

## Workshop on Stratospheric Sudden Warming and its Role in Weather and Climate Variations

February 22 (Wed) - 24 (Fri) in 2012

at Shiran Kaikan, Kyoto University, Kyoto, Japan

Invited Speakers: Isamu Hirota (Kyoto U., Japan), Karin Labitzke (Free U. Berlin, Germany),  
Taroh Matsuno (JAMSTEC /U. Tokyo, Japan), Michael McIntyre (U. Cambridge, UK),  
Alan Plumb (MIT, USA), and Mike Wallace (U. Washington, USA)

Conveners: Mark Baldwin (NWRA, USA), Ted Shepherd (U. Toronto, Canada),  
and Shigeo Yoden (Kyoto U., Japan)

Sponsors: WCRP/SPARC, IAMAS/ICMA, MEXT/JSPS-GIASR,  
Kyoto Univ. GCOE-ARS, and Kyoto Univ. Foundation

More information at <http://www-mete.kugi.kyoto-u.ac.jp/Kyoto2012/>

Stratospheric sudden warming (SSW) is a breakdown event of the winter polar vortex associated with a sudden rise of temperature by several tens K in a few days in the polar stratosphere. It is basically a nonlinear dynamical event in planetary scale, while it is recognized as an event that has association with smaller spatial-scale gravity waves, and longer time-scale intraseasonal and interannual variations or climate change of the polar vortex. It is also interacted with radiative and chemical processes in the stratosphere. Nowadays its remote influence and association with variations in some components of Earth's climate system are investigated widely, including the troposphere, the mesosphere and lower thermosphere, the oceans, the hydrosphere, and the cryosphere.

It is nearly 60 years since the finding of stratospheric sudden warming by Richard Scherhag (1952), nearly 40 years since the pioneering theory by Taroh Matsuno (1971), and nearly 30 years since the publication of some well known articles on SSWs in the special issue of the Journal of the Meteorological Society of Japan on the occasion of the centennial anniversary of the Society. In this workshop, we invite several speakers from the first generation of SSW research to promote intensive discussions with the second and third generations to inform the future. We will repeat Michael McIntyre's (1982) question "How well do we understand the dynamics of stratospheric warmings?", and expand the question to their remote influence in the climate system and roles in weather and climate variations. Planned sessions include:

- dynamics of SSWs and radiative and chemical processes associated with them
- intraseasonal and interannual variations of the polar vortex
- upward and downward vertical couplings in the polar region
- association with the oceans, the hydrosphere, or the cryosphere
- roles in numerical weather forecasts and climate change projections

温故而知新

(on ko chi shin)

To the past to inform the future



*Please send the following information to [ieshub-office@eps.sci.kyoto-u.ac.jp](mailto:ieshub-office@eps.sci.kyoto-u.ac.jp) in order to receive the third circular that includes further information on the SSW Kyoto workshop, such as the application method of papers, hotel information etc.*

----- SSW Kyoto workshop 2012 -----

Name:

Affiliation:

Address:

E-mail address:

Planned title of your paper (if available):

----- send this form to [ieshub-office@eps.sci.kyoto-u.ac.jp](mailto:ieshub-office@eps.sci.kyoto-u.ac.jp) -----