Claudia Stolle

List of Publications by Year
in descending order

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118 papers	4,255 citations	147801 31 h-index	128289 60 g-index
146 all docs	146 docs citations	146 times ranked	2624 citing authors

#	Article	IF	Citations
1	International Geomagnetic Reference Field: the thirteenth generation. Earth, Planets and Space, 2021, 73, .	2.5	319
2	The Swarm Satellite Constellation Application and Research Facility (SCARF) and Swarm data products. Earth, Planets and Space, 2013, 65, 1189-1200.	2.5	222
3	Magnetic signatures of equatorial spreadFas observed by the CHAMP satellite. Journal of Geophysical Research, 2006, 111, .	3.3	205
4	Lunarâ€dependent equatorial ionospheric electrodynamic effects during sudden stratospheric warmings. Journal of Geophysical Research, 2010, 115, .	3.3	187
5	Resolution of direction of oceanic magnetic lineations by the sixthâ€generation lithospheric magnetic field model from CHAMP satellite magnetic measurements. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	160
6	The Geomagnetic Kp Index and Derived Indices of Geomagnetic Activity. Space Weather, 2021, 19, e2020SW002641.	3.7	153
7	Longitudinal variation of F region electron density and thermospheric zonal wind caused by atmospheric tides. Geophysical Research Letters, 2007, 34, .	4.0	131
8	Third generation of the Potsdam Magnetic Model of the Earth (POMME). Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	124
9	Estimating the daytime Equatorial Ionization Anomaly strength from electric field proxies. Journal of Geophysical Research, 2008, 113, .	3.3	117
10	Comparing plasma bubble occurrence rates at CHAMP and GRACE altitudes during high and low solar activity. Annales Geophysicae, 2010, 28, 1647-1658.	1.6	104
11	Earth's lithospheric magnetic field determined to spherical harmonic degree 90 from CHAMP satellite measurements. Geophysical Journal International, 2006, 164, 319-330.	2.4	97
12	September 2019 Antarctic Sudden Stratospheric Warming: Quasiâ€6â€Day Wave Burst and Ionospheric Effects. Geophysical Research Letters, 2020, 47, e2019GL086577.	4.0	94
13	TheSwarmsatellite loss of GPS signal and its relation to ionospheric plasma irregularities. Space Weather, 2016, 14, 563-577.	3.7	90
14	Fifth-generation lithospheric magnetic field model from CHAMP satellite measurements. Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	2.5	89
15	Solar activity dependence of the electron density in the equatorial anomaly regions observed by CHAMP. Journal of Geophysical Research, 2007, 112, .	3.3	85
16	Longâ€term analysis of ionospheric polar patches based on CHAMP TEC data. Radio Science, 2013, 48, 289-301.	1.6	79
17	How Sudden Stratospheric Warming Affects the Whole Atmosphere. Eos, 2018, 99, .	0.1	72
18	Ionospheric Plasma Irregularities Characterized by the Swarm Satellites: Statistics at High Latitudes. Journal of Geophysical Research: Space Physics, 2019, 124, 1262-1282.	2.4	62

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19	Equatorial electrodynamics and neutral background in the Asian sector during the 2009 stratospheric sudden warming. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	60
20	Relation between the occurrence rate of ESF and the equatorial vertical plasma drift velocity at sunset derived from global observations. Annales Geophysicae, 2008, 26, 3979-3988.	1.6	54
21	Scale analysis of equatorial plasma irregularities derived from Swarm constellation. Earth, Planets and Space, 2016, 68, .	2.5	51
22	In situ spatiotemporal measurements of the detailed azimuthal substructure of the substorm current wedge. Journal of Geophysical Research: Space Physics, 2014, 119, 927-946.	2.4	49
23	Climatology of the Occurrence Rate and Amplitudes of Local Time Distinguished Equatorial Plasma Depletions Observed by Swarm Satellite. Journal of Geophysical Research: Space Physics, 2018, 123, 3014-3026.	2.4	46
24	Magnetic signatures and conjugate features of lowâ€latitude plasma blobs as observed by the CHAMP satellite. Journal of Geophysical Research, 2008, 113, .	3.3	43
25	The Ionospheric Bubble Index deduced from magnetic field and plasma observations onboard Swarm. Earth, Planets and Space, 2013, 65, 1333-1344.	2.5	43
26	Satellite Geomagnetism. Annual Review of Earth and Planetary Sciences, 2012, 40, 441-465.	11.0	41
27	The characteristics of field-aligned currents associated with equatorial plasma bubbles as observed by the CHAMP satellite. Annales Geophysicae, 2009, 27, 2685-2697.	1.6	39
28	Multiâ€instrument observations from Svalbard of a traveling convection vortex, electromagnetic ion cyclotron wave burst, and proton precipitation associated with a bow shock instability. Journal of Geophysical Research: Space Physics, 2013, 118, 2975-2997.	2.4	38
29	Magnetopause erosion during the 17 March 2015 magnetic storm: Combined fieldâ€aligned currents, auroral oval, and magnetopause observations. Geophysical Research Letters, 2016, 43, 2396-2404.	4.0	36
30	Ionospheric Plasma Irregularities Based on In Situ Measurements From the Swarm Satellites. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028103.	2.4	36
31	Evaluation of candidate models for the 13th generation International Geomagnetic Reference Field. Earth, Planets and Space, 2021, 73, .	2.5	33
32	Climatology of GPS signal loss observed by Swarm satellites. Annales Geophysicae, 2018, 36, 679-693.	1.6	30
33	Equatorial Counter Electrojet Longitudinal and Seasonal Variability in the American Sector. Journal of Geophysical Research: Space Physics, 2018, 123, 9906-9920.	2.4	29
34	Examining the Wind Shear Theory of Sporadic E With ICON/MIGHTI Winds and COSMICâ€2 Radio Occultation Data. Geophysical Research Letters, 2022, 49, .	4.0	29
35	Comparison of high latitude electron density profiles obtained with the GPS radio occultation technique and EISCAT measurements. Annales Geophysicae, 2004, 22, 2015-2022.	1.6	27
36	Evaluation of the IRI model using CHAMP observations in polar and equatorial regions. Advances in Space Research, 2007, 39, 904-909.	2.6	27

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37	Observations of a Pc5 global (cavity/waveguide) mode outside the plasmasphere by THEMIS. Journal of Geophysical Research, 2012, 117, .	3.3	27
38	On the relationship between weakening of the northern polar vortex and the lunar tidal amplification in the equatorial electrojet. Journal of Geophysical Research: Space Physics, 2015, 120, 10006-10019.	2.4	27
39	Systematic Analysis of Machine Learning and Feature Selection Techniques for Prediction of the Kp Index. Space Weather, 2019, 17, 1461-1486.	3.7	27
40	A method to derive maps of ionospheric conductances, currents, and convection from the Swarm multisatellite mission. Journal of Geophysical Research: Space Physics, 2015, 120, 3263-3282.	2.4	26
41	Quasiâ€6â€Day Wave Modulation of the Equatorial Electrojet. Journal of Geophysical Research: Space Physics, 2018, 123, 4094-4109.	2.4	26
42	Magnetic signatures of mediumâ€scale traveling ionospheric disturbances as observed by CHAMP. Journal of Geophysical Research, 2009, 114, .	3.3	25
43	Solar flux variation of the electron temperature morning overshoot in the equatorialFregion. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	25
44	Comparison between SuperDARN flow vectors and equivalent ionospheric currents from ground magnetometer arrays. Journal of Geophysical Research, 2012, 117, .	3.3	25
45	Lower-thermosphereâ€“ionosphere (LTI) quantities: current status of measuring techniques and models. Annales Geophysicae, 2021, 39, 189-237.	1.6	25
46	Daedalus: a low-flying spacecraft for in situ exploration of the lower thermosphereâ€“ionosphere. Geoscientific Instrumentation, Methods and Data Systems, 2020, 9, 153-191.	1.6	25
47	Features of highly structured equatorial plasma irregularities deduced from CHAMP observations. Annales Geophysicae, 2012, 30, 1259-1269.	1.6	24
48	Relation between stratospheric sudden warming and the lunar effect on the equatorial electrojet based on Huancayo recordings. Annales Geophysicae, 2015, 33, 235-243.	1.6	24
49	Longitudinal Variation of the Lunar Tide in the Equatorial Electrojet. Journal of Geophysical Research: Space Physics, 2017, 122, 12,445.	2.4	24
50	Magnetic Signatures of Ionospheric and Magnetospheric Current Systems During Geomagnetic Quiet Conditionsâ€”An Overview. Space Science Reviews, 2017, 206, 5-25.	8.1	24
51	Average Characteristics of Lowâ€Latitude Interhemispheric and F Region Dynamo Currents Deduced From the Swarm Satellite Constellation. Journal of Geophysical Research: Space Physics, 2019, 124, 10631-10644.	2.4	24
52	Geomagnetic Activity Index Hpo. Geophysical Research Letters, 2022, 49, .	4.0	24
53	Low and Midlatitude Ionospheric Plasma Density Irregularities and Their Effects on Geomagnetic Field. Space Science Reviews, 2017, 206, 495-519.	8.1	23
54	Towards understanding the electrodynamics of the 3-dimensional high-latitude ionosphere: present and future. Annales Geophysicae, 2008, 26, 3913-3932.	1.6	22

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55	A GPS based three-dimensional ionospheric imaging tool: Process and assessment. Advances in Space Research, 2006, 38, 2313-2317.	2.6	21
56	Daytime midlatitude plasma depletions observed by Swarm: Topside signatures of the rocket exhaust. Geophysical Research Letters, 2016, 43, 1802-1809.	4.0	21
57	Space Weather opportunities from the Swarm mission including near real time applications. Earth, Planets and Space, 2013, 65, 1375-1383.	2.5	20
58	On the variability of the semidiurnal solar and lunar tides of the equatorial electrojet during sudden stratospheric warmings. Annales Geophysicae, 2018, 36, 1545-1562.	1.6	20
59	Geomagnetic response to solar wind dynamic pressure impulse events at highâ€latitude conjugate points. Journal of Geophysical Research: Space Physics, 2013, 118, 6055-6071.	2.4	19
60	A dayside plasma depletion observed at midlatitudes during quiet geomagnetic conditions. Geophysical Research Letters, 2015, 42, 967-974.	4.0	19
61	Longitudeâ€dependent lunar tidal modulation of the equatorial electrojet during stratospheric sudden warmings. Journal of Geophysical Research: Space Physics, 2017, 122, 3760-3776.	2.4	19
62	Neutral Wind Profiles During Periods of Eastward and Westward Equatorial Electrojet. Geophysical Research Letters, 2021, 48, e2021GL093567.	4.0	19
63	Relationship between large-scale ionospheric field-aligned currents and electron/ion precipitations: DMSP observations. Earth, Planets and Space, 2020, 72, .	2.5	19
64	Observing the north polar ionosphere on 30 October 2003 by GPS imaging and IS radars. Annales Geophysicae, 2006, 24, 107-113.	1.6	18
65	Nighttime magnetic field fluctuations in the topside ionosphere at midlatitudes and their relation to mediumâ€scale traveling ionospheric disturbances: The spatial structure and scale sizes. Journal of Geophysical Research: Space Physics, 2015, 120, 6818-6830.	2.4	18
66	Conjugate observations of traveling convection vortices associated with transient events at the magnetopause. Journal of Geophysical Research: Space Physics, 2015, 120, 2015-2035.	2.4	18
67	3-Dimensional ionospheric electron density reconstruction based on gps measurements. Advances in Space Research, 2003, 31, 1965-1970.	2.6	17
68	On the direction of the Poynting flux associated with equatorial plasma depletions as derived from Swarm. Geophysical Research Letters, 2017, 44, 5884-5891.	4.0	17
69	Ionospheric Plasma IRregularities â€IPIR â€Data Product Based on Data From the Swarm Satellites. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	17
70	Equatorial ionospheric electrodynamic perturbations during Southern Hemisphere stratospheric warming events. Journal of Geophysical Research: Space Physics, 2013, 118, 1190-1195.	2.4	16
71	Observing Earthâ€™s magnetic environment with the GRACE-FO mission. Earth, Planets and Space, 2021, 73, .	2.5	16
72	The Space Weather Atmosphere Models and Indices (SWAMI) project: Overview and first results. Journal of Space Weather and Space Climate, 2020, 10, 18.	3.3	15

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73	Seasonal and latitudinal variations of the electron density nonmigrating tidal spectrum in the topside ionospheric F region as resolved from CHAMP observations. Journal of Geophysical Research: Space Physics, 2014, 119, 10,416.	2.4	14
74	The role of high-resolution geomagnetic field models for investigating ionospheric currents at low Earth orbit satellites. Earth, Planets and Space, 2016, 68, .	2.5	14
75	Interhemispheric field-aligned currents at the edges of equatorial plasma depletions. Scientific Reports, 2019, 9, 1233.	3.3	14
76	Morphology of highâ€latitude plasma density perturbations as deduced from the total electron content measurements onboard the Swarm constellation. Journal of Geophysical Research: Space Physics, 2017, 122, 1338-1359.	2.4	14
77	Solar Flux Influence on the Inâ€Situ Plasma Density at Topside Ionosphere Measured by Swarm Satellites. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	14
78	Geomagnetically Conjugate Observations of Equatorial Plasma Irregularities From Swarm Constellation and Groundâ€Based GPS Stations. Journal of Geophysical Research: Space Physics, 2019, 124, 3650-3665.	2.4	13
79	Role Of the Sun and the Middle atmosphere/thermosphere/ionosphere In Climate (ROSMIC): a retrospective and prospective view. Progress in Earth and Planetary Science, 2021, 8, .	3.0	13
80	GPS ionospheric imaging of the north polar ionosphere on 30 October 2003. Advances in Space Research, 2005, 36, 2201-2206.	2.6	12
81	Zonal currents in the F region deduced from Swarm constellation measurements. Journal of Geophysical Research: Space Physics, 2016, 121, 638-648.	2.4	12
82	Dependence of Lunar Tide of the Equatorial Electrojet on the Wintertime Polar Vortex, Solar Flux, and QBO. Geophysical Research Letters, 2018, 45, 3801-3810.	4.0	12
83	Relation of the Plasmapause to the Midlatitude Ionospheric Trough, the Subâ€Auroral Temperature Enhancement and the Distribution of Smallâ€Scale Field Aligned Currents as Observed in the Magnetosphere by THEMIS, RBSP, and Arase, and in the Topside Ionosphere by Swarm. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	12
84	Westward tilt of lowâ€latitude plasma blobs as observed by the Swarm constellation. Journal of Geophysical Research: Space Physics, 2015, 120, 3187-3197.	2.4	11
85	Statistical survey of nighttime midlatitude magnetic fluctuations: Their source location and Poynting flux as derived from the Swarm constellation. Journal of Geophysical Research: Space Physics, 2016, 121, 11,235.	2.4	11
86	Special issue â€œSwarm science results after 2Âyears in spaceâ€• Earth, Planets and Space, 2016, 68, .	2.5	11
87	Interannual Variability of the Daytime Equatorial Ionospheric Electric Field. Journal of Geophysical Research: Space Physics, 2018, 123, 4241-4256.	2.4	11
88	On the Balance Between Plasma and Magnetic Pressure Across Equatorial Plasma Depletions. Journal of Geophysical Research: Space Physics, 2019, 124, 5936-5944.	2.4	11
89	On the Occurrence of GPS Signal Amplitude Degradation for Receivers on Board LEO Satellites. Space Weather, 2020, 18, e2019SW002398.	3.7	11
90	Quantifying solar flux and geomagnetic main field influence on the equatorial ionospheric current system at the geomagnetic observatory Huancayo. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 163, 120-125.	1.6	10

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91	Whole Atmosphere Model Simulations of Ultrafast Kelvin Wave Effects in the Ionosphere and Thermosphere. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027939.	2.4	10
92	Field-aligned current associated with low-latitude plasma blobs as observed by the CHAMP satellite. Annales Geophysicae, 2010, 28, 697-703.	1.6	9
93	Evolution of the Geomagnetic Daily Variation at Tatuoca, Brazil, From 1957 to 2019: A Transition From Sq to EEJ. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028109.	2.4	9
94	Diagnosing low-/mid-latitude ionospheric currents using platform magnetometers: CryoSat-2 and GRACE-FO. Earth, Planets and Space, 2020, 72, .	2.5	9
95	Longitudinal variability of the equatorial counter electrojet during the solar cycle 24. Studia Geophysica Et Geodaetica, 2019, 63, 304-319.	0.5	8
96	Plasma and Field Observations in the Magnetospheric Source Region of a Stable Auroral Red (SAR) Arc by the Arase Satellite on 28 March 2017. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028068.	2.4	8
97	Statistical Analysis of Pc1 Wave Ducting Deduced From Swarm Satellites. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA029016.	2.4	8
98	CSES High Precision Magnetometer Data Products and Example Study of an Intense Geomagnetic Storm. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028026.	2.4	8
99	Differential Code Bias of GPS Receivers in Low Earth Orbit: An Assessment for CHAMP and SAC-C. , 2005, , 465-470.		7
100	Conjugate observations of electromagnetic ion cyclotron waves associated with traveling convection vortex events. Journal of Geophysical Research: Space Physics, 2017, 122, 7336-7352.	2.4	7
101	Isolated Proton Aurora Driven by EMIC Pc1 Wave: PWING, Swarm, and NOAA POES Multiâ€Instrument Observations. Geophysical Research Letters, 2021, 48, e2021GL095090.	4.0	7
102	Understanding the Total Electron Content Variability Over Europe During 2009 and 2019 SSWs. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028751.	2.4	7
103	Estimating along-track plasma drift speed from electron density measurements by the three Swarm satellites. Annales Geophysicae, 2015, 33, 829-835.	1.6	5
104	Ionospheric Plasma Density Oscillation Related to EMIC Pc1 Waves. Geophysical Research Letters, 2020, 47, e2020GL089000.	4.0	5
105	Comparison of Thermospheric Winds Measured by GOCE and Groundâ€Based FPIs at Low and Middle Latitudes. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028182.	2.4	5
106	Response of reverse convection to fast IMF transitions. Journal of Geophysical Research: Space Physics, 2015, 120, 4020-4037.	2.4	4
107	Editorial: Topical Volume on Earthâ€™s Magnetic Fieldâ€”Understanding Geomagnetic Sources from the Earthâ€™s Interior and Its Environment. Space Science Reviews, 2017, 206, 1-3.	8.1	4
108	A Synopticâ€Scale Wavelike Structure in the Nighttime Equatorial Ionization Anomaly. Earth and Space Science, 2021, 8, e2020EA001529.	2.6	4

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109	Migrating solar diurnal tidal variability during Northern and Southern Hemisphere Sudden Stratospheric Warmings. Earth, Planets and Space, 2022, 74, .	2.5	4
110	On the Role of Eâ€F Region Coupling in the Generation of Nighttime MSTIDs During Summer and Equinox: Case Studies Over Northern Germany. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	3
111	Three-Dimensional Monitoring of the Polar Ionosphere with Ground- and Space-Based GPS. , 2005, , 477-482.		2
112	Special issue â€œCharacterization of the geomagnetic field and its dynamic environment using data from space-based magnetometersâ€• Earth, Planets and Space, 2021, 73, .	2.5	2
113	Correlation analysis of field-aligned currents from the magnetic measurements of GRACE follow-on mission. Earth, Planets and Space, 2021, 73, .	2.5	2
114	Calibration of the GRACE-FO Satellite Platform Magnetometers and Co-Estimation of Intrinsic Time Shift in Data. , 2021, , .		2
115	Ionospheric plasma irregularities studied with Swarm satellites. E3S Web of Conferences, 2018, 62, 01009.	0.5	1
116	Low and Midlatitude Ionospheric Plasma Density Irregularities and Their Effects on Geomagnetic Field. Space Sciences Series of ISSI, 2018, , 503-527.	0.0	1
117	SWARM electron density measurements and predictions by IRI and IRI-real-time. , 2015, , .		0
118	Magnetic Signatures of Ionospheric and Magnetospheric Current Systems During Geomagnetic Quiet Conditionsâ€”An Overview. Space Sciences Series of ISSI, 2018, , 7-27.	0.0	0