Torsten Schmidt

List of Publications by Year in Descending Order

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	A Model for the Relationship between Rainfall, GNSS-Derived Integrated Water Vapour, and CAPE in the Eastern Central Andes. *Remote Sensing*, **2021**, 13, 3788	5	1
114	Consistency and structural uncertainty of multi-mission GPS radio occultation records. *Atmospheric Measurement Techniques*, **2020**, 13, 2547-2575	4	16
113	Observed Temperature Changes in the Troposphere and Stratosphere from 1979 to 2018. *Journal of Climate*, **2020**, 33, 8165-8194	4.4	28
112	On the behavior of rainfall maxima at the eastern Andes. *Atmospheric Research*, **2020**, 234, 104792	5.4	2
111	Double Tropopauses and the Tropical Belt Connected to ENSO. *Geophysical Research Letters*, **2020**, 47, e2020GL089027	4.9	3
110	Large Uncertainties in Estimation of Tropical Tropopause Temperature Variabilities Due to Model Vertical Resolution. *Geophysical Research Letters*, **2019**, 46, 10043-10052	4.9	6
109	Using Convective Available Potential Energy (CAPE) and Dew-Point Temperature to Characterize Rainfall-Extreme Events in the South-Central Andes. *Atmosphere*, **2019**, 10, 379	2.7	4
108	11 Years of Rayleigh Lidar Observations of Gravity Wave Activity Above the Southern Tip of South America. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 451-467	4.4	7
107	A Method to Determine Gravity Wave Net Momentum Flux, Propagation Direction, and Real Wavelengths: A GPS Radio Occultations Soundings Case Study. *Earth and Space Science*, **2018**, 5, 222-230	3.1	3
106	On the distortions in calculated GW parameters during slanted atmospheric soundings. *Atmospheric Measurement Techniques*, **2018**, 11, 1363-1375	4	10
105	On the influence of zonal gravity wave distributions on the Southern Hemisphere winter circulation. *Annales Geophysicae*, **2017**, 35, 785-798	2	9
104	UTLS temperature validation of MPI-ESM decadal hindcast experiments with GPS radio occultations. *Meteorologische Zeitschrift*, **2016**, 25, 673-683	3.1	4
103	Stratospheric gravity wave momentum flux from radio occultations. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 4443-4467	4.4	33
102	Limb sounders tracking topographic gravity wave activity from the stratosphere to the ionosphere around midlatitude Andes. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 9014-9022	2.6	7
101	Quantifying contributions to the recent temperature variability in the tropical tropopause layer. *Atmospheric Chemistry and Physics*, **2015**, 15, 5815-5826	6.8	15
100	Distribution functions and statistical parameters that may be used to characterize limb sounders gravity wave climatologies in the stratosphere. *Advances in Space Research*, **2015**, 56, 619-633	2.4	4
99	Wave activity at ionospheric heights above the Andes Mountains detected from FORMOSAT-3/COSMIC GPS radio occultation data. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 2046-2051	2.6	10

98	Atmosphere sounding by GPS radio occultation: First results from TanDEM-X and comparison with TerraSAR-X. *Advances in Space Research*, **2014**, 53, 272-279	2.4	9
97	GPS radio occultation with TerraSAR-X and TanDEM-X: sensitivity of lower troposphere sounding to the Open-Loop Doppler model **2014**,		1
96	Reprocessing and Application of GPS Radio Occultation Data from CHAMP and GRACE. *Advanced Technologies in Earth Sciences*, **2014**, 63-71		
95	. *IEEE Transactions on Geoscience and Remote Sensing*, **2013**, 51, 3240-3249	8.1	4
94	Least-squares harmonic estimation of the tropopause parameters using GPS radio occultation measurements. *Meteorology and Atmospheric Physics*, **2013**, 120, 73-82	2	3
93	Tropopause analysis over the Iranian region using GPS radio occultation data. *Advances in Space Research*, **2013**, 52, 1700-1707	2.4	0
92	Observations and Ray Tracing of Gravity Waves: Implications for Global Modeling. *Springer Atmospheric Sciences*, **2013**, 383-408	0.7	2
91	A new approach to global gravity wave momentum flux determination from GPS radio occultation data **2013**,		1
90	On the determination of gravity wave momentum flux from GPS radio occultation data. *Atmospheric Measurement Techniques*, **2013**, 6, 3169-3180	4	33
89	Quantification of structural uncertainty in climate data records from GPS radio occultation. *Atmospheric Chemistry and Physics*, **2013**, 13, 1469-1484	6.8	95
88	Recent variability of the tropical tropopause inversion layer. *Geophysical Research Letters*, **2013**, 40, 6308-6313	4.6	23
87	Global Sporadic E Layer Characteristics Obtained from GPS Radio Occultation Measurements. *Springer Atmospheric Sciences*, **2013**, 207-221	0.7	2
86	Large-amplitude gravity waves above the southern Andes, the Drake Passage, and the Antarctic Peninsula. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		20
85	Non-tidal atmospheric and oceanic mass variations and their impact on GRACE data analysis. *Journal of Geodynamics*, **2012**, 59-60, 9-15	2.2	10
84	Horizontal transport affecting trace gas seasonality in the Tropical Tropopause Layer (TTL). *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		72
83	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. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		89
82	On the retrieval of the specular reflection in GNSS carrier observations for ocean altimetry. *Radio Science*, **2012**, 47, n/a-n/a	1.4	16
81	Identification and localization of layers in the ionosphere using the eikonal and amplitude of radio occultation signals. *Atmospheric Measurement Techniques*, **2012**, 5, 1-16	4	23

80	Using Atmospheric Uncertainties for GRACE De-aliasing: First Results. *International Association of Geodesy Symposia*, **2012**, 147-152	0.8	2
79	First results from the GPS atmosphere sounding experiment TOR aboard the TerraSAR-X satellite. *Atmospheric Chemistry and Physics*, **2011**, 11, 6687-6699	6.8	14
78	GNSS remote sensing of the Australian tropopause. *Climatic Change*, **2011**, 105, 597-618	4.5	20
77	A method to improve the determination of wave perturbations close to the tropopause by using a digital filter. *Atmospheric Measurement Techniques*, **2011**, 4, 1777-1784	4	8
76	Validation of refractivity profiles derived from GRAS raw-sampling data **2011**,		1
75	Validation of refractivity profiles derived from GRAS raw-sampling data. *Atmospheric Measurement Techniques*, **2011**, 4, 1541-1550	4	6
74	A method to improve the determination of wave perturbations close to the tropopause by using a digital filter **2011**,		2
73	Sporadic <i>E</i> signatures revealed from multi-satellite radio occultation measurements. *Advances in Radio Science*, **2010**, 8, 225-230		22
72	Observational characteristics of the tropopause inversion layer derived from CHAMP/GRACE radio occultations and MOZAIC aircraft data. *Journal of Geophysical Research*, **2010**, 115,		19
71	Phase acceleration: a new important parameter in GPS occultation technology. *GPS Solutions*, **2010**, 14, 3-11	4.4	14
70	A comparative and numerical study of effects of gravity waves in small miss-distance and miss-time GPS radio occultation temperature profiles. *Advances in Space Research*, **2010**, 45, 1231-1234	2.4	3
69	Variability of the upper troposphere and lower stratosphere observed with GPS radio occultation bending angles and temperatures. *Advances in Space Research*, **2010**, 46, 150-161	2.4	60
68	Estimated errors in a global gravity wave climatology from GPS radio occultation temperature profiles. *Advances in Space Research*, **2010**, 46, 174-179	2.4	7
67	GNSS Activities for Natural Disaster Monitoring and Climate Change Detection at GFZ An Overview **2010**, 159-171		2
66	The Operational Processing System for GPS Radio Occultation Data from CHAMP and GRACE. *Advanced Technologies in Earth Sciences*, **2010**, 455-460		
65	Global Atmospheric Data from CHAMP and GRACE-A: Overview and Results. *Advanced Technologies in Earth Sciences*, **2010**, 433-441		
64	GPS Radio Occultation: Results from CHAMP, GRACE and FORMOSAT-3/COSMIC. *Terrestrial, Atmospheric and Oceanic Sciences*, **2009**, 20, 35	1.8	81
63	A data archive of GPS navigation messages. *GPS Solutions*, **2009**, 13, 35-41	4.4	12

62	A gravity wave analysis near to the Andes Range from GPS radio occultation data and mesoscale numerical simulations: Two case studies. *Advances in Space Research*, **2009**, 44, 494-500	2.4	9
61	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. *Journal of Geophysical Research*, **2009**, 114,		98
60	Integrated water vapor from IGS ground-based GPS observations: initial results from a global 5-min data set. *Annales Geophysicae*, **2009**, 27, 2851-2859	2	35
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	Recent Advances in Gravity Wave Analysis from Long Term Global GPS Radio Occultation Observations **2009**, 153-164		1
57	Global tropopause height trends estimated from GPS radio occultation data. *Geophysical Research Letters*, **2008**, 35,	4.9	58
56	A global climatology of ionospheric irregularities derived from GPS radio occultation. *Geophysical Research Letters*, **2008**, 35,	4.9	121
55	Global gravity wave activity in the tropopause region from CHAMP radio occultation data. *Geophysical Research Letters*, **2008**, 35,	4.9	34
54	Comparison of Water Vapor and Temperature Results From GPS Radio Occultation Aboard CHAMP With MOZAIC Aircraft Measurements. *IEEE Transactions on Geoscience and Remote Sensing*, **2008**, 46, 3406-3411	8.1	13
53	Validation of GPS slant delays using water vapour radiometers and weather models. *Meteorologische Zeitschrift*, **2008**, 17, 807-812	3.1	35
52	Comparison of ECMWF analyses with GPS radio occultations from CHAMP. *Annales Geophysicae*, **2008**, 26, 3225-3234	2	10
51	Location of layered structures in the ionosphere and atmosphere by use of GPS occultation data. *Advances in Space Research*, **2008**, 42, 224-228	2.4	7
50	Observing upper troposphere–lower stratosphere climate with radio occultation data from the CHAMP satellite. *Climate Dynamics*, **2008**, 31, 49-65	4.2	80
49	Effects of the ionosphere and solar activity on radio occultation signals: Application to CHAllenging Minisatellite Payload satellite observations. *Journal of Geophysical Research*, **2007**, 112, n/a-n/a		27
48	Combined forecast impact of GRACE-A and CHAMP GPS radio occultation bending angle profiles. *Atmospheric Science Letters*, **2007**, 8, 43-50	2.4	19
47	The global distribution of gravity wave energy in the lower stratosphere derived from GPS data and gravity wave modelling: Attempt and challenges. *Journal of Atmospheric and Solar-Terrestrial Physics*, **2007**, 69, 2238-2248	2	20
46	Improved determination of the atmospheric attraction with 3D air density data and its reduction on ground gravity measurements **2007**, 541-548		4
45	A global analysis of wave potential energy in the lower stratosphere derived from 5 years of GPS radio occultation data with CHAMP. *Geophysical Research Letters*, **2006**, 33,	4.9	63

44	A climatology of multiple tropopauses derived from GPS radio occultations with CHAMP and SAC-C. *Geophysical Research Letters*, **2006**, 33,	4.9	51
43	Application of GPS radio occultation method for observation of the internal waves in the atmosphere. *Journal of Geophysical Research*, **2006**, 111,		22
42	Observations and simulations of receiver-induced refractivity biases in GPS radio occultation. *Journal of Geophysical Research*, **2006**, 111,		42
41	Gravity waves above the Andes detected from GPS radio occultation temperature profiles: Jet mechanism?. *Geophysical Research Letters*, **2006**, 33,	4.9	31
40	Global monitoring of tropospheric water vapor with GPS radio occultation aboard CHAMP. *Advances in Space Research*, **2006**, 37, 2222-2227	2.4	25
39	Analysis of Seasonal and Daily Mid-Latitude Tropopause Pressure Using GPS Radio Occultation Data and NCEP-NCAR Reanalyses **2006**, 253-263		
38	Global Atmospheric Sounding with GPS Radio Occultation aboard CHAMP **2006**, 55-67		5
37	GPS Radio Occultation with CHAMP and GRACE: Recent Results **2006**, 3-16		5
36	Global Climatologies Based on Radio Occultation Data: The CHAMPCLIM Project **2006**, 303-314		10
35	Pre-Operational Retrieval of Radio Occultation Based Climatologies **2006**, 315-323		10
34	Refractivity Biases in GNSS Occultation Data **2006**, 37-43		3
33	Validation of stratospheric temperatures measured by Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) on Envisat. *Journal of Geophysical Research*, **2005**, 110,		12
32	GPS radio occultation with GRACE: Atmospheric profiling utilizing the zero difference technique. *Geophysical Research Letters*, **2005**, 32,	4.9	98
31	Atmospheric Profiling with CHAMP: Status of the Operational Data Analysis, Validation of the Recent Data Products and Future Prospects **2005**, 495-500		1
30	An Analysis of the Lower Tropospheric Refractivity Bias by Heuristic Sliding Spectral Methods **2005**, 507-512		
29	GPS Radio Occultation with CHAMP: Comparison of Atmospheric Profiles from GFZ Potsdam and IGAM Graz **2005**, 525-530		2
28	Comparisons of MIPAS/ENVISAT and GPS-RO/CHAMP Temperatures **2005**, 567-572		1
27	The CHAMP Atmospheric Processing System for Radio Occultation Measurements **2005**, 597-602		5

26	GPS radio occultation with CHAMP and SAC-C: global monitoring of thermal tropopause parameters. *Atmospheric Chemistry and Physics*, **2005**, 5, 1473-1488	6.8	91
25	Different mechanisms of the ionospheric influence on GPS occultation signals. *GPS Solutions*, **2005**, 9, 96-104	4.4	3
24	Analysis of atmospheric and ionospheric structures using the GPS/MET and CHAMP radio occultation database: a methodological review. *GPS Solutions*, **2005**, 9, 122-143	4.4	18
23	The CHAMPCLIM Project: An Overview **2005**, 615-620		15
22	GPS radio occultation with CHAMP and GRACE: A first look at a new and promising satellite configuration for global atmospheric sounding. *Annales Geophysicae*, **2005**, 23, 653-658	2	91
21	Amplitude Variations in CHAMP Radio Occultation Signal as an Indicator of the Ionospheric Activity **2005**, 431-440		
20	Tropical Tropopause Characteristics from CHAMP **2005**, 561-566		
19	The Radio Occultation Experiment aboard CHAMP: Operational Data Analysis and Validation of Vertical Atmospheric Profiles. *Journal of the Meteorological Society of Japan*, **2004**, 82, 381-395	2.8	138
18	GPS radio occultation with CHAMP: an innovative remote sensing method of the atmosphere. *Advances in Space Research*, **2004**, 33, 1036-1040	2.4	11
17	Atmospheric sounding by global navigation satellite system radio occultation: An analysis of the negative refractivity bias using CHAMP observations. *Journal of Geophysical Research*, **2004**, 109,		38
16	Amplitude variations in GPS signals as a possible indicator of ionospheric structures. *Geophysical Research Letters*, **2004**, 31,	4.9	47
15	Tropical tropopause parameters derived from GPS radio occultation measurements with CHAMP. *Journal of Geophysical Research*, **2004**, 109, n/a-n/a		68
14	Cross-validation of MIPAS/ENVISAT and GPS-RO/CHAMP temperature profiles. *Journal of Geophysical Research*, **2004**, 109,		24
13	Atmospheric sounding with CHAMP: GPS ground station data for occultation processing. *Physics and Chemistry of the Earth*, **2004**, 29, 267-275	3	12
12	Gravity reduction with three-dimensional atmospheric pressure data for precise ground gravity measurements. *Journal of Geodynamics*, **2004**, 38, 437-450	2.2	49
11	GPS Radio Occultation with CHAMP **2003**, 371-383		7
10	Validation and Data Quality of CHAMP Radio Occultation Data **2003**, 384-396		24
9	GPS radio occultations with CHAMP: A radio holographic analysis of GPS signal propagation in the troposphere and surface reflections. *Journal of Geophysical Research*, **2002**, 107, ACL 27-1		68

8	Aerosol optical properties from columnar data during the second Aerosol Characterization Experiment on the south coast of Portugal. *Journal of Geophysical Research*, **2002**, 107, AAC 6-1		24
7	GPS radio occultation with CHAMP: First results and status of the experiment. *International Association of Geodesy Symposia*, **2002**, 273-278	0.8	7
6	Atmosphere sounding by GPS radio occultation: First results from CHAMP. *Geophysical Research Letters*, **2001**, 28, 3263-3266	4.9	353
5	An assessment of the quality of GPS/MET radio limb soundings during February 1997. *Physics and Chemistry of the Earth*, **2001**, 26, 125-130		16
4	Climate-relevant aerosol parameters of South-East-Asian forest fire haze. *Atmospheric Environment*, **1999**, 33, 3183-3190	5.3	37
3	First results from the GPS atmosphere sounding experiment TOR aboard the TerraSAR-X satellite		5
2	Quantification of structural uncertainty in climate data records from GPS radio occultation		1
1	Decadal variations in atmospheric water vapor time series estimated using ground-based GNSS		6