

## 36th International Technical Meeting on Air Pollution Modelling and its Application

May 14 - 18, 2018 – Ottawa, Canada

	Monday 14 May	Tuesday 15 May	Wednesday 16 May	Thursday 17 May	Friday 18 May
9:00	Opening session	2.11 Anthony Dore	<b>Luisa T. Molina (invited)</b>	6.3 Paul Makar	1.11 Amir Hakami
9:20	<b>Randall Martin (invited)</b>	2.12 Rostislav Kouznetsov		6.4 Talat Odman	1.12 Fabian Lenartz
9:40		1.1 Stefano Galmarini	2.13 Sarav Arunachalam	6.5 Richard Ménard	1.13 Rodrigo Munoz-Alpizar
10:00	1.2 Ulas Im	2.14 Andy Delcloo	5.1 Clemens Mensink	6.6 Ari Karpinen	8.1 Greg Yarwood
10:20		2.15 Silvia Trini Castelli	5.2 Vera Rodrigues	6.7 Andreas Uppstu	8.2 Julius Vira
10:40	<b>Coffee</b>	<b>Coffee</b>	<b>Coffee</b>	<b>Coffee</b>	<b>Coffee</b>
11:00	1.3 Valerie Garcia	<b>Arlene Fiore (invited)</b>	5.4 Wouter Lefebvre	<b>Richard Burnett (Invited)</b>	8.3 Volker Matthias
11:20	1.4 Yasar Burak Oztaner		5.5 Nicolas Moussiopoulos		8.4 Renske Timmermans
11:40	1.5 Camilla Geels	3.1 Fernando Garcia-Menendez	5.6 Sergej Zilitinkevich	1.8 Marjan Soltan Zadeh	8.5 Niko Karvosenoja
12:00	1.6 Robyn Chatwin-Davies	3.2 Ana Isabel Miranda	6.1 Xuesong Zhang	1.9 Armistead Russell	8.6 Jukka-Pekka Jalkanen
12:20	1.7 Amanda Pappin	3.3 Gufran Beig	6.2 Pablo Saide	1.10 Angele Genereux	8.7 Kaarle Kupiainen
12:40	<b>Lunch Break</b>	<b>Lunch Break</b>	<b>Lunch Break</b>	<b>Lunch Break</b>	<b>36th ITM Adjourns</b>
14:00	2.1 Renske Timmermans	4.1 Joana Soares	<b>Excursion</b>	7.1 Eleni Karnezi	
14:20	2.2 Greg Yarwood	4.2 Christian Hogrefe		7.2 Yilin Chen	
14:40	2.3 Lucas Henneman	4.3 Johannes Bieser		7.3 Ralf Wolke	
15:00	2.4 Oriol Jorba	4.4 Marina Astitha		7.4 Jianhui Jiang	
15:20	2.5 Deborah Luecken	4.5 Melanie Fillingham		7.5 George Kallos	
15:40	<b>Coffee</b>	<b>Coffee</b>		<b>Coffee</b>	
16:00	2.6 Sebnem Aksoyoglu	4.6 Huiying Luo		7.6 Maria Kanakidou	
16:20	2.7 David Wong	4.7 Risto Hänninen		7.7 Nadine Chaumerliac	
16:40	2.8 Rohit Mathur	4.8 Daiwen Kang		7.8 Laurent Deguillaume	
17:00	2.9 Eric van der Swaluw	4.9 Steven Hanna		7.9 Wanmin Gong	
17:20	2.10 Jerzy Bartnicki	4.10 Cristina Guerreiro		7.10 Oriol Jorba	
17:40	<b>Poster Presentations</b>	S.1 AQMEII & S.2 Nitsa Haikin		7.11 Marje Prank	
18:00	<b>Break</b>	<b>Break</b>		<b>Break</b>	
18:30	<b>Poster Viewing &amp; Reception</b>	<b>Poster Viewing &amp; Reception</b>		<b>Social Dinner</b>	

Key topic 1: Air quality, human & environmental health
Key topic 2: Regional & intercontinental modelling
Key topic 3: Air quality & climate change
Key topic 4: Model assessment & verification
Key topic 5: Local & urban modelling
Key topic 6: Data assimilation & air quality forecasting
Key topic 7: Aerosols in the atmosphere
Key topic 8: Processing of emissions

GURME meeting: Sunday 13 May & Monday 14 May  
 ITM SC meeting: Tuesday 15 May (lunch break)  
 AQMEII meeting: Tuesday 15 May (t.b.d.)

NR	Presenting Author	Author(s)	Title
INV	Randall Martin	Randall Martin	Insight into Aerosols Worldwide with Implications for Air Quality, Health, and Climate
1.1	Stefano Galmarini	Ef시오 Solazzo <sup>1</sup> , Angelo Riccio <sup>2</sup> , Rita Van Dingenen <sup>1</sup> and Stefano Galmarini <sup>1</sup>	Bias correction and multi-model ensembles as the latest resource to assess air quality impact on crop yields and mortality
1.2	Ulas Im	Ulas Im <sup>1</sup> , Jørgen Brandt <sup>1</sup> , Camilla Geels <sup>1</sup> , Kaj Mantzius Hansen <sup>1</sup> , Jesper Heile Christensen <sup>1</sup> , Mikael Skou Andersen <sup>1</sup> , Ef시오 Solazzo <sup>2</sup> , Ioannis Kioutsoukis <sup>3</sup> , Ummugulsam Alyuz <sup>4</sup> , Alessandra Balzarini <sup>5</sup> , Rocio Baro <sup>6</sup> , Roberto Bellasio <sup>7</sup> , Roberto Bianconi <sup>7</sup> , Johannes Bieser <sup>8</sup> , Augustin Colette <sup>9</sup> , Gabriele Curci <sup>10,11</sup> , Aidan Farrow <sup>12</sup> , Johannes Flemming <sup>13</sup> , Andrea Fraser <sup>14</sup> , Pedro Jimenez-Guerrero <sup>6</sup> , Nutthida Kitwiroon <sup>15</sup> , Ciao-Kai Liang <sup>16</sup> , Uarporn Nopmongkol <sup>17</sup> , Guido Pirovano <sup>5</sup> , Luca Pozzoli <sup>2</sup> , Marje Prank <sup>18,19</sup> , Rebe	Multi-model assessment of air pollution-related premature mortality in Europe and U.S.: domestic vs. foreign contributions
1.3	Valerie Garcia	Valerie Garcia <sup>1</sup> , Catherine Nowakowski <sup>2</sup> , Marina Astitha <sup>2</sup> , Penny Vlahos <sup>3</sup> , Ellen Cooter <sup>1</sup> , Chunling Tang <sup>1</sup>	Using Multi-media Modeling to Investigate Conditions Leading to Harmful Algal Blooms
1.4	Yasar Burak Oztaner	Yasar Burak Oztaner, Marjan Soltanzadeh, Shunliu Zhao, Amanda Pappin, Amir Hakami (Carleton U); Matt D. Turner, Daven K. Henze (U of Colorado); Shannon L. Capps (Drexel U); Peter B. Percell (U of Houston); Jaroslav Resler (ICS Prague); Jesse O. Bash, Sergey L. Napelenok, Kathleen Fahey (USEPA); Rob W. Pinder; Armistead G. Russell, Athanasios Nenes (Georgia Tech); Jaameen Baek, Greg R. Carmichael, Charlie O. Stanier (Uof Iowa); Adrian Sandu (Virginia Tech), Tianfeng Chai (Uof Maryland), Daewon Byun	Assessing the air quality health benefits of phasing out coal-fire power plants in Canada and US

1.5	Camilla Geels	Geels et al	The first high resolution integrated assessment of air pollution and related health impacts across the Nordic region
1.6	Robyn Chatwin-Davies	Robyn Chatwin-Davies, Burak Oztaner, Shunliu Zhao, Melanie Fillingham, Marjan Soltanzadeh, Matthew Russell, Amir Hakami (Carleton University); Amanda Pappin (Health Canada); Iyad Kheirbek, Kazuhiko Ito, Thomas Matte (New York City Department of Health and Mental Hygiene); Jay Haney, Sharon Douglas (ICF International); et. al. (see remainder in abstract document)	Quantifying impacts of emission reductions on environmental justice and human health in a metropolitan area
1.7	Amanda Pappin	Amanda J. Pappin, Lauren L. Pinault, Richard T Burnett (Health Canada); Burak Oztaner, Marjan Soltanzadeh, Shunliu Zhao, Amir Hakami (Carleton University); Markey Johnson, Phil Blagden, Scott Weichenthal (Health Canada); Matt D. Turner, Shannon L. Capps, Daven K. Henze (University of Colorado); Peter B. Percell (University of Houston); Jaroslav Resler (ICS Prague); Jesse O. Bash, Sergey L. Napelenok, Kathleen Fahey, Rob W. Pinder (U.S. EPA); Armistead G. Russell, Athanasios Nenes (Georgia Tech)	Nonlinearity in concentration-response models and implications for source-attributed air pollution health burdens
2.1	Renske Timmermans	C. Hendriks (TNO), R. Timmermans (TNO), R. Kranenburg (TNO), I. Kirchner (FU-Berlin), M. Thürkow (FU-Berlin) D. v. Pinxteren (TROPOS), M. Schaap (TNO)	Establishing the origin of Particulate Matter in eastern Germany using an improved regional modelling framework
2.2	Greg Yarwood	Greg Yarwood, Alan Dunker, Bonyoung Koo	Source Apportionment using CAMx with the Path Integral Method: Accurate and Flexible
2.3	Lucas Henneman	Lucas Henneman, Huizhong Shen, Cong Liu, James A Mulholland, Armistead G Russell	Ozone in the eastern United States: production efficiency variability over time and between sources
2.4	Oriol Jorba	María Teresa Pay	Unraveling the origin of high ozone concentrations in southwestern Europe
2.5	Deborah Luecken	Deborah Luecken, Sergey Napelenok	Sensitivity of ambient atmospheric formaldehyde to VOCs and NOx emissions: Implications for predicting multi-pollutant benefits of emission reductions
2.6	Sebnem Aksoyoglu	Jianhui Jiang, Sebnem Aksoyoglu, Giancarlo Ciarelli, Emmanouil Oikonomakis, André S. H. Prévôt	Effects of using two different biogenic emission models on ozone and particles in Europe
2.7	David Wong	David C. Wong, Hosein Foroutan, Jonathan E. Pleim, Russell Bullock Jr., Robert C. Gilliam, Jerold A. Herwehe, George A. Pouliot, Christian	A proof-of-concept for linking the global meteorological model, MPAS-A with the air quality model, CMAQ
2.8	Rohit Mathur	Rohit Mathur, Yuqiang Zhang, Christian Hogrefe, Jia Xing	Long-term trends in sulfur and reactive nitrogen deposition across
2.9	Eric van der Swaluw	Eric van der Swaluw1, Wilco de Vries1, Roy Wichink Kruit1, Jan Aben1, Massimo Vieno2, Hilde Fagerli3, Peter Wind3 & Addo van Pul1	Trend analysis of air pollution and nitrogen deposition over the Netherlands using the EMEP4NL and OPS model
2.10	Jerzy Bartnicki	Jerzy Bartnicki	Atmospheric contribution to eutrophication of the Baltic Sea
2.11	Anthony Dore	Anthony Dore, Jane Hall, Oliver Pescott, Janet Simkin, Edward Carnell, Samuel Tomlinson, Ulrike Dragosits, Sim Tang, Amy Stephens, Christine Braban, William Bealey, Mark Sutton,	Modelling the concentration of ammonia and exceedance of the critical level in the UK
2.12	Rostislav Kouznetsov	R.Kouznetsov, M.Sofiev	Stratospheric Age-Of-Air and SF6 simulations with Silam
2.13	Sarav Arunachalam	Sarav Arunachalam and Lakshmi Pradeepa Vennam	Tracer study to assess the transport of cruise altitude aviation emissions in Northern Hemisphere
2.14	Andy Delcloc	Andy Delcloc, Willem Verstraeten, Sebastien Dujardin, Nicolas Bruffaerts, Marijke Hendrickx, Rafiq Hamdi and Mikhail Sofiev	Spatio-temporal monitoring and modelling of birch pollen in Belgium
2.15	Silvia Trini Castelli	Andrea Bisignano (1), Silvia Trini Castelli (1) and Piero Malguzzi (2)	Development and verification of a new meteo-dispersive modelling system for accidental releases in the Italian territory: SMART
INV	Arlene Fiore	Arlene Fiore	Coupled conundrums: Connecting climate change with regional air quality
3.1	Fernando Garcia-Menendez	Fernando Garcia-Menendez, James East, Bret Pienkosz, Erwan Monier	Climate model response uncertainty in projections of climate change impacts on air quality
3.2	Ana Isabel Miranda	Ana Isabel Miranda, Ana Ascenso, Carla Gama, Daniel Blanco-Ward, Alexandra Monteiro, Carlos Silveira, Carolina Viceto, Alfredo Rocha, Myriam Lopes, Carlos Borrego	Ozone risk for Douro vineyards in present and future climates
3.3	Gufran Beig	Gufran Beig, Neha Parkhi and R. Srinivas	The big smog of Delhi: onus on climate change?
4.1	Joana Soares	Joana Soares (1), Paul Makar (1), Ayodeji Akingunola (1), Yayne-abebe Akllilu (2)	Air quality model as a proxy for air quality monitoring network optimization
4.2	Christian Hogrefe	Christian Hogrefe1, Stefano Galmarini2, Ef시오 Solazzo2, Roberto Bianconi3, Peng Liu4, and Rohit Mathur1	Continental-Scale Analysis of Atmospheric Deposition Over North America and Europe Using the AQMEII Database
4.3	Johannes Bieser	Johannes Bieser, Ef시오 Solazzo, Gabriele Curci, Paolo Tuccella, Marje Prank, Michael Sofiev, Ranjeet S. Sokhi	Multi model study on the impact of emission uncertainties on regional air quality over Europe.
4.4	Marina Astitha	Marina Astitha, Ioannis Kioutsoukis, Ghezae Araya Fisseha, Johannes Bieser, Jesper H. Christensen, Owen Cooper, Christian Hogrefe, Ulas Im, Byan Johnson, Peng Liu, Uarporn Nopmongcol, Irina Petropavlovskikh, David W. Tarasick, Greg Yarwood	Seasonal ozone vertical profiles over North America using the AQMEII group of air quality models: model inter-comparison and stratospheric intrusion
4.5	Melanie Fillingham	Melanie Fillingham, et al.	Impact of model resolution on concentration and sensitivity estimates through process and input representation
4.6	Huiying Luo	Huiying Luo, Marina Astitha, Christian Hogrefe, Rohit Mathur, and S. Trivikrama Rao	Using CMAQ to provide probabilistic assessment of emission control scenarios in meeting the ozone standard
4.7	Risto Hänninen	R. Hänninen, M. Sofiev, R. Kouznetsov, V. Sofieva	Evaluation of the new version of stratospheric chemistry module of the SILAM CTM
4.8	Daiwen Kang	Daiwen Kang, Rohit Mathur, Limei Ran, George Pouliot, David Wong, Kristen Foley, Wyatt Appel, and Shawn Roselle	Regional and Seasonal Lightning NOX Signal and its Implications in Ground-level Air Quality over the Continental United States
4.9	Steven Hanna	Steven Hanna and Joseph Chang	Is a Model's Scatter Really "Very Small" or is Model A Really "Performing Better" than Model B?

4.10	Cristina Guerreiro	C. Guerreiro (1), E. Pisoni (2), L. Tarrason (1), M. Guevara (3), S. Lopez-Aparicio (1), S. Janssen (4), P. Thunis (2)	FAIRMODE WG5: BENCHMARKING URBAN/REGIONAL MODELLING FOR IMPROVING AIR QUALITY MANAGEMENT PRACTICES
S.2	Nitsa Haikin	Nitsa Haikin(1,2), George Kallos(3), Pinhas Alpert(1), Roni Avissar(4), Bob Bornstein(5), Roger Pielke Sr.(6)	An Atmospheric Modeler - scientific contribution of Yitzhaq Mahrer
INV	Luisa Molina	Luisa Molina	Atmospheric Pollution: Experience from Mexico City and Santiago de Chile
5.1	Clemens Mensink	Wouter Lefebvre, Bino Maiheu, Hans Hooyberghs, Stijn Vranckx, Stijn Janssen, Karen van de Vel, Guido Cosemans, Peter Viaene, Jean Vankerkom, Marlies Vanhulsel, Filip Lefebvre, Wim Peelaerts, Stijn Van Looy, Guy Driessen, Nele Smeets, Clemens Mensink. VITO Bart Degraeuwe JRC.	Overview of the change in NO2 assessment maps during the last 15 years in Flanders: problems encountered and solutions
5.2	Vera Rodrigues	Vera Rodrigues, Sandra Sorte, Sílvia Coelho, Sandra Rafael, Ana Ascenso, Myriam Lopes, Ana Isabel Miranda and Carlos Borrego	Modelling the potential of green infrastructures to reduce the impact of climate change on air quality at microscale
5.3	Shuzhan Ren	1Shuzhan Ren, 1Craig Stroud, 2Stephane Belair, 2Sylvie Leroyer, 1Michael Moran, 1Junhua Zhang, 1Ayodeji Akingunola, and 1Paul Makar	Impact of urban land use and anthropogenic heat on air quality in urban environments
5.4	Wouter Lefebvre	Bino Maiheu, Wouter Lefebvre, Hans Hooyberghs, Lisa Blyth, Stijn Janssen	Improved tools for assessing NO2 exposure in Europe
5.5	Nicolas Moussiopoulos	Nicolas Moussiopoulos, George Tsegas, Eleftherios Chourdakis	The impact of port operations on air quality in Piraeus and the surrounding urban areas
5.6	S.S. Zilitinkevich	S.S. Zilitinkevich	Towards revision of conventional theory of the surface-layer turbulence
6.1	Xuesong Zhang	Xuesong Zhang, Dylan Jones, Martin Keller, Zhe Jiang, Adam E Bourassa, D.A. Degenstein and Cathy Clerboux	Global CO emission estimates inferred from assimilation of MOPITT and IASI CO data, together with observations of O3, NO2, HNO3, and HCHO.
6.2	Pablo Saide	Pablo Saide (1), Meng Gao (2, 3), Myungje Choi (4), Jhoon Kim (4), Arlindo da Silva (5), Patricia Castellanos (1), Brent Holben (5), Andreas Beyersdorf (5), Kenneth Thornhill (5), Luke Ziemba (5), Bruce Anderson (5), John Hair (5), Reich Ferrare (5), Amin Nehrir (5), Marta Fenn (5), Samuel Leblanc (5), Michal Segal Rozenhaimer (5), Kristina Pistone (5), Jens Redemann (5), Louisa Emmons (1), Gregory Carmichael (2), Jim Crawford (5) and the KORUS-AQ Science team	Investigating the performance of WRF-Chem aerosol forecasts coupled to AOD data assimilation in eastern Asia
6.3	Paul Makar	Paul Makar et al (for full author list, see attached Word file)	Experimental forecasting using the high-resolution research configuration of GEM-MACH
6.4	Talat Odman	M. Talat Odman , Ha H. Ai, Yongtao Hu, Armistead G. Russell / Ambarish Vaidyanathan / Scott L. Goodrick	An Air Quality Modeling System Providing Smoke Impact Forecasts for Health Protection in Southeastern USA
6.5	Richard Ménard	Richard Menard and Martin Deshaies-Jacques	Evaluation of air quality analysis using cross-validation: Metrics, diagnostics and optimization
6.6	Ari Karppinen	Ari Karppinen, Lasse Johansson, Timo Nousiainen, Ari-Matti Harri, Mikko Laakso, Erkkka Saukko, Jarkko Niemi	Helsinki Metropolitan Air Quality Testbed
6.7	Andreas Uppstu	Andreas Uppstu, Mikhail Sofiev	Ensemble-based data assimilation and forecasting of aviation hazards
INV	Richard Burnett	Richard Burnett	t.b.a.
1.8	Marjan Soltan Zadeh	Marjan Soltanzadeh, Burak Oztaner, Amanda Pappin, Matthew Russell, Shunliu Zhao, Amir Hakami, Shannon Capps, Matt Turner, Daven Henze, Peter Percel, Kathleen Fahey, Jaroslav Resler, Ted Russell, Athanasios Nenes, Sergey Napelenok, Rob Pinder, Jameen Baek, Greg Carmichael, Adrian Sandu, Charles Stanier, Jesse Bash, Tianfeng Chai	Air quality health co-benefits of CO2 reduction in East Asia An adjoint sensitivity analysis
1.9	Armistead Russell	Josephine T. Bates <sup>1</sup> , Rodney J. Weber <sup>1</sup> , Vishal Verma <sup>2</sup> , Ting Fang <sup>1</sup> , Cesunica Ivey <sup>1,3</sup> , Cong Liu <sup>1,4</sup> , Howard Chang <sup>5</sup> , James A. Mulholland <sup>1</sup> , Armistead G. Russell <sup>1</sup>	Spatiotemporal Trends in PM2.5 Oxidative Potential Across the Eastern United States Estimated Using CMAQ-DDM Source Impacts
1.10	Angele Genereux	Angele Genereux, Amir Hakami (Carleton U), Amanda Pappin (Health Canada) Shunliu Zhao, Matthew Russell (Carleton U), Matt Turner, Daven Henze (U of Colorado); Shannon Capps (Drexel U); Peter Percell (U of Houston); Jaroslav Resler (ICS Prague); Jesse Bash, Sergey Napelenok, Kathleen Fahey, Rob Pinder (USEPA); Armistead Russell, Athanasios Nenes (Georgia Tech); Jaameen Baek, Greg Carmichael, Charlie Stanier (U of Iowa); Adrian Sandu (Virginia Tech); Tianfeng Chai (U of Maryland)	Estimating Spatially Resolved, Age-Segregated Per-Vehicle Health Benefits for Canada and the United States
7.1	Eleni Karnezi	Eleni Karnezi, Benjamin Murphy, Spyros Pandis	Evaluation of seven chemical aging modeling schemes with the 2D-VBS framework against ground and airborne PEGASOS campaign measurements
7.2	Yilin Chen	Yilin Chen, Huizhong Shen, Armistead G. Russell, Yongtao Hu	Modeling future fine particle pH in the United States: the role of NH3 and SO2
7.3	Ralf Wolke	R. Wolke, Y. Chen, W. Schröder, G. Spindler, A. Wiedensohler	A Parameterization of Heterogeneous Hydrolysis of N2O5 for 3-D Atmospheric Modelling
7.4	Jianhui Jiang	Jianhui Jiang, Sebnem Aksoyoglu, Imad El Haddad, Giancarlo Ciarelli, Emmanouil Oikonomakis, Hugo Denier van der Gon, André S. H. Prévôt	Modelling organic aerosol in Europe: improved CAMx and contribution of anthropogenic and biogenic sources
7.5	George Kallos	Stathopoulos, C., P. Patlakas, G. Galanis, J. Al Qahtani, I. Alexiou, and G. Kallos	Sea Spray Effects on Marine and Coastal Boundary Layer
7.6	Maria Kanakidou	Georgios Fanourgakis, Nikos Kalivitis, Maria Kanakidou	Global simulations of cloud condensation nuclei concentrations and the contribution of organics.
7.7	Chaumerliac, N.	Chaumerliac, N., Deguillaume, L., Rose, C., Leriche, M., Mouchel-Vallon, C., Perroux, H., Armand, P.	Modeling the partitioning of organic chemical species in cloud phases with CLEPS (1.1)
7.8	Deguillaume Laurent	Deguillaume, L., Perroux, H., Wirgot, N., Mouchel-Vallon, C., Chaumerliac, N., Joly, M., Vinatier, V., Delort, A.-M.,	Biological activity in clouds: from the laboratory to the model

7.9	Wanmin Gong	Wanmin Gong, Ayodeji Akingunola, Shuzhan Ren, Stephen Beagley, Rodrigo Munoz-Alpizar, Paul Makar, Craig Stroud	Aerosol indirect effect on air pollution-meteorology interaction in an urban environment
7.10	Oriol Jorba	Vincenzo Obiso, Oriol Jorba, Carlos Pérez García-Pando, Marco Pandolfi	Aerosol intensive radiative properties: global evaluation of the NMMB-MONARCH model
7.11	Marje Prank	Marje Prank, Shawn C. Kenaley, Natalie M. Mahowald	Modelling the emission and transport of fungal spores using the Community Earth System Model
1.11	Amir Hakami	Melanie Fillingham, Burak Oztaner, Shunliu Zhao, Marjan Soltanzadeh, and Amir Hakami., et al.	Impact of grid resolution on health burdens from air pollution modelled with CMAQ-Adjoint
1.12	Fabian Lenartz	Fabian Lenartz, Virginie Hutsemékers, Wouter Lefebvre	Trying to link personal exposure measurement and population exposure modelling: a test case in Liège, Belgium
1.13	Rodrigo Munoz-Alpizar	Rodrigo Munoz-Alpizar <sup>1</sup> , Radenko Pavlovic <sup>1</sup> , Michael D. Moran <sup>2</sup> , Jack Chen <sup>2</sup> , Sylvie Gravel <sup>2</sup> , Sarah B. Henderson <sup>3</sup> , Sylvain Menard <sup>1</sup> , Jacinthe Racine <sup>1</sup> , Annie Duhamel <sup>1</sup> , Samuel Gilbert <sup>1</sup> , Paul-Andre Beaulieu <sup>1</sup> , Hugo Landry <sup>1</sup> and Didier Davignon <sup>1</sup> .	Estimates of PM <sub>2.5</sub> exposure from wildfire smoke during the North American 2013-2016 fire season using the FireWork air quality forecast system
8.1	Greg Yarwood	Alex Guenther, Xiaoyan Jiang, Tejas Shah, Ling Huang, Sue Kemball-Cook, Greg Yarwood	Model of Emissions of Gases and Aerosol from Nature version 3 (MEGAN3) for Estimating Biogenic Emissions
8.2	Julius Vira	J. Vira, J. Melkonian, W. Wieder, P. Hess	Mechanistic modeling of global ammonia emissions in an earth system model
8.3	Volker Matthias	Volker Matthias, Jan Arndt, Armin Aulinger, Johannes Bieser, Markus Quanté	Modelling the temporal and spatial allocation of emission data
8.4	Martijn Schaap	R. Kranenburg (TNO), J. Kuenen (TNO), A. Mues (TNO, now at IASS), S. Dellaert (TNO), A. Zwamborn (TNO), A. Visschedijk (TNO), M. Quade (FU Berlin, now at Fz-Julich), M. Schaap (TNO)	Sensitivity of LOTOS-EUROS air pollution simulations to dynamic emission time profiles
8.5	Niko Karvosenoja	Niko Karvosenoja (1), Ville-Veikko Paunu (1), Mikko Savolahti (1), Kaarle Kupiainen (1), Ari Karppinen (2), Jaakko Kukkonen (2), Otto Hänninen (3)	A high-resolution national emission inventory and dispersion modelling – Is population density a sufficient proxy variable?
8.6	Jukka-Pekka Jalkanen	Lasse Johansson, Jukka-Pekka Jalkanen, Erik Fridell, Ilja Maljutenko, Erik Ytreberg, K. Martin Eriksson, Eva Roth and Vivian Fischer	Modelling of leisure craft emissions
8.7	Dr. Kaarle Kupiainen	Kupiainen K., Stojiljkovic A., Paunu V.-V., Karvosenoja N., Karppinen A., Kukkonen J., Kangas L., Kauhaniemi M., Denby B., Hänninen O.	Characteristics and mitigation of vehicular non-exhaust particle emissions in Nordic conditions
P 1.1	Wouter Lefebvre	Wouter Lefebvre	What policy makers and the public at large should know about air quality
P 1.2	Sidali Khedidji	KHEDIDJI Sidali, CROES Kim and YASSAA Noureddine	Determination of PCDD/Fs and PCBs in PM <sub>10</sub> air samples by using the DRE-CALUX bioassay
P 2.1	Peter L. Jackson	Peter L. Jackson, Dennis Fudge, Bruce Ainslie, John Spagnol, Christophe Corbel, Andreas Veira, Volker Schunicht, Brayden Nilson	Comprehensive modelling and visualization of particulate matter in support of air quality management in Prince George, British Columbia, Canada
P 2.2	Pieter De Meutter	Pieter De Meutter, Johan Camps, Andy Delcloo and Piet Termonia	Inverse modelling of intercontinental Ruthenium-106 detections in autumn 2017
P 2.3	Greg Yarwood	Bonyoung Koo, Swen M. Metzger, Chris Emery, Gary Wilson, Greg Yarwood	Comparing the ISORROPIA and EQSAM Aerosol Thermodynamic Options in CAMx
P 2.4	Calvin Arter	Calvin Arter, Sarav Arunachalam	Using Higher Order Sensitivity Approaches to Assess Aircraft Emissions Impacts on O <sub>3</sub> and PM <sub>2.5</sub>
P 2.5	Sebnem Aksoyoglu	Emmanouil Oikonomakis, Sebnem Aksoyoglu, Giancarlo Ciarelli, Urs Baltensperger, André S. H. Prévôt	Searching for reasons of low ozone production by CAMx in Europe
P 2.6	Jack Chen	Jack Chen, Diane Pendlebury, Sylvie Gravel, Craig Stroud, Irena Ivanova, Jean DeGranpre, David Plummer	Development and Current Status of the GEM-MACH-Global Modelling System at the Environment and Climate Change Canada
P 2.7	S.L. Napelenok	S.L. Napelenok, R. Pinder, R. Scheffe, K. Fahey, S. Roselle	Modeling reduced nitrogen deposition in the regulatory context
P 2.8	Jeff McQueen	Jeff McQueen, Jianping Huang, Ho-Chun Huang, Perry Shafran, Amanda Sleinkofer Pius Lee, Li Pan, Daniel Tong Ivanka Stajner, Sikhya Upadhyay	Evaluation of the NOAA Finite Volume (FV3) Model for Air Quality Applications
P 2.9	Janya Kelly	Anthony Ciccone, Janya Kelly and James Wilkinson	Hamilton Airshed Modelling System
P 2.10	Vanisa Surapipith	Vanisa Surapipith	Atmospheric Modelling Systems for the Himalayan Countries
P 2.11	Tomas Halenka	Tomas Halenka, Peter Huszar, Michal Belda, Jan Karlický, Tereza Novakova	On the urban canopy effects in regional climate simulations - An inter-model comparison and potential in prediction
P 3.1	Edward Charles White	Edward Charles White, Paul Kushner, Dylan Jones	Linking North American Summer Ozone Pollution Episodes to Subseasonal Atmospheric Variability
P 3.2	Jinliang Liu	Jinliang Liu	Assessing Potential Climate Change Impacts on Local Air Dispersion Modelling Practices
P 4.1	Stefano Galmarini	Stefano Galmarini, Ioannis Koutsoukis, E. Solazzo	Two-scale multi-model ensemble. Is a hybrid ensemble of opportunity telling us more?
P 4.2	Stefano Alessandrini	Enrico Ferrero <sup>1</sup> , Bret Anderson <sup>2</sup> , Stefano Alessandrini <sup>3</sup> , Andrea Bisignano <sup>1,4</sup> , Elena Tomasi <sup>5</sup>	Modelling wild fire plume dispersion: intercomparison of different models with field campaign measurements
P 4.3	Maria Kanakidou	D.G. Amanatidis <sup>1</sup> , S. Myriokefalitakis <sup>2</sup> , G. Fanourgakis <sup>1</sup> , N. Daskalakis <sup>1</sup> , and M. Kanakidou <sup>1</sup>	Sensitivity of atmospheric composition mesoscale simulations in the Mediterranean to the meteorological data
P 4.4	Andy Delcloo	Andy Delcloo and Pieter De Meutter	Quantification of model uncertainty in Lagrangian dispersion modelling, using ECMWF's new ERA5 ensemble
P 4.5	Jennifer Moutinho	Jennifer L. Moutinho, Donghai Liang, Jeremy Sarnat, Armistead G. Russell	Assessment of fine-scale dispersion modelling for near-road exposure applications
P 4.6	Zita Ferenczi	Zita Ferenczi, Emese Homolya and László Bozó	Detailed assessment of a smog situation detected in the Sajó valley, Hungary
P 4.7	Camille Taylor	Jackson Mak, Camille Taylor, Melanie Fillingham, Jamie McEvoy	Comparison of the performance of AERMOD and CALPUFF dispersion model outputs to monitored data
P 4.8	Hana Chaloupecká	Hana Chaloupecká, Zbynek Janour, Klára Jurčáková	Model of arrival time for gas clouds in urban canopy

<b>P 5.1</b>	Sabine Banzhaf	Sabine Banzhaf (1), Basit A. Khan (2) , Renate Forkel (2), Emmanuele Russo (1), Farah Kanani-Su`hring (3), Klaus Ketelsen (4), Matthias Mauder (2), Björn Maronga (3), and Siegfried Raasch (3)	Development and Implementation of an Online Chemistry Module to a Large Eddy Simulation Model for the Application in the Urban Canopy
<b>P 5.2</b>	Angele Genereux	Angele Genereux, Amir Hakami (Carleton University), Amanda Pappin (Health Canada)	Estimating the Tipping Point of Urban NOX Control in Major U.S. Cities
<b>P 5.3</b>	Oriol Jorba	Jaime Benavides, Albert Soret, Marc Guevara, Carlos Pérez Garcia-Pando, Michelle Snyder, Fulvio Amato, Xavier Querol and Oriol Jorba	Potential impact of a low emission zone on street-level air quality in Barcelona city using the CALIOPE-Urban model
<b>P 5.4</b>	Stefano Alessandrini	Stefano Alessandrini, Francois Vandenberghe, Rong Shyang Sheu	Definition of typical days dispersion patterns from multiple releases
<b>P 5.5</b>	Martin Ramacher	Martin Ramacher, Matthias Karl, Armin Aulinger, Johannes Bieser, Volker Matthias, Markus Quante	Population exposure to emissions from industry, traffic, shipping and residential heating in the urban area of Hamburg
<b>P 5.6</b>	Fotios Barmpas	Fotios Barmpas, Antti Hellsten, Klaus Ketelsen, Mikko Auvinen, George Tsegas, Nicolas Moussiopoulos, 7. Siegfried Raasch	Validation of the nested multi-scale system in the PALM Large-Eddy Simulation Model
<b>P 5.7</b>	Jiun-Horng, Tsai	Jiun-Horng, Tsai and Wei-Ting, Gu	Carcinogenic Air Toxics Emission Profile and Risk Assessment in the Industrial Metropolitan Area by using AERMOD Model
<b>P 6.1</b>	Pius Lee	Pius Lee1, Li Pan1,2, Youhua Tang1,2, Daniel Tong1,2,3 , Barry Baker1,2 , Hyuncheol Kim1,2 , and Rick Saylor3	Performance differences of the National Air Quality Forecasting Capability when there is a major upgrade in the chemistry modules
<b>P 6.2</b>	Sina Voshtani	Sina Voshtani, Shunliu Zhao, Amir Hakami	Evaluating methane emissions using KF and 4D-VAR inversion in CMAQ
<b>P 6.3</b>	Alain Robichaud	A. Robichaud , A.S. Cole, M.D. Moran, A. Lupu, M. Shaw, G. Roy, M. Beauchemin, V. Fortin, R. Vet	Total deposition maps evaluated from measurement-model fusion in North America (ADAGIO project)
<b>P 6.4</b>	Michael Moran	Michael Moran, Qiong Zheng, Junhua Zhang, Radenko Pavlovic, and Mourad Sassi	Importance of Inventory Representativeness for Air Quality Forecasting: A Recent North American Example
<b>P 6.5</b>	Maciej Kryza	Malgorzata Werner, Maciej Kryza, Jakub Guzikowski	Can assimilation of ground particulate matter observations improve air pollution forecasts for highly polluted area of Europe?
<b>P 6.6</b>	Maciej Kryza	Maciej Kryza, Malgorzata Werner, Jakub Guzikowski	Assimilation of meteorological data in online integrated atmospheric transport model – example of air quality forecasts for Poland
<b>P 6.7</b>	Pavel Kishcha	Pavel Kishcha (1), Neng-Huei Lin (2), Boris Starobinets (1), Arlindo da Silva (3), Pinhas Alpert (1)	Differentiating between local and remote air pollution over Taiwan based on pollution homogeneity analysis
<b>P 6.8</b>	Verica Savic-Jovicic	Verica Savic-Jovicic, Michael D. Moran, Radenko Pavlovic, Hugo Landry, Qiong Zheng, Junhua Zhang, Alexandru Lupu, Sylvain Ménard, Ayodeji Akingunola, Sylvie Gravel, and Didier Davignon	Overview of the 2018 Canadian Operational Regional Air Quality Deterministic Prediction System: New Features and Performance Improvements
<b>P 6.9</b>	Antonopoulos, Stavros	Antonopoulos, Stavros et al.	PROGNOS: A Meteorological Service of Canada (MSC) initiative to renew the operational statistical post-processing infrastructure
<b>P 6.10</b>	Abdou Adam Abdoul-Aziz Abebe	Abdou Adam Abdoul-Aziz Abebe	Monitoring and forecasting dust haze over West Africa using Satellite Imageries and numerical weather prediction output: some applications
<b>P 7.1</b>	Yu Qian	Yu Qian, Armistead G. Russell	Characteristics and Source Contribution of Particulate Matters Acidity in City of Atlanta
<b>P 7.2</b>	Nitsa Haikin	Nitsa Haikin	An Extreme event of a mesoscale dust front - case study over the Eastern Mediterranean
<b>P 8.1</b>	Camilla Geels	Camilla Geels1, Camilla Andersson2, Jukka-Pekka Jalkanen3, Morten Winther1 and Jesper H. Christensen1.	Emissions from ships and the impacts on human health and environment in the Nordic and Arctic region - now and in the future.