

Special Issue

Solar Activity Influence on Atmospheric Composition

Message from the Guest Editor

Topics of this Special Issue include but are not limited to: Relations between the 11-year solar cycle and concentrations of neutral and ionized atmosphere constituents in dependence on the height, latitude, longitude and season;

Influence of the solar cycle on variations of such integral characteristics as total ozone and total electron content;

Long-term tendencies in the climate processes, atmospheric ozone, state of both the upper neutral atmosphere and ionosphere in connection with solar activity;

Solar rotation cycle and atmosphere parameters;

Case studies of arbitrary changes in the atmosphere, caused by processes on the Sun;

Mechanisms and consequences of changes in the atmosphere under the influence of solar activity;

Simulation of the impact of solar activity on the troposphere, stratosphere (including ozone layer), upper neutral atmosphere and ionosphere, evaluation of the quality of both atmospheric models and reanalyses in representation of the role of solar activity;

Possible nonlinear interaction between numerous factors influencing state of the atmosphere (different dynamical and chemical processes and solar activity).

Guest Editor

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Deadline for manuscript submissions

closed (20 May 2022)



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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

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