Nikolai A Tsyganenko

List of Publications by Year
in descending order

99 papers	6,293 citations	101384 36 h-index	66788 78 g-index
103 all docs	103 docs citations	103 times ranked	2515 citing authors

#	Article	IF	Citations
1	Modeling the dynamics of the inner magnetosphere during strong geomagnetic storms. Journal of Geophysical Research, 2005, 110, .	3.3	895
2	Modeling the Earth's magnetospheric magnetic field confined within a realistic magnetopause. Journal of Geophysical Research, 1995, 100, 5599.	3.3	850
3	Modeling the global magnetic field of the large-scale Birkeland current systems. Journal of Geophysical Research, 1996, 101, 27187-27198.	3.3	474
4	A model of the near magnetosphere with a dawn-dusk asymmetry 1. Mathematical structure. Journal of Geophysical Research, 2002, 107, SMP 12-1-SMP 12-15.	3.3	415
5	A model of the near magnetosphere with a dawn-dusk asymmetry 2. Parameterization and fitting to observations. Journal of Geophysical Research, 2002, 107, SMP 10-1-SMP 10-17.	3.3	343
6	Storm-time distortion of the inner magnetosphere: How severe can it get?. Journal of Geophysical Research, 2003, 108, .	3.3	210
7	Tail plasma sheet models derived from Geotail particle data. Journal of Geophysical Research, 2003, 108, .	3.3	190
8	Magnetospheric configurations from a high-resolution data-based magnetic field model. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	157
9	Storm time evolution of the outer radiation belt: Transport and losses. Journal of Geophysical Research, 2006, 111, .	3.3	155
10	Quantitative models of the magnetospheric magnetic field: Methods and results. Space Science Reviews, 1990, 54, 75-186.	3.7	124
11	Global shape of the magnetotail current sheet as derived from Geotail and Polar data. Journal of Geophysical Research, 2004, 109, .	3.3	98
12	Disturbances in Mercury's magnetosphere: Are the Mariner 10 â€œsubstormsâ€• simply driven?. Journal of Geophysical Research, 1998, 103, 9113-9119.	3.3	93
13	Low-altitude magnetic field measurements by MESSENGER reveal Mercuryâ€™s ancient crustal field. Science, 2015, 348, 892-895.	6.0	89
14	Dynamical dataâ€based modeling of the stormâ€time geomagnetic field with enhanced spatial resolution. Journal of Geophysical Research, 2008, 113, .	3.3	77
15	Are existing magnetospheric models excessively stretched?. Journal of Geophysical Research, 1993, 98, 15343-15354.	3.3	73
16	Data-based modelling of the Earth's dynamic magnetosphere: a review. Annales Geophysicae, 2013, 31, 1745-1772.	0.6	71
17	Hybrid state of the tail magnetic configuration during steady convection events. Journal of Geophysical Research, 1994, 99, 23571.	3.3	65
18	Modeling of twisted/warped magnetospheric configurations using the general deformation method. Journal of Geophysical Research, 1998, 103, 23551-23563.	3.3	64

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19	Observations and model predictions of substorm auroral asymmetries in the conjugate hemispheres. Geophysical Research Letters, 2005, 32, .	1.5	62
20	Determination of the properties of Mercury's magnetic field by the MESSENGER mission. Planetary and Space Science, 2004, 52, 733-746.	0.9	61
21	Impact of ULF oscillations in solar wind dynamic pressure on the outer radiation belt electrons. Geophysical Research Letters, 2006, 33, .	1.5	61
22	A forecasting model of the magnetosphere driven by an optimal solar wind coupling function. Journal of Geophysical Research: Space Physics, 2015, 120, 8401-8425.	0.8	61
23	Modular model for Mercury's magnetospheric magnetic field confined within the average observed magnetopause. Journal of Geophysical Research: Space Physics, 2015, 120, 4503-4518.	0.8	59
24	Time-dependent magnetospheric configuration and breakup mapping during a substorm. Journal of Geophysical Research, 2011, 116, .	3.3	56
25	Testing a twoâ€loop pattern of the substorm current wedge (SCW2L). Journal of Geophysical Research: Space Physics, 2014, 119, 947-963.	0.8	55
26	Magnetic effects of the substorm current wedge in a â€œspread-out wireâ€•model and their comparison with ground, geosynchronous, and tail lobe data. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	54
27	Global configuration of the magnetotail current sheet as derived from Geotail, Wind, IMP 8 and ISEE 1/2 data. Journal of Geophysical Research, 1998, 103, 6827-6841.	3.3	53
28	Magnetic signatures of the distant polar cusps: Observations by Polar and quantitative modeling. Journal of Geophysical Research, 1999, 104, 24939-24955.	3.3	50
29	Concerning flux erosion from the dayside magnetosphere. Journal of Geophysical Research, 1994, 99, 13425.	3.3	49
30	Toward adapted timeâ€dependent magnetospheric models: A simple approach based on tuning the standard model. Journal of Geophysical Research, 2009, 114, .	3.3	47
31	Solar wind parameters for magnetospheric magnetic field modeling. Space Weather, 2007, 5, .	1.3	45
32	Modeling the inner magnetosphere: The asymmetric ring current and Region 2 Birkeland currents revisited. Journal of Geophysical Research, 2000, 105, 27739-27754.	3.3	44
33	A large magnetosphere magnetic field database. Journal of Geophysical Research, 1994, 99, 11319.	3.3	42
34	Global Empirical Picture of Magnetospheric Substorms Inferred From Multimission Magnetometer Data. Journal of Geophysical Research: Space Physics, 2019, 124, 1085-1110.	0.8	41
35	Empirical modeling of the storm time innermost magnetosphere using Van Allen Probes and THEMIS data: Eastward and banana currents. Journal of Geophysical Research: Space Physics, 2016, 121, 157-170.	0.8	40
36	Empirical modeling of a CIRâ€driven magnetic storm. Journal of Geophysical Research, 2010, 115, .	3.3	38

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37	A quantitative assessment of empirical magnetic field models at geosynchronous orbit during magnetic storms. Journal of Geophysical Research, 2008, 113, .	3.3	37
38	Analytical models of the magnetic field of disk-shaped current sheets. Journal of Geophysical Research, 1994, 99, 199.	3.3	36
39	Magnetotail views at 33RE: IMP 8 magnetometer observations. Journal of Geophysical Research, 1994, 99, 8705.	3.3	33
40	An empirical RBF model of the magnetosphere parameterized by interplanetary and groundâ€based drivers. Journal of Geophysical Research: Space Physics, 2016, 121, 10,786.	0.8	33
41	A Dynamic Model of Mercury's Magnetospheric Magnetic Field. Geophysical Research Letters, 2017, 44, 10147-10154.	1.5	30
42	Empirical reconstruction of storm time steady magnetospheric convection events. Journal of Geophysical Research: Space Physics, 2013, 118, 6434-6456.	0.8	29
43	Testing the accuracy of magnetospheric model field line mapping. Journal of Geophysical Research, 1996, 101, 27431-27442.	3.3	28
44	Reconstructing the magnetosphere from data using radial basis functions. Journal of Geophysical Research: Space Physics, 2016, 121, 2249-2263.	0.8	27
45	Do we know the actual magnetopause position for typical solar wind conditions?. Journal of Geophysical Research: Space Physics, 2016, 121, 6493-6508.	0.8	27
46	Signatures of Nonideal Plasma Evolution During Substorms Obtained by Mining Multimission Magnetometer Data. Journal of Geophysical Research: Space Physics, 2019, 124, 8427-8456.	0.8	27
47	Uses and limitations of the Tysganenko magnetic field models. Eos, 1992, 73, 489-489.	0.1	26
48	A global analytical representation of the magnetic field produced by the region 2 Birkeland currents and the partial ring current. Journal of Geophysical Research, 1993, 98, 5677-5690.	3.3	26
49	Birkeland currents in the plasma sheet. Journal of Geophysical Research, 1993, 98, 19455-19464.	3.3	26
50	Internally and externally induced deformations of the magnetospheric equatorial current as inferred from spacecraft data. Annales Geophysicae, 2015, 33, 1-11.	0.6	26
51	Dynamical response of the magnetotail to changes of the solar wind direction: an MHD modeling perspective. Annales Geophysicae, 2008, 26, 2395-2402.	0.6	24
52	Comparison of observed and model magnetic fields at high altitudes above the polar cap: POLAR initial results. Geophysical Research Letters, 1997, 24, 1451-1454.	1.5	23
53	Modeling of time-evolving magnetic fields during substorms. Journal of Geophysical Research, 1999, 104, 12327-12337.	3.3	21
54	An empirical model of the substorm current wedge. Journal of Geophysical Research, 1997, 102, 19935-19941.	3.3	20

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55	Solar wind control of the tail lobe magnetic field as deduced from Geotail, AMPTE/IRM, and ISEE 2 data. Journal of Geophysical Research, 2000, 105, 5517-5528.	3.3	20
56	A study of the inner magnetosphere based on data of Polar. Journal of Geophysical Research, 1999, 104, 10275-10283.	3.3	19
57	Further evidence for the role of magnetotail current shape in substorm initiation. Earth, Planets and Space, 2015, 67, .	0.9	19
58	Magnetic field and electric currents in the vicinity of polar cusps as inferred from Polar and Cluster data. Annales Geophysicae, 2009, 27, 1573-1582.	0.6	18
59	Testing the Hypothesis That Charge Exchange Can Cause a Two-Phase Decay. Geophysical Monograph Series, 0, , 211-225.	0.1	17
60	The substorm cycle as reproduced by global MHD models. Space Weather, 2017, 15, 131-149.	1.3	17
61	Dataâ€based modeling of the geomagnetosphere with an IMFâ€dependent magnetopause. Journal of Geophysical Research: Space Physics, 2014, 119, 335-354.	0.8	16
62	Mapping of the ionospheric fieldâ€aligned currents to the equatorial magnetosphere. Journal of Geophysical Research, 1997, 102, 14467-14476.	3.3	15
63	Event study combining magnetospheric and ionospheric perspectives of the substorm current wedge modeling. Journal of Geophysical Research: Space Physics, 2014, 119, 9714-9728.	0.8	15
64	A hybrid approach to empirical magnetosphere modeling. Journal of Geophysical Research: Space Physics, 2017, 122, 8198-8213.	0.8	15
65	Method for confining the magnetic field of the cross-tail current inside the magnetopause. Journal of Geophysical Research, 1994, 99, 19393.	3.3	14
66	Modeling Inner Magnetospheric Electric Fields: Latest Self-Consistent Results. Geophysical Monograph Series, 0, , 263-269.	0.1	14
67	Secular Drift of the Auroral Ovals: How Fast Do They Actually Move?. Geophysical Research Letters, 2019, 46, 3017-3023.	1.5	14
68	Empirical Modeling of the Quiet and Storm Time Geosynchronous Magnetic Field. Space Weather, 2018, 16, 16-36.	1.3	13
69	On the â€œbowlâ€shapedâ€• deformation of planetary equatorial current sheets. Geophysical Research Letters, 2014, 41, 1079-1084.	1.5	12
70	Enhanced high-altitude polar cap plasma and magnetic field values in response to the interplanetary magnetic cloud that caused the great storm of 31 March 2001: A case study for a new magnetospheric index. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	11
71	Empirical Modeling of Extreme Events: Storm-Time Geomagnetic Field, Electric Current, and Pressure Distributions. , 2018, , 259-279.		11
72	Testing Efficiency of Empirical, Adaptive, and Global MHD Magnetospheric Models to Represent the Geomagnetic Field in a Variety of Conditions. Space Weather, 2019, 17, 672-686.	1.3	11

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73	Statistics of a parallel Poynting vector in the auroral zone as a function of altitude using Polar EFI and MFE data and Astrid-2 EMMA data. Annales Geophysicae, 2005, 23, 1797-1806.	0.6	10
74	Magnetotail magnetic flux monitoring based on simultaneous solar wind and magnetotail observations. Journal of Geophysical Research: Space Physics, 2016, 121, 8821-8839.	0.8	10
75	Reconstruction of Extreme Geomagnetic Storms: Breaking the Data Paucity Curse. Space Weather, 2020, 18, e2020SW002561.	1.3	10
76	On the reconstruction of magnetospheric plasma pressure distributions from empirical geomagnetic field models. Journal of Geophysical Research, 2010, 115, .	3.3	9
77	Reconstructing Substorms via Historical Data Mining: Is It Really Feasible?. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029604.	0.8	9
78	Storm Time Plasma Pressure Inferred From Multimission Measurements and Its Validation Using Van Allen Probes Particle Data. Space Weather, 2020, 18, e2020SW002583.	1.3	9
79	Magnetic field and electric current density distribution in the geomagnetic tail, based on Geotail data. Journal of Geophysical Research, 2001, 106, 25919-25927.	3.3	8
80	Conjugate comparison of Super Dual Auroral Radar Network and Cluster electron drift instrument measurements ofEÃ—Bplasma drift. Journal of Geophysical Research, 2004, 109, .	3.3	7
81	A Historical Introduction to the Ring Current. Geophysical Monograph Series, 0, , 1-8.	0.1	7
82	Empirical Modeling of the Geomagnetosphere for SIR and CMEâ€Driven Magnetic Storms. Journal of Geophysical Research: Space Physics, 2019, 124, 5641-5662.	0.8	7
83	Reconstruction of Local Magnetic Structures by a Modified Radial Basis Function Method. Journal of Geophysical Research: Space Physics, 2019, 124, 10141-10152.	0.8	7
84	Magnetospheric â€œPenetrationâ€• of IMF Viewed Through the Lens of an Empirical RBF Modeling. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027439.	0.8	7
85	A quantitative study of magnetospheric magnetic field line deformation by a two-loop substorm current wedge. Annales Geophysicae, 2015, 33, 505-517.	0.6	6
86	Reconstruction of Magnetospheric Stormâ€Time Dynamics Using Cylindrical Basis Functions and Multiâ€Mission Data Mining. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028390.	0.8	6
87	Drivers of the Inner Magnetosphere. Geophysical Monograph Series, 0, , 135-145.	0.1	5
88	Storm-substorm coupling during 16 Hours of Dst steadily at âˆ'150 nT. Geophysical Monograph Series, 0, , 155-161.	0.1	4
89	Empirical Magnetic Field Models for the Space Weather Program. Geophysical Monograph Series, 2013, , 273-280.	0.1	4
90	Empirical Modeling of Dayside Magnetic Structures Associated With Polar Cusps. Journal of Geophysical Research: Space Physics, 2018, 123, 9078-9092.	0.8	4

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91	Magnetotail Configuration During a Steady Convection Event as Observed by Lowâ€Altitude and Magnetospheric Spacecraft. Journal of Geophysical Research: Space Physics, 2018, 123, 8390-8406.	0.8	4
92	Recent progress in the data-based modeling of magnetospheric currents. Geophysical Monograph Series, 2000, , 61-70.	0.1	3
93	A Back-Tracing Code to Study the Magnetosphere Transmission Function for Primary Cosmic Rays. Geophysical Monograph Series, 0, , 301-305.	0.1	3
94	Building the Magnetosphere From Magnetic Bubbles. Geophysical Research Letters, 2018, 45, 6382-6389.	1.5	2
95	Models of Magnetospheric Magnetic Field. Journal of Geomagnetism and Geoelectricity, 1991, 43, 325-336.	0.8	2
96	Correction to â€œComparison of empirical field models and global MHD simulations: The near-tail currentsâ€•by T. I.Pulkkinen, D. N. Baker, R. J. Walker, J. Raeder, and M. Ashour-Abdalla. Geophysical Research Letters, 1996, 23, 315-316.	1.5	1
97	Correction to â€œTail plasma sheet models derived from Geotail particle dataâ€. Journal of Geophysical Research, 2003, 108, .	3.3	0
98	Global Magnetospheric Dynamics During Magnetic Storms of Different Intensities. Geophysical Monograph Series, 0, , 293-300.	0.1	0
99	Data-Based Models of the Global Geospace Magnetic Field: Challenges and Prospects of the ISTP Era. Geophysical Monograph Series, 2013, , 371-382.	0.1	0