

Levon A Avanov

List of Publications by Year in descending order

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87
papers

4,616
citations

117453

34
h-index

102304

66
g-index

89
all docs

89
docs citations

89
times ranked

1747
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Fast Plasma Investigation for Magnetospheric Multiscale. <i>Space Science Reviews</i> , 2016, 199, 331-406. | 3.7 | 960 |
| 2 | Electron-scale measurements of magnetic reconnection in space. <i>Science</i> , 2016, 352, aaf2939. | 6.0 | 545 |
| 3 | Electron-scale dynamics of the diffusion region during symmetric magnetic reconnection in space. <i>Science</i> , 2018, 362, 1391-1395. | 6.0 | 221 |
| 4 | Lower hybrid waves in the ion diffusion and magnetospheric inflow regions. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 517-533. | 0.8 | 108 |
| 5 | Magnetospheric Multiscale observations of magnetic reconnection associated with Kelvin-Helmholtz waves. <i>Geophysical Research Letters</i> , 2016, 43, 5606-5615. | 1.5 | 104 |
| 6 | MMS observations of electron-scale filamentary currents in the reconnection exhaust and near the X line. <i>Geophysical Research Letters</i> , 2016, 43, 6060-6069. | 1.5 | 99 |
| 7 | Ion-scale secondary flux ropes generated by magnetopause reconnection as resolved by MMS. <i>Geophysical Research Letters</i> , 2016, 43, 4716-4724. | 1.5 | 95 |
| 8 | Electron scale structures and magnetic reconnection signatures in the turbulent magnetosheath. <i>Geophysical Research Letters</i> , 2016, 43, 5969-5978. | 1.5 | 92 |
| 9 | Rippled Quasiperpendicular Shock Observed by the Magnetospheric Multiscale Spacecraft. <i>Physical Review Letters</i> , 2016, 117, 165101. | 2.9 | 87 |
| 10 | Estimates of terms in Ohm's law during an encounter with an electron diffusion region. <i>Geophysical Research Letters</i> , 2016, 43, 5918-5925. | 1.5 | 86 |
| 11 | MMS observations of large guide field symmetric reconnection between colliding reconnection jets at the center of a magnetic flux rope at the magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 5536-5544. | 1.5 | 84 |
| 12 | Currents and associated electron scattering and bouncing near the diffusion region at Earth's magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 3042-3050. | 1.5 | 81 |
| 13 | Observations of turbulence in a Kelvin-Helmholtz event on 8 September 2015 by the Magnetospheric Multiscale mission. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 11,021. | 0.8 | 81 |
| 14 | Wave-particle energy exchange directly observed in a kinetic Alfvén-branch wave. <i>Nature Communications</i> , 2017, 8, 14719. | 5.8 | 73 |
| 15 | MMS Observation of Magnetic Reconnection in the Turbulent Magnetosheath. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,442. | 0.8 | 73 |
| 16 | Electron energization and mixing observed by MMS in the vicinity of an electron diffusion region during magnetopause reconnection. <i>Geophysical Research Letters</i> , 2016, 43, 6036-6043. | 1.5 | 67 |
| 17 | Electron jet of asymmetric reconnection. <i>Geophysical Research Letters</i> , 2016, 43, 5571-5580. | 1.5 | 66 |
| 18 | Magnetospheric Multiscale observations of large-amplitude, parallel, electrostatic waves associated with magnetic reconnection at the magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 5626-5634. | 1.5 | 66 |

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|----|---|------|-----------|
| 19 | Electron currents and heating in the ion diffusion region of asymmetric reconnection. <i>Geophysical Research Letters</i> , 2016, 43, 4691-4700. | 1.5 | 53 |
| 20 | Electron diffusion region during magnetopause reconnection with an intermediate guide field: Magnetospheric multiscale observations. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5235-5246. | 0.8 | 52 |
| 21 | Electron Crescent Distributions as a Manifestation of Diamagnetic Drift in an Electron-Scale Current Sheet: Magnetospheric Multiscale Observations Using New 7.5Åms Fast Plasma Investigation Moments. <i>Geophysical Research Letters</i> , 2018, 45, 578-584. | 1.5 | 52 |
| 22 | Energy limits of electron acceleration in the plasma sheet during substorms: A case study with the Magnetospheric Multiscale (MMS) mission. <i>Geophysical Research Letters</i> , 2016, 43, 7785-7794. | 1.5 | 51 |
| 23 | Electron Heating at Kinetic Scales in Magnetosheath Turbulence. <i>Astrophysical Journal</i> , 2017, 836, 247. | 1.6 | 50 |
| 24 | Electron dynamics in a subproton-gyroscale magnetic hole. <i>Geophysical Research Letters</i> , 2016, 43, 4112-4118. | 1.5 | 49 |
| 25 | Kinetic evidence of magnetic reconnection due to Kelvin-Helmholtz waves. <i>Geophysical Research Letters</i> , 2016, 43, 5635-5643. | 1.5 | 47 |
| 26 | Autogenous and efficient acceleration of energetic ions upstream of Earth's bow shock. <i>Nature</i> , 2018, 561, 206-210. | 13.7 | 47 |
| 27 | Electron Scattering by High-frequency Whistler Waves at Earth's Bow Shock. <i>Astrophysical Journal Letters</i> , 2017, 842, L11. | 3.0 | 46 |
| 28 | Drift waves, intense parallel electric fields, and turbulence associated with asymmetric magnetic reconnection at the magnetopause. <i>Geophysical Research Letters</i> , 2017, 44, 2978-2986. | 1.5 | 46 |
| 29 | Whistler mode waves and Hall fields detected by MMS during a dayside magnetopause crossing. <i>Geophysical Research Letters</i> , 2016, 43, 5943-5952. | 1.5 | 44 |
| 30 | Solitary Waves Across Supercritical Quasi-Perpendicular Shocks. <i>Geophysical Research Letters</i> , 2018, 45, 5809-5817. | 1.5 | 43 |
| 31 | Spacecraft Observations and Analytic Theory of Crescent-Shaped Electron Distributions in Asymmetric Magnetic Reconnection. <i>Physical Review Letters</i> , 2016, 117, 185101. | 2.9 | 42 |
| 32 | Magnetospheric Multiscale mission observations of the outer electron diffusion region. <i>Geophysical Research Letters</i> , 2017, 44, 2049-2059. | 1.5 | 41 |
| 33 | Spacecraft and Instrument Photoelectrons Measured by the Dual Electron Spectrometers on MMS. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,548. | 0.8 | 39 |
| 34 | Finite gyroradius effects in the electron outflow of asymmetric magnetic reconnection. <i>Geophysical Research Letters</i> , 2016, 43, 6724-6733. | 1.5 | 37 |
| 35 | Reconnection With Magnetic Flux Pileup at the Interface of Converging Jets at the Magnetopause. <i>Geophysical Research Letters</i> , 2019, 46, 1937-1946. | 1.5 | 36 |
| 36 | Cold ion demagnetization near the X-line of magnetic reconnection. <i>Geophysical Research Letters</i> , 2016, 43, 6759-6767. | 1.5 | 35 |

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|----|--|-----|-----------|
| 37 | Signatures of complex magnetic topologies from multiple reconnection sites induced by Kelvinâ€Helmholtz instability. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 9926-9939. | 0.8 | 35 |
| 38 | Magnetic Reconnection at a Thin Current Sheet Separating Two Interlaced Flux Tubes at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1779-1793. | 0.8 | 35 |
| 39 | The substructure of a flux transfer event observed by the MMS spacecraft. <i>Geophysical Research Letters</i> , 2016, 43, 9434-9443. | 1.5 | 33 |
| 40 | The Hall Electric Field in Earth's Magnetotail Thin Current Sheet. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 1052-1062. | 0.8 | 32 |
| 41 | Lower Hybrid Drift Waves and Electromagnetic Electron Spaceâ€Phase Holes Associated With Dipolarization Fronts and Fieldâ€Aligned Currents Observed by the Magnetospheric Multiscale Mission During a Substorm. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 12,236. | 0.8 | 31 |
| 42 | Transient, smallâ€scale fieldâ€aligned currents in the plasma sheet boundary layer during storm time substorms. <i>Geophysical Research Letters</i> , 2016, 43, 4841-4849. | 1.5 | 30 |
| 43 | Lower-Hybrid Drift Waves Driving Electron Nongyrotropic Heating and Vortical Flows in a Magnetic Reconnection Layer. <i>Physical Review Letters</i> , 2020, 125, 025103. | 2.9 | 29 |
| 44 | Decay of mesoscale flux transfer events during quasiâ€continuous spatially extended reconnection at the magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 4755-4762. | 1.5 | 28 |
| 45 | Ion Kinetics in a Hot Flow Anomaly: MMS Observations. <i>Geophysical Research Letters</i> , 2018, 45, 11,520. | 1.5 | 28 |
| 46 | On the Kinetic Nature of Solar Wind Discontinuities. <i>Geophysical Research Letters</i> , 2019, 46, 1185-1194. | 1.5 | 27 |
| 47 | The Properties of Lion Roars and Electron Dynamics in Mirror Mode Waves Observed by the Magnetospheric MultiScale Mission. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 93-103. | 0.8 | 26 |
| 48 | Magnetic Reconnection Inside a Flux Rope Induced by Kelvinâ€Helmholtz Vortices. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027665. | 0.8 | 26 |
| 49 | Energy partitioning constraints at kinetic scales in low- β^2 turbulence. <i>Physics of Plasmas</i> , 2018, 25, . | 0.7 | 25 |
| 50 | Crossâ€Shock Potential in Rippled Versus Planar Quasiâ€Perpendicular Shocks Observed by MMS. <i>Geophysical Research Letters</i> , 2019, 46, 2381-2389. | 1.5 | 25 |
| 51 | Polar-Interball coordinated observations of plasma and magnetic field characteristics in the regions of the northern and southern distant cusps. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 2-1. | 3.3 | 23 |
| 52 | Smallâ€scale Flux Transfer Events Formed in the Reconnection Exhaust Region Between Two X Lines. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8473-8488. | 0.8 | 23 |
| 53 | Electron Vorticity Indicative of the Electron Diffusion Region of Magnetic Reconnection. <i>Geophysical Research Letters</i> , 2019, 46, 6287-6296. | 1.5 | 23 |
| 54 | Quantitative analysis of a Hall system in the exhaust of asymmetric magnetic reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5277-5289. | 0.8 | 21 |

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|----|--|-----|-----------|
| 55 | Strong current sheet at a magnetosheath jet: Kinetic structure and electron acceleration. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 9608-9618. | 0.8 | 20 |
| 56 | Spacecraft Observations of Oblique Electron Beams Breaking the Frozen-In Law During Asymmetric Reconnection. <i>Physical Review Letters</i> , 2018, 120, 055101. | 2.9 | 20 |
| 57 | On the Ubiquity of Magnetic Reconnection Inside Flux Transfer Event-Like Structures at the Earth's Magnetopause. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086726. | 1.5 | 20 |
| 58 | Two-scale ion meandering caused by the polarization electric field during asymmetric reconnection. <i>Geophysical Research Letters</i> , 2016, 43, 7831-7839. | 1.5 | 19 |
| 59 | MMS Measurements of the Vlasov Equation: Probing the Electron Pressure Divergence Within Thin Current Sheets. <i>Geophysical Research Letters</i> , 2019, 46, 7862-7872. | 1.5 | 19 |
| 60 | Investigation of Electron Distribution Functions Associated With Whistler Waves at Dipolarization Fronts in the Earth's Magnetotail: MMS Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028268. | 0.8 | 19 |
| 61 | Simultaneous Remote Observations of Intense Reconnection Effects by DMSP and MMS Spacecraft During a Storm Time Substorm. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10891-10909. | 0.8 | 17 |
| 62 | Systematic Uncertainties in Plasma Parameters Reported by the Fast Plasma Investigation on NASA's Magnetospheric Multiscale Mission. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10345-10359. | 0.8 | 16 |
| 63 | Reconnection driven lobe convection: Interball tail probe observations and global simulations. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2000, 62, 833-849. | 0.6 | 15 |
| 64 | On the deviation from Maxwellian of the ion velocity distribution functions in the turbulent magnetosheath. <i>Journal of Plasma Physics</i> , 2020, 86, . | 0.7 | 15 |
| 65 | Structures in the terms of the Vlasov equation observed at Earth's magnetopause. <i>Nature Physics</i> , 2021, 17, 1056-1065. | 6.5 | 15 |
| 66 | Ion demagnetization in the magnetopause current layer observed by MMS. <i>Geophysical Research Letters</i> , 2016, 43, 4850-4857. | 1.5 | 12 |
| 67 | Performance of a space-based wavelet compressor for plasma count data on the MMS Fast Plasma Investigation. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 765-779. | 0.8 | 12 |
| 68 | Contribution of Anisotropic Electron Current to the Magnetotail Current Sheet as a Function of Location and Plasma Conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027251. | 0.8 | 12 |
| 69 | Automated Classification of Plasma Regions Using 3D Particle Energy Distributions. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029620. | 0.8 | 11 |
| 70 | Magnetic Reconnection Inside a Flux Transfer Event-Like Structure in Magnetopause Kelvin-Helmholtz Waves. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027527. | 0.8 | 10 |
| 71 | Characteristics of Resonant Electrons Interacting With Whistler Waves in the Nearest Dipolarizing Magnetotail. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029440. | 0.8 | 9 |
| 72 | Parallel electron heating in the magnetospheric inflow region. <i>Geophysical Research Letters</i> , 2017, 44, 4384-4392. | 1.5 | 8 |

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|----|--|-----|-----------|
| 73 | Fourâ€Spacecraft Measurements of the Shape and Dimensionality of Magnetic Structures in the Nearâ€Earth Plasma Environment. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 6850-6868. | 0.8 | 7 |
| 74 | Latitudinal Dependence of the Kelvinâ€Helmholtz Instability and Beta Dependence of Vortexâ€Induced Highâ€Guide Field Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027333. | 0.8 | 7 |
| 75 | Comparison of the Flank Magnetopause at Nearâ€Earth and Lunar Distances: MMS and ARTEMIS Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028406. | 0.8 | 6 |
| 76 | Shock Drift Acceleration of Ions in an Interplanetary Shock Observed by MMS. <i>Astrophysical Journal Letters</i> , 2020, 891, L26. | 3.0 | 6 |
| 77 | Microchannel plate lifetime experiment for the DIS and DES instruments on the Magnetospheric Multiscale Mission. <i>Planetary and Space Science</i> , 2018, 161, 92-98. | 0.9 | 5 |
| 78 | The parameterization of microchannel-plate-based detection systems. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 10,005-10,018. | 0.8 | 4 |
| 79 | Extending the dynamic range of microchannel plate detectors using charge-integration-based counting. <i>Review of Scientific Instruments</i> , 2018, 89, 073301. | 0.6 | 3 |
| 80 | Terrestrial Bow Shock Parameters From MMS Measurements: Dependence on Upstream and Downstream Time Ranges. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027231. | 0.8 | 3 |
| 81 | Event Studies of O + Density Variability Within Quietâ€Time Plasma Sheet. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 4168-4187. | 0.8 | 2 |
| 82 | Observations of Mirror Mode Structures in the Dawnâ€Side Magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028649. | 0.8 | 2 |
| 83 | Particle Acceleration by Dense Impulsive Structures Moving in Ambient Magnetospheric Plasma. 3â€Hybrid Kinetic Modeling and MMS Observations. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL088590. | 1.5 | 2 |
| 84 | Thick escaping magnetospheric ion layer in magnetopause reconnection with MMS observations. <i>Geophysical Research Letters</i> , 2016, 43, 6028-6035. | 1.5 | 1 |
| 85 | Three Solar Irradiance Proxies for Aperture Photoelectron Detections in Topâ€Hat ESAs Coated With Ebonolâ€C. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, . | 0.8 | 1 |
| 86 | Production of Negative Hydrogen Ions Within the MMS Fast Plasma Investigation Due to Solar Wind Bombardment. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 6161-6170. | 0.8 | 0 |
| 87 | Hybrid Kinetic Model of the Interaction Between the Dense Plasma Clouds and Magnetospheric Plasma on Large Time and Spatial Scales, and Comparison With MMS Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, . | 0.8 | 0 |