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Funktion

Wissenschaftliche Mitarbeiterin

Abteilung

Fernerkundung atmosphärischer Prozesse

Gruppe

AG Bodengebundene Fernerkundung

Forschungsgebiete & Arbeitsschwerpunkte

- Erkundung von atmosphärischen Aerosol-Eigenschaften mit Lidar
- Aufbau von Lidargeräten zur Aerosolforschung
- Mineralstaub in der Atmosphäre
- Änderung des Polarisationszustands von Licht durch atmosphärische Partikel

Aktuelle Projekte

- PollyXT
- Polly^{NET} - Weltweite Aerosolverteilung
- Ceilometer Jenoptik CHM15k

Abgeschlossene Projekte

- MEGACITIES - Satellite-Based Aerosol Mapping over Megacities, Guangzhou, China
- EUSAAR - European Supersites for Atmospheric Aerosol Research
- SAMUM - Saharan Dust Experiment, Marokko
- POLIS - Portable Lidar System
- AMMA - African Monsoon Multidisciplinary Analysis, Niger, Afrika
- BBC2 - BALTEX BRIDGE Cloud campaign, Cabauw und Rotterdam
- GTCO - Ground Truth Center Oberbayern
- METRO - MEridional TRansport of Ozone
- THESEO - Third European Stratospheric Experiment on Ozone
- StarMOCS: Monitoring of ozone and stratospheric constituents (Ozone, NO2, OClO, BrO) during polar night using starlight
- Stratospherisches Ozon Lidar (DIAL), Tageslicht Messungen an der Koldewey Station in Ny-Ålesund, Spitzbergen.
- EASOE - European Arctic Stratospheric Ozone Experiment
- SESAME - Second European Stratospheric Arctic and Mid-latitude Experiment

Lebenslauf

Academic qualification

1991-1995|Doktorandin |Alfred Wegener Institut für Polar- und Meeresforschung, Bremerhaven		
1990-1991|Diplomarbeit |Nansen Remote Sensing Center, Bergen, Norwegen		
1984-1989|Studium der Physik und Meteorologie |Institut für Meereskunde an der Christian Albrechts Universität, Kiel		

Diplomarbeit: V*ergleich des Gesamtozongehalts aus Satellitenbeobachtungen (TOMS) und Bodenmessungen (Dobson-Spektrometer) in nördlichen Breiten*

Research Experience

Seit 2007|Wissenschaftlerin |TROPOS, Leipzig		
2000-2006|Wissenschaftlerin |Meteorologisches Institut der Ludwig-Maximilian-Universität, München		
1998-2000|Post-Doc|Service d'Aeronomie du CNRS, Paris, Frankreich		
1995-1998|Associate Professor|University Centre in Svalbard, Longyearbyen, Norwegen		

Publikationen

siehe auch TROPOS Publikationen

- **Heese B**. , D. Althausen, H. Baars, S. Bohlmann, R, Deng, 2016, Aerosol Properties over South-Eastern China from Multiwavelength Raman and Depollarization Lidar Measurements, Proceedings of the 27th International Laser Radar Conference (ILRC), New York City, USA, 05-10 July 2015, EPJ Web of Conferences 119, 23018, dx.doi.org/10.1051/epjconf/201611923018.
- Chen, Z., W. Liu, **B. Heese**, D. Althausen,H. Baars, T. Cheng, X. Shu, and T. Zhang, 2014, Aerosol optical properties observed by combined Raman-elastic backscatter lidar in winter 2009 in Pearl River Delta, south China, J. Geophys. Res. Atmos., 119, 2496–2510, doi:10.1002/2013JD020200.
- Mey, B., E. Jäkel, **B. Heese**, D. Althausen, H. Baars, X. Gu, Yu, Z. Li and M. Wendisch, 2013, Airborne measurements of urban surface reflectivity and albedo, AIP Conference Proceedings 1531, 516; doi: 10.1063/1.4804820.
- **Heese, B.**, Althausen, D., Bauditz, M., Bao, R., Deng, R., Li, Z., 2012, Lidar depolarization and sun photometer polarization measurements for particle characterization over Guangzhou, China, Proceedings of the 26th International Laser Radar Conference (ILRC), Porto Heli, Greece, 25-29 June, 505-509.
- **Heese, B**., Flentje, H., Althausen, D., Ansmann, A., and Frey S., 2010. Ceilometer lidar comparison: backscatter coefficient retrieval and signal-to-noise ratio determination, Atmos. Meas. Tech., 3, 1763-1770, doi:10.5194/amt-3-1763-2010.
- **Heese. B**., D. Althausen, T. Dinter, T. Müller, M. Tesche, and M. Wiegner, 2009, Vertically resolved Dust Optical Properties during SAMUM: Tinfou compared to Ouarzazate, Tellus 61B.
- Bierwirth, E., M. Wendisch, A. Ehrlich, **B. Heese**, M. Tesche, D. Althausen, A. Schladitz, D. Müller, S. Otto, T. Trautmann, T. Dinter, W. von Hoyningen-Huene, and R. Kahn, 2009. Spectral Surface Albedo over Morocco and its Impact on Radiative Forcing of Saharan Dust, Tellus, 61B.
- Freudenthaler, V., M. Esselborn, M. Wiegner, **B. Heese**, M. Tesche, A. Ansmann, D. Müller, D. Althausen, M. Wirth, A. Fix, G. Ehret, P. Knipperts, C. Toledano, J. Gasteiger, M. Garhammer, and M. Seefeldner, 2009, Depolarization-ratio profiling at several wavelengths in pure Saharan dust during SAMUM 2006, Tellus 61B.
- Kahn, R., A. Petzold, M. Wendisch, E. Bierwirth, T. Dinter, M. Esselborn, M. Fiebig, **B. Heese**, P. Knippertz, D. Müller, A. Schladitz, W.

von Hoyningen-Huene, 2009, Desert dust aerosol air mass mapping in the western Sahara using particle properties derived from space-based multi-angle imaging, Tellus 61B.
- Tesche, M., A. Ansmann, D. Müller, D. Althausen, I. Mattis, **B. Heese**, V. Freudenthaler, M. Wiegner, M. Esselborn, G. Pisani, and P. Knipperts, 2009, Vertical profiling of Saharan dust with Raman lidars and airborne HSRL in southern Morocco during SAMUM, Tellus 61B.
- Wiegner, M., J. Gasteiger, K. Kandler, B. Weinzierl, K. Rasp, M. Esselborn, V. Freudenthaler, **B. Heese**, C. Toledano, M. Tesche, and D. Althausen, 2009, Numerical simulations of optical properties of Saharan dust aerosols with emphasis on lidar applications, Tellus 61B.
- **Heese, B.**, and M. Wiegner, 2008, Vertical aerosol profiles from Raman polarization lidar observations during the dry season AMMA field campaign, J. Geophys. Res., 113, D00C11, doi:10.1029/2007JD009487. Johnson, B. T., B. Heese, S. A. McFarlane, P. Chazette, A. Jones, and N. Bellouin 2008, Vertical distribution and radiative effects of mineral dust biomass burning aerosol over West Africa during DABEX, J. Geophys. Res., 113, D00C12, doi:10.1029/2008JD009848.
- Haywood, J. M., J. Pelon, P. Formenti, N. A. Bharmal, M. Brooks, G. Capes, P. Chazette, C. Chou, S. Christopher, H. Coe, J. Cuesta, Y. Derimian, K. Desboeufs, G. Greed, M. Harrison, **B. Heese**, E. J. Highwood, B. T. Johnson, M. Mallet, B. Marticorena, J. Marsham, S. Milton, G. Myhre, S.R. Osborne, D. J. Parker, J.-L. Rajot, M. Schulz, A. Slingo, D. Tanre, and P. Tulet, 2008, Overview of the Dust and Biomass-burning Experiment and African Monsoon Multidisciplinary Analysis Special Observing Period-0, J. Geophys. Res., 113, D00C17, doi:10.1029/2008JD010077.
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- **Heese, B**., V. Freudenthaler, M. Seefeldner, M. Kosmale, M. Wiegner, 2004, First results from the portable lidar system POLIS - Proceedings of the International Laser Radar Conference, Matera, Italy.
- Godin-Beekmann, S. M., T. Song, and **B. Heese**, 2003, Long-term DIAL monitoring of the stratospheric ozone vertical distribution, Lidar Remote Sensing for Industry and Environment Monitoring III, Upendra N. Singh, Toshikasu Itabe, Zhishen Liu, Editors, SPIE, 4893.
- **Heese, B**., V. Freudenthaler, M. Seefeldner, M. Wiegner, 2002, POLIS - A new POrtable LIdar System for ground-based and airborne measurements of aerosols and clouds, Proceedings of the International Laser Radar Conference, Québec, Canada.
- **Heese, B**., S. Godin, A. Hauchecorne, 2001, Forecast and Simulation of Stratospheric Ozone Filaments: A Validation of a High Resolution PV Advection Model by Airborne Ozone Lidar Measurements in Winter 1998-1999, J. Geophy. Res., 106, 20,011.
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- **Heese, B.**, K. Barthel, Ø. Hov, 1992, TOMS total ozone data compared with northern latitude Dobson ground stations, Ozone in the Troposphere and Stratosphere, NASA Conference Publication 3266, 215.
- **Heese, B.**, K. Barthel, Ø. Hov, 1992, A comparison of total ozone data from satellite and ground-based observations at northern latitudes, J. Geophy. Res., 97, 3825.

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