Pekka T Verronen

List of Publications by Year
in descending order

91	3,683	145106 33	169272 56
papers	citations	h-index	g-index

117	117	117	3205
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	HEPPA III Intercomparison Experiment on Electron Precipitation Impacts: 1. Estimated Ionization Rates During a Geomagnetic Active Period in April 2010. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	16
2	Heppa III Intercomparison Experiment on Electron Precipitation Impacts: 2. Modelâ€Measurement Intercomparison of Nitric Oxide (NO) During a Geomagnetic Storm in April 2010. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	10
3	Ground-based Ku-band microwave observations of ozone in the polar middle atmosphere. Atmospheric Measurement Techniques, 2022, 15, 2361-2376.	1.2	0
4	Lower-thermosphereâ€“ionosphere (LTI) quantities: current status of measuring techniques and models. Annales Geophysicae, 2021, 39, 189-237.	0.6	25
5	Penetration of MeV electrons into the mesosphere accompanying pulsating aurorae. Scientific Reports, 2021, 11, 13724.	1.6	37
6	Impacts of UV Irradiance and Medium-Energy Electron Precipitation on the North Atlantic Oscillation during the 11-Year Solar Cycle. Atmosphere, 2021, 12, 1029.	1.0	3
7	Sensitivity of Middle Atmospheric Ozone to Solar Proton Events: A Comparison Between a Climate Model and Satellites. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034549.	1.2	2
8	Simulated seasonal impact on middle atmospheric ozone from high-energy electron precipitation related to pulsating aurorae. Annales Geophysicae, 2021, 39, 883-897.	0.6	8
9	Electron Precipitation From the Outer Radiation Belt During the St. Patrick's Day Storm 2015: Observations, Modeling, and Validation. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027725.	0.8	9
10	Citizen Scientists Discover a New Auroral Form: Dunes Provide Insight Into the Upper Atmosphere. AGU Advances, 2020, 1, e2019AV000133.	2.3	14
11	Is there a direct solar proton impact on lower-stratospheric ozone?. Atmospheric Chemistry and Physics, 2020, 20, 14969-14982.	1.9	6
12	Statistical response of middle atmosphere composition to solar proton events in WACCM-D simulations: the importance of lower ionospheric chemistry. Atmospheric Chemistry and Physics, 2020, 20, 8923-8938.	1.9	6
13	Odd hydrogen response thresholds for indication of solar proton and electron impact in the mesosphere and stratosphere. Annales Geophysicae, 2020, 38, 1299-1312.	0.6	4
14	Magnetic-local-time dependency of radiation belt electron precipitation: impact on ozone in the polar middle atmosphere. Annales Geophysicae, 2020, 38, 833-844.	0.6	5
15	Cosmic Noise Absorption During Solar Proton Events in WACCMâ€D and Riometer Observations. Journal of Geophysical Research: Space Physics, 2019, 124, 1361-1376.	0.8	8
16	Simulation study for ground-based Ku-band microwave observations of ozone and hydroxyl in the polar middle atmosphere. Atmospheric Measurement Techniques, 2019, 12, 1375-1392.	1.2	4
17	Middle atmospheric ozone, nitrogen dioxide and nitrogen trioxide inÂ2002â€“2011: SD-WACCM simulations compared to GOMOS observations. Atmospheric Chemistry and Physics, 2018, 18, 5001-5019.	1.9	2
18	Extreme Space Weather Events: From Cradle to Grave. Space Science Reviews, 2018, 214, 1.	3.7	97

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19	Polar Ozone Response to Energetic Particle Precipitation Over Decadal Time Scales: The Role of Mediumâ€Energy Electrons. Journal of Geophysical Research D: Atmospheres, 2018, 123, 607-622.	1.2	38
20	Space Weather Effects in the Earthâ€™s Radiation Belts. Space Science Reviews, 2018, 214, 1.	3.7	121
21	Mesospheric Nitric Acid Enhancements During Energetic Electron Precipitation Events Simulated by WACCMâ€D. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6984-6998.	1.2	12
22	An Updated Model Providing Longâ€Term Data Sets of Energetic Electron Precipitation, Including Zonal Dependence. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9891-9915.	1.2	37
23	Observations and Modeling of Increased Nitric Oxide in the Antarctic Polar Middle Atmosphere Associated With Geomagnetic Stormâ€Driven Energetic Electron Precipitation. Journal of Geophysical Research: Space Physics, 2018, 123, 6009-6025.	0.8	22
24	Relativistic Electron Microburst Events: Modeling the Atmospheric Impact. Geophysical Research Letters, 2018, 45, 1141-1147.	1.5	23
25	Energetic electron precipitation and auroral morphology at the substorm recovery phase. Journal of Geophysical Research: Space Physics, 2017, 122, 6508-6527.	0.8	20
26	HEPPA-II modelâ€“measurement intercomparison project: EPP indirect effects during the dynamically perturbed NH winter 2008â€“2009. Atmospheric Chemistry and Physics, 2017, 17, 3573-3604.	1.9	55
27	Solar forcing for CMIP6 (v3.2). Geoscientific Model Development, 2017, 10, 2247-2302.	1.3	293
28	Space Weather Effects in the Earthâ€™s Radiation Belts. Space Sciences Series of ISSI, 2017, , 371-430.	0.0	0
29	<i>D</i>-region ionâ€“neutral coupled chemistry (SodankylÃ Ion Chemistry,) Tj ETQq1 1 0.784314 rgB WACCM-rSIC. Geoscientific Model Development, 2016, 9, 3123-3136.	1.3	16
30	Transport versus energetic particle precipitation: Northern polar stratospheric NO x and ozone in January-March 2012. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6085-6100.	1.2	21
31	A model providing longâ€term data sets of energetic electron precipitation during geomagnetic storms. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12,520.	1.2	63
32	Improving the twilight model for polar cap absorption nowcasts. Space Weather, 2016, 14, 950-972.	1.3	10
33	Mesospheric ozone destruction by highâ€energy electron precipitation associated with pulsating aurora. Journal of Geophysical Research D: Atmospheres, 2016, 121, 11,852.	1.2	69
34	WACCMâ€Dâ€”Whole Atmosphere Community Climate Model with Dâ€region ion chemistry. Journal of Advances in Modeling Earth Systems, 2016, 8, 954-975.	1.3	86
35	WACCMâ€Dâ€”Improved modeling of nitric acid and active chlorine during energetic particle precipitation. Journal of Geophysical Research D: Atmospheres, 2016, 121, 10,328.	1.2	32
36	Linkages Between the Radiation Belts, Polar Atmosphere and Climate: Electron Precipitation Through Wave Particle Interactions. , 2016, , 354-376.		9

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37	Effects of meteoric smoke particles on the D region ion chemistry. Journal of Geophysical Research: Space Physics, 2015, 120, 10,823.	0.8	23
38	Enhancement of odd nitrogen modifies mesospheric ozone chemistry during polar winter. Geophysical Research Letters, 2015, 42, 10,445.	1.5	13
39	Substormâ€induced energetic electron precipitation: Impact on atmospheric chemistry. Geophysical Research Letters, 2015, 42, 8172-8176.	1.5	51
40	Contribution of proton and electron precipitation to the observed electron concentration in Octoberâ€“November 2003 and September 2005. Annales Geophysicae, 2015, 33, 381-394.	0.6	17
41	Missing driver in the Sunâ€“Earth connection from energetic electron precipitation impacts mesospheric ozone. Nature Communications, 2014, 5, 5197.	5.8	148
42	Longitudinal hotspots in the mesospheric OH variations due to energetic electron precipitation. Atmospheric Chemistry and Physics, 2014, 14, 1095-1105.	1.9	40
43	Analysis and parameterisation of ionic reactions affecting middle atmospheric HO_x and NO_y during solar proton events. Annales Geophysicae, 2013, 31, 909-956.	0.6	46
44	Observed effects of solar proton events and sudden stratospheric warmings on odd nitrogen and ozone in the polar middle atmosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6837-6848.	1.2	27
45	Comparison of modeled and observed effects of radiation belt electron precipitation on mesospheric hydroxyl and ozone. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,419.	1.2	21
46	Long-term solar activity and its implications to the heliosphere, geomagnetic activity, and the Earthâ€™s climate. Journal of Space Weather and Space Climate, 2013, 3, A21.	1.1	6
47	Polar-night O₃, NO₂ and NO₃ distributions during sudden stratospheric warmings in 2003â€“2008 as seen by GOMOS/Envisat. Atmospheric Chemistry and Physics, 2012, 12, 1051-1066.	1.9	24
48	Influence of a Carrington-like event on the atmospheric chemistry, temperature and dynamics. Atmospheric Chemistry and Physics, 2012, 12, 8679-8686.	1.9	16
49	Combined THEMIS and groundâ€based observations of a pair of substormâ€associated electron precipitation events. Journal of Geophysical Research, 2012, 117, .	3.3	13
50	Precipitating radiation belt electrons and enhancements of mesospheric hydroxyl during 2004â€“2009. Journal of Geophysical Research, 2012, 117, .	3.3	54
51	Contrasting the responses of three different groundâ€based instruments to energetic electron precipitation. Radio Science, 2012, 47, .	0.8	53
52	First evidence of mesospheric hydroxyl response to electron precipitation from the radiation belts. Journal of Geophysical Research, 2011, 116, .	3.3	75
53	Nitric acid enhancements in the mesosphere during the January 2005 and December 2006 solar proton events. Journal of Geophysical Research, 2011, 116, .	3.3	36
54	Mesosphere-to-stratosphere descent of odd nitrogen in Februaryâ€“March 2009 after sudden stratospheric warming. Atmospheric Chemistry and Physics, 2011, 11, 4645-4655.	1.9	39

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55	Composition changes after the "Halloween" solar proton event: the High Energy Particle Precipitation in the Atmosphere (HEPPA) model versus MIPAS data intercomparison study. Atmospheric Chemistry and Physics, 2011, 11, 9089-9139.	1.9	145
56	Retrieval of ozone profiles from GOMOS limb scattered measurements. Atmospheric Measurement Techniques, 2011, 4, 659-667.	1.2	10
57	Impact of different energies of precipitating particles on NOx generation in the middle and upper atmosphere during geomagnetic storms. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 1176-1189.	0.6	166
58	Statistical comparison of night-time NO2 observations in 2003â€“2006 from GOMOS and MIPAS instruments. Advances in Space Research, 2009, 43, 1918-1925.	1.2	10
59	Remote sensing space weather events: Antarcticâ€Arctic Radiationâ€belt (Dynamic) Depositionâ€VLF Atmospheric Research Konsortium network. Space Weather, 2009, 7, .	1.3	102
60	Spatio-temporal observations of the tertiary ozone maximum. Atmospheric Chemistry and Physics, 2009, 9, 4439-4445.	1.9	29
61	Recent Results from Studies of Electric Discharges in the Mesosphere. Surveys in Geophysics, 2008, 29, 71-137.	2.1	114
62	Description and validation of a limb scatter retrieval method for Odin/OSIRIS. Journal of Geophysical Research, 2008, 113, .	3.3	24
63	About the increase of HNO₃ in the stratopause region during the Halloween 2003 solar proton event. Geophysical Research Letters, 2008, 35, .	1.5	39
64	The effects of hardâ€spectra solar proton events on the middle atmosphere. Journal of Geophysical Research, 2008, 113, .	3.3	47
65	Atmospheric impact of the Carrington event solar protons. Journal of Geophysical Research, 2008, 113, .	3.3	25
66	Technical Note: Continuity of MIPAS-ENVISAT operational ozone data quality from full- to reduced-spectral-resolution operation mode. Atmospheric Chemistry and Physics, 2008, 8, 2201-2212.	1.9	15
67	Case study of the mesospheric and lower thermospheric effects of solar X-ray flares: coupled ion-neutral modelling and comparison with EISCAT and riometer measurements. Annales Geophysicae, 2008, 26, 2311-2321.	0.6	8
68	Parameterisation of the chemical effect of sprites in the middle atmosphere. Annales Geophysicae, 2008, 26, 13-27.	0.6	49
69	Arctic and Antarctic polar winter NOxand energetic particle precipitation in 2002â€“2006. Geophysical Research Letters, 2007, 34, .	1.5	97
70	Storm time, shortâ€lived bursts of relativistic electron precipitation detected by subionospheric radio wave propagation. Journal of Geophysical Research, 2007, 112, .	3.3	22
71	Improved dynamic geomagnetic rigidity cutoff modeling: Testing predictive accuracy. Journal of Geophysical Research, 2007, 112, .	3.3	12
72	Latitudinal extent of the January 2005 solar proton event in the Northern Hemisphere from satellite observations of hydroxyl. Annales Geophysicae, 2007, 25, 2203-2215.	0.6	27

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73	Lightning-driven inner radiation belt energy deposition into the atmosphere: implications for ionisation-levels and neutral chemistry. Annales Geophysicae, 2007, 25, 1745-1757.	0.6	25
74	Destruction of the tertiary ozone maximum during a solar proton event. Geophysical Research Letters, 2006, 33, .	1.5	75
75	Dynamic geomagnetic rigidity cutoff variations during a solar proton event. Journal of Geophysical Research, 2006, 111, .	3.3	43
76	Modeling polar ionospheric effects during the October-November 2003 solar proton events. Radio Science, 2006, 41, n/a-n/a.	0.8	32
77	Ionospheric evidence of thermosphere-to-stratosphere descent of polar NOX. Geophysical Research Letters, 2006, 33, .	1.5	39
78	Production of odd hydrogen in the mesosphere during the January 2005 solar proton event. Geophysical Research Letters, 2006, 33, .	1.5	93
79	Nighttime ozone profiles in the stratosphere and mesosphere by the Global Ozone Monitoring by Occultation of Stars on Envisat. Journal of Geophysical Research, 2006, 111, .	3.3	55
80	Sunset transition of negative charge in the D-region ionosphere during high-ionization conditions. Annales Geophysicae, 2006, 24, 187-202.	0.6	16
81	The atmospheric implications of radiation belt remediation. Annales Geophysicae, 2006, 24, 2025-2041.	0.6	20
82	GOMOS serendipitous data products: The mesospheric sodium layer and various limb emissions. Advances in Space Research, 2005, 36, 967-972.	1.2	1
83	A comparison of night-time GOMOS and MIPAS ozone profiles in the stratosphere and mesosphere. Advances in Space Research, 2005, 36, 958-966.	1.2	22
84	Autoregressive smoothing of GOMOS transmittances. Advances in Space Research, 2005, 36, 899-905.	1.2	4
85	Effects of D-region RF heating studied with the SodankylÃ Ion Chemistry model. Annales Geophysicae, 2005, 23, 1575-1583.	0.6	16
86	Diurnal variation of ozone depletion during the October-November 2003 solar proton events. Journal of Geophysical Research, 2005, 110, .	3.3	147
87	Solar proton events of Octoberâ€“November 2003: Ozone depletion in the Northern Hemisphere polar winter as seen by GOMOS/Envisat. Geophysical Research Letters, 2004, 31, .	1.5	141
88	Global measurement of the mesospheric sodium layer by the star occultation instrument GOMOS. Geophysical Research Letters, 2004, 31, .	1.5	26
89	Modelling the effects of the October 1989 solar proton event on mesospheric odd nitrogen using a detailed ion and neutral chemistry model. Annales Geophysicae, 2002, 20, 1967-1976.	0.6	52
90	The structure of expanded mercury. Journal of Physics Condensed Matter, 1998, 10, 8147-8153.	0.7	7

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91	Active Precipitation of Radiation Belt Electrons using Rocket Exhaust Driven Amplification (REDA) of Manâ€Made Whistlers. Journal of Geophysical Research: Space Physics, 0, , .	0.8	5