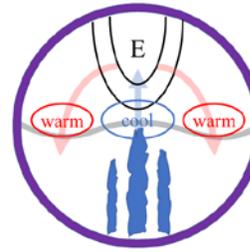


The first circular

# 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

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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, Kyoto University, JSPS

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. There is an increase of reports on the 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 anthropogenic cooling trend in the lower stratosphere, do influence on the tropospheric variations in the tropics with the form of 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 as 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), and global warming trend. Some global general circulation models and regional cloud resolving models show similar features as related to 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, jointly organized with the following collaborative research activities:

- Years of the Maritime Continent (YMC)  
<http://www.jamstec.go.jp/ymc/index.html>



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- JSPS KAKENHI “Stratosphere-troposphere dynamical coupling in the tropics”
- MEXT KAKENHI “Project for solar-terrestrial environment prediction (PSTEP)”  
<http://www.pstep.jp/?lang=en>
- 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 in the tropics. 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.

### Important dates

- Call for abstracts: 1 September, 2019
- Deadline for abstract submission with grant application: 30 November, 2019
- Deadline for abstract submission: 20 December, 2019
- Deadline of online registration: 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 and related subjects

**February 23 (Sun)**  
(evening) workshop dinner

**February 24 (Mon) @ Seminar House of Graduate School of Science**  
Sessions focusing on the stratosphere-troposphere coupling associated with solar activity variations and related subjects

**February 25 (Tue) @ Raku-Yu Kaikan, Kyoto U.**  
Sessions focusing on the extreme weather in changing climate in the Maritime Continent and societal applications

