

## Modelling of Deep Convection and its Role in the Tropical Tropopause Layer

SPARC-GEWEX/GCSS-IGAC Invitational workshop

June 12-15, 2006

Coast Harbourside Hotel, Victoria BC, Canada

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The tropical tropopause layer (TTL) is a transition layer in which the air has mixed stratospheric and tropospheric properties. The TTL has increasing levels of ozone with height, large lapse rates and near its base the net radiative heating changes sign from negative below to positive above. The heat, moisture and chemistry budgets of the TTL ultimately affect the properties of stratospheric air. These budgets are influenced by slow ascent within the upward branch of the Brewer-Dobson circulation and by overshooting deep moist convection, which is an effective transport method from the boundary layer. The relative importance of the contribution of deep moist convection to the heat, moisture and chemistry budgets of the TTL is still uncertain and subject of debate.

The TTL has received attention within the SPARC (Stratospheric Processes and Their Role in Climate) community from the perspective of its importance for processes in the tropical lower stratosphere, while research on modelling and understanding of deep convection in the tropics has received considerable attention within the GEWEX Cloud System Study (GCSS). The IGAC (International Global Atmospheric Chemistry) community is interested in the role of deep convection in transporting and processing chemical constituents and aerosols. The aim of this workshop is to bring together expertise from these communities and related research activities on stratospheric processes and modelling of deep convection and chemistry in the tropics to set the stage for a better understanding of the role of convection in determining the thermal structure and composition of the TTL. The workshop will be organized into three main sections: Overviews of historical development and current TTL research (Day 1), Modelling deep convection in the tropics (Day 2), Coupling of deep convection and chemistry (Day 3). There will be organized breakouts, discussion, and poster sessions in addition to plenary sessions devoted to oral presentations. The last half-day (Day 4) will be devoted to summarizing and discussing the outcomes of the workshop and future directions.

**Participation:** Because of space limitations the workshop size is limited to 70 participants. Participation will be by invitation but all interested are invited to contact the SPARC IPO at the following address:

SPARC International Project Office  
Department of Physics, University of Toronto  
60 St. George St.

Toronto, ON M5S 1A7

Tel: 416 946 7543

Fax: 416 946 0513

email: [sparc@atmosp.physics.utoronto.ca](mailto:sparc@atmosp.physics.utoronto.ca)

web address: <http://www.atmosp.physics.utoronto.ca/SPARC/>

Participants are expected to cover their own travel and lodging costs. A limited amount of funding will be available to assist with travel expenses for participants in need and these will be awarded on a case by case basis. A small registration fee (maximum \$75 CAN) may be charged to partially cover costs of catering and the workshop reception.

**Accommodation:** The workshop will be held at the Coast Harbourside Hotel in Victoria, BC, Canada.

146 Kingston Street

Victoria, BC, V8V 1V4

Ph. (250) 360-1211

Fax. (250) 360-1418

Res 1-800-663-1144

<http://www.coasthotels.com/home/sites/victoria/home.cfm>

A block of rooms has been reserved at this hotel:

Comfort Rooms: \$119.00

Superior Rooms: \$129.00

Harbourview Rooms: \$149.00

Rates are quoted in Canadian Dollars and are subject to taxes; Room rates are for single or double occupancy.

To obtain this rate, reservations must be made by **May 22, 2006**

Reservations can be made directly through the Hotel, through the toll free reservations telephone line: 1-800-663-1144

The group or meeting name must be quoted: SPARC-GEWEX/GCSS-IGAC Workshop

We are looking forward to a very exciting and productive workshop.

Best regards,

The organizing committee

N. McFarlane (SPARC IPO), T. Birner (University of Toronto), J. Petch (Met. Office),  
M. Barth (NCAR)