

Gunter Stober

List of Publications by Year in descending order

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97
papers

1,877
citations

218677

26
h-index

361022

35
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148
all docs

148
docs citations

148
times ranked

1163
citing authors

#	ARTICLE	IF	CITATIONS
1	Statistical Parameter Estimation for Observation Error Modelling: Application to Meteor Radars. , 2022, , 185-213.		2
2	Mesosphere and Lower Thermosphere Winds and Tidal Variations During the 2019 Antarctic Sudden Stratospheric Warming. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	8
3	A case study of a ducted gravity wave event over northern Germany using simultaneous airglow imaging and wind-field observations. Annales Geophysicae, 2022, 40, 179-190.	1.6	4
4	Continuous temperature soundings at the stratosphere and lower mesosphere with a ground-based radiometer considering the Zeeman effect. Atmospheric Measurement Techniques, 2022, 15, 2231-2249.	3.1	2
5	Development of a Polarimetric 50-GHz Spectrometer for Temperature Sounding in the Middle Atmosphere. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 5644-5651.	4.9	2
6	Dual frequency measurements of meteor head echoes simultaneously detected with the MAARSY and EISCAT radar systems. Icarus, 2021, 355, 114137.	2.5	5
7	High precision meteor observations with the Canadian automated meteor observatory: Data reduction pipeline and application to meteoroid mechanical strength measurements. Icarus, 2021, 354, 114097.	2.5	19
8	Seasonal evolution of winds, atmospheric tides, and Reynolds stress components in the Southern Hemisphere mesosphere–lower thermosphere in 2019. Annales Geophysicae, 2021, 39, 1-29.	1.6	15
9	Observation of the A Carinid Meteor Shower 2020 Unexpected Outburst. Planetary Science Journal, 2021, 2, 56.	3.6	3
10	Vertical Structure of the Arctic Spring Transition in the Middle Atmosphere. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034353.	3.3	12
11	Radar observations of Draconid outbursts. Monthly Notices of the Royal Astronomical Society, 2021, 507, 852-857.	4.4	3
12	Interhemispheric differences of mesosphere–lower thermosphere winds and tides investigated from three whole-atmosphere models and meteor radar observations. Atmospheric Chemistry and Physics, 2021, 21, 13855-13902.	4.9	24
13	Meteoroid Mass Estimation Based on Single-Frequency Radar Cross Section Measurements. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029525.	2.4	2
14	An Improved Method to Measure Head Echoes Using a Meteor Radar. Planetary Science Journal, 2021, 2, 197.	3.6	6
15	Development of a Polarimetric 50 GHz Spectrometer for Temperature Sounding in the Middle Atmosphere. , 2021, , .		2
16	Atmospheric tomography using the Nordic Meteor Radar Cluster and Chilean Observation Network De Meteor Radars: network details and 3D-Var retrieval. Atmospheric Measurement Techniques, 2021, 14, 6509-6532.	3.1	10
17	Characteristics of very faint (+16) meteors detected with the Middle Atmosphere ALOMAR Radar System (MAARSY). Icarus, 2020, 340, 113444.	2.5	5
18	Precision Measurements of Radar Transverse Scattering Speeds From Meteor Phase Characteristics. Radio Science, 2020, 55, e2019RS006987.	1.6	11

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19	Coupling From the Middle Atmosphere to the Exobase: Dynamical Disturbance Effects on Light Chemical Species. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028331.	2.4	12
20	First measurements of tides in the stratosphere and lower mesosphere by ground-based Doppler microwave wind radiometry. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 2367-2386.	4.9	3
21	Secondary Gravity Waves Generated by Breaking Mountain Waves Over Europe. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031662.	3.3	43
22	Small-scale variability of stratospheric ozone during the sudden stratospheric warming 2018/2019 observed at Ny-Ålesund, Svalbard. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 10791-10806.	4.9	9
23	Trends of atmospheric water vapour in Switzerland from ground-based radiometry, FTIR and GNSS data. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 11223-11244.	4.9	16
24	Comparative study between ground-based observations and NAVGEM-HA analysis data in the mesosphere and lower thermosphere region. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 11979-12010.	4.9	24
25	Climatologies and long-term changes in mesospheric wind and wave measurements based on radar observations at high and mid latitudes. <i>Annales Geophysicae</i> , 2019, 37, 851-875.	1.6	27
26	On the evaluation of the phase relation between temperature and wind tides based on ground-based measurements and reanalysis data in the middle atmosphere. <i>Annales Geophysicae</i> , 2019, 37, 581-602.	1.6	21
27	Mesospheric anomalous diffusion during noctilucent cloud scenarios. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 5259-5267.	4.9	5
28	Can VHF radars at polar latitudes measure mean vertical winds in the presence of PMSE?. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 4485-4497.	4.9	14
29	Statistical climatology of mid-latitude mesospheric summer echoes characterised by OSWIN (Ostsee-Wind) radar observations. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 5251-5258.	4.9	2
30	PMC Turbo: Studying Gravity Wave and Instability Dynamics in the Summer Mesosphere Using Polar Mesospheric Cloud Imaging and Profiling From a Stratospheric Balloon. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 6423-6443.	3.3	27
31	Connection between the length of day and wind measurements in the mesosphere and lower thermosphere at mid- and high latitudes. <i>Annales Geophysicae</i> , 2019, 37, 1-14.	1.6	2
32	Middle Atmosphere Variability and Model Uncertainties as Investigated in the Framework of the ARISE Project. , 2019, , 845-887.		17
33	Relations Between Semidiurnal Tidal Variants Through Diagnosing the Zonal Wavenumber Using a Phase Differencing Technique Based on Two Ground-Based Detectors. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 4015-4026.	3.3	29
34	A meteoroid stream survey using meteor head echo observations from the Middle Atmosphere ALOMAR Radar System (MAARSY). <i>Icarus</i> , 2018, 309, 177-186.	2.5	26
35	Semidiurnal solar tide differences between fall and spring transition times in the Northern Hemisphere. <i>Annales Geophysicae</i> , 2018, 36, 999-1008.	1.6	19
36	Derivation of gravity wave intrinsic parameters and vertical wavelength using a single scanning OH(3-1) airglow spectrometer. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 2937-2947.	3.1	8

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37	Seasonal variability of atmospheric tides in the mesosphere and lower thermosphere: meteor radar data and simulations. <i>Annales Geophysicae</i> , 2018, 36, 825-830.	1.6	23
38	Mesospheric Temperature During the Extreme Midlatitude Noctilucent Cloud Event on 18/19 July 2016. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 13,775.	3.3	12
39	Simultaneous observations of NLCs and MSEs at midlatitudes: implications for formation and advection of ice particles. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 15569-15580.	4.9	3
40	Retrieving horizontally resolved wind fields using multi-static meteor radar observations. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 4891-4907.	3.1	36
41	Observation of Kelvinâ€Helmholtz instabilities and gravity waves in the summer mesopause above Andenes in Northern Norway. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 6721-6732.	4.9	18
42	High-resolution vertical velocities and their power spectrum observed with the MAARSY radar â€Part 1: frequency spectrum. <i>Annales Geophysicae</i> , 2018, 36, 577-586.	1.6	8
43	Intercomparison of middle-atmospheric wind in observations and models. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 1971-1987.	3.1	24
44	Comparison of mesospheric winds from a high-altitude meteorological analysis system and meteor radar observations during the boreal winters of 2009â€2010 and 2012â€2013. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2017, 154, 132-166.	1.6	57
45	Analysis of small-scale structures in lidar observations of noctilucent clouds using a pattern recognition method. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2017, 162, 48-56.	1.6	10
46	Simultaneous optical and meteor head echo measurements using the Middle Atmosphere Alomar Radar System (MAARSY): Data collection and preliminary analysis. <i>Planetary and Space Science</i> , 2017, 141, 25-34.	1.7	19
47	Global observations of 2-day wave coupling to the diurnal tide in a high-altitude forecast-assimilation system. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 4135-4149.	3.3	13
48	Characterization of a Double Mesospheric Bore Over Europe. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 9738-9750.	2.4	20
49	Application of Manleyâ€Rowe Relation in Analyzing Nonlinear Interactions Between Planetary Waves and the Solar Semidiurnal Tide During 2009 Sudden Stratospheric Warming Event. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,783.	2.4	30
50	Climatology of semidiurnal lunar and solar tides at middle and high latitudes: Interhemispheric comparison. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 7750-7760.	2.4	31
51	Polar mesospheric horizontal divergence and relative vorticity measurements using multiple specular meteor radars. <i>Radio Science</i> , 2017, 52, 811-828.	1.6	33
52	Results of the first continuous meteor head echo survey at polar latitudes. <i>Icarus</i> , 2017, 297, 1-13.	2.5	26
53	Experimental Evidence of Arctic Summer Mesospheric Upwelling and Its Connection to Cold Summer Mesopause. <i>Geophysical Research Letters</i> , 2017, 44, 9151-9158.	4.0	9
54	Exceptionally strong summer-like zonal wind reversal in the upper mesosphere during winter 2015/16. <i>Annales Geophysicae</i> , 2017, 35, 711-720.	1.6	46

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55	A comparison of 11-year mesospheric and lower thermospheric winds determined by meteor and MF radar at 69°N. <i>Annales Geophysicae</i> , 2017, 35, 893-906.	1.6	28
56	Coded continuous wave meteor radar. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 829-839.	3.1	27
57	Derivation of turbulent energy dissipation rate with the Middle Atmosphere Alomar Radar System (MAARSY) and radiosondes at Andøya, Norway. <i>Annales Geophysicae</i> , 2016, 34, 1209-1229.	1.6	23
58	The extraordinarily strong and cold polar vortex in the early northern winter 2015/2016. <i>Geophysical Research Letters</i> , 2016, 43, 12,287.	4.0	44
59	Mid-latitude mesospheric clouds and their environment from SOFIE observations. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2016, 149, 1-14.	1.6	24
60	Quasi-biennial oscillation modulation of the middle and high latitude mesospheric semidiurnal tides during August–September. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 4869-4879.	2.4	22
61	On the angular dependence and scattering model of polar mesospheric summer echoes at VHF. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 278-288.	3.3	12
62	A multistatic and multifrequency novel approach for specular meteor radars to improve wind measurements in the MLT region. <i>Radio Science</i> , 2015, 50, 431-442.	1.6	46
63	Upper mesospheric lunar tides over middle and high latitudes during sudden stratospheric warming events. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 3084-3096.	2.4	74
64	Corrigendum to "Development of the mesospheric Na layer at 69° N during the Geminids meteor shower 2010", published in <i>Ann. Geophys.</i> , 31, 61–73, 2013. <i>Annales Geophysicae</i> , 2015, 33, 197-197.	1.6	1
65	Radar observations of the Maribo fireball over Juliusruh: revised trajectory and meteoroid mass estimation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 450, 1460-1464.	4.4	14
66	Wind and spectral width estimations in PMSE with coherent radar imaging. , 2014, , .		0
67	MAARSY multiple receiver phase calibration using radio sources. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2014, 118, 55-63.	1.6	16
68	Quantifying gravity wave momentum fluxes with Mesosphere Temperature Mappers and correlative instrumentation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 13,583.	3.3	35
69	Nonspecular meteor trails from non-aligned irregularities: Can they be explained by presence of charged meteor dust?. <i>Geophysical Research Letters</i> , 2014, 41, 3336-3343.	4.0	31
70	Neutral density variation from specular meteor echo observations spanning one solar cycle. <i>Geophysical Research Letters</i> , 2014, 41, 6919-6925.	4.0	37
71	Development of the mesospheric Na layer at 69° N during the Geminids meteor shower 2010. <i>Annales Geophysicae</i> , 2013, 31, 61-73.	1.6	16
72	The impact of planetary waves on the latitudinal displacement of sudden stratospheric warmings. <i>Annales Geophysicae</i> , 2013, 31, 1397-1415.	1.6	24

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73	Determination of meteor-head echo trajectories using the interferometric capabilities of MAARSY. <i>Annales Geophysicae</i> , 2013, 31, 1843-1851.	1.6	23
74	Investigation of gravity waves using horizontally resolved radial velocity measurements. <i>Atmospheric Measurement Techniques</i> , 2013, 6, 2893-2905.	3.1	37
75	The Geminid meteor shower during the ECOMA sounding rocket campaign: specular and head echo radar observations. <i>Annales Geophysicae</i> , 2013, 31, 473-487.	1.6	20
76	Investigation of horizontal structures at mesospheric altitudes using coherent radar imaging. <i>Advances in Radio Science</i> , 2013, 11, 319-325.	0.7	1
77	In situ observations of meteor smoke particles (MSP) during the Geminids 2010: constraints on MSP size, work function and composition. <i>Annales Geophysicae</i> , 2012, 30, 1661-1673.	1.6	39
78	MAARSY: The new MST radar on Andãyaâ€”System description and first results. <i>Radio Science</i> , 2012, 47, .	1.6	74
79	Neutral air density variations during strong planetary wave activity in the mesopause region derived from meteor radar observations. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2012, 74, 55-63.	1.6	62
80	First three-dimensional observations of polar mesosphere winter echoes: Resolving space-time ambiguity. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	22
81	Gravity wave momentum fluxes in the MLTâ€”Part I: Seasonal variation at Collm (51.3Â°N, 13.0Â°E). <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2011, 73, 904-910.	1.6	34
82	Meteoroid mass determination from underdense trails. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2011, 73, 895-900.	1.6	22
83	Cosmic radio noise observations using a mid-latitude meteor radar. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2011, 73, 1069-1076.	1.6	12
84	High-speed video-based tracking of optically trapped colloids. <i>Journal of Optics (United Kingdom)</i> , 2011, 13, 044011.	2.2	24
85	A piecewise linear model for detecting climatic trends and their structural changes with application to mesosphere/lower thermosphere winds over Collm, Germany. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	19
86	Meteor radar temperatures over Collm (51.3Â°N, 13Â°E). <i>Advances in Space Research</i> , 2008, 42, 1253-1258.	2.6	42
87	Midlatitude mesosphere/lower thermosphere meridional winds and temperatures measured with meteor radar. <i>Advances in Space Research</i> , 2007, 39, 1278-1283.	2.6	41
88	Distortion of meteor count rates due to cosmic radio noise and atmospheric particularities. <i>Advances in Radio Science</i> , 0, 8, 237-241.	0.7	2
89	New experiments to validate the radiation pattern of the Middle Atmosphere Alomar Radar System (MAARSY). <i>Advances in Radio Science</i> , 0, 11, 283-289.	0.7	11
90	Triple-frequency meteor radar full wave scattering. Measurements and comparison to theory. <i>Astronomy and Astrophysics</i> , 0, , .	5.1	3

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91	Validation of the radiation pattern of the Middle Atmosphere Alomar Radar System (MAARSY). <i>Advances in Radio Science</i> , 0, 10, 245-253.	0.7	6
92	Horizontally resolved structures of radar backscatter from polar mesospheric layers. <i>Advances in Radio Science</i> , 0, 10, 285-290.	0.7	7
93	MAARSY – the new MST radar on Andromeda: first results of spaced antenna and Doppler measurements of atmospheric winds in the troposphere and mesosphere using a partial array. <i>Advances in Radio Science</i> , 0, 10, 291-298.	0.7	17
94	Geometric considerations of polar mesospheric summer echoes in tilted beams using coherent radar imaging. <i>Advances in Radio Science</i> , 0, 12, 197-203.	0.7	6
95	Validation of the radiation pattern of the VHF MST radar MAARSY by scattering off a sounding rocket's payload. <i>Advances in Radio Science</i> , 0, 13, 41-48.	0.7	2
96	Meteor radar observations of mesopause region long-period temperature oscillations. <i>Advances in Radio Science</i> , 0, 14, 169-174.	0.7	2
97	Influence of geomagnetic disturbances on mean winds and tides in the mesosphere/lower thermosphere at midlatitudes. <i>Advances in Radio Science</i> , 0, 19, 185-193.	0.7	1