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**Arbeitsbereich/ Field of work**

- Leiterin Gruppe Krisenfallvorsorge/ Head of Group Emergency Response Modelling

**CV / Lebenslauf**

1995 – present	ZAMG, Department of Environmental Meteorology
2004	University of Vienna, Dissertation in Meteorology (master thesis: "Qualitätsprüfung, Verifikation und Anwendung von Windprofilerdaten in Österreich") Final Certification : "Dr. rer.nat."
1993 - 1994	Tutor in Synoptic Meteorology at the Institute for Meteorology and Geodynamics, University of Vienna.
1992 - 1995	Scientific work in research projects at the Department of Environmental Meteorology, Central Institute for Meteorology and Geodynamics
1989 - 1995	University of Vienna, Diploma in Meteorology (diploma thesis: "Evaluation diagnostischer Windfeldmodelle für komplexe Orographie an künstlichen Topographien und in der Anwendung für den Ostalpenraum")

**Professional experience** (selection)

RVS 04.02.12 Dispersion of air pollutants at streets ([www.fsv.at](http://www.fsv.at))

Austrian Science Fund FWF (Projects: P 13492 ROM – Rhine valley ozone study within MAP; P 15078 CABL - Climatology of Alpine Boundary Layer heights)

EC-COST: National Delegate to COST – Action 732 (Microscale Meteorological Models);

## Publications / Publikationen

### Peer reviewed publications

- **Baumann**, K. und Stohl, A., 1997: Validation of a long-range trajectory model using gas balloon tracks from the Gordon Bennett Cup 95. *J. Appl. Meteor.* Vol.36, No.6, 711-720.
- Piringer, M., **Baumann**, K., Rötzer, H., Riesing, J. und Nodop, K., 1997: Results on Perfluorocarbon Background Concentrations in Austria. *Atmos. Environ.* 31, 4, 515- 27.
- Stohl, A., **Baumann**, K., Wotawa, G., Langer, M., Neininger, B., Piringer, M. und Formeyer, H., 1997: Diagnostic downscaling of large-scale wind fields to compute local scale trajectories. *J. Appl. Meteor.* Vol.36, No.7, 931-942.
- Piringer, M., **Baumann**, K. und Langer, M., 1998: Summertime Mixing Heights at Vienna, Austria, Estimated from Vertical Soundings and by a Numerical Model. *Bound.-Layer Meteor.* 89, 25-45.
- Piringer, M. und **Baumann**, K., 1999: Modifications of a valley wind system by an urban area - experimental results. *Meteor. Atmos. Phys.* 71, 117-125.
- Almbauer, R. A., Piringer, M., **Baumann**, K., Öttl, D. und Sturm, P. J., 2000: Analysis of the daily variations of wintertime air pollution concentrations in the city of Graz, Austria. *Environmental Monitoring and Assessment*, 65, 79 – 87
- Öttl, D., Almbauer, R.A., Sturm, P. J., Piringer, M. und **Baumann**, K., 2000: Analysing the nocturnal wind field in the city of Graz. *Atmos. Environ.* 35, 379-387.
- **Baumann**, K. und Piringer, M., 2001: Two - years statistics of boundary layer measurements with a Sodar. *Phys. Chem Earth B* 26, 3, 205-211.
- **Baumann**, K., Maurer, H., Rau, G., Piringer, M., Pechinger, U., Prévôt, A., Furger, M., Neininger, B. und Pellegrini, U., 2001: The influence of south Foehn on the ozone distribution in the Rhine valley - results from the MAP field phase. *Atmos. Environ.* 35, 6379-6390.
- Piringer, M., **Baumann**, K., Pechinger, U. und Vogt S., 2001: Meteorological and ozone sounding experience during a strong Foehn event - a MAP case study. *Meteorol. Z.* 10, 6, 445-455.
- Scheifinger, H., **Baumann**, K. and Pechinger, U., 2001: A statistical interpolation scheme to generate 2D and 3D meteorological pre - processor input fields from routine meteorological data. *Meteorol. Z.* 10, 4, 341-350.
- **Baumann-Stanzer**, K. , 2004: The UHF wind profiler at Vienna airport - data quality control and comparisons to rawinsonde data. *Meteor. Atmos. Phys.* 85, 165-174.
- **Baumann-Stanzer**, K. und Groehn, I. , 2004: Alpine radiosoundings - feasible for mixing height determination? *Meteorol. Z.* 13, 2, 131-142.
- **Baumann-Stanzer**, K. und Piringer, M. , 2004: Foehn signals detected by Sodar wind and turbulence measurements in the Rhine Valley, Austria, during the MAP field phase. *Meteor. Atmos. Phys.* 85, 125-139.

- Richner H., **Baumann-Stanzer**, K., Benech, B., Berger, H., Chimani, B., Dorninger, M., Drobinski, P., Furger, M., Gubser, S., Guttermann, T., Häberli, C., Häller, E., Lothon, M., Mitev, V., Ruffieux, D., Seiz, G., Steinacker, R., Tschannett, S., Vogt, S. und Werner, R. , 2006: Unstationary aspects of Foehn in a large valley, Part I: Operational setup, scientific objectives and analysis of the cases during Special Observing Period of the MAP subprogramme FORM. *Meteor. Atmos. Phys.*, 92(3-4), 255-284
- Drobinski, P., Steinacker, R., Richner, H., **Baumann-Stanzer**, K., Beffrey, G., Benech, B., Berger, H., Chimani, B., Dabas, A., Dorninger, M., Duerr, B., Flamant, C., Frioud, M., Furger, M., Groehn, I., Gubser, S., Gutermaun, T., Haerberli, C., Haeller-Scharnhost, E., Jaubert, G., Lothon, M., Mitev, V., Pechinger, U., Piringer, M., Ratheiser, M., Ruffieux, D., Seiz, G., Spatzierer, M., Tschannett, S., Vogt, S., Werner R. und Zaengl, G. , 2007: Foehn in the Rhine Valley during MAP: A review of its multiscale dynamics in complex valley geometry. *Q. J. R. Meteorol. Soc.* 133, 897-916.
- Emeis S., **Baumann-Stanzer**, K., Piringer, M., Kallistratova, M., Kouznetsov, R. und Yushkov V. , 2007: Wind and turbulence in the urban boundary layer analysis from acoustic remote sensing data and fit to analytical relations. *Meteorol. Z.* 16, 4, 393-406(14).
- Hirtl, M. und **Baumann-Stanzer**, K., 2007: Evaluation of two dispersion models (ADMS-Roads and LASAT) applied to street canyons in Stockholm, London and Berlin. *Atmos. Environ.* 41, 5959-5971.
- Piringer, M., Joffre, S., Baklanov, A., Christen, A., Deserti, M., De Ridder, K., Emeis, S., Mestayer, P., Tombrou, M., Middleton, D., **Baumann-Stanzer**, K., Dandou, A., Karppinen, A. und Burzynski, J., 2007: The surface energy balance and the mixing height in urban areas – activities and recommendations of COST-Action 715. *Bound.-Layer Meteor.* 124, 3-24.
- Piringer, M., K. **Baumann-Stanzer**, 2009: Selected results of a model validation exercise. *Adv. Sci. Res.* 3, 13 - 16.

### Conference proceedings and other publications (since 2000)

- **Baumann**, K. und Maurer, H., 2000: Air mass analysis from PBL soundings and trajectories for the Rhine Valley - first results of the ROM project. *MAP Newsletter*, Vol. 13.
- **Baumann**, K., Maurer, H., Rau, G., Piringer, M., Pechinger, U., Furger, M., Prévôt, A. S.H. und Neininger, B. , 2000: ROM project - Air mass analysis based on PBL soundings and trajectories. Extended abstracts of 26th Internat. Conference on Alpine Met (ICAM 2000). *Österr. Beiträge zu Meteorologie und Geophysik.* Vol. 23, 392.
- **Baumann**, K., Piringer, M. und Pechinger, U., 2000: Continuous PBL measurements of the project ROM during the MAP SOP: Sodar and ultrasonic data. *MAP Meeting 2000, Book of abstracts*, (Ed.: Vrhovec, T., Univ. of Ljubljana), 114; *MAP Newsletter* Vol. 13, 72-73.
- **Baumann**, K., Polreich, E., Langer, M. und Pechinger, U., 2000: ROM project - Simulations of the boundary layer - Foehn interaction. Extended abstracts of 26th Internat. Conference on Alpine Met (ICAM 2000). *Österr. Beiträge zu Meteorologie und Geophysik.* Vol. 23, 392.
- Piringer, M., **Baumann**, K. und Pechinger, U. , 2000: An example of continuous measurements by the new tethersonde meteorological tower (TMT) system during project ROM. *MAP Meeting 2000, Book of abstracts*, (Ed.: Vrhovec, T., Univ. of Ljubljana), 86; *MAP Newsletter*, Vol.13, 52-53.

- Piringer, M., **Baumann**, K. und Pechinger, U., 2000: Overview of boundary layer soundings within project ROM during MAP IOPs. MAP Meeting 2000, Book of abstracts (Ed.: Vrhovec, T., Univ. of Ljubljana), 78; MAP Newsletter Vol. 13, 42-43.
- Piringer, M., **Baumann**, K. und Pechinger, U., 2000: Project ROM: The vertical structure of the boundary layer in the Austrian Rhine valley during MAP IOPs. Extended abstracts of 26th Internat. Conference on Alpine Met (ICAM 2000), Österr. Beiträge zu Meteorologie und Geophysik 23, 5.
- Rau G. und **Baumann**, K., 2000: Airborne Measurements with the ARAT (STAAARTE 99) over the Rhine Valley before deep Foehn (IOP 8). MAP Newsletter, Vol.13, 58-59.
- Rau G. und **Baumann**, K., 2000: Airborne Measurements with the ARAT (STAAARTE 99) over the Rhine Valley during deep Foehn (IOP 15). MAP Newsletter, Vol.13, 56-57.
- Rau G. und **Baumann**, K., 2000: Aircraft measurements (STAAARTE 99) and Cable Car Soundings (project ROM) during a South Foehn Event. Extended Abstracts of 26th Internat. Conference on Alpine Met (ICAM 2000). Österr. Beiträge zu Met. u. Geoph., Vol.23, No.392.
- Rau G. und **Baumann**, K., 2000: Comparison of aircraft data (STAAARTE 99) and groundbased measurements of ozone (project ROM) before the onset of South Foehn. Extended Abstracts of 26th Internat. Conference on Alpine Met (ICAM 2000). Österr. Beiträge zu Met. u. Geoph., Vol.23, No.392.
- **Baumann**, K., 2001: Föhnstudien im Rheintal in MAP – FORM. ÖGM Bulletin 2001/2,16-18.
- **Baumann**, K., 2001: Rheintal Ozonstudie in MAP – ROM. ÖGM Bulletin 2001/2,18-22.
- **Baumann**, K., Piringer, M., Rau, G. und Pechinger, U. , 2001: Einfluss des Föhns auf die Ozonbelastung im alpinen Rheintal - Ergebnisse des MAP Experimentes. Tagungsband zur Deutsch-Österreichisch-Schweizerische Meteorologentagung (DACH), September 2001,Österr. Beiträge zu Meteorologie und Geophysik 27, 330.
- **Baumann**, K., Polreich, E., Piringer, M. und Pechinger, U. , 2001: Boundary Layer- Foehn interaction - MM5 simulations and observations for MAP IOP10. Extended Abstracts from the MAP Meeting 2001, Schliersee, Germany. MAP Newsletter, Vol. 15, 168-169.
- Piringer, M., K. **Baumann**, U. Pechinger, 2000: Scale interactions in meteorology - examples from Vienna and Graz, Austria. In: Mensink, C., N. Lewyckyj, J. Cools (Eds.): Proceedings of the SIMPAQ-2000 Symposium: Scale Interactions in Models and Policies for Air Quality Management, pp. 26 - 31, 13 - 14 April 2000, Antwerp, Belgium. Report 2000/TAP/55, VITO, June 2000.
- **Baumann** K., and M. Piringer, 2001: Two-years of boundary layer measurements with a Sodar - statistics and applications. *Physics and Chemistry of the Earth*, Part B. 26/3, 205-211.
- Pechinger, U., Langer, M., **Baumann**, K. und Petz, E., 2001: The Austrian Emergency Response Modelling System TAMOS. *Physics and Chemistry of the Earth B* 26, 2, 99-103.
- Piringer, M. and K. **Baumann**, 2001: Exploring the urban boundary layer by sodar and tethersonde. *Physics and Chemistry of the Earth*, Part B. 26/11-12, 881-885.
- Piringer, M., Rau, G. und **Baumann**, K., 2001: Strömung und Turbulenz im Bereich des Bahnhofs Wien - Mitte. DACH-Tagung 2001, Österr. Beiträge zu Meteorologie und Geophysik 27, 252.
- Rau G. und **Baumann**, K., 2001: Flugzeugmessungen im Rheintal vor und während eines Südföhn-Ereignisses. *Rheticus* 3, 265-271. ISBN 3-85298-097-6

- Piringer, M. K. **Baumann**, 2002: Remote sensing in urban areas- recent advances. In: W. Pillmann, K. Tochtermann (Eds.): Proceedings of the 16<sup>th</sup> Int. Conference on Informatics for Environmental Protection (EnviroInfo Vienna 2002), Sept. 25 – 27, 2002, Univ. of Technology, Vienna, Austria, Vol. 1, 511 - 518.
- **Baumann**, K., G. Rau, M. Piringer, U. Pechinger, 2002: Sodar measurements for the MAP Foehn campaign. Proc. 11<sup>th</sup> Int. Symposium on Acoustic Remote Sensing and Associated Techniques of the Atmosphere and Oceans (Eds.: S. Argentini, G. Mastrantonio, I. Petenko), 24. – 28. June 2002, Rome, Italy, pp. 287 – 290.
- **Baumann-Stanzer**, K., Piringer, M., Rau, G. und Pechinger, U., 2003: ROM – Rhine valley ozone study within MAP. In: Scientific contributions of Austria to the Mesoscale Alpine Programme (MAP), Österr. Beiträge zu Meteorologie und Geophysik, Heft 29, 2-14.
- **Piringer**, M. and K. Baumann-Stanzer, 2006: The potential of additional vertical soundings to detect the flow and temperature structure in and around an urban area. Ext. abstract to the ISARS 13 conference, 18 – 20 July 2006, Garmisch – Partenkirchen. Forschungszentrum Karlsruhe in der Helmholtz – Gesellschaft, Wissenschaftliche Berichte FZKA 7222, 118 – 120, ISSN 0947-8620.
- **Baumann-Stanzer**, K. and M. Piringer, 2006: Comparison of tethered sonde and RASS vertical temperature profiles during a morning inversion break-up. Ext. abstract to the ISARS 13 conference, 18 – 20 July 2006, Garmisch – Partenkirchen. Forschungszentrum Karlsruhe in der Helmholtz – Gesellschaft, Wissenschaftliche Berichte FZKA 7222, 144 – 145, ISSN 0947-8620.
- Franke, J., Hellsten, A., Schlünzen, H. und Carissimo, B. (Eds), **Baumann-Stanzer**, K., Piringer, M., ... , 2007: Best practice guideline for the CFD simulation of flows in the urban environment. COST Action 732, report ISBN:3-00-018312-4, 51 p.
- **Baumann-Stanzer**, K., M. Piringer, E. Polreich, M. Hirtl, E. Petz, M. Bügelmayer, 2008: User experience with model validation exercises. Ext abstract of the 12th Int. Conf. on Harmonization within atmospheric dispersion modelling for regulatory purposes, Cavtat, Croatia, 6 – 10 October 2008. In: Croatian Meteorological Journal 43 (2008), Vol. 1, 52 – 56, ISSN 1330-0083.
- S. Stenzel, K. **Baumann-Stanzer**, 2009: Dispersion modeling of accidental releases of toxic gases – utility for the fire brigades. Extended abstracts, METTOOLS VII, 1.-3.9.2009, Hamburg.
- Piringer, M., K. **Baumann-Stanzer**, 2009: Selected results of a non-CFD model evaluation exercise. Proc. of short papers presented at the 7<sup>th</sup> Int. Conf. on Air Quality – Science and Application, Istanbul, 24 – 27 March 2009, on CD-Rom. Abstract on p. 356 of the Abstract Book.

### Current Scientific Activities / Gegenwärtige wissenschaftliche Aktivitäten

- Dispersion modeling of accidental releases of hazardous gases
- Use of the now-casting system INCA for air quality applications
- Reviewing for Atmospheric Chemistry and Physics, Atmospheric Environment, Meteorology and Atmospheric Physics, Theoretical and Applied Climatology, Wind Energy