Special Issue

Developing Algorithms and Software Tools to Retrieve Atmospheric Composition

Message from the Guest Editor

In the past two decades a large number satellite instruments have been flown with the aim of retrieving atmospheric composition. These have used a variety of viewing geometries and spectral ranges, each with their own particular characteristics, advantages and difficulties. For this special issue we would like to compile descriptions of the retrieval algorithms used for these instruments, not at a detailed ATBD level but with sufficient information to allow different methods to be compared and to guide those designing future missions. In particular we would like an emphasis on solutions adopted for particular problems, both anticipated and unanticipated, and lessons learned for instrument design. The generally accepted equations for radiative transfer and inverse methods need not detailed. Specific examples of retrieved profiles may be included to illustrate retrieval characteristics but this special issue is not intended to include validation. A length of 10 pages is suggested. In addition we would welcome short papers addressing particular issues which may be have been confined to internal technical documents but could be of wider interest.

Guest Editor

Dr. Anu Dudhia
Department of Physics, University of Oxford, Parks Rd, Oxford OX1 3PU, UK

Deadline for manuscript submissions

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Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

Dr. Daniele Contini
Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

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