

Acknowledgements

I would like to thank all the people, that were involved in the realization of this work.

In particular, I would like to express my gratitude to Prof. Dr. Jürgen Fischer and Prof. Dr. Thomas Trautmann for their interest in and support of this work, for their patience and flexibility and, last but not least, for reviewing this thesis.

Furthermore I like to sincerely thank my supervisors Franz Schreier und Ute Böttger for years of support and attendance, for confidence in me and the fact that there might be a finishing result, for sharing their knowledge with me in lots of scientific (and other) discussions. Special thanks to Franz for demonstrating that Bavaria is not that bad!

I greatly appreciate the support of Michael Höpfner, who has always been very open to questions and discussions, and who provided most of the data used in the cloud retrieval. I would like to thank Holger Walter, Francesco Spada and, especially, Claudia Emde for closely collaborating in the model intercomparisons. I thank Ping Yang very much for proving unbureaucratic and fast access to the database of ice particle optical properties compiled by him and his colleagues.

I thank Michael Hess and Adrian Doicu, my colleagues from German Aerospace Center, for providing helpful suggestions and ideas. Thanks to all the colleagues from the Institute of Space Sciences of Free University Berlin. I did always appreciate your seminars, not only the ones on the top of Germany. In particular, I like to thank Kerstin Ebert and Ronny Leinweber, who hurled themselves into the struggle with MERIS and MODIS data and to fit these to my requirements.

I gratefully acknowledge the support of Prof. Kuo-Nan Liou, who provided the possibility to visit the Department of Atmospheric and Oceanic Sciences at the University of California, Los Angeles. This visit was sponsored by the German Academic Exchange Service, DAAD (D/04/34989).

Thanks for – just everything to Kerstin Ebert.