

## Oral Publications

### Invited Presentations and Keynotes at International Conferences

- Steiner, A. K.**, Atmospheric climate change – Insights from GNSS RO, *8th International Radio Occultation Working Group Meeting – IROWG-8*, virtual meeting, April 2021.
- Steiner, A. K.** (keynote), GNSS RO for monitoring atmospheric climate change, *EUMETSAT–ROM SAF–C3S Workshop 2020*, online, December 2020.
- Steiner, A. K.** and the SPARC ATC Activity, Observed temperature trends in the troposphere and stratosphere over the last four decades, *5th International Conference on GPS Radio Occultation – ICGPSRO 2020*, Hsinchu, Taiwan (virtual conference), October 2020.
- Steiner, A. K.** and the SPARC ATC Activity, SPARC Activity on Atmospheric Temperature Changes and their Drivers (ATC), *ISSI Team Meeting on Middle Atmosphere Dynamics*, Bern, Switzerland, March 2019.
- Steiner, A. K.**, F. Ladstädter, and the SPARC ATC Activity, Atmospheric temperature trends from observations – an update, *AGU Fall Meeting 2018*, Washington, D.C., USA, December 2018.
- Steiner, A. K.**, Detection and attribution: trends and extremes (Part II of: Climate change, impacts and attribution of anthropogenic causes: status and challenges by Kirchengast G., A.K. Steiner, D.Maraun), *Climate Change, Responsibility and Liability International Conference*, Graz, November 2018.
- Steiner A. K.**, Klimavariabilität und Trends in der Atmosphäre, *Sitzung 12/18 der Kommission Klima und Luftqualität der Österreichischen Akademie der Wissenschaften*, Wien, Austria, October 2018.
- Steiner A. K.**, F. Ladstädter, and H. Wilhelmson, Temperature trends and climate variability from GPS RO, radiosondes, and AMSU, *ICGPSRO 2018 – 4th International Conference on GPS Radio Occultation and 11th FORMOSAT-3/COSMIC Data Users' Workshop*, Taipei, Taiwan, April 2018.
- Foelsche\* U., G. Kirchengast, J. Danzer, M. Schwärz, **A. K. Steiner**, V. Proschek, B. Angerer, F. Ladstädter, and J.Innerkofler, Studying atmosphere and climate with GNSS RO data: recent results from the Wegener Center, Graz, Austria, *ICGPSRO 2018 – 4th International Conference on GPS Radio Occultation and 11th FORMOSAT-3/COSMIC Data Users' Workshop*, Taipeh, Taiwan, April 2018 (\*presenter).
- Kirchengast\*, G., and **A. K. Steiner**, GNSS radio occultation for climate science: where do we stand and what are key next steps? *SGCS17 - IAG Workshop on Satellite Geodesy for Climate Studies*, Bonn, Germany, September 2017 (\*presenter).
- Steiner, A. K.** and the ARSCLiSys group, Atmospheric Climate Monitoring with GNSS Radio Occultation, *14th Annual Meeting Asia Oceania Geosciences Society – AOGS 2017*, Singapore, August 2017.
- Steiner, A. K.** and the ARSCLiSys group, Recent advances in climate monitoring with GNSS radio occultation capturing atmospheric variability and trends, GC41A-1069, *American Geophysical Union (AGU) Fall Meeting 2016*, San Francisco, CA, USA, December 2016.
- Kirchengast\*, G., and **A. K. Steiner**, GNSS radio occultation for climate: new results and advances for monitoring variability, trends, and extreme events, *IAG/CPGPS International Conference on GNSS+ (ICG+2016)*, Shanghai, China, July 2016 (\*presenter).
- Steiner, A. K.**, Einblicke in unsere Atmosphäre mittels GPS Radio-Okkultation: Klimavariabilität, Trends, und Extremereignisse, *Jahreshauptversammlung der Österreichischen Gesellschaft für Meteorologie*, ZAMG, Wien, Austria, March 2016.
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, L. Brunner, M. Schwaerz, R. Biondi, J. Fritzer, J. Schwarz, U. Foelsche, and G. Kirchengast, Observing climate variability and change with GPS radio occultation, *Our Common Future Under Climate Change – CFCC15*, Paris, France, June 2015.
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, R. Biondi, L. Brunner, G. Kirchengast, and the ARSCLiSys group, Atmospheric variability modes and trends in the UTLS from the RO record, *SPARC Stratospheric Temperature Trends Workshop*, Victoria, BC, Canada, April 2015.
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, M. Schwärz, L. Brunner, T. Rieckh, R. Klingler, R. Biondi, J. Fritzer, J. Schwarz, U. Foelsche, and G. Kirchengast, Observing atmospheric variability, extreme events, and

climate change from space with GPS radio occultation, *The Climate Symposium 2014*, Darmstadt, Germany, October 2014.

**Steiner, A. K.**, Climate monitoring with GPS RO – Achievements and challenges, *Eighth FORMOSAT-3/COSMIC Data Users' Workshop*, Boulder, CO, USA, September/October 2014.

**Steiner, A. K.**, Status of the RO record with focus on stratospheric trend analysis, *SPARC Stratospheric Temperature Trends Workshop*, Reading, UK, September 2013.

**Steiner, A. K.** (keynote), Climate monitoring and change detection with GPS Radio Occultation, *2nd International Conference on GPS Radio Occultation (ICGPSRO)*, Taipei, Taiwan, May 2013.

**Steiner, A. K.**, GNSS radio occultation – Utility for weather and climate, *First Gfg2 (GNSS for Global Environmental Earth Observation (GEE0) and GEOSS) Consultation Workshop*, Oslo, Norway, October 2011.

**Steiner, A. K.**, GPS radio occultation for climate monitoring and change detection: Error characteristics, uncertainty, applications, *Stratospheric Processes And their Role in Climate (SPARC) Temperature Trend Assessment Meeting*, Paris, France, September 2011.

**Steiner, A. K.**, B. C. Lackner, F. Ladstädter, B. Scherllin-Pirscher, G. C. Hegerl, U. Foelsche, and G. Kirchengast, GPS radio occultation for observing atmosphere and climate, *UCAR/COSMIC Seminar*, Boulder, CO, USA, August 2010.

**Steiner A. K.**, B. C. Lackner, F. Ladstädter, G. Kirchengast, B. Pirscher, G. C. Hegerl, and U. Foelsche, GPS radio occultation for climate applications, *Intl. Beacon Satellite Symposium*, Barcelona, Spain, June 2010.

**Steiner, A. K.** (invited), G. Kirchengast, B. C. Lackner, B. Pirscher, and U. Foelsche, Atmospheric climate change detection based on GPS/Met and CHAMP radio occultation records 1995 to 2007, *Geophysical Research Abstracts*, Vol. 10, EGU2008-A-09177, *European Geosciences Union (EGU) General Assembly 2008*, Vienna, Austria, April 2008.

**Steiner, A. K.**, G. Kirchengast, M. Borsche, and U. Foelsche, A multi-year comparison of lower stratospheric temperatures from CHAMP radio occultation data with MSU/AMSU records, *3rd International Workshop on Occultations for Probing Atmosphere and Climate (OPAC-3)*, Graz, Austria, September 2007.

**Steiner, A. K.**, Climate change monitoring and atmospheric change analysis by radio occultation, *United Nations/Austria/European Space Agency Symposium on "Space Tools and Solutions for Monitoring the Atmosphere in Support of Sustainable Development"*, Graz, Austria, September 2007.

**Steiner, A. K.**, U. Foelsche, A. Gobiet, and G. Kirchengast, Simulation studies on the analysis of radio occultation data, *2nd GRAS SAF User Workshop*, Helsingør, Denmark, June 2003.

Kirchengast, G., U. Foelsche, and **A. K. Steiner\***, Climate monitoring using GNSS occultation, From promises via simulation studies to real monitoring and beyond, *4th Oersted International Science Team Conference (OIST-4)*, Copenhagen, Denmark, September 2002 (\*presenter).

**Steiner, A. K.**, G. Kirchengast, U. Foelsche, L. Kornblueh, E. Manzini, and L. Bengtsson, GNSS occultation sounding for climate monitoring, *Geophysical Research Abstracts*, Vol. 2, *25th Gen. Assembly of the Europ. Geophys. Society (EGS)*, Nice, France, April 2000.

**Presentations as First or Presenting Author at International Conferences**

- Steiner, A. K.**, and A. Maycock, Activity report – Atmospheric temperature changes and their drivers, 28<sup>th</sup> SPARC SSG Meeting 2021, virtual meeting, February 2021.
- Steiner, A. K.**, F. Ladstädter, M. Stocker, H. Wilhelmson, M. Gorfer, and G. Kirchengast, Recent advances in atmospheric climate monitoring with GNSS radio occultation, *AGU Fall Meeting 2019*, San Francisco, USA December 2019.
- Steiner, A. K.**, and N. Livesey, Long-term records for climate understanding – summary of SPARC Activity presentations, *SPARC SSG Meeting 2019*, Boulder, CO, USA, December 2019.
- Steiner, A. K.**, F. Ladstädter, and the SPARC ATC Activity, Atmospheric temperature trends from observations – an update on recent advances, *ROM SAF-IROWG 2019*, Elsinore, Denmark September 2019.
- Steiner, A. K.**, F. Ladstädter, and the Wegener Center Team, Temperature trends in the free atmosphere from observations – contributions to the IPCC AR6, *ROM SAF-IROWG 2019*, Elsinore, Denmark September 2019.
- Steiner, A. K.**, F. Ladstädter, H. Wilhelmson, M. Stocker, and P. Peter, Klimavariabilität und Trends in der freien Atmosphäre aus Beobachtungsdaten, *DACH 2019*, Garmisch-Partenkirchen, Germany, March 2019.
- Unterberger, C., L. Brunner, S. Nabernegg, K. W. Steininger, **A. K. Steiner\***, E. Stabentheiner, S. Monschein, H. Truhetz (poster), Spring frost risk for regional apple production under a warmer climate, *DACH 2019*, Garmisch-Partenkirchen, Germany, March 2019 (\*presenter).
- Steiner, A. K.**, and A. C. Maycock, Atmospheric temperature changes and their drivers - Activity report, 26<sup>th</sup> SPARC Scientific Steering Group meeting, Kyoto, Japan, October 2018.
- Steiner, A. K.**, F. Ladstädter, H. Wilhelmson, M. Stocker, M. Schwärz, and G. Kirchengast (poster), Advances in GNSS radio occultation for atmospheric climate monitoring, *SPARC General Assembly 2018*, Kyoto, Japan, October 2018.
- Steiner, A. K.**, F. Ladstädter, and H. Wilhelmson, Temperature trends from atmospheric observations, *SPARC ATC Activity 2<sup>nd</sup> Workshop on Atmospheric Temperature Changes and their Drivers*, Paris, France, June 2018.
- Maycock, A. C., W. J. Randel, and **A. K. Steiner\***, Revisiting the mystery of recent stratospheric temperature trends, *SPARC ATC Activity 2<sup>nd</sup> Workshop on Atmospheric Temperature Changes and their Drivers*, Paris, France, June 2018 (\*presenter).
- Steiner, A. K.**, Attribution of extreme events to human induced climate change, *DK Climate Change Annual Workshop*, Wegener Center, Graz, Austria, June 2018.
- Steiner, A. K.**, F. Ladstädter, and H. Wilhelmson (poster), Temperature trends variability in the troposphere and stratosphere from GPS Radio Occultation, *Geophys. Res. Abstracts, Vol. 20, EGU2018-1528, EGU General Assembly 2018*, Vienna, Austria, April 2018.
- Steiner, A. K.**, and A. C. Maycock, Atmospheric temperature changes and their drivers - Activity report, 25<sup>th</sup> SPARC Scientific Steering Group meeting, Incheon, South Korea, October 2017.
- Steiner, A. K.**, F. Ladstädter, H. Wilhelmson, and G. Kirchengast (poster), Atmospheric variability and trends from the GPS RO record, *7. Österreichischer MeteorologInnentag*, Graz, Austria, November 2017.
- Steiner, A. K.**, M. Mochart, F. Ladstädter, B. Angerer, M. Schwärz, C. Ao, H. Gleisner, D. Hunt, T. Schmidt, A. von Engeln, U. Foelsche, S-P. Ho, G. Kirchengast, Y-H. Kuo, K.B. Lauritsen, A.J. Mannucci, C. Marquardt, W. Schreiner, S. Syndergaard, and J. Wickert, Multi-mission GPS RO observations from different processing centers - consistency and structural uncertainty, *COSMIC-IROWG 2017*, Estes Park, CO, USA, September 2017.
- Steiner, A. K.**, F. Ladstädter, H. Wilhelmson, B. Angerer, and G. Kirchengast (poster), Atmospheric variability and trends from the GPS RO record, *COSMIC-IROWG 2017*, Estes Park, CO, USA, September 2017.
- Steiner, A. K.**, G. Kirchengast\*, and Research Teams, Climate use of GNSS radio occultation data, *RO Science Advisory Group 4<sup>th</sup> Meeting*, EUMETSAT, Darmstadt, May 2017.

- Steiner, A. K.**, F. Ladstädter, and H. Wilhelmssen (poster), Vertically resolved trends from GPS Radio Occultation and their uncertainties, *Geophys. Res. Abstracts*, Vol. 19, EGU2017-9489, EGU General Assembly 2017, Vienna, Austria, April 2017.
- Ladstädter, F., **A. K. Steiner\***, B. Angerer, and H. Wilhelmssen (poster), Vertically resolved trends and imprints of recent record years in the UTLS from GPS RO, A13G-0381, *American Geophysical Union (AGU) Fall Meeting 2016*, San Francisco, CA, USA, December 2016 (\*presenter).
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, H. Wilhelmssen, and B. Angerer, Vertically resolved atmospheric trends from the RO record 2001 to 2016, *OPAC-IROWG 2016 International Workshop*, Seggau Castle, Austria, September 2016.
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, R. Klingler, B. Angerer, C. Ao, H. Gleisner, D. Hunt, T. Schmidt, A. von Engeln, U. Foelsche, S-P. Ho, G. Kirchengast, Y-H. Kuo, K. B. Lauritsen, A. J. Mannucci, C. Marquardt, W. Schreiner, S. Syndergaard, and J. Wickert, Consistency of multi-satellite RO records from different data centers: First result, *OPAC-IROWG 2016 International Workshop*, Seggau Castle, Austria, September 2016.
- Steiner, A. K.**, B.C. Lackner, M. A. Ringer, and G. Kirchengast, Model evaluation with GPS radio occultation observations in the UTLS, *SPARC ATC Activity Workshop Atmospheric Temperature Changes and their Drivers*, Graz, Austria, April 2016.
- Steiner, A. K.**, A. C. Maycock, and W. Randel, Atmospheric Temperature Changes and their Drivers (ATC) – New Avenues of the Stratospheric Temperature Trends Activity, *SPARC ATC Activity Workshop Atmospheric Temperature Changes and their Drivers*, Graz, Austria, April 2016.
- Steiner, A. K.**, R. Biondi, G. Kirchengast, and T. Rieckh, Characterization of cyclones and volcanic clouds with GPS radio occultation, *3rd International Conference on GPS Radio Occultation (ICGPSRO)*, Taipei, Taiwan, March 2016.
- Steiner, A. K.**, A. C. Maycock, and W. Randel, Atmospheric temperature changes: new avenues of the stratospheric temperature trends activity, *SPARC 23rd Scientific Steering Group meeting*, Boulder, CO, USA, November 2015.
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, M. Schwaerz, R. Biondi, L. Brunner, U. Foelsche, and G. Kirchengast, GPS radio occultation: applications of an emerging reference climate record, *SPARC Regional Workshop on Chemical and Physical Processes in the Climate System*, Boulder, CO, USA, November 2015.
- Steiner, A. K.**, B. Scherllin-Pirscher, F. Ladstädter, L. Brunner, M. Schwaerz, R. Biondi, J. Fritzer, J. Schwarz, U. Foelsche, and G. Kirchengast (poster), Observing climate variability and change with GPS radio occultation, *Our Common Future Under Climate Change – CFCC15*, Paris, France, June 2015.
- Steiner, A. K.**, B. Scherllin-Pirscher\*, L. Brunner, M. Schwärz, and G. Kirchengast (poster), Temperature trends in the upper troposphere to lower stratosphere from radio occultation climate records 2002 to 2012, *5th SPARC General Assembly*, Queenstown, New Zealand, January 2014.
- Steiner, A. K.**, B. Scherllin-Pirscher, L. Brunner, M. Schwärz, and G. Kirchengast\* (poster), Temperature trends in the upper troposphere to lower stratosphere from radio occultation climate records 2002 to 2012, *AGU Fall Meeting*, San Francisco, CA, USA, December 2013.
- Steiner, A. K.**, J. Schwarz, M. A. Ringer, and G. Kirchengast, Evaluation of climate models with radio occultation observations, *OPAC-IROWG 2013 International Workshop*, Seggau Castle, Austria, September 2013.
- Steiner, A. K.**, B. C. Lackner, M. Schwärz, M. A. Ringer, and G. Kirchengast (poster), Evaluation of climate models using radio occultation observations – Tropical convection regimes in the HadGEM model, *4th WGNE Workshop on systematic errors in weather and climate models*, Exeter, UK, April 2013.
- Steiner, A. K.**, Beobachtung von Klimaänderungen mittels GPS Radio-Okkultation, *Habilitationskolloquium*, University of Graz, Graz, Austria, January 2013.
- Steiner, A. K.**, D. Hunt, S-P. Ho, G. Kirchengast, A. J. Mannucci, B. Scherllin-Pirscher, H. Gleisner, A. von Engeln, T. Schmidt, C. Ao, S. S. Leroy, E. R. Kursinski, U. Foelsche, M. Gorbunov, S. Heise, Y-H. Kuo, K. B. Lauritsen, C. Marquardt, C. Rocken, W. Schreiner, S. Sokolovskiy, S. Syndergaard, and J. Wickert, Assessing structural uncertainty in climate data records from GPS radio occultation, *Geophysical Research Abstracts*, Vol. 14, EGU2012-9319-1, *European Geosciences Union (EGU) General Assembly 2012*, Vienna, Austria, April 2012.

- Steiner, A. K.**, B. C. Lackner, M. Schwärz, M. A. Ringer, and G. Kirchengast, Evaluation of climate models using radio occultation observations – Tropical convection regimes in the HadGEM model, *Int'l Radio Occultation Working Group 2nd Workshop (IROWG2)*, Estes Park, CO, USA, March 28 to April 3, 2012.
- Steiner, A. K.**, D. Hunt, S-P. Ho, G. Kirchengast, A. J. Mannucci, B. Scherllin-Pirscher, H. Gleisner, A. von Engeln, T. Schmidt, C. Ao, S. S. Leroy, E. R. Kursinski, U. Foelsche, M. Gorbunov, Y-H. Kuo, K. B. Lauritsen, C. Marquardt, C. Rocken, W. Schreiner, S. Sokolovskiy, S. Syndergaard, S. Heise, and J. Wickert, Quantification of structural uncertainty in climate data records from GPS radio occultation, *Int'l Radio Occultation Working Group 2nd Workshop (IROWG2)*, Estes Park, CO, USA, March 28 to April 3, 2012.
- Steiner, A. K.**, D. Hunt, S-P. Ho, G. Kirchengast, A. J. Mannucci, B. Scherllin-Pirscher, H. Gleisner, A. von Engeln, T. Schmidt, C. Ao, S. S. Leroy, U. Foelsche, Y-H. Kuo, E. R. Kursinski, K. B. Lauritsen, S. Syndergaard, M. Gorbunov, C. Marquardt, C. Rocken, W. Schreiner, S. Sokolovskiy, and J. Wickert (poster), Towards Earth system data records from GPS radio occultation: Assessing structural uncertainty, Abstract IN21A-1406, *American Geophysical Union (AGU) Fall Meeting 2011*, San Francisco, CA, USA, December 2011.
- Lackner B. C., **A. K. Steiner\***, M. A. Ringer, and G. Kirchengast (poster), Evaluation of tropical convection regimes in the HadGEM2 model using radio occultation observations, Abstract GC41A-0780, *American Geophysical Union (AGU) Fall Meeting 2011*, San Francisco, CA, USA, December 2011 (\*presenter).
- Ladstädter, F., **A. K. Steiner\***, L. Haimberger, C. Tavalato, U. Foelsche, and G. Kirchengast, Beobachtung der Temperatur der unteren Stratosphäre mit (A)MSU, Radiosonden und GPS Radio-Okkultation: Ein Vergleich, 4. *Österr. MeteorologInnentag*, Klagenfurt, Austria, November 2011 (\*presenter).
- Steiner, A. K.**, S-P. Ho, D. Hunt, G. Kirchengast, A. J. Mannucci, B. Scherllin-Pirscher, H. Gleisner, A. von Engeln, T. Schmidt, C. Ao, S. S. Leroy, U. Foelsche, Y-H. Kuo, E. R. Kursinski, K. B. Lauritsen, S. Syndergaard, C. Marquardt, C. Rocken, W. Schreiner, S. Sokolovskiy, J. Wickert, Structural uncertainty of the CHAMP RO climate record from different data centers, *5th Formosat-3/COSMIC Data Users Workshop and Int'l Conference on GPS Radio Occultation (ICGPSRO) 2011*, Taipei, Taiwan, April 2011.
- Steiner, A. K.**, S-P. Ho, D. Hunt, G. Kirchengast, A. J. Mannucci, B. Scherllin-Pirscher, H. Gleisner, A. von Engeln, T. Schmidt, C. Ao, S. S. Leroy, U. Foelsche, Y-H. Kuo, E. R. Kursinski, K. B. Lauritsen, S. Syndergaard, C. Marquardt, C. Rocken, W. Schreiner, S. Sokolovskiy, J. Wickert, Structural uncertainty of the CHAMP climate record from different data centers, *Int'l Workshop on Occultations for Probing Atmosphere and Climate (OPAC) 2010*, Graz, Austria, September 2010.
- Scherllin-Pirscher B., **A. K. Steiner\***, U. Foelsche, G. Kirchengast, and Y.-H. Kuo (poster), Error characteristics of GPS radio occultation atmospheric profiles, *OPAC 2010 International Workshop*, Graz, Austria, September 2010 (\*presenter).
- Steiner, A. K.**, U. Foelsche, B. Scherllin-Pirscher, B. C. Lackner, F. Ladstädter, and G. Kirchengast, Monitoring des Klimawandels mit Satellitenmethoden – GPS Radio-Okkultation, *Summer University – Graz in Space 2010*, Univ. of Graz, Austria, September 2010.
- Steiner A. K.**, G. Kirchengast, B. C. Lackner, G. C. Hegerl, B. Pirscher, and U. Foelsche (poster), Climate change detection in the UTLS with the GPS radio occultation record, *Eos Trans. AGU 90(52)*, Fall Meet. Suppl., Abstract A31D-0154, *American Geophysical Union (AGU) Fall Meeting 2009*, San Francisco, CA, USA, December 2009.
- Steiner A. K.**, G. Kirchengast, B. C. Lackner, G. C. Hegerl, B. Pirscher, and U. Foelsche (poster), Climate change detection with the GPS radio occultation record, 3. *Österr. MeteorologInnentag*, Graz, Austria, November 2009.
- Steiner, A. K.**, G. Kirchengast, B. C. Lackner, G. C. Hegerl, B. Pirscher, and U. Foelsche, Climate change detection with the GPS radio occultation record, *4th Formosat-3/COSMIC Workshop*, Boulder, CO, USA, October 2009.
- Steiner A. K.**, G. Kirchengast, B. C. Lackner\*, G. C. Hegerl, B. Pirscher, M. Borsche and U. Foelsche (poster), The GPS radio occultation record – a novel dataset for atmospheric change detection, *WAVACS Summer School*, Cargese/Corsica, France, September 2009.
- Steiner, A. K.**, B. C. Lackner, G.C. Hegerl, B. Pirscher, M. Borsche, U. Foelsche, and G. Kirchengast, Atmospheric change detection based on the GPS radio occultation record, *Geophysical Research Abstracts*, Vol. 11, EGU2009-9074, *European Geosciences Union (EGU) General Assembly 2009*, Vienna, Austria, April 2009.
- Steiner, A. K.**, G. Kirchengast, B. C. Lackner, G. C. Hegerl, B. Pirscher, M. Borsche, and U. Foelsche (poster), The GPS radio occultation record – a novel dataset for atmospheric change detection, *The IARU Scientific Congress on Climate Change: Global Risks, Challenges and Decisions*, Copenhagen, Denmark, March 2009.

- Steiner, A. K.**, G. Kirchengast\*, B. C. Lackner, B. Pirscher, M. Borsche, and U. Foelsche, Detection of tropical temperature change based on GPS radio occultation within 1995 to 2008, *Eos Trans. AGU* 89(53), Fall Meet. Suppl., Abstract GC31B-5, *American Geophysical Union (AGU) Fall Meeting 2008*, San Francisco, CA, USA, December 2008 (\*presenting author).
- Steiner, A. K.**, U. Foelsche, B. C. Lackner, F. Ladstädter, M. Borsche, B. Pirscher, A. Leuprecht, J. Fritzer, M. Pock, und G. Kirchengast (invited), Klimamonitoring und Atmosphärenanalyse mittels Radio-Okkultation: Überblick und aktuelle Ergebnisse, *Meteorol.-Geophys. Kolloquium*, Univ. Wien, Austria, November 2008.
- Steiner, A. K.**, G. Kirchengast, B. C. Lackner, B. Pirscher, M. Borsche, and U. Foelsche, Atmospheric climate change detection based on the GPS radio occultation record within 1995 to 2007, *5th IAGA/ICMA/CAWSES Workshop "Long-term Trends and Changes in the Atmosphere"*, St. Petersburg, Russia, September 2008.
- Steiner, A. K.**, Klimamonitoring und Atmosphärenanalyse mittels Radio-Okkultation: Aktuelle Forschung am Wegener Zentrum, *2. Österr. Meteorologentag*, Wien, Austria, November 2007.
- Steiner, A. K.**, G. Kirchengast, M. Borsche, and U. Foelsche, A comparison of lower stratospheric temperatures from the 2001-2006 CHAMP radio occultation and MSU/ASMU climate records, *Geophysical Research Abstracts*, Vol. 9, EGU2007-A-10228, *European Geosciences Union (EGU) General Assembly 2007*, Vienna, Austria, April 2007.
- Steiner, A. K.**, G. Kirchengast, M. Borsche, U. Foelsche, and T. Schöngassner (poster), A multi-year comparison of lower stratospheric temperatures from CHAMP radio occultation data with MSU/AMSU records *WGNE/PCMDI Workshop on Systematic Errors in Climate and NWP Models*, San Francisco, USA, February 2007.
- Steiner A. K.**, G. Kirchengast, M. Borsche, U. Foelsche, and T. Schöngassner (poster), Comparison of upper air temperatures: MSU/AMSU and CHAMP radio occultation data, *4<sup>th</sup> Workshop on Long-Term Changes and Trends in the Atmosphere*, Sodankylä, Finland, September 2006.
- Steiner A. K.**, G. Kirchengast, M. Borsche, U. Foelsche, and T. Schöngassner (poster), Upper air temperatures from satellite records: A comparison of MSU and CHAMP radio occultation data, *Geophysical Research Abstracts Vol. 8*, 09559, *EGU General Assembly 2006*, Vienna, Austria, April 2006.
- Steiner, A. K.**, A. Gobiet, U. Foelsche, M. Borsche, G. Kirchengast, T. Schmidt, and J. Wickert, Validation of stratospheric temperatures in ECMWF analyses with CHAMP radio occultation climatologies, *2nd GPS Radio Occultation Data User's Workshop*, Lansdowne, VA, USA, August 2005.
- Steiner, A. K.**, A. Löscher, and G. Kirchengast, Error characteristics of refractivity profiles retrieved from CHAMP radio occultation data, *2nd Int'l Workshop on Occultations for Probing Atmosphere and Climate (OPAC-2)*, Graz, Austria, September 2004.
- Steiner, A. K.**, U. Foelsche, G. Kirchengast, A. Gobiet, A. Löscher, J. Wickert and T. Schmidt (poster), CHAMPCLIM: Climatologies based on radio occultation observations, *1st International CLIVAR Conference*, Baltimore, MD, USA, June 2004.
- Steiner, A. K.**, A. Löscher, and G. Kirchengast, Error characteristics of refractivity profiles retrieved from CHAMP radio occultation data, *Geophysical Research Abstracts*, Vol. 6, 05423, *European Geosciences Union (EGU) 1st General Assembly*, Nice, France, April 2004.
- Steiner, A. K.** (invited poster): Environmental research in Biosphere 2, *15th Annual Conference of the Academia Europea*, Graz, Austria, September 2003.
- Steiner, A. K.**, and G. Kirchengast, Empirical error characteristics of radio occultation data for data assimilation systems, *Geophysical Research Abstracts*, Vol. 5, 12719, *EGS-AGU-EUG Joint Assembly 2003*, Nice, France, April 2003.
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