Patrick Eriksson

List of Publications by Year
in descending order

117 papers	3,606 citations	186265 28 h-index	197818 49 g-index
181 all docs	181 docs citations	181 times ranked	1984 citing authors

#	Article	IF	Citations
1	An overview of the Odin atmospheric mission. Canadian Journal of Physics, 2002, 80, 309-319.	1.1	403
2	ARTS, the atmospheric radiative transfer simulator, version 2. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1551-1558.	2.3	222
3	ARTS, the atmospheric radiative transfer simulator. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 91, 65-93.	2.3	218
4	Qpack, a general tool for instrument simulation and retrieval work. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 91, 47-64.	2.3	142
5	ARTS, the Atmospheric Radiative Transfer Simulator â€“ version 2.2, the planetary toolbox edition. Geoscientific Model Development, 2018, 11, 1537-1556.	3.6	102
6	A concept for a satellite mission to measure cloud ice water path, ice particle size, and cloud altitude. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 109-128.	2.7	100
7	Evolution of stratospheric ozone and water vapour time series studied with satellite measurements. Atmospheric Chemistry and Physics, 2009, 9, 6055-6075.	4.9	98
8	Assessing observed and modelled spatial distributions of ice water path using satellite data. Atmospheric Chemistry and Physics, 2011, 11, 375-391.	4.9	90
9	A general database of hydrometeor single scattering properties at microwave and sub-millimetre wavelengths. Earth System Science Data, 2018, 10, 1301-1326.	9.9	74
10	Retrieval of stratospheric O3and NO2profiles from Odin Optical Spectrograph and Infrared Imager System (OSIRIS) limb-scattered sunlight measurements. Journal of Geophysical Research, 2004, 109, .	3.3	65
11	Global observations of middle atmospheric water vapour by the Odin satellite: An overview. Planetary and Space Science, 2007, 55, 1093-1102.	1.7	59
12	Performance simulations for a submillimetre-wave satellite instrument to measure cloud ice. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 129-149.	2.7	52
13	Observing ice clouds in the submillimeter spectral range: the CloudIce mission proposal for ESA's Earth Explorer 8. Atmospheric Measurement Techniques, 2012, 5, 1529-1549.	3.1	51
14	First Odin sub-mm retrievals in the tropical upper troposphere: ice cloud properties. Atmospheric Chemistry and Physics, 2007, 7, 471-483.	4.9	47
15	Odin/SMR limb observations of stratospheric trace gases: Validation of N2O. Journal of Geophysical Research, 2005, 110, .	3.3	46
16	A cloud filtering method for microwave upper tropospheric humidity measurements. Atmospheric Chemistry and Physics, 2007, 7, 5531-5542.	4.9	44
17	Microwave radiometer to retrieve temperature profiles from the surface to the stratopause. Atmospheric Measurement Techniques, 2013, 6, 2477-2494.	3.1	40
18	Middle-atmospheric zonal and meridional wind profiles from polar, tropical and midlatitudes with the ground-based microwave Doppler wind radiometer WIRA. Atmospheric Measurement Techniques, 2014, 7, 4491-4505.	3.1	39

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19	Strato-mesospheric measurements of carbon monoxide with the Odin Sub-Millimetre Radiometer: Retrieval and first results. Geophysical Research Letters, 2004, 31, .	4.0	37
20	Validation of groundâ€based microwave radiometers at 22 GHz for stratospheric and mesospheric water vapor. Journal of Geophysical Research, 2009, 114, .	3.3	36
21	Wintertime water vapor in the polar upper mesosphere and lower thermosphere: First satellite observations by Odin submillimeter radiometer. Journal of Geophysical Research, 2009, 114, .	3.3	36
22	On the microwave optical properties of randomly oriented ice hydrometeors. Atmospheric Measurement Techniques, 2015, 8, 1913-1933.	3.1	36
23	Towards an operational Ice Cloud Imager (ICI) retrieval product. Atmospheric Measurement Techniques, 2020, 13, 53-71.	3.1	35
24	Studies for the Odin sub-millimetre radiometer. II. Retrieval methodology. Canadian Journal of Physics, 2002, 80, 341-356.	1.1	34
25	Analysis and comparison of two linear regularization methods for passive atmospheric observations. Journal of Geophysical Research, 2000, 105, 18157-18167.	3.3	33
26	An update on global atmospheric ice estimates from satellite observations and reanalyses. Atmospheric Chemistry and Physics, 2018, 18, 11205-11219.	4.9	33
27	Non-Gaussian Bayesian retrieval of tropical upper tropospheric cloud ice and water vapour from Odin-SMR measurements. Atmospheric Measurement Techniques, 2009, 2, 621-637.	3.1	33
28	Longest continuous ground-based measurements of mesospheric CO. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	32
29	Recent developments in the line-by-line modeling of outgoing longwave radiation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 98, 446-457.	2.3	32
30	First Odin sub-mm retrievals in the tropical upper troposphere: humidity and cloud ice signals. Atmospheric Chemistry and Physics, 2007, 7, 459-469.	4.9	32
31	Polar vortex evolution during the 2002 Antarctic major warming as observed by the Odin satellite. Journal of Geophysical Research, 2005, 110, .	3.3	31
32	Technical Note: Validation of Odin/SMR limb observations of ozone, comparisons with OSIRIS, POAM III, ground-based and balloon-borne instruments. Atmospheric Chemistry and Physics, 2008, 8, 3385-3409.	4.9	31
33	Absorption lookup tables in the radiative transfer model ARTS. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1559-1567.	2.3	31
34	Retrieval of an ice water path over the ocean from ISMAR and MARSS millimeter and submillimeter brightness temperatures. Atmospheric Measurement Techniques, 2018, 11, 611-632.	3.1	31
35	Overview: Estimating and reporting uncertainties in remotely sensed atmospheric composition and temperature. Atmospheric Measurement Techniques, 2020, 13, 4393-4436.	3.1	31
36	Comparison between early Odin-SMR, Aura MLS and CloudSat retrievals of cloud ice mass in the upper tropical troposphere. Atmospheric Chemistry and Physics, 2008, 8, 1937-1948.	4.9	30

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37	A treatment of the Zeeman effect using Stokes formalism and its implementation in the Atmospheric Radiative Transfer Simulator (ARTS). Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 445-453.	2.3	30
38	Microwave hyperspectral measurements for temperature and humidity atmospheric profiling from satellite: The clearâ€sky case. Journal of Geophysical Research D: Atmospheres, 2015, 120, 11,334.	3.3	30
39	Studies for the Odin sub-millimetre radiometer: III. Performance simulations. Canadian Journal of Physics, 2002, 80, 357-373.	1.1	29
40	The 22 GHz radio-aeronomy receiver at Onsala Space Observatory. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 77, 23-42.	2.3	29
41	Pressure broadening coefficients of the water vapor lines at 556.936 and 752.033GHz. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 144-150.	2.3	29
42	Observing the vertical branch of the mesospheric circulation at latitude 60Â°N using ground-based measurements of CO and H2O. Journal of Geophysical Research, 2005, 110, .	3.3	28
43	Diurnal variations of humidity and ice water content in the tropical upper troposphere. Atmospheric Chemistry and Physics, 2010, 10, 11519-11533.	4.9	28
44	A study of ozone depletion in the 2004/2005 Arctic winter based on data from Odin/SMR and Aura/MLS. Journal of Geophysical Research, 2008, 113, .	3.3	27
45	Intercomparison of Odin/SMR ozone measurements with MIPAS and balloon sonde data. Canadian Journal of Physics, 2007, 85, 1111-1123.	1.1	26
46	Efficient radiative transfer simulations for a broadband infrared radiometerâ€"Combining a weighted mean of representative frequencies approach with frequency selection by simulated annealing. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 602-615.	2.3	26
47	Diurnal variation of tropospheric relative humidity in tropical regions. Atmospheric Chemistry and Physics, 2016, 16, 6913-6929.	4.9	24
48	The SPARC water vapour assessment II: comparison of annual, semi-annual and quasi-biennial variations in stratospheric and lower mesospheric water vapour observed from satellites. Atmospheric Measurement Techniques, 2017, 10, 1111-1137.	3.1	24
49	Airborne validation of radiative transfer modelling of ice clouds at millimetre and sub-millimetre wavelengths. Atmospheric Measurement Techniques, 2019, 12, 1599-1617.	3.1	23
50	Towards more realistic hypotheses for the information content analysis of cloudy/precipitating situations â€“ Application to a hyperspectral instrument in the microwave. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 1-14.	2.7	23
51	Studies for the Odin sub-millimetre radiometer: I. Radiative transfer and instrument simulation. Canadian Journal of Physics, 2002, 80, 321-340.	1.1	22
52	The northern hemisphere stratospheric vortex during the 2002-03 winter: Subsidence, chlorine activation and ozone loss observed by the Odin Sub-Millimetre Radiometer. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	22
53	Efficient forward modelling by matrix representation of sensor responses. International Journal of Remote Sensing, 2006, 27, 1793-1808.	2.9	22
54	Observations of the mesospheric semi-annual oscillation (MSAO) in water vapour by Odin/SMR. Atmospheric Chemistry and Physics, 2008, 8, 6527-6540.	4.9	22

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55	Prediction of cloud ice signatures in submillimetre emission spectra by means of ground-based radar and in situ microphysical data. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 151-162.	2.7	21
56	Six years of mesospheric CO estimated from ground-based frequency-switched microwave radiometry at 57Â° N compared with satellite instruments. Atmospheric Measurement Techniques, 2012, 5, 2827-2841.	3.1	21
57	Intercalibration and Validation of Observations From ATMS and SAPHIR Microwave Sounders. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 5915-5925.	6.3	21
58	A neural network approach to estimating a posteriori distributions of Bayesian retrieval problems. Atmospheric Measurement Techniques, 2018, 11, 4627-4643.	3.1	20
59	Microwave and submillimeter wave scattering of oriented ice particles. Atmospheric Measurement Techniques, 2020, 13, 2309-2333.	3.1	20
60	Critical parameters for the retrieval of mesospheric water vapour and temperature from Odin/SMR limb measurements at 557GHz. Advances in Space Research, 2007, 40, 835-845.	2.6	19
61	An empirical model of nitric oxide in the upper mesosphere and lower thermosphere based on 12 years of OdinÂSMR measurements. Atmospheric Chemistry and Physics, 2018, 18, 13393-13410.	4.9	19
62	Summer Snowfall Workshop: Scattering Properties of Realistic Frozen Hydrometeors from Simulations and Observations, as well as Defining a New Standard for Scattering Databases. Bulletin of the American Meteorological Society, 2018, 99, ES55-ES58.	3.3	19
63	Using passive and active observations at microwave and sub-millimetre wavelengths to constrain ice particle models. Atmospheric Measurement Techniques, 2020, 13, 501-520.	3.1	19
64	Comparison of satellite limb-sounding humidity climatologies of the uppermost tropical troposphere. Atmospheric Chemistry and Physics, 2008, 8, 309-320.	4.9	18
65	The impact of the melting layer on the passive microwave cloud scattering signal observed from satellites: A study using TRMM microwave passive and active measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5667-5678.	3.3	18
66	Zeeman effect in atmospheric O₂ measured by ground-based microwave radiometry. Atmospheric Measurement Techniques, 2015, 8, 1863-1874.	3.1	18
67	A Hotelling transformation approach for rapid inversion of atmospheric spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 73, 529-543.	2.3	16
68	MLS and CALIOP Cloud Ice Measurements in the Upper Troposphere: A Constraint from Microwave on Cloud Microphysics. Journal of Applied Meteorology and Climatology, 2014, 53, 157-165.	1.5	16
69	Overview and sample applications of SMILES and Odin-SMR retrievals of upper tropospheric humidity and cloud ice mass. Atmospheric Chemistry and Physics, 2014, 14, 12613-12629.	4.9	16
70	Simulation study for the Stratospheric Inferred Winds (SIW) sub-millimeter limb sounder. Atmospheric Measurement Techniques, 2018, 11, 4545-4566.	3.1	16
71	Pointing and temperature retrieval from millimeter-submillimeter limb soundings. Journal of Geophysical Research, 2002, 107, ACH 10-1.	3.3	14
72	Statistical parameters derived from ozonesonde data of importance for passive remote sensing observations of ozone. International Journal of Remote Sensing, 2002, 23, 4945-4963.	2.9	13

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73	On cloud ice induced absorption and polarisation effects in microwave limb sounding. Atmospheric Measurement Techniques, 2011, 4, 1305-1318.	3.1	13
74	The SPARC water vapour assessment II: profile-to-profile comparisons of stratospheric and lower mesospheric water vapour data sets obtained from satellites. Atmospheric Measurement Techniques, 2019, 12, 2693-2732.	3.1	13
75	Tomographic retrieval of water vapour and temperature around polar mesospheric clouds using Odin-SMR. Atmospheric Measurement Techniques, 2015, 8, 1981-1999.	3.1	12
76	The SPARC water vapour assessment II: comparison of stratospheric and lower mesospheric water vapour time series observed from satellites. Atmospheric Measurement Techniques, 2018, 11, 4435-4463.	3.1	12
77	On the distinctiveness of observed oceanic raindrop distributions. Atmospheric Chemistry and Physics, 2019, 19, 6969-6984.	4.9	12
78	The effect of cirrus clouds on microwave limb radiances. Atmospheric Research, 2004, 72, 383-401.	4.1	11
79	Meso-scale modelling and radiative transfer simulations of a snowfall event over France at microwaves for passive and active modes and evaluation with satellite observations. Atmospheric Measurement Techniques, 2015, 8, 1605-1616.	3.1	11
80	The relationship between polar mesospheric clouds and their background atmosphere as observed by Odin-SMR and Odin-OSIRIS. Atmospheric Chemistry and Physics, 2016, 16, 12587-12600.	4.9	11
81	Measurement of tropospheric/stratospheric transmission at 10-35 GHz for H2O retrieval in low Earth orbiting satellite links. Radio Science, 2003, 38, n/a-n/a.	1.6	10
82	First inversions of observed submillimeter limb sounding radiances by neural networks. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	10
83	Understanding the variability of clear-sky outgoing long-wave radiation based on ship-based temperature and water vapour measurements. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 2675-2691.	2.7	10
84	Updated Zeeman effect splitting coefficients for molecular oxygen in planetary applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 224, 431-438.	2.3	10
85	A neural network technique for inversion of atmospheric observations from microwave limb sounders. Radio Science, 2001, 36, 941-953.	1.6	9
86	Comparisons of MIPAS/ENVISAT ozone profiles with SMR/ODIN and HALOE/UARS observations. Advances in Space Research, 2005, 36, 927-931.	2.6	9
87	Impact of ice aggregate parameters on microwave and sub-millimetre scattering properties. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 224, 233-246.	2.3	9
88	Introducing hydrometeor orientation into all-sky microwave and submillimeter assimilation. Atmospheric Measurement Techniques, 2021, 14, 3427-3447.	3.1	9
89	Three Dimensional Radiative Effects in Passive Millimeter/Sub-Millimeter All-sky Observations. Remote Sensing, 2020, 12, 531.	4.0	9
90	Inversion of Odin limb sounding submillimeter observations by a neural network technique. Radio Science, 2003, 38, n/a-n/a.	1.6	8

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91	The representation of tropical upper tropospheric water in EC Earth V2. Climate Dynamics, 2012, 39, 2713-2731.	3.8	8
92	A compact receiver system for simultaneous measurements of mesospheric CO and O₃. Geoscientific Instrumentation, Methods and Data Systems, 2016, 5, 27-44.	1.6	8
93	Synergistic radar and radiometer retrievals of ice hydrometeors. Atmospheric Measurement Techniques, 2020, 13, 4219-4245.	3.1	8
94	Microwave single-scattering properties of non-spheroidal raindrops. Atmospheric Measurement Techniques, 2020, 13, 6933-6944.	3.1	8
95	A practical demonstration on AMSU retrieval precision for upper tropospheric humidity by a non-linear multi-channel regression method. Atmospheric Chemistry and Physics, 2005, 5, 451-459.	4.9	7
96	Time series inversion of spectra from ground-based radiometers. Atmospheric Measurement Techniques, 2013, 6, 1597-1609.	3.1	7
97	Retrieving Layer-Averaged Tropospheric Humidity From Advanced Technology Microwave Sounder Water Vapor Channels. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 6675-6688.	6.3	7
98	Bulk hydrometeor optical properties for microwave and sub-millimetre radiative transfer in RTTOV-SCATT v13.0. Geoscientific Model Development, 2021, 14, 7497-7526.	3.6	7
99	Altitude resolved iceâ€fraction in the uppermost tropical troposphere. Geophysical Research Letters, 2008, 35, .	4.0	6
100	All-sky information content analysis for novel passive microwave instruments in the range from 23.8 to 874.4â€‰GHz. Atmospheric Measurement Techniques, 2018, 11, 4217-4237.	3.1	6
101	Atmospheric Gas Absorption Knowledge in the Submillimeter: Modeling, Field Measurements, and Uncertainty Quantification. Bulletin of the American Meteorological Society, 2019, 100, ES291-ES295.	3.3	6
102	Synergistic radar and sub-millimeter radiometer retrievals of ice hydrometeors in mid-latitude frontal cloud systems. Atmospheric Measurement Techniques, 2022, 15, 677-699.	3.1	5
103	Microwave Absorption, Emission and Scattering: Trace Gases and Meteorological Parameters. Physics of Earth and Space Environments, 2011, , 153-230.	0.5	4
104	Martian magnetism with orbiting sub-millimeter sensor: simulated retrieval system. Geoscientific Instrumentation, Methods and Data Systems, 2017, 6, 27-37.	1.6	4
105	The first global 883â€‰GHz cloud ice survey: IceCube LevelÂ1 data calibration, processing and analysis. Earth System Science Data, 2021, 13, 5369-5387.	9.9	4
106	The SPARC Water Vapor Assessment II: assessment of satellite measurements of upper tropospheric humidity. Atmospheric Measurement Techniques, 2022, 15, 3377-3400.	3.1	4
107	Diagnosing the average spatio-temporal impact of convective systems â€“ Part 2: A model intercomparison using satellite data. Atmospheric Chemistry and Physics, 2014, 14, 8701-8721.	4.9	3
108	Modeling the Zeeman effect in high-altitude SSMIS channels for numerical weather prediction profiles: comparing a fast model and a line-by-line model. Atmospheric Measurement Techniques, 2016, 9, 841-857.	3.1	3

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109	Recovery and validation of Odin/SMR long-term measurements of mesospheric carbon monoxide. Atmospheric Measurement Techniques, 2020, 13, 5013-5031.	3.1	3
110	On the accuracy of RTTOV-SCATT for radiative transfer at all-sky microwave and submillimeter frequencies. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 283, 108137.	2.3	3
111	Diagnosing the average spatio-temporal impact of convective systems â€“ Part 1: A methodology for evaluating climate models. Atmospheric Chemistry and Physics, 2013, 13, 12043-12058.	4.9	2
112	Intercalibration of microwave temperature sounders using radio occultation measurements. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3758-3773.	3.3	2
113	The SPARC water vapour assessmentÂII: profile-to-profile and climatological comparisons of stratospheric <i>Î´</i>D(H₂O) observations from satellite. Atmospheric Chemistry and Physics, 2019, 19, 2497-2526.	4.9	1
114	An experimental 2D-Var retrieval using AMSR2. Atmospheric Measurement Techniques, 2019, 12, 6341-6359.	3.1	1
115	Improvement of Odin/SMR water vapour and temperature measurements and validation of the obtained data sets. Atmospheric Measurement Techniques, 2021, 14, 5823-5857.	3.1	1
116	Fast Radiative Transfer Approximating Ice Hydrometeor Orientation and Its Implication on IWP Retrievals. Remote Sensing, 2022, 14, 1594.	4.0	1
117	Can machine learning correct microwave humidity radiances for the influence of clouds?. Atmospheric Measurement Techniques, 2021, 14, 2957-2979.	3.1	0