Publications by Patrick Jöckel

(last update: 2018-01-16)

— 2018 —

121. Zhang, J., Tian, W., Xie, F., Chipperfield, M. P., Feng, W., Son, S., Abraham, N., Archibald, A. T., Bekki, S., Butchart, N., Deushi, M., Dhomse, S., Han, Y., Jckel, P., Kinnison, D., Kirner, O., Michou, M., Morgenstern, O., OConnor, F. M., Pitari, G., Plummer, D. A., Revell, L. E., Rozanov, E., Visioni, D., Wang, W., & Zeng, G.: *Stratospheric ozone loss over the Eurasian continent induced by the polar vortex shift*, Nature Communications, 9, 206, doi: 10.1038/s41467-017-02565-2, URL `https://doi.org/10.1038/s41467-017-02565-2` (2018)

— 2017 —

120. Hüneke, T., Aderhold, O.-A., Bounin, J., Dorf, M., Gentry, E., Grossmann, K., Grooß, J.-U., Hoor, P., Jöckel, P., Kenntner, M., Knapp, M., Knecht, M., Lörks, D., Ludmann, S., Matthes, S., Raecke, R., Reichert, M., Weimar, J., Werner, B., Zahn, A., Ziereis, H., & Pfeilsticker, K.: *The novel HALO mini-DOAS instrument: inferring trace gas concentrations from airborne UV/visible limb spectroscopy under all skies using the scaling method*, Atmospheric Measurement Techniques, 10, 4209–4234, doi: 10.5194/amt-10-4209-2017, URL `https://www.atmos-meas-tech.net/10/4209/2017/` (2017)

119. Ehret, G., Bousquet, P., Pierangelo, C., Alpers, M., Millet, B., Abshire, J. B., Bovensmann, H., Burrows, J. P., Chevallier, F., Ciais, P., Crevoisier, C., Fix, A., Flamant, P., Frankenberg, C., Gibert, F., Heim, B., Heimann, M., Houweling, S., Hubberten, H. W., Jöckel, P., Law, K., Löw, A., Marshall, J., Agusti-Panareda, A., Payan, S., Prigent, C., Rairoux, P., Sachs, T., Scholze, M., & Wirth, M.: *MERLIN: A French-German Space Lidar Mission Dedicated to Atmospheric Methane*, Remote Sensing, 9, doi: 10.3390/rs9101052, URL `http://www.mdpi.com/2072-4292/9/10/1052` (2017)

118. Anderson, D. C., Nicely, J. M., Wolfe, G. M., Hanisco, T. F., Salawitch, R. J., Canty, T. P., Dickerson, R. R., Apel, E. C., Baidar, S., Bannan, T. J., Blake, N. J., Chen, D., Dix, B., Fernandez, R. P., Hall, S. R., Hornbrook, R. S., Gregory Huey, L., Josse, B., Jöckel, P., Kinnison, D. E., Koenig, T. K., Le Breton, M., Marécal, V., Morgenstern, O., Oman, L. D., Pan, L. L., Percival, C., Plummer, D., Revell, L. E., Rozanov, E., Saiz-Lopez, A., Stenke, A., Sudo, K., Tilmes, S., Ullmann, K., Volkamer, R., Weinheimer, A. J., & Zeng, G.: *Formaldehyde in the Tropical Western Pacific: Chemical Sources and Sinks, Convective Transport, and Representation in CAM-Chem and the CCMI Models*, Journal of Geophysical Research: Atmospheres, pp. n/a–n/a, doi: 10.1002/2016JD026121, URL `http://dx.doi.org/10.1002/2016JD026121`, 2016JD026121 (2017)

117. Lossow, S., Garny, H., & Jöckel, P.: *An "island" in the stratosphere – on the enhanced annual variation of water vapour in the middle and upper stratosphere in the southern tropics and subtropics*, Atmospheric Chemistry and Physics, 17, 11 521–11 539, doi: 10.5194/acp-17-11521-2017, URL `https://www.atmos-chem-phys.net/17/11521/2017/` (2017)

116. Falk, S., Sinnhuber, B.-M., Krysztofiak, G., Jöckel, P., Graf, P., & Lennartz, S. T.: *Brominated VSLS and their influence on ozone under a changing climate*, Atmospheric Chemistry and Physics, 17, 11 313–11 329, doi: 10.5194/acp-17-11313-2017, URL `https://www.atmos-chem-phys.net/17/11313/2017/` (2017)

115. Gromov, S., Brenninkmeijer, C. A. M., & Jöckel, P.: *Uncertainties of fluxes and* $^{13}C\,/\,^{12}C$ *ratios of atmospheric reactive-gas emissions*, Atmospheric Chemistry and Physics, 17, 8525–8552, doi: 10.5194/acp-17-8525-2017, URL `https://www.atmos-chem-phys.net/17/8525/2017/` (2017)

114. Grewe, V., Dahlmann, K., Flink, J., Frömming, C., Ghosh, R., Gierens, K., Heller, R., Hendricks, J., Jöckel, P., Kaufmann, S., Kölker, K., Linke, F., Luchkova, T., Lührs, B., Van Manen, J., Matthes, S., Minikin, A., Nikla, M., Plohr, M., Righi, M., Rosanka, S., Schmitt, A., Schumann, U., Terekhov, I., Unterstrasser, S., Vázquez-Navarro, M., Voigt, C., Wicke, K., Yamashita, H., Zahn, A., & Ziereis, H.: *Mitigating the Climate Impact from Aviation: Achievements and Results of the DLR WeCare Project*, Aerospace, 4, doi: 10.3390/aerospace4030034, URL `http://www.mdpi.com/2226-4310/4/3/34` (2017a)

113. Grewe, V., Tsati, E., Mertens, M., Frömming, C., & Jöckel, P.: *Contribution of emissions to concentrations: the TAGGING 1.0 submodel based on the Modular Earth Submodel System (MESSy 2.52)*, Geoscientific Model Development, 10, 2615–2633, doi: 10.5194/gmd-10-2615-2017, URL `https://www.geosci-model-dev.net/10/2615/2017/` (2017c)

112. Dietmüller, S., Garny, H., Plöger, F., Jöckel, P., & Cai, D.: *Effects of mixing on resolved and unresolved scales on stratospheric age of air*, Atmospheric Chemistry and Physics, 17, 7703–7719, doi: 10.5194/acp-17-7703-2017, URL `https://www.atmos-chem-phys.net/17/7703/2017/` (2017)

111. Gottschaldt, K.-D., Schlager, H., Baumann, R., Bozem, H., Eyring, V., Hoor, P., Jöckel, P., Jurkat, T., Voigt, C., Zahn, A., & Ziereis, H.: *Trace gas composition in the Asian summer monsoon anticyclone: a case study based on aircraft observations and model simulations*, Atmospheric Chemistry and Physics, 17, 6091–6111, doi: 10.5194/acp-17-6091-2017, URL `http://www.atmos-chem-phys.net/17/6091/2017/` (2017)

110. Ostermöller, J., Bönisch, H., Jöckel, P., & Engel, A.: *A new time-independent formulation of fractional release*, Atmospheric Chemistry and Physics, 17, 3785–3797, doi: 10.5194/acp-17-3785-2017, URL `http://www.atmos-chem-phys.net/17/3785/2017/` (2017)

109. Grewe, V., Matthes, S., Frömming, C., Brinkop, S., Jöckel, P., Gierens, K., Champougny, T., Fuglestvedt, J., Haslerud, A., Irvine, E., & Shine, K.: *Feasibility of climate-optimized air traffic routing for trans-Atlantic flights*, Environmental Research Letters, 12, 034 003, URL `http://stacks.iop.org/1748-9326/12/i=3/a=034003` (2017b)

108. Morgenstern, O., Hegglin, M. I., Rozanov, E., O'Connor, F. M., Abraham, N. L., Akiyoshi, H., Archibald, A. T., Bekki, S., Butchart, N., Chipperfield, M. P., Deushi, M., Dhomse, S. S., Garcia, R. R., Hardiman, S. C., Horowitz, L. W., Jöckel, P., Josse, B., Kinnison, D., Lin, M., Mancini, E., Manyin, M. E., Marchand, M., Marécal, V., Michou, M., Oman, L. D., Pitari, G., Plummer, D. A., Revell, L. E., Saint-Martin, D., Schofield, R., Stenke, A., Stone, K., Sudo, K., Tanaka, T. Y., Tilmes, S., Yamashita, Y., Yoshida, K., & Zeng, G.: *Review of the global models used within phase 1 of the Chemistry–Climate Model Initiative (CCMI)*, Geoscientific Model Development, 10, 639–671, doi: 10.5194/gmd-10-639-2017, URL `http://www.geosci-model-dev.net/10/639/2017/` (2017)

— 2016 —

107. Kern, B. & Jöckel, P.: *A diagnostic interface for the ICOsahedral Non-hydrostatic (ICON) modelling framework based on the Modular Earth Submodel System (MESSy v2.50)*, Geoscientific Model Development, 9, 3639–3654, doi: 10.5194/gmd-9-3639-2016, URL `http://www.geosci-model-dev.net/9/3639/2016/` (2016)

106. Mertens, M., Kerkweg, A., Jöckel, P., Tost, H., & Hofmann, C.: *The 1-way on-line coupled model system MECO(n) – Part 4: Chemical evaluation (based on MESSy v2.52)*, Geoscientific Model Development, 9, 3545–3567, doi: 10.5194/gmd-9-3545-2016, URL `http://www.geosci-model-dev.net/9/3545/2016/` (2016)

105. Yamashita, H., Grewe, V., Jöckel, P., Linke, F., Schaefer, M., & Sasaki, D.: *Air traffic simulation in chemistry-climate model EMAC 2.41: AirTraf 1.0*, Geoscientific Model Development, 9, 3363–3392, doi: 10.5194/gmd-9-3363-2016, URL `http://www.geosci-model-dev.net/9/3363/2016/` (2016)

104. Brinkop, S., Dameris, M., Jöckel, P., Garny, H., Lossow, S., & Stiller, G.: *The millennium water vapour drop in chemistryclimate model simulations*, Atmospheric Chemistry and Physics, 16, 8125–8140, doi: 10.5194/acp-16-8125-2016, URL `http://www.atmos-chem-phys.net/16/8125/2016/` (2016)

103. Beirle, S., Hörmann, C., Jöckel, P., Liu, S., Penning de Vries, M., Pozzer, A., Sihler, H., Valks, P., & Wagner, T.: *The STRatospheric Estimation Algorithm from Mainz (STREAM): estimating stratospheric NO2 from nadir-viewing satellites by weighted convolution*, Atmospheric Measurement Techniques, 9, 2753–2779, doi: 10.5194/amt-9-2753-2016, URL `http://www.atmos-meas-tech.net/9/2753/2016/` (2016)

102. Dietmüller, S., Jöckel, P., Tost, H., Kunze, M., Gellhorn, C., Brinkop, S., Frömming, C., Ponater, M., Steil, B., Lauer, A., & Hendricks, J.: *A new radiation infrastructure for the Modular Earth Submodel System (MESSy, based on version 2.51)*, Geoscientific Model Development, 9, 2209–2222, doi: 10.5194/gmd-9-2209-2016, URL `http://www.geosci-model-dev.net/9/2209/2016/` (2016)

101. Löffler, M., Brinkop, S., & Jöckel, P.: *Impact of major volcanic eruptions on stratospheric water vapour*, Atmospheric Chemistry and Physics, 16, 6547–6562, doi: 10.5194/acp-16-6547-2016, URL http://www.atmos-chem-phys.net/16/6547/2016/ (2016)

100. Jöckel, P., Tost, H., Pozzer, A., Kunze, M., Kirner, O., Brenninkmeijer, C. A. M., Brinkop, S., Cai, D. S., Dyroff, C., Eckstein, J., Frank, F., Garny, H., Gottschaldt, K.-D., Graf, P., Grewe, V., Kerkweg, A., Kern, B., Matthes, S., Mertens, M., Meul, S., Neumaier, M., Nützel, M., Oberländer-Hayn, S., Ruhnke, R., Runde, T., Sander, R., Scharffe, D., & Zahn, A.: *Earth System Chemistry integrated Modelling (ESCiMo) with the Modular Earth Submodel System (MESSy) version 2.51*, Geoscientific Model Development, 9, 1153–1200, doi: 10.5194/gmd-9-1153-2016, URL http://www.geosci-model-dev.net/9/1153/2016/ (2016)

99. Baumgaertner, A. J. G., Jöckel, P., Kerkweg, A., Sander, R., & Tost, H.: *Implementation of the Community Earth System Model (CESM) version 1.2.1 as a new base model into version 2.50 of the MESSy framework*, Geoscientific Model Development, 9, 125–135, doi: 10.5194/gmd-9-125-2016, URL http://www.geosci-model-dev.net/9/125/2016/ (2016)

— 2015 —

98. Eichinger, R., Jöckel, P., & Lossow, S.: *Simulation of the isotopic composition of stratospheric water vapour – Part 2: Investigation of HDO / H_2O variations*, Atmospheric Chemistry and Physics, 15, 7003–7015, doi: 10.5194/acp-15-7003-2015, URL http://www.atmos-chem-phys.net/15/7003/2015/ (2015b)

97. Fischer, H., Pozzer, A., Schmitt, T., Jöckel, P., Klippel, T., Taraborrelli, D., & Lelieveld, J.: *Hydrogen peroxide in the marine boundary layer over the South Atlantic during the OOMPH cruise in March 2007*, Atmospheric Chemistry and Physics, 15, 6971–6980, doi: 10.5194/acp-15-6971-2015, URL http://www.atmos-chem-phys.net/15/6971/2015/ (2015)

96. Eichinger, R., Jöckel, P., Brinkop, S., Werner, M., & Lossow, S.: *Simulation of the isotopic composition of stratospheric water vapour – Part 1: Description and evaluation of the EMAC model*, Atmospheric Chemistry and Physics, 15, 5537–5555, doi: 10.5194/acp-15-5537-2015, URL http://www.atmos-chem-phys.net/15/5537/2015/ (2015a)

95. Righi, M., Eyring, V., Gottschaldt, K.-D., Klinger, C., Frank, F., Jöckel, P., & Cionni, I.: *Quantitative evaluation of ozone and selected climate parameters in a set of EMAC simulations*, Geoscientific Model Development, 8, 733–768, doi: 10.5194/gmd-8-733-2015, URL http://www.geosci-model-dev.net/8/733/2015/ (2015)

— 2014 —

94. Sander, R., Jöckel, P., Kirner, O., Kunert, A. T., Landgraf, J., & Pozzer, A.: *The photolysis module JVAL-14, compatible with the MESSy standard, and the JVal PreProcessor (JVPP)*, Geoscientific Model Development, 7, 2653–2662, doi: 10.5194/gmd-7-2653-2014, URL http://www.geosci-model-dev.net/7/2653/2014/ (2014)

93. Hoppe, C. M., Hoffmann, L., Konopka, P., Grooß, J.-U., Ploeger, F., Günther, G., Jöckel, P., & Müller, R.: *The implementation of the CLaMS Lagrangian transport core into the chemistry climate model EMAC 2.40.1: application on age of air and transport of long-lived trace species*, Geoscientific Model Development, 7, 2639–2651, doi: 10.5194/gmd-7-2639-2014, URL http://www.geosci-model-dev.net/7/2639/2014/ (2014)

92. Valks, P., Hao, N., Gimeno Garcia, S., Loyola, D., Dameris, M., Jöckel, P., & Delcloo, A.: *Tropical tropospheric ozone column retrieval for GOME-2*, Atmospheric Measurement Techniques, 7, 2513–2530, doi: 10.5194/amt-7-2513-2014, URL http://www.atmos-meas-tech.net/7/2513/2014/ (2014)

91. Eichinger, R. & Jöckel, P.: *The generic MESSy submodel TENDENCY (v1.0) for process-based analyses in Earth system models*, Geoscientific Model Development, 7, 1573–1582, doi: 10.5194/gmd-7-1573-2014, URL http://www.geosci-model-dev.net/7/1573/2014/ (2014)

90. Grewe, V., Brinkop, S., Jöckel, P., Shin, S., Reich, S., & Yserentant, H.: *On the theory of mass conserving transformations for Lagrangian methods in 3D atmosphere-chemistry models*, Meteorologische Zeitschrift, pp. –, URL http://dx.doi.org/10.1127/0941-2948/2014/0552 (2014)

89. Meul, S., Langematz, U., Oberländer, S., Garny, H., & Jöckel, P.: *Chemical contribution to future tropical ozone change in the lower stratosphere*, Atmospheric Chemistry and Physics, 14, 2959–2971, doi: 10.5194/acp-14-2959-2014, URL http://www.atmos-chem-phys.net/14/2959/2014/ (2014)

88. Liu, C., Beirle, S., Butler, T., Hoor, P., Frankenberg, C., Jöckel, P., Penning de Vries, M., Platt, U., Pozzer, A., Lawrence, M. G., Lelieveld, J., Tost, H., & Wagner, T.: *Profile information on CO from SCIAMACHY observations using cloud slicing and comparison with model simulations*, Atmospheric Chemistry and Physics, 14, 1717–1732, doi: 10.5194/acp-14-1717-2014, URL http://www.atmos-chem-phys.net/14/1717/2014/ (2014)

87. Grewe, V., Frömming, C., Matthes, S., Brinkop, S., Ponater, M., Dietmüller, S., Jöckel, P., Garny, H., Tsati, E., Dahlmann, K., Søvde, O. A., Fuglestvedt, J., Berntsen, T. K., Shine, K. P., Irvine, E. A., Champougny, T., & Hullah, P.: *Aircraft routing with minimal climate impact: the REACT4C climate cost function modelling approach (V1.0)*, Geoscientific Model Development, 7, 175–201, doi: 10.5194/gmd-7-175-2014, URL http://www.geosci-model-dev.net/7/175/2014/ (2014)

— 2013 —

86. Regelin, E., Harder, H., Martinez, M., Kubistin, D., Tatum Ernest, C., Bozem, H., Klippel, T., Hosaynali-Beygi, Z., Fischer, H., Sander, R., Jöckel, P., Königstedt, R., & Lelieveld, J.: *HO_x measurements in the summertime upper troposphere over Europe: a comparison of observations to a box model and a 3-D model*, Atmospheric Chemistry and Physics, 13, 10 703–10 720, doi: 10.5194/acp-13-10703-2013, URL http://www.atmos-chem-phys.net/13/10703/2013/ (2013)

85. Dameris, M. & Jöckel, P.: *Numerical Modeling of Climate-Chemistry Connections: Recent Developments and Future Challenges*, Atmosphere, 4, 132–156, doi: 10.3390/atmos4020132, URL http://www.mdpi.com/2073-4433/4/2/132 (2013)

84. Gottschaldt, K., Voigt, C., Jöckel, P., Righi, M., Deckert, R., & Dietmüller, S.: *Global sensitivity of aviation NO_x effects to the HNO_3-forming channel of the HO_2 + NO reaction*, Atmospheric Chemistry and Physics, 13, 3003–3025, doi: 10.5194/acp-13-3003-2013, URL http://www.atmos-chem-phys.net/13/3003/2013/ (2013)

— 2012 —

83. Baumgaertner, A. J. G., Jöckel, P., Aylward, A. D., & Harris, M. J.: *Simulation of Particle Precipitation Effects on the Atmosphere with the MESSy Model System*, in: Climate and Weather of the Sun-Earth System (CAWSES), edited by Lübken, F.-J., Springer Atmospheric Sciences, pp. 301–316, Springer Netherlands, doi: 10.1007/978-94-007-4348-9_17, URL http://dx.doi.org/10.1007/978-94-007-4348-9_17 (2013)

82. Jöckel, P.: *Earth System Modeling*, in: Atmospheric Physics, edited by Schumann, U., Research Topics in Aerospace, pp. 577–590, Springer Berlin Heidelberg, doi: 10.1007/978-3-642-30183-4_35, URL http://dx.doi.org/10.1007/978-3-642-30183-4_35 (2012)

81. Hofmann, C., Kerkweg, A., Wernli, H., & Jöckel, P.: *The 1-way on-line coupled atmospheric chemistry model system MECO(n) – Part 3: Meteorological evaluation of the on-line coupled system*, Geoscientific Model Development, 5, 129–147, doi: 10.5194/gmd-5-129-2012, URL http://www.geosci-model-dev.net/5/129/2012/ (2012)

80. Kerkweg, A. & Jöckel, P.: *The 1-way on-line coupled atmospheric chemistry model system MECO(n) – Part 2: On-line coupling with the Multi-Model-Driver (MMD)*, Geoscientific Model Development, 5, 111–128, doi: 10.5194/gmd-5-111-2012, URL http://www.geosci-model-dev.net/5/111/2012/ (2012a)

79. Kerkweg, A. & Jöckel, P.: *The 1-way on-line coupled atmospheric chemistry model system MECO(n) – Part 1: Description of the limited-area atmospheric chemistry model COSMO/MESSy*, Geoscientific Model Development, 5, 87–110, doi: 10.5194/gmd-5-87-2012, URL http://www.geosci-model-dev.net/5/87/2012/ (2012b)

78. Kunkel, D., Lawrence, M. G., Tost, H., Kerkweg, A., Jöckel, P., & Borrmann, S.: *Urban emission hot spots as sources for remote aerosol deposition*, Geophys. Res. Lett., 39, L01808, doi: 10.1029/2011GL049634, URL http://dx.doi.org/10.1029/2011GL049634 (2012)

— 2011 —

77. Pozzer, A., Jöckel, P., Kern, B., & Haak, H.: *The Atmosphere-Ocean General Circulation Model EMAC-MPIOM*, Geoscientific Model Development, 4, 771–784, doi: 10.5194/gmd-4-771-2011, URL `http://www.geosci-model-dev.net/4/771/2011/` (2011)

76. Bais, A. F., Tourpali, K., Kazantzidis, A., Akiyoshi, H., Bekki, S., Braesicke, P., Chipperfield, M. P., Dameris, M., Eyring, V., Garny, H., Iachetti, D., Jöckel, P., Kubin, A., Langematz, U., Mancini, E., Michou, M., Morgenstern, O., Nakamura, T., Newman, P. A., Pitari, G., Plummer, D. A., Rozanov, E., Shepherd, T. G., Shibata, K., Tian, W., & Yamashita, Y.: *Projections of UV radiation changes in the 21st century: impact of ozone recovery and cloud effects*, Atmospheric Chemistry and Physics, 11, 7533–7545, doi: 10.5194/acp-11-7533-2011, URL `http://www.atmos-chem-phys.net/11/7533/2011/` (2011)

75. Liu, C., Beirle, S., Butler, T., Liu, J., Hoor, P., Jöckel, P., Pozzer, A., Frankenberg, C., Lawrence, M. G., Lelieveld, J., Platt, U., & Wagner, T.: *Application of SCIAMACHY and MOPITT CO total column measurements to evaluate model results over biomass burning regions and Eastern China*, Atmospheric Chemistry and Physics, 11, 6083–6114, doi: 10.5194/acp-11-6083-2011, URL `http://www.atmos-chem-phys.net/11/6083/2011/` (2011)

74. Baumgaertner, A. J. G., Seppälä, A., Jöckel, P., & Clilverd, M. A.: *Geomagnetic activity related NO_x enhancements and polar surface air temperature variability in a chemistry climate model: modulation of the NAM index*, Atmospheric Chemistry and Physics, 11, 4521–4531, doi: 10.5194/acp-11-4521-2011, URL `http://www.atmos-chem-phys.net/11/4521/2011/` (2011)

73. Klippel, T., Fischer, H., Bozem, H., Lawrence, M. G., Butler, T., Jöckel, P., Tost, H., Martinez, M., Harder, H., Regelin, E., Sander, R., Schiller, C. L., Stickler, A., & Lelieveld, J.: *Distribution of hydrogen peroxide and formaldehyde over Central Europe during the HOOVER project*, Atmospheric Chemistry and Physics, 11, 4391–4410, doi: 10.5194/acp-11-4391-2011, URL `http://www.atmos-chem-phys.net/11/4391/2011/` (2011)

72. Sander, R., Baumgaertner, A., Gromov, S., Harder, H., Jöckel, P., Kerkweg, A., Kubistin, D., Regelin, E., Riede, H., Sandu, A., Taraborrelli, D., Tost, H., & Xie, Z.-Q.: *The atmospheric chemistry box model CAABA/MECCA-3.0*, Geoscientific Model Development, 4, 373–380, doi: 10.5194/gmd-4-373-2011, URL `http://www.geosci-model-dev.net/4/373/2011/` (2011)

71. Butchart, N., Charlton-Perez, A. J., Cionni, I., Hardiman, S. C., Haynes, P. H., Krueger, K., Kushner, P. J., Newman, P. A., Osprey, S. M., Perlwitz, J., Sigmond, M., Wang, L., Akiyoshi, H., Austin, J., Bekki, S., Baumgaertner, A., Braesicke, P., Brühl, C., Chipperfield, M., Dameris, M., Dhomse, S., Eyring, V., Garcia, R., Garny, H., Jöckel, P., Lamarque, J.-F., Marchand, M., Michou, M., Morgenstern, O., Nakamura, T., Pawson, S., Plummer, D., Pyle, J., Rozanov, E., Scinocca, J., Shepherd, T. G., Shibata, K., Smale, D., Teyssèdre, H., Tian, W., Waugh, D., & Yamashita, Y.: *Multimodel climate and variability of the stratosphere*, J. Geophys. Res., 116, doi: 10.1029/2010JD014995 (2011)

70. Deckert, R., Jöckel, P., Grewe, V., Gottschaldt, K.-D., & Hoor, P.: *A quasi chemistry-transport model mode for EMAC*, Geoscientific Model Development, 4, 195–206, doi: 10.5194/gmd-4-195-2011, URL `http://www.geosci-model-dev.net/4/195/2011/` (2011)

69. Kirner, O., Ruhnke, R., Buchholz-Dietsch, J., Jöckel, P., Brühl, C., & Steil, B.: *Simulation of polar stratospheric clouds in the chemistry-climate-model EMAC via the submodel PSC*, Geoscientific Model Development, 4, 169–182, doi: 10.5194/gmd-4-169-2011, URL `http://www.geosci-model-dev.net/4/169/2011/` (2011)

68. Montzka, S. A., Krol, M., Dlugokencky, E., Hall, B., Jöckel, P., & Lelieveld, J.: *Small Interannual Variability of Global Atmospheric Hydroxyl*, Science, 331, 67–69, doi: 10.1126/science.1197640, URL `http://www.sciencemag.org/content/331/6013/67.short` (2011)

— 2010 —

67. Jöckel, P., Kerkweg, A., Pozzer, A., Sander, R., Tost, H., Riede, H., Baumgaertner, A., Gromov, S., & Kern, B.: *Development cycle 2 of the Modular Earth Submodel System (MESSy2)*, Geoscientific Model Development, 3, 717–752, doi: 10.5194/gmd-3-717-2010, URL `http://www.geosci-model-dev.net/3/717/2010/` (2010)

66. Austin, J., Struthers, H., Scinocca, J., Plummer, D. A., Akiyoshi, H., Baumgaertner, A. J. G., Bekki, S., Bodeker, G. E., Braesicke, P., Brühl, C., Butchart, N., Chipperfield, M. P., Cugnet, D., Dameris, M., Dhomse, S., Frith, S., Garny, H., Gettelman, A., Hardiman, S. C., Jöckel, P., Kinnison, D., Kubin, A., Lamarque, J. F., Langematz, U., Mancini, E., Marchand, M., Michou, M., Morgenstern, O., Nakamura, T., Nielsen, J. E., Pitari, G., Pyle, J., Rozanov, E., Shepherd, T. G., Shibata, K., Smale, D., Teyssèdre, H., & Yamashita, Y.: *Chemistry-climate model simulations of spring Antarctic ozone*, J. Geophys. Res., 115D, D00M11, doi: 10.1029/2009JD013577, URL `http://dx.doi.org/10.1029/2009JD013577` (2010)

65. Son, S.-W., Gerber, E. P., Perlwitz, J., Polvani, L. M., Gillett, N. P., Seo, K.-H., Eyring, V., Shepherd, T. G., Waugh, D., Akiyoshi, H., Austin, J., Baumgaertner, A., Bekki, S., Braesicke, P., Brühl, C., Butchart, N., Chipperfield, M. P., Cugnet, D., Dameris, M., Dhomse, S., Frith, S., Garny, H., Garcia, R., Hardiman, S. C., Jöckel, P., Lamarque, J. F., Mancini, E., Marchand, M., Michou, M., Nakamura, T., Morgenstern, O., Pitari, G., Plummer, D. A., Pyle, J., Rozanov, E., Scinocca, J. F., Shibata, K., Smale, D., Teyssèdre, H., Tian, W., & Yamashita, Y.: *Impact of stratospheric ozone on Southern Hemisphere circulation change: A multimodel assessment*, J. Geophys. Res., 115D, D00M07, doi: 10.1029/2010JD014271, URL `http://dx.doi.org/10.1029/2010JD014271` (2010)

64. Hegglin, M. I., Gettelman, A., Hoor, P., Krichevsky, R., Manney, G. L., Pan, L. L., Son, S.-W., Stiller, G., Tilmes, S., Walker, K. A., Eyring, V., Shepherd, T. G., Waugh, D., Akiyoshi, H., Añel, J. A., Austin, J., Baumgaertner, A., Bekki, S., Braesicke, P., Brühl, C., Butchart, N., Chipperfield, M., Dameris, M., Dhomse, S., Frith, S., Garny, H., Hardiman, S. C., Jöckel, P., Kinnison, D. E., Lamarque, J. F., Mancini, E., Michou, M., Morgenstern, O., Nakamura, T., Olivié, D., Pawson, S., Pitari, G., Plummer, D. A., Pyle, J. A., Rozanov, E., Scinocca, J. F., Shibata, K., Smale, D., Teyssèdre, H., Tian, W., & Yamashita, Y.: *Multimodel assessment of the upper troposphere and lower stratosphere: Extratropics*, J. Geophys. Res., 115D, D00M09, doi: 10.1029/2010JD013884, URL `http://dx.doi.org/10.1029/2010JD013884` (2010)

63. Gettelman, A., Hegglin, M. I., Son, S.-W., Kim, J., Fujiwara, M., Birner, T., Kremser, S., Rex, M., Añel, J. A., Akiyoshi, H., Austin, J., Bekki, S., Braesike, P., Brühl, C., Butchart, N., Chipperfield, M., Dameris, M., Dhomse, S., Garny, H., Hardiman, S. C., Jöckel, P., Kinnison, D. E., Lamarque, J. F., Mancini, E., Marchand, M., Michou, M., Morgenstern, O., Pawson, S., Pitari, G., Plummer, D., Pyle, J. A., Rozanov, E., Scinocca, J., Shepherd, T. G., Shibata, K., Smale, D., Teyssèdre, H., & Tian, W.: *Multimodel assessment of the upper troposphere and lower stratosphere: Tropics and global trends*, J. Geophys. Res., 115D, D00M08, doi: 10.1029/2009JD013638, URL `http://dx.doi.org/10.1029/2009JD013638` (2010)

62. Baumgaertner, A. J. G., Jöckel, P., Dameris, M., & Crutzen, P. J.: *Will climate change increase ozone depletion from low-energy-electron precipitation?*, Atmospheric Chemistry and Physics, 10, 9647–9656, doi: 10.5194/acp-10-9647-2010, URL `http://www.atmos-chem-phys.net/10/9647/2010/` (2010a)

61. Morgenstern, O., Giorgetta, M. A., Shibata, K., Eyring, V., Waugh, D. W., Shepherd, T. G., Akiyoshi, H., Austin, J., Baumgaertner, A. J. G., Bekki, S., Braesicke, P., Brühl, C., Chipperfield, M. P., Cugnet, D., Dameris, M., Dhomse, S., Frith, S. M., Garny, H., Gettelman, A., Hardiman, S. C., Hegglin, M. I., Jöckel, P., Kinnison, D. E., Lamarque, J.-F., Mancini, E., Manzini, E., Marchand, M., Michou, M., Nakamura, T., Nielsen, J. E., Olivié, D., Pitari, G., Plummer, D. A., Rozanov, E., Scinocca, J. F., Smale, D., Teyssèdre, H., Toohey, M., Tian, W., & Yamashita, Y.: *Review of the formulation of present-generation stratospheric chemistry-climate models and associated external forcings*, J. Geophys. Res., 115, D00M02, doi: 10.1029/2009JD013728, URL `http://dx.doi.org/10.1029/2009JD013728` (2010)

60. Puķīte, J., Kühl, S., Deutschmann, T., Dörner, S., Jöckel, P., Platt, U., & Wagner, T.: *The effect of horizontal gradients and spatial measurement resolution on the retrieval of global vertical NO_2 distributions from SCIAMACHY measurements in limb only mode*, Atmospheric Measurement Techniques, 3, 1155–1174, doi: 10.5194/amt-3-1155-2010, URL `http://www.atmos-meas-tech.net/3/1155/2010/` (2010)

59. Williams, J., Custer, T., Riede, H., Sander, R., Jöckel, P., Hoor, P., Pozzer, A., Wong-Zehnpfennig, S., Hosaynali Beygi, Z., Fischer, H., Gros, V., Colomb, A., Bonsang, B., Yassaa, N., Peeken, I., Atlas, E. L., Waluda, C. M., van Aardenne, J. A., & Lelieveld, J.: *Assessing the effect of marine isoprene and ship emissions on ozone, using modelling and measurements from the South Atlantic*

Ocean, Environmental Chemistry, 7, 171–182, doi: 10.1071/EN09154, URL http://www.publish.csiro.au/?paper=EN09154 (2010)

58. Gromov, S., Jöckel, P., Sander, R., & Brenninkmeijer, C. A. M.: *A kinetic chemistry tagging technique and its application to modelling the stable isotopic composition of atmospheric trace gases*, Geoscientific Model Development, 3, 337–364, doi: 10.5194/gmd-3-337-2010, URL http://www.geosci-model-dev.net/3/337/2010/ (2010)

57. Baumgaertner, A. J. G., Jöckel, P., Steil, B., Tost, H., & Sander, R.: *A fast stratospheric chemistry solver: the E4CHEM submodel for the atmospheric chemistry global circulation model EMAC*, Geoscientific Model Development, 3, 321–328, doi: 10.5194/gmd-3-321-2010, URL http://www.geosci-model-dev.net/3/321/2010/ (2010c)

56. Baumgaertner, A. J. G., Jöckel, P., Riede, H., Stiller, G., & Funke, B.: *Energetic particle precipitation in ECHAM5/MESSy – Part 2: Solar proton events*, Atmospheric Chemistry and Physics, 10, 7285–7302, doi: 10.5194/acp-10-7285-2010, URL http://www.atmos-chem-phys.net/10/7285/2010/ (2010b)

55. Pozzer, A., Pollmann, J., Taraborrelli, D., Jöckel, P., Helmig, D., Tans, P., Hueber, J., & Lelieveld, J.: *Observed and simulated global distribution and budget of atmospheric C_2-C_5 alkanes*, Atmospheric Chemistry and Physics, 10, 4403–4422, doi: 10.5194/acp-10-4403-2010, URL http://www.atmos-chem-phys.net/10/4403/2010/ (2010)

54. Tost, H., Lawrence, M. G., Brühl, C., Jöckel, P., The GABRIEL Team, & The SCOUT-O3-DARWIN/ACTIVE Team: *Uncertainties in atmospheric chemistry modelling due to convection parameterisations and subsequent scavenging*, Atmospheric Chemistry and Physics, 10, 1931–1951, doi: 10.5194/acp-10-1931-2010, URL http://www.atmos-chem-phys.net/10/1931/2010/ (2010)

— 2009 —

53. Pozzer, A., Jöckel, P., & Van Aardenne, J.: *The influence of the vertical distribution of emissions on tropospheric chemistry*, Atmospheric Chemistry and Physics, 9, 9417–9432, doi: 10.5194/acp-9-9417-2009, URL http://www.atmos-chem-phys.net/9/9417/2009/ (2009)

52. Riede, H., Jöckel, P., & Sander, R.: *Quantifying atmospheric transport, chemistry, and mixing using a new trajectory-box model and a global atmospheric-chemistry GCM*, Geoscientific Model Development, 2, 267–280, doi: 10.5194/gmd-2-267-2009, URL http://www.geosci-model-dev.net/2/267/2009/ (2009)

51. Kerkweg, A., Buchholz, J., Ganzeveld, L., Pozzer, A., Tost, H., & Jöckel, P.: *Corrigendum to "Technical Note: An implementation of the dry removal processes DRY DEPosition and SEDImentation in the Modular Earth Submodel System (MESSy)" published in Atmos. Chem. Phys., 6, 4617–4632, 2006*, Atmospheric Chemistry and Physics, 9, 9569–9569, doi: 10.5194/acp-9-9569-2009, URL http://www.atmos-chem-phys.net/9/9569/2009/ (2009)

50. Burrows, S. M., Butler, T., Jöckel, P., Tost, H., Kerkweg, A., Pöschl, U., & Lawrence, M. G.: *Bacteria in the global atmosphere – Part 2: Modeling of emissions and transport between different ecosystems*, Atmospheric Chemistry and Physics, 9, 9281–9297, doi: 10.5194/acp-9-9281-2009, URL http://www.atmos-chem-phys.net/9/9281/2009/ (2009)

49. Isaksen, I., Granier, C., Myhre, G., Berntsen, T., Dalsøren, S., Gauss, M., Klimont, Z., Benestad, R., Bousquet, P., Collins, W., Cox, T., Eyring, V., Fowler, D., Fuzzi, S., Jöckel, P., Laj, P., Lohmann, U., Maione, M., Monks, P., Prevot, A., Raes, F., Richter, A., Rognerud, B., Schulz, M., Shindell, D., Stevenson, D., Storelvmo, T., Wang, W.-C., van Weele, M., Wild, M., & Wuebbles, D.: *Atmospheric composition change: Climate-Chemistry interactions*, Atmospheric Environment, 43, 5138 – 5192, doi: DOI: 10.1016/j.atmosenv.2009.08.003, URL http://www.sciencedirect.com/science/article/B6VH3-4X1J78C-3/2/c660af6491988702a6e62e2306513c65, aCCENT Synthesis (2009)

48. Franke, K., Richter, A., Bovensmann, H., Eyring, V., Jöckel, P., Hoor, P., & Burrows, J. P.: *Ship emitted NO_2 in the Indian Ocean: comparison of model results with satellite data*, Atmospheric Chemistry and Physics, 9, 7289–7301, doi: 10.5194/acp-9-7289-2009, URL http://www.atmos-chem-phys.net/9/7289/2009/ (2009)

47. Khosrawi, F., Müller, R., Proffitt, M. H., Ruhnke, R., Kirner, O., Jöckel, P., Grooß, J.-U., Urban, J., Murtagh, D., & Nakajima, H.: *Evaluation of CLaMS, KASIMA and ECHAM5/MESSy1 simulations in the lower stratosphere using observations of Odin/SMR and ILAS/ILAS-II*, Atmospheric Chemistry and Physics, 9, 5759–5783, doi: 10.5194/acp-9-5759-2009, URL `http://www.atmos-chem-phys.net/9/5759/2009/` (2009)

46. Hoor, P., Borken-Kleefeld, J., Caro, D., Dessens, O., Endresen, O., Gauss, M., Grewe, V., Hauglustaine, D., Isaksen, I. S. A., Jöckel, P., Lelieveld, J., Myhre, G., Meijer, E., Olivie, D., Prather, M., Schnadt Poberaj, C., Shine, K. P., Staehelin, J., Tang, Q., van Aardenne, J., van Velthoven, P., & Sausen, R.: *The impact of traffic emissions on atmospheric ozone and OH: results from QUANTIFY*, Atmospheric Chemistry and Physics, 9, 3113–3136, doi: 10.5194/acp-9-3113-2009, URL `http://www.atmos-chem-phys.net/9/3113/2009/` (2009)

45. Baumgaertner, A. J. G., Jöckel, P., & Brühl, C.: *Energetic particle precipitation in ECHAM5/MESSy1 – Part 1: Downward transport of upper atmospheric NO_x produced by low energy electrons*, Atmospheric Chemistry and Physics, 9, 2729–2740, doi: 10.5194/acp-9-2729-2009, URL `http://www.atmos-chem-phys.net/9/2729/2009/` (2009)

44. Lelieveld, J., Hoor, P., Jöckel, P., Pozzer, A., Hadjinicolaou, P., Cammas, J.-P., & Beirle, S.: *Severe ozone air pollution in the Persian Gulf region*, Atmospheric Chemistry and Physics, 9, 1393–1406, doi: 10.5194/acp-9-1393-2009, URL `http://www.atmos-chem-phys.net/9/1393/2009/` (2009)

— 2008 –

43. Jöckel, P., Kerkweg, A., Buchholz-Dietsch, J., Tost, H., Sander, R., & Pozzer, A.: *Technical Note: Coupling of chemical processes with the Modular Earth Submodel System (MESSy) submodel TRACER*, Atmospheric Chemistry and Physics, 8, 1677–1687, doi: 10.5194/acp-8-1677-2008, URL `http://www.atmos-chem-phys.net/8/1677/2008/` (2008)

42. Kerkweg, A., Jöckel, P., Warwick, N., Gebhardt, S., Brenninkmeijer, C. A. M., & Lelieveld, J.: *Consistent simulation of bromine chemistry from the marine boundary layer to the stratosphere – Part 2: Bromocarbons*, Atmospheric Chemistry and Physics, 8, 5919–5939, doi: 10.5194/acp-8-5919-2008, URL `http://www.atmos-chem-phys.net/8/5919/2008/` (2008b)

41. Kerkweg, A., Jöckel, P., Pozzer, A., Tost, H., Sander, R., Schulz, M., Stier, P., Vignati, E., Wilson, J., & Lelieveld, J.: *Consistent simulation of bromine chemistry from the marine boundary layer to the stratosphere – Part 1: Model description, sea salt aerosols and pH*, Atmospheric Chemistry and Physics, 8, 5899–5917, doi: 10.5194/acp-8-5899-2008, URL `http://www.atmos-chem-phys.net/8/5899/2008/` (2008a)

40. Krol, M. C., Meirink, J. F., Bergamaschi, P., Mak, J. E., Lowe, D., Jöckel, P., Houweling, S., & Röckmann, T.: *What can ^{14}CO measurements tell us about OH?*, Atmospheric Chemistry and Physics, 8, 5033–5044, doi: 10.5194/acp-8-5033-2008, URL `http://www.atmos-chem-phys.net/8/5033/2008/` (2008)

— 2007 –

39. Tarasova, O. A., Brenninkmeijer, C. A. M., Jöckel, P., Zvyagintsev, A. M., & Kuznetsov, G. I.: *A climatology of surface ozone in the extra tropics: cluster analysis of observations and model results*, Atmospheric Chemistry and Physics, 7, 6099–6117, doi: 10.5194/acp-7-6099-2007, URL `http://www.atmos-chem-phys.net/7/6099/2007/` (2007)

38. Brühl, C., Steil, B., Stiller, G., Funke, B., & Jöckel, P.: *Nitrogen compounds and ozone in the stratosphere: comparison of MIPAS satellite data with the chemistry climate model ECHAM5/MESSy1*, Atmospheric Chemistry and Physics, 7, 5585–5598, doi: 10.5194/acp-7-5585-2007, URL `http://www.atmos-chem-phys.net/7/5585/2007/` (2007)

37. Lauer, A., Eyring, V., Hendricks, J., Jöckel, P., & Lohmann, U.: *Global model simulations of the impact of ocean-going ships on aerosols, clouds, and the radiation budget*, Atmospheric Chemistry and Physics, 7, 5061–5079, doi: 10.5194/acp-7-5061-2007, URL `http://www.atmos-chem-phys.net/7/5061/2007/` (2007)

36. Ramsey, C. B., Brenninkmeijer, C. A. M., Jöckel, P., Kjeldsen, H., & Masarik, J.: *Direct measurement of the radiocarbon production at altitude*, Nuclear Instruments & Methods in Physics Research Section B, Beam Interactions with Materials and Atoms, 259, 558–564 (2007)

35. Tost, H., Jöckel, P., & Lelieveld, J.: *Lightning and convection parameterisations – uncertainties in global modelling*, Atmospheric Chemistry and Physics, 7, 4553–4568, doi: 10.5194/acp-7-4553-2007, URL http://www.atmos-chem-phys.net/7/4553/2007/ (2007b)

34. Stiller, G. P., von Clarmann, T., Brühl, C., Fischer, H., Funke, B., Glatthor, N., Grabowski, U., Höpfner, M., Jöckel, P., Kellmann, S., Kiefer, M., Linden, A., López-Puertas, M., Tsidu, G. M., Milz, M., Steck, T., & Steil, B.: *Global distributions of HO_2NO_2 as observed by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS)*, J. Geophys. Res., 112, D09314, doi: 10.1029/2006JD007212, URL http://www.agu.org/journals/jd/jd0709/2006JD007212/ (2007)

33. Kerkweg, A., Sander, R., Tost, H., Jöckel, P., & Lelieveld, J.: *Technical Note: Simulation of detailed aerosol chemistry on the global scale using MECCA-AERO*, Atmospheric Chemistry and Physics, 7, 2973–2985, doi: 10.5194/acp-7-2973-2007, URL http://www.atmos-chem-phys.net/7/2973/2007/ (2007)

32. Tost, H., Jöckel, P., Kerkweg, A., Pozzer, A., Sander, R., & Lelieveld, J.: *Global cloud and precipitation chemistry and wet deposition: tropospheric model simulations with ECHAM5/MESSy1*, Atmospheric Chemistry and Physics, 7, 2733–2757, doi: 10.5194/acp-7-2733-2007, URL http://www.atmos-chem-phys.net/7/2733/2007/ (2007a)

31. Pozzer, A., Jöckel, P., Tost, H., Sander, R., Ganzeveld, L., Kerkweg, A., & Lelieveld, J.: *Simulating organic species with the global atmospheric chemistry general circulation model ECHAM5/MESSy1: a comparison of model results with observations*, Atmospheric Chemistry and Physics, 7, 2527–2550, doi: 10.5194/acp-7-2527-2007, URL http://www.atmos-chem-phys.net/7/2527/2007/ (2007)

30. Lelieveld, J., Brühl, C., Jöckel, P., Steil, B., Crutzen, P. J., Fischer, H., Giorgetta, M. A., Hoor, P., Lawrence, M. G., Sausen, R., & Tost, H.: *Stratospheric dryness: model simulations and satellite observations*, Atmospheric Chemistry and Physics, 7, 1313–1332, doi: 10.5194/acp-7-1313-2007, URL http://www.atmos-chem-phys.net/7/1313/2007/ (2007)

29. Assonov, S. S., Brenninkmeijer, C. A. M., Jöckel, P., Mulvaney, R., Bernard, S., & Chappellaz, J.: *Evidence for a CO increase in the SH during the 20th century based on firn air samples from Berkner Island, Antarctica*, Atmospheric Chemistry and Physics, 7, 295–308, doi: 10.5194/acp-7-295-2007, URL http://www.atmos-chem-phys.net/7/295/2007/ (2007)

– 2006 –

28. Jöckel, P., Tost, H., Pozzer, A., Brühl, C., Buchholz, J., Ganzeveld, L., Hoor, P., Kerkweg, A., Lawrence, M. G., Sander, R., Steil, B., Stiller, G., Tanarhte, M., Taraborrelli, D., van Aardenne, J., & Lelieveld, J.: *The atmospheric chemistry general circulation model ECHAM5/MESSy1: consistent simulation of ozone from the surface to the mesosphere*, Atmospheric Chemistry and Physics, 6, 5067–5104, doi: 10.5194/acp-6-5067-2006, URL http://www.atmos-chem-phys.net/6/5067/2006/ (2006)

27. Jöckel, P.: *Technical note: Recursive rediscretisation of geo-scientific data in the Modular Earth Submodel System (MESSy)*, Atmospheric Chemistry and Physics, 6, 3557–3562, doi: 10.5194/acp-6-3557-2006, URL http://www.atmos-chem-phys.net/6/3557/2006/ (2006)

26. Tost, H., Jöckel, P., & Lelieveld, J.: *Influence of different convection parameterisations in a GCM*, Atmospheric Chemistry and Physics, 6, 5475–5493, doi: 10.5194/acp-6-5475-2006, URL http://www.atmos-chem-phys.net/6/5475/2006/ (2006b)

25. Pozzer, A., Jöckel, P., Sander, R., Williams, J., Ganzeveld, L., & Lelieveld, J.: *Technical Note: The MESSy-submodel AIRSEA calculating the air-sea exchange of chemical species*, Atmospheric Chemistry and Physics, 6, 5435–5444, doi: 10.5194/acp-6-5435-2006, URL http://www.atmos-chem-phys.net/6/5435/2006/ (2006)

24. Lelieveld, J., Brenninkmeijer, C. A. M., Jöckel, P., Isaksen, I. S. A., Krol, M. C., Mak, J. E., Dlugokencky, E., Montzka, S. A., Novelli, P. C., Peters, W., & Tans, P. P.: *New Directions: Watching over tropospheric hydroxyl (OH)*, Atmos. Environ., 40, 5741–5743 (2006)

23. Kerkweg, A., Buchholz, J., Ganzeveld, L., Pozzer, A., Tost, H., & Jöckel, P.: *Technical Note: An implementation of the dry removal processes DRY DEPosition and SEDImentation in the Modular Earth Submodel System (MESSy)*, Atmospheric Chemistry and Physics, 6, 4617–4632, doi: 10.5194/acp-6-4617-2006, URL http://www.atmos-chem-phys.net/6/4617/2006/ (2006a)

22. Kerkweg, A., Sander, R., Tost, H., & Jöckel, P.: *Technical note: Implementation of prescribed (OFFLEM), calculated (ONLEM), and pseudo-emissions (TNUDGE) of chemical species in the Modular Earth Submodel System (MESSy)*, Atmospheric Chemistry and Physics, 6, 3603–3609, doi: 10.5194/acp-6-3603-2006, URL `http://www.atmos-chem-phys.net/6/3603/2006/` (2006b)

21. Tost, H., Jöckel, P., Kerkweg, A., Sander, R., & Lelieveld, J.: *Technical note: A new comprehensive SCAVenging submodel for global atmospheric chemistry modelling*, Atmospheric Chemistry and Physics, 6, 565–574, doi: 10.5194/acp-6-565-2006, URL `http://www.atmos-chem-phys.net/6/565/2006/` (2006a)

— 2005 –

20. Jöckel, P. & Brenninkmeijer, C. A. M.: *Natural bleach under scrutiny*, News and Views, Nature, 436, 921–922, doi: 10.1038/436921a (2005)

19. Jöckel, P., Sander, R., Kerkweg, A., Tost, H., & Lelieveld, J.: *Technical Note: The Modular Earth Submodel System (MESSy) - a new approach towards Earth System Modeling*, Atmospheric Chemistry and Physics, 5, 433–444, doi: 10.5194/acp-5-433-2005, URL `http://www.atmos-chem-phys.net/5/433/2005/` (2005)

18. Assonov, S. S., Brenninkmeijer, C. A. M., & Jöckel, P.: *The ^{18}O isotope exchange rate between firn air CO_2 and the firn matrix at three Antarctic sites*, J. Geophys. Res., 110, D18310, doi: 10.1029/2005JD005769 (2005)

17. Sander, R., Kerkweg, A., Jöckel, P., & Lelieveld, J.: *Technical note: The new comprehensive atmospheric chemistry module MECCA*, Atmospheric Chemistry and Physics, 5, 445–450, doi: 10.5194/acp-5-445-2005, URL `http://www.atmos-chem-phys.net/5/445/2005/` (2005)

— 2004 –

16. Jöckel, P. & Brenninkmeijer, C. A. M.: *^{14}CO and its Application in Studies of Atmospheric Chemistry and Transport*, Tech. rep., 1st International Expert Meeting on Sources and Measurements of Natural Radionuclides Applied to Climate and Air Quality Studies, WMO/GAW Report No.155 (March 2004)

— 2003 –

15. Jöckel, P., Brenninkmeijer, C. A. M., Singh, H. B., & Crutzen, P. J.: *Investigation of the Global Atmospheric Oxidation Efficiency and Its Trends: A Proposal to Initiate IGAC-GHOST (Global HO Systematic Tests)*, Tech. rep., IGACtivities Newsletter, Issue No. 28, 2-5 (May 2003)

14. Jöckel, P., Brenninkmeijer, C. A. M., Lawrence, M. G., & Siegmund, P.: *The detection of solar proton produced ^{14}CO*, Atmos. Chem. Phys., 3, 999–1005, URL `http://www.atmos-chem-phys.net/3/999` (2003b)

13. Jöckel, P., Brenninkmeijer, C. A. M., & Crutzen, P. J.: *A discussion on the determination of atmospheric OH and its trends?*, Atmos. Chem. Phys., 3, 107–118, URL `http://www.atmos-chem-phys.net/3/107/2003/` (2003a)

— 2002 –

12. Jöckel, P., Brenninkmeijer, C. A. M., Lawrence, M. G., Jeuken, A. B. M., & van Velthoven, P. F.: *Evaluation of stratosphere - troposphere exchange and the hydroxyl radical distribution in 3-dimensional global atmospheric models using observations of cosmogenic ^{14}CO*, J. Geophys. Res., 107, 4446, doi: 10.1029/2001JD001324 (2002)

11. Jöckel, P. & Brenninkmeijer, C. A. M.: *The seasonal cycle of cosmogenic ^{14}CO at the surface level: A solar cycle adjusted, zonal average climatology based on observations*, J. Geophys. Res., 107, 4656, doi: 10.1029/2001JD001104 (2002)

10. Röckmann, T., Jöckel, P., Gros, V., Bräunlich, M., Possnert, G., & Brenninkmeijer, C. A. M.: *Using ^{14}C, ^{13}C, ^{18}O and ^{17}O isotopic variations to provide insights into the high northern latitude surface CO inventory*, Atmospheric Chemistry and Physics, 2, 147–159, doi: 10.5194/acp-2-147-2002, URL `http://www.atmos-chem-phys.net/2/147/2002/` (2002)

9. Gros, V., Jöckel, P., Brenninkmeijer, C. A. M., Röckmann, T., Meinhardt, F., & Graul, R.: *Characterization of pollution events observed at Schainsland using CO and its stable isotopes*, Atmos. Environ., 36, 2831–2840 (2002)

— 2001 –

8. Jöckel, P., von Kuhlmann, R., Lawrence, M. G., Steil, B., Brenninkmeijer, C. A. M., Crutzen, P. J., Rasch, P. J., & Eaton, B.: *On a fundamental problem in implementing flux-form advection schemes for tracer transport in 3-dimensional general circulation and chemistry transport models*, Q. J. R. Meteorol. Soc., 127, 1035–1052 (2001)

7. Lawrence, M. G., Jöckel, P., & von Kuhlmann, R.: *What does the global mean OH concentration tell us?*, Atmospheric Chemistry and Physics, 1, 37–49, doi: 10.5194/acp-1-37-2001, URL `http://www.atmos-chem-phys.net/1/37/2001/` (2001)

6. Bräunlich, M., M., O. A., Marik, T., Jöckel, P., Brenninkmeijer, C. A. M., Chappellaz, J., Barnola, J.-M., Mulvaney, R., & Sturges, W. T.: *Changes in the global atmospheric methane budget over the last decades inferred from 13C and D isotopic analysis of Antarctic firn air*, J. Geophys. Res., 106, 20 465–20 481 (2001)

5. Gros, V., Bräunlich, M., Röckmann, T., Jöckel, P., Bergamaschi, P., Brenninkmeijer, C. A. M., Rom, W., Kutschera, W., Kaiser, A., Scheel, H. E., Mandl, M., van der Plicht, J., & Possnert, G.: *Detailed analysis of the isotopic composition of CO and characterization of the air masses arriving at Mount Sonnblick (Austrian Alps)*, J. Geophys. Res., 106, 3179–3193 (2001)

— 2000 –

4. Jöckel, P., Brenninkmeijer, C. A. M., & Lawrence, M. G.: *The atmospheric response time of cosmogenic ^{14}CO to changes in solar activity*, J. Geophys. Res., 105, 6737–6744 (2000)

— 1999 –

3. Jöckel, P., Lawrence, M. G., & Brenninkmeijer, C. A. M.: *Simulations of cosmogenic ^{14}CO using the three-dimensional atmospheric model MATCH: Effects of ^{14}C production distribution and the solar cycle*, J. Geophys. Res., 104, 11 733–11 743 (1999)

2. Lawrence, M. G., Landgraf, J., Jöckel, P., & Eaton, B.: *Artifacts in global atmospheric modeling: Two recent examples*, EOS, 80, 11 (March 16, 1999)

1. Brenninkmeijer, C. A. M., Röckmann, T., Bräunlich, M., Jöckel, P., & Bergamaschi, P.: *Review of progress in isotope studies of atmospheric carbon monoxide*, Chemosphere, Global Change Science, 1, 33–52 (1999)