

| Submission Id | Title                                                                                                                                                                | Presenting        | Final Category | POSTER CODE |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------|-------------|
| 6             | Transport of black carbon from the planetary boundary layer to free troposphere during the summer monsoon over South Asia                                            | Prashant Singh    | ACAM           | ACAM-1A     |
| 40            | The PM2.5 carbonaceous abundance and chemical constituents in ambient atmosphere of tropical urban city                                                              | Hanashriah Hassan | ACAM           | ACAM-2B     |
| 175           | Ozone and carbon monoxide over the northern Indian Ocean during winter and monsoon: influence of chemistry and dynamics                                              | Imran Girach      | ACAM           | ACAM-3C     |
| 208           | Photochemistry over an urban environment in India: Integration of measurements with box model                                                                        | Meghna Soni       | ACAM           | ACAM-4A     |
| 217           | Organic, inorganic and total bromine in the extratropical tropopause and lowermost stratosphere in fall 2017: Origins, transport pathways and consequences for ozone | Meike Rotermund   | ACAM           | ACAM-5B     |
| 221           | Exploring potential impacts of Black Carbon on vertical mixing and overall air quality over Northern India                                                           | Prerita Agarwal   | ACAM           | ACAM-6C     |

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| 257 | Non-targeted screening of halogenated organosulfates in atmospheric particles                                                                                               | Ke Gao              | ACAM | ACAM-7A  |
| 465 | Accuracy assessment of TRMM precipitation product across different Agro-Climatic Zones of Tamil Nadu, India                                                                 | VENKADESH SAMYKANNU | ACAM | ACAM-8B  |
| 502 | Impacts of biomass burning over Southeast Asia on regional air quality, radiation, and meteorology                                                                          | Jiawei Li           | ACAM | ACAM-9C  |
| 527 | Comparisons between satellite and CTM model derived total columns of ammonia over South and East-Asia                                                                       | Pooja Pawar         | ACAM | ACAM-10A |
| 568 | The substantial modulation of vertical mixing on new particle formation in Yangtze River Delta                                                                              | Shiyi Lai           | ACAM | ACAM-11B |
| 586 | Interannual variability of aerosol in the upper troposphere/lower stratosphere (UTLS): Connection to the climate variability, Asian summer monsoon strengths, and emissions | Mian Chin           | ACAM | ACAM-12C |
| 592 | Storage stability of VOC in canisters under different conditions in HongKong                                                                                                | YUCHEN MAI          | ACAM | ACAM-13A |

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| 596 | Light Absorption Properties of Atmospheric Brown Carbon during Winter in Dhaka, Bangladesh.                                     | ASFAY RAIHAN            | ACAM | ACAM-14B |
| 597 | Combining Multi-Wavelength AERONET SSA Retrievals with an MIE Model and UV AI from OMI to Quantify the Global AAOD of BC and OC | Xinying Wang            | ACAM | ACAM-15C |
| 608 | Linkage of water vapor distribution in the lower stratosphere to organized Asian summer monsoon convection                      | Bhupendra Bahadur Singh | ACAM | ACAM-16A |
| 611 | Light Absorption Properties of Brown Carbon from the Biomass Burning                                                            | Md. Islam               | ACAM | ACAM-17B |
| 614 | Transport of air in the region of the Asian monsoon anticyclone and its impact on the stratosphere                              | Bärbel Vogel            | ACAM | ACAM-18C |
| 629 | Atmospheric outflow of anthropogenic iron and its deposition to China adjacent seas                                             | Xiaohuan Liu            | ACAM | ACAM-19A |
| 631 | Intensified modulation of winter aerosol pollution in China by El Niño with short duration                                      | Liangying Zeng          | ACAM | ACAM-20B |

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| 653 | Simultaneous trace gas measurements of the HALO aircraft: Widespread detection of HONO in excess of model predictions during the EMeRGe-EU and -Asia campaigns and its possible formation mechanisms. | Benjamin Schreiner      | ACAM | ACAM-21C |
| 659 | Oxygenated volatile organic compounds measurement using proton transfer reaction time-of-flight mass spectrometry in Hong Kong: characteristics, chemical reactivities, and source apportionment      | Lirong HUI              | ACAM | ACAM-22A |
| 661 | TCCON Nicosia: First ground-based FTIR greenhouse gas measurements in the Eastern Mediterranean and Middle East region                                                                                | Constantina Rousogenous | ACAM | ACAM-23B |
| 664 | Carbon and health implications of trade restrictions                                                                                                                                                  | Lulu Chen               | ACAM | ACAM-24C |
| 670 | Compositional Analysis of Cloud Droplet Residuals by High Resolution Time-of-Flight Aerosol Mass Spectrometry: A CAMP2Ex Case Study                                                                   | Claire Robinson         | ACAM | ACAM-25A |

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| 682 | Observations of Regional Biomass Burning and Urban Trace Gas Enhancement Ratios in Southeast Asia and their Relationship with Aerosol Composition and Air Quality | Joshua DiGangi      | ACAM | ACAM-26B |
| 683 | The Implication of Oil Production to Ozone Chemistry in the Oilfield Regions of Northern China                                                                    | Tianshu Chen        | ACAM | ACAM-27C |
| 708 | Airborne and Satellite Investigation of Asian Air Quality (ASIA-AQ): An Opportunity for International Collaboration                                               | James Crawford      | ACAM | ACAM-28A |
| 740 | Aerosol structure, absorption and interactions with the PBL and impact on surface pollution                                                                       | Zhanqing Li         | ACAM | ACAM-29B |
| 754 | Decadal trend of black carbon aerosols over the Central Himalayas: 17 years of ground observations                                                                | Priyanka Srivastava | ACAM | ACAM-30A |
| 786 | Quantitative Assessment of Black Carbon over Southern China During Springtime: Regional and Sectoral Sources and the Impacts of East Asian Summer Monsoon Onset   | Chenwei Fang        | ACAM | ACAM-31A |

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| 795 | Aromatics derived oxygenated organic molecules in Hong Kong: Source, formation and impacts                                            | Penggang ZHENG | ACAM  | ACAM-32B |
| 803 | Aqueous production of secondary organic aerosol from fossil-fuel emissions in winter Beijing haze                                     | Junfeng Wang   | ACAM  | ACAM-33C |
| 838 | Investigation of Dust Transportation Effects on Meteorological Parameters in Turkey: A Case Study in 2020                             | Umur Dinç      | ACAM  | ACAM-34A |
| 848 | Chemical formation pathways of secondary organic aerosols in the Beijing-Tianjin-Hebei region in wintertime                           | Jie Li         | ACAM  | ACAM-35B |
| 34  | Solar induced fluorescence and NO <sub>2</sub> measurements from TROPOMI to constrain NO <sub>2</sub> deposition fluxes to vegetation | Erin Delaria   | AMIGO | AMIGO-1A |
| 87  | Ambient characterization of marine shipping emissions at the Port of Ningbo-Zhoushan on the coast of East China Sea                   | Dantong Liu    | AMIGO | AMIGO-2B |
| 102 | Source Apportionment of Volatile Organic Compounds and Trace Metals in Houston                                                        | Morshad Ahmed  | AMIGO | AMIGO-3C |

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| 110 | Trends and seasonal variability of ammonia across major biomes inferred from long-term series of ground-based and satellite measurements                                           | Money Ossohou   | AMIGO | AMIGO-4A |
| 130 | Long-term air quality trends in fast-growing future megacities in the tropics                                                                                                      | Karn Vohra      | AMIGO | AMIGO-5B |
| 134 | Global-Scale In-Situ Measurements of Aerosol Optical Depth: An Overview from the Atmospheric Tomography (ATom) Project                                                             | Charles Brock   | AMIGO | AMIGO-6C |
| 142 | Satellite-Based Emission Estimates of Tropospheric Bromine During Arctic Spring in the GEOS-Chem Model                                                                             | Pamela Wales    | AMIGO | AMIGO-7A |
| 149 | Evaluating the detectability of methane point sources from satellite observing systems using microscale modeling                                                                   | Piyush Bhardwaj | AMIGO | AMIGO-8B |
| 153 | How well can satellite derived XCO <sub>2</sub> determine seasonal and interannual changes of CO <sub>2</sub> over oceans? Evaluation by integrated ship and aircraft observations | Astrid Müller   | AMIGO | AMIGO-9C |

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| 211 | Anthropogenic point sources of ethylene revealed from space                                                                                                     | Bruno Franco        | AMIGO | AMIGO-10A |
| 226 | Meteorology-aerosol-chemistry multiphase data assimilation system improves estimation of wildfire carbonaceous emissions and transport                          | Benjamin Gaubert    | AMIGO | AMIGO-11B |
| 272 | Impact of the Raikoke volcanic eruption 2019 on the Northern Hemisphere UT/LS aerosol load and properties as seen from IAGOS-CARIBIC in-situ observations       | Andreas Petzold     | AMIGO | AMIGO-12C |
| 289 | Improving national emission inventories by advanced spatio-temporal inversion                                                                                   | Anne Caroline Lange | AMIGO | AMIGO-13A |
| 319 | Evaluation of new 4D-variational inverse modeling system, CIF-CHIMERE: Inversion of NO <sub>x</sub> emissions over China using NO <sub>2</sub> OMI observations | Dilek Savas         | AMIGO | AMIGO-14B |
| 335 | Tropospheric NO <sub>2</sub> observed from space with Copernicus Sentinel-5 Precursor TROPOMI: Validation with ground-based network data.                       | Tijl Verhoelst      | AMIGO | AMIGO-15C |

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| 360 | Agricultural emissions of ammonia estimated with satellite observations and GEOS-Chem                                              | Eloise Marais          | AMIGO | AMIGO-16A |
| 369 | New insights on NOx sources and sinks from the divergence of the mean flux                                                         | Steffen Beirle         | AMIGO | AMIGO-17B |
| 377 | Using WRF-Chem Volcano to model the in-plume halogen chemistry of Etna's 2018 eruption                                             | Luke Surl<br>WITHDRAWN | AMIGO | AMIGO-18C |
| 434 | Contribution of fossil fuel sources to PM2.5 in Seoul constrained by carbon, nitrogen, and oxygen isotopic ratios                  | Meehye Lee             | AMIGO | AMIGO-19A |
| 444 | Expanded observations of oxygenated organic compounds in urban emissions via ammonium-adduct chemical ionization mass spectrometry | Drew Gentner           | AMIGO | AMIGO-20B |
| 456 | Assimilating CrIS Observations to Improve U.S. Ammonia Emissions within CMAQ                                                       | Shannon Capps          | AMIGO | AMIGO-21C |
| 481 | A comprehensive analysis of shipping emissions over the Mediterranean and the Black Sea regions                                    | Andreas Pseftogkas     | AMIGO | AMIGO-22A |

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| 500 | 4D-Var inversion of European NH <sub>3</sub> emissions using CrIS NH <sub>3</sub> measurements and GEOS-Chem adjoint with bi-directional and uni-directional flux schemes | Hansen Cao        | AMIGO | AMIGO-23B |
| 505 | Swiss Halocarbon Emissions Derived from Regional Atmospheric Measurements                                                                                                 | Dominique Rust    | AMIGO | AMIGO-24C |
| 515 | Refining Ammonia Emissions Estimates with Satellite-based Observations Using a Novel Framework and an Air Quality Model                                                   | Congmeng Lyu      | AMIGO | AMIGO-25A |
| 556 | Modeling methane from the North Sea region with ICON-ART                                                                                                                  | Christian Scharun | AMIGO | AMIGO-26B |
| 567 | TROPOMI based NO <sub>x</sub> emission estimate for Asia                                                                                                                  | Hao Kong          | AMIGO | AMIGO-27C |
| 569 | Investigation of the temporal and spatial variability of methane flux estimations from mass balance approach, using FLEXPART-WRF methane fields                           | Sarah-Lena Meyer  | AMIGO | AMIGO-28A |
| 583 | Sources of PM <sub>2.5</sub> and BC in Beijing Based on Hourly Continuous Online Measurements from 2016 to 2019                                                           | Yue Liu           | AMIGO | AMIGO-29B |

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| 587 | Direct estimates of biomass burning NO <sub>x</sub> emissions and lifetime using daily observations from TROPOMI   | Xiaomeng Jin       | AMIGO | AMIGO-30C |
| 595 | Brown Carbon in Harbin, China during the heating season of 2018                                                    | Jiumeng Liu        | AMIGO | AMIGO-31A |
| 605 | A new divergence method to quantify methane emissions using observations of Sentinel-5P TROPOMI                    | Mengyao Liu        | AMIGO | AMIGO-32B |
| 613 | Globally Significant methane fluxes from African tropical wetlands                                                 | Jacob Shaw         | AMIGO | AMIGO-33C |
| 626 | Improving OMI-NO <sub>2</sub> resolution based on deep learning over central and southern Chile                    | Santiago Parraguez | AMIGO | AMIGO-34A |
| 637 | High-resolution tropospheric NO <sub>2</sub> satellite retrieval in Asia based on OMI                              | Yuhang Zhang       | AMIGO | AMIGO-35B |
| 642 | Estimation of Marine Isoprene Production and Emission based on Geostationary Satellite Remote Sensing Observations | Wentai Zhang       | AMIGO | AMIGO-36C |
| 648 | Global-Scale Observation and Evaluation of Nitrous Oxide from IASI: Application to Source Estimates                | Philippe Ricaud    | AMIGO | AMIGO-37A |

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| 663 | Reconciling Assumptions in Bottom Up and Top Down Approaches for Estimating Aerosol Emissions from Wildland Fires in the Western US using Observations from FIREX-AQ | Elizabeth Wiggins | AMIGO | AMIGO-38B |
| 667 | 3 years of urban CO2 emissions in the San Francisco Bay Area inferred from a low-cost monitoring network                                                             | Alexander Turner  | AMIGO | AMIGO-39C |
| 672 | Applications of satellite-derived NOx emissions                                                                                                                      | Ronald van der A  | AMIGO | AMIGO-40A |
| 675 | Temporal variations of atmospheric NH3 revealed from space: from intraday cycles to long-term global trends                                                          | Lieven Clarisse   | AMIGO | AMIGO-41B |
| 699 | Optimizing carbon monoxide emission estimates from Californian wildfires through inverse modeling based on high-resolution satellite observations                    | Johann Nüß        | AMIGO | AMIGO-42C |
| 721 | Satellite-derived NOx emissions for 80 global megacities between 2005 and 2019                                                                                       | Daniel Goldberg   | AMIGO | AMIGO-43A |

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| 771 | Estimation of NO <sub>x</sub> , SO <sub>2</sub> and HCHO emissions from the Megacity of Lahore, Pakistan using car MAX-DOAS observations and comparison with regional atmospheric chemistry model and TROPospheric Monitoring Instrument (TROPOMI) satellite data | Maria Razi         | AMIGO | AMIGO-44B |
| 775 | Airborne greenhouse gas (CO <sub>2</sub> and CH <sub>4</sub> ) measurements in Cyprus                                                                                                                                                                             | Yunsong Liu        | AMIGO | AMIGO-45C |
| 791 | INSIGHTS OF THE ACCURACY OF BOTTOM-UP AND TOP-DOWN LOCAL EMISSION INVENTORIES THROUGH HIGH-RESOLUTION ATMOSPHERIC MODELING                                                                                                                                        | Carlos Gonzalez    | AMIGO | AMIGO-46A |
| 793 | Identification of major air pollutant source location in India using satellite data and statistical-based analysis                                                                                                                                                | Abhishek Chhari    | AMIGO | AMIGO-47B |
| 814 | Propane emission estimates over Europe using observations and an inverse modelling approach                                                                                                                                                                       | Francesco Graziosi | AMIGO | AMIGO-48C |

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| 818 | Methane and non-methane hydrocarbons concentrations and sources in an Eastern Mediterranean Island (Cyprus)                 | Emeric Germain-Piaulenne | AMIGO              | AMIGO-49A |
| 81  | The local and remote climate and human health impacts of Africa's 21st century aerosol emission trajectory                  | Chris Wells              | ANGA Working Group | ANGA-1A   |
| 127 | Dominant contribution of nitrogen compounds in precipitation chemistry in the Lake Victoria catchment (East Africa)         | Adama BAKAYOKO           | ANGA Working Group | ANGA-2B   |
| 371 | Characterization of aerosol oxidative potential over African cities: a metric for relating air pollution and health effects | Cathy Leal-Liousse       | ANGA Working Group | ANGA-3C   |
| 494 | Assessment of Respirable Crystalline Silica Exposure among Miners of Konkola Underground Mine                               | Mwaba Sifanu             | ANGA Working Group | ANGA-4A   |
| 495 | REVIEW OF OCCUPATIONAL EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA TO MINEWORKERS AT MOPANI MUFULIRA MINE IN ZAMBIA           | Lubinda Nabiwa           | ANGA Working Group | ANGA-5B   |

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| 540 | Evidence of Long-Term Trend of Visibility in the Sahel and Coevolution with Meteorological Conditions and Vegetation Cover during the Recent Period | N'Datchoh TOURE      | ANGA Working Group | ANGA-6C  |
| 553 | 14C-based Source Apportionment of Black Carbon in PM2.5 aerosols in Urban Nairobi                                                                   | Leonard Kirago       | ANGA Working Group | ANGA-7A  |
| 610 | Learning the lessons of more than 150 years of air quality management: recommendations for future efforts to reduce air pollution                   | Aderiana Mbandi      | ANGA Working Group | ANGA-8B  |
| 701 | Optical Properties of Water-Soluble Carbonaceous Aerosols at the Rwanda Climate Observatory                                                         | Samuel Mwaniki Gaita | ANGA Working Group | ANGA-9C  |
| 723 | Urban emissions inventories development for air quality modelling in Abidjan and Korhogo cities                                                     | Sekou KEITA          | ANGA Working Group | ANGA-10A |
| 735 | HDM-4 Model Calibration and Estimation of Vehicular Emissions in Nairobi, Kenya                                                                     | Ezekiel NYAGA        | ANGA Working Group | ANGA-11B |
| 736 | How Has Sub-Saharan Africa's Air Quality and Climate Been Altered by Recent Land Use and Land Cover Change and Emissions Changes?                   | Timothy Glotfelty    | ANGA Working Group | ANGA-12C |

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| 830 | Atmospheric Particulate Matter and gases at high altitude: a case study at 4760 m on Mt. Kenya                                                                                                      | Anne Mutahi       | ANGA Working Group     | ANGA-13A    |
| 856 | Occupational exposure and spatial distribution of BTEX concentrations at Lanseria International Airport                                                                                             | Raeesa Moolla     | ANGA Working Group     | ANGA-14B    |
| 862 | Air pollution in West African cities and some strategies for particulate pollutant emissions reduction.                                                                                             | Veronique Yoboue  | ANGA Working Group     | ANGA-15C    |
| 863 | THE AFRICA INTEGRATED ASSESSMENT OF AIR POLLUTION, CLIMATE CHANGE & SUSTAINABLE DEVELOPMENT IN AFRICA                                                                                               | Youba Sokona,     | ANGA Working Group     | ANGA-16A    |
| 33  | Amazonian biogenic volatile organic compounds under global change                                                                                                                                   | Ana Yañez-Serrano | Americas Working Group | AMERICAS-1A |
| 43  | Air pollution measurements in Coyhaique, Patagonia                                                                                                                                                  | Zoe Fleming       | Americas Working Group | AMERICAS-2B |
| 506 | Assessing population exposure to air pollution in Metropolitan Lima and Callao, Peru: Creating a high-resolution spatial emissions inventory with limited data, supported by air quality monitoring | Ben Richmond      | Americas Working Group | AMERICAS-3C |

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| 529 | Ammonia temporal variability from urban ground-based FTIR measurements                                                                                                                                                                                         | Beatriz Herrera      | Americas Working Group | AMERICAS-4A |
| 600 | Air-borne measurements of CH <sub>2</sub> O, C <sub>2</sub> H <sub>2</sub> O <sub>2</sub> , and C <sub>3</sub> H <sub>4</sub> O <sub>2</sub> * and CO over the Amazon and their biomass burning emission ratios and emission factors in biomass burning plumes | Flora Kluge          | Americas Working Group | AMERICAS5B  |
| 627 | MODELING AND ASSIMILATION OF ATMOSPHERIC AEROSOLS OVER SÃO PAULO - BRAZIL WITH THE REGIONAL CHEMISTRY TRANSPORT EURAD-INVERSE MODEL ON HIGH-RESOLUTION                                                                                                         | Ediclê Duarte        | Americas Working Group | AMERICAS-6C |
| 678 | An atmospheric perspective on Amazon fire emissions                                                                                                                                                                                                            | Maarten Krol         | Americas Working Group | AMERICAS-7A |
| 692 | Changes in Mortality in Response to Decreases in Ozone and PM <sub>2.5</sub> Concentrations Across the United States from 1990 to 2019                                                                                                                         | Revathi Muralidharan | Americas Working Group | AMERICAS-8B |
| 711 | Ozone trends at Tololo (30.17° S, 70.80° W, 2154 m a.s.l.) GAW monitoring station in Chile: an update and attribution study.                                                                                                                                   | Laura Gallardo       | Americas Working Group | AMERICAS-9C |

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| 726 | ASSESSMENT OF TOAR OZONE METRICS DISTRIBUTIONS OVER LATIN AMERICAN CITIES                                                                            | Angel Gálvez              | Americas Working Group | AMERICAS-10A |
| 733 | Assessing brown carbon light absorption from aerosol optical properties in Mexico City                                                               | Armando Retama            | Americas Working Group | AMERICAS-11B |
| 839 | Hourly variation of polycyclic aromatic hydrocarbons in a receptor site in Mexico City during the cold dry season                                    | Yadira Martínez-Domínguez | Americas Working Group | AMERICAS-12C |
| 115 | Evolution of organic aerosol from wood smoke influenced by burning phase and solar radiation                                                         | Siyuan Li                 | BIOMASS BURNING        | BB-1A        |
| 140 | Uncertainty in fire emission factors and the impact on modeled atmospheric CO and O <sub>3</sub>                                                     | Rebecca Buchholz          | BIOMASS BURNING        | BB-2B        |
| 144 | Using observations of Western U.S. wildfire smoke to improve fire emissions in air quality forecasting models                                        | Megan Bela                | BIOMASS BURNING        | BB-3C        |
| 184 | Employing the model to reproduce aerosol transport characteristics over Southeast Asia: comparison of different biomass burning emission inventories | Shuo Wang                 | BIOMASS BURNING        | BB-4A        |

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| 447 | The impact of biomass burning emissions on Protected Natural Areas in central and southern Mexico                                                                                        | Fabiola Trujano    | BIOMASS BURNING | BB-5B  |
| 503 | Effects of fire diurnal variation on U.S. air quality during FIREX-AQ based on the Multi-Scale Infrastructure for Chemistry and Aerosols (MUSICA-V0)                                     | Wenfu Tang         | BIOMASS BURNING | BB-6C  |
| 510 | Characterizing the Physical and Chemical Evolution of Organic Aerosol in Biomass Burning Smoke using Gas- and Particle-phase Molecular Tracers from Laboratory and FIREX-AQ Observations | Melinda Schueneman | BIOMASS BURNING | BB-7A  |
| 514 | Global Wildfire Plume-Rise Data Set and Parameterizations for Climate Model Applications                                                                                                 | Ziming Ke          | BIOMASS BURNING | BB-8B  |
| 526 | Persistent Influence of Biomass Burning Aerosols during Clean Air Conditions in the Western United States                                                                                | Ryan Farley        | BIOMASS BURNING | BB-9C  |
| 551 | Submicron Particle Composition and Acidity in Fire Plumes during FIREX-AQ aircraft study                                                                                                 | Hongyu Guo         | BIOMASS BURNING | BB-10A |
| 557 | Does Combustion Condition Impact Biomass Burning                                                                                                                                         | Rudra Pokhrel      | BIOMASS BURNING | BB-11B |

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|     | Aerosol Hygroscopicity?                                                                                                                                                                    |                        |                 |        |
| 577 | Sources and characteristics of paddy-residue burning derived carbonaceous aerosols using dual carbon isotopes                                                                              | M Devaprasad           | BIOMASS BURNING | BB-12C |
| 632 | A top-down method of estimating NO2 emissions over South, Southeast and East Asia based on OMI NO2 observations                                                                            | Jian Liu               | BIOMASS BURNING | BB-13A |
| 668 | Aerosol Emissions Factors for Agricultural Fires in the Southeast United States                                                                                                            | Richard Moore          | BIOMASS BURNING | BB-14B |
| 703 | Photolysis of biomass burning organic aerosol, chemical transformations and photo-bleaching                                                                                                | Rachel O'Brien         | BIOMASS BURNING | BB-15C |
| 706 | A Machine Learning Approach for Identifying Smoke Plumes Based on GOES Satellite Observations Over the United States Using the Trained on the Hazard Mapping System Fire and Smoke Product | Benjamin Brown-Steiner | BIOMASS BURNING | BB-16A |
| 719 | Aerosol properties and processing during wintertime under hazy condition                                                                                                                   | Susan Mathai           | BIOMASS BURNING | BB-17B |

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| 762 | Investigating the effect of wildfire on PM2.5 in southeastern U.S. in November 2016                                                                       | Shuhui Guan             | BIOMASS BURNING | BB-18C   |
| 776 | Salting-out effects on evolvement of light-absorbing SOA in atmospheric aerosols                                                                          | Jackson Tham            | BIOMASS BURNING | BB-19A   |
| 828 | Mechanism development and model studies on the chemical multiphase processing of key biomass burning tracers with the new CAPRAM BBM1.0 module            | Lin He                  | BIOMASS BURNING | BB-20B   |
| 139 | Heterogeneous ice nucleation in the WRF-Chem model and its influence on the cloud response to volcanic aerosols                                           | Louis Marelle           | CATCH           | CATCH-1A |
| 181 | Characterization and chemical imaging of aerosol in West Antarctica.                                                                                      | Sérgio Gonçalves Junior | CATCH           | CATCH-2B |
| 199 | Impact of biomass burning aerosol from Amazon associated with changes of snow albedo over the Central Andes mountains using satellite remote sensing data | Tomás R. Bolaño-Ortiz   | CATCH           | CATCH-3C |
| 344 | Role of oceanic ozone deposition in explaining short-term variability of surface ozone at high-Arctic sites                                               | Johannes Barten         | CATCH           | CATCH-4A |

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| 450 | 3-D modeling of bromine chemistry and boundary-layer mercury depletion across the springtime Arctic                                                               | Kenjiro Toyota      | CATCH | CATCH-5B  |
| 472 | Molecular simulations on potassium-rich feldspar surfaces interacting with ions and possibility of ice nucleation                                                 | Anand Kumar         | CATCH | CATCH-6C  |
| 485 | Oxidation of methanesulfonate into sulfate at inland Antarctica evidenced by 17O-excess signature                                                                 | Sakiko Ishino       | CATCH | CATCH-7A  |
| 513 | Simulating brown carbon aerosol over High Mountain Asia: WRF-Chem model implementation and application                                                            | Cenlin He           | CATCH | CATCH-8B  |
| 516 | Investigating the relationship of meteorology and atmospheric composition to snow cover: A comparative study over High-Mountain Asia and Andes                    | Chayan Roychoudhury | CATCH | CATCH-9C  |
| 518 | The importance of alkyl nitrates and sea ice emissions to atmospheric NO <sub>x</sub> sources and cycling in the summertime Southern Ocean marine boundary layer. | Jessica Burger      | CATCH | CATCH-10A |

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| 519 | A Southern Ocean-wide examination of Multi-year Trends in Sea Ice, Chlorophyll Concentration, and Marine Aerosol Optical Depth | Srishti Dasarathy<br>WITHDRAWN | CATCH | CATCH-11B |
| 530 | 14CO in Glacial Ice from Law Dome, Antarctica as a Tracer of Changes in Atmospheric OH Abundance from 1870 AD to Present       | Peter Neff                     | CATCH | CATCH-12C |
| 541 | Urban inland wintertime N2O5 deposition and snowpack ClNO2 production                                                          | Kathryn Kulju                  | CATCH | CATCH-13A |
| 545 | Using 1D-modelling to study Arctic chlorine activation, transport and VOC oxidation during Arctic springtime                   | Shaddy Ahmed                   | CATCH | CATCH-14B |
| 562 | Modeling large dust deposition events to alpine snow and their impacts: the role of model resolution                           | Foteini Baladima               | CATCH | CATCH-15C |
| 570 | Atmospheric nitrogen deposition and watershed budget at the Lautaret Pass                                                      | Jim Grisillon                  | CATCH | CATCH-16A |
| 575 | What we learn from fundamental laboratory studies at the Swiss Light Source about atmospheric chemistry.                       | Thorsten Bartels-Rausch        | CATCH | CATCH-17B |

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| 604 | Reactive nitrogen species in polar environments: a laboratory-based study of nitrous acid gas (HONO) production from snow.                  | Amelia Bond    | CATCH | CATCH-18C |
| 617 | Short-term variability in atmospheric carbon dioxide as observed from coastal Antarctica                                                    | Freya Squires  | CATCH | CATCH-19A |
| 625 | Trend analysis of aerosol particle physical properties at Villum Research Station, Northern Greenland                                       | Jakob Pernov   | CATCH | CATCH-20B |
| 630 | Acidity-driven enhancement of sulfate formation after SO <sub>2</sub> emission control evidenced by 17O-excess of ice core sulfate.         | Shohei Hattori | CATCH | CATCH-21C |
| 654 | Unprecedented snow darkening and melting in New Zealand due to 2019–2020 Australian wildfires                                               | Wei Pu         | CATCH | CATCH-22A |
| 677 | An overview of the role of atmospheric composition within the CRiceS project                                                                | Jennie Thomas  | CATCH | CATCH-23B |
| 695 | Increasing scientific impact through combined field and modelling studies – Example: sea salt aerosol from blowing snow above polar sea ice | Markus Frey    | CATCH | CATCH-24C |

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| 702 | The evolving sources of cloud condensation nuclei in the Arctic and North Atlantic: preliminary results from the SEANA project                  | Alexander Kurganskiy | CATCH | CATCH-25A |
| 709 | Modelling Study of the Arctic Clouds                                                                                                            | Roya Ghahreman       | CATCH | CATCH-26B |
| 712 | Sea Spray Aerosol Generation Experiments in the Summertime High Arctic Pack Ice                                                                 | Jessica Mirrielees   | CATCH | CATCH-27C |
| 717 | Using both a blowing snow source and a snowpack source to model reactive bromine in GEOS-Chem                                                   | William Swanson      | CATCH | CATCH-28A |
| 724 | Using gas phase, particle, and snow composition data to understand the spring shutdown of reactive bromine cycling in the Arctic boundary layer | Daun Jeong           | CATCH | CATCH-29B |
| 734 | Impacts of anthropogenic emissions on tropospheric reactive halogens and the oxidation capacity of the atmosphere                               | Shuting Zhai         | CATCH | CATCH-30C |
| 782 | Observations of iodine monoxide over three summers at the Indian Antarctic bases, Bharati and Maitri                                            | Anoop Mahajan        | CATCH | CATCH-31A |

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| 809 | Changes in the Structure of the Freeze-Concentrated Solution in the Veins of Ice due to Various Freezing Rates                           | Jan Zezula    | CATCH | CATCH-32B |
| 823 | Halogen elements in two sub-Antarctic ice cores and their suitability as sea ice proxies                                                 | Delia Segato  | CATCH | CATCH-33C |
| 825 | Perspectives of an early career researcher in the polar ocean-ice-atmosphere interactions community                                      | Megan Willis  | CATCH | CATCH-34A |
| 845 | Geographic distribution of fluorescent bioaerosols and roles of marine biological particles in the cloud processes over the Arctic Ocean | Kaori Kawana  | CATCH | CATCH-35B |
| 45  | Understanding of the space-time variations of hydroxyl (OH) using methyl chloroform (CH <sub>3</sub> CCl <sub>3</sub> )                  | Prabir Patra  | CCMI  | CCMI-1A   |
| 58  | Coupling interactive fire with atmospheric composition and climate in the UK Earth System Model (UKESM)                                  | Joao Teixeira | CCMI  | CCMI-2B   |
| 79  | Understanding the historical changes in tropospheric halogens and their impacts over the last century                                    | Tomás Sherwen | CCMI  | CCMI-3C   |

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| 84  | Irreversible changes in the future global methane cycle under the aggressive-mitigation SSP1-2.6 scenario, simulated with a fully coupled, dynamic methane cycle process model in UKESM1.0. | Gerd Folberth    | CCMI | CCMI-4A |
| 89  | Climate-driven chemistry and aerosol feedbacks in Earth system models                                                                                                                       | William Collins  | CCMI | CCMI-5B |
| 145 | Turbulence-vegetation-chemistry interactions: Impacts on OH reactivity at a deciduous forest                                                                                                | Olivia Clifton   | CCMI | CCMI-6C |
| 168 | Atmospheric Chemistry in the OpenIFS Model                                                                                                                                                  | Marcus Köhler    | CCMI | CCMI-7A |
| 185 | Impact of heatwaves and drought stress on isoprene in a UK temperate forest: results from the 2018-2020 WIsDOM campaigns                                                                    | Valerio Ferracci | CCMI | CCMI-8B |
| 192 | Characterisation and Molecularly Resolved Source Apportionment of Brown Carbon Absorption by UV-Vis Spectroscopy and Atmospheric Pressure Chemical Ionisation-Mass Spectrometry             | Liudongqing Yang | CCMI | CCMI-9C |

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| 195 | Ozone Production in U.S. Thunderstorm Convective Outflow Regions                                                                                                                                         | Mary Barth      | CCMI | CCMI-10A |
| 202 | Investigating aerosol radiative adjustment mechanisms and magnitudes with model nudging                                                                                                                  | Max Coleman     | CCMI | CCMI-11B |
| 230 | Ozone changes from past to future: characterising regional ozone sensitivity across the globe                                                                                                            | Zhenze Liu      | CCMI | CCMI-12C |
| 254 | Insights from MOZAIC long-term routine in-situ measurements into vertical distribution, seasonal variability and tropospheric fingerprint of ice-supersaturated air masses in the northern mid-latitudes | Susanne Rohs    | CCMI | CCMI-13A |
| 277 | How detailed should a vegetation canopy be represented for ozone deposition impact assessments?                                                                                                          | Auke Visser     | CCMI | CCMI-14B |
| 286 | New MESSy scavenging subroutine to treat aerosol particles gas-phase partitioning in convective clouds                                                                                                   | Giorgio Taverna | CCMI | CCMI-15C |
| 306 | One value of cloud pH to rule them all: The impact of an interactive cloud pH scheme on aerosols in UKESM1                                                                                               | Steven Turnock  | CCMI | CCMI-16A |

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| 316 | Methane: At the Interface between Hydrology, Atmospheric Composition, Air Quality, and Climate                                                                     | Fiona O'Connor            | CCMI | CCMI-17B |
| 349 | Trends in global tropospheric hydroxyl radical and methane lifetime since 1850 from AerChemMIP                                                                     | David Stevenson           | CCMI | CCMI-18C |
| 390 | Graph Theory and Atmospheric Chemistry                                                                                                                             | Sam Silva                 | CCMI | CCMI-19A |
| 412 | Examining the Competition Between Oxidation and Deposition in the Fate of Reactive Organic Carbon                                                                  | Gabriel Isaacman-VanWertz | CCMI | CCMI-20B |
| 413 | Reactive nitrogen in global upper troposphere from NASA DC8 and MOZAIC aircraft campaigns                                                                          | Nana Wei                  | CCMI | CCMI-21C |
| 417 | A large source of formic acid from cloud droplets                                                                                                                  | Domenico Taraborrelli     | CCMI | CCMI-22A |
| 449 | The NOAA Baseline Balloon Stratospheric Aerosol Profiles (B2SAP) Project                                                                                           | Elizabeth Asher           | CCMI | CCMI-23B |
| 455 | Dynamical downscaling of a global chemistry-climate model to study the influence of climate change and variability on mid-21st century PM2.5 in the continental US | Surendra Kunwar           | CCMI | CCMI-24C |

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| 457 | Two proxies reflect OH variability on local scales in the remote atmosphere                                | Colleen Baublitz   | CCMI | CCMI-25A |
| 475 | Viscosity of Secondary Organic Aerosol: Effects of Composition and Oxidation Method                        | Giuseppe Crescenzo | CCMI | CCMI-26B |
| 480 | Tropospheric Age-of-Air: Influence of SF6 Emissions in Recent Surface Trends and Model Biases              | Clara Orbe         | CCMI | CCMI-27C |
| 484 | Observed and simulated effects of droughts and heatwaves on ozone concentration in Southern Europe         | Antoine Guion      | CCMI | CCMI-28A |
| 491 | Climatological pattern of hydrocarbon in the UTLS region associated with the Australian Bushfires          | Donghee Lee        | CCMI | CCMI-29B |
| 492 | Intercomparison of Ground- and Satellite-Based Total Ozone Column Data at Three stations, Antarctic Region | SONGKANG KIM       | CCMI | CCMI-30C |
| 501 | Direct Comparison of the Submicron Aerosol Hygroscopicity of Water-Soluble Sugars                          | Kotiba Malek       | CCMI | CCMI-31A |
| 512 | Hemispheric Lightning NOx Emissions and the Impact on Ground-Level Ozone                                   | Mike Madden        | CCMI | CCMI-32B |

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| 523 | Observational Metrics that Relate to the Answers we seek from Chemistry-Climate Models          | Michael Prather | CCMI | CCMI-33C |
| 547 | Impacts of future land use and land cover change on mid-21st-century dust air quality           | Lang Wang       | CCMI | CCMI-34A |
| 548 | A Simplified Chemistry-Dynamical Model                                                          | Hao-Jhe Hong    | CCMI | CCMI-35B |
| 599 | Study of Different Carbon Bond 6 (CB6) Mechanisms by Using a Concentration Sensitivity Analysis | Le Cao          | CCMI | CCMI-36C |
| 615 | Observationally constrained analysis of sulfur species in the marine atmosphere                 | Huisheng Bian   | CCMI | CCMI-37A |
| 621 | Revising the Ozone Depletion Potentials Metric for Short-Lived Chemicals Such as CF3I and CH3I  | Jun Zhang       | CCMI | CCMI-38B |
| 657 | Assessing dust impact on air quality using the global chemistry and transport model TM4-ECPL    | Medea Zanolli   | CCMI | CCMI-39C |
| 666 | Evaluation of CMIP6 model simulations of PM2.5 components in China                              | Fangxuan Ren    | CCMI | CCMI-40A |
| 669 | Modeling atmospheric brown carbon in the GISS ModelE Earth system model                         | Maegan DeLessio | CCMI | CCMI-41B |

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| 673 | Enhancing chemical schemes accounted in the FLEXPART v10.4 transport model using a kinetic preprocessor                  | Ruben Sousse     | CCMI | CCMI-42C |
| 676 | In- and out-of-cloud measurements at SMEAR IV for pristine conditions and an aged forest fire plume event                | Angela Buchholz  | CCMI | CCMI-43A |
| 700 | Observations of Lightning NO <sub>x</sub> Production from TROPOMI Case Studies over the United States                    | Dale Allen       | CCMI | CCMI-44B |
| 704 | The fingerprint of Biomass Burning on CO in the remote atmosphere                                                        | Nikos Daskalakis | CCMI | CCMI-45C |
| 713 | Assessing global chemistry-climate simulations on the long term in the UTLS with the IAGOS database                      | Yann Cohen       | CCMI | CCMI-46A |
| 720 | Continuity of the Arosa ozone column series after Dobson automation and the displacement of the LKO instruments to Davos | René Stübi       | CCMI | CCMI-47B |
| 755 | An overview of iodine chemistry over the Indian and Southern Ocean waters using ship-based observations and modelling    | Swaleha Inamdar  | CCMI | CCMI-48C |

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| 773 | Arctic warming and associated sea ice reduction in the early 20th century induced by natural forcings in MRI-ESM2.0 climate simulations and multimodel analyse | Takuro Aizawa          | CCMI | CCMI-49A |
| 783 | A Core-Shell kinetic model for simulating Viscosity dependent secondary organic Aerosol (CSVA) and its applications                                            | Long Jia               | CCMI | CCMI-50B |
| 787 | The impact of changes in anthropogenic emissions on future summer ozone concentrations over China based on CMIP6                                               | Xinran Zeng            | CCMI | CCMI-51C |
| 796 | Dust minerals in the atmosphere as precursors of Ice Nuclei Particles                                                                                          | Marios Chatziparaschos | CCMI | CCMI-52A |
| 797 | Global PM2.5 prediction and estimated mortality to 2050 under different climate change scenarios                                                               | Wanying CHEN           | CCMI | CCMI-53B |
| 820 | Co-benefits of changing diet. A modelling assessment at the regional scale integrating social acceptability, environmental and health impacts                  | Michela Maione         | CCMI | CCMI-54C |
| 822 | Size-resolved aerosol pH over Europe during summer                                                                                                             | Stylianos Kakavas      | CCMI | CCMI-55A |

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| 854 | Estimation of radiative forcing and heating rate based on vertical observation of black carbon in Nanjing, China                                                      | Shuangshuang Shi         | CCMI     | CCMI-56B |
| 857 | On the formation of formic acid from formaldehyde processing in liquid clouds                                                                                         | Jean-Francois Muller     | CCMI     | CCMI-57C |
| 859 | Assessment of the impact of OH's temporal resolution on the global atmosphere                                                                                         | Sofía Gómez Maqueo Anaya | CCMI     | CCMI-58A |
| 307 | First year of real-time VOC measurements at the SIRTa facility (Paris region, France): diurnal and seasonal variabilities, impact of COVID-19 lockdown on air quality | Leïla Simon              | COVID-19 | COVID-1A |
| 321 | Global tropospheric ozone responses to reduced NOx emissions linked to the COVID-19 world-wide lockdowns                                                              | Kazuyuki Miyazaki        | COVID-19 | COVID-2B |
| 463 | Impact of Singapore's COVID-19 lockdown on atmospheric CO2 fluxes at neighborhood scale                                                                               | Erik Velasco             | COVID-19 | COVID-3C |
| 466 | Quantification of the Emission Changes in Europe During 2020 Due to the COVID-19 Mobility Restrictions                                                                | Marc Guevara             | COVID-19 | COVID-4A |

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| 479 | US COVID-19 shutdown demonstrates importance of background NO <sub>2</sub> in inferring NO <sub>x</sub> emissions from satellite NO <sub>2</sub> observations               | Zhen Qu         | COVID-19 | COVID-5B  |
| 508 | The impact of COVID-19 on projections, and the use of scenario analysis tools for modelling impacts of mitigation strategies on air pollutant emissions and concentrations. | Ben Pearson     | COVID-19 | COVID-6C  |
| 521 | Do satellite-based HCHO and NO <sub>2</sub> observations help with the quantitative prediction of surface ozone during the pandemic?                                        | Amir Sourì      | COVID-19 | COVID-7A  |
| 522 | Mapping Urban CO with BEACO <sub>2</sub> N and Bayesian Inversions                                                                                                          | Naomi Asimow    | COVID-19 | COVID-8B  |
| 531 | Impact of COVID-19 on NO <sub>x</sub> and VOC levels over China based on multi-species satellite data and modeling                                                          | Jenny Stavrakou | COVID-19 | COVID-9C  |
| 554 | The Impact of COVID-19 Lockdowns and Car Free- day Policy on Levels of Air Pollution in Kigali, Rwanda                                                                      | Egide Kalisa    | COVID-19 | COVID-10A |

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| 573 | Fast Climate Responses to Aerosol Emission Reductions During the COVID-19 Pandemic                                          | Yang Yang          | COVID-19 | COVID-11B |
| 578 | The effects of the COVID-19 lockdowns on air-quality throughout the troposphere as seen by IAGOS in-situ data               | Hannah Clark       | COVID-19 | COVID-12C |
| 582 | Impacts of COVID-19 on Black Carbon in Two Representative Regions in China Based on Online Measurement in Beijing and Tibet | Mei Zheng          | COVID-19 | COVID-13A |
| 585 | Analysis of the effect of the COVID-19 lockdown on Aerosol Optical Properties over Bangladesh                               | Khaled Joy         | COVID-19 | COVID-14B |
| 590 | From COVID-19 to Future Electrification: Assessing Traffic Impacts on Air Quality by a Machine Learning Model               | Jiani Yang         | COVID-19 | COVID-15C |
| 616 | Knowns and unknowns on the impacts of COVID-19 lockdowns on urban air quality                                               | Georgios Gkatzelis | COVID-19 | COVID-16A |
| 633 | Chemistry of Atmospheric Fine Particles during the COVID-19 Pandemic in a Megacity of Eastern China                         | Lei Liu            | COVID-19 | COVID-17B |
| 694 | Covid-19 induced lower-tropospheric ozone changes                                                                           | Mariano Mertens    | COVID-19 | COVID-18C |

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| 716 | Quantifying and attributing carbon monoxide (CO) emission changes in New York City during the COVID-19 shutdown                                               | Luke Schiferl    | COVID-19 | COVID-19A |
| 722 | Errors and uncertainties associated with mobility and traffic activity data for estimating fossil fuel CO <sub>2</sub> emissions during the COVID-19 pandemic | Tomohiro Oda     | COVID-19 | COVID-20B |
| 738 | Impact of the COVID-19 lockdown period in surface Ozone, PM <sub>2.5</sub> , and SOA in the Mexico Megalopolis                                                | Victor Almanza   | COVID-19 | COVID-21C |
| 745 | Lockdown influences on Ozone, NO <sub>2</sub> , and CO over Asia: Some contrary affects                                                                       | Prajjwal Rawat   | COVID-19 | COVID-22A |
| 763 | Changes in aerosol over the Indian subcontinent during the COVID19 Lockdown in 2020                                                                           | Satyendra Pandey | COVID-19 | COVID-23B |
| 780 | Exploring Changes in Air Quality Across Africa from COVID-19 in 2020 and 2021: Observations from the AfriqAir Network                                         | Michael Giordano | COVID-19 | COVID-24C |
| 798 | Investigating Air Quality and Emissions Changes from COVID-19 Lockdown Measures in Mexico City with Satellite Observations                                    | Duncan Quevedo   | COVID-19 | COVID-25A |

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| 802 | Hourly Organic Tracer-based Source Apportionment of PM2.5 before and during the Covid-19 lockdown: A Case Study in Suburban Shanghai                                     | Shan WANG      | COVID-19            | COVID-26B |
| 821 | COVID-19 LOCKDOWN: DECADEAL LOW OF INDIAN METRO AIR QUALITY                                                                                                              | RAVI YADAV     | COVID-19            | COVID-27C |
| 849 | High-latitude urban air quality: 20 months of aerosol composition data from Fairbanks, Alaska                                                                            | Ellis Robinson | COVID-19            | COVID-28A |
| 5   | Hygroscopicity of fresh and aged mineral dust aerosol                                                                                                                    | Mingjin Tang   | China Working Group | CHINA-1A  |
| 302 | Health Effects of Global Air Pollution on Reproduction: from Fertility Rate Reduction in United States, to Pregnancy Loss in Africa, and Preterm Births in Beijing China | Tong Zhu       | China Working Group | CHINA-2B  |
| 473 | Online Measurement of Fine Aerosol Nitrite via a Versatile Aerosol Concentration Enrichment System Coupled with Ion Chromatography                                       | Xiaona Shang   | China Working Group | CHINA-3C  |
| 490 | Atmospheric Environmental Impacts of Freight Transportation                                                                                                              | Huan Liu       | China Working Group | CHINA-4A  |

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| 565 | Dibasic Esters Observed as Potential Emerging Indoor Air Pollutants in New Apartments in Beijing, China                                               | Yingjun Liu     | China Working Group | CHINA-5B  |
| 674 | Effects of Regional Transport on Haze in the North China Plain: Transport of Precursors or Secondary Inorganic Aerosols                               | Jie Li          | China Working Group | CHINA-6C  |
| 684 | Overview of the aircraft measurements in the Northeastern and Northern China                                                                          | Shan Ye         | China Working Group | CHINA-7A  |
| 742 | The researches of unstable reactive oxidants in the atmosphere                                                                                        | Shengrui Tong   | China Working Group | CHINA-8B  |
| 758 | The long-term trend of acidity and chemical compositions of precipitation in Shanghai                                                                 | Shiyu Ye        | China Working Group | CHINA-9C  |
| 767 | The impact of climate change and extreme weather events on ozone formation                                                                            | Yang Gao        | China Working Group | CHINA-10A |
| 770 | Estimation of heterogeneous ozone oxidation rates of oleic, elaidic, and linoleic acid in urban organic aerosols using their hourly measurement data. | Qiongqiong Wang | China Working Group | CHINA-11B |
| 779 | Health Impact of Global Atmospheric Arsenic: 2005-2015                                                                                                | Lei Zhang       | China Working Group | CHINA-12C |

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| 794 | Terpene-derived Nitrooxy Organosulfates                                                                                             | Jian Zhen Yu           | China Working Group      | CHINA-13A |
| 804 | Aerosol Acidity and Water Content as a Driver of Aerosol Formation, Intense Haze Events and Nutrient Deposition                     | Athanasios Nenes       | China Working Group      | CHINA-14B |
| 860 | Study on the Ozone Photochemistry in China                                                                                          | Keding Lu              | China Working Group      | CHINA-15A |
| 861 | First comprehensive measurements on atmospheric photochemistry over the Tibetan Plateau                                             | Chunxiang Ye           | China Working Group      | CHINA-16B |
| 124 | Identification of Different Generation Oxidation Products and Tracers: Secondary Organic Aerosol Formation from Aromatic Precursors | Deepchandra Srivastava | FUNDAMENTALS AND FUTURES | FF-1A     |
| 133 | Exploring modeled impacts and uncertainties of DMS oxidation mechanisms                                                             | Linia Tashmim          | FUNDAMENTALS AND FUTURES | FF-2B     |
| 200 | First observations of gas-phase urea in the atmosphere                                                                              | Emily Matthews         | FUNDAMENTALS AND FUTURES | FF-3C     |
| 222 | Coexistence of three liquid phases in individual atmospheric aerosol particles                                                      | Fabian Mahrt           | FUNDAMENTALS AND FUTURES | FF-4A     |
| 255 | Water as the pH probe for individual particles using micro-Raman spectroscopy                                                       | Xiaoyu Cui             | FUNDAMENTALS AND FUTURES | FF-5B     |

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| 343 | Using Measurements of Atmospheric $^{14}\text{CO}$ in a Global Network to Improve Understanding of OH Spatial and Temporal Variability | Vasilii Petrenko         | FUNDAMENTALS AND FUTURES | FF-6C  |
| 348 | Criegee intermediate yields from seven atmospherically important ozone-alkene systems                                                  | Beth Nelson<br>WITHDRAWN | FUNDAMENTALS AND FUTURES | FF-7A  |
| 352 | Renoxification on Aerosol Particles over the Atlantic Ocean                                                                            | Simone Andersen          | FUNDAMENTALS AND FUTURES | FF-8B  |
| 421 | Organic nitrate deposition to trees: processes, rates and atmospheric implications                                                     | Bryan Place              | FUNDAMENTALS AND FUTURES | FF-9C  |
| 454 | Elucidation of the Structure and Formation Mechanism of Dimer Esters in Monoterpene Secondary Organic Aerosol                          | Christopher Kenseth      | FUNDAMENTALS AND FUTURES | FF-10A |
| 478 | The Viscosity of Organic Films from Cooking Aerosol                                                                                    | Kristian Kiland          | FUNDAMENTALS AND FUTURES | FF-11B |
| 488 | Nitrate-mediated photooxidation of organic acids in the aqueous phase                                                                  | Theodora Nah             | FUNDAMENTALS AND FUTURES | FF-12C |
| 517 | Unveiling Processes in Secondary Organic Aerosol Particles during Isothermal Evaporation                                               | Zijun Li                 | FUNDAMENTALS AND FUTURES | FF-13A |

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| 524 | Formation of secondary aerosols, particulate nitrogen- and sulfur-containing organics through anthropogenic-biogenic interactions at night | Li Xu            | FUNDAMENTALS AND FUTURES | FF-14B |
| 532 | Highly oxygenated organic nitrates formed from NO <sub>3</sub> radical initiated oxidation of $\beta$ -pinene                              | Hongru Shen      | FUNDAMENTALS AND FUTURES | FF-15C |
| 543 | An evaluation of the unexplored generation of hydrogen from the photolysis of aldehydes using two photochemistry models                    | Maria Pérez-Peña | FUNDAMENTALS AND FUTURES | FF-16A |
| 544 | Insights into tropical cloud chemistry at La Reunion Island reveals a high supersaturation of low-soluble VOCs in the aqueous phase        | Pamela DOMINUTTI | FUNDAMENTALS AND FUTURES | FF-17B |
| 566 | Spatial heterogeneity of LDSA using a pilot network of LDSA sensors                                                                        | Jacinta Edebeli  | FUNDAMENTALS AND FUTURES | FF-18C |
| 579 | Stereoscopic remote sensing of atmospheric trace gases                                                                                     | Cheng Liu        | FUNDAMENTALS AND FUTURES | FF-19A |
| 603 | O <sub>2</sub> --induced SO <sub>2</sub> oxidation in aerosol formation                                                                    | Narcisse Tsona   | FUNDAMENTALS AND FUTURES | FF-20A |

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| 612 | Influence of atmospheric conditions on the role of trifluoroacetic acid in atmospheric sulfuric acid-dimethylamine nucleation                                 | Ling Ling     | FUNDAMENTALS AND FUTURES | FF-21C |
| 634 | Comprehensive product characterization in the OH oxidation of dimethyl sulfide using an environmental chamber                                                 | Qing Ye       | FUNDAMENTALS AND FUTURES | FF-22A |
| 639 | Role of photo-generated hydroxyl radicals in the ozone depletion on the surface of and within the polar stratospheric clouds (PSCs)                           | Jun He        | FUNDAMENTALS AND FUTURES | FF-23B |
| 641 | Enabling exchange and adequate use of data for observation based atmospheric research                                                                         | Jörg Klausen  | FUNDAMENTALS AND FUTURES | FF-24C |
| 646 | Constructing shapes and mixing structures of black carbon particles with applications to optical calculations                                                 | Yuanyuan Wang | FUNDAMENTALS AND FUTURES | FF-25A |
| 658 | Application of the method to determine the atmospheric carbonyl compounds using liquid chromatography tandem mass spectrometry (LC-MS/MS) to ship measurement | Yang XU       | FUNDAMENTALS AND FUTURES | FF-26B |

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| 660 | Characterizing dynamic behaviors of phthalate monoesters and diesters in an office                                                                                                        | Yatai Li              | FUNDAMENTALS AND FUTURES | FF-27C |
| 685 | Reaction Products and Pathways of Alkoxy Radicals in the Condensed Phase                                                                                                                  | Victoria Barber       | FUNDAMENTALS AND FUTURES | FF-28A |
| 705 | A new mobile UAV-based platform of ACTRIS for atmospheric profiling                                                                                                                       | Maria Kezoudi         | FUNDAMENTALS AND FUTURES | FF-29B |
| 728 | Submicron aerosol acidity variability at a Mediterranean Coastal site                                                                                                                     | Anna Maria Neroladaki | FUNDAMENTALS AND FUTURES | FF-30C |
| 746 | Seasonal Variation in Phase State and Chemical Composition of Ambient Particles Collected at the Southern Great Plains Site at Different Altitude                                         | Zezhen Cheng          | FUNDAMENTALS AND FUTURES | FF-31A |
| 749 | Synergistic Multiphase Chemistry of Isoprene Hydroxy Hydroperoxides (ISOPOOH) with Sulfur Dioxide in Acidic Sulfate Aerosols Leading to Secondary Inorganic and Organic Aerosol Formation | Yue Zhang             | FUNDAMENTALS AND FUTURES | FF-32B |
| 757 | Identification and quantification of tracer products and influence factors of their yields in the OH-initiated oxidation of                                                               | Shuyu He              | FUNDAMENTALS AND FUTURES | FF-33C |

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|     | toluene and m-xylene                                                                                                                       |                         |                          |        |
| 761 | Supersaturated state accelerates the uncatalyzed autoxidation of SO <sub>2</sub> within aerosol droplets                                   | Pai Liu                 | FUNDAMENTALS AND FUTURES | FF-34A |
| 768 | Atmospheric gas-phase alkylamines in the Mediterranean and their relation to new particle formation                                        | Evangelia Tzitzikalaki  | FUNDAMENTALS AND FUTURES | FF-35B |
| 785 | What has data science ever done for us? Successes, lessons learned and reflections from a data diletante                                   | Paul Young<br>WITHDRAWN | FUNDAMENTALS AND FUTURES | FF-36C |
| 799 | Theoretical Study on the Role of Environmental Factors in EPFRs Formation over CuO Surface                                                 | Danli Liang             | FUNDAMENTALS AND FUTURES | FF-37A |
| 811 | The role of Organophosphate Esters Flame Retardants and plasticizers (OPEs) in Phosphorus Cycle in the atmosphere of the Mediterranean Sea | Kalliopi VIOLAKI        | FUNDAMENTALS AND FUTURES | FF-38B |
| 837 | Physicochemical properties and Ice Nucleation Potential of Long-range Transported Free tropospheric aerosols                               | Nurun Nahar Lata        | FUNDAMENTALS AND FUTURES | FF-39C |

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| 842 | Development of "Chemspot" instrument for the characterization of organic aerosol                                                                        | PURUSHOTTA M KUMAR | FUNDAMENTALS AND FUTURES | FF-40A  |
| 847 | A Kinetic and Mechanistic Study on the Photochemistry of Polycyclic Aromatic Hydrocarbons and its Effect on Atmospheric Iron Solubility                 | Desiree Sarmiento  | FUNDAMENTALS AND FUTURES | FF-41B  |
| 858 | A new chemical pathway for stratospheric sulfate aerosol formation                                                                                      | Erik Larson        | FUNDAMENTALS AND FUTURES | FF-42C  |
| 9   | Road Traffic Emission Inventory in an Urban Zone of West Africa: Case of Yopougon City (Abidjan, Côte d'Ivoire)                                         | DOUMBIA Madina     | GEIA                     | GEAI-1A |
| 13  | ESTIMATION OF POLLUTANT EMISSIONS BY INDUSTRIAL SOURCES IN BOGOTÁ UNDER POWER MATRIXES SCENARIOS PROJECTED TO THE YEAR 2050 IMPLEMENTING THE LEAP MODEL | Karen Hernandez    | GEIA                     | GEIA-2B |
| 30  | The influence of change the fuel type used in power plants on reduction of carbon dioxide emission in the Energy Sector of Azerbaijan                   | Sadig Hasanov      | GEIA                     | GEIA-3C |

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| 55  | Characterising oceanic emissions of alkenes and their impacts                                                                                                 | Ryan Pound      | GEIA | GEIA-4A  |
| 59  | The CAMS Global and Regional Emissions for Global and Regional Forecasts and Reanalyses                                                                       | Claire Granier  | GEIA | GEIA-5B  |
| 125 | Incorporating interactive surface exchange of ammonia into chemistry-climate models                                                                           | Jize Jiang      | GEIA | GEIA-6C  |
| 173 | Secondary Organic Aerosol Formation from Emissions of Coastal Sage Shrubs                                                                                     | Archit Mehra    | GEIA | GEIA-7A  |
| 210 | Connecting seasonal variability in monoterpene concentrations to features in the biosphere of a southeastern U.S. forest.                                     | Deborah McGlynn | GEIA | GEIA-8B  |
| 240 | Evaluation of black carbon emissions in East Asia: Comparisons of six inventories and constraints from surface observations and model simulations             | Kohei Ikeda     | GEIA | GEIA-9C  |
| 244 | Investigation of major emission sources and photochemical processes of Volatile Organic Compounds (VOCs) at a suburban site of New Delhi, India in the winter | Nidhi Tripathi  | GEIA | GEIA-10A |

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| 422 | Forecasting policy, innovation and new technologies for reducing transport emissions in Chile 2020-2050           | Mauricio Osses       | GEIA | GEIA-11B |
| 469 | Aerosols in Western Mediterranean Basin: three complementary approaches for source emission identification        | Abdelfettah Benchrif | GEIA | GEIA-12C |
| 471 | Road Traffic Emission Inventory in an Urban Zone of West Africa: Case of Yopougon City (Abidjan, Côte d'Ivoire)   | Madina Doumbia       | GEIA | GEIA-13A |
| 474 | A comprehensive and spatially resolved Mercury Emission Inventory for Indian Subcontinent                         | Madhusmita Mishra    | GEIA | GEIA-14B |
| 482 | Quantification of methane emissions from offshore oil & gas platforms in the Norwegian Sea.                       | Amy Foulds           | GEIA | GEIA-15C |
| 483 | Experimental determination of isoprene and other BVOCs emissions from Platanus x hispanica under urban conditions | Carmen Kalalian      | GEIA | GEIA-16A |
| 497 | Emission sources and health risk of volatile organic compounds during heating season in rural northern China      | Hui Chen             | GEIA | GEIA-17B |
| 498 | The CAMS Global Anthropogenic Emissions                                                                           | Antonin Soulié       | GEIA | GEIA-18C |

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| 499 | Estimation of Methane emissions from Akouédo landfill through a modelling approach                        | Séka Yapo           | GEIA | GEIA-19A |
| 520 | Global Emission trends to 2020 from the Community Emissions Data System (CEDs)                            | Steven Smith        | GEIA | GEIA-20B |
| 525 | Annual changes of ship emissions around China under gradually promoted control policies from 2016 to 2019 | Xiaotong Wang       | GEIA | GEIA-21C |
| 528 | Third Revision of the Bottom-up Global Surface Seawater Dimethyl Sulphide Climatology (DMS-Rev3)          | Shrivardhan Hulswar | GEIA | GEIA-22A |
| 533 | A Technological Inventory of Particulate Matter Emission for Indian Megacity Kolkata                      | Poonam Mangaraj     | GEIA | GEIA-23B |
| 534 | Unfolding Inventory of Indoor Air Pollutant Emission in Indian Household: An Invisible Potential Threat   | Saroj Sahu          | GEIA | GEIA-24C |
| 536 | EMISSIONS FROM STATIONARY SOURCES AND THEIR IMPACT ON AIR QUALITY IN CUBA                                 | Cuesta Osvaldo      | GEIA | GEIA-25A |

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| 546 | The CAMS-REG v5 high-resolution European emission inventory for air pollutants and greenhouse gases (2000-2018) to support air quality and climate change modelling | Stijn Dellaert      | GEIA | GEIA-26B |
| 549 | Understanding the Effect of Drought on Biogenic Isoprene and the Biosphere-Atmosphere-Chemistry Relationship with NASA GISS ModelE+MEGAN Simulations                | Elizabeth Klovenski | GEIA | GEIA-27C |
| 563 | The Effects of Light on the Emission of Biogenic Isoprene and Monoterpenes : A Review                                                                               | Xinyu Wang          | GEIA | GEIA-28A |
| 564 | Downscaling method: Increasing the resolution of EDGAR emission inventory data for complex terrains like Switzerland                                                | Curdin Spirig       | GEIA | GEIA-29B |
| 572 | Sensitivity of different BVOC emission schemes in WRF-Chem(v3.6) to vegetation distributions and its impacts over East China                                        | Mingshuai Zhang     | GEIA | GEIA-30C |
| 591 | BVOCs emission factors of urban green trees                                                                                                                         | Yuran Tan           | GEIA | GEIA-31A |

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| 598 | A case study to clarify emissions of biogenic volatile organic compounds (BVOCs) based on measurements of total ozone reactivity in the ambient air of a suburban forest in Japan                                                                                                                                        | Jun Matsumoto | GEIA | GEIA-32B |
| 618 | RTEII: A new high-resolution ( $0.1^{\circ} \times 0.1^{\circ}$ ) road transport emission inventory over India of 74 VOCs, CO, NO <sub>x</sub> , NH <sub>3</sub> , SO <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , PM <sub>2.5</sub> constrained by measured emission factors and regional vehicular activity data | Haseeb Hakkim | GEIA | GEIA-33C |
| 619 | A new “hybrid” gridded 1 km × 1 km emission inventory for paddy stubble burning reveals that stubble burning is a massive source of VOCs unaccounted for by existing emission inventories and overwhelms other anthropogenic activities over the Indo-Gangetic Plain.                                                    | Ashish Kumar  | GEIA | GEIA-34A |
| 620 | Volatile chemical product emissions and criteria pollutant enhancements in the United States                                                                                                                                                                                                                             | Karl Seltzer  | GEIA | GEIA-35B |

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| 645 | Global NH3 emissions from livestock management : implementation of a dynamical module within a land surface model and impact on atmospheric chemistry | Maureen Beaudor   | GEIA | GEIA-36C |
| 662 | Airborne measurements of formaldehyde from biomass burning plumes and urban and wetland emissions using Laser-Induced Fluorescence Spectroscopy       | Samuel Seldon     | GEIA | GEIA-37A |
| 710 | Modeling and Mapping Biomass Burning for High Northern Latitudes with the Wildland Fire Emissions Inventory System (WFEIS)                            | Nancy French      | GEIA | GEIA-38B |
| 714 | Improving the bottom-up estimates of natural geologic emissions via microseepage                                                                      | Marika Stock      | GEIA | GEIA-39C |
| 718 | Assessing vehicle fuel efficiency using a dense network of CO2 observations                                                                           | Helen Fitzmaurice | GEIA | GEIA-40A |
| 725 | Comparison of bottom-up and top-down road transport emission inventories                                                                              | Erika Trejos      | GEIA | GEIA-41B |
| 731 | COvid-19 adjustmeNt Factors fOR eMissions (CONFORM): A dataset for                                                                                    | Thierno Doumbia   | GEIA | GEIA-42C |

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|     | atmospheric models                                                                                                             |                      |      |          |
| 752 | Global high-resolution emissions of soil NO <sub>x</sub> , sea salt aerosols, and biogenic VOCs                                | Hongjian Weng        | GEIA | GEIA-43A |
| 759 | The impact of land cover change and biogenic emissions from urban green space on summer ozone formation over North China Plain | Mingchen Ma          | GEIA | GEIA-44B |
| 777 | Municipal solid waste burning is a neglected source of highly reactive VOCs that fuel ozone formation over rural India         | Pooja Chaudhary      | GEIA | GEIA-45C |
| 788 | Residential heating emissions cause more aerosol pollution than paddy-residue burning and in rural northwest India             | Harshita Pawar       | GEIA | GEIA-46A |
| 834 | Agricultural particulate matter emissions in the Colombian Orinoco region                                                      | Andres Ardila Ardila | GEIA | GEIA-47B |
| 835 | Particulate matter emission factors for light and heavy-duty vehicles in a South American megacity (São Paulo, Brazil)         | Guilherme Pereira    | GEIA | GEIA-48C |

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| 840 | Reactive Nitrogen Emissions from Turfgrass Systems: Emission, Emission Factor, and Modeling                                                                                        | Viney Aneja                 | GEIA                     | GEIA-49A |
| 841 | Concentrations of Atmospheric VOCs Emitted from Fireworks in Southwest Mexico City Measured by a Real-time Vocus PTR-TOF-MS                                                        | Maribel Hernández-Camarillo | GEIA                     | GEIA-50B |
| 846 | Geostatistical analysis and inventory of emissions from sugarcane pre-harvest burning in Southwest Colombia                                                                        | ANDREA CARDOZO              | GEIA                     | GEIA-51C |
| 851 | Updating the 2013 National Emissions Inventory for air quality modeling in Central Mexico                                                                                          | Jose Rodriguez              | GEIA                     | GEIA-52A |
| 855 | Estimating Road Transportation Emissions using CNNs and Satellite Imagery                                                                                                          | Ryan Mukherjee              | GEIA                     | GEIA-53B |
| 93  | Light absorption properties of brown carbon aerosols in the Asian outflow: Implications from a combination of filter and ground remote sensing observations at Fukue Island, Japan | Chunmao Zhu                 | Japan National Committee | JNC-1A   |

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| 147 | Evaluation of a Low-Cost Mobile PM2.5 Sensor and Application to the Measurements along the Japan National Route 1                                 | Kenta Kanegae     | Japan National Committee | JNC-2B |
| 232 | Effects of marine nitrogen fixation on the formation of atmospheric water-soluble organic nitrogen revealed by a laboratory incubation experiment | Yuzo Miyazaki     | Japan National Committee | JNC-3C |
| 248 | A chemistry-transport modeling to support satellite observations of NO2 and CO2 emitted from megacities                                           | Yousuke Yamashita | Japan National Committee | JNC-5A |
| 249 | Temperature and acidity dependence of secondary organic aerosol formation from $\alpha$ -pinene oxidation: implication for SOA models             | Yange Deng        | Japan National Committee | JNC-6C |
| 281 | Modelling the sources of air pollution over the East China Sea                                                                                    | Adedayo Adedeji   | Japan National Committee | JNC-7A |
| 476 | First Concurrent Observations of NO2 and CO2 from Power Plant Plumes by Airborne Remote Sensing                                                   | Tamaki Fujinawa   | Japan National Committee | JNC-8B |
| 507 | A comparison of the impact of TROPOMI and OMI tropospheric NO2 on global chemical data assimilation and emission inversion                        | Takashi Sekiya    | Japan National Committee | JNC-9C |

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| 560 | Aerosol soluble iron production under clean, haze and fog conditions at a coastal site of China                                                                        | Daizhou Zhang    | Japan National Committee | JNC-10A |
| 581 | Significant Anthropogenic Contribution to Particulate Chloride in Marine Aerosol in the Northern China                                                                 | Junyi Liu        | Japan National Committee | JNC-11B |
| 588 | Investigation of the wet removal rate of black carbon in East Asia: validation of a below- and in-cloud wet removal scheme in FLEXible PARTicle (FLEXPART) model v10.4 | Yongjoo Choi     | Japan National Committee | JNC-12C |
| 589 | Changes in tropospheric nitrogen dioxide vertical column densities over Japan and Korea during the COVID-19 using Pandora and MAX-DOAS                                 | Yongjoo Choi     | Japan National Committee | JNC-13A |
| 593 | Observing anthropogenic emissions of greenhouse gases and air pollutants with the GOSAT-GW satellite: Scientific targets and policy contributions                      | Hiroshi Tanimoto | Japan National Committee | JNC-14B |
| 644 | Model analysis of the atmospheric aerosol concentrations and depositions by ship-onboard observations over                                                             | Kazuyo Yamaji    | Japan National Committee | JNC-15C |

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|     | the Eastern Indian Ocean                                                                                                                            |                 |                          |          |
| 681 | Investigation of adhesivity of marine organic aerosols by atomic force microscopy                                                                   | Kohei Ono       | Japan National Committee | JNC-16A  |
| 750 | Chemical characteristics of humic-like substance (HULIS) organic aerosol in a cool-temperate forest area of Japan                                   | Sonia Afsana    | Japan National Committee | JNC-17B  |
| 82  | Indoor Air Quality Indicators and Toxicity Potential at the Hospitals' Environment in Dhaka, Bangladesh                                             | Shahid Zaman    | MANGO                    | MANGO-1A |
| 95  | Indoor Exposure of Particulate Matter and Association of PM2.5 with Lung Function and Oxygen Saturation Level of the Residents in Dhaka, Bangladesh | Samiha Nahian   | MANGO                    | MANGO-2B |
| 179 | Fine particulate matter concentrations during 2020-2021 Lunar New Year holidays and the COVID-19 pandemic in Ho Chi Minh City, Vietnam              | Cong-Thanh Tran | MANGO                    | MANGO-3C |

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| 285 | Evolution of urban aerosols in warm and humid environment: Number concentrations & specific density                                         | Yang Lan                                           | MANGO | MANGO-4A |
| 300 | Particulate Matter Pollution over North Western India using integrated modeling approach: Case Study of Pre-monsoon Event                   | MANISH SONI                                        | MANGO | MANGO-5B |
| 350 | Investigating the performance of WRF-Chem in simulating the Indian Summer Monsoon and associated chemistry-feedback processes               | Sreyashi Debnath                                   | MANGO | MANGO-6C |
| 408 | A model- and observation-based approach to quantify trends and uncertainty of premature mortality due to PM2.5 in China                     | Paolo Giani                                        | MANGO | MANGO-7A |
| 452 | Assessment of statistical models to improve performance of low-cost optical aerosol sensors in a warm and humid urban environment           | Pongpichit Chuanraksasat<br><br>NOTE:<br>Withdrawn | MANGO | MANGO-8B |
| 459 | Effect of relative humidity on SOA formation from aromatic hydrocarbons: Implications from the evolution of gas- and particle-phase species | Tianzeng Chen                                      | MANGO | MANGO-9C |

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| 460 | Fungal spores as emission sources of 137Cs to ambient aerosols after a nuclear accident in Fukushima 2011 | Kimitaka Kawamura | MANGO | MANGO-10A |
| 486 | Personal PM2.5 exposures of solid fuel users in rural China: in vitro toxicity and chemical composition   | Alexandra Lai     | MANGO | MANGO-11B |
| 537 | Multi-drugs Resistant Bacteria Associated Particulate Matter in the Ambient Air over Dhaka, Bangladesh    | Razia Ankhy       | MANGO | MANGO-12C |
| 747 | A ship-borne field campaign on ozone and precursors in Hong Kong waters                                   | Xin FENG          | MANGO | MANGO-13A |
| 756 | Measurements of hydrogen peroxide and formaldehyde concentrations over Toyama Prefecture in central Japan | Koichi Watanabe   | MANGO | MANGO-14B |
| 760 | Formation and impacts of gaseous nitrated phenols at Hok Tsui during autumn and winter of 2018            | Yi CHEN           | MANGO | MANGO-15C |
| 819 | MEASUREMENT OF BLACK CARBON MASS CONCENTRATION BY USING AETHALOMETER IN MEGACITY LAHORE, PAKISTAN         | Noor Ahmad        | MANGO | MANGO-16A |

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| 845 | Geographic distribution of fluorescent bioaerosols and roles of marine biological particles in the cloud processes over the Arctic Ocean                                                                             | Kaori Kawana            | MANGO  | MANGO-17B<br>**Moved to CATCH |
| 37  | Development and adaptation of sensors and samplers for vertical profiling using fixed-wing drones in the context of the Cooperation to Unravel the RoLE of Atmospheric Aerosols over the Amazonian Basin (CURE-3AB). | Maximilien Desservettaz | MAP-AQ | MAPAQ-86B                     |
| 68  | GEOS Simulations of Dust Deposition into Tropical Atlantic Ocean: Underestimate of Dust Emissions Compensated by Efficient Removals                                                                                  | Hongbin Yu              | MAP-AQ | MAPAQ-87C                     |
| 86  | How Does Indoor Air Chemistry Affect Outdoor Air Pollution?                                                                                                                                                          | Freja Oesterstroem      | MAP-AQ | MAPAQ-88A                     |
| 99  | What's really in the air? A season of pollen counts with novel real-time instruments                                                                                                                                 | Fiona Tummon            | MAP-AQ | MAPAQ-89B                     |
| 107 | Development of an Aerosol and Cloud Analysis System in the Caribbean                                                                                                                                                 | Bighnaraj Sarangi       | MAP-AQ | MAPAQ-90C                     |
| 108 | Development of a MUlti-Scale Infrastructure for Chemistry and Aerosols – MUSICA                                                                                                                                      | Louisa Emmons           | MAP-AQ | MAPAQ-91A                     |

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| 128 | Linking land surface conditions with biogenic emissions, dry deposition and ozone in several latitude regions                             | Min Huang       | MAP-AQ | MAPAQ-1A |
| 138 | Chemical characterization and source apportionment of PM <sub>2.5</sub> in two West African cities (Korhogo and Abidjan in Cote d'Ivoire) | Sylvain Gnamien | MAP-AQ | MAPAQ-2B |
| 182 | PM <sub>2.5</sub> -bound silicon-containing secondary organic aerosols (Si-SOA) in Beijing ambient air                                    | Jingsha Xu      | MAP-AQ | MAPAQ-3C |
| 225 | Direct and indirect effects of aerosols on meteorology and air pollutant concentrations during dry and wet periods on Southeast Brazil    | Sergio Espinosa | MAP-AQ | MAPAQ-4A |
| 239 | The impact of large-scale circulation on daily PM <sub>2.5</sub> in major populated regions of China during winter                        | Zixuan Jia      | MAP-AQ | MAPAQ-5B |
| 246 | Impact of aerosol chemical parameterization in a regional chemical transport model on PM distribution over Thailand.                      | Sherin Bran     | MAP-AQ | MAPAQ-6C |

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| 258 | Model evaluation of Zeppelin and surface observations of reactive compounds in the evolving Atmospheric Boundary Layer: Entrainment versus other ABL sources and sinks.     | Laurens Ganzeveld | MAP-AQ | MAPAQ-7A  |
| 268 | The impact of climate change on winter haze over the North China Plain                                                                                                      | Shipra Jain       | MAP-AQ | MAPAQ-8B  |
| 273 | Association between pollution sources of ambient fine particulate and the changes in biomarkers of oxidative stress and inflammation: A case study in urban Beijing in 2016 | Yidan Zhang       | MAP-AQ | MAPAQ-9C  |
| 282 | Mountain-valley circulation in Santiago, Chile: consequences on Black Carbon deposition over glaciers and Ozone injection into the free troposphere                         | Rémy Lapere       | MAP-AQ | MAPAQ-10A |
| 304 | TRACE METALS ASSOCIATED WITH ATMOSPHERIC FINE PARTICULATE MATTERS IN THE TWO MOST POPULOUS CITIES IN VIETNAM                                                                | Chi Nguyen        | MAP-AQ | MAPAQ-11B |

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| 347 | Towards high resolution air quality modeling using large eddy simulation: a case study for Eindhoven, the Netherlands           | Ruud Janssen         | MAP-AQ | MAPAQ-12C |
| 361 | Assessing nitrogen dioxide intra-urban spatial variability in the West African city of Dakar, Senegal                           | Aissatou Faye        | MAP-AQ | MAPAQ-13A |
| 373 | Investigation of the atmospheric chemistry of solid fuel burning tracers during a strong winter time particle pollution episode | Julien Kammer        | MAP-AQ | MAPAQ-14B |
| 383 | Statistical and Machine Learning Methods for Evaluating Emissions Reduction Policies under Changing Meteorological Conditions   | Minghao Qiu          | MAP-AQ | MAPAQ-15C |
| 394 | Modelling changes in secondary inorganic aerosol formation and nitrogen deposition in Europe from 2005 to 2030                  | Jan Eiof Jonson      | MAP-AQ | MAPAQ-16A |
| 395 | Ultrafine Aerosol Particles in Merida, Yucatan (Mexico)                                                                         | Joshua Muñoz-Salazar | MAP-AQ | MAPAQ-17B |
| 400 | Black carbon dispersion in central and southern Chile in winter and summer 2016                                                 | Kevin Basoa          | MAP-AQ | MAPAQ-18C |

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| 401 | An Update on Low-cost Sensors for the Measurement of Atmospheric Composition                                                                                        | Richard Peltier   | MAP-AQ | MAPAQ-19A |
| 405 | Increasing trends in secondary aerosols in Santiago: empirical analysis and modeling approach                                                                       | Camilo Menares    | MAP-AQ | MAPAQ-20B |
| 425 | Comparison of ground-based aerosol data, satellite observation and dust forecast models in African dust and high convective events over the Greater Caribbean Basin | Josele Rosas Nava | MAP-AQ | MAPAQ-21C |
| 446 | Modeling the combined impacts of changing human activity and a changing climate on air quality                                                                      | Hannah Horowitz   | MAP-AQ | MAPAQ-22A |
| 461 | From Low-Cost Sensors to High-Quality Data: the Importance of Collocated Calibration Model Development                                                              | Michael Giordano  | MAP-AQ | MAPAQ-23B |
| 470 | Assessment of Atmospheric Particulate Matter (PM <sub>2.5</sub> and PM <sub>2.5-10</sub> ) and Source Apportionment in the Ambient Air of Kenitra City, Morocco     | Mounia TAHRI      | MAP-AQ | MAPAQ-24C |
| 477 | Formaldehyde column density as an indicator for elevated surface ozone                                                                                              | Laura Judd        | MAP-AQ | MAPAQ-25A |

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| 487 | Combining light-absorption observation and source-oriented modelling for characterization and source apportionment of black carbon aerosol pollution in a typical Mediterranean coastal area | Andrea Milinković | MAP-AQ | MAPAQ-26B |
| 493 | Diagnosis and prognosis of air quality in South Korea using the UKESM1 modeling                                                                                                              | Taegyung Lee      | MAP-AQ | MAPAQ-27C |
| 538 | Polycyclic Aromatic Hydrocarbons (PAHs) in the Atmospheric Suspended Particulate Matter from Fertilizer Industries in Bangladesh                                                             | Snigdha Aziz      | MAP-AQ | MAPAQ-28A |
| 539 | Effect of Global Atmospheric Datasets in Modeling Meteorology and Air Quality in the Andean Region of Ecuador                                                                                | René Parra        | MAP-AQ | MAPAQ-29B |
| 542 | Efficient vertical transport of black carbon in the planetary boundary layer                                                                                                                 | Kang Hu           | MAP-AQ | MAPAQ-30C |
| 550 | Quality Assurance in the WMO-Global Atmosphere Watch (GAW) Program: A New Expert Team on Measurement Quality for More Standardization and Evaluation                                         | Herman Smit       | MAP-AQ | MAPAQ-31A |

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| 555 | Sensitivity of Air Pollution in Quebec to Regional Emissions                                                                                              | Robin Stevens     | MAP-AQ | MAPAQ-32B |
| 558 | Quantifying Linear and Non-Linear Influences of Aerosol Precursor Emissions on Pollutant Concentrations Using CMAQ-hyd                                    | Jiachen Liu       | MAP-AQ | MAPAQ-33C |
| 559 | The influence of chemical compositions to the sensitivity of visibility on the PM <sub>2.5</sub> and relative humidity                                    | Jiao Wang         | MAP-AQ | MAPAQ-34A |
| 574 | Constructing a spatiotemporally coherent long-term PM <sub>2.5</sub> concentration dataset over China during 1980–2019 using a machine learning approach  | Huimin Li         | MAP-AQ | MAPAQ-35B |
| 594 | Contribution of brown carbon to the light absorption and radiative effect of carbonaceous aerosols from biomass burning emissions in Chiang Mai, Thailand | Ying Zhang        | MAP-AQ | MAPAQ-36C |
| 622 | Air Quality Modeling with Urban WRF-Chem system over a high altitude tropical City: Implementation and evaluation.                                        | J. Miguel Poblete | MAP-AQ | MAPAQ-37A |

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| 640 | Trace Elements From Ocean-Going Vessels in East Asia:Vanadium and Nickel Emissions and Their Impacts on Air Quality                                                         | Junri Zhao            | MAP-AQ | MAPAQ-38B |
| 649 | Insights into future spatial and temporal variability of PM2.5 and O3 in Xiamen, South China                                                                                | Qixian Liu            | MAP-AQ | MAPAQ-39C |
| 650 | Modelling the impact of urban traffic management strategies on emissions and air quality levels in Barcelona (Spain)                                                        | Daniel Rodriguez-Rey  | MAP-AQ | MAPAQ-40A |
| 651 | A cross-model examination of the impact of orography and model resolution on pollutant transport                                                                            | Alexandros Poulidis   | MAP-AQ | MAPAQ-41B |
| 652 | RWANDA AIR POLLUTION ASSESSMENT AND FORECASTING.                                                                                                                            | HABINEZA THEOBARD     | MAP-AQ | MAPAQ-42C |
| 655 | Characteristics and Source Apportionment of Trace Metals in PM10and PM2.5 at a Traffic Site in Agra, India.                                                                 | Surat Dewan           | MAP-AQ | MAPAQ-43A |
| 665 | Exploring strategies to improve source apportionment in urban areas: Combination and cross-validation of traditional (EPA-PMF) and new (Multi-Isotopic Fingerprint) models. | Carlos Souto-Oliveira | MAP-AQ | MAPAQ-44B |

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| 671 | The study of atmospheric nitrous acid in the North China Plain                                                                                                      | Wenqian Zhang       | MAP-AQ | MAPAQ-45C |
| 680 | An Overview of long-term monitoring efforts of Persistent Organic Pollutants and pesticides in Africa                                                               | John Mwangi         | MAP-AQ | MAPAQ-46A |
| 687 | Modeling diurnal variation of surface PM <sub>2.5</sub> concentrations over East China with WRF-Chem: impacts from boundary-layer mixing and anthropogenic emission | Qiuyan Du           | MAP-AQ | MAPAQ-47B |
| 688 | Uncertainties propagated from optical properties in aerosol classification schemes                                                                                  | Ariel Scagliotti    | MAP-AQ | MAPAQ-48C |
| 693 | Evaluating the impact of dust events on Cloud Condensation Nuclei (CCN) and Aerosol Load levels over the East Mediterranean using satellite observations            | Maria Sfakianaki    | MAP-AQ | MAPAQ-49A |
| 697 | Assessing the role on two anthropogenic emission inventories on the outcomes of air quality simulations for the metropolitan area of Buenos Aires                   | Melisa Diaz Resquin | MAP-AQ | MAPAQ-50B |

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| 698 | MAIAC algorithm calibration uncertainties for sites with low AOD values. Case study: Metropolitan Area of Buenos Aires                                                   | Josefina Urquiza | MAP-AQ | MAPAQ-51C |
| 707 | Importance of model complexity on modeling ambient air quality and the resulting health impacts                                                                          | Forrest Lacey    | MAP-AQ | MAPAQ-52A |
| 727 | Towards an automated algorithm for surface PM2.5 estimation using stacked machine learning                                                                               | Kyle Shores      | MAP-AQ | MAPAQ-53B |
| 737 | Aerosol Optical Depth, decadal (2007-2018) scenario over four megacities of India: An Assessment using Gridded MODIS Satellite Observations                              | Priyanshu Gupta  | MAP-AQ | MAPAQ-54C |
| 741 | The oObservation of particulate matters in a research vessel: indoor concentrations and size distributions                                                               | wu xudong        | MAP-AQ | MAPAQ-55A |
| 743 | Characterization, oxidative potential (OP) and health risk analysis of PM2.5 bound trace metals during foggy and non-foggy episodes at a site in the Indo-Gangetic Plain | Isha Goyal       | MAP-AQ | MAPAQ-56B |

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| 753 | Characteristics of Volatile Organic Compounds over Hong Kong Waters in a Pilot Ship Measurement Campaign During Ozone Episode | Ho Wun Lee                | MAP-AQ | MAPAQ-57C |
| 765 | The aggravated short-term PM2.5-related health risk due to atmospheric transport in the Yangtze River Delta                   | Peng Wang                 | MAP-AQ | MAPAQ-58A |
| 769 | Long-term fog variation and its impact factors over East China                                                                | Shuqi Yan                 | MAP-AQ | MAP-AQ59B |
| 778 | A new air quality index to measure the impact of urban trees on air quality, human health and secondary pollutant formation   | Savita Datta              | MAP-AQ | MAPAQ-60C |
| 781 | Spatial bias-correction method for street-scale air quality models                                                            | Jan Armengol              | MAP-AQ | MAPAQ-61A |
| 784 | Simultaneous observations of NO2 and HCHO from three different locations in India                                             | Mriganka Biswas           | MAP-AQ | MAPAQ-62B |
| 789 | Predicting future changes of soil selenium based on Se atmospheric deposition.                                                | Yutao Chen                | MAP-AQ | MAPAQ-63C |
| 790 | Simulated fine particulate air pollution attributable to coal-fired power in the Highveld                                     | Patricia-Ann van der Walt | MAP-AQ | MAPAQ-64A |

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| 792 | Mixing Height Simulations over the Chiang Mai Valley Atmosphere in Northern Thailand                                                                                           | Ronald Macatangay     | MAP-AQ | MAPAQ-65B |
| 800 | Decision support system for air-quality management in Delhi and the surrounding region                                                                                         | Gaurav Govardhan      | MAP-AQ | MAPAQ-66C |
| 801 | Fog-forecast over the northern region of India employing realistic aerosol                                                                                                     | Gaurav Govardhan      | MAP-AQ | MAPAQ-67A |
| 805 | Biogenic Volatile Organic Compounds (BVOCs) and roles on Air Quality (Ozone and PM2.5) over Northern Thailand                                                                  | Vanisa Surapipith     | MAP-AQ | MAPAQ-68B |
| 806 | Rainwater Chemistry during the GoAmazon2014/5: the multiple influence of biogenic, biomass burning and urban pollution on the composition of precipitation in Central Amazonia | Theotonio Pauliquevis | MAP-AQ | MAPAQ-69C |
| 807 | Development of a regional air quality reanalysis over the contiguous United States                                                                                             | Rajesh Kumar          | MAP-AQ | MAPAQ-70A |
| 808 | Forecasting of PM2.5 Concentration under Climate Change over Thailand                                                                                                          | Angkhana Ketjalan     | MAP-AQ | MAPAQ-71B |

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| 810 | Levels of PM2.5 in Great Mendoza (Argentina) and its impact on bicyclists                                                    | Maria Tames              | MAP-AQ | MAPAQ-72C |
| 813 | Effects of Land Use and Land Cover pattern on Meteorology and Air Quality over Delhi                                         | Preeti Gunwani           | MAP-AQ | MAPAQ-73A |
| 816 | Modeling secondary organic aerosol formation from volatile chemical products in Los Angeles                                  | Elyse Pennington         | MAP-AQ | MAPAQ-74B |
| 817 | Understanding NO2 concentrations on the South African Highveld using a ground-based monitoring system                        | Refilwe Kai              | MAP-AQ | MAPAQ-75C |
| 824 | Understanding aerosol composition in an inter-Andean valley impacted by sugarcane-intensive agriculture and urban emissions. | Angela Vargas            | MAP-AQ | MAPAQ-76A |
| 826 | THE DIURNAL EVOLUTION OF AIR POLLUTANTS IN NAIROBI CITY, KENYA                                                               | Constance Okuku          | MAP-AQ | MAPAQ-77B |
| 827 | EC/OC content in PM2.5 in five Latin American cities and megacities: air quality and radiative forcing                       | Julian Gelman Constantin | MAP-AQ | MAPAQ-78C |
| 829 | Experimental air quality forecasting with the Rapid-Refresh model coupled to chemistry (RAP-Chem)                            | Jordan Schnell           | MAP-AQ | MAPAQ-79A |

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| 831 | Size-segregated ions and carbonaceous fractions of ambient aerosol in Bogotá                                                                    | Lady Mateus       | MAP-AQ | MAPAQ-80B |
| 832 | Effects of grid resolution on urban air quality simulation with MUSICA <sub>v0</sub>                                                            | Duseong Jo        | MAP-AQ | MAPAQ-81C |
| 833 | Impact of air quality management programs on non-criteria and criteria primary atmospheric pollutants in the Metropolitan Zone of Mexico Valley | Omar Amador-Muñoz | MAP-AQ | MAPAQ-82A |
| 850 | Air quality modeling with WRF-Chem / DART system for Central Mexico                                                                             | Evelyn Martinez   | MAP-AQ | MAPAQ-83B |
| 852 | The AQ-WATCH Project - Worldwide Analysis and Forecasting of Atmospheric Composition for Health                                                 | Yvonne Boose      | MAP-AQ | MAPAQ-84C |
| 853 | Stable and transport indices applied to winter air pollution over the Yangtze River Delta China                                                 | Xiaohui Liu       | MAP-AQ | MAPAQ-85A |
| 121 | FUTURE AEROSOL RADIATIVE FORCING OVER THE ARCTIC                                                                                                | Ulas Im           | PACES  | PACES-1A  |
| 126 | Isotopic composition of atmospheric nitrate in Fairbanks, Alaska: results from the pre-ALPACA campaign 2019                                     | Sarah Albertin    | PACES  | PACES-2B  |

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| 129 | Ozone and carbon monoxide observations over open oceans on R/V Mirai from 67° S to 75° N during 2012 to 2017: Testing global chemical reanalysis TCR-2 in terms of Arctic processes and low ozone levels at low latitudes | Yugo Kanaya     | PACES | PACES-3C |
| 372 | WRF-Chem numerical analysis of YAK-AEROSIB aircraft data with BC emissions from Russian oil/gas flarings evaluated by satellite data                                                                                      | T. ONISHI       | PACES | PACES-4A |
| 462 | Model simulations of short-lived climate forcers in the Arctic                                                                                                                                                            | Cynthia Whaley  | PACES | PACES-5B |
| 496 | Modelling Air Quality in the Arctic and Northern Latitudes: An assessment of surface ozone.                                                                                                                               | Stephen Beagley | PACES | PACES-6C |
| 576 | Source attribution of Arctic black carbon and sulfate aerosols and associated Arctic surface warming during 1980–2018                                                                                                     | Lili Ren        | PACES | PACES-7A |
| 609 | Can a global chemistry climate model reproduce interannual variabilities and trends ofdepositions of sulfate, nitrate, and ammonium preserved in the SoutheasternGreenl and Dome ice core?                                | Kengo Sudo      | PACES | PACES-8B |

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| 623 | Modelling Atmospheric Chemistry and Vertical Transport in Fairbanks, Alaska                                                                                      | Sarah Johnson        | PACES | PACES-9C  |
| 690 | Observations of Extreme Wildfire Enhancements of CH <sub>3</sub> OH, HCOOH, and PAN over the Canadian High Arctic                                                | Tyler Wizenberg      | PACES | PACES-10A |
| 729 | Size-Resolved Elemental Analysis of High-Latitude Mineral Dust Aerosol in Kluane National Park, Yukon                                                            | Arnold Downey        | PACES | PACES-11B |
| 730 | Evaluating air quality and atmosphere composition impacts of Arctic wildfires in the summers of 2019 and 2020                                                    | Mark Parrington      | PACES | PACES-12C |
| 744 | Wintertime surface based temperature inversions are related to differences in particulate matter and ozone on a 20 m vertical scale in Alaska                    | Meeta Cesler-Maloney | PACES | PACES-13A |
| 764 | Source and variability of formaldehyde (HCHO) vertical column density at northern high latitude: an integrated satellite, ground/aircraft, and model perspective | Tianlang Zhao        | PACES | PACES-14B |

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| 774 | Wintertime anthropogenic Arctic Air Pollution over Alaska                                                                                   | Eleftherios Ioannidis | PACES                              | PACES-15C |
| 31  | Development of a regional airshed chemical transport model for priority airsheds in Western Australia                                       | Sean Lam              | Southern Hemispheres Working Group | SH-1A     |
| 109 | Particulate matter mass concentration in different size fractions related to meteorological variables in the Metropolitan Area of São Paulo | Victória Peli         | Southern Hemispheres Working Group | SH-2B     |
| 111 | Temperature response measurements from eucalypts give insight into the impact of Australian isoprene emissions on air quality in 2050       | Kathryn Emmerson      | Southern Hemispheres Working Group | SH-3C     |
| 251 | Identifying the factors driving the Biogenic VOC uncertainty in CTM models in south-east Australia.                                         | Jhonathan Ramirez     | Southern Hemispheres Working Group | SH-4A     |
| 366 | Dust emissions modelling over the semi-arid Argentinian territory                                                                           | Ramiro Espada         | Southern Hemispheres Working Group | SH-5B     |
| 380 | Quantification and characterization of PM <sub>2.5</sub> in Buenos Aires, Argentina.                                                        | Pablo Lichtig         | Southern Hemispheres Working Group | SH-6C     |
| 403 | Black Carbon atmospheric emissions from biomass burning in the Amazon reaching the Chilean Central Andes: evidence                          | Maria Ruggeri         | Southern Hemispheres Working Group | SH-7A     |

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|     | from a multi-technical approach                                                                                                                       |                            |                                    |        |
| 427 | An Overview of the COALA-2020 campaign at Cataract (Characterising Organics and Aerosol Loading in Australia)                                         | Clare Murphy (Paton-Walsh) | Southern Hemispheres Working Group | SH-8B  |
| 464 | Mass spectrometry system (MALDI-TOF) validation in the identification of Aspergillus Nigri Section species of atmospheric air from São Paulo, Brazil. | Valter Duo Filho           | Southern Hemispheres Working Group | SH-9C  |
| 489 | Intercontinental Air Pollution Transport in the Southern Hemisphere                                                                                   | Lily Sheridan              | Southern Hemispheres Working Group | SH-10A |
| 511 | Radon Dosimetry in Nchanga Underground Mine on The Copperbelt Province                                                                                | RABBISON BANDA             | Southern Hemispheres Working Group | SH-11B |
| 561 | Can we see the impact of indigenous fire management on the interannual variability of carbon monoxide?                                                | Shyno Susan John           | Southern Hemispheres Working Group | SH-12C |
| 602 | Prediction of Aerosol acidity in the remote marine boundary layer of the southern ocean during summer.                                                | Sive Xokashe               | Southern Hemispheres Working Group | SH-13A |

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| 636 | Southern Ocean latitudinal gradients of Cloud Condensation Nuclei                                                                       | Ruhi Humphries   | Southern Hemispheres Working Group | SH-14B |
| 643 | Mapping the sources of organic PM1: A case study from the COALA campaign in Southeast Australia                                         | Adhitya Sutresna | Southern Hemispheres Working Group | SH-15C |
| 748 | Using Climate Mode Indices to Forecast Carbon Monoxide Variability in Fire-Prone Southern Hemisphere Regions                            | William Daniels  | Southern Hemispheres Working Group | SH-16A |
| 751 | Biomass burning smoke and coincident water vapor over the southeast Atlantic stratocumulus region: results from observations and models | Kristina Pistone | Southern Hemispheres Working Group | SH-17B |
| 815 | AVOC and BVOC sensitivity study for ozone pollution in Santiago, Chile combining observations and a box model                           | Constanza Urbina | Southern Hemispheres Working Group | SH-18C |
| 836 | Update of Tropospheric Ozone trends at Ushuaia GAW Station                                                                              | Pablo Medina     | Southern Hemispheres Working Group | SH-19A |
| 843 | The influence of ventilation coefficient on carbon monoxide concentration in São Paulo city: An observation from lidar data             | Gregori Moreira  | Southern Hemispheres Working Group | SH-20B |

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| 844 | Anthropogenic air pollutant emission inventories for South America                                                   | Nicolas Huneus      | Southern Hemispheres Working Group | SH-21C                        |
| 46  | Ozone production in African biomass burning                                                                          | James Lee           | TOAR-II                            | TOAR-1A<br>NOTE:<br>Withdrawn |
| 91  | Reactive Uptake of Ozone to Simulated Seawater: Factors Affecting Uptake and Iodine Formation                        | Stephanie Schneider | TOAR-II                            | TOAR-2B                       |
| 105 | The TOAR-II Satellite Ozone Focus Working Group                                                                      | Helen Worden        | TOAR-II                            | TOAR-3C                       |
| 141 | Trends of surface ozone and its precursors over 20 years in Southern Germany                                         | Dagmar Kubistin     | TOAR-II                            | TOAR-4A                       |
| 155 | Links between oceanic ozone uptake and biogenic organic matter found in the sea surface microlayer                   | Katherine Weddell   | TOAR-II                            | TOAR-5B                       |
| 176 | Productions of gaseous isoprene, acetone, and acetaldehyde from reactions between ozone and seawater.                | Daniel Phillips     | TOAR-II                            | TOAR-6C                       |
| 209 | Harmonised assessment of tropospheric ozone data records from multiple satellites with the ozonesonde global network | Arno Keppens        | TOAR-II                            | TOAR-7A                       |
| 218 | Large contribution of biomass burning emissions to ozone throughout the global remote troposphere                    | Ilann Bourgeois     | TOAR-II                            | TOAR-8B                       |

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| 253 | (Global) direct and in-direct effects of heat-stressed vegetation on ozone extremes                                                 | Tamara Emmerichs          | TOAR-II | TOAR-9C  |
| 290 | Oxidation of low-molecular weight organic compounds in cloud droplets: global impact on tropospheric oxidants and other trace gases | Simon Rosanka             | TOAR-II | TOAR-10A |
| 298 | Recent Chinese ozone trends as seen from space and models: exploring the impact from local precursor emissions reductions           | Gaëlle Dufour             | TOAR-II | TOAR-11B |
| 314 | New tropospheric ozone dataset from OMPS/NPP and the detection of enhanced tropospheric ozone above South American megacities       | Andrea Orfanoz-Cheuquelaf | TOAR-II | TOAR-12C |
| 320 | Local and global impacts of C1-C3 alkyl nitrate chemistry and emissions on tropospheric ozone                                       | Maria Zamyatina           | TOAR-II | TOAR-13A |
| 355 | Long-term trends in tropospheric ozone at the Cape Verde Atmospheric Observatory                                                    | Matthew Rowlinson         | TOAR-II | TOAR-14B |
| 362 | Vegetation feedbacks during drought exacerbate ozone air pollution extremes in Europe                                               | Meiyun Lin                | TOAR-II | TOAR-15C |

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| 367 | Contributions of World Regions to the Global Tropospheric Ozone Burden Change From 1980 to 2010                                                | Yuqiang Zhang     | TOAR-II | TOAR-16A |
| 414 | Global Surface Ozone Concentration Mapping Through Data Fusion at Fine Resolution for 1990 to 2017 to Support Health Impact Assessment         | Jason West        | TOAR-II | TOAR-17B |
| 442 | The TOAR-II Ozone and its Precursors in the Tropics Focus Working Group's activities                                                           | Audrey Gaudel     | TOAR-II | TOAR-18C |
| 458 | The observation and modelling study of ozone enhancement in NOx-saturated megacity during the 2018 summer heat wave                            | Junsu Gil         | TOAR-II | TOAR-19A |
| 467 | Lower than expected summertime clean-background ozone concentrations derived from ozone precursor relationships in the Southeast United States | Qiyang Yan        | TOAR-II | TOAR-20B |
| 468 | Night-time Ozone Chemistry and Influence of Meteorological Parameters at a ground level site in Delhi, India                                   | Pallavi Saxena    | TOAR-II | TOAR-21C |
| 504 | TOAR-II Chemical Reanalysis Focus Working Group                                                                                                | Kazuyuki Miyazaki | TOAR-II | TOAR-22  |

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| 509 | Trends of Surface and Tropospheric Ozone over Southeast Asia and their drivers during 2005 to 2014                                          | Xiaolin Wang         | TOAR-II | TOAR-23B |
| 535 | Current organizational and research plans of the TOAR-II Statistics Focus Working Group                                                     | Kai-Lan Chang        | TOAR-II | TOAR-24C |
| 571 | Improved high-quality data of volatile organic compounds thanks to metrological developments                                                | Céline Pascale       | TOAR-II | TOAR-25A |
| 580 | Highlights from a multi annual observation of ozone deposition in a deciduous mature forest in Italy                                        | Giacomo Gerosa       | TOAR-II | TOAR-26  |
| 584 | The TOAR database: data harmonization and quality assurance on global air quality data                                                      | Niklas Selke         | TOAR-II | TOAR-27C |
| 601 | Harmonization and Evaluation of Ground-based Instruments for Free-Tropospheric Ozone Measurements by TOAR-II Focus Working Group “HEGIFTOM” | Roeland Van Malderen | TOAR-II | TOAR-28A |
| 606 | Long-term measurements of tropospheric ozone and precursors (HCHO and CO) from the NDACC FTIR ground-based network                          | Corinne Vigouroux    | TOAR-II | TOAR-29B |

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| 607 | TOAR-II<br>Tropospheric Ozone<br>Precursors (TOP)-<br>Focus Working<br>Group:<br>Photochemical<br>ozone formation<br>and free radical<br>chemistry in five<br>Chinese megacities<br>in summer 2018 | Xufei LIU           | TOAR-II | TOAR-30C |
| 624 | TOAR-II<br>Tropospheric Ozone<br>Precursors (TOP) –<br>Focus Working<br>Group: Evaluating<br>the Regional and<br>Global Distributions<br>of Ozone<br>Precursors in<br>relation to Ozone            | Yasin<br>Elshorbany | TOAR-II | TOAR-31A |
| 628 | Distribution and<br>seasonal variability<br>of ozone and<br>carbon monoxide<br>over the tropics<br>with 20 years of<br>measurements                                                                | Maria Tsivlidou     | TOAR-II | TOAR-32B |
| 638 | Characteristics and<br>source analysis of<br>tropospheric ozone<br>in Qinghai Tibet<br>Plateau                                                                                                     | Chenghao Xu         | TOAR-II | TOAR-33C |
| 647 | High ozone over the<br>bread basket of<br>India ramped up by<br>isoprene and<br>acetaldehyde                                                                                                       | Vinod Kumar         | TOAR-II | TOAR-34A |
| 656 | The TOAR-II Ozone<br>Radiative Forcing<br>(ORF) Working<br>Group activities                                                                                                                        | Fiona O'Connor      | TOAR-II | TOAR-35B |

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| 679 | Surface ozone concentrations response to current air pollution mitigation strategies in Chinese megacity agglomerations                      | Yijuan Zhang     | TOAR-II | TOAR-36C |
| 686 | Implementation of a New Value of the Ozone Absorption Cross-section per Molecule at 253.65 nm (air) for Global Atmospheric Ozone Measurement | Paul Brewer      | TOAR-II | TOAR-37A |
| 689 | Effect of global and local biogenic emission inventories in surface ozone simulations using WRF-Chem                                         | Felipe Cifuentes | TOAR-II | TOAR-38B |
| 691 | Observations of light NMHCs over the central Himalayas: Assessment of ozone production potential using a photochemical box model             | Mahendar Rajwar  | TOAR-II | TOAR-39C |
| 696 | Multimodel evaluation of present-day and climate-driven changes in surface ozone over Africa and South America                               | Florence Brown   | TOAR-II | TOAR-40A |
| 715 | TOAR-II Tropospheric Ozone Precursors (TOP) – Focus Working Group: Addressing multi-scale processes in South America                         | Rodrigo Seguel   | TOAR-II | TOAR-41B |

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| 732 | Evaluation of tropospheric ozone measurements derived from the satellite UV sensors                                                           | Natalya Kramarova        | TOAR-II | TOAR-42C |
| 739 | Impact of the 2020 Colorado wildfires on Ozone in the Front Range                                                                             | Patricia Razafindrambina | TOAR-II | TOAR-43A |
| 766 | Ozone Chemistry over a Western Himalayan Site                                                                                                 | Renu Masiwal             | TOAR-II | TOAR-44B |
| 772 | Investigating the governing processes and synergic effect between anthropogenic and biogenic emissions on ozone pollution over northern China | Feifan Yan               | TOAR-II | TOAR-45C |
| 812 | Estimation of Ozone during lightning event in pre-monsoon season                                                                              | Swagata Payra            | TOAR-II | TOAR-46A |