[POSTER 4]

Date / Time (Thu.) October 7, 2021 / 13:55-15:05 (UTC)

Session Code THU3

Session Chair Seok-Woo Son, Ulrike Langematz

[THU3_1] 13:55-13:57

Stratospheric to Tropospheric Fractions in the Tropopause Transition Layer using Water and Ozone Concentrations

Paul A. Newman[1], Leslie R. Lait[1], Junhua Liu[1], Qing Liang[1], Chaitri Roy[2], and A. R. Ravishankara[2]

[1]NASA, USA, [2]Colorado State University, USA

[THU3_2] 13:57-13:59

Tropospheric Ozone Variability in Associations with Tropical Climate Variability

Vishnu M Warrier and Vazhathottathil Madhu

Cochin University of Science and Technology, India

[THU3_3] 13:59-14:01

Ozone Trends in the Lower Stratosphere from Ozone Sondes

W. Steinbrecht[1], R. Van Malderen[2], D. Poyraz[2], D. Hubert[3], J. Davies[4], D.W. Tarasick[4], P. v. d. Gathen[5], H. Deckelmann[5], N. Jepsen[6], R. Kivi[7], N. Lyall[8], B. Kois[9], P. Oelsner[1], M. Allaart[10], A. Piters[11], M. Gill[11], G. Romanens[12], R. Stübi[12], G. Ancellet[13], S. Godin-Beekmann[13], B. Johnson[14], P. Cullis[14,15], I. Petropavlovskikh[14,15], J.-L. Hernandez[16], A. Diaz[16], T. Nakano[17], C. Torres[16], M.Tully[18], R. Querel[19], D.E. Kollonige[20,21], R.M. Stauffer[20], A.M. Thompson[20], and H.G.J. Smit[22]

[1]Deutscher Wetterdienst, Germany, [2]Royal Meteorological Institute of Belgium, Belgium, [3]BIRA-IASB, Belgium, [4]Environment and Climate Change Canada, Canada, [5]Alfred Wegener Institute, Germany, [6]Danish Meteorological Institute, Denmark, [7]Finnish Meteorological Institute, Finland, [8]British Meteorological Service, Scotland, [9]Institute of Meteorology and Water Management, Poland, [10]KNMI, The Netherlands, [11]Met Éireann Forecast, Ireland, [12]MeteoSwiss, Switzerland, [13]LATMOS, France, [14]NOAA, USA, [15]CIRES, USA, [16]AEMET, Spain, [17]Meteorological Research Institute, Japan, [18]Bureau of Meteorology, Australia, [19]NIWA, New Zealand, [20]NASA, USA, [21]Science Systems and Applications, Inc., USA, [22]Institute of Energy and Climate Research (IEK), Germany

[THU3_4] 14:01-14:03

Persistent Stratospheric Warming due to 2019–2020 Australian Wildfire Smoke

Karen H. Rosenlof[1], Pengfei Yu[2], Sean M. Davis[1], Robert W. Portmann[1], Owen B. Toon[3], Charles G. Bardeen[4], Christopher Maloney[4,1], Hagen Telg[3,1], and John E. Barnes[1]

[1]NOAA, USA, [2]Jinan University, China, [3]University of Colorado, USA, [4]NCAR, USA

V. Program Schedule

[THU3_5] 14:03-14:05

Formation of Lower-Tropospheric High-Ozone Layer in Spring over Southeast Asia

S.-Y. Ogino[1], K. Miyazaki[2], M. Fujiwara[3], M. I. Nodzu[4], M. Shiotani[5], F. Hasebe[3], J. Matsumoto[1,4], J. Witte[6], A. M. Thompson[2], Nguyen Hoang Anh[7], and Nguyen Vinh Thu[7]

[1]JAMSTEC, Japan, [2]NASA, USA, [3]Hokkaido University, Japan, [4]Tokyo Metropolitan University, Japan, [5]Kyoto University, Japan, [6]NCAR, USA, [7]NCHMF, Vietnam

[THU3_6] 14:05-14:07

The ENSO Induced Tropospheric Ozone Dipole based on Chemistry-Climate Model Simulation

Vazhathottathil Madhu[1,2] and Kengo Sudo[2]

[1]Cochin University of Science and Technology, India, [2]Nagoya University, Japan

[THU3_7] 14:07-14:09

Variability of the Spectral Ultraviolet Irradiance and Total Ozone in Italy: The Role of Atmospheric Dynamics

Ilias Fountoulakis[1,5], Henri Diémoz[1,2], Anna Maria Siani[3], Alcide di Sarra[4], and Daniela Meloni[4]

[1]Aosta Valley Regional Environmental Protection Agency, Italy, [2]National Research Council, Italy, [3]Sapienza Università di Roma, Italy, [4]Agenzia nazionale per le Nuove Tecnologie, Italy, [5]National Observatory of Athens, Greece

[THU3_8] 14:09-14:11

Northern Hemisphere Climate Response to Projected Stratospheric Ozone Recovery

Denise Seiling and Ulrike Langematz

Freie Universität Berlin, Germany

[THU3_9] 14:11-14:13

Investigation of Ozone Changes in 10-Year Period in Tehran

Nasim Hossein Hamzeh and Sara Karami

Atmospheric Science and Meteorological Research Center, Iran

[THU3_10] 14:13-14:15

Roles of Ozone-Wave Interaction on the Stratospheric Pathway of the Arctic-Mid-Latitude Climate Linkage

Tetsu Nakamura[1], Daniel Kreyling[2], Jinro Ukita[3], Ingo Wohltmann[2], Ralf Jaiser[2], and Dörthe Handorf[2]

[1]Hokkaido University, Japan, [2]Alfred Wegener Institute for Polar and Marine Research, Germany, [3]Niigata University, Japan

[THU3_11] 14:15-14:17

The Stratospheric Brewer-Dobson Circulation in ERA5 and ERA-Interim Reanalyses

Felix Ploeger, Mohamadou Diallo, Paul Konopka, and Martin Riese

Institute of Energy and Climate Research (IEK), Germany

[THU3_12] 14:17-14:19

The Impact of the Southern Hemisphere Polar Vortex on Surface Climate and the Role of Ozone Feedbacks

Nora Bergner[1], Gabriel Chiodo[1,2], Marina Friedel[1], Daniela Domeisen[1], and Thomas Peter[1]
[1]ETH Zürich, Switzerland, [2]Columbia University, USA

[THU3_13] 14:19-14:21

Projections Changes in the Total Column Ozone over the 21st Century in CMIP6 Models

Ana Letícia Campos Yamamoto, Marcelo de Paula Corrêa, and Roger Rodrigues Torres
Federal University of Itajubá, Brazil

[THU3_14] 14:21-14:23

Coupling of the Fast Stratospheric Ozone Chemistry Module (SWIFT) to the Atmospheric General Circulation Model for the Earth Simulator (AFES)

Daniel Kreyling[1], Tetsu Nakamura[2], Jinro Ukita[3], Ingo Wohltmann[1], Ralf Jaiser[1], and Dörthe Handorf[1]
[1]Alfred Wegener Institute for Polar and Marine Research, Germany, [2]Hokkaido University, Japan, [3]Niigata University, Japan

[THU3_15] 14:23-14:25

Long-Term Changes in Tropospheric Ozone in Antarctica and Possible Drivers

P. Kumar[1], J. Kuttippurath[1], P. von der Gathen[2], I. Petropavlovskikh[3,4], B. Johnson[4], A. McClure Begley[3,4], P. Cristofanelli[5], P. Bonasoni[5], M. E. Barlasina[6], and R. Sánchez[6]
[1]Indian Institute of Technology Kharagpur, India, [2]Alfred Wegener Institute, Germany, [3]University of Colorado, USA, [4]NOAA, USA, [5]National Research Council, Italy, [6]Servicio Meteorológico Nacional, Argentina

[THU3_17] 14:27-14:29

Early Vortex Break-Up Events in the ACCESS-CM2-Chem Model

Fraser Dennison
CSIRO, Australia

[THU3_18] 14:29-14:31

Analysis of Completeness, Coherency and Plausibility of Ground-Based Ozone Datasets within the Copernicus Climate Change Service

Fabrizio Marra[1], Karin Kreher[2], and Fabio Madonna[1]
[1]National Research Council (CNR), Italy, [2]BK SCIENTIFIC (BKS), Germany

[THU3_19] 14:31-14:33

Evaluation of a Stratospheric Ozone Reduction Event of Tropical Origin Influenced by the Secondary Effect of the Antarctic Ozone Hole over the Southern Brazil through CFSV2: July/August 2013

Gustavo Rasera[1], Vagner Anabor[1], Luiz Angelo Steffenel[2], Damaris Kirsch Pinheiro[1], and Lissette Guzmán Rodríguez[1]
[1]UFSM, Brazil, [2]Université de Reims Champagne Ardenne, Laboratoire LICIIS / LRC CEA DIGIT, France

V. Program Schedule

[THU3_21] 14:35-14:37

Developing Artificial Intelligence-Based Prediction Systems to Monitor the Quantitative Effect of Australian Bushfires on the Antarctic Ozone Hole

Thomas Y. Chen
Academy for Mathematics, Science, and Engineering, USA

[THU3_22] 14:37-14:39

Air-Temperature and Humidity Dependence of the Ozone Generation Rate in the Surface Air Layer

P.N. Antokhin, O.Yu. Antokhina, V.V. Antonovich, V.G. Arshinova, M.Yu. Arshinov, B.D. Belan, S.B.Belan, D.K. Davydov, G.A.Ivlev, A.V.Fofonov, A.V. Kozlov, T. M. Rasskazchikova, D.E. Savkin, D.V. Simonenkov, T.K. Sklyadneva, and G.N. Tolmachev
V.E. Zuev Institute of Atmospheric Optics SB RAS, Russia

[THU3_23] 14:39-14:41

Bias Correction of Multi-Sensor Satellite-Acquired Total Column Ozone

Hiroaki Naoe[1], Takashi Maki[1], Makoto Deushi[1], and Keisuke Ueno[2]
[1]Meteorological Research Institute, Japan, [2]Aerological Observatory, Japan

[THU3_24] 14:41-14:43

Towards Understanding the Mechanism for the Downward Propagation of Ozone Depletion on Surface Climate

Chaim I Garfinkel[1], Ian White[1], Edwin Gerber[2], Martin Jucker[3], and Seok-Woo Son[4]
[1]Hebrew University, Israel, [2]New York University, USA, [3]UNSW Sydney, Australia, [4]Seoul National University, Republic of Korea

[THU3_25] 14:43-14:45

Montreal Protocol Benefits Simulated with SOCOLv4.0

Tatiana Egorova[1], Jan Sedlacek[1], Timofei Sukhodolov[1,3], Arseniy Karagodin[1,2], and Eugene Rozanov[1,2,3]
[1]PMOD/WRC, Switzerland, [2]ETH Zürich, Switzerland, [3]St. Petersburg State University, Russia

[THU3_26] 14:45-14:47

Ozone Hole Impacts on Southern Annular Mode Persistency and Predictability in Idealized ICON-ART Climate Change Simulations

Marleen Braun and Peter Braesicke
Karlsruhe Institute of Technology, Germany

[THU3_27] 14:47-14:49

Monitoring of Surface Ozone in the Moscow Region

Danil Vladimirovich Borisov[1], Irina Nikolaevna Kuznetsova[1], Irina Yurievna Shalygina[1], Murat Islemgaleevich Nahaev[1], Elena Aleksandrovna Lezina[2], and Vladimir Aleksandrovich Lapchenko[3]
[1]Hydrometeorological Research Center of Russian Federation, Russia, [2]Budgetary Environmental Protection Institution, Russia, [3]Karadag Scientific Station, Russia

[THU3_28] 14:49-14:51

Effective Radiative Forcing of Stratospheric Ozone Recovery

Katerina Kusakova, Björn-Martin Sinnhuber, Maryam Ramezani Ziarani, and Peter Braesicke
Karlsruhe Institute of Technology, Germany

[THU3_29] 14:51-14:53

Assessment of Tropical UTLS Ozone in Chemistry-Climate Models

Joowan Kim and Hosun Ryu
Kongju National University, Republic of Korea

[THU3_30] 14:53-14:55

Effect of Ozone Enhancement in UT/LS for the Long-Term Total Ozone Trend Analysis in Seoul, Korea

Sang Seo Park[1], Yun Gon Lee[2], Jhoon Kim[3], Hi Ku Cho[3], and Hyunkwang Lim[3]
[1]UNIST, Republic of Korea, [2]Chungnam National University, Republic of Korea, [3]Yonsei University, Republic of Korea

[THU3_31] 14:55-14:57

The Present and Future Ozone Trend in South Korea

Taegyung Lee[1], Ja-Ho Koo[1], and Sungbo Shim[2]
[1]Yonsei University, Republic of Korea, [2]National Institute of Meteorological Sciences, Republic of Korea

[THU3_32] 14:57-14:59

Effect of Stratospheric Ozone on Simulation of Winter Surface Temperature in the Northern Hemisphere in Climate Models

Yong-Cheol Jeong[1], Sang-Wook Yeh[1], Seungun Lee[2], Rokjin J. Park[2], and Seok-Woo Son[2]
[1]Hanyang University, Republic of Korea, [2]Seoul National University, Republic of Korea

[THU3_33] 14:59-15:01

Impact of Stratospheric Ozone on the Subseasonal Prediction in the Southern Hemisphere Spring

Jiyoung Oh[1,2], Seok-Woo Son[1], Jung Choi[1], Eun-Pa Lim[3], Chaim Garfinkel[4], Harry Hendon[3], Yoonjae Kim[2], and Hyun-Sun Kang[2]
[1]Seoul National University, Republic of Korea, [2]Korea Meteorological Administration, Republic of Korea, [3]Bureau of Meteorology, Australia, [4]Hebrew University, Israel