The second circular

WCRP/SPARC SATIO-TCS joint workshop on Stratosphere-Troposphere Dynamical Coupling in the Tropics

SATIO-TCS
Stratospheric and Tropospheric Influences on Tropical Convective Systems

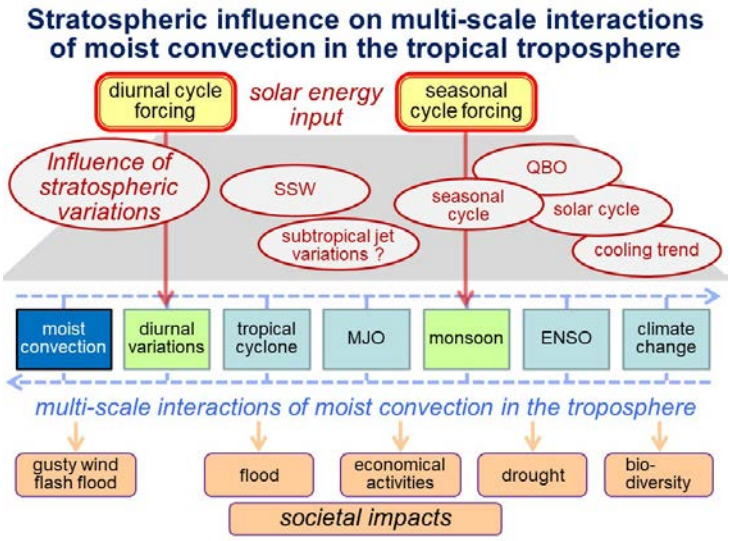
February 21 (Fri) – 24 (Mon), 2020
Seminar House of Graduate School of Science, Kyoto University, Kyoto, Japan
February 25 (Tue), 2020
Raku-Yu Kaikan, Kyoto University, Kyoto, Japan

Organizers
Peter H. Haynes[1], Peter Hitchcock[2], Matthew H. Hitchman[3],
Tieh-Yong Koh[4], Takatoshi Sakazaki[5], and Shigeo Yoden[5]

1: U. of Cambridge, 2: Cornell U., 3: U. of Wisconsin-Madison,
4: Singapore U. of Social Sciences, 5: Kyoto U.

Sponsors
WCRP/SPARC, YMC, PSTEP, Kyoto University, JSPS (KAKENHI, JSPS-DG-RSTHE JRP)

SATIO-TCS (Stratospheric And Tropospheric Influences On Tropical Convective Systems) is an international research activity under WCRP/SPARC (World Climate Research Programme/ Stratosphere-troposphere Processes And their Role in Climate). SATIO-TCS has its focus on stratosphere-troposphere coupling (upward and downward) in the tropics associated with moist convection and its organized systems (see figure at the bottom). There is an increase in reports of observational evidence that stratospheric variations, such as stratospheric sudden warming (SSW) events, the equatorial quasi-biennial oscillation (QBO), the 11-year solar cycle (SC), and the anthropogenic cooling trend (CT) in the lower stratosphere, influence tropospheric variations in the tropics by modulating moist convection and its large-scale organization into meso-to-planetary-scale systems. Such multi-scale interactions cover a wide range of space- and time-scales, including phenomena ranging from moist convection, its diurnal variations, cloud clusters, tropical cyclones, the Madden-Julian Oscillation (MJO), monsoon circulations, interannual variations like El Nino Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD), to the global warming trend. Some global general circulation models and regional cloud-resolving models show similar features as these observations, but such modeling studies are in a rather preliminary state. For more details, please visit https://www.sparc- climate.org/activities/satio-tcs/.



This is a workshop on the stratosphere-troposphere dynamical coupling in the tropics, and also teleconnections to the extratropics, jointly organized with the following collaborative research activities:

- Years of the Maritime Continent (YMC)
- Project for solar-terrestrial environment prediction (PSTEP)
- JSPS KAKENHI “Stratosphere-troposphere dynamical coupling in the tropics”
- JSPS-DG-RSTHE Joint Research Project “Scientific research on extreme weather in changing climate in the Maritime Continent and its societal application”

Two-day core sessions are planned for the latest results of observations and data analyses, numerical experiments, and theoretical studies on the stratosphere-troposphere dynamical coupling in the tropics, whereas a couple of sessions are also planned for some specific subjects related to the influences of solar activity variations on weather and climate, and the implications for extreme weather and climate in the Maritime Continent under the scope of stratosphere-troposphere dynamical coupling. Participation of early career scientists and PhD students is encouraged, and limited amount of grants will be available to support the participation from Asian countries. Please visit the joint workshop Web page at http://www-mete.kugi.kyoto-u.ac.jp/Kyoto2020/index.html for abstract submission, registration, and travel grant application.

Important dates

- Deadline for abstract submission with grant application: 30 November, 2019
- Deadline for abstract submission: 20 December, 2019
- Deadline for registration without presentations: 31 January, 2020

Tentative schedules

February 21 (Fri) and 22 (Sat) @ Seminar House of Graduate School of Science
Sessions focusing on the stratospheric and tropospheric influences on tropical convective systems (SATIO-TCS) and related subjects
Invited speakers: P.H. Haynes (U. Cambridge), H.H. Hendon (BOM/Australia), P. Hitchcock (Cornell U.), M.H. Hitchman (U. Wisconsin-Madison), G.N. Kiladis (NOAA/ESRL), K. Kodera (JMA/MRI), T.Y. Koh (Singapore U.S.S.), S.W. Son (Seoul N.U.),, C.C. Wu (N.Taiwan U.)
February 23 (Sun) (evening) @ GANKO Takasegawa Nijoen, workshop dinner
February 24 (Mon) @ Seminar House of Graduate School of Science
Session focusing on the impacts of solar activity variations on weather and climate (PSTEP)
Invited speakers: L.L. Hood (U. Arizona), Y. Kuroda (JMA/MRI), U. Langematz (F.U. Berlin), Y.J. Orsolini (Norwegian I.A.R.)
February 25 (Tue) @ Raku-Yu Kaikan, Kyoto U.
Session focusing on the extreme weather in changing climate over the Maritime Continent (YMC) and tropical Asia
Invited speakers: T.W. Hadi (I.T. Bandung), S.K. Mishra (I.I.T. Delhi), N.J. Trilaksono (I.T. Bandung), K. Yoneyama (JAMSTEC), C. Zhang (NOAA/PMEL)