# Adrian F Tuck

List of Publications by Year
in descending order

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|---|---|---|---|
| 129 papers | 7,045 citations | 61687 45 h-index | 71088 80 g-index |
| 137 all docs | 137 docs citations | 137 times ranked | 3534 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Scaling Up: Molecular to Meteorological via Symmetry Breaking and Statistical Multifractality. Meteorology, 2022, 1, 4-28. | 0.6 | 3 |
| 2 | Theoretical Chemistry and the Calculation of the Atmospheric State. Atmosphere, 2021, 12, 727. | 1.0 | 7 |
| 3 | Perspective on aircraft in the stratosphere: 50â€‰years from COMESA through the ozone hole to climate. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 713-727. | 1.0 | 7 |
| 4 | Turbulence: Vertical Shear of the Horizontal Wind, Jet Streams, Symmetry Breaking, Scale Invariance and Gibbs Free Energy. Atmosphere, 2021, 12, 1414. | 1.0 | 5 |
| 5 | Gibbs Free Energy and Reaction Rate Acceleration in and on Microdroplets. Entropy, 2019, 21, 1044. | 1.1 | 22 |
| 6 | Proposed Empirical Entropy and Gibbs Energy Based on Observations of Scale Invariance in Open Nonequilibrium Systems. Journal of Physical Chemistry A, 2017, 121, 6620-6629. | 1.1 | 12 |
| 7 | Quasi-geostrophic turbulence and generalized scale invariance, a theoretical reply. Atmospheric Chemistry and Physics, 2012, 12, 327-336. | 1.9 | 26 |
| 8 | Joint horizontalâ€vertical anisotropic scaling, isobaric and isoheight wind statistics from aircraft data. Geophysical Research Letters, 2012, 39, . | 1.5 | 15 |
| 9 | Oceanâ€“Atmosphere Interactions in the Emergence of Complexity in Simple Chemical Systems. Accounts of Chemical Research, 2012, 45, 2106-2113. | 7.6 | 62 |
| 10 | Vertical scaling of temperature, wind and humidity fluctuations: dropsondes from 13 km to the surface of the Pacific Ocean. International Journal of Remote Sensing, 2011, 32, 5891-5918. | 1.3 | 13 |
| 11 | Correction to: â€˜From molecules to meteorology via turbulent scale invarianceâ€™ by A. F. Tuck. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 275-275. | 1.0 | 3 |
| 12 | From molecules to meteorology via turbulent scale invariance. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 1125-1144. | 1.0 | 30 |
| 13 | Horizontal cascade structure of atmospheric fields determined from aircraft data. Journal of Geophysical Research, 2010, 115, . | 3.3 | 30 |
| 14 | Reply to comment by Igor Esau on â€œDo stable atmospheric layers exist?â€• Geophysical Research Letters, 2009, 36, . | 1.5 | 0 |
| 15 | Vertical cascade structure of the atmosphere and multifractal dropsonde outages. Journal of Geophysical Research, 2009, 114, . | 3.3 | 20 |
| 16 | Reinterpreting aircraft measurements in anisotropic scaling turbulence. Atmospheric Chemistry and Physics, 2009, 9, 5007-5025. | 1.9 | 49 |
| 17 | On geoengineering with sulphate aerosols in the tropical upper troposphere and lower stratosphere. Climatic Change, 2008, 90, 315-331. | 1.7 | 17 |
| 18 | Do stable atmospheric layers exist?. Geophysical Research Letters, 2008, 35, . | 1.5 | 29 |

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|---|---|---|---|
| 19 | Atmospheric Turbulence. , 2008, , . | | 28 |
| 20 | Chlorine activation near the midlatitude tropopause. Journal of Geophysical Research, 2007, 112, . | 3.3 | 22 |
| 21 | Is isotropic turbulence relevant in the atmosphere?. Geophysical Research Letters, 2007, 34, . | 1.5 | 55 |
| 22 | High-resolution airborne profiles of CH4, O3, and water vapor near tropical Central America in late January to early February 2004. Journal of Geophysical Research, 2006, 111, . | 3.3 | 13 |
| 23 | Molecular velocity distributions and generalized scale invariance in the turbulent atmosphere. Faraday Discussions, 2005, 130, 181. | 1.6 | 14 |
| 24 | Fatty acids on continental sulfate aerosol particles. Journal of Geophysical Research, 2005, 110, n/a-n/a. | 3.3 | 111 |
| 25 | Direct transport of midlatitude stratospheric ozone into the lower troposphere and marine boundary layer of the tropical Pacific Ocean. Journal of Geophysical Research, 2005, 110, . | 3.3 | 84 |
| 26 | Fractal aircraft trajectories and nonclassical turbulent exponents. Physical Review E, 2004, 70, 036306. | 0.8 | 31 |
| 27 | Convective transport of reactive constituents to the tropical and mid-latitude tropopause region: I. Observations. Atmospheric Environment, 2004, 38, 1259-1274. | 1.9 | 23 |
| 28 | Scale invariance in jet streams: ER-2 data around the lower-stratospheric polar night vortex. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2423-2444. | 1.0 | 20 |
| 29 | Organic Aerosols and the Origin of Life: An Hypothesis. Origins of Life and Evolution of Biospheres, 2004, 34, 57-67. | 0.8 | 69 |
| 30 | Chemistry in Prebiotic Aerosols: A Mechanism for the Origin of Life. , 2004, , 153-165. | | 7 |
| 31 | Impact factors: a tool of the sterile audit culture. Nature, 2003, 424, 14-14. | 13.7 | 4 |
| 32 | Law of mass action in the Arctic lower stratospheric polar vortex Januaryâ€“March 2000: ClO scaling and the calculation of ozone loss rates in a turbulent fractal medium. Journal of Geophysical Research, 2003, 108, . | 3.3 | 17 |
| 33 | Atmospheric Photochemistry via Vibrational Overtone Absorption. Chemical Reviews, 2003, 103, 4717-4730. | 23.0 | 97 |
| 34 | Role of NOyas a diagnostic of small-scale mixing in a denitrified polar vortex. Journal of Geophysical Research, 2002, 107, ACL 21-1. | 3.3 | 8 |
| 35 | New evidence of an organic layer on marine aerosols. Journal of Geophysical Research, 2002, 107, AAC 1-1. | 3.3 | 153 |
| 36 | A fast-response near-infrared tunable diode laser absorption spectrometer for in situ measurements of CH 4 in the upper troposphere and lower stratosphere. Applied Physics B: Lasers and Optics, 2002, 75, 183-194. | 1.1 | 43 |

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|---|---|---|---|
| 37 | The asymmetry of organic aerosol fission and prebiotic chemistry. Origins of Life and Evolution of Biospheres, 2002, 32, 237-245. | 0.8 | 22 |
| 38 | The Role of Atmospheric Aerosols in the Origin Of Life. Surveys in Geophysics, 2002, 23, 379-409. | 2.1 | 80 |
| 39 | Spontaneous fission of atmospheric aerosol particles. Physical Chemistry Chemical Physics, 2001, 3, 5270-5273. | 1.3 | 35 |
| 40 | Atmospheric absorption of near infrared and visible solar radiation by the hydrogen bonded water dimer. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1627-1643. | 1.0 | 109 |
| 41 | Polar stratospheric cloud impacts on Antarctic stratospheric heating rates. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1645-1658. | 1.0 | 4 |
| 42 | Atmospheric aerosols as prebiotic chemical reactors. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 11864-11868. | 3.3 | 228 |
| 43 | Optical and chemical properties of atmospheric organic aerosols. Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 2000, 25, 195-198. | 0.2 | 8 |
| 44 | Enhancement of HOX at high solar zenith angles by overtone-induced dissociation of HNO3 and HNO4. Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 2000, 25, 223-227. | 0.2 | 1 |
| 45 | On the changing abundance of ozone minima at northern midlatitudes. Journal of Geophysical Research, 2000, 105, 12169-12180. | 3.3 | 52 |
| 46 | Observation of stratospheric ozone depletion associated with Delta II rocket emissions. Geophysical Research Letters, 2000, 27, 2209-2212. | 1.5 | 28 |
| 47 | An overview of the Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone (STERAO)-Deep Convection experiment with results for the July 10, 1996 storm. Journal of Geophysical Research, 2000, 105, 10023-10045. | 3.3 | 98 |
| 48 | Study blazing new trails into effects of aviation and rocket exhaust in the atmosphere. Eos, 1999, 80, 437. | 0.1 | 7 |
| 49 | Fractal behavior of ozone, wind and temperature in the lower stratosphere. Geophysical Research Letters, 1999, 26, 1271-1274. | 1.5 | 41 |
| 50 | Lower stratospheric radiative heating rates and sensitivities calculated from Antarctic balloon observations. Journal of Geophysical Research, 1999, 104, 9293-9308. | 3.3 | 8 |
| 51 | Tropospheric clouds and lower stratospheric heating rates: Results from late winter in the southern hemisphere. Journal of Geophysical Research, 1999, 104, 9309-9324. | 3.3 | 7 |
| 52 | Atmospheric processing of organic aerosols. Journal of Geophysical Research, 1999, 104, 11633-11641. | 3.3 | 408 |
| 53 | Persistence in Ozone Scaling under the Hurst Exponent as an Indicator of the Relative Rates of Chemistry and Fluid Mechanical Mixing in the Stratosphere. Journal of Physical Chemistry A, 1999, 103, 10445-10450. | 1.1 | 12 |
| 54 | Chemical ozone loss in the Arctic vortex in the winter 1995â€“96: HALOE measurements in conjunction with other observations. Annales Geophysicae, 1999, 17, 101. | 0.6 | 0 |

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|---|---|---|---|
| 55 | A comparison of Antarctic stratospheric radiative heating rates calculated from high-resolution interferometer sounder and U.K. Meteorological Office data. Journal of Geophysical Research, 1998, 103, 19691-19707. | 3.3 | 5 |
| 56 | HALOE observations of the vertical structure of chemical ozone depletion in the Arctic Vortex during winter and early spring 1996-1997. Geophysical Research Letters, 1997, 24, 2717-2720. | 1.5 | 59 |
| 57 | Hemispheric asymmetries in water vapor and inferences about transport in the lower stratosphere. Journal of Geophysical Research, 1997, 102, 13213-13234. | 3.3 | 208 |
| 58 | Evolution and stoichiometry of heterogeneous processing in the Antarctic stratosphere. Journal of Geophysical Research, 1997, 102, 13235-13253. | 3.3 | 25 |
| 59 | Comment on â€œOn the magnitude of transport out of the Antarctic polar vortexâ€•by Wiel M. F. Wauben et al.. Journal of Geophysical Research, 1997, 102, 28215-28218. | 3.3 | 16 |
| 60 | Atmospheric radical production by excitation of vibrational overtonesviaabsorption of visible light. Geophysical Research Letters, 1997, 24, 2651-2654. | 1.5 | 94 |
| 61 | Correction to â€œOzone measurements in a tropopause fold associated with a cut-off low systemâ€• Geophysical Research Letters, 1997, 24, 109-109. | 1.5 | 3 |
| 62 | Airborne Southern Hemisphere Ozone Experiment/Measurements for Assessing the Effects of Stratospheric Aircraft (ASHOE/MAESA): A road map. Journal of Geophysical Research, 1997, 102, 3901-3904. | 3.3 | 22 |
| 63 | Introduction to special section: ASHOE/MAESA. Journal of Geophysical Research, 1997, 102, 3899-3899. | 3.3 | 3 |
| 64 | Severe chemical ozone loss in the Arctic during the winter of 1995â€“96. Nature, 1997, 389, 709-712. | 13.7 | 155 |
| 65 | The Brewer-Dobson circulation in the light of high altitude in situ aircraft observations. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 1-69. | 1.0 | 76 |
| 66 | Chlorine activation and ozone depletion in the Arctic vortex: Observations by the Halogen Occultation Experiment on the Upper Atmosphere Research Satellite. Journal of Geophysical Research, 1996, 101, 12531-12554. | 3.3 | 68 |
| 67 | Validation of hydrogen chloride measurements made by the Halogen Occultation Experiment from the UARS platform. Journal of Geophysical Research, 1996, 101, 10151-10162. | 3.3 | 66 |
| 68 | Validation of measurements of water vapor from the Halogen Occultation Experiment (HALOE). Journal of Geophysical Research, 1996, 101, 10205-10216. | 3.3 | 162 |
| 69 | Ozone measurements in a tropopause fold associated with a cut-off low system. Geophysical Research Letters, 1996, 23, 2501-2504. | 1.5 | 67 |
| 70 | Observations of absorbing layers in the antarctic stratosphere in October 1991. Quarterly Journal of the Royal Meteorological Society, 1995, 121, 655-667. | 1.0 | 4 |
| 71 | Airborne chemistry and dynamics at the edge of the 1994 Antarctic vortex. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 3063. | 1.7 | 17 |
| 72 | Time and temperature dependences of fractional HCl abundances from airborne data in the Southern Hemisphere during 1994. Faraday Discussions, 1995, 100, 389. | 1.6 | 12 |

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|---|---|---|---|
| 73 | Evolution of southern hemisphere spring air masses observed by HALOE. Geophysical Research Letters, 1994, 21, 213-216. | 1.5 | 31 |
| 74 | On the distribution of cold air near the vortex edge in the lower stratosphere. Journal of Geophysical Research, 1994, 99, 3431. | 3.3 | 15 |
| 75 | Spread of denitrification from 1987 Antarctic and 1988â€“1989 Arctic stratospheric vortices. Journal of Geophysical Research, 1994, 99, 20573. | 3.3 | 16 |
| 76 | Spring Dehydration in the Antarctic Stratospheric Vortex Observed by HALOE. Journals of the Atmospheric Sciences, 1994, 51, 2931-2941. | 0.6 | 21 |
| 77 | Synoptic Interpretation of Measurements from HALOE. Journals of the Atmospheric Sciences, 1994, 51, 2942-2956. | 0.6 | 26 |
| 78 | Haloe Antarctic observations in the spring of 1991. Geophysical Research Letters, 1993, 20, 719-722. | 1.5 | 85 |
| 79 | Stratospheric dryness: Antiphased desiccation over Micronesia and Antarctica. Geophysical Research Letters, 1993, 20, 1227-1230. | 1.5 | 43 |
| 80 | Intercomparison of HALOE and ERâ€2 aircraft H<sub>2</sub>O and CH<sub>4</sub> Observations collected during the Second Airborne Arctic STratospheric Experiment (AASEâ€II). Geophysical Research Letters, 1993, 20, 1243-1246. | 1.5 | 6 |
| 81 | The Halogen Occultation Experiment. Journal of Geophysical Research, 1993, 98, 10777-10797. | 3.3 | 827 |
| 82 | <title>Summary of atmospheric chemistry observations from the Antarctic and Arctic aircraft campaigns</title>. , 1991, 1491, 252. | | 1 |
| 83 | Wintertime asymmetry of upper tropospheric water between the Northern and Southern Hemispheres. Nature, 1991, 353, 244-247. | 13.7 | 47 |
| 84 | Observations of denitrification and dehydration in the winter polar stratospheres. Nature, 1990, 344, 321-324. | 13.7 | 221 |
| 85 | Evaluating ozone depletion potentials. Nature, 1990, 348, 203-203. | 13.7 | 3 |
| 86 | Instrumental Requirements for Global Atmospheric Chemistry. Science, 1990, 250, 75-81. | 6.0 | 30 |
| 87 | Airborne lidar observations in the wintertime Arctic stratosphere: Ozone. Geophysical Research Letters, 1990, 17, 325-328. | 1.5 | 52 |
| 88 | Ice saturation at the tropopause observed from the ERâ€2 aircraft. Geophysical Research Letters, 1990, 17, 353-356. | 1.5 | 30 |
| 89 | Airborne lidar observations in the wintertime Arctic stratosphere: Polar stratospheric clouds. Geophysical Research Letters, 1990, 17, 385-388. | 1.5 | 215 |
| 90 | Redistribution of reactive odd nitrogen in the lower Arctic stratosphere. Geophysical Research Letters, 1990, 17, 453-456. | 1.5 | 55 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | A comparison of ERâ€2 measurements of stratospheric water vapor between the 1987 Antarctic and 1989 Arctic airborne missions. Geophysical Research Letters, 1990, 17, 465-468. | 1.5 | 86 |
| 92 | High-latitude ozone loss outside the Antarctic ozone hole. Nature, 1989, 342, 233-237. | 13.7 | 90 |
| 93 | Preface [to special section on The Airborne Antarctic Ozone Experiment (AAOE)]. Journal of Geophysical Research, 1989, 94, 11179-11179. | 3.3 | 5 |
| 94 | The planning and execution of ERâ€2 and DCâ€8 aircraft flights over Antarctica, August and September 1987. Journal of Geophysical Research, 1989, 94, 11181-11222. | 3.3 | 84 |
| 95 | Dehydration in the lower Antarctic stratosphere during late winter and early spring, 1987. Journal of Geophysical Research, 1989, 94, 11317-11357. | 3.3 | 191 |
| 96 | A chemical definition of the boundary of the Antarctic ozone hole. Journal of Geophysical Research, 1989, 94, 11437-11448. | 3.3 | 56 |
| 97 | Lagrangian photochemical modeling studies of the 1987 Antarctic spring vortex: 1. Comparison with AAOE observations. Journal of Geophysical Research, 1989, 94, 11529-11558. | 3.3 | 75 |
| 98 | Diagnostic studies of the Antartctic vortex during the 1987 Airborne Antarctic Ozone Experiment: Ozone miniholes. Journal of Geophysical Research, 1989, 94, 11641-11668. | 3.3 | 111 |
| 99 | Indicators of transport and vertical motion from correlations between in situ measurements in the Airborne Antarctic Ozone Experiment. Journal of Geophysical Research, 1989, 94, 11669-11685. | 3.3 | 42 |
| 100 | Synoptic and chemical evolution of the Antarctic vortex in late winter and early spring, 1987. Journal of Geophysical Research, 1989, 94, 11687-11737. | 3.3 | 173 |
| 101 | A comparison of the longitudinal distributions of polar stratospheric clouds and temperatures for the 1987 Antarctic spring. Journal of Geophysical Research, 1989, 94, 16511-16525. | 3.3 | 28 |
| 102 | Tropospheric ozone in the vicinity of the ozone hole: 1987 Airborne Antarctic Ozone Experiment. Journal of Geophysical Research, 1989, 94, 16537-16545. | 3.3 | 9 |
| 103 | In situ ozone measurements within the 1987 Antarctic ozone hole from a highâ€altitude ERâ€2 aircraft. Journal of Geophysical Research, 1989, 94, 16547-16555. | 3.3 | 112 |
| 104 | Intercomparison of ozone measurements over Antarctica. Journal of Geophysical Research, 1989, 94, 16557-16569. | 3.3 | 26 |
| 105 | Lagrangian photochemical modeling studies of the 1987 Antarctic spring vortex: 2. Seasonal trends in ozone. Journal of Geophysical Research, 1989, 94, 16717-16735. | 3.3 | 29 |
| 106 | The southern hemisphere lower stratosphere during August and September 1987: Analyses based on the United Kingdom Meteorological Office global model. Journal of Geophysical Research, 1989, 94, 16847-16854. | 3.3 | 16 |
| 107 | Photochemical model comparisons with lims observations in a stratospheric trajectory coordinate system. , 1987, 113, 361. | | 7 |
| 108 | Polar stratospheric clouds inferred from satellite data. Geophysical Research Letters, 1986, 13, 1256-1259. | 1.5 | 16 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | On the atmospheric photochemistry of nitric acid. Journal of Geophysical Research, 1986, 91, 5477-5485. | 3.3 | 107 |
| 110 | Stratospheric chemistry: Depletion of Antarctic ozone. Nature, 1986, 321, 729-730. | 13.7 | 10 |
| 111 | The calculation of stratospheric air parcel trajectories using satellite data. , 1985, 111, 279. | | 13 |
| 112 | Atmospheric measurements of peroxyacetylnitrate (PAN) in rural, south-east England: Seasonal variations winter photochemistry and long-range transport. Atmospheric Environment, 1984, 18, 2691-2702. | 1.1 | 57 |
| 113 | Vertical profiles of tropospheric gases: Chemical consequences of stratospheric intrusions. Atmospheric Environment, 1984, 18, 1759-1766. | 1.1 | 66 |
| 114 | Air sampling flights round the British Isles at low altitudes: SO2 oxidation and removal rates. Atmospheric Environment, 1984, 18, 1777-1790. | 1.1 | 16 |
| 115 | Transport of water vapour in a stratosphere-troposphere general circulation model II: Trajectories. Quarterly Journal of the Royal Meteorological Society, 1984, 110, 357-392. | 1.0 | 9 |
| 116 | Global OH distribution derived from general circulation model fields of ozone and water vapor. Journal of Geophysical Research, 1981, 86, 5303-5320. | 3.3 | 19 |
| 117 | Stratospheric O<SUB>3</SUB>-CO<SUB>2</SUB> coupling in a photochemical-radiative column model. II: With chlorine chemistry. Quarterly Journal of the Royal Meteorological Society, 1980, 106, 141-157. | 1.0 | 2 |
| 118 | Stratospheric O<SUB>3</SUB>-CO<SUB>2</SUB> coupling in a photochemical-radiative column model. I Without chlorine chemistry. Quarterly Journal of the Royal Meteorological Society, 1980, 106, 125-140. | 1.0 | 1 |
| 119 | Simultaneous effects of CO2 and chlorofluoromethanes on stratospheric ozone. Nature, 1979, 280, 127-129. | 13.7 | 28 |
| 120 | A comparison of one-, two- and three-dimensional model representations of stratospheric gases. Philosophical Transactions of the Royal Society A, 1979, 290, 477-494. | 1.3 | 41 |
| 121 | Increased atmospheric carbon dioxide and stratospheric ozone. Nature, 1978, 273, 711-715. | 13.7 | 59 |
| 122 | Changes to the Ozone Layer. Physics Bulletin, 1978, 29, 168-171. | 0.0 | 1 |
| 123 | Molecular beam studies of ethyl nitrite photodissociation. Journal of the Chemical Society, Faraday Transactions 2, 1977, 73, 689. | 1.1 | 156 |
| 124 | Numerical model studies of the effect of injected nitrogen oxides on stratospheric ozone. Proceedings of the Royal Society of London Series A, Mathematical and Physical Sciences, 1977, 355, 267-299. | 1.5 | 8 |
| 125 | Production of nitrogen oxides by lightning discharges. Quarterly Journal of the Royal Meteorological Society, 1976, 102, 749-755. | 1.0 | 100 |
| 126 | Nitrogen Oxides, Nuclear Weapon Testing, Concorde and Stratospheric Ozone. Nature, 1973, 244, 545-551. | 13.7 | 75 |

| # | Article | IF | Citations |
|---|---|---|---|
| 127 | Reaction of deuterium atoms with methyl bromide studied by gas phase e.p.r. spectroscopy. Transactions of the Faraday Society, 1970, 66, 886. | 0.9 | 13 |
| 128 | Heat transfer to a gas from a spherical enclosure: Measurements and mechanism. International Journal of Heat and Mass Transfer, 1967, 10, 251-253. | 2.5 | 14 |
| 129 | Scale Invariant Turbulence and Gibbs Free Energy in the Atmosphere. , 0, , . | | 2 |