

1. IF(A \rightarrow X, B \rightarrow X) chemiluminescence from the F + I₂F reaction, T. Trickl, J. Wanner, J. Chem. Phys. **74** (1981), 6508-6510
2. Statistical and Non-Statistical IF Product State Distributions in the Reactions F + IX \rightarrow IF + X – X = Cl, Br, I, R (Polyatomic), M. Trautmann, T. Trickl, J. Wanner, Ber. Bunsenges. Phys. Chem. **86** (1982), 481-482
3. Laser Spectroscopy of Iodine Monofluoride Produced in Situ in a Molecular Beam Experiment, M. Trautmann, T. Trickl, J. Wanner, Ber. Bunsenges. Phys. Chem. **86** (1982), 841-843
4. The dynamics of the reactions F + IX \rightarrow IF + X (X = Cl, Br, I); a laser-induced fluorescence study, T. Trickl, J. Wanner, J. Chem. Phys. **78** (1983), 6091-6101
5. High-resolution, Laser-induced Fluorescence Spectroscopy of Nascent IF: Determination of X- and B-state Molecular Constants, T. Trickl, J. Wanner, J. Mol. Spectrosc. **104** (1984), 174-182
6. IF chemiluminescence in F + I₂ Experiments, T. Trickl, J. Wanner, Faraday Discuss. Chem. Soc. **84** (1987), 109-111
7. State-selective Detection of H₂ by 1 + 1 REMPI via the C ¹Π_u (v' = 0, J') States, A. H. Kung, T. Trickl, N. A. Gershenfeld, Y. T. Lee, Chem. Phys. Lett. **144** (1988), 427-430
8. Ultrahigh-resolution (1 + 1) photoionization spectroscopy of Kr I: Hyperfine structures, isotope shifts and lifetimes for the n = 5, 6, 7 4p5 ns Rydberg levels, T. Trickl, M. J. J. Vrakking, E. Cromwell, Y. T. Lee, A. H. Kung, Phys. Rev. A **39** (1989), 2948-2955
9. A high-intensity multi-purpose piezo-electric pulsed molecular beam source, D. Proch, T. Trickl, Rev. Sci. Instrum. **60** (1989), 713-716
10. The IF(v = 0) Contribution in the Reactions F + I₂ and F + ICl, T. Trickl, K. Wagemann, J. Wanner, X. K. Zeng, J. Chem. Soc. Faraday Trans. II **85** (1989), 1277-1279
11. Ultra-narrow bandwidth VUV-XUV laser system, E. Cromwell, T. Trickl, Y. T. Lee, A. H. Kung, Rev. Sci. Instrum. **60** (1989), 2888-2892
12. State-selective ionization of nitrogen in the X ²Σ_g⁺ v⁺ = 0 and v⁺ = 1 states by two-color (1 + 1) photon excitation near threshold, T. Trickl, E. F. Cromwell, Y. T. Lee, A. H. Kung, J. Chem. Phys. **91** (1989), 6006-6012
13. State-selective Ionization of N₂ by Resonance-enhanced Three- and Four-photon Excitation, S. Opitz, D. Proch, T. Trickl, K. L. Kompa, Chem. Phys. **143** (1990), 305-323
14. Resonance-enhanced 2 + 2 Photon Ionization of Nitrogen: The Lyman-Birge-Hopfield Band System, T. Trickl, D. Proch, K. L. Kompa, J. Mol. Spectrosc. **162** (1993), 184-229
15. A Wide-range UV Lidar System for Tropospheric Ozone Measurements: Development and Application, U. Kempfer, W. Carnuth, R. Lotz, T. Trickl, Rev. Sci. Instrum. **65** (1994), 3145-3164
16. A Powerful Eyesafe Infrared Aerosol Lidar: Application of Stimulated Raman Backscattering of 1.06 μm Radiation, W. Carnuth, T. Trickl, Rev. Sci. Instrum. **65** (1994), 3324-3331
17. The Lyman-Birge-Hopfield System of Nitrogen: Revised Calculation of the Energy Levels, T. Trickl, D. Proch, K. L. Kompa, J. Mol. Spectrosc. **171** (1995), 374-384
18. Second Generation of the IFU Stationary Tropospheric Ozone Lidar, H. Eisele, T. Trickl, pp. 379 to 382 in: Advances in Atmospheric Remote Sensing with Lidar, Selected Papers of the

- 18th International Laser Radar Conference, Berlin (Germany), July 22 to 26, 1996, A. Ansmann, R. Neuber, P. Rairoux, U. Wandinger, Eds., Springer (Berlin, Heidelberg, Germany, 1997)
19. A Novel Mobile Vertical-sounding System for Ozone Studies in the Lower Troposphere, P. Brenner, O. Reitebuch, K. Schäfer, T. Trickl, A. Stichternath, pp. 383 to 386 in: *Advances in Atmospheric Remote Sensing with Lidar, Selected Papers of the 18th International Laser Radar Conference, Berlin (Germany), July 22 to 26, 1996*, A. Ansmann, R. Neuber, P. Rairoux, U. Wandinger, Eds., Springer (Berlin, Heidelberg, Germany, 1997)
 20. Large-scale European Network of Laser Remote Sensing Facilities for Environmental and Industrial Monitoring of Toxic and Global Change Related Trace Gases (HCM Lidar Network), A. Papayannis, G. Ancellet, R. Barbini, J. Bösenberg, B. Calpini, W. Diehl, M. Del Guasta, M. Milton, T. Trickl, pp. 431 to 434 in: *Advances in Atmospheric Remote Sensing with Lidar, Selected Papers of the 18th International Laser Radar Conference, Berlin (Germany), July 22 to 26, 1996*, A. Ansmann, R. Neuber, P. Rairoux, U. Wandinger, Eds., Springer (Berlin, Heidelberg, Germany, 1997)
 21. Regional and Global Tropopause Fold Occurrence and Related Ozone Flux across the Tropopause, M. Beekmann, G. Ancellet, S. Blonsky, D. De Muer, A. Ebel, H. Elbern, J. Hendricks, J. Kowol, C. Mancier, R. Sladkovic, H. G. J. Smit, P. Speth, T. Trickl, P. Van Haver, *J. Atmos. Chem.* **28** (1997), 29-44
 22. Raman-shifted laser sources suitable for differential-absorption lidar measurements of ozone in the troposphere, M. J. T. Milton, G. Ancellet, A. Apituley, J. Bösenberg, W. Carnuth, F. Castagnoli, T. Trickl, H. Edner, L. Stefanutti, T. Schaberl, A. Sunesson, C. Weitkamp, *Appl. Phys. B* **66** (1998), 105-113
 23. Inverse modelling on the basis of remote sensing to determine emission rates, K. Schäfer, I. Steinicke, S. Emeis, M. Stockhause, R. Sussmann, T. Trickl, O. Reitebuch, K. Hoehstetter, A. Sedlmaier, G. Depta, A. Gronauer, J. Seedorf, J. Hartung, *Meteorol. Zeitschrift N.F.* **7** (1998), 7-10
 24. Lidar Sounding of Tropospheric Ozone at Garmisch-Partenkirchen, H. Eisele, T. Trickl, pp. 351 to 354 in: *Atmospheric Ozone, Proc. 18th Quadrennial Ozone Symposium, L'Aquila (Italy), Sept. 12 to 21, 1996*, R. D. Bojkov, G. Visconti, Eds., International Ozone Commission (Genève, Switzerland, 1998)
 25. Freisetzung partikelförmiger Stoffe aus einem Schweinestall mit zentraler Abluftführung in die Stallumgebung, J. Hartung, J. Seedorf, T. Trickl, H. Gronauer, *Dtsch. tierärztl. Wschr.* **105** (1998), 244-245
 26. High-resolution Lidar Measurements of Stratosphere-troposphere Exchange, H. Eisele, H. E. Scheel, R. Sladkovic, T. Trickl, *J. Atmos. Sci.* **56** (1999), 319-330
 27. A textbook example of long-range transport: Simultaneous observation of ozone maxima of stratospheric and North American origin in the free troposphere over Europe, A. Stohl, T. Trickl, *J. Geophys. Res.* **104** (1999), 30445-30462
 28. The influence of stratospheric intrusions on alpine ozone concentrations, A. Stohl, N. Spichtinger-Rakowsky, P. Bonasoni, H. Feldmann, M. Memmesheimer, H. E. Scheel, T. Trickl, S. Hübener, W. Ringer, M. Mandl, *Atmos. Environ.* **34** (2000), 1323-1354

29. South foehn and ozone in the Eastern Alps – case study and climatological aspects, P. Seibert, H. Feldmann, B. Neininger, M. Bäuml, T. Trickl, *Atmos. Environ.* **34** (2000), 1379-1394
30. The VOTALP Mesolcina Valley Campaign 1996-concept, background and some highlights, M. Furger, J. Dommen, W. K. Graber, L. Pioggio, A. Prévôt, S. Emeis, G. Grell, T. Trickl, B. Gomiscek, B. Neininger, G. Wotawa, *Atmos. Environ.* **34** (2000), 1395-1412
31. Transport studies with the IFU three-wavelength aerosol lidar during the VOTALP Mesolcina experiment, W. Carnuth, T. Trickl, *Atmos. Environ.* **34** (2000), 1425-1434
32. EARLINET: A European Aerosol Research Lidar Network, J. Bösenberg, C. Böckmann, A. Hågård, G. Vaughan, P. Flamant, J. Pelon, A. Ansmann, J. Schneider, A. Papayannis, D. Balis, A. Comeron, N. Spinelli, G. Visconti, B. Calpini, V. Mitev, A. Chaikovsky, D. Resendes, M. Wiegner, T. Trickl, pp. 155-158 in: *Laser Remote Sensing of the Atmosphere, Selected Papers of the 20th International Laser Radar Conference, Vichy (France), July 10 to 14, 2000*, A. Dabas, J. Pelon, Eds., Éditions de l'École Polytechnique (Palaiseau, France, 2001), ISBN 2-7302-0798-8
33. Spectacular Cases of Vertical and Long-range Ozone and Aerosol Transport, S. Kreipl, R. Mücke, H. Jäger, T. Trickl, A. Stohl, pp. 455-458 in: *Laser Remote Sensing of the Atmosphere, Selected Papers of the 20th International Laser Radar Conference, Vichy (France), July 10 to 14, 2000*, A. Dabas, J. Pelon, Eds., Éditions de l'École Polytechnique (Paris, France, 2001), ISBN 2-7302-0798-8
34. Transport of boreal forest fire emissions from Canada to Europe, C. Forster, U. Wandinger, G. Wotawa, P. James, I. Mattis, D. Althausen, P. Simmonds, S. O'Doherty, S. G. Jennings, C. Kleefeld, J. Schneider, T. Trickl, S. Kreipl, H. Jäger, A. Stohl, *J. Geophys. Res.* **106** (2001), 22887-22906
35. Highlights of the Tropospheric Lidar Studies at IFU within the TOR Project, W. Carnuth, U. Kempfer, T. Trickl, *Tellus B* **54** (2002), 163-185
36. Forecast, observation and modelling of a deep stratospheric intrusion event over Europe, P. Zanis, T. Trickl, A. Stohl, H. Wernli, O. Cooper, C. Zerefos, H. Gaeggeler, A. Priller, C. Schnabel, H. E. Scheel, H. J. Kanter, L. Tobler, P. W. Kubik, P. Cristofanelli, C. Forster, P. James, E. Gerasopoulos, A. Delcloo, A. Papayannis, H. Claude, *Atmos. Chem. Phys.* **3** (2003), 763-777
37. Stratosphere-troposphere exchange - a review, and what we have learned from STACCATO, A. Stohl, P. Bonasoni, P. Cristofanelli, W. Collins, J. Feichter, A. Frank, C. Forster, E. Gerasopoulos, H. Gäggeler, P. James, T. Kentarchos, H. Kromp-Kolb, B. Krüger, C. Land, J. Meloen, A. Papayannis, A. Priller, P. Seibert, M. Sprenger, G. J. Roelofs, H. E. Scheel, C. Schnabel, P. Siegmund, L. Tobler, T. Trickl, H. Wernli, V. Wirth, P. Zanis, C. Zerefos, *J. Geophys. Res.* **108** (2003), 8516, doi:10.1029/2002JD002490, STA 1, 15 pp.
38. Stratosphere to troposphere transport: a model and method evaluation, P. Cristofanelli, P. Bonasoni, W. Collins, J. Feichter, C. Forster, P. James, A. Kentarchos, P. W. Kubik, C. Land, J. Meloen, G. J. Roelofs, P. Siegmund, M. Sprenger, C. Schnabel, A. Stohl, L. Tobler, L. Tositti, T. Trickl, P. Zanis, *J. Geophys. Res.* **108** (2003), 8525, doi: 10.1029/2002JD002600, STA 10, 23 pp.
39. Intercomparison of tropospheric ozone models: Ozone transport in a complex tropopause folding event, G.-J. Roelofs, A. S. Kentarchos, T. Trickl, A. Stohl, W. J. Collins, R. A.

- Crowther, D. Hauglustaine, A. Klonecki, K. S. Law, M. G. Lawrence, R. von Kuhlmann, M. van Weele, *J. Geophys. Res.* **108** (2003), 8529, doi: 10.1029/2003JD003462, STA 14, 13 pp.
40. Intercontinental transport and its influence on the ozone concentrations over central Europe: Three case studies, T. Trickl, O. R. Cooper, H. Eisele, P. James, R. Mücke, A. Stohl, *J. Geophys. Res.* **108** (2003), 8530, doi: 10.1029/2002JD002735, STA 15, 23 pp.
 41. Improvements of the aerosol algorithm in ozone-lidar data processing by use of evolutionary strategies, H. Eisele, T. Trickl, *Appl. Opt.* **44** (2005), 2638-2651
 42. EARLINET: the European Aerosol Lidar Network, A. Amodeo, J. Bösenberg, A. Ansmann, D. Balis, C. Böckmann, A. Chaikovsky, A. Comeron, V. Mitev, A. Papayannis, G. Pappalardo, M. R. Perrone, V. Rizi, V. Simeonov, P. Sobolewski, N. Spinelli, D. V. Stoyanov, T. Trickl, M. Wiegner, *Optica Pura y Aplicada* **39** (2006), 1-10
 43. Krypton atom and testing the limits of extreme-ultraviolet tunable-laser spectroscopy, T. Trickl, A. H. Kung, Y. T. Lee, *Phys. Rev. A* **75** (2007), 022501, 13 pp.
 44. Wide-range sounding of free-tropospheric water vapor with a differential-absorption lidar (DIAL) at a high-altitude station, H. Vogelmann, T. Trickl, *Appl. Opt.* **47** (2008) 2116-2132
 45. The stratospheric impact of the Chisholm PyroCumulonimbus eruption: 2. Vertical profile perspective, M. Fromm, E. P. Shettle, K. H. Fricke, C. Ritter, T. Trickl, H. Giehl, M. Gerding, J. Barnes, M. O'Neill, S. T. Massie, U. Blum, I. S. McDermid, T. Leblanc, T. Deshler, *J. Geophys. Res.* **113** (2008), D08203, doi: 10.1029/2007JD009147, 19 pp.
 46. Systematic lidar observations of Saharan dust over Europe in the frame of EARLINET (2000-2002), A. Papayannis, V. Amiridis, L. Mona, G. Tsaknakis, D. Balis, J. Bösenberg, A. Chaikovsky, F. De Tomasi, I. Grigorov, I. Mattis, V. Mitev, D. Müller, S. Nickovic, C. Pérez, A. Pietruczuk, G. L. Pisani, F. Ravetta, V. Rizi, M. Sicard, T. Trickl, M. Wiegner, M. Gerding, R. E. Mamouri, G. D'Amico, G. Pappalardo, *J. Geophys. Res.* **113** (2008), D10204; doi: 10.1029/2007JD009028, 17 pp.
 47. Deep stratospheric intrusions over Central Europe: case studies and climatological aspects, T. Trickl, H. Feldmann, H.-J. Kanter, H. E. Scheel, M. Sprenger, A. Stohl, H. Wernli, *Atmos. Chem. Phys.* **10** (2010), 499-524
 48. Upgraded 1.56- μm lidar at IMK-IFU with 0.28 J/pulse, T. Trickl, *Appl. Opt.* **49** (2010), 3732-3740
 49. A Pulsed Source of Cold Hydrogen and Hydrogen Clusters: Development and Extreme-ultraviolet Studies, T. Trickl, A. H. Kung, Y. T. Lee, *Appl. Phys. B* **101** (2010), 321-335, DOI: 10.1007/s00340-010-4025-7
 50. The Untold Story of Pyrocumulonimbus, M. Fromm, D. T. Lindsey, R. Servranckx, G. Yue, T. Trickl, R. Sica, P. Doucet, S. Godin-Beekmann, *Bull. Am. Met. Soc.* **91** (2010), 1193-1209
 51. Tropospheric trace-gas measurements with the differential-absorption lidar technique, T. Trickl, pp. 87-147 in: *Recent Advances in Atmospheric Lidars*, L. Fiorani, V. Mitev, Eds., INOE Publishing House, Bucharest (Romania, 2010), Series on Optoelectronic Materials and Devices, Vol. 7, ISBN 978-973-88109-6-9; revised version: <http://www.trickl.de/DIAL.pdf>
 52. Intercomparison of atmospheric water vapor soundings from the differential absorption lidar (DIAL) and the solar FTIR system on Mt. Zugspitze, H. Vogelmann, R. Sussmann, T. Trickl, T. Borsdorff, *Atmos. Meas. Technol.* **4** (2011), 835-841

53. High-ozone layers in the middle and upper troposphere above Central Europe: potential import from the stratosphere along the subtropical jet stream, T. Trickl, H. Eisele, N. Bärtsch-Ritter, M. Furger, R. Mücke, M. Sprenger, A. Stohl, *Atmos. Chem. Phys.* **11** (2011), 9343-9366; 5-p. Supplement
54. Lidar, T. Leblanc, T. Trickl, H. Vogelmann, pp. 113-158 (Chapter 7) in: *Monitoring Atmospheric Water Vapour: Ground-Based Remote Sensing and In-situ Methods*, N. Kämpfer, Ed., International Space Science Institute, Bern (Switzerland), ISSI Scientific Reports Series, Vol. 10, ISBN 978-1-4614-3908-0, Springer (Berlin, Heidelberg, New York, 2012)
55. Four-dimensional distribution of the 2010 Eyjafjallajökull volcanic cloud over Europe observed by EARLINET, G. Pappalardo, L. Mona, G. D'Amico, U. Wandinger, M. Adam, A. Amodeo, A. Ansmann, A. Apituley, L. Alados Arboledas, D. Balis, A. Boselli, J. A. Bravo-Aranda, A. Chaikovsky, A. Comeron, J. Cuesta, F. De Tomasi, V. Freudenthaler, M. Gausa, E. Giannakaki, H. Giehl, A. Giunta, I. Grigorov, S. Groß, M. Haeffelin, A. Hiebsch, M. Iarlori, D. Lange, H. Linné, F. Madonna, I. Mattis, R. Mamouri, M. A. P. McAuliffe, V. Mitev, F. Molero, F. Navas-Guzman, D. Nicolae, A. Papayannis, M. R. Perrone, C. Pietras, A. Pietruczuk, G. Pisani, J. Preißler, M. Pujadas, V. Rizi, A. A. Ruth, J. Schmidt, P. Seifert, I. Serikov, M. Sicard, V. Simeonov, N. Spinelli, K. Stebel, M. Tesche, T. Trickl, X. Wang, F. Wagner, M. Wiegner, K. M. Wilson, Eyjafjallajökull special section of *Atmos. Chem. Phys.*, *Atmos. Chem. Phys.* **13** (2013), 4429-4450
56. 35 years of stratospheric aerosol measurements at Garmisch-Partenkirchen: from Fuego to Eyjafjallajökull, and beyond, T. Trickl, H. Giehl, H. Jäger, H. Vogelmann, Eyjafjallajökull special section of *Atmos. Chem. Phys.*, *Atmos. Chem. Phys.* **13** (2013), 5205-5225
57. How stratospheric are deep stratospheric intrusions? T. Trickl, H. Vogelmann, H. Giehl, H. E. Scheel, M. Sprenger, A. Stohl, *Atmos. Chem. Phys.* **14** (2014), 9941-9961
58. Spatiotemporal variability of water vapor investigated using lidar and FTIR vertical soundings above the Zugspitze, H. Vogelmann, R. Sussmann, T. Trickl, A. Reichert, *Atmos. Chem. Phys.* **14** (2015), 3135-3148
59. Wavelength dependence of nanosecond infrared laser-induced breakdown in water: Evidence for multiphoton initiation via an intermediate state, N. Linz, S. Freidank, X.-X. Liang, H. Vogelmann, T. Trickl, A. Vogel, *Phys. Rev. B* **91** (2015), 134114, 10 pp.
60. Stratospheric ozone in boreal fire plumes – the 2013 smoke season over Central Europe, T. Trickl, H. Vogelmann, H. Flentje, L. Ries, *Atmos. Chem. Phys.* **15** (2015), 9631–9649
61. Effective resolution concepts for lidar observations, M. Iarlori, F. Madonna, V. Rizi, T. Trickl, and A. Amodeo, *Atmos. Meas. Tech.* **8** (2015), 5157–5176
62. EARLINET instrument intercomparison campaigns: Overview on strategy and results, U. Wandinger, V. Freudenthaler, H. Baars, A. Amodeo, R. Engelmann, I. Mattis, S. Groß, G. Pappalardo, A. Giunta, G. D'Amico, A. Chaikovsky, F. Ossipenko, A. Slesar, D. Nicolae, L. Belegante, C. Talianu, I. Serikov, H. Linné, F. Jansen, A. Apituley, K. Wilson, M. de Graaf, T. Trickl, H. Giehl, M. Adam, A. Comeron, C. Muñoz-Porcar, F. Rocadenbosch, M. Sicard, S. Tomás, D. Lange, D. Kumar, M. Pujadas, F. Molero, A. J. Fernandez, L. Alados Arboledas, J. A. Bravo-Aranda, F. Navas-Guzmán, J. L. Guerrero-Rascado, M. J. Granados-Munoz, J. Preißler, F. Wagner, M. Gausa, I. Grigorov, D. Stoyanov, M. Iarlori, V. Rizi, N. Spinelli, A. Boselli, X. Wang, T. Lo Feudo, M. R. Perrone, F. De Tomasi, P. Burlizzi, *Atmos. Meas. Tech.* **9** (2016), 1001-1023

63. The Zugspitze Raman Lidar: System Testing, K. Höveler, L. Klanner, T. Trickl, H. Vogelmann, 27th International Laser Radar Conference, New York City (U.S.A.), July 5 to 10, 2015, B. Gross, F. Moshairy, M. Arend, Eds., Poster Session A2, „Lidar for Trace Gas Monitoring“, A2.8, EPJ Web of Conferences **199** (2016) 21004, 4 pp., DOI: 10.1051/epjconf/201611905008
64. Combined DIAL Sounding of Ozone, Water Vapour and Aerosol, T. Trickl, H. Vogelmann, 27th International Laser Radar Conference, New York City (U.S.A.), July 5 to 10, 2015, B. Gross, F. Moshairy, M. Arend, Eds., Oral Session S11, “Combining Lidar and Other Observations”, S11.5, EPJ Web of Conferences **199** (2016) 21004, 4 pp., DOI: 10.1051/epjconf/201611921004
65. Spatio-Temporal Variability of Water Vapor in the Free Troposphere, Investigated by DIAL and FTIR Vertical Soundings, H. Vogelmann, R. Sussmann, T. Trickl, A. Reichert, 27th International Laser Radar Conference, New York City (U.S.A.), July 5 to 10, 2015, B. Gross, F. Moshairy, M. Arend, Eds., Poster Session C2, “Combining Lidar and Other Observations”, C2.6, EPJ Web of Conferences **199** (2016) 24006, 4 pp., DOI: 10.1051/epjconf/201611924006
66. Stratospheric aerosol – Observations, processes, and impact on climate, S. Kremser, L. W. Thomason, M. von Hobe, M. Hermann, T. Deshler, C. Timmreck, M. Toohey, A. Stenke, J. P. Schwarz, R. Weigel, S. Fueglistaler, F. J. Prata, J.-P. Vernier, H. Schlager, J. E. Barnes, J.-C. Antuña-Marrero, D. Fairlie, M. Palm, E. Mahieu, J. Notholt, M. Rex, C. Bingen, F. Vanhellefont, A. Bourassa, J. M. C. Plane, D. Klocke, S. A. Carn, L. Clarisse, T. Trickl, R. Neely, A. D. James, L. Rieger, J. C. Wilson, B. Meland, *Rev. Geophys.* **54** (2016), 278-335, doi: 10.1002/2015RG000511.
67. How stratospheric are deep stratospheric intrusions into the troposphere? LUAMI 2008, T. Trickl, H. Vogelmann, A. Fix, A. Schäfler, M. Wirth, B. Calpini, G. Levrat, G. Romanens, A. Apituley, K. M. Wilson, R. Begbie, J. Reichardt, H. Vömel, M. Sprenger, *Atmos. Chem. Phys.* **16** (2016), 8791-8815
68. Proposed standardized definitions for vertical resolution and uncertainty in the NDACC lidar ozone and temperature algorithms. Part 1: Vertical resolution, T. Leblanc, R. J. Sica, J. A. E. van Gijssel, S. Godin-Beekmann, A. Haeferle, T. Trickl, G. Payen, F. Gabarrot, *Atmos. Meas. Tech.* **9** (2016), 4029-4049; 18-pp. supplement
69. Proposed standardized definitions for vertical resolution and uncertainty in the NDACC lidar ozone and temperature algorithms. Part 2: Ozone DIAL uncertainty budget, T. Leblanc, R. J. Sica, J. A. E. van Gijssel, S. Godin-Beekmann, A. Haeferle, T. Trickl, G. Payen, and G. Liberti, *Atmos. Meas. Tech.* **9** (2016), 4051-4078
70. A decadal time series of water vapor and D/H isotope ratios above Mt. Zugspitze: transport patterns to Central Europe. P. Hausmann, R. Sussmann, T. Trickl, M. Schneider, *Atmos. Chem. Phys.* **17** (2017), 7635-7651
71. Tropospheric Ozone Assessment Report: Database and Metrics Data of Global Surface Ozone Observations, M. G. Schultz, S. Schröder, O. Lyapina, O. Cooper, I. Galbally, I. Petropavlovskikh, E. von Schneidmesser, H. Tanimoto, Y. Elshorbany, M. Naja, R. J. Seguel, U. Dauert, P. Eckhardt, S. Feigenspan, M. Fiebig, A.-G. Hjellbrekke, Y.-D. Hong, P. C. Kjeld, H. Koide, G. Lear, D. Tarasick, M. Ueno, M. Wallasch, D. Baumgardner, M.-T. Chuang, R. Gillett, M. Lee, S. Molloy, R. Moolla, T. Wang, K. Sharps, J. A. Adame, G. Ancellet, F. Apadula, P. Artaxo, M. E. Barlasina, M. Bogucka, P. Bonasoni, L. Chang, A. Colomb, E. Cuevas-Agulló, M. Cupeiro, A. Degorska, A. Ding, M. Fröhlich, M. Frolova, H. Gadhavi, F. Gheusi, S. Gilge, M. Y. Gonzalez, V. Gros, S. H. Hamad, D. Helmig, D. Henriques, O. Hermansen, R. Holla, J. Hueber, U. Im, D. A. Jaffe, N. Komala, D. Kubistin, K.-S. Lam, T. Laurila, H. Lee, I. Levy, C.

- Mazzoleni, L. R. Mazzoleni, A. McClure-Begley, M. Mohamad, M. Murovec, M. Navarro-Comas, F. Nicodim, D. Parrish, K. A. Read, N. Reid, L. Ries, P. Saxena, J. J. Schwab, Y. Scorgie, I. Senik, P. Simmonds, V. Sinha, A. I. Skorokhod, G. Spain, W. Spangl, R. Spoor, S. R. Springston, K. Steer, M. Steinbacher, E. Suharguniyawan, P. Torre, T. Trickl, L. Weili, R. Weller, X. Xiaobin, L. Xue, M. Zhiqiang, *Elem. Sci. Anth.*, **5** (2017), 58, DOI: <https://doi.org/101525/elementa.244>, 25 pp.
72. Stratospheric aerosol data record for the climate change Initiative: development, validation and application to chemistry-climate modelling, C. Bingen, C. E. Robert, K. Stebel, C. Brühl, J. Schallock, F. Vanhellemont, N. Mateshvili, M. Höpfner, T. Trickl, J. E. Barnes, J. Jumelet, J.-P. Vernier, T. Popp, G. De Leeuw, S. Pinnock, *Remote Sensing of Environment* **203** (2017) 296–321
72. Tropospheric Ozone Assessment Report: Database and Metrics Data of Global Surface Ozone Observations, M. G. Schultz, S. Schröder, O. Lyapina, O. Cooper, I. Galbally, I. Petropavlovskikh, E. von Schneidmesser, H. Tanimoto, Y. Elshorbany, M. Naja, R. J. Seguel, U. Dauert, P. Eckhardt, S. Feigenspan, M. Fiebig, A.-G. Hjellbrekke, Y.-D. Hong, P. C. Kjeld, H. Koide, G. Lear, D. Tarasick, M. Ueno, M. Wallasch, D. Baumgardner, M.-T. Chuang, R. Gillett, M. Lee, S. Molloy, R. Moolla, T. Wang, K. Sharps, J. A. Adame, G. Ancellet, F. Apadula, P. Artaxo, M. E. Barlasina, M. Bogucka, P. Bonasoni, L. Chang, A. Colomb, E. Cuevas-Agulló, M. Cupeiro, A. Degorska, A. Ding, M. Fröhlich, M. Frolova, H. Gadhavi, F. Gheusi, S. Gilge, M. Y. Gonzalez, V. Gros, S. H. Hamad, D. Helmig, D. Henriques, O. Hermansen, R. Holla, J. Hueber, U. Im, D. A. Jaffe, N. Komala, D. Kubistin, K.-S. Lam, T. Laurila, H. Lee, I. Levy, C. Mazzoleni, L. R. Mazzoleni, A. McClure-Begley, M. Mohamad, M. Murovec, M. Navarro-Comas, F. Nicodim, D. Parrish, K. A. Read, N. Reid, L. Ries, P. Saxena, J. J. Schwab, Y. Scorgie, I. Senik, P. Simmonds, V. Sinha, A. I. Skorokhod, G. Spain, W. Spangl, R. Spoor, S. R. Springston, K. Steer, M. Steinbacher, E. Suharguniyawan, P. Torre, T. Trickl, L. Weili, R. Weller, X. Xiaobin, L. Xue, M. Zhiqiang, *Elem. Sci. Anth.* **5** (2017), 58, DOI: <https://doi.org/101525/elementa.244>, 25 pp.
73. Water-vapour measurements up to the lower stratosphere — the high power Raman lidar at the Schneefernerhaus, L. Klanner, T. Trickl, H. Vogelmann, 28th International Laser Radar Conference, Bucharest (Romania), June 25 to 30, 2017, Poster 011-213, D. Nicolae, A. Makoto, A. Vassilis, D. Balis, A. Behrendt, A. Comeron, F. Gibert, E. Landulfo, M. P. McCormick, C. Senff, I. Veselovskii and U. Wandinger (Eds.), *EPJ Web of Conferences* **176** (2018), 01026, 4 pp., DOI: <https://doi.org/10.151/epjconf/201817601026>
74. New Laser Design for NIR Lidar Applications, H. Vogelmann, T. Trickl, M. Perfahl, S. Biggel, 28th International Laser Radar Conference, Bucharest (Romania), June 25 to 30, 2017, Session “Recent advances in lidar technology”, Poster 011-217, D. Nicolae, A. Makoto, A. Vassilis, D. Balis, A. Behrendt, A. Comeron, F. Gibert, E. Landulfo, M. P. McCormick, C. Senff, I. Veselovskii and U. Wandinger (Eds.), *EPJ Web of Conferences* **176** (2018), 01027, 4 pp., DOI: <https://doi.org/10.1051/epjconf/201817601027>
75. Moving Baseline Finder, statistical data selection to identify atmospheric CO₂ baseline levels: application to European elevated mountain stations, Y. Yuan, L. Ries, H. Petermeier, M. Steinbacher, A. J. Gómez-Peláez, M. C. Leuenberger, M. Schumacher, C. Couret, T. Trickl, F. Meinhardt, M. Wallasch, A. Menzel, *Atmos. Meas. Tech.* **11** (2018), 1501–1514
76. Tropospheric Ozone Assessment Report: Present-day distribution and trends of tropospheric ozone relevant to climate and global atmospheric chemistry model evaluation, A. Gaudel, O. R. Cooper, G. Ancellet, B. Barret, A. Boynard, J. P. Burrows, C. Clerbaux, P.-F. Coheur, J.

- Cuesta, E. Cuevas, S. Doniki, G. Dufour, F. Ebojie, G. Foret, O. Garcia, M. J. Granados-Muñoz, J. Hannigan, F. Hase, B. Hassler, G. Huang, D. Hurtmans, D. Jaffe, N. Jones, P. Kalabokas, B. Kerridge, S. Kulawik, B. Latter, T. Leblanc, E. Le Flochmoën, W. Lin, J. Liu, X. Liu, E. Mahieu, A. McClure-Begley, J. Neu, M. Osman, M. Palm, H. Petetin, I. Petropavlovskikh, R. Querel, N. Rapp, A. Rozanov, M. G. Schultz, J. Schwab, R. Siddans, D. Smale, M. Steinbacher, H. Tanimoto, D. Tarasick, V. Thouret, A. M. Thompson, T. Trickl, E. Weatherhead, C. Wespes, H. Worden, C. Vigouroux, X. Xu, G. Zeng, J. Ziemke, *Elem. Sci. Anth.* **6** (2018), 39, DOI: <https://doi.org/10.1525/elementa.291>, 58 pp., 21-pp. supplement
77. On the diurnal, weekly, seasonal cycles and annual trends in atmospheric CO₂ at Mount Zugspitze, Germany during 1981–2016, Y. Yuan, L. Ries, H. Petermeier, T. Trickl, M. Leuchner, C. Couret, R. Sohmer, F. Meinhardt, A. Menzel, *Atmos. Chem. Phys.* **19** (2019), 999–1012; Special Issue: The 10th International Carbon Dioxide Conference (ICDC10) and the 19th WMO/IAEA Meeting on Carbon Dioxide, other Greenhouse Gases and Related Measurement Techniques (GGMT-2017) (AMT/ACP/BG/CP/ESD inter-journal SI)
78. Tropospheric Ozone Assessment Report: Tropospheric ozone from 1877 to 2016, observed levels, trends and uncertainties, D. Tarasick, I. E. Galbally, O. R. Cooper, M. G. Schultz, G. Ancellet, T. Leblanc, T. J. Wallington, J. Ziemke, X. Liu, M. Steinbacher, J. Staehelin, C. Vigouroux, J. Hannigan, O. García, G. Foret, P. Zanis, E. Weatherhead, I. Petropavlovskikh, H. Worden, M. Osman, J. Liu, K.-L. Chang, A. Gaudel, M. Lin, M. Granados-Muñoz, A. M. Thompson, S. J. Oltmans, J. Cuesta, G. Dufour, V. Thouret, B. Hassler, T. Trickl, J. L. Neu, *Elem. Sci. Anth.* **7** (2019), Article 39, DOI: <https://doi.org/10.1525/elementa.376>, 72 pp.; 56 pp. supplemental material
79. The unprecedented 2017–2018 stratospheric smoke event: Decay phase and aerosol properties observed with the EARLINET, H. Baars, A. Ansmann, K. Ohneiser, M. Haarig, R. Engelmann, D. Althausen, I. Hanssen, M. Gausa, A. Pietruczuk., A. Szkop, I. Stachlewska., D. Wang, J. Reichardt, A. Skupin, I. Mattis, T. Trickl, H. Vogelmann, F. Navas-Guzmán, A. Haefele, K. Acheson, A. A. Ruth, B. Tatarov, D. Müller, Q. Hu, T. Podvin, P. Goloub., I. Vesselovski, C. Pietras, M. Haefelin, P. Fréville, M. Sicard, A. Comerón, A. J. Fernández García, F. Molero Menéndez, C. Córdoba-Jabonero, J. L. Guerrero-Rascado, L. Alados-Arboledas, D. Bortoli, M. J. Costa, D. Dionisi, G. Liberti, X. Wang, A. Sannino, N. Papagiannopoulos, A. Boselli, L. Mona, G. D'Amico, S. Romano, M. R. Perrone, L. Belegante, D. Nicolae, I. Grigorov, A. Gialitaki, V. Amiridis, O. Soupiona, A. Papayannis, R.-E. Mamouri, A. Nisantzi, B. Heese, J. Hofer, Y. Y. Schechner, U. Wandinger, G. Pappalardo, *Atmos. Chem. Phys.* **19** (2019), 15183-15198
80. Very high stratospheric influence observed in the free troposphere over the Northern Alps – just a local phenomenon? T. Trickl, H. Vogelmann, L. Ries, M. Sprenger, *Atmos. Chem. Phys.* **20** (2020), 243-266
81. Zonal Similarity of Long-term Changes and Seasonal Cycles of Baseline Ozone at Northern Mid-latitudes, D. D. Parrish, R. G. Derwent, W. Steinbrecht, R. Stübi, R. Van Malderen, M. Steinbacher, T. Trickl, L. Ries, X. Xu, *J. Geophys. Res.* **125** (2020), e2019JD031908. <https://doi.org/10.1029/2019JD031908>, 19 pp.
82. Three decades of tropospheric ozone-lidar development at Garmisch-Partenkirchen, Germany, T. Trickl, H. Giehl, F. Neidl, M. Perfahl, H. Vogelmann, *Atmos. Meas. Tech.* **13** (2020), 6357-6390
83. Tropospheric Ozone Assessment Report: Critical Review of changes in the Tropospheric Ozone Burden and Budget from 1850-2100, A. T. Archibald, J. L. Neu, Y. Elshorbany, O. R. Cooper, P. J. Young, H. Akiyoshi, R. A. Cox, M. Coyle, R. Derwent, M. Deushi, A. Finco, G.

J. Frost, I. E. Galbally, G. Gerosa, C. Granier, P. T. Griffiths, R. Hossaini, L. Hu, P. Jöckel, B. Josse, M. Y. Lin, M. Mertens, O. Morgenstern, M. Naja, V. Naik, S. Oltmans, D. A. Plummer, L. E. Revell, A. Saiz-Lopez, P. Saxena, Y. M. Shin, I. Shahid, D. Shallcross, S. Tilmes, T. Trickl, T. J. Wallington, T. Wang, H. M. Worden, G. Zeng, *Elem. Sci. Anth.* **8** (2020), DOI: <https://doi.org/10.1525/elementa.2020.034>, 53 pp.

84. A powerful lidar system capable of one-hour measurements of water vapour in the troposphere and the lower stratosphere as well as the temperature in the upper stratosphere and mesosphere, L. Klanner, K. Höveler, D. Khordakova, M. Perfahl, C. Rolf, T. Trickl, H. Vogelmann, *Atmos. Meas. Tech.* **14** (2021), 531-555
85. A powerful transversely pumped Ti:sapphire laser for near infrared lidar applications, H. Vogelmann, J. Speidel, M. Perfahl, T. Trickl, *Appl. Opt.* **61** (2022), 8553-8562
86. The Far-Infrared Radiation Mobile Observation System for spectral characterisation of the atmospheric emission, C. Belotti, F. Barbara, M. Barucci, G. Bianchini, F. D'Amato, S. Del Bianco, G. Di Natale, M. Gai, A. Montori, F. Pratesi., C. Rolf, R. Sussmann, T. Trickl, S. Viciani, H. Vogelmann, L. Palchetti, *Atmos. Meas. Techn.* **16** (2023), 2511–2529, <https://doi.org/10.5194/amt-16-2511-2023>
87. Zugspitze ozone 1978 – 2020: The role of stratosphere-troposphere transport, T. Trickl, C. Couret, L. Ries, H. Vogelmann, *Atmos. Chem. Phys.* **23** (2023), 8403–8427
88. Local comparisons of tropospheric ozone: Vertical sounding at two neighbouring stations in Southern Bavaria, T. Trickl, M. Adelwart, D. Khordakova, L. Ries, C. Rolf, W. Steinbrecht, H. Vogelmann, *Atmos. Meas. Tech.* **16** (2023), 5145–5165.
89. Powerful Raman-LiDAR for Water Vapor in the Free Troposphere and Lower Stratosphere as well as Temperature in the Stratosphere and Mesosphere; H. Vogelmann, T. Trickl, L. Klanner, K. Höveler, M. Perfahl, 30th International Laser Radar Conference, Big Sky (Montana, U.S.A.), June 26 to July 1, 2022, J. T. Sullivan, T. Leblanc, S. Tucker, B. Demoz, E. Eloranta, C. Hostetler, S. Ishii, L. Mona, F. Moshary, A. Papayannis, K. Rupavatharam Editors, Contribution 113, pp. 411-417, Springer Atmospheric Sciences(Cham, Switzerland, 2023), ISSN 2194-5217 ISSN 2194-5225 (electronic), <https://doi.org/10.1007/978-3-031-37818-8>
90. Stratospheric Aerosol – 45 Years of Lidar Measurements at Garmisch-Partenkirchen, T. Trickl, H. Vogelmann, H. Giehl, H. Jäger, M. Perfahl, 30th International Laser Radar Conference, Big Sky (Montana, U.S.A.), June 26 to July 1, 2022, J. T. Sullivan, T. Leblanc, S. Tucker, B. Demoz, E. Eloranta, C. Hostetler, S. Ishii, L. Mona, F. Moshary, A. Papayannis, K. Rupavtharam Editors, Contribution 54, pp. 885-891, Springer Atmospheric Sciences(Cham, Switzerland, 2023), ISSN 2194-5217 ISSN 2194-5225 (electronic), <https://doi.org/10.1007/978-3-031-37818-8>
91. Measurement report: Violent biomass burning and volcanic eruptions: a new period of elevated stratospheric aerosol over Central Europe (2017 to 2023) in a long series of observations: The years 2012 to 2023, T. Trickl, H. Vogelmann, M. D. Fromm, H. Jäger, M. Perfahl, W. Steinbrecht, *Atmos. Chem. Phys.*, in press (Dec. 2023)

Conference Contributions with Simple Review:

1. Guidelines for ground-based remote sensing of gaseous pollution, wind vector, and visibility with lidar, C. Weitkamp, L. Woppowa, C. Werner, H. Danzeisen, D. Engelbart, K. Fritzsche, V. Klein, C. Münkel, T. Trickl, pp. 15 to 18 in: Lidar Remote Sensing in Atmospheric and Earth Sciences, Reviewed and Revised Papers presented at the 21th International Laser Radar

- Conference, Québec, Canada, July 8 to 12, 2002, L. R. Bissonette, G. Roy, G. Vallée, Eds., Defence R&D Canada-Valcartier (Val-Bélair, QC G3J 1X5, Canada, 2002)
2. The Zugspitze Lidar: On the Way to Ground-Based Water-Vapour Measurements throughout the Free Troposphere, T. Trickl, H. Vogelmann, pp. 81 to 84 in: Lidar Remote Sensing in Atmospheric and Earth Sciences, Reviewed and Revised Papers presented at the 21th International Laser Radar Conference, Québec, Canada, July 8 to 12, 2002, L. R. Bissonette, G. Roy, G. Vallée, Eds., Defence R&D Canada-Valcartier (Val-Bélair, QC G3J 1X5, Canada, 2002)
 3. EARLINET: Establishing the European Aerosol Lidar Network, J. Bösenberg, M. Alpers, A. Ansmann, J. M. Baldasano, D. Balis, C. Böckmann, B. Calpini, A. Chaikovsky, A. Hågård, V. Mitev, A. Papayannis, J. Pelon, D. Resendes, N. Spinelli, T. Trickl, G. Vaughan, G. Visconti, M. Wiegner, pp. 293 to 296 in: Lidar Remote Sensing in Atmospheric and Earth Sciences, Reviewed and Revised Papers presented at the 21th International Laser Radar Conference, Québec, Canada, July 8 to 12, 2002, L. R. Bissonette, G. Roy, G. Vallée, Eds., Defence R&D Canada-Valcartier (Val-Bélair, QC G3J 1X5, Canada, 2002)
 4. Two years of continuous observations of Saharan dust events over the European continent using a coordinated LIDAR network in the frame of the EARLINET project, A. Papayannis, D. Balis, A. Chaikovsky, A. Comeron, R. Eixmann, A. Hagard, M. Iarlori, L. Komguyen, I. Mattis, V. Mitev, M. Pandolfi, J. Rodrigues, L. Sauvage, P. Sobolewski, N. Spinelli, F. De Tomasi, T. Trickl, G. Tsaknakis, M. Wiegner, pp. 309 to 312 in: Lidar Remote Sensing in Atmospheric and Earth Sciences, Reviewed and Revised Papers presented at the 21th International Laser Radar Conference, Québec, Canada, July 8 to 12, 2002, L. R. Bissonette, G. Roy, G. Vallée, Eds., Defence R&D Canada-Valcartier (Val-Bélair, QC G3J 1X5, Canada, 2002)
 5. Lidar Characterization of Volcanic Dust Performed by the European Aerosol Research Lidar Network (EARLINET project) During Etna's Eruption, X. Wang, A. Amodeo, A. Chaikovsky, W. Kumpf, A. Papayannis, M. R. Perrone, V. Rizi, L. Sauvage, N. Spinelli, T. Trickl, pp. 313 to 315 in: Lidar Remote Sensing in Atmospheric and Earth Sciences, Reviewed and Revised Papers presented at the 21th International Laser Radar Conference, Québec, Canada, July 8 to 12, 2002, L. R. Bissonette, G. Roy, G. Vallée, Eds., Defence R&D Canada-Valcartier (Val-Bélair, QC G3J 1X5, Canada, 2002)
 6. A Powerful Widely Tunable Single-mode Laser System for Lidar Sounding of Water Vapour throughout the Free Troposphere, T. Trickl, H. Vogelmann, pp. 175 to 178 in: Reviewed and Revised Papers Presented at the 22nd International Laser Radar Conference, Matera, Italy, July 12 to 16, 2004, G. Pappalardo, A. Amodeo, B. Warmbein, Eds., ESA Publications Division (Noordwijk, The Netherlands, 2004), ISBN 92-9092-872-7, ISSN 0379-6566
 7. Long-range Transport and its Impact on the Vertical Distribution of Trace Constituents in the Central European Free Troposphere, H. Jäger, S. Kreipl, P. James, A. Stohl, T. Trickl, pp. 679 to 682 in: Reviewed and Revised Papers Presented at the 22nd International Laser Radar Conference, Matera, Italy, July 12 to 16, 2004, G. Pappalardo, A. Amodeo, B. Warmbein, Eds., ESA Publications Division (Noordwijk, The Netherlands, 2004), ISBN 92-9092-872-7, ISSN 0379-6566
 8. Saharan Dust Outbreaks towards Europe: 3 Years of Systematic Observations by the European Lidar Network in the Frame of the EARLINET Project (2000-2003), A. Papayannis, M. Alpers, D. Balis, J. Bösenberg, A. Chaikovsky, F. de Tomasi, A. Haagaard, V. Matthias, I. Mattis, V. Mitev, S. Nicovic, G. Pappalardo, J. Pelon, C. Perez, G. Pisani, S. Puchalski, D. Stoyanov, V. Rizi, L. Sauvage, V. Simeonov, T. Trickl, G. Vaughan, M. Wiegner, A. D. Castahno, pp. 845 to 848 in: Reviewed and Revised Papers Presented at the 22nd International

Laser Radar Conference, Matera, Italy, July 12 to 16, 2004, G. Pappalardo, A. Amodeo, B. Warmbein, Eds., ESA Publications Division (Noordwijk, The Netherlands, 2004), ISBN 92-9092-872-7, ISSN 0379-6566

9. European Aerosol Research Lidar Network – Advanced Sustainable Observation System (EARLINET-ASOS), G. Pappalardo, J. Bösenberg, A. Amodeo, A. Ansmann, A. Apituley, D. Balis, C. Böckmann, A. Chaikovsky, A. Comeron, V. Freudenthaler, G. Hansen, V. Mitev, A. Papayannis, M. R. Perrone, A. Pietruczuk, M. Pujadas, F. Ravetta, V. Rizi, V. Simeonov, N. Spinelli, D. Stoyanov, T. Trickl, M. Wiegner, pp. 667 to 670 in: Reviewed and Revised Papers Presented at the 23rd International Laser Radar Conference, Nara (Japan), July 24 to 28, 2006, C. Nagasawa, N. Sugimoto, Eds., Tokyo Metropolitan University (Tokyo, Japan, 2006), ISBN 4-9902916-0-3
10. Wide-range Vertical Sounding of Free-tropospheric Water Vapour: The First Two Years of Operation of the Zugspitze Differential-absorption Lidar, T. Trickl, H. Vogelmann, pp. 687 to 690 in: Reviewed and Revised Papers Presented at the 23rd International Laser Radar Conference, Nara (Japan), July 24 to 28, 2006, C. Nagasawa, N. Sugimoto, Eds., Tokyo Metropolitan University (Tokyo, Japan, 2006), ISBN 4-9902916-0-3
11. Long-Range Transport of Free-Tropospheric Aerosol: A Nine-year Climatology, H. Jäger, P. James, A. Stohl, T. Trickl, pp. 795 to 796 in: Reviewed and Revised Papers Presented at the 23rd International Laser Radar Conference, Nara (Japan), July 24 to 28, 2006, C. Nagasawa, N. Sugimoto, Eds., Tokyo Metropolitan University (Tokyo, Japan, 2006), ISBN 4-9902916-0-3
12. Twelve Years of Lidar Studies of Stratosphere-Troposphere Transport, T. Trickl, H.-E. Scheel, M. Sprenger, A. Stohl, H. Vogelmann, pp. 647-650 in: Reviewed and Revised Papers Presented at the 24th International Laser Radar Conference, Boulder (Colorado, U.S.A.), June 23-27, 2008, Vol. II, M. Hardesty, S. Mayor, Eds., ISBN 978-0-615-21489-4
13. EARLINET for Long-Term Observations of Aerosol over Europe, G. Pappalardo, J. Bösenberg, A. Amodeo, A. Ansmann, A. Apituley, L. Alados Arboledas, D. Balis, C. Böckmann, A. Chaikovsky, A. Comeron, G. D'Amico, V. Freudenthaler, I. Grigorov, G. Hansen, H. Linné, I. Mattis, L. Mona, D. Müller, V. Mitev, D. Nicolae, A. Papayannis, M. R. Perrone, A. Pietruczuk, M. Pujadas, J.-P. Putaud, F. Ravetta, V. Rizzi, V. Sinmeonov, N. Spinelli, T. Trickl, U. Wandinger, M. Wiegner, pp. 711-714 in: Reviewed and Revised Papers Presented at the 24th International Laser Radar Conference, Boulder (Colorado, U.S.A.), June 23-27, 2008, Vol. II, M. Hardesty, S. Mayor, Eds., ISBN 978-0-615-21489-4
14. One Year of Routine Operation with the Water Vapor DIAL on Mt. Zugspitze, H. Vogelmann, T. Trickl, 24th ILRC pp. 1064-1067 in: Reviewed and Revised Papers Presented at the 24th International Laser Radar Conference, Boulder (Colorado, U.S.A.), June 23-27, 2008, Vol. II, M. Hardesty, S. Mayor, Eds., ISBN 978-0-615-21489-4
15. Standardization of the Definitions of Vertical Resolution and Uncertainty in the NDACC-Archived Ozone and Temperature Measurements, T. Leblanc, S. Godin-Beekmann, G. Payen, F. Gabarrot, A. van Gijssel, J. Bando, R. Sica, T. Trickl, pp. 327-330 in: Reviewed and Revised Papers Presented at the 26th International Laser Radar Conference (ILRC 2012), Porto Heli (Greece), June 25 to 29, 2012, A. Papayannis, D. Balis, V. Amiridis, Eds., published in Greece on behalf of the International Co-ordination Group for Laser Atmospheric Studies (ICLAS), 2012
16. Two Decades of Tropospheric Studies with Differential-Absorption Lidar Systems at Garmisch-Partenkirchen, T. Trickl, Invited Paper, pp. 823-826 in: Reviewed and Revised Papers Presented at the 26th International Laser Radar Conference (ILRC 2012), Porto Heli (Greece), June 25 to 29, 2012, A. Papayannis, D. Balis, V. Amiridis, Eds., published in Greece

on behalf of the International Co-ordination Group for Laser Atmospheric Studies (ICLAS), 2012

17. On the Way to Combined DIAL and Raman-Lidar Sounding of Water Vapour on Mt. Zugspitze – a Progress Report, L. Klanner, T. Trickl, H. Vogelmann, pp. 853-826 in: Reviewed and Revised Papers Presented at the 26th International Laser Radar Conference (ILRC 2012), Porto Heli (Greece), June 25 to 29, 2012, A. Papayannis, D. Balis, V. Amiridis, Eds., published in Greece on behalf of the International Co-ordination Group for Laser Atmospheric Studies (ICLAS), 2012
18. Simultaneous Measurements of Free-Tropospheric Water Vapor and Ozone, H. Vogelmann, T. Trickl, pp. 999-1002 in: Reviewed and Revised Papers Presented at the 26th International Laser Radar Conference (ILRC 2012), Porto Heli (Greece), June 25 to 29, 2012, A. Papayannis, D. Balis, V. Amiridis, Eds., published in Greece on behalf of the International Co-ordination Group for Laser Atmospheric Studies (ICLAS), 2012

Further Relevant Publications without Review

1. IF($A \rightarrow X$, $B \rightarrow X$) Chemiluminescence of Fluorine-iodide Systems in a Crossed Molecular Beam Experiment, M. Trautmann, T. Trickl, J. Wanner, pp. 525-529 in: "Selectivity in Chemical Reactions", NATO Advanced Science Institute Series, Series C (Mathematical and Physical Sciences), Vol. 245, Proceedings of the NATO Advanced Workshop in Bowes-on-Windermere (Great Britain), Sep. 7 to 11, 1987, J. C. Whitehead, Ed., Kluwer Academic Publishers (Dordrecht, The Netherlands, 1988); <http://www.trickl.de/NATO1988>
2. XUV Source for Ultra-high Resolution Spectroscopy, E. Cromwell, A. H. Kung, T. Trickl, Y. T. Lee, "Pulsed Single-frequency Lasers: Technology and Applications", SPIE Symposium, Los Angeles (California, U.S.A.), January 12 to 13, 1988, W. Bischel, L. Rahn, Eds., Proc. SPIE **912** (1988), 145-149, SPIE – The International Society for Optical Engineering (Bellingham, Washington, U.S.A.)
3. Ultra-high Resolution VUV-XUV Laser: Application to the Hyperfine Structure of Krypton, A. H. Kung, T. Trickl, E. Cromwell, M. J. J. Vrakking, Y. T. Lee, pp. 411-413 in: Proceedings of the O.S.A. Topical Meeting on "Short Wavelength Coherent Radiation: Generation and Application" (Vol. 2), North Falmouth (Cape Cod, Massachusetts, U.S.A.), Sept. 26 to 29, 1988, R. W. Falcone, J. Kirz, Eds., The Optical Society of America (Washington, DC, U.S.A., 1988)
4. State-selective Ionization by XUV + Visible 1 + 1 Photon Excitation, T. Trickl, E. Cromwell, A. H. Kung, Y. T. Lee pp. 165-170 in: "Symposium on Atomic and Surface Physics (SASP 90)", Obertraun (Austria), March 18 to 24, 1990, T. D. Märk, F. Howorka, Eds. (Universität Innsbruck, Austria, 1990)
17. Lidar Measurements of Atmospheric Extinction During the MAPTIP Trial, G. J. Kunz, T. Trickl, in: "Image Propagation Through the Atmosphere", SPIE Symposium, Denver (Colorado, U.S.A.), August 7 to 9, 1996, J. C. Dainty, L. R. Bissonnette, Eds., Proc. SPIE **2828** (1996), 31-38, SPIE – The International Society for Optical Engineering (Bellingham, Washington, U.S.A.)
39. Warm conveyor belts and their importance for intercontinental air-pollution transport, A. Stohl, T. Trickl, pp. 31-32 in: Atmospheric Ozone, Proceedings of the Quadrennial Ozone Symposium 2000, Sapporo (Japan), July 3 to 8, 2000, NASDA (Tokyo, Japan, 2000)
46. Experimental Evidence for Trans-Atlantic Transport of Air Pollution, A. Stohl, T. Trickl, IGAActivities, Newsletter of the International Global Atmospheric Chemistry Project, Issue No. 24 (2001) 10-12

62. Atmospheric Long-range Transport and its Impact on the Trace-gas Concentrations in the Free Troposphere over Central Europe (ATMOFAST), A. Ebel, S. Eckhardt, H. Feldmann, C. Forster, H. Jäger, H. Jakobs, P. James, H.-J. Kanter, M. Kerschgens, S. Kreipl, M. Memmesheimer, H. E. Scheel, A. Stohl, T. Trickl, H. Vogelmann, *Atmosphärenforschung 2000*, Newsletter 9, 7-10, GSF-Forschungszentrum (München, Germany, December 2004),
64. Atmospheric Long-range Transport and its Impact on the Trace-gas Concentrations in the Free Troposphere over Central Europe (ATMOFAST), T. Trickl (with contributions of H. Jäger, H.-J. Kanter, S. Kreipl, H.-E. Scheel, T. Trickl, S. Eckhardt, C. Forster, P. James, A. Stohl, H. Feldmann, H. J. Jakobs, M. Memmesheimer, M. Kerschgens), pp. 145-149 in: *Results of the German Atmospheric Research Programme – AFO 2000*, R. Winkler (Ed.), Bundesministerium für Bildung und Forschung (Bonn, Germany, 2005)
85. Low Ozone and Carbon Monoxide over Central Europe in Air Masses from the Subtropical North Atlantic, T. Trickl, C. Forster, H. E. Scheel, M., A. Stohl, ATMOFAST special report, 2011, 34 pp., <http://www.trickl.de/SUBTROPATL11.PDF>
91. Simultaneous lidar measurements of ozone, water vapour, and particles: long-term investigation of atmospheric transport up to the hemispheric scale, pp. 333 to 352 in: *Science at the Environmental Research Station Schneefernerhaus/Zugspitze*, M. Bittner, Ed., Bayerisches Staatsministerium für Umwelt und Verbraucherschutz (Munich, Germany, 2022), 372 pp.
- (93 conference proceedings or chapters without review)

Selected Final Reports

39. Hemispheric Transport of Air Pollution 2010, Part A: Ozone and Particulate Matter, prepared by the Task Force on Hemispheric Transport of Air Pollution (including T. Trickl), F. Dentener, T. Keating, H. Akimoto, Eds., *Air Pollution Studies No. 17*, United Nations Publications, UNECE Informations Service, Geneva (Switzerland, 2010), Sales. No. E.11.II.E.7, ISSN 1014-4625, ISBN 978-92-1-117043-6, 304 pp., <http://www.htap.org/>
40. Hemispheric Transport of Air Pollution 2010, Part D: Answers to Policy-Relevant Science Questions, prepared by the Task Force on Hemispheric Transport of Air Pollution (including T. Trickl), T. Keating, A. Zuber, Lead Authors, *Air Pollution Studies No. 20*, United Nations Publications, UNECE Informations Service, Geneva (Switzerland, 2010), Sales. No. E.11.II.E.10, ISSN 1014-4625, ISBN 978-92-1-117047-4, 56 pp., <http://www.htap.org/>

(56 final reports)

Co-author of three VDI Lidar Guide Lines:

- VDI 4210, Blatt 1 / Part 1: Fernmeßverfahren: Messungen in der Atmosphäre nach dem LIDAR-Prinzip, Messen gasförmiger Luftverunreinigungen mit dem DAS-LIDAR / Remote Sensing: Atmospheric measurements with LIDAR, Measuring gaseous air pollution with DAS LIDAR, Verein Deutscher Ingenieure, Düsseldorf (Germany, 1999)
- VDI 3786, Blatt 14 / Part 14: Umweltmeteorologie: Bodengebundene Fernmessung des Windvektors, Doppler Wind-LIDAR / Environmental meteorology: Ground-based remote sensing of the wind vector, Doppler wind LIDAR, Verein Deutscher Ingenieure, Düsseldorf (Germany, 2001)
- VDI 3786, Blatt 15 / Part 15: Umweltmeteorologie: Bodengebundene Fernmessung der Sichtweite, Sichtweiten-LIDAR / Environmental meteorology: Ground-based remote sensing of visual range, visual-range LIDAR, Verein Deutscher Ingenieure, Düsseldorf (Germany, 2004)

Patent:

Pulsed parametric oscillator, has two cylindrical lenses used to elliptically deform, and vertically compress pump beam of pump laser, where beam section of pump laser produces ellipse, H. Vogelmann, K. Grützmacher, T. Trickl, A. Steiger, M. Steiger, Patent Assignee and Codes: Forschungszentrum Karlsruhe G.m.b.H. (GESL-C), Patent Numbers: WO2007107441-A1 (September 27, 2007), DE102006043061-A1 (October 4, 2007), Derwent Primary Accession Number: 2007-860108 [38], International Patent Classification: G02F-001/35; G02F-001/39, Derwent Class Codes: P81, V07, V08, Derwent Manual Codes: V07-F02, V08-A01A, V08-A02, <http://www.wipo.int/pctdb/en/wo.jsp?WO=2007107441&IA=EP2007052020&DISPLAY=STATUS>

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