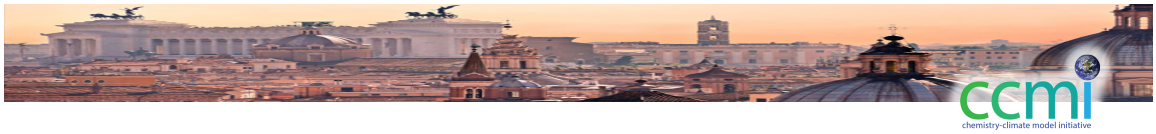
AerChemMIP SCIENCE SESSION

16:00	Circulation as key mediator of aerosol-driven climate impacts	*Massimo Bollasina*
16:15	MERRA Version 2: The Goddard aerosol reanalysis 1979 to present	*Cynthia Randles*
16:30	Local and remote climate effects of regional pollutant emissions	*Apostolos Voulgarakis*
16:45	Emergent constraints in chemistry-climate interactions	*Kevin Bowman*
17:00	Relative climate impacts of halocarbons and CO_2 in the tropical UTLS	*Ted Shepherd*
17:15	Modeling assessment of the climate response to stratospheric aerosol	*Claudia Timmreck*

17:30 ***AerChemMIP SCIENCE POSTER SESSION***

ICEBREAKER

Buses leave ESRIN at 19:00 and 19:30



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THURSDAY - 8 OCTOBER: CCMI WORKSHOP DAY 1 at CNR (Tor Vergata, Frascati/Rome)

Buses leave Frascati P. Marconi for CNR at 8:00 AM

08:30	***Registration opens***	

CCMI BACKGROUND SESSION		
09:00	Welcome & logistics	*Federico & Chiara*
09:10	CCMI status quo and way ahead	*Michaela & Jean-François (CCMI co-chairs)*

CCMI linkages to ongoing assessment activities		
09:30	Preparing for the 2018 WMO/UNEP ozone assessment	*Paul Newman (**INVITED**)*
09:50	TOAR - open science questions and status quo	*Owen Cooper (**INVITED**)*
10:10	**Discussion**	*CCMI co-chairs*

10:30	***COFFEE BREAK***	

CCMI SCIENCE SESSION I: MODELLING ADVANCES		
11:00	The data request – status quo and future evolution	*David Plummer (**INVITED**)*
11:15	CCMI WACCM: Model development and science highlights	*Doug Kinnison*
11:30	Nudged CCM-SMILES comparison during the 2010 SSW	*Hideharu Akiyoshi*
11:45	Impacts of ozone depletion on trends and extreme events	*Olaf Morgenstern*
12:00	CCMI-1 evaluation with the ESMValTool	*Irene Cionni*
12.15	**Discussion**	*David Plummer & CCMI co-chairs*

12:30	***LUNCH BREAK***	

CCMI SCIENCE SESSION II: TROPOSPHERIC CHEMISTRY, DYNAMICS & TRANSPORT		
13:30	Role of climate, the stratosphere and emissions on US surface ozone trends and extremes	*Meiyun Lin (**INVITED**)*
13:45	Controlling factors of tropospheric OH and methane lifetime	*Simone Tilmes*
14:00	Sensitivity of tropospheric ozone trends to emission uncertainty	*Sarah Monks*
14:15	OH inter-hemispheric ratio and inter-annual variations in CCMs	*Prabir Patra*
14:30	Changes in transport from the NH midlatitude surface	*Clara Orbe*
14:45	The climate benefit of air quality mitigation	*Bill Collins*

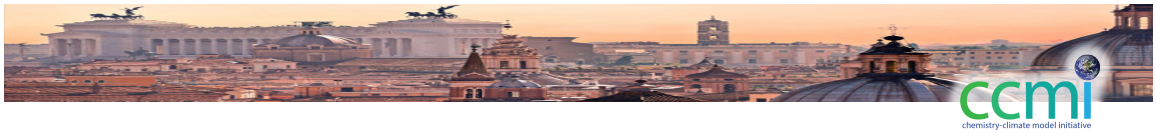
15:00	***COFFEE BREAK***	

15:30	***CCMI POSTER SESSION I***	

CCMI SCIENCE SESSION III: OBSERVATIONS		
17:00	ACAM	*Suvarna Fadnavis (**INVITED**)*
17:15	Future tropospheric satellite observations	*Pieternel Levelt (**INVITED**)*
17:30	A new re-analysis of global atmospheric composition	*Johannes Flemming*
17:45	ATOM: in-situ observations to constrain global-scale models	*Tom Ryerson*

18:00	***CHILL-OUT WINE SESSION AT CNR***	

Buses leave CNR for Frascati at 18:15



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FRIDAY - 9 OCTOBER: CCMI WORKSHOP DAY 2 at CNR (Tor Vergata, Frascati/Rome)

Buses leave Frascati P. Marconi for CNR at 8:00 AM

CCMI SCIENCE SESSION IV: STRATOSPHERE AND STRAT-TROP COUPLING

08:30	Stratospheric influence on the troposphere: An overview	*Seok-Woo Son (**INVITED**)*
08:45	Effect of recent SST Trends on the Arctic stratospheric vortex	*Chaim Garfinkel*
09:00	ENSO's role in extremely low Arctic ozone events	*Wenshou Tian*
09:15	Prognosing volcanic aerosols for use in CCMs	*Andrew Gettelman*
09:30	The Brewer-Dobson circulation – climate feedback	*Amanda Maycock*
09:45	Tropical tropospheric Br budget from CONTRAST and ATTREX	*Ross Salawitch*

10:00 ***COFFEE BREAK***

10:30 ***CCMI POSTER SESSION II***

12:30 ***LUNCH BREAK***

13:30 ***CCMI CHARRETTES***

Topics for discussion in sub-groups

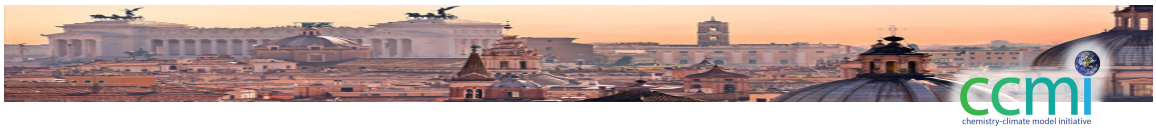
1) Benchmarking and process-oriented diagnostics in troposphere
2) Benchmarking and process-oriented diagnostics in stratosphere
3) Observational needs
4) Modelling needs

15:00 ***CCMI CHARRETTES SUMMARY SESSION***

16:00 ***END OF MEETING***

Buses leave CNR for Frascati and Rome at 16:30

16:15 ***CLOSED SSG MEETING* ends 17:30**



CCMI AerChemMIP posters (Wednesday presentation @ ESRIN)

Archibald, Alexander T.: State of knowledge of tropospheric ozone sources, sinks and budgets

Butchart, Neal: Separating the effects of future changes in the amounts of greenhouse gases and ozone depleting substances in Met Office Hadley Centre CCMI simulations

Dhomse, Sandip: Evaluation of global aerosol properties simulated by the high resolution coupled chemistry-aerosol-microphysics model C-IFS-GLOMAP

Doumbia, Thierno: Impact of CO and NO2 emission changes on atmospheric composition between 1980 and 2010

Granier, Claire: Evaluation of the anthropogenic and biomass burning emissions used in the CCMI simulations

Griffiths, Paul: Analysis of surface O3 in the UKCA CCMI simulations

Hassler, Birgitt: Comparison of global tropospheric ozone precursors from measurements and the MACCity global emissions inventory

Keslake, Tim: Biomass burning influences on atmospheric composition: a case study to assess the impact of aerosol and gas phase data assimilation

Lee, Lindsay: A multi-model study of the sources of uncertainty in model budgets of tropospheric ozone and OH

Lee, Lindsay: Pinatubo Emulation in Multiple Models (POEMs): planned co-ordinated experiments for the SPARC Stratospheric Sulphur and it's Role in Climate initiative (SSiRC)

Li, Feng: Separating the Effects of Ozone Depletion and Greenhouse Gas Increases on Southern Hemisphere Climate Change

Luo, Jiali: Intra-seasonal Scale Variability of Asian Summer Monsoon Anticyclone from Climate Chemistry Model and Satellite Data

Mann, Graham: Quantifying the radiative forcing from the 1991 Mount Pinatubo eruption

Mann, Graham: Historical Eruption SO2 Emissions Assessment: co-ordinated experiments to intercompare volcanic forcings among interactive stratospheric aerosol CCMs

Mann, Graham: The SSiRC Historical Eruption SO2 Emissions Assessment (HErSEA): intercomparison for interactive stratospheric aerosol models

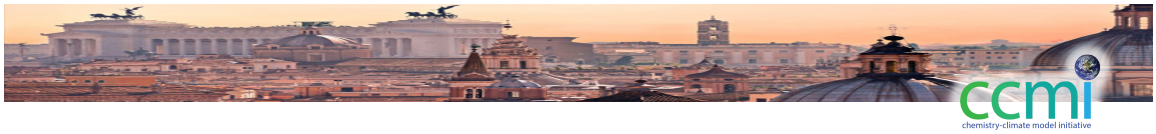
Marshall, Lauren: Disentangling the eruption source parameters that control the climate effects of volcanic eruptions

Naik ,Vaishali: Impact of volcanic aerosols on stratospheric ozone recovery

Newsome, Ben: What is the uncertainty on the ozone radiative forcing from rate constant uncertainty?

Paulot, Fabien: Dry deposition of nitrogen: impact of climate and land-use change

Plummer, David: Estimating the role of imposed forcings, dynamical variability and model biases on the model simulated evolution of ozone



Portmann, Robert: The Global Energy Budget across CMIP5 and CCMI Models

Rap, Alex: The tropospheric ozone radiative forcing and the kernel technique

Rumboldt, Steve: Ammonium nitrate aerosol in UKESM1

Schultz, Martin: The TOAR database in Juelich and its use for model evaluation

Smith, Steve: CEDS - New Historical Emissions for Aerosol and Chemistry Research

Stone, K. A.: Evaluation of the Australian Community Climate and Earth-System Simulator Chemistry-Climate Model

Struzewska, Joanna: Impact of aviation emission on chemical composition and atmospheric dynamics in current and future climate based on coupled GEM-AC model simulations

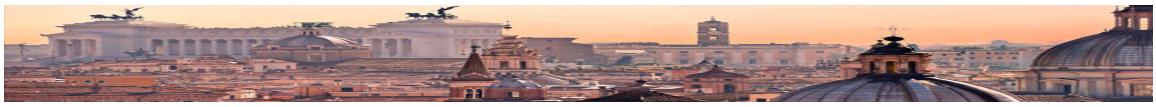
Sudo, Kengo: Interannual variabilities and long-term trends in tropospheric constituents during the recent decades simulated in CHASER (MIROC-ESM)

Tummon, Fiona: Drivers of the tropospheric ozone budget throughout the 21st century in CCMI-1 simulations

Wareing, Nicola: Atmospheric stagnation and Southern Hemisphere climate change

Wenzel, Sabrina: Constraining Future Austral Jet Stream Position and Shifts in the CMIP5 Ensemble by Process-oriented Multiple Diagnostic Regression

Worden, John: Sensitivity of Northern Hemispheric Tropospheric Ozone To Anthropogenic Emissions: Impacts on radiative forcing calculations



CCMI posters (Thursday&Friday presentation @ CNR)

Anderson, Daniel Either: Representation of High Ozone/Low Water Filaments in the CCMI Models

Balkanski, Yves: Simulation of the Laki volcanoe based upon analogs of winds

Bednarz ,Ewa: Future Arctic ozone recovery - the importance of chemistry and dynamics

Birner, Thomas: Role of vertical and horizontal mixing in the tape recorder signal near the tropical tropopause

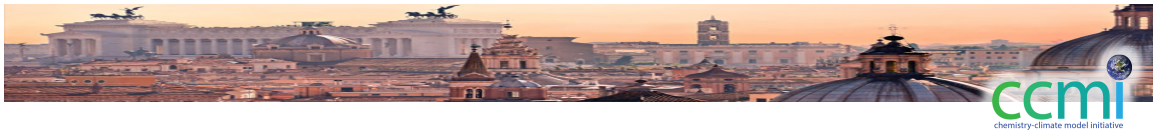
Bowdalo, Dene: Intermodel spreads in the periodicity of Surface Ozone

Braesicke, Peter: ENSO effects on atmospheric ozone: Regional versus zonal mean changes

Brenna, Hans: Modelling the combined halogen and sulfur impact of large Plinian eruptions on ozone and climate

Chandra, S.: Temporal variation of K+ in PM2.5 aerosols and Concentration Weighted Trajectory analysis at Central Delhi, India

Coulon, Ancelin: Evaluating the effects of the Pinatubo volcanic eruption on tropospheric methane using a Chemistry-Climate Model



Dameris, Martin: Strength and weaknesses of chemistry-climate models to reproduce large stratospheric water vapour fluctuations

Dell'Aquila, Alessandro: A process-oriented metric to evaluate the midlatitude atmospheric variability in global datasets

Deushi, M.: Dependence of stratospheric mean age of air on model resolution and transport scheme in REF-C1 simulations

Dhomse, Sandip: Revisiting the hemispheric asymmetry in mid-latitude ozone changes following the Mount Pinatubo eruption: A 3-D model study

Dhomse, Sandip: Revisiting 11-year solar cycle signal profile in stratospheric ozone

Diallo, Mohamadou: Age of stratospheric air in the Chemistry-Climate Model Initiative

Emmons, Louisa: Model evaluation of hydrocarbons

Froidevaux, Lucien: Confronting chemistry climate models with stratospheric composition data

Garfinkel, Chaim: Recent Hadley cell expansion: the role of SSTs, ozone depletion and natural variability

Garny, Hella: Effects of residual transport and mixing on the simulation of stratospheric Age of Air

Harper, Kandice: Evaluation of NASA ModelE2-YIBs in the tropics 1990 - 2010

Heimann, Ines: Colouring methane sources - Developing an offline model based on UM-UKCA

Kaffashzadeh, Najmeh: Evaluation of global model simulation of tropospheric ozone using meteorological variables for time filtering and vertical model level selection

Keeble, J.: Modelling trends in tropical column ozone with the UKCA chemistry-climate model

Kinnison, Doug: Bi-modal Distribution of Tropical Tropospheric Ozone from New Observations and Implications to Process-Oriented Model Evaluation

Kuai, Le: Updates of TES Instantaneous Radiative Kernel (IRK) products in the 9.6-micron ozone band for the CCMI

Kuchar, Ales: Attribution of the 11-year solar cycle in lower-stratospheric temperature and ozone

Liang, Qing: Using CO2 as a diagnostics to evaluate model transport and photochemistry

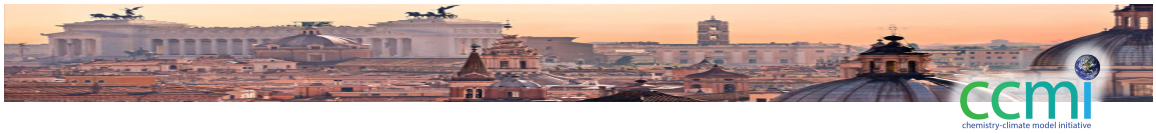
Liao, Hong: Past and future changes in tropospheric ozone and aerosols in China and associated transboundary transport

Liu, Hongyu: Using satellite observations of cloud vertical distribution to improve global model estimates of cloud radiative effect on key tropospheric oxidants

Lovric Mija: Non-stationary solar cycle and stratospheric ozone variations

Meul, S.: Hemispheric asymmetries in midlatitude total ozone column return dates and the effect of the SST handling in CCM simulations

Michou, Martine: Recent evolutions of the aerosol scheme in the CNRM climate model: in view of CMIP6 simulations



Miles, Georgina: Comparisons of satellite-derived and CCM tropospheric ozone

Millan, Luis: Dynamical Ozone Variability from Satellite Data, Reanalyzes and Climate Models: Low Ozone Events an

Miyazaki, Kazuyuki: Evaluation of CCMI and ACCMIP ensemble simulations using atmospheric chemical reanalysis

Murray, Lee T.: A novel proxy for OH variability from space: implications for evaluating global chemistry-climate models

Nagashima ,Tatsuya: On the seasonal cycle of surface O3 in global chemical models

Neu, Jessica L.: Improving our Understanding of the Tropospheric Ozone Response to Variability in the Stratospheric Circulation

Nicely, Julie M.: OH in the TWP: An In-Depth Comparison of CONTRAST and CAM-Chem OH Precursors and Implications for the Oxidative Capacity of the Troposphere

Nowack, Peer Johannes: Ozone changes under solar geoengineering: implications for UV exposure and air quality

Nuetzel, Matthias: Variability of the Asian monsoon anticyclone on intraseasonal and interannual timescales

Oberlaender-Hayn, Sophie: Is the Brewer-Dobson circulation increasing, or moving upward?

Oconnor, F. M.: Processes controlling tropical tropopause temperature and stratospheric water vapour in climate models

Olsen, Mark A.: Tropical and midlatitude tropospheric column ozone response to ENSO in GEOS-5 assimilation of OMI and MLS ozone data

Oman, Luke D.: The Effect of Representing Bromine from VSLS on the Simulation and Evolution of the Ozone Layer

Oman, Luke D.: The Ozone Response to ENSO in Observations and CCMI Simulations

Pearce, Hannah C.: Nitrate aerosol: implications for European air quality and climate

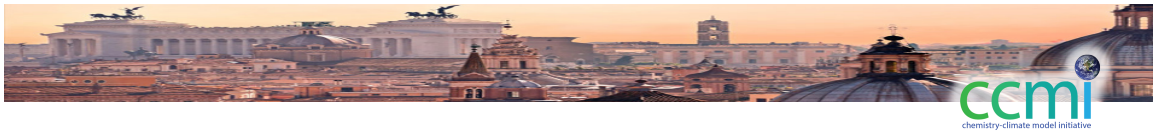
Pitari, Gianni: Stratospheric aerosols from major volcanic eruptions: impact on age-of-air and transport of long-lived species

Putero, Davide: Interannual ozone variability at the NCO-P WMO/GAW global station: influence of stratosphere-to-troposphere exchange

Rea, Gloria: Atmospheric and oceanic long-term changes in the Southern Hemisphere simulated by CMIP5 models

Rozanov, Eugene: NOy production by precipitating energetic particles: CCMI model evaluation using the MIPAS observations

Sacha, Petr: Internal Gravity Wave Activity Hotspot and Implications for the Middle Atmospheric Dynamics and Climatology



Sahu, L. K.: Impact of tropical convection in the vertical distribution of trace gases over an urban site of South Asia

Sakazaki, Takatoshi: Zonally uniform tidal oscillations in the tropical stratosphere

Sasaki, T.: The relationships between dynamical and chemical fields derived from the free- running and specified dynamics modes of the chemistry-climate models

Schultz, M. G.: The TOAR database of global surface ozone observations

Seguel, Rodrigo J.: Stratospheric ozone intrusions over central Chile

Serva Federico: Impact of a stochastic gravity wave parametrization on the stratospheric climate of an AGCM

Sheel, Varun: Role of regional models in simulation budget of trace gases and aerosols over Asia

Sinnhuber, Björn-Martin: Arctic ozone depletion in chemistry-climate models: A multi-model comparison of CCMI C1SD simulations with NDACC data

Stenke, Andrea: Simulation of future atmospheric methane concentrations using the CCM SOCOL

Taverna, Giorgio S.: Transport of trace gases to the Upper Troposphere - Lower Stratosphere in the Asian Monsoon

Tilmes, Simone: Impacts from the G4 Specified Stratospheric Aerosols (G4SSA) GeoMIP Simulation on climate, chemistry, and agriculture, using the CESM-CAM4 climate model

Tiwari, Pushp Raj: Role of the Himalayan orography and aerosols on the dynamics of Asian monsoon

Varma, Sunil: Using Earth observation data to evaluate the processes of CCMI models from ozone-carbon monoxide correlations

Wales, Pamela: A Reevaluation of the Contribution of VSL Bromocarbons to Stratospheric Bry Loading

Walker, Thomas: Constraints on present day and future OH from data assimilation of multiple species from satellite observations and adjoint sensitivity analysis

Waugh, Darryn: Tropospheric transit time distributions and path-dependent lifetimes: Observations and Models

Worden, Helen: Benchmarking climate model top-of-atmosphere radiance in the 9.6 micron ozone band compared to TES

Yamashita, Yousuke: The QBO and solar cycle influences on the Arctic ozone

Zhang, Jiankai: The influence of ENSO on northern mid-latitude ozone during the winter to spring transition