

**Adrian Doicu, Thomas Trautmann, Franz Schreier**

Numerical Regularization for Atmospheric Inverse Problems. Springer Praxis Books in Environmental Sciences, Springer and Praxis Publishing, 2010, XIII, 426 p, ISBN 978-3-642-05438-9, Hardcover

This research monograph presents and analyzes numerical algorithms for atmospheric retrieval, pulling together all the relevant material in a consistent, very powerful manner. The subject of this book is a hot topic with currently no monographic support. It is more advanced, specialized and mathematical than its competitors, and a comprehensive book on regularization techniques for atmospheric science is much needed for further development in this field. It

- Presents regularization methods for atmospheric retrieval, based on the authors work
- Focuses on computational aspects but also provides some theoretical results
- Surveys the state-of-the-art numerical methods for solving discrete ill-posed problems
- Analyzes the existing numerical algorithms and discusses practical implementation issues
- Illustrates with examples from atmospheric remote sensing the various methods in action

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