

TORERO Data Workshop, 23-25 July 2012 (tentative agenda, 18 July 2012)  
TORERO – Tropical Ocean Troposphere Exchange of Reactive halogens and Ovoc

**Monday – July 23<sup>rd</sup> – CIRES Auditorium**

- 12:00-12:30 **REGISTRATION & Welcome**
- 12:30-13:00 **Welcome & Overview TORERO and EqPOS Projects**  
Rainer Volkamer, *CU Boulder* – PI TORERO, Chair  
Hiroshi Furutani, *University of Tokyo* – PI EqPOS, Co-Chair
- TORERO – TROPICAL OCEAN TROPOSPHERE EXCHANGE OF REACTIVE HALOGENS AND OVOC**  
"SCIENCE OBJECTIVES: NSF/NCAR GV, AND NOAA RV KA'IMIMOANA" Rainer Volkamer, *CU Boulder*
- EQPOS – EQUATORIAL PACIFIC OCEAN AND STRATOSPHERIC/TROPOSPHERIC ATMOSPHERE STUDY**  
"SCIENCE OBJECTIVES: RV HAKUHO MARU" Hiroshi Furutani, *University of Tokyo*
- 13:00 **SESSION ONE**  
**TORERO OBSERVATIONS ABOARD RV KA'IMIMOANA**
- 13:00-13:30 Atmospheric and ocean state: VLSH concentrations and emissions  
Steve Andrews, Lucy Carpenter, *York University, UK*
- 13:30-14:00 Measurements of I2 in the open ocean marine boundary layer  
Ru-Jin Huang, Thorsten Hoffmann, *University of Mainz, Germany*
- 14:00-14:20 Summary of observations of near-surface meteorology and air-sea fluxes from R/V KaimiMoana  
Chris Fairall, Ludovic Bariteau, David Welsh, *NOAA/ESRL/PSD*  
Byron Blomquist, *University of Hawaii*
- 14:20-14:50 CU LED-CE-DOAS and MAX-DOAS: diurnal cycles, vertical profiles and air-sea fluxes of glyoxal  
Sean Coburn, Ryan Thalman, Ivan Ortega, Roman Sinreich, Barbara Dix, Rainer Volkamer, *CU Boulder*
- 14:50-15:20 Spatial distributions of organic carbon and organic nitrogen with their isotopic compositions and biogenic tracer compounds in marine aerosols over the eastern equatorial Pacific  
Yuzo Miyazaki, *Hokkaido University, Japan*
- 15:20-15:30 Discussion
- 15:30-15:45 **BREAK**
- 15:45-16:30 **SESSION TWO**  
**EQPOS OBSERVATIONS ABOARD RV HAKUHO MARU**
- Shipboard atmospheric and oceanic observations during the EqPOS (Equatorial Pacific Ocean and Stratospheric/Tropospheric)  
Hiroshi Furutani, *University of Tokyo*
- 16:30-17:00 Discussion
- 17:00-20:00 **Poster Session CIRES Atrium** (w/ catered food)

**Tuesday – July 24<sup>th</sup> – CIRES Auditorium**

- 7:30-8:00 **CONTINENTAL BREAKFAST**
- 8:00 **SESSION THREE**  
**NSF/NCAR GV: LONG LIVED GASES**
- 8:00-8:30 CO, CO2 and methane measurements from the NSF/NCAR G-V  
Teresa Campos, *NCAR/ACD*
- 8:30-9:00 O3 observations in the tropical UTLS  
Ru-Shan Gao, *NOAA/ESRL/CSD*
- 9:00-9:20 VCSEL – fast water vapor  
Mark Zondlo, *Princeton*  
Stuart Beaton, *NCAR/RAF*
- 9:20-10:00 Validation of RAQMS Ozone Analyses and PATMOS-X Cloud Retrievals  
Brad Pierce, *NOAA/NESDIS*
- 10:00-10:30 Discussion
- 10:30-10:45 **BREAK**
- 10:45-11:30 Oxidant chemistry in the tropical troposphere: role of bromine and oxygenated VOCs, and implications for mercury  
Daniel Jacob, *Harvard*
- 11:30-11:45 Discussion
- 11:45-13:00 **LUNCH**

13:00 **SESSION FOUR**  
**NSF/NCAR GV: REACTIVE GASES, RADIATION, RADICALS AND MERCURY**

13:00-13:30 Trace Organic Gas Analyzer measurements  
Eric Apel, Rebecca Hornbrook, *NCAR/ACD*

13:30-14:00 Actinic flux measurements and photolysis frequencies near clouds  
Sam Hall, *NCAR/ACD*  
Sebastian Schmidt, *CU Boulder and LASP*

14:00-14:30 CU AMAX DOAS measurements of BrO and OVOC vertical profiles  
Rainer Volkamer, Sunil Baidar, Barbara Dix, Siyan Wang, *CU Boulder*

14:30-15:00 Vertical profiles of Reactive Gaseous Mercury  
Tony Hynes, Dieter Bauer, *RSMAS, UMiami*

15:00-15:30 Discussion

15:30-15:45 **BREAK**

13:00 **SESSION FOUR**  
**NSF/NCAR GV: REMOTE SENSING AND AEROSOLS**

15:45-16:15 High Spectral Resolution LIDAR data processing  
Ed Eloranta, *University of Wisconsin*  
Bruce Morley, Scott Spuler, Jothiram Vivekanandan (Vivek), *NCAR*

16:15-16:45 Microwave Temperature Profiler and Sea Surface Temperature Measurements  
Julie Haggerty, *NCAR/RAF*

16:45-17:15 Detection of IO and glyoxal in the FT: implications for satellite retrievals  
Barbara Dix, Sunil Baidar, Rainer Volkamer, *CU Boulder*

17:15-17:45 Aerosol size distributions - nucleation to coarse mode  
Dave Rogers, *NCAR/RAF*

17:45-18:00 Discussion

19:00 **DINNER @ WALNUT BREWERY**  
**1123 WALNUT STREET (WALNUT AND BROADWAY)**  
**TEL: 303-447-1345**

## Wednesday - July 25<sup>th</sup> - CIRES Auditorium

7:30-8:00 **CONTINENTAL BREAKFAST**

8:00 **SESSION FIVE** (DATA ARCHIVE, POLICY, AGU ABSTRACTS, BEST PICTURE AWARD)  
**Atmospheric Modeling**

8:00-9:40 Glyoxal over oceans: Reconciling model calculations with observations  
Stelios Myriokefalitakis, Maria Kanakidou, *University of Crete, Greece*

8:40-9:10 Controls from a widespread surface ocean organic micro layer on atmospheric oxidative capacity  
Rainer Volkamer, *CU Boulder*  
Roland von Glasow, Roberto Sommariva, *UEA Norwich, UK*

9:10-9:30 Discussion

9:30-10:00 **BREAK - tour the ATMOSpeclab w/ students in the Volkamer group**

10:00-10:15 TORERO Data management  
Steve Williams, Linda Echo-Hawk, *NCAR/EOL*

10:15-10:30 TORERO Data policy  
TORERO Science Team

10:30-11:30 AGU Session A075 - Tropospheric Chemistry and Tropical Oceans  
Plenary Discussion

11:30-11:40 Best picture award  
Michael Lechner, *CU Boulder*

11:40 **FINAL REMARKS**  
Alex Pszenny, *NSF*

12:00 **Adjourn**

## Monday - July 23<sup>rd</sup> - CIRES Auditorium

17:00-20:00 Poster Session CIRES Atrium

#1	Byron Blomquist, UHawaii	Air-Sea Flux of CO <sub>2</sub>
#2	Byron Blomquist, UHawaii	Air-Sea Flux of CO
#3	Siyuan Wang, CU Boulder	Vertical distributions of halogens and OVOC during TORERO
#4	Rebecca Hornbrook, NCAR/ACD	Trace Organic Gas Analyzer measurements aboard the NSF/NCAR GV
#5	Sunil Baidar, CU Boulder	Assessing O <sub>4</sub> cross section uncertainties from AMAX-DOAS and LED-CE-DOAS measurements
#6	Sean Coburn, CU Boulder	Measurements of reactive halogen species as oxidants of mercury over the Gulf of Mexico
#7	Barbara Dix, CU Boulder	Airborne Detection of Iodine Oxide and Glyoxal in the Free Troposphere over the Remote Tropical Pacific Ocean
#8	Steve Arnold, ULeeds	A heterogeneous open ocean source for glyoxal and iodine oxide
#9	Laura Gonzalez, CU Boulder	Glyoxal formation from the heterogeneous reaction of PUFA + O <sub>3</sub>
#10	Ryan Thalman, CU Boulder	Temperature Dependent formation of glyoxal and methyl glyoxal from the oxidation of isoprene under zero and high NO <sub>x</sub> conditions
#11	Eleanor Waxman, CU Boulder	Secondary Organic Aerosol Formation from Glyoxal: photochemical versus dark uptake and reversible versus irreversible SOA formation
#12	Christopher Kampf, CU Boulder	Effective Henry's Law constant measurements for glyoxal in model aerosols containing sulfate