

**IAU COLLOQUIUM 143**

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**The Sun as a Variable Star**  
**Solar and Stellar Irradiance**  
**Variations**

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**EDITED BY J. M. PAP, C. FRÖHLICH,**  
**H. S. HUDSON and S. K. SOLANKI**

How does the variability of the Sun affect the climate on Earth and other conditions in our atmosphere? The 143rd IAU Colloquium, held in Boulder, Colorado, brought together international experts to investigate this connection. This timely volume presents their articles and together these clearly illustrate just how variations in the energy output of the Sun affect the terrestrial climate, radiative environment, and chemistry of the upper atmosphere.

This survey provides a complete and up-to-date review of observations, theoretical interpretations, and empirical and physical models of variations in the energy output of the Sun and solar-type stars. In particular, it shows how this variability is related to magnetic activity on the surface of the star and how long-term modulations are driven by the stellar interior.

Together, these articles clearly demonstrate the link between changes in the radiative output of the Sun and registered climatic anomalies – essential reading for researchers and graduate students.

# The Sun as a Variable Star

IAU Astronomical Union  
Union Astronomique Internationale

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# The Sun as a Variable Star

## Solar and Stellar Irradiance Variations

Proceedings of IAU Colloquium No. 143  
held in Boulder, Colorado, USA  
June 20–25, 1993

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 **CAMBRIDGE**  
UNIVERSITY PRESS

Published by the Press Syndicate of the University of Cambridge  
The Pitt Building, Trumpington Street, Cambridge CB2 1RP  
40 West 20th Street, New York, NY 10011-4211, USA  
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

© Cambridge University Press 1994

First published 1994

Printed in Great Britain at the University Press, Cambridge

*A catalogue record for this book is available from the British Library*

*Library of Congress cataloguing in publication data available*

ISBN 0 521 42006 7 hardback

Dedicated to the memory of

*Ernest Gurtovenko*



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