

Nikolai Ostgaard

List of Publications by Year in descending order

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133
papers

3,236
citations

159585

30
h-index

223800

46
g-index

154
all docs

154
docs citations

154
times ranked

1976
citing authors

#	ARTICLE	IF	CITATIONS
1	X-rays from solar system objects. Planetary and Space Science, 2007, 55, 1135-1189.	1.7	119
2	Production altitude and time delays of the terrestrial gamma flashes: Revisiting the Burst and Transient Source Experiment spectra. Journal of Geophysical Research, 2008, 113, .	3.3	116
3	Overview of Solar Windâ€™Magnetosphereâ€™Ionosphereâ€™Atmosphere Coupling and the Generation of Magnetospheric Currents. Space Science Reviews, 2017, 206, 547-573.	8.1	105
4	The ASIM Mission on the International Space Station. Space Science Reviews, 2019, 215, 1.	8.1	93
5	How the IMF B_y induces a B_z component in the closed magnetosphere and how it leads to asymmetric currents and convection patterns in the two hemispheres. Journal of Geophysical Research: Space Physics, 2015, 120, 9368-9384.	2.4	90
6	Asymmetric auroral intensities in the Earthâ€™s Northern and Southern hemispheres. Nature, 2009, 460, 491-493.	27.8	77
7	Interplanetary magnetic field control of the location of substorm onset and auroral features in the conjugate hemispheres. Journal of Geophysical Research, 2004, 109, .	3.3	72
8	Observations and model predictions of substorm auroral asymmetries in the conjugate hemispheres. Geophysical Research Letters, 2005, 32, .	4.0	62
9	A terrestrial gamma-ray flash and ionospheric ultraviolet emissions powered by lightning. Science, 2020, 367, 183-186.	12.6	60
10	Effects of dead time losses on terrestrial gamma ray flash measurements with the Burst and Transient Source Experiment. Journal of Geophysical Research, 2010, 115, .	3.3	58
11	Earthward plasma sheet flows during substorm phases. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	55
12	The true fluence distribution of terrestrial gamma flashes at satellite altitude. Journal of Geophysical Research, 2012, 117, .	3.3	54
13	Simultaneous observations of optical lightning and terrestrial gamma ray flash from space. Geophysical Research Letters, 2013, 40, 2423-2426.	4.0	54
14	Estimating the capture and loss of cold plasma from ionospheric outflow. Journal of Geophysical Research, 2012, 117, .	3.3	52
15	First 10 Months of TGF Observations by ASIM. Journal of Geophysical Research D: Atmospheres, 2019, 124, 14024-14036.	3.3	52
16	Observations of non-conjugate theta aurora. Geophysical Research Letters, 2003, 30, .	4.0	50
17	Confining the angular distribution of terrestrial gamma ray flash emission. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	49
18	Assessment of ionospheric Joule heating by GUMICS-4 MHD simulation, AMIE, and satellite-based statistics: towards a synthesis. Annales Geophysicae, 2005, 23, 2051-2068.	1.6	47

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19	Enhanced detection of terrestrial gamma-ray flashes by AGILE. <i>Geophysical Research Letters</i> , 2015, 42, 9481-9487.	4.0	45
20	Cluster observations of a field aligned current at the dawn flank of a bursty bulk flow. <i>Annales Geophysicae</i> , 2007, 25, 1405-1415.	1.6	43
21	Auroral conjugacy studies based on global imaging. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2007, 69, 249-255.	1.6	42
22	The Modular X- and Gamma-Ray Sensor (MXGS) of the ASIM Payload on the International Space Station. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	42
23	A new method reveals more TGFs in the RHESSI data. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	41
24	Interhemispherical asymmetry of substorm onset locations and the interplanetary magnetic field. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	39
25	Energy transfer and flow in the solar wind-magnetosphere-ionosphere system: A new coupling function. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 5659-5672.	2.4	39
26	Blue Optical Observations of Narrow Bipolar Events by ASIM Suggest Corona Streamer Activity in Thunderstorms. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032708.	3.3	38
27	The impact of sunlight on high-latitude equivalent currents. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 2715-2726.	2.4	37
28	Modeling the relativistic runaway electron avalanche and the feedback mechanism with GEANT4. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9174-9191.	2.4	35
29	Magnetospheric response and reconfiguration times following IMF B_y reversals. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 417-431.	2.4	35
30	Statistics of plasma sheet convection. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	33
31	Pilot system development in metre-scale laboratory discharge. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 425203.	2.8	32
32	Instantaneous ionospheric global conductance maps during an isolated substorm. <i>Annales Geophysicae</i> , 2002, 20, 1181-1191.	1.6	31
33	Gamma Ray Glow Observations at 20-km Altitude. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 7236-7254.	3.3	30
34	Small and meso-scale properties of a substorm onset auroral arc. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	29
35	Intensity asymmetries in the dusk sector of the poleward auroral oval due to IMF B_x . <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9497-9507.	2.4	29
36	Birkeland current effects on high-latitude ground magnetic field perturbations. <i>Geophysical Research Letters</i> , 2015, 42, 7248-7254.	4.0	29

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37	Assessing the power law distribution of TGFs. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	28
38	In-Flight Observation of Gamma Ray Glows by ILDAS. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 12801-12811.	3.3	28
39	On the non-conjugacy of nightside aurora and their generator mechanisms. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 3394-3406.	2.4	27
40	How the IMF Induces a Local Component During Northward IMF and Characteristic Timescales. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 3333-3348.	2.4	27
41	Mesoscale ionospheric electrodynamics of omega bands determined from ground-based electromagnetic and satellite optical observations. <i>Annales Geophysicae</i> , 2005, 23, 325-342.	1.6	26
42	Simultaneous imaging of the reconnection spot in the opposite hemispheres during northward IMF. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	26
43	Evolution of auroral asymmetries in the conjugate hemispheres during two substorms. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	26
44	Observation of intrinsically bright terrestrial gamma ray flashes from the Mediterranean basin. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 12143-12156.	3.3	26
45	North-south asymmetries in cold plasma density in the magnetotail lobes: Cluster observations. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 136-149.	2.4	26
46	Simultaneous observations of the auroral ovals in both hemispheres under varying conditions. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	25
47	Seasonal dependence of localized, high-latitude dayside aurora (HiLDA). <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	24
48	Dynamic effects of restoring footpoint symmetry on closed magnetic field lines. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 3963-3977.	2.4	24
49	Spectral Observations of Optical Emissions Associated With Terrestrial Gamma-Ray Flashes. <i>Geophysical Research Letters</i> , 2021, 48, 2020GL090700.	4.0	24
50	Interhemispheric observations of emerging polar cap asymmetries. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	23
51	Terrestrial gamma-ray flash electron beam geometry, fluence, and detection frequency. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	23
52	Optical emissions associated with narrow bipolar events from thunderstorm clouds penetrating into the stratosphere. <i>Nature Communications</i> , 2021, 12, 6631.	12.8	21
53	Constraints to do realistic modeling of the electric field ahead of the tip of a lightning leader. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 8120-8134.	3.3	20
54	Evaluation of Monte Carlo tools for high-energy atmospheric physics II: relativistic runaway electron avalanches. <i>Geoscientific Model Development</i> , 2018, 11, 4515-4535.	3.6	20

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55	Observation of the onset of a blue jet into the stratosphere. <i>Nature</i> , 2021, 589, 371-375.	27.8	20
56	Modeling lightning observations from space-based platforms (CloudScat.jl 1.0). <i>Geoscientific Model Development</i> , 2020, 13, 5549-5566.	3.6	20
57	Very-high-frequency oscillations in the main peak of a magnetar giant flare. <i>Nature</i> , 2021, 600, 621-624.	27.8	20
58	On the motion of dayside auroras caused by a solar wind pressure pulse. <i>Annales Geophysicae</i> , 2005, 23, 509-521.	1.6	19
59	Persistent global proton aurora caused by high solar wind dynamic pressure. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	19
60	Evolution of Asymmetrically Displaced Footpoints During Substorms. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 10,030.	2.4	19
61	Observations of Asymmetries in Ionospheric Return Flow During Different Levels of Geomagnetic Activity. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 4638-4651.	2.4	19
62	On the High-Energy Spectral Component and Fine Time Structure of Terrestrial Gamma Ray Flashes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 7484-7497.	3.3	19
63	The 3rd AGILE Terrestrial Gamma-Ray Flashes Catalog. Part II: Optimized Selection Criteria and Characteristics of the New Sample. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031986.	3.3	19
64	Estimates of magnetotail reconnection rate based on IMAGE FUV and EISCAT measurements. <i>Annales Geophysicae</i> , 2005, 23, 123-134.	1.6	18
65	Changes in the magnetotail configuration before near-Earth reconnection. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	18
66	Dayside and nightside magnetic field responses at 780 km altitude to dayside reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 1670-1689.	2.4	18
67	The asymmetric geospace as displayed during the geomagnetic storm on 17 August 2001. <i>Annales Geophysicae</i> , 2018, 36, 1577-1596.	1.6	18
68	The 3rd AGILE Terrestrial Gamma Ray Flash Catalog. Part I: Association to Lightning Sferics. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031985.	3.3	18
69	A new population of terrestrial gamma-ray flashes in the RHESSI data. <i>Geophysical Research Letters</i> , 2015, 42, 10,937.	4.0	17
70	Radio emissions from double RHESSI TGFs. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 8006-8022.	3.3	17
71	Blue Flashes as Counterparts to Narrow Bipolar Events: The Optical Signal of Shallow In-Cloud Discharges. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035013.	3.3	17
72	Global Frequency and Geographical Distribution of Nighttime Streamer Corona Discharges (BLUEs) in Thunderclouds. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094657.	4.0	17

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73	Effects of energetic electrons on the electrodynamics in the ionosphere. <i>Annales Geophysicae</i> , 2004, 22, 475-496.	1.6	16
74	Auroral Asymmetries in the Conjugate Hemispheres and Interhemispheric Currents. <i>Geophysical Monograph Series</i> , 0, , 99-112.	0.1	16
75	Timescales of Dayside and Nightside Field-Aligned Current Response to Changes in Solar Wind-Magnetosphere Coupling. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 7307-7319.	2.4	16
76	Auroral Signatures of the Dynamic Plasma Sheet. <i>Geophysical Monograph Series</i> , 0, , 317-336.	0.1	15
77	Evaluation of Monte Carlo tools for high energy atmospheric physics. <i>Geoscientific Model Development</i> , 2016, 9, 3961-3974.	3.6	15
78	Relativistic electrons from sparks in the laboratory. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 2939-2954.	3.3	15
79	Comparison of High-Speed Optical Observations of a Lightning Flash From Space and the Ground. <i>Earth and Space Science</i> , 2020, 7, e2020EA001249.	2.6	15
80	Simultaneous Observations of EIP, TGF, Elve, and Optical Lightning. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033921.	3.3	15
81	Meter-scale spark X-ray spectrum statistics. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 11191-11202.	3.3	14
82	X-ray Emissions in a Multiscale Fluid Model of a Streamer Discharge. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 6935-6953.	3.3	14
83	A Simultaneous Observation of Lightning by ASIM, Colombia Lightning Mapping Array, GLM, and ISS LIS. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033735.	3.3	14
84	Statistical pitch angle properties of substorm-injected electron clouds and their relation to dawnside energetic electron precipitation. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	13
85	Simultaneous observations of magnetotail reconnection and bright X-ray aurora on 2 October 2002. <i>Journal of Geophysical Research</i> , 2007, 112, n/a-n/a.	3.3	13
86	Can magnetotail reconnection produce the auroral intensities observed in the conjugate ionosphere?. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	13
87	Separation and Quantification of Ionospheric Convection Sources: 2. The Dipole Tilt Angle Influence on Reverse Convection Cells During Northward IMF. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 6182-6194.	2.4	13
88	Ionospheric conductances derived from satellite measurements of auroral UV and X-ray emissions, and ground-based electromagnetic data: a comparison. <i>Annales Geophysicae</i> , 2005, 23, 343-358.	1.6	12
89	Seasonal and interplanetary magnetic field-dependent polar cap contraction during substorm expansion phase. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	12
90	On the timing between terrestrial gamma ray flashes, radio atmospheric, and optical lightning emission. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 7734-7741.	2.4	12

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91	Interplanetary Magnetic Field \times Component Influence on Horizontal and Field-Aligned Currents in the Ionosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 3360-3379.	2.4	12
92	Observation of Terrestrial Gamma-Ray Flashes at Mid Latitude. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034432.	3.3	12
93	Analysis of Blue Corona Discharges at the Top of Tropical Thunderstorm Clouds in Different Phases of Convection. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	12
94	Production of Terrestrial Gamma-Ray Flashes During the Early Stages of Lightning Flashes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	12
95	Spectral Characteristics of VLF Sferics Associated With RHESSI TGFs. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 139-159.	3.3	11
96	Terrestrial Gamma-Ray Flashes With Accompanying Elves Detected by ASIM. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	11
97	How simulated fluence of photons from terrestrial gamma ray flashes at aircraft and balloon altitudes depends on initial parameters. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 2333-2339.	2.4	10
98	The Detached Auroras Induced by the Solar Wind Pressure Enhancement in Both Hemispheres From Imaging and In Situ Particle Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 3170-3182.	2.4	10
99	Observations of Asymmetric Lobe Convection for Weak and Strong Tail Activity. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 9999-10017.	2.4	10
100	Observationally Weak TGFs in the RHESSI Data. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 287-298.	3.3	10
101	Spectral Analysis of Individual Terrestrial Gamma-Ray Flashes Detected by ASIM. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035347.	3.3	10
102	Simultaneous measurements of X-rays and electrons during a pulsating aurora. <i>Annales Geophysicae</i> , 1998, 16, 148-160.	1.6	9
103	Thermospheric nitric oxide at higher latitudes: Model calculations with auroral energy input. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	9
104	In-Flight Observation of Positron Annihilation by ILDAS. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 8074-8090.	3.3	9
105	Separation and Quantification of Ionospheric Convection Sources: 1. A New Technique. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 6343-6357.	2.4	9
106	A Rapid Gamma-Ray Glow Flux Reduction Observed From 20 km Altitude. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033467.	3.3	9
107	Initiation of lightning flashes simultaneously observed from space and the ground: Narrow bipolar events. <i>Atmospheric Research</i> , 2022, 268, 105981.	4.1	9
108	The First Terrestrial Electron Beam Observed by the Atmosphere-Space Interactions Monitor. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10497-10511.	2.4	8

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109	Quantifying the Lobe Reconnection Rate During Dominant IMF B_y Periods and Different Dipole Tilt Orientations. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029742.	2.4	8
110	Observations of Blue Corona Discharges in Thunderclouds. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	8
111	Energetics of a substorm on 15 August, 2001: Comparing empirical methods and a global MHD simulation. <i>Advances in Space Research</i> , 2005, 36, 1825-1829.	2.6	7
112	Height profiles of the ionospheric electron density derived using space-based remote sensing of UV and X ray emissions and EISCAT radar data: A ground-truth experiment. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	7
113	Connecting the terrestrial gamma-ray flash source strength and observed fluence distributions. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	7
114	An altitude and distance correction to the source fluence distribution of TGFs. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8698-8704.	2.4	7
115	Multi-pulse Corona Discharges in Thunderclouds Observed in Optical and Radio Bands. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	7
116	Constraining Spectral Models of a Terrestrial Gamma-ray Flash From a Terrestrial Electron Beam Observation by the Atmosphere-Space Interactions Monitor. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093152.	4.0	6
117	Time-scale dependence of solar wind-based regression models of ionospheric electrodynamics. <i>Scientific Reports</i> , 2020, 10, 16406.	3.3	5
118	Evolution of IMF B_y Induced Asymmetries: The Role of Tail Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029577.	2.4	5
119	Global multispectral auroral imaging of an isolated substorm. <i>Geophysical Research Letters</i> , 2000, 27, 637-640.	4.0	4
120	Pi2-pulsations observed in energetic electron precipitation and magnetic field in association with a substorm surge. <i>Annales Geophysicae</i> , 2004, 22, 2097-2105.	1.6	4
121	Medium energy pitch angle distribution during substorm injected electron clouds. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	4
122	Conjugate high-intensity energetic electron precipitation at high latitude. <i>Annales Geophysicae</i> , 2003, 21, 1443-1455.	1.6	3
123	Comparisons of electron energy deposition derived from observations of lower thermospheric nitric oxide and from X-ray bremsstrahlung measurements. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	3
124	X-RAY EMISSION FROM PLANETS AND COMETS: RELATIONSHIP WITH SOLAR X-RAYS AND SOLAR WIND. , 2009, , 229-244.		3
125	Constraints on Recoil Leader Properties Estimated from X-ray Emissions in Aircraft-triggered Discharges. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032151.	3.3	3
126	Multispectral Optical Diagnostics of Lightning from Space. <i>Remote Sensing</i> , 2022, 14, 2057.	4.0	3

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127	Reconnection Hall current system observed in the magnetotail and in the ionosphere. Geophysical Research Letters, 2009, 36, .	4.0	2
128	The Hall current system revealed as a statistical significant pattern during fast flows. Annales Geophysicae, 2008, 26, 3429-3437.	1.6	2
129	On the spatial scale of streamers. , 2014, , .		1
130	The Space Science Suitcaseâ€™ Instruments for Exploring Near-Earth Space from the Classroom. Earth, Moon and Planets, 2009, 104, 73-75.	0.6	0
131	Terrestrial Gamma-ray flash intensity distribution. , 2011, , .		0
132	BGO front-end electronics and signal processing in the MXGS instrument for the ASIM mission. , 2012, , .		0
133	First simultaneous observations of optical lightning and terrestrial gamma flash from space. , 2014, , .		0