GEWEX Upper Tropospheric Clouds & Convection PROcess Evaluation Study meeting

22 – 23 October 2018

UPMC Sorbonne University, Paris, France

Day 1

Room 24-02, Tour Zamansky (central tower), 24th floor

9 :00 Registration

9 :15 Welcome, Logistics	Claudia Stubenrauch
9 :25 GEWEX update	Graeme Stephens
9 :40 UTCC PROES update & goals for this meeting	Claudia Stubenrauch

9 :55 round-table presentation of participants

10:10 The Release 5 CloudSat Products: Upgrades of Relevance to UT Cloud Process Studies
Tristan L'Ecuyer, University of Wisconsin, USA

Observational analyses of mesoscale convective systems (20 minutes each)

10:35 A Mesoscale Convective Systems Database Over the Tropical belt for the 2012-2016 Period, derived from the Meteorological Geostationary fleet
Thomas Fiolleau, CNRS, LEGOS, France

11:00 coffee break

11:20 MCS cloud life cycle from merged satellite data
Dominique Bouniol, CNRM, GMME, France

11:45 The life cycle of anvil clouds from SEVIRI
Luca Bugliario, DLR, Germany

12:10 Monitoring deep convection and convective overshooting using MHS : A CloudSat/Calipso-based assessment
Jean-François Rysman, LMD, France

12:35 group photo & lunch

14:30 Horizontal emissivity structure of UT cloud systems and resulting heating (A-Train Synergy)
Claudia Stubenrauch, CNRS, LMD, France

Water Vapor and Convective transport (20 minutes each)

14:55 Statistical downscaling of water vapour satellite measurements from observations of tropical ice clouds
Gulia Carella, LSCE, France

15:20 Upper tropospheric water vapour and its interaction with cirrus clouds – Insights from two decades of IAGOS in-situ observations
Andreas Petzold, FZ Juelich, Germany

15:45 High convective clouds in the Asian monsoon TTL
Bernard Legras, CNRS, LMD, France

16:10 Coffee break

16:30 On the Use of Tracer Measurements to Diagnose Convective Transport Pathways from the PBL to the UT
Johnny Luo, CUNY, City College, USA

16:55 Discussion : summarizing observational advances and
potential diagnostics for comparison to models

Process studies

17:30 The dynamical and microphysical support of convective anvils
Susan Van den Heever, CSU, USA (remote)

17:55 Discussions on potential of process studies

adjourn 18 :30

Day 2
Earth, Environment and Biodiversity Faculty (UFR918) Conference Room, Tower 45/55, 2nd floor

Climate variation and feedbacks *(20 minutes each)*

9:30 Observed cloud anomalies associated with the North Atlantic Oscillation, and their radiative feedback
Georgios Papavasileiou, IMK-TRO, KIT, Germany

9:55 Regional Intensification of the tropical hydrological cycle during ENSO
Graeme Stephens, NASA JPL, USA

10:20 Roles of Convection in the Maintenance of Tropical Margins
Hirohiko Masunaga, Nagoya University, Japan

10 :45 coffee break

11:10 Quantifying the relative importance of the middle and upper troposphere for the clear-sky outgoing longwave radiation
Venkatachalam Ramaswamy, NOAA GFDL, USA

11:35 Discussions on cirrus heating and feedbacks

12:25 lunch

Parameterizations and model diagnostic studies (20 minutes each)

14:00 Simulating ice crystal formation by convective detrainment and in-situ formation with our new cloud routine for the GCM ECHAM-HAM
Steffen Muench, ETHZ, Switzerland

14:25 Using a Cloud System Concept to assess bulk ice fall speed parameterizations in the LMDZ GCM
Marine Bonazzola, LMD, France

14:50 A parametrization of the dynamics of cold pool population in the LMDZ GCM
Jean-Yves Grandpeix, LMD, France

15:15 High cloud responses to aerosols and surface warming in two versions of E3SM with different cloud and convection tunings

Po-Lun Ma, PNNL, USA

15:40 Coffee and Discussion

bring obs and models together, and next steps :

- cooperations built since last meeting
- synergetic UT cloud system data for climate studies and model assessment
- other specific new diagnostics to be used for evaluating modelling at different scales (CRM which resolve convection and GCM which use parameterizations)
- preparation of review article ?

Adjourn 17:00