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mdLb Daten Methoden Modelle

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Email: e.koch@zamg.ac.at**Arbeitsbereich/ Field of work**

- Leiterin Fachabteilung Klimatologie / Head of Section Climatology / Division Customer Service
- Seit 01.12.2009 mit der Leitung von DMM betraut

CV / Lebenslauf

Dec 2009 - present	ZAMG, mit der Leitung betraut Daten Methoden Modelle
Jan 2009 - present	ZAMG, Head of Section Climatology/ Division Customer Service
2001 - 2009	ZAMG, Head of Section Applied Climatology
1978 - 2000	ZAMG, Department of Climatology
1976 - 1978	ZAMG, Department of Bioclimatology
1970/1971-1976	Vienna University, student at Institute for Meteorology and Geophysics Diploma Thesis: Der Strahlungshaushalt des Neusiedler Sees Final Certification: Dr. ⁱⁿ phil.

Other international functions and activities / Andere Funktionen

2009 - present	Member of WMO (World Meteorological Organization) Commission for Agrometeorology
2008 - present	Editor: Open Access Journals "Advances in Science and Research"
2008- present	Vice Chair of the Phenology Study Group of ISB
2007- present	Vice Chair of ESFRI Roadmap working group for Environment (European Strategy Forum on Research Infrastructures)
2004 - 2009	Chair of COST action 725 - a real success story of DC ESSEM
2004 - 2005	Rapporteur of WMO on Guidelines for plant phenological observations
2000 - 2001	Rapporteur der WMO on Interaction with Users and Public Awareness

Publications / Publikationen (since 2000)

Peer reviewed

- Koch, E.: Phenology in Austria. Phenological Mapping, Long-Term Trends. Selected Papers from the Conference ICB - ICUC '99, Sydney 8 – 12 November 1999. WMO / TD No.1026, Genf 2000.
- Scheifinger, H., A. Menzel, E. Koch, C. Peter, R. Ahas: Atmospheric Mechanisms Governing the Spatial and Temporal Variability of Phenological Observations in Central Europe. *Int. J. Climatol.*, 22, 1739-1755, 2002.
- Scheifinger, H., A. Menzel, E. Koch, C. Peter: Trends of Spring Time Frost Events and Phenological Dates in Central Europe. *Theor. Appl. Climatol.*, 2002.
- Matulla, C., H. Scheifinger, A. Menzel, E. Koch: Direct Downscaling of Central European phenological time series using two empirical techniques. GKSS Forschungszentrum Geesthacht, 2003.
- Koch, E., H. Scheifinger: Phenology as biological indicator for a warming Europe, *World Resource Review* Vol 16, No 2, 173 –182, 2004.
- Scheifinger, H., H. Winkler, E. Koch: Results of a first look into the Austrian animal phenological records, *Meteorologische Zeitschrift*, Vol. 14, No. 2, 1-7, 2005.
- Scheifinger, H., E. Koch, H. Winkler: Arrival Dates of migrating Birds in Austria and Climate Variability. *Annalen der Meteorologie* 41, VI 2, DWD, 2005.
- Koch E., E. Dittmann, W. Lipa, A. Menzel, A. v. Vliet: COST 725 Establishing a European phenological data platform for climatological purposes. *Annalen der Meteorologie* 41, VI 2, DWD, 2005.
- Rudel, E., E. Koch, A. Matzarakis, W. Marktl, H. Nefzger, S. Schunder Tatzber, M. Zygmuntowski: Austrian Climate and Health Tourism Initiative ACTIVE. *Annalen der Meteorologie* 41, VI 2, DWD, 2005.
- Zygmuntowski, M., A. Matzarakis, E. Koch, E. Rudel: Comparison of Climate and Synop Measurements for the Bioclimate of Austria. *Annalen der Meteorologie* 41, VI 2, DWD, 2005.
- Menzel, A, T. H. Sparks, N. Estrella, E. Koch, A. Aasa, R. Ahas, K. Alm-Kübler, P. Bissolli, O. Braslavská, A. Briede, F. M. Chmielewski, Z. Crepinsek, Y. Curnel, Å. Dahl, C. Defila, A. Donnelly, Y. Filella, K. Jatczak, F. Måge, A. Mestre, Ø. Nordli, J. Peñuelas, P. Pirinen, V. Remisová, H. Scheifinger, M. Striz, A. Susnik, F.-E. Wielgolaski, A. v. Vliet, S. Zach, A. Zust: European phenological response to climate change matches the warming pattern, *Global Change Biology* 12, 2006.
- Scheifinger H., E. Koch, H. Winkler: Erste Ergebnisse einer Analyse vogelphänologischer Beobachtungen der Zentralanstalt für Meteorologie und Geodynamik 1951 – 1999 in Österreich, *promet*, Jg 33, Heft 1/2, Deutscher Wetterdienst, 2007.
- Scheifinger, H., E. Koch, P. Cate and C. Matulla: New frontiers in plant phenological research. Oxley, L. and Kulasiri, D. (eds) MODSIM 2007 International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2007, pp. 497-503, 2007 http://mssanz.org.au/modsim07/papers/9_s54/NewFrontiers_s54_Scheifinger_.pdf.
- Koch, E., E. Bruns, F.-M. Chmielewski, C. Defila, W. Lipa, A. Menzel: Guidelines for plant

phenological observations, 2007, <http://www.omm.urv.cat/documentation.html>.

- Nekovar, J., E. Koch, E. Kubin, P. Nejedlik, T. Sparks, F.E. Wielgolaski (eds.): COST action 725 The history and current status of phenology in Europe. ISBN 978-951-40-2091-9, 182 pp, 2008.
- Ziello C., N. Estrella, M. Kostova, E. Koch, A. Menzel: Influence of altitude on phenology of selected plant species in the Alpine region (1971–2000), Vol. 39 doi: 10.3354/cr00822, Climate Research, 2009.
- Koch, E., C. Maurer, C. Hammerl, T. Hammerl and E. Pokorny: BACCHUS grape harvest days and temperature reconstruction for Vienna from the 16th to the 18th century, In Anderssen, R.S., R.D. Braddock and L.T.H. Newham (eds) 18th World IMACS Congress and MODSIM09 International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand and International Association for Mathematics and Computers in Simulation, July 2009, pp. 2377-2383. ISBN: 978-0-9758400-7-8. http://www.mssanz.org.au/modsim09/G2/koch_e.pdf.
- Maurer, C., E. Koch, C. Hammerl, T. Hammerl and E. Pokorny: BACCHUS Temperature Reconstruction for the Period 16th to 18th Centuries from Viennese and Klosterneuburg Grape Harvest Dates, J. Geophys. Res., Vol. 114, D22106, doi:10.1029/2009JD011730
- Koch E., E. Dittmann, W. Lipa, A. Menzel, T. H. Sparks, A.V.H. v. Vliet: COST 725 Establishing a European phenological data platform for climatological purposes major results. Adv. Sci. Res., 1, 1–4, 2009 www.adv-sci-res.net/1/1/2009

Grey literature

Scheifinger, H., E. Koch, W. Lipa, C. Peter: Spatial and Temporal Behaviour of Phenological Data in Central Europe. Proceedings of Challenges of a Changing Earth, Open Science Conference, 10 – 13 July 2001 Amsterdam.

Scheifinger, H., E. Koch, W. Lipa, C. Peter: Alpine phänologische Trends. Proceedings DACH Meteorologentagung 2001, Wien. Österreichische Beiträge zu Meteorologie und Geophysik Heft Nr. 27.

Scheifinger, H., E. Koch, W. Lipa, C. Peter: Räumliches Verhalten von phänologischen Daten in Mitteleuropa, Proceedings DACH Meteorologentagung 2001, Wien. Österreichische Beiträge zu Meteorologie und Geophysik Heft Nr. 27.

Scheifinger, H., E. Koch, W. Lipa, C. Peter: European Trends of Phenological Phases, Temperature and the North Atlantic Oscillation. Book of Abstracts of the 1st European Phenological Conference, Wageningen, 2001.

Koch, E.: Quality Management in a NMS, Endreport für CCI <http://www.wmo.ch/index-en.html>, 2001.

Koch, E., W. Lipa, H. Posch, E. Rudel: Economic Aspects of Severe Weather conditions. Proceedings of ECAM 2001, Budapest.

Menzel, A., Ahas, E. Chuine, N. Estrella, M. Hirschberg, e. Koch, H. Scheifinger, C.J. Tucker: The EU Project POSITIVE (EVK2 CT 1999-00012) Phenological Observations and Satellite Data (NDVI) Trends in the Vegetation Cycle in Europe. Proceedings of the 1st European Phenological Conference, Wageningen, 2001.

Scheifinger, H., A. Menzel, E. Koch, C. Peter, R. Ahas: Atmospheric Mechanisms Governing the Spatial and Temporal Variability of Phenological Observations in Central Europe. 15th Conference on Biometeorology/Aerobiology and 16th Congress of Biometeorology, 28 October-1 November 2002 in Kansas City, MO.

Scheifinger, H., A. Menzel, E. Koch, C. Peter: Trends of Spring Time Frost Events and Phenological Dates in Central Europe. Fourth European Conference on Applied Climatology, Brussels, 12-15

November 2002.

Menzel A., A. Aasa, R. Ahas, I. Chuine, N. Estrella, M. Hirschberg, E. Koch, H. Scheifinger, CJ Tucker: Phenology as a tool in Global Change Research – Highlights of the European project POSITIVE. 15th Conference on Biometeorology/Aerobiology and 16th Congress of Biometeorology, 28 October-1 November 2002 in Kansas City, MO.

Harlfinger, O., E. Koch, H. Scheifinger: Klimahandbuch der Österreichischen Bodenschätzung, Teil 2, Strahlung, Weinbau, Phänologie, 259 S, Innsbrucker Universitätsverlag, 2002.

Scheifinger, H., E. Koch, A. Menzel, C. Peter: Proceedings of ICAM Brig 19.-23.5.2003: Poster: Trends of Springtime Frost Events and Phenological Dates in Central Europe.

Bissolli, P., O. Braslavská, E. Koch, J. Nekovar: Proceedings of EPN Wageningen 29.3.-2.4.2003: Poster Selected Central European Phenological Phenophase Comparison.

Koch, E., H. Scheifinger: Proceedings of 5. BIOMET Tagung, Dresden: Erste Ergebnisse der Auswertung tierphänologischer Daten von Österreich, 2003.

Scheifinger, H., H. Winkler, E. Koch: Arrival Dates of Migrating Birds in Central Europe and Climate Variability. European Geosciences Union General Assembly, 24-29 April 2005, Vienna, EGU05-A-02799, p. 343.

Koch, E., H. Scheifinger: Phänologie ein Bioindikator für den Klimawandel. Proceedings Seminar 50 Jahre meteorologische Beobachtungen in Gumpenstein, 2005.

Zach, G., W. Lipa, R. Potzmann, E. Koch, E. Rudel: Speeding up weather related insurance Claims. Proceedings 5th annual meeting of EMS, 7th Conf. On Application of Meteorology ECAM in Utrecht 11-16/09/2005.

Koch, E., E. Dittmann, W. Lipa, A. Menzel, A. v. Vliet: COST 725 Establishing a European phenological data platform for climatological purposes. Proceedings 5th annual meeting of EMS, 7th Conf. On Application of Meteorology ECAM in Utrecht 11-16/09/2005.

Scheifinger, H., H. Winkler, E. Koch: Arrival dates of migrating birds in central Europe and climate variability. Croatian Met. Journal, 28th Int. Conf. on Alpine Meteorology, 681-685, 2005.

Matzarakis, A., E. Rudel, M. Zygmuntowski, E. Koch: Thermal human bioclimatological conditions for Austria and the Alps Croatian Met. Journal, 28th Int. Conf. on Alpine Meteorology, 190-193, 2005.

Rudel, E., M. Zygmuntowski, A. Matzarakis, E. Koch: Thermal bioclimate in the Alpine regions of Austria Croatian Met. Journal, 28th Int. Conf. on Alpine Meteorology, 194-197, 2005.

Matzarakis, A., M. Zygmuntowski, E. Koch, E. Rudel: Mapping the thermal bioclimate of Austria for health and recreation tourism. In Berichte des Meteorologischen Institutes der Universität Freiburg, Nr. 12, Freiburg November 2004.

Koch, E., E. Rudel, A. Matzarakis, W. Marktl, H. Nefzger, S. Schunder-Tatzber, M. Zygmuntowski: ACTIVE the Austrian Climate and Health Tourism Initiative. Proceedings of the Technical Conference Climate as a Resource, Beijing 1-2/11/2005. WMO 158-164.

Koch, E., W. Marktl, A. Matzarakis, H. Nefzger, E. Rudel, S. Schunder-Tatzber, M. Zygmuntowski,: Klimatherapie in Österreich. Broschüre zu den Potentialen der Klimatherapie in Österreich. Bundesministerium für Wirtschaft und Arbeit, 2005 www.bmwa.gv.at/NR/rdonlyres/9E673239-C359-4EC6-A040-E6AB9B1454D1/17318/BroschuereKlimatherapieinsterreich.pdf.

Koch, E., E. Dittmann, W. Lipa, A. Menzel, J. Nekovar: A.v.Vliet: Establishing a European phenological data platform for climatological applications. 9. Österreichischen Klimatags "Klima, Klimawandel und Auswirkungen", 16.- 17. März 2006, AustroClim, P27.

Scheifinger, H., E. Koch, P. Cate, C. Matulla: CLIMPHEN – a comprehensive analysis of Austria's plant and insect phenological observations 1951-2005. 02-07 April 2006, Vienna, Proceedings of EGU general assembly.

Mohnl, H., E. Koch: Comparison between AWS registered sunshine registration and traditional Campbell Stokes. Proceedings of ICEAWS 2006, Lisboa.

Koch, E., E. Rudel, A. Matzarakis : Simulations For Future Bioclimate Conditions In Austria. Proceedings of GWXVII, April 2006, Miami.

Koch, E., R. Neumcke: Phänologie und Klimawandel – phänologisches Monitoring in Österreich, Deutscher Klimatag 2006, München.

Scheifinger, H., E. Koch, P. Cate and C. Matulla: The spatial gradient law of phenology proposed, CLIMPHEN - a comprehensive analysis of Austria's plant and insect phenological observations. ESF Workshop on Phenology and Agroclimatology, 21-22/09/2006, Volos.

Koch, E., E. Rudel, A. Matzarakis: Increase of human heat stress, one of the most serious extreme events due to global warming. Proceedings of International Conference on Problems of Hydrometeorological security: prediction and adaptation of the society to the extreme climate changes, 25-29/09/2006.

Koch E., R. Neumcke: Phänologisches Monitoring in Österreich Tagungsbericht der Biomet 26.-28.3.2007, Freiburg.

Rudel, E., A. Matzarakis, E. Koch: Bioklima und Sterblichkeit in Wien, Tagungsbericht der Biomet 26.-28.3.2007, Freiburg.

Koch, E., A. Matzarakis, E. Rudel: Anpassung des Sommertourismus an den Klimawandel in Österreich. StartClim 2006.D2: erste Ergebnisse Tagungsbericht der Biomet 26.-28.3.2007, Freiburg.

Koch, E., E. Dittmann, W. Lipa, A. Menzel, J. Nekovar, A. v. Vliet, S. Zach: COST725 Establishing a European Phenological Database for Climatological Applications: Overview und erste Ergebnisse. Proceedings DACH 2007, 10.-15.9.2007.

Rudel, E., A. Matzarakis, E. Koch, C. Endler, R. Neumcke: Sommertourismus in Österreich unter den Aspekten des Klimawandels. Proceedings DACH 2007, Hamburg 10.-15.9.2007.

Koch, E., E. Dittmann, W. Lipa, A. Menzel, J. Nekovar, A. v. Vliet,: COST725 Establishing a European Phenological Database for Climatological Applications: Overview und first results. Proceedings 7thEMS/8thECAM 2007, El Escorial 01.-05.10.2007.

Koch, E., R. Neumcke, W. Lipa: Austrian phenology on the web: www.zamg.ac.at/phaenologie. Proceedings 7thEMS/8thECAM 2007, El Escorial 01.-05.10.2007.

Rudel, E., A. Matzarakis, E. Koch, C. Endler, R. Neumcke: Adaptation of summer tourism in Austria in respect of climate change. Proceedings 7thEMS/8thECAM 2007, 01.-05.10.2007.

Matzarakis, A., E. Koch, E. Rudel: Analysis of summer tourism period for Austria based on climate variables on daily basis. In: A. Matzarakis, C. R. de Freitas, D. Scott (Eds.), Developments in Tourism Climatology, 122-128. Proceedings of 3rd International Workshop on Climate, Tourism and Recreation Alexandroupolis, Greece 19 – 22 September 2007, Commission on Climate, Tourism and Recreation, International Society of Biometeorology, Freiburg, ISBN: 978-3-00-024110-9, Freiburg, Deutschland.

Koch, E., E. Dittmann, W. Lipa, A. Menzel, J. Nekovar, A. v. Vliet,: COST725 Establishing a European Phenological Database for Climatological Applications: Major results. Proceedings 8thEMS/7thECAC 2008, Amsterdam 29.9.-3.10.2008.

Koch, E., C. Hammerl, C. Maurer: BACCHUS Klosterneuburg wine and Climate Change in Lower Austria. Proceedings 8thEMS/7thECAC 2008, Amsterdam, 29.9.-3.10.2008.

Koch, E., E. Dittmann, W. Lipa, A. Menzel, J. Nekovar, A. v. Vliet: COST725 Establishing a European Phenological Database for Climatological Applications. Proceedings 18th International Congress of Biometeorology, Tokyo 22. – 26.09.2008.

Koch E., C. Maurer, C. Hammerl, T. Hammerl, E. Pokorny: BACCHUS: Klimatologische Betrachtungen der Weinlesetermine in Klosterneuburg und Wien vom 16. Jahrhundert bis heute A climatological view on grape harvest days from Klosterneuburg and Vienna starting in the 16th century. Bericht ALVA Jahrestagung 2009, Salzburg 18.-19.5.2009 ISSN 1606-612X, 229-231.

C. Maurer, C. Hammerl, E. Pokorny, T. Hammerl, Koch, E., (2009): BACCHUS* grape harvest dates from Vienna and Klosterneuburg from the 16th to the 21st century. Proceedings EGU Vienna, 20.-24.4.2009 Geophysical Research Abstracts, Vol. 11, EGU2009-9335-1, 2009

Koch E., G. Hohenwarther, A. Matzarakis, S. Muthers, H. Scheifinger Die Forschungsprojekte BACCHUS, POLLVOR und MortKlim, 3. ÖST. METEOROLO-GINNENTAG Graz 5.-6.11.2009,

<http://wegc203116.uni-graz.at/meteorologentag/sites/default/files/abstracts-print.pdf>

Koch E., C. Maurer, C. Hammerl, T. Hammerl and E. Pokorny: Bacchus: Long Time Series Of Grape Harvest Dates In The Viennese Wine Growing Region - International Conference on Scope and current limits of linking phenology and climatology 10.-12.03.2009, Geisenheim, Deutschland, <http://www.campus-geisenheim.de/fileadmin/Forschungsanstalt/Gartenbau/Obstbau/COST725/koch.pdf>

Projects / Projekte

ongoing / laufend

- 2008 BACCHUS II
- 2008 PDR-QC/03
- 2009 MortKlim
- 2009. BEAUVORT
- 2010 PEP725
- 2010 ZEUS 2020
- EWCR I (2008-2009)

- Scientific Activities / Wissenschaftliche Aktivitäten
- Reviewing for: International Journal of Biometeorology, Climate Research
- Reviewing of international project applications

International involvement

- Vice chair of the ESFRI env. Working Group
- Vice chair of the phenology study group of ISB
- Co-chair of GEO task group on Global Phenology data
- Representative at WMO CAgM
- Chair of the management committee of COST725 (2004-2009)

Awards / Auszeichnungen

- Best Presentation at the conference: Climate as a Resource, Beijing 1-2/11/2005
- Klimaschutzpreis 2006 der Österreichischen Hagelversicherung