

ECATS Conference Poster Presentations

SESSION I – Climate Impact of Aviation Emissions

Gierens, K., F. Dilger: A climatology of formation conditions for aerodynamic contrails

Graf, K., U. Schumann, P. Minnis, D. Duda: Diurnal cycles of linear contrail coverage, cirrus coverage, and outgoing longwave radiation in the North Atlantic flight corridor

Iachetti, D., G. Pitari, G. Di Genova, A. Sovde, G. Myhre, Ø. Hodneborg: Multi-model estimate of direct and indirect radiative impact of aviation aerosols

Ponater, M., S. Dietmüller, C. Frömming, L. Bock: The shortwave to longwave ratio in contrail radiative forcing as evident in two radiation schemes used for global GCMs

Porebska, M., J. Kaminski: Representation of cirrus clouds and contrails in the GEM-AC model simulations

Stratmann, G.: The Impact of Aviation on the Nitrogen Oxide Distribution: An Analysis using CARIBIC Observations and the AERO2K global aviation Emissions Inventories

SESSION II – Aviation Environmental Modelling and Databases

Kazhan, K., V. Tokarev, O. Zaporozhets, R. Berghof, P. Brok: New Aviation and Environment Policy Modelling Interactions and Synergies Tool

Whitefield, P., L. Prem, D. Hagen, R. Miake-Lye: A Standard Method for Aircraft PM Emission Quantification – Description, Status and Its Implications for addressing some Technical Challenges for Aviation in a Changing Environment

Zaporozhets, O., K. Synylo, J. Fröhlich, J. Stiller: Aircraft jet penetration and buoyancy effects: comparison of CFD-Modelling and semi-empirical results.

Zaporozhets, O., K. Synylo, K. Kazhan, P. Wiesen, R. Kurtenbach, M. Gallus, S. Ifang, O. Drach, A. Beliajev: Monitoring of air pollution produced by aircraft engine emissions in the vicinity of airports

SESSION III – Alternative Fuels – Mitigation Options

Bhagwan, R., P. Habisreuther, N. Zarzalis, F. Turrini: Determination of Emissions Formation and Lean Extinction limits of Lean Turbulent Partially Premixed Swirled Flames of Synthetic Jet Fuels and Jet A-1 Under Varied Ambient Conditions

Blanch, A.: ISUM Model (ITAKA Scale-Up Model): A techno-economic and sustainability assessment of renewable aviation bio-kerosene uptake in Europe 2020

Ray, A., G. Fichtl, C. Bertelli: Renewable Jet Fuels: Multiple Pathways to Commercial Reality

SESSION IV – Optimal Flight Trajectory: Climate & Safety

Grewe, V., S. Matthes, S. Brinkop, M. Ponater, S. Dietmüller, P. Jöckel, H. Garny, E. Tsati, O.A. Sovde, J. Fuglestedt, T.K. Berntsen, K.P. Shine, E.A. Irvine, T. Champougny, P. Hullah: Aircraft routing with minimal climate impact: The REACT4C - climate cost function modelling approach (V1.0)

Gustavo, G., A. Benito, C. Samuel, A. Blanch: CASSIOPEIA (Complex Adaptive Systems for Optimisation of Performance in ATM) Case Study 1: Local Environmental Restrictions

Irvine, E.A., B. Hoskins, K.P. Shine: The impact of climate change on trans-Atlantic flight routing

Luckowa, T., R. Wollenheit: The impact of new propulsion systems: Benefit of the Electric Taxi powered by a fuel cell