

Torsten Schmidt

List of Publications by Citations

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115
papers

2,962
citations

29
h-index

51
g-index

121
ext. papers

3,289
ext. citations

3.5
avg, IF

4.55
L-index

#	Paper	IF	Citations
115	Atmosphere sounding by GPS radio occultation: First results from CHAMP. <i>Geophysical Research Letters</i> , 2001 , 28, 3263-3266	4.9	353
114	The Radio Occultation Experiment aboard CHAMP: Operational Data Analysis and Validation of Vertical Atmospheric Profiles. <i>Journal of the Meteorological Society of Japan</i> , 2004 , 82, 381-395	2.8	138
113	A global climatology of ionospheric irregularities derived from GPS radio occultation. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	121
112	Estimating the uncertainty of using GPS radio occultation data for climate monitoring: Intercomparison of CHAMP refractivity climate records from 2002 to 2006 from different data centers. <i>Journal of Geophysical Research</i> , 2009 , 114,		98
111	GPS radio occultation with GRACE: Atmospheric profiling utilizing the zero difference technique. <i>Geophysical Research Letters</i> , 2005 , 32,	4.9	98
110	Quantification of structural uncertainty in climate data records from GPS radio occultation. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 1469-1484	6.8	95
109	GPS radio occultation with CHAMP and SAC-C: global monitoring of thermal tropopause parameters. <i>Atmospheric Chemistry and Physics</i> , 2005 , 5, 1473-1488	6.8	91
108	GPS radio occultation with CHAMP and GRACE: A first look at a new and promising satellite configuration for global atmospheric sounding. <i>Annales Geophysicae</i> , 2005 , 23, 653-658	2	91
107	Reproducibility of GPS radio occultation data for climate monitoring: Profile-to-profile inter-comparison of CHAMP climate records 2002 to 2008 from six data centers. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		89
106	GPS Radio Occultation: Results from CHAMP, GRACE and FORMOSAT-3/COSMIC. <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 2009 , 20, 35	1.8	81
105	Observing upper troposphere/lower stratosphere climate with radio occultation data from the CHAMP satellite. <i>Climate Dynamics</i> , 2008 , 31, 49-65	4.2	80
104	Horizontal transport affecting trace gas seasonality in the Tropical Tropopause Layer (TTL). <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		72
103	Tropical tropopause parameters derived from GPS radio occultation measurements with CHAMP. <i>Journal of Geophysical Research</i> , 2004 , 109, n/a-n/a		68
102	GPS radio occultations with CHAMP: A radio holographic analysis of GPS signal propagation in the troposphere and surface reflections. <i>Journal of Geophysical Research</i> , 2002 , 107, ACL 27-1		68
101	A global analysis of wave potential energy in the lower stratosphere derived from 5 years of GPS radio occultation data with CHAMP. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	63
100	Variability of the upper troposphere and lower stratosphere observed with GPS radio occultation bending angles and temperatures. <i>Advances in Space Research</i> , 2010 , 46, 150-161	2.4	60
99	Global tropopause height trends estimated from GPS radio occultation data. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	58

98	A climatology of multiple tropopauses derived from GPS radio occultations with CHAMP and SAC-C. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	51
97	Gravity reduction with three-dimensional atmospheric pressure data for precise ground gravity measurements. <i>Journal of Geodynamics</i> , 2004 , 38, 437-450	2.2	49
96	Amplitude variations in GPS signals as a possible indicator of ionospheric structures. <i>Geophysical Research Letters</i> , 2004 , 31,	4.9	47
95	Observations and simulations of receiver-induced refractivity biases in GPS radio occultation. <i>Journal of Geophysical Research</i> , 2006 , 111,		42
94	Atmospheric sounding by global navigation satellite system radio occultation: An analysis of the negative refractivity bias using CHAMP observations. <i>Journal of Geophysical Research</i> , 2004 , 109,		38
93	Climate-relevant aerosol parameters of South-East-Asian forest fire haze. <i>Atmospheric Environment</i> , 1999 , 33, 3183-3190	5.3	37
92	Integrated water vapor from IGS ground-based GPS observations: initial results from a global 5-min data set. <i>Annales Geophysicae</i> , 2009 , 27, 2851-2859	2	35
91	Validation of GPS slant delays using water vapour radiometers and weather models. <i>Meteorologische Zeitschrift</i> , 2008 , 17, 807-812	3.1	35
90	Global gravity wave activity in the tropopause region from CHAMP radio occultation data. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	34
89	On the determination of gravity wave momentum flux from GPS radio occultation data. <i>Atmospheric Measurement Techniques</i> , 2013 , 6, 3169-3180	4	33
88	Stratospheric gravity wave momentum flux from radio occultations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 4443-4467	4.4	33
87	Gravity waves above the Andes detected from GPS radio occultation temperature profiles: Jet mechanism?. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	31
86	Observed Temperature Changes in the Troposphere and Stratosphere from 1979 to 2018. <i>Journal of Climate</i> , 2020 , 33, 8165-8194	4.4	28
85	Effects of the ionosphere and solar activity on radio occultation signals: Application to CHALLENGING Minisatellite Payload satellite observations. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		27
84	Global monitoring of tropospheric water vapor with GPS radio occultation aboard CHAMP. <i>Advances in Space Research</i> , 2006 , 37, 2222-2227	2.4	25
83	Cross-validation of MIPAS/ENVISAT and GPS-RO/CHAMP temperature profiles. <i>Journal of Geophysical Research</i> , 2004 , 109,		24
82	Aerosol optical properties from columnar data during the second Aerosol Characterization Experiment on the south coast of Portugal. <i>Journal of Geophysical Research</i> , 2002 , 107, AAC 6-1		24
81	Validation and Data Quality of CHAMP Radio Occultation Data 2003 , 384-396		24

80	Recent variability of the tropical tropopause inversion layer. <i>Geophysical Research Letters</i> , 2013 , 40, 6308-6313	4.9	23
79	Identification and localization of layers in the ionosphere using the eikonal and amplitude of radio occultation signals. <i>Atmospheric Measurement Techniques</i> , 2012 , 5, 1-16	4	23
78	Sporadic <i>E</i> signatures revealed from multi-satellite radio occultation measurements. <i>Advances in Radio Science</i> , 2010 , 8, 225-230		22
77	Application of GPS radio occultation method for observation of the internal waves in the atmosphere. <i>Journal of Geophysical Research</i> , 2006 , 111,		22
76	Large-amplitude gravity waves above the southern Andes, the Drake Passage, and the Antarctic Peninsula. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		20
75	GNSS remote sensing of the Australian tropopause. <i>Climatic Change</i> , 2011 , 105, 597-618	4.5	20
74	The global distribution of gravity wave energy in the lower stratosphere derived from GPS data and gravity wave modelling: Attempt and challenges. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2007 , 69, 2238-2248	2	20
73	Observational characteristics of the tropopause inversion layer derived from CHAMP/GRACE radio occultations and MOZAIC aircraft data. <i>Journal of Geophysical Research</i> , 2010 , 115,		19
72	Combined forecast impact of GRACE-A and CHAMP GPS radio occultation bending angle profiles. <i>Atmospheric Science Letters</i> , 2007 , 8, 43-50	2.4	19
71	Analysis of atmospheric and ionospheric structures using the GPS/MET and CHAMP radio occultation database: a methodological review. <i>GPS Solutions</i> , 2005 , 9, 122-143	4.4	18
70	Consistency and structural uncertainty of multi-mission GPS radio occultation records. <i>Atmospheric Measurement Techniques</i> , 2020 , 13, 2547-2575	4	16
69	On the retrieval of the specular reflection in GNSS carrier observations for ocean altimetry. <i>Radio Science</i> , 2012 , 47, n/a-n/a	1.4	16
68	An assessment of the quality of GPS/MET radio limb soundings during February 1997. <i>Physics and Chemistry of the Earth</i> , 2001 , 26, 125-130		16
67	Quantifying contributions to the recent temperature variability in the tropical tropopause layer. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 5815-5826	6.8	15
66	The CHAMPCLIM Project: An Overview 2005 , 615-620		15
65	First results from the GPS atmosphere sounding experiment TOR aboard the TerraSAR-X satellite. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 6687-6699	6.8	14
64	Phase acceleration: a new important parameter in GPS occultation technology. <i>GPS Solutions</i> , 2010 , 14, 3-11	4.4	14
63	Comparison of Water Vapor and Temperature Results From GPS Radio Occultation Aboard CHAMP With MOZAIC Aircraft Measurements. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2008 , 46, 3406-3411	8.1	13

62	A data archive of GPS navigation messages. <i>GPS Solutions</i> , 2009 , 13, 35-41	4.4	12
61	Validation of stratospheric temperatures measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. <i>Journal of Geophysical Research</i> , 2005 , 110,		12
60	Atmospheric sounding with CHAMP: GPS ground station data for occultation processing. <i>Physics and Chemistry of the Earth</i> , 2004 , 29, 267-275	3	12
59	GPS Radio Occultation with CHAMP, GRACE-A, SAC-C, TerraSAR-X, and FORMOSAT-3/COSMIC: Brief Review of Results from GFZ 2009 , 3-15		12
58	GPS radio occultation with CHAMP: an innovative remote sensing method of the atmosphere. <i>Advances in Space Research</i> , 2004 , 33, 1036-1040	2.4	11
57	Wave activity at ionospheric heights above the Andes Mountains detected from FORMOSAT-3/COSMIC GPS radio occultation data. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 2046-2051	2.6	10
56	Non-tidal atmospheric and oceanic mass variations and their impact on GRACE data analysis. <i>Journal of Geodynamics</i> , 2012 , 59-60, 9-15	2.2	10
55	Comparison of ECMWF analyses with GPS radio occultations from CHAMP. <i>Annales Geophysicae</i> , 2008 , 26, 3225-3234	2	10
54	On the distortions in calculated GW parameters during slanted atmospheric soundings. <i>Atmospheric Measurement Techniques</i> , 2018 , 11, 1363-1375	4	10
53	Global Climatologies Based on Radio Occultation Data: The CHAMPCLIM Project 2006 , 303-314		10
52	Pre-Operational Retrieval of Radio Occultation Based Climatologies 2006 , 315-323		10
51	Atmosphere sounding by GPS radio occultation: First results from TanDEM-X and comparison with TerraSAR-X. <i>Advances in Space Research</i> , 2014 , 53, 272-279	2.4	9
50	On the influence of zonal gravity wave distributions on the Southern Hemisphere winter circulation. <i>Annales Geophysicae</i> , 2017 , 35, 785-798	2	9
49	A gravity wave analysis near to the Andes Range from GPS radio occultation data and mesoscale numerical simulations: Two case studies. <i>Advances in Space Research</i> , 2009 , 44, 494-500	2.4	9
48	A method to improve the determination of wave perturbations close to the tropopause by using a digital filter. <i>Atmospheric Measurement Techniques</i> , 2011 , 4, 1777-1784	4	8
47	Limb sounders tracking topographic gravity wave activity from the stratosphere to the ionosphere around midlatitude Andes. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 9014-9022	2.6	7
46	Estimated errors in a global gravity wave climatology from GPS radio occultation temperature profiles. <i>Advances in Space Research</i> , 2010 , 46, 174-179	2.4	7
45	Location of layered structures in the ionosphere and atmosphere by use of GPS occultation data. <i>Advances in Space Research</i> , 2008 , 42, 224-228	2.4	7

44	GPS Radio Occultation with CHAMP 2003 , 371-383		7
43	GPS radio occultation with CHAMP: First results and status of the experiment. <i>International Association of Geodesy Symposia</i> , 2002 , 273-278	0.8	7
42	11 Years of Rayleigh Lidar Observations of Gravity Wave Activity Above the Southern Tip of South America. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 451-467	4.4	7
41	Large Uncertainties in Estimation of Tropical Tropopause Temperature Variabilities Due to Model Vertical Resolution. <i>Geophysical Research Letters</i> , 2019 , 46, 10043-10052	4.9	6
40	Validation of refractivity profiles derived from GRAS raw-sampling data. <i>Atmospheric Measurement Techniques</i> , 2011 , 4, 1541-1550	4	6
39	Decadal variations in atmospheric water vapor time series estimated using ground-based GNSS		6
38	The CHAMP Atmospheric Processing System for Radio Occultation Measurements 2005 , 597-602		5
37	First results from the GPS atmosphere sounding experiment TOR aboard the TerraSAR-X satellite		5
36	Global Atmospheric Sounding with GPS Radio Occultation aboard CHAMP 2006 , 55-67		5
35	GPS Radio Occultation with CHAMP and GRACE: Recent Results 2006 , 3-16		5
34	Using Convective Available Potential Energy (CAPE) and Dew-Point Temperature to Characterize Rainfall-Extreme Events in the South-Central Andes. <i>Atmosphere</i> , 2019 , 10, 379	2.7	4
33	. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2013 , 51, 3240-3249	8.1	4
32	Distribution functions and statistical parameters that may be used to characterize limb sounders gravity wave climatologies in the stratosphere. <i>Advances in Space Research</i> , 2015 , 56, 619-633	2.4	4
31	Improved determination of the atmospheric attraction with 3D air density data and its reduction on ground gravity measurements 2007 , 541-548		4
30	UTLS temperature validation of MPI-ESM decadal hindcast experiments with GPS radio occultations. <i>Meteorologische Zeitschrift</i> , 2016 , 25, 673-683	3.1	4
29	A Method to Determine Gravity Wave Net Momentum Flux, Propagation Direction, and Real Wavelengths: A GPS Radio Occultations Soundings Case Study. <i>Earth and Space Science</i> , 2018 , 5, 222-230 ^{3.1}		3
28	Least-squares harmonic estimation of the tropopause parameters using GPS radio occultation measurements. <i>Meteorology and Atmospheric Physics</i> , 2013 , 120, 73-82	2	3
27	A comparative and numerical study of effects of gravity waves in small miss-distance and miss-time GPS radio occultation temperature profiles. <i>Advances in Space Research</i> , 2010 , 45, 1231-1234	2.4	3

26	Different mechanisms of the ionospheric influence on GPS occultation signals. <i>GPS Solutions</i> , 2005 , 9, 96-104	4.4	3
25	Double Tropopauses and the Tropical Belt Connected to ENSO. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL089027	4.9	3
24	Refractivity Biases in GNSS Occultation Data 2006 , 37-43		3
23	Observations and Ray Tracing of Gravity Waves: Implications for Global Modeling. <i>Springer Atmospheric Sciences</i> , 2013 , 383-408	0.7	2
22	A method to improve the determination of wave perturbations close to the tropopause by using a digital filter 2011 ,		2
21	GPS Radio Occultation with CHAMP: Comparison of Atmospheric Profiles from GFZ Potsdam and IGAM Graz 2005 , 525-530		2
20	Using Atmospheric Uncertainties for GRACE De-aliasing: First Results. <i>International Association of Geodesy Symposia</i> , 2012 , 147-152	0.8	2
19	GNSS Activities for Natural Disaster Monitoring and Climate Change Detection at GFZ [An Overview 2010 , 159-171		2
18	Global Sporadic E Layer Characteristics Obtained from GPS Radio Occultation Measurements. <i>Springer Atmospheric Sciences</i> , 2013 , 207-221	0.7	2
17	On the behavior of rainfall maxima at the eastern Andes. <i>Atmospheric Research</i> , 2020 , 234, 104792	5.4	2
16	GPS radio occultation with TerraSAR-X and TanDEM-X: sensitivity of lower troposphere sounding to the Open-Loop Doppler model 2014 ,		1
15	A new approach to global gravity wave momentum flux determination from GPS radio occultation data 2013 ,		1
14	Validation of refractivity profiles derived from GRAS raw-sampling data 2011 ,		1
13	Atmospheric Profiling with CHAMP: Status of the Operational Data Analysis, Validation of the Recent Data Products and Future Prospects 2005 , 495-500		1
12	Comparisons of MIPAS/ENVISAT and GPS-RO/CHAMP Temperatures 2005 , 567-572		1
11	Quantification of structural uncertainty in climate data records from GPS radio occultation		1
10	Recent Advances in Gravity Wave Analysis from Long Term Global GPS Radio Occultation Observations 2009 , 153-164		1
9	A Model for the Relationship between Rainfall, GNSS-Derived Integrated Water Vapour, and CAPE in the Eastern Central Andes. <i>Remote Sensing</i> , 2021 , 13, 3788	5	1

- 8 Tropopause analysis over the Iranian region using GPS radio occultation data. *Advances in Space Research*, **2013**, 52, 1700-1707 2.4 ○
- 7 An Analysis of the Lower Tropospheric Refractivity Bias by Heuristic Sliding Spectral Methods **2005**, 507-512
- 6 Amplitude Variations in CHAMP Radio Occultation Signal as an Indicator of the Ionospheric Activity **2005**, 431-440
- 5 Tropical Tropopause Characteristics from CHAMP **2005**, 561-566
- 4 Analysis of Seasonal and Daily Mid-Latitude Tropopause Pressure Using GPS Radio Occultation Data and NCEP-NCAR Reanalyses **2006**, 253-263
- 3 The Operational Processing System for GPS Radio Occultation Data from CHAMP and GRACE. *Advanced Technologies in Earth Sciences*, **2010**, 455-460
- 2 Global Atmospheric Data from CHAMP and GRACE-A: Overview and Results. *Advanced Technologies in Earth Sciences*, **2010**, 433-441
- 1 Reprocessing and Application of GPS Radio Occultation Data from CHAMP and GRACE. *Advanced Technologies in Earth Sciences*, **2014**, 63-71