

List of Publications

Peer Reviewed Articles

2019

Jacobi, C., Arras, C., Geißler, C., and **Lilienthal, F.**: *Quarterdiurnal signature in sporadic E occurrence rates and comparison with neutral wind shear*, Ann. Geophys., 37, 273–288, doi:10.5194/angeo-37-273-2019, 2019

Lilienthal, F. and Jacobi, C.: *Nonlinear forcing mechanisms of the terdiurnal solar tide and their impact on the zonal mean circulation*, Ann. Geophys. Disc., doi:10.5194/angeo-2019-37, under review, 2019

Korotyshkin, D., Merzlyakov, E., Jacobi, C., **F. Lilienthal**, and Wu, Q.: *Longitudinal MLT wind structure at higher mid-latitudes as seen by meteor radars at central and Eastern Europe (13°E/49°E)*, Adv. Space Res., 63, 3154 – 3166, doi:10.1016/j.asr.2019.01.036, 2019

2018

Jacobi, C., Geißler, C., **Lilienthal, F.**, and Krug, A.: *Forcing mechanisms of the 6 h tide in the mesosphere/lower thermosphere*, Adv. Radio Sci., 16, 141–147, doi:10.5194/ars-16-141-2018, 2018b

Lilienthal, F., Jacobi, C., and Geißler, C.: *Forcing mechanisms of the terdiurnal tide*, Atmos. Chem. Phys., 18, 15 725–15 742, doi:10.5194/acp-18-15725-2018, 2018

2017

Lilienthal, F., Jacobi, C., Schmidt, T., de la Torre, A., and Alexander, P.: *On the influence of zonal gravity wave distributions on the Southern Hemisphere winter circulation*, Ann. Geophys., 35, 785–798, doi:10.5194/angeo-35-785-2017, 2017

2016

Šácha, P., **Lilienthal, F.**, Jacobi, C., and Pišoft, P.: *Influence of the spatial distribution of gravity wave activity on the middle atmospheric dynamics*, Atmos. Chem. Phys., 16, 15 755–15 775, doi:10.5194/acp-16-15755-2016, 2016a

2015

Jacobi, C., **Lilienthal, F.**, Geißler, C., and Krug, A.: *Long-term variability of mid-latitude mesosphere-lower thermosphere winds over Collm (51°N, 13°E)*, J. Atm. Sol.-Terr. Phys., 136, 174–186, doi:10.1016/j.jastp.2015.05.006, 2015d

Lilienthal, F. and Jacobi, C.: *Meteor radar quasi 2-day wave observations over 10 years at Collm (51.3°N, 13.0°E)*, Atmos. Chem. Phys., 15, 9917–9927, doi:10.5194/acp-15-9917-2015, 2015a

2014

Lilienthal, F. and Jacobi, C.: *Seasonal and inter-annual variability of the quasi 2 day wave over Collm (51.3°N, 13°E) as obtained from VHF meteor radar measurements*, Adv. Radio Sci., 12, 205–210, doi:10.5194/ars-12-205-2014, 2014a

2012

Lilienthal, F. and Böttcher, F.: *The need of irrigation of maize and winter wheat in the context of climate change*, *Hercynia N. F.*, 45, 161–171, 2012

Other Articles

Lilienthal, F. and Jacobi, C.: *The Role of Solar Heating in the Forcing of Terdiurnal Tides*, *Rep. Inst. Meteorol. Univ. Leipzig*, 54, URL <http://nbn-resolving.de/urn:nbn:de:bsz:15-qucosa-212126>, 2016b

Jacobi, C., **Lilienthal, F.**, Schmidt, T., and de la Torre, A.: *Modeling the Southern Hemisphere winter circulation using realistic zonal mean gravity wave information in the lower atmosphere*, *Rep. Inst. Meteorol. Univ. Leipzig*, 54, URL <http://nbn-resolving.de/urn:nbn:de:bsz:15-qucosa-212126>, 2016b

Lilienthal, F., Šácha, P., and Jacobi, C.: *Gravity Wave effects on a Modeled Mean Circulation*, *Rep. Inst. Meteorol. Univ. Leipzig*, 53, 11–22, URL <http://nbn-resolving.de/urn:nbn:de:bsz:15-qucosa-212118>, 2015b

Krug, A., **Lilienthal, F.**, and Jacobi, C.: *The terdiurnal tide in the MUAM circulation model*, *Rep. Inst. Meteorol. Univ. Leipzig*, 53, 33–44, URL <http://nbn-resolving.de/urn:nbn:de:bsz:15-qucosa-212118>, 2015

Lilienthal, F. and Jacobi, C.: *Comparison of QTDW amplitudes and phases over Collm based on two different analyses*, *Rep. Inst. Meteorol. Univ. Leipzig*, 52, 25–34, URL <http://nbn-resolving.de/urn:nbn:de:bsz:15-qucosa-212081>, 2014b

Posters

Lilienthal, F. and Jacobi, C.: *Terdiurnal Components of Tidal Forcing Terms in a Middle Atmosphere Model*, VCAIS, Potsdam, 2-6 July, URL http://home.uni-leipzig.de/lilienthal/poster/2018_VCAIS.pdf, 2018a

Jacobi, C., **Lilienthal, F.**, Geißler, C., Krug, A., and Stober, G.: *Forcing mechanisms of the terdiurnal and quarterdiurnal tide*, EGU, Vienna, URL http://home.uni-leipzig.de/jacobi/bilder/2018_EGU_Tides.pdf, 2018c

Jacobi, C., Krug, A., **Lilienthal, F.**, and Merzlyakov, E.: *Interannual and long-term variability of the quarterdiurnal tide in the mesosphere/lower thermosphere at midlatitudes*, Trend Workshop, Kühlungsborn, Germany, 19-23 September, URL http://home.uni-leipzig.de/lilienthal/poster/2016_Trends_QDT.pdf, 2016a

de la Torre, A., Jacobi, C., **Lilienthal, F.**, and Alexander, P.: *Modeling the Southern Hemisphere winter circulation using stratospheric gravity wave information based on GNSS radio occultations*, OPAC-IROWG, Leibnitz, Austria, 8-14 September, URL http://home.uni-leipzig.de/lilienthal/poster/2016_OPAC_GW.pdf, 2016

Šácha, P., **Lilienthal, F.**, Pišoft, P., and Jacobi, C.: *Influence of spatial distribution of the gravity wave activity on the middle atmospheric circulation and transport*, SHARP, Berlin, 16-19 February, 2016b

Lilienthal, F., Šácha, P., Jacobi, C., and Pišoft, P.: *The Influence of Locally Increased Gravity Wave Drag on the Middle Atmosphere Circulation – A Model Study*, EGU, Vienna, 17 - 22 April, URL http://home.uni-leipzig.de/lilienthal/poster/2016_EGU_GW.pdf, 2016

Jacobi, C., Lima, L. M., Krug, A., and **Lilienthal, F.**: *Radar observations of the quarterdiurnal tide in the mesosphere/lower thermosphere*, EGU, Vienna, 17 - 22 April, URL http://home.uni-leipzig.de/lilienthal/poster/2016_EGU_QDT.pdf, 2016c

Lilienthal, F. and Jacobi, C.: *10 years of radar observations of the quasi two-day wave over Collm (51°N, 13°E)*, 26th IUGG, Prague, June 22 - July 2, URL http://home.uni-leipzig.de/lilienthal/poster/2015_IUGG_QTDW.pdf, 2015b

Lilienthal, F., Jacobi, C., and Šácha, P.: *Effect of the lower atmosphere gravity wave regional distribution on the middle atmospheric circulation in a global numerical model*, 26th IUGG, Prague, 22 June - 2 July, URL http://home.uni-leipzig.de/lilienthal/poster/2015_IUGG_GW.pdf, 2015a

Šácha, P., Pišoft, P., **Lilienthal, F.**, and Jacobi, C.: *Internal Gravity Wave Activity Hotspot and Implications for the Middle Atmospheric Dynamics*, 26th IUGG, Prague, 22 June - 2 July, 2015c

Šácha, P., Pišoft, P., **Lilienthal, F.**, and Jacobi, C.: *Internal Gravity Wave Activity Hotspot and Implications for the Middle Atmospheric Dynamics*, ATMOS, Heraklion, 08-12 June, 2015b

Conference Proceedings

Šácha, P., Pišoft, P., **Lilienthal, F.**, and Jacobi, C.: *Internal Gravity Wave Activity Hotspot and Implications for the Middle Atmospheric Dynamics*, ATMOS, Heraklion, 2015a

Böttcher, F., **Lilienthal, F.**, Hage, B., Müller, M., and Jäkel, K.: *Die Entwicklung der Beregnungsbedürftigkeit landwirtschaftlicher Kulturpflanzen vor dem Hintergrund des manifesten und projizierten Klimawandels*, in: 9. Deutsche Klimatagung, Freiburg, 9.-12. Oktober 2012: Kurzfassungen von Vorträgen und Posterbeiträgen, edited by Mayer, H., vol. 23, p. 134, 2012b

Böttcher, F., **Lilienthal, F.**, Hage, B., Müller, M., and Jäkel, K.: *Die Entwicklung der Beregnungsbedürftigkeit landwirtschaftlicher Kulturpflanzen vor dem Hintergrund des manifesten und projizierten Klimawandels*, in: Beiträge zur Bernburger Pflanzenforschung: Nährstoff- und Wasserversorgung der

Pflanzenbestände unter den Bedingungen der Klimaerwärmung, edited by Deubel, A. and Orzessek, D., pp. 144–151, 2012a

Conference Presentations

speaker

Lilienthal, F. and Jacobi, C.: *Numerical Simulation of Wavenumber 3 Tidal Forcing Mechanisms*, VCAIS, Potsdam, 2-6 July, 2018b

Lilienthal, F. and Jacobi, C.: *The Role of Solar Heating in the Forcing of the Teridurnal Tide*, EGU, Vienna, 17 - 22 April, 2016a

Jacobi, C., Geißler, C., **Lilienthal, F.**, and Krug, A.: *Die Dynamik der oberen Mesosphäre und unteren Thermosphäre mittlerer Breiten und ihre Änderung von 1979 bis heute*, 10. Deutsche Klimatagung, Hamburg, 21.-24. September, 2015a

Lilienthal, F. and Jacobi, C.: *A study of the quasi-two-day wave over Collm (51.3° N, 13.0° E) 2005-2012*, Kleinheubacher Tagung, Miltenberg, 23-25 September, 2013

co-author

Jacobi, C., Geißler, C., **Lilienthal, F.**, and Arras, C.: *Quarterdiurnal signature in sporadic E occurrence rates and comparison with neutral wind shear*, VCAIS, Potsdam, 2-6 July, 2018a

Jacobi, C., Lima, L. M., Krug, A., and **Lilienthal, F.**: *Radar observations of the quarterdiurnal tide in the mesosphere/lower thermosphere*, EGU, Vienna, 17 - 22 April, URL http://home.uni-leipzig.de/lilienthal/poster/2016_EGU_QDT.pdf, 2016c

Lima, L., Araujo, L., Rodrigues, C., Batista, P., Jacobi, C., and **Lilienthal, F.**: *Interannual variation of the quasi-two-day wave at 22.7 S*, COSPAR Scientific Assembly, Istanbul, 30 July - 7 August, 2016

Šácha, P. and **Lilienthal, F.**: *Model Study of IGW Hotspot Implications for the Middle Atmospheric Dynamics and Transport*, AGU, San Francisco, 14 - 18 December, 2015

Jacobi, C., Geißler, C., **Lilienthal, F.**, Krug, A., Manson, A., Meek, C., Merzlyakov, E., Portnyagin, Y., Qian, L., and Berger, U.: *Long-term tendencies of mesosphere/lower thermosphere prevailing winds at northern midlatitudes as seen from radar observations and modeling*, 26th IUGG, Prague, 22 June - 2 July, 2015b

Jacobi, C., Geißler, C., Manson, A., Meek, C., Merzlyakov, E., Portnyagin, Y., Qian, L., Berger, U., **Lilienthal, F.**, and Krug, A.: *Mesosphere/lower thermosphere prevailing winds at northern midlatitudes – long-term tendencies derived from radar observations and modeling*, EGU, Vienna, 12 - 17 April, 2015c

Jacobi, C., **Lilienthal, F.**, and Krug, A.: *Lower ionospheric reference height variability due to atmospheric changes*, DPG Frühjahrstagung, Wuppertal, 9 - 13 March, 2015e

Jacobi, C., **Lilienthal, F.**, Lange, S., and Geißler, C.: *Inter-annual and long-term variability of mid-latitude mesosphere-lower thermosphere winds and waves*, 5th IAGA/ICMA/SCOSTEP Workshop on Vertical Coupling in the Atmosphere-Ionosphere System, Antalya, 11-15 August, 2014

Böttcher, F., **Lilienthal, F.**, and Hage, B.: *Berechnungsbedürftigkeit landwirtschaftlicher Fruchtarten in Thüringen und Sachsen*, Sächsisch-Thüringischer Bewässerungstag, 08 December, 2011