



geosciences



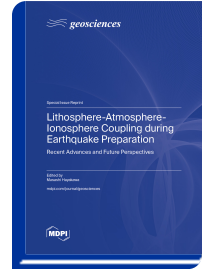
Special Issue Reprint

Lithosphere-Atmosphere-Ionosphere Coupling during Earthquake Preparation: Recent Advances and Future Perspectives

www.mdpi.com/books/reprint/9758

Edited by
Masashi Hayakawa

ISBN 978-3-7258-1903-4 (Hardback)
ISBN 978-3-7258-1904-1 (PDF)



This Reprint is concerned with the problems of earthquake (EQ) precursors, short-term EQ prediction, and related fundamental scientific physics. EQ prediction (especially short-term prediction) is one of the most challenging subjects in the field of geosciences, and in the last few decades, researchers have achieved a lot of significant progress in various EQ precursors found not only in the lithosphere but also in the atmosphere and ionosphere. Further, the uppermost layer of ionosphere is found to be very sensitive to pre-EQ lithospheric activity, according to data from subionospheric VLF/LF propagation, ionosonde, and TEC observations, as well as satellite in situ observations, leading to the generation of a new intrinsic concept of lithosphere–atmosphere–ionosphere coupling (LAIC). Several hypotheses have already been proposed to explain the LAIC process by making full use of satellite- and ground-based multi-parameter observations, but we are still far from having a complete understanding, and this topic needs further extensive investigation. This Reprint offers new contributions to the LAIC process by presenting 12 papers, most of which deal with the latest findings and achievements related to the study of the LAIC process based on multi-parameter and multi-layer observations, and one of them recommends the use of artificial intelligence in the identification of EQ precursors. We hope that this Reprint will provide you with a new direction for short-term EQ prediction studies and encourage the production of further extensive seismo-electromagnetic studies in the future.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/9758

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.