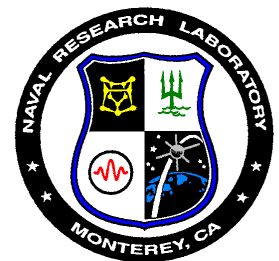


Third THORPEX International Science Symposium
TTISS
Monterey California, 14-18 September 2009



Program Booklet



Monday, 14 September 2009

Opening Session

Chair: David Burridge

09:00-09:05	Simon Chang (Superintendent, NRL Marine Meteorology Division): <i>Welcome to Monterey</i>
09:05-09:30	Dave Parsons (WMO, Director of WWRP): <i>THORPEX Overview</i>
09:30-09:50	Huw Davies (ETH Zurich): <i>Extra-tropical flow dynamics and THORPEX: Some core issues</i>
09:50-10:10	Patrick A. Harr (NPS) and James Moore (NCAR): <i>The THORPEX Pacific Asian Regional Campaign (T-PARC)/Tropical Cyclone Structure-08 (TCS-08) and affiliated program over the Western North Pacific: Objectives, strategies, and accomplishments</i>
10:10-10:30	Yucheng Song : <i>The Winter Component of T-PARC</i>

Coffee

Session: RCCCRT-A

T-PARC/TCS-08, *Chair: Dave Parsons*

11:00-11:15	Tetsuo Nakazawa et al. (MRI, Japan): <i>Impact of extra sonde observations for typhoons during T-PARC 2008</i>
11:15-11:30	Munehiko Yamaguchi et al. (U. Miami): <i>Coordinated use of targeted observations during TCS-08/T-PARC</i>
11:30-11:45	Martin Weissmann et al. (DLR, Germany): <i>Overview of T-PARC Falcon operations and first results from ECMWF data denial experiments</i>
11:45-12:00	Peter Black (NRL, Monterey): <i>Overview of WC-130J storm-scale observations during T-PARC/TCS08</i>
12:00-12:15	Yoichiro Ohta and Takuya Komori (JMA): <i>Total energy singular vector guidance in JMA for T-PARC 2008</i>
12:15-12:30	Byoung-Joo Jung et al. (Yonsei U., Korea): <i>Real-time adaptive observation guidance and observation system experiments for Typhoons observed in T-PARC</i>
12:30-12:45	Elizabeth Sanabia and Patrick Harr (NPS): <i>The impact of Typhoon Sinlaku on the Northern Hemisphere midlatitudes during T-PARC</i>

Lunch

 Monday, 14 September 2009, Continued

Session: TIGGE–A **TIGGE and multi-model ensembles**, *Chair: Tom Hamill*

14:00-14:25 **Richard Swinbank et al.** (UK Met Office): *The THORPEX Interactive Grand Global Ensemble*

14:25-14:45 **Laurence J. Wilson and Anna Ghelli** (Environment Canada): *Verification of multi-model ensemble forecasts using the TIGGE dataset*

14:45-15:00 **Wen Chen and Xiefei Zhi** (Nanjing U., China): *Multi-model superensemble forecasts of the surface temperature in the Northern Hemisphere*

Coffee & T-PARC/TCS-08, RCCRT and PDP-A Poster Sessions

Session: PDP–A **PDP in the Tropics**, *Chair: Sarah Jones*

16:30-16:45 **Michael T. Montgomery** (NPS): *Tropical cyclogenesis within a tropical wave critical layer: Easterly waves. Physical basis and high resolution numerical simulations*

16:45-17:00 **Rahul Mahajan and Greg Hakim** (U. Washington): *Ensemble sensitivity analysis applied to tropical cyclones*

17:00-17:15 **Russ Elsberry, Mary Jordan** (NPS) and **Frederic Vitart** (ECMWF): *Predictability of tropical cyclone events on intraseasonal timescales with the ECMWF monthly forecast model*

17:15-17:30 **Ann Shelly, Nick Savage and Sean Milton** (UK Met Office): *Predictability and systematic error growth in Met Office MJO predictions*

17:30-17:45 **Jim Caughey** (WMO): *THORPEX Africa–Plans and Priorities*

17:45-18:00 **Hai Lin et al.** (Environment Canada): *Interactions between the Madden–Julian Oscillation and the North Atlantic Oscillation*

18:30-20:30 **Icebreaker at the Monterey Peninsula Yacht Club**

Monday, 14 September 2009 Poster Sessions

T-PARC/TCS-08 Poster Session

- Florian Harnisch** and **Martin Weissmann** (DLR): *Observation impact of dropsonde data*
- Jeffrey Hawkins** (NRL, Monterey) and **Christopher Velden** (U. Wisconsin): *Integrating satellite data and products for mission support and science applications in T-PARC*
- William Komaromi** (U. Miami), **Eric Rappin**, **Sharan Majumdar**, **Chris Velden**, **Rolf Langland**, **Sim Aberson**, and **David Nolan**: *Challenges in numerical predictions of the structure of Typhoon Sinlaku*
- Koji Yamashita** (JMA), **Yoichiro Ohta**, **Takuya Komori**, **Kiyotomi Sato**, and **Tetsuo Nakazawa**: *Observing system experiments using the operational NWP system of JMA with special observations targeted for Typhoon Sinlaku and Jangmi*
- Carolyn Reynolds** and **Rolf Langland** (NRL, Monterey): *Naval Research Laboratory global model adaptive observing during T-PARC/TCS-08*
- James D. Doyle** (NRL, Monterey), **Clark Amerault** and **Carolyn A. Reynolds**: *Aspects of tropical cyclogenesis predictability: perspectives from T-PARC/TCS-08*
- Andrew Snyder** and **Zhaoxia Pu** (U. Utah): *NOGAPS ensemble prediction of tropical cyclone genesis: Evaluation during T-PARC/TCS-08*
- Hiroyuki Yamada** (JAMESCT): *Observation and simulation of the genesis of Typhoon Fengshen (2008) in the Tropical Western Pacific*
- Hyun Mee Kim** and **Sung-Min Kim** (Yonsei U.): *Characteristics of total energy singular vectors for tropical cyclones observed in T-PARC*
- Michael M. Bell** and **Michael T. Montgomery** (NPS): *Development of a persistent low-level circulation in pre-depression Hagupit observed during TCS-08.*
- Arwen Twitchett** (U. Leeds), **Michael Morgan** and **Cornelia Schwiertz**: *Adjoint-based sensitivities of potential vorticity streamer formation during the THORPEX Pacific Asian Regional Campaign*
- Kotaro Bessho** (JMA), **Tetsuo Nakazawa** and **Martin Weissmann**: *Dropsonde operation of Falcon in T-PARC and the analysis of surrounding environment of typhoons*

- R. L. Elsberry** (NPS), **M. T. Montgomery**, **D Raymond**, **P. Black**, **J. Hawkins**, **P. A. Harr**, **C. Velden**, **E. A. Ritchie**, **W. C. Lee**, **M. Bell**, **D. Eleuterio** and **R. Ferek**: *The Tropical Cyclone Structure-2008 (TCS-08) program: objectives on tropical cyclone formation, intensification, and structure change*
- Tetsuo Nakazawa** (JMA), **C.-C. Wu**, **M. Weissmann**, **S. Majumdar**, **C. Reynolds**, **J. Doyle**, **S. C. Jones**, **H.-S. Lee**, **D. Richardson**, **M. Yamaguchi**, **F. Harnisch**, and **D. Parsons**: *The THORPEX Pacific Asian Regional Campaign (T-PARC) objective on targeted observations associated with tropical cyclones over the Western North Pacific*
- Patrick A. Harr** (NPS), **S. C. Jones**, **D. Anwender**, **M. Bell**, **C. Davis**, **R. L. Elsberry**, **J. Evans**, **C. Kiemle**, **N. Kitabatake**, **W. C. Lee**, **R. McTaggart-Cowan**, **E. R. Sanabia**, **C. Velden** and **M. Weissmann**: *The THORPEX Pacific Asian Regional Campaign (T-PARC) objective on the extratropical transition of tropical cyclones: structure and downstream impacts*
- Rolf Langland** (NRL, Monterey), **Chris Velden**, **Sharan Majumdar**, **H. Berger**, and **Carolyn Reynolds** : *Data impact experiments for targeted observations during T-PARC (2008-2009)*
- Eun-Hee Jeon** (NIMR, Korea), **Yeon-Hee Kim**, **Dong-Eon Chang** and **Hee Sang Lee**: *Observing system experimnts using T-PARC 2008 dropsonde observations*
- Zhaoxia Pu** and **Lei Zhang** (U. Utah): *Mesoscale numerical simulations of T-PARC/TCS08 typhoons with assimilation of satellite and airborne observations*
- Alexander Kats** (Central Aerological Observatory, Russian Federation): *Russian upper-air network–experience of organizing additional/adaptive radiosonde ascents*
- Steven Businger**, **Antti Pessi**, **Nick Demetriades** and **Edward Treiber** (U. Hawaii): *Lighthing observations during T-PARC/TCS-08*
- Christian M. Grams** and **Sarah Jones** (U. Karlsruhe): *The interaction of Typhoon Jangmi (2008) and the midlatitude jet*
- Eric Rappin** (U. Miami): *A hierarchy of vortex initialization methods for tropical cyclones*
- Yi Jin** (NRL, Monterey): *Comparison of COAMPS-TC simulations with and without ocean coupling of Super-Typhoon Jangmi to T-PARC/TCS08 aircraft and satellite observations*
- Girmaw Bogale** (Ethiopia): *Rainfall prediction performance of the WRF model over complex terrain of Ethiopia*

Ron McTaggart-Cowan (Canada), **M. Riemer**, **Carolyn Reynolds**, and **Richard Moore**: *The evolution of a low-latitude summer trough over the western North Pacific*

Richard Moore (NPS): *Potential vorticity streamers as precursors to Tropical Cyclone genesis*

Byoung Joo Jung (Yonsei U., Korea), **Hyun Mee Kim**, **Fuqing Zhang** and **Chun-Chieh Wu**: *Impacts of targeted dropsonde observations on typhoon Sinlaku using an ensemble Kalman filter*

Jenni L. Evans (PSU), **Francesca Chiaromonte**, **Prabhani Kuruppumulage Don** and **Sarah Jones**: *Partitioning ensemble forecasts of tropical cyclone evolution*

Yeon-Hee Kim, **Eun-Hee Jeon**, **Dong-Eon Chang** and **Hee Sang Lee**: *Impact on typhoon track forecasts of dropsonde observations from DOTSTAR*

RCCCRT Poster Session

Andreas Doernbrack (DLR), **Axel Amediek**, **Andreas Fix**, **Christoph Kiemle**, **Stephan Rahm**, **Rudolf Simmet**, **Andreas Schäfler**, **Martin Wirth** and **Jon-Egill Kristjansson**: *Simultaneous airborne wind and water vapor lidar measurements during IPY-THORPEX.*

Peter Knippertz and **A. H. Fink** (U. Mainz): *Prediction of dry-season precipitation in Tropical West Africa and its relation to forcing from the extratropics*

M. Riemer (NPS) and **Sarah C. Jones**: *Baroclinic wave amplification in idealized scenarios of Extra-tropical Transition of Tropical Cyclones*

Rosalind Cornforth and **Brian Hoskins** (U. Reading): *Understanding and forecasting African Easterly Waves using moist singular vectors*

PDP-A Poster Session

Leonhard Scheck (U. Karlsruhe), **Martin Baumann**, **Sarah Jones**, **Vincent Heuveline**, and **Martin Jukes**: *Goal oriented adaptivity for Tropical Cyclones*

T. Salami, **O. S. Idowu** (Nigerian Meteorological Agency), and **E. E. Balogun**: *West African weather systems in the Development of Tropical Cyclones*

Amare Babu (National Meteorological Agency, Ethiopia): *The impact of Pacific sea surface temperature on the Ethiopian Rainfall*

Girmaw Bogale (Ethiopia): *Rainfall prediction performance of the WRF model over complex terrain of Ethiopia*

Tuesday, 15 September 2009

Session: PDP-B	Theoretical aspects of ensemble forecasting and adjoint based sensitivity analysis, Chair: Craig Bishop
09:00-09:15	Olivier Talagrand and Guillem Candille (LMD): <i>Important challenges for ensemble forecasting—a theoretical prospective</i>
09:15-09:30	Elizabeth Satterfield and Istvan Szunyogh (Texas A&M): <i>Local predictability of the performance of an ensemble forecast system</i>
09:30-09:45	Stephane Vannitsem (Roy. Met. Int. Belgium): <i>Dynamical properties of Model Output Statistics (MOS): The impact of initial condition and model errors</i>
09:45-10:00	Joao Teixeira (JPL): <i>Stochastic parameterization: From satellite observations to ensemble prediction</i>
10:00-10:15	Brett T. Hoover and Michael C. Morgan (U. Wisconsin): <i>Application of adjoint-derived sensitivity gradients to targeted observations for tropical cyclone steering and extratropical transition: an improved methodology</i>
10:15-10:30	Simon Lang et al. (U. Karlsruhe): <i>The structure of singular vectors associated with extratropical transition of tropical cyclones</i>
<hr/>	
Coffee	
Session: DAOS-A	Data Assimilation Techniques, Chair: Florence Rabier
11:00-11:25	Andrew Lorenc (UK Met Office): <i>Success and challenges in 4D-Var</i>
11:25-11:45	Mark Buehner et al. (Environment Canada): <i>Comparison of the performance of different combinations of the ensemble-based and variational data assimilation approaches in the context of deterministic NWP</i>
11:45-12:00	Craig Bishop and Daniel Hodyss (NRL Monterey): <i>Data assimilation using modulated ensembles</i>
12:00-12:15	Tom Hamill (NOAA, ESRL): <i>What limits the growth of spread in forecasts from ensemble Kalman filters?</i>
12:15-12:30	Jeff Whitaker (NOAA, ESRL): <i>The main results and future challenges identified by the NOAA THORPEX ensemble-based data assimilation inter-comparison project</i>
<hr/>	
Lunch	

Tuesday, 15 September 2009, Continued

Session: TIGGE-B	Hydrological applications and the TIGGE archive, <i>Chair: Zoltan Toth</i>
14:00-14:15	John Schaake (NOAA): <i>Proposed THORPEX/HEPEX Hydrological Applications Project</i>
14:15-14:30	Tian Fuyou (NMC, China) et al.: <i>Predicted rainfall estimation in the Huaihe river basin based on TIGGE</i>
14:30-15:00	Baudouin Raoult et al. (ECMWF): <i>Joint presentation of the international TIGGE archive</i>
Coffee & PDP-B, DAOS-A and TIGGE-A Poster Sessions	<i>User demonstration of how to access the TIGGE archive, by representatives of the 3 TIGGE data centers</i>
Session: RCCRT-B	IPY, HyMeX and T-NAWDEX, <i>Chair: Gilbert Brunet</i>
16:30-16:50	TBA: <i>The WWRP-THORPEX IPY Cluster</i>
16:50-17:05	Florence Rabier et al. (Meteo France): <i>Concordiasi: satellite data assimilation at high latitudes</i>
17:05-17:20	Jon Egill Kristjensson (Norwegian Meteorological Institute): <i>Observations and modeling of polar lows and arctic fronts: early results from the Norwegian IPY-THORPEX</i>
17:20-17:35	Olivier Nuissier et al. (Meteo France): <i>HyMeX, and experimental program (2010-2020) dedicated to the hydrological cycle in the Mediterranean</i>
17:35-17:55	Sarah Jones (U. Karlsruhe) : <i>T-NAWDEX-The THORPEX North Atlantic Waveguide and Downstream Impact Experiment: Outline and scientific background</i>
18:00-19:30	GIFS-TIGGE Working Group meeting (Location: Driftwood I)

Tuesday, 15 September 2009 Poster Sessions

PDP-B Poster Session

Jan Keller (U. Bonn): *The GME-EFS ensemble forecast system*

Mozheng Wei, Zoltan Toth, Yuejian Zhu, Richard Wobus and Malaquias Pena (NCEP/NOAA): *ET based initial perturbations and analysis error estimation for the NCEP global ensemble forecast system*

Warren Tennant (UK Met Office): *A Stochastic Kinetic Energy Backscatter (SKEB2) algorithm*

Dingchen Hou (NCEP/NOAA): *A stochastic perturbation scheme to represent model-related forecast uncertainty*

Matthew Hoffman (U. Maryland): *Bred vectors in a global ocean model*

Tony Eckel (NPS): *Estimating ambiguity in ensemble forecasts*

Ann Shelly and Sean Milton (UK Met Office): *Resolution studies in 1-15 day predictions with the Met Office Unified Model*

Laurent Descamps and Carole Labadie (CNRM-GAME) *PEARP, the Meteo France Ensemble Prediction System*

Eric Wenke (Charlotte, USA): *Weather forecasts*

Ming Xue (U. Oklahoma) and **Fanyou Kong**: *Convective resolving ensemble and deterministic forecasts: Spring forecast experiments over continental United States and initial assessment*

DAOS-A Poster Session

Jian-Wen Bao, E. D. Grell, G. A. Grell, J.S. Whitaker, T. Hamill, S. A. Michelson (NOAA/ESRL): *Physics-Based Ensemble Generation in the Global Forecast System (GFS)*

Daniel Hodyss and Craig H. Bishop (NRL): *An Adaptive Ensemble Covariance Localization Tool for the Local Ensemble Transform Kalman Filter*

Loik Berre, Gerard Desroziers, L. Raynaud, R. Montroty and Florence Rabier (Meteo-France): *The Ensemble variational assimilation of Meteo-France*

- W. Campbell** (NRL, Monterey): *Theoretical and practical problems of Houtekamer's localization method for ENKFs assimilating satellite radiances*
- Xuguang Wang** (U. Oklahoma), **Tom Hamill**, **Jeff Whitaker**, and **Craig Bishop**: *A Comparison of the Hybrid and EnSRF Analysis Schemes in the Presence of Model Errors due to Unresolved Scales*
- Xuguang Wang** (U. Oklahoma), **Jeff Whitaker**, **Tom Hamill**: *Bias correction in the ensemble-based data assimilation system for the NCEP GFS model*
- Hong Li** (Shanghai Typhoon Inst.), **Eugenia Kalnay**, and **Takemasa Miyoshi**: *Simultaneous estimation of covariance inflation and observation errors within an ensemble Kalman filter*
- Hong Li** (Shanghai Typhoon Inst.), **Eugenia Kalnay**, **Takemasa Miyoshi**, and **Christopher M. Danforth**: *Accounting for Model Errors in Ensemble Data Assimilation*
- Shu-Chih Yang** (Taiwan Nat. Central U.) and **Eugenia Kalnay**: *How can EnKF handle nonlinearity and non-gaussianity?*
- Altug Aksoy**, **Sim D. Aberson**, **Frank D. Marks Jr.** (NOAA/AOML/HRD), and **Fuqing Zhang**: *Development of the Ensemble Kalman Filter Data Assimilation Component for the Hurricane Research System at NOAA/AOML/HRD*
- A. Carrassi**, **S. Vannitsem**, and **C. Nicolis** (Roy. Met. Belgique): *Model error and sequential data assimilation: A deterministic formulation.*
- Junjie Liu** (Berkeley): *Online estimated inflation and observation error in realistic ensemble data assimilation system.*
- Malaquias Pena** (NCEP/NOAA): *Controlling noise in ensemble data assimilation schemes*
- Chun-Chieh Wu** (Nat. Taiwan U.), **Kuo-Yuan Lien**, and **Fuqing Zhang**: *A New Approach for Tropical Cyclone Initialization Based on EnKF*
- Bin Wang** (Beijing, China): *4D-Var...*

TIGGE-A Poster Session

- Craig H. Bishop** (NRL) and **K.T. Shanley**: *Bayesian Model Averagings problematic treatment of extreme weather and a paradigm shift that fixes it*
- Andre Montani**, **C. Marsigli**, **T. Paccagnella** (ARPA-SIM): *Limited-area ensemble activities at the Hydro-Meteorological Weather Service of Emilia-Romagna, ARPA-SIM*

Mio Matsueda (Met. Res. Inst., Japan): *Can MCGE outperform the ECMWF ensemble?*

Yong Wang (ZAMG, Austria): *Dealing with the uncertainties related with LAMEPS*

Ma Xulin (NUIST), **Xue Jishan**, **Chen Dehui**, **Chen Jing**, **Zhang Lihong**, and **Chen Chaoping**: *An Experiment to Identify Sensitive Areas of a Heavy Rainfall Event Based on TIGGE Data*

Jingwen Xu (China): *GRAPES*

J. Flowerdew, **N.E. Bowler**, **R. Swinbank** and **K.R. Mylne** (UK. Met office): *Recent developments to MOGREPS: improving the calibration of ensemble spread*

Hua Tian (NMC, Beijing): *Upgrading of Global Medium Range Forecast System*

Susanna Corti (ISAC-CNR): *Weather regime dependent calibration of TIGGE ensemble forecasts*

B. Cui, **Z. Toth**, **D. Hou**, **Y. Zhu** (NCEP/NOAA), and **A. Methot**: *A study of the effect of bias correction and downscaling on the performance of ensemble forecast systems*

Normand Gagnon(CMC/MSC), **Guillem Candille**, and **Stephane Bearegard**: *Bias removal of multi-model ensemble forecast: NAEFS experience*

Yuejian Zhu (NCEP): *Upgrade of the North American Ensemble Forecast System (NAEFS)*

Glenn Rutledge (NOAA): *The NOAA Operational Model Archive and Distribution System (NOMADS)*

Wednesday, 16 September 2009

Session: DAOS-B **Observation Impact Studies, Chair: Carla Cardinali**

09:00-09:15 **Florence Rabier et al.** (Meteo France): *Data assimilation experiments for AMMA, using radiosonde observations and satellite observations over land*

09:15-09:30 **Takeshi Enomoto et al.** (JAMSTEC): *Observing system experiments using the AFES-LETKF data assimilation system*

09:30-09:45 **Emma Irvine and Suzanne Gray** (U. Reading): *Impact of targeted dropsondes on European forecasts*

09:45-10:00 **Ron Gelaro** (NASA GSFC) and **Rolf Langland** (NRL Monterey): *Results from the THORPEX observation-impact inter-comparison project*

10:00-10:15 **Qoosaku Moteki** (JAMSTEC): *Propagation of the impact signal of the additionally-assimilated observations over the Indian Ocean through tropical waves*

10:15-10:30 **Doris Anwender et al.** (U. Karlsruhe): *Data denial experiments for extratropical transition*

Coffee

Session: PDP-C **PDP in the Extratropics, Chair: Greg Hakim**

11:00-11:15 **Edmund K. M. Chang** (SUNY Stony Brook): *Predictability issues associated with explosive cyclogenesis in the North-West Pacific*

11:15-11:30 **Maxi Boettcher and Heini Wernli** (U. Mainz): *A case study of an explosively deepening, diabatic Rossby-wave induced cyclone: the influence of environmental conditions*

11:30-11:45 **Gwendal Riviere** (Meteo France): *A kinetic energy budget of the winter storm "Klaus"*

11:45-12:00 **Gwendal Riviere and Jean-Baptiste Gilet** (CNRM-GAME): *Nonlinear baroclinic dynamics of surface cyclones crossing a zonal jet*

12:00-12:15 **Mio Matsueda** (MRI, Japan), **Masayuki Kyouda**, **Zoltan Toth**, **Takemasa Miyoshu**, **Hiroshi L. Tanaka** and **Tadashi Tsuyuki** : *On the predictability of a blocking occurred on 15th December 2005*

12:15-12:30 **Sarah Jones et al.** (U. Karlsruhe): *The PANDOWAE Research Group*

Lunch

Wednesday, 16 September 2009, Continued

Special Session: Observation Targeting *Chair: Istvan Szunyogh*

14:00-14:15 **Istvan Szunyogh** (Texas A&M): *Introduction*
 14:15-14:35 **Rolf Langland** (NRL Monterey): *The Assessment of the DAOS WG on observation targeting*
 14:35-14:55 **Zoltan Toth** (NCEP/NOAA): *Experience accumulated in the Winter Storm Reconnaissance Program of NOAA*
 14:55-15:15 **Chun-Chieh Wu et al.** (NTU, Taiwan): *Targeted observations and its impact in DOTSTAR under T-PARC 2008*
 15:15-16:30 **Panel Discussion**

Coffee & PDP-C and DAOS-B Poster Sessions *User demonstration of how to access the TIGGE archive, by representatives of the 3 TIGGE data centers*

18:30-20:30 **DAOS Working Group meeting** (Location: Driftwood I)

Wednesday, 16 September 2009 Poster Sessions

PDP-C Poster Session

- S. Argence, D. Lambert, E. Richard, J. P. Charboureau** (U. Toulouse), **P. Arbogast**, and **K. Maynard**: *Improving the numerical prediction of a cyclone in the Mediterranean by local potential vorticity modifications*
- Giacomo Masato, Brian J. Hoskins** and **T. J. Woollings**: *Atmospheric blocking: development and predictability for the Northern Winter Hemisphere*
- Andreas Scheffler** (DLR), **Heini Wernli, Andreas Doernbrack, Christoph Kiemle, Stephan Rahm** and **Martin Wirth**: *Evaluation of warm conveyor belt forecasts using airborne lidar observations*
- Michael Ziemianski** (IMWM, Poland): *TBD*
- Yafei Wang** (China): *An extratropical air-sea interaction over the North Pacific in association with a preceding El Nino episode in early summer*
- Ilona Tuerschmann** (U. Mainz): *The role of a long-lived Rossby wave train in the Elbe flooding on 10-12th of August 2002.*
- Arwen Twitchett** (U. Leeds) and **Cornelia Schwierz**: *The role of dynamical precursor features in UK heavy precipitation events*
- Thomas Spengler** (ETH Zurich): *The modulation of mid-latitude flow and wave breaking by the Madden Julian Oscillation*
- Olivier Nuissier** (Meteo-France): *An ensemble forecast approach for evaluating the convective-scale predictability of Mediterranean heavy precipitation*
- Heini Wernli** and **Jana Campa**: *A climatological analysis of diabatic processes associated with extratropical cyclones*
- Lars Wiegand** and **Peter Knippertz** (U. Mainz): *Upper-level disturbances over the low-latitude North-Atlantic: Forecast quality, predictability and dynamics*
- Manoel Alsonso Gan, Everson Dal Piva** and **Dirceu Luis Herdies** (CPTEC, Brazil): *Energetics of a cutoff-low over the South Pacific Ocean*
- Lynn McMurdie, Joe Casola** and **Garrett Wedam** (U. Washington): *Predictability in the Pacific Northwest: The effects of weather regimes and ensemble Kalman filter initial condition sensitivity*

DAOS-B Poster Session

- Mu Mu** (CAS, Beijing): *Conditional nonlinear optimal perturbation (CNOP)*
- Yucheng Song** and **Zoltan Toth** (NCEP/NOAA): *The Winter Storm Reconnaissance (WSR) Program*
- Yungi Ni** (CAS, Beijing): *SCHeREX-2008* and its preliminary results
- Oleg Pokrovsky** (Main Geophysical Observatory, Russian Federation): *Optimal location of new radiosonde and adaptive observations in SubArctic area of East Siberia*
- Chunguang Cui, Wan Rong** and **Wang Bin**: *An introduction of observing system of mesoscale heavy rainfall and the preliminary application of observations*
- A. Doerenbecher, O. Pannekoucke** (Meteo-France), **N. Verdier, C. Basdevant,** and **C. Fesquet**: *BAMED and HyMeX: Adaptive observation with balloons*
- Sharan Majumdar** (U. Miami), **Kathryn Sellwood, Daniel Hodyss, Yucheng Song** and **Zoltan Toth**: *Properties of ETKF targets for medium-range forecasts of winter weather*
- Ji-Sun Kang, Eugenia Kalnay** (U. Maryland), **Hong Li** and **Kayo Ide**: *Adaptive estimation of inflation and observation errors in a simulated carbon cycle data assimilation*
- Ji-Sun Kang, Eugenia Kalnay** (U Maryland), **Junjie Liu, Inez Fung** and **Ning Zeng**: *Comparison of multivariate and univariate data assimilation for carbon cycle using Local Ensemble Transform Kalman Filter*
- Simon Pellerin** (Environment Canada): *Observation impact of the new Canadian meso-strato global forecast system*
- Xiaowei Tan** (Beijing, China): *Methodology of identifying sensitive areas with conditional nonlinear optimal perturbation*
- Junjie Liu** (UC Berkeley): *TBD*

Thursday, 17 September 2009

Session: SERA

Chair: Brian Mills

09:00-09:15

Mathias Rotach et al. (MeteoSwiss), **M. Arpagaus**, **M. Dominger**, **C. Hegg**, **A. Montani** and **R. Ranzi**: *On the way to ensemble hydrological forecasts: lessons learned from MAP D-PHASE*

09:15-09:30

Duan Yuxiao (Beijing Meteorological Bureau): *Assessment of the impact of an improved forecast system during the Beijing 2008 Olympic Games*

09:30-09:45

Peter Chen (WMO Secretariat) and **Eugene Poolman** (South African Weather Service): *Lessons from the Southern African Severe Weather Forecast Demonstration Project*

09:45-10:00

Jacques Andre Nidon (Centre du Suivi Ecologique, Senegal): *Improved understanding of Rift Valley Fever etiology and outbreaks in relation to intra-seasonal rainfall variability*

10:00-10:15

Eric Gruit (3TIER Inc.): *Barriers to the use of uncertainty information in weather-driven renewable energy forecasting applications*

10:15-10:30

TBA

Coffee

Session: RCCRT-C

Weather, climate and Earth-system, *Chair: Tetsuo Nakazawa*

11:00-11:15

Mel Shapiro (U. Colorado, U. Bergen, Norway and NCAR): *A weather, climate and Earth-system initiative for the 21st century*

11:15-11:30

Gilbert Brunet (Environment Canada): *Toward a seamless process for the prediction of weather and climate: the advancement of sub-seasonal to seasonal prediction*

11:30-11:45

Mitchell Moncieff (NCAR): *Year of Tropical Convection (YOTC)*

11:45-12:00

Phil Arkin and **John Janowiak et al.** (U. Maryland) *An evaluation of tropical precipitation forecasts from the NCEP global model (GFS)*

12:00-12:15

Hiroyuki Yamada (Jap. Agency Marine-Earth Sci. Tech.): *Observation and simulation of the genesis of Typhoon Fengshen (2008) in the Tropical Western Pacific*

12:15-12:30

Chris Thorncroft (SUNY, Albany) and **Jean-Luc Redelsperger**: *An overview of AMMA*

Lunch

 Thursday, 17 September 2009, Continued

Session: TIGGE–C **Plans for the Global Interactive Forecast System,**
Chair: Richard Swinbank

14:00-14:30 **Zoltan Toth** (NCEP/NOAA)
An outline for the Global Interactive Forecast System

14:30-14:45 **Jennifer Adams** and **Brian Doty** (IGES/COLA)
*Distribution and access of TIGGE data via OpenDAP using
 the GrADS data server*

14:45-15:00 **Ken Mylne** (UK Met Office)
*Operational considerations for TIGGE research and devel-
 opments of GIFS*

**Coffee & DAOS-C, TIGGE-B, and SERA
 Poster Sessions** *Discussion of plans for GIFS Focus Groups from 15:30 to
 16:30 in Driftwood I*

Session: DAOS–C **Satellite Observations/ OSSEs/**, *Chair: Rolf Langland*

16:30-16:45 **Roger Saunders** (UK Met Office)
*Current and future challenges in the use of satellite obser-
 vations to improve NWP forecasts*

16:45-17:00 **Carla Cardinali** (ECMWF)
Impact of extra-assimilated radiances in sensitive areas

17:00-17:15 **Howard Berger** and **Chris Velden** (U. Wisc.-CIMSS)
*Recent advances in the processing, targeting and data as-
 similation of satellite-derived atmospheric motion vectors
 (AMVs)*

17:15-17:30 **Lars Peter Riishojgard** (JCSDA)
The Joint OSSE project

17:30-17:45 **Pierre Gauthier** (U. Quebec)
Summary of DAOS Working Group activities

18:45 Buses leave the hotel for the dinner location

19:00-22:00 **Dinner at the Monterey Bay Aquarium**

Thursday, 17 September 2009 Poster Sessions

DAOS-C Poster Session

Young-Joon Kim, William Campbell, and Steven Swadley (NRL): *Improved Use of Satellite Radiance Data for Global Atmospheric Prediction Systems*

Brian Kahn (JPL/NASA): *Observations and simulations of small-scale variability of temperature, water vapor, and cloud liquid and ice water content*

Michiko Masutani (NCEP/NOAA): *Observing system impact assessments using OSSEs*

Kaustubha Bhattacharya (NCMRWF): *Role of scatterometer in tropical cyclone analysis and prediction*

Roger Saunders and Adrian Semple (UK Met Office): *What can we learn comparing Met Office and ECMWF analyses and forecasts?*

Gang Ma (CMA, China): *Assimilation of FY3A VASS radiance in CMA NWP models*

TIGGE-B Poster Session

Chen Yun (NMC, Beijing), Shu Ying, He Lifu, and Li Qiang: *Applied Research on Potential Forecast of Severe Convective Weather in China Using Regional Ensemble Forecasting Products*

Martin Sharpe (UK. Met Office): *A Bayesian method for updating event probabilities, given a series of forecasts*

Wanchang Zhang, Jingwen Xu, Yonghe Liu, Jiongfeng Chen, Yuehong Shao, and Zhongwei Yan (CAS, Beijing): *A Watershed Level Early Flood Warning Approach by Using Grand-ensemble Weather Predictions: Verification and Application for a Case Study in the Linyi Watershed, Shangdong, China*

Jingwen Xu (CAS, Beijing): *Coupling XXT Hydrological Model with GRAPES for Flood Prediction Based on TIGGE Data*

Munehiko Yamaguchi, Sharan Majumdar (U. Miami), **Melinda Peng** and **Carolyn Reynolds**: *Intercomparison of ensemble predictions of typhoons using TIGGE data*

Peter Finocchio and Sharan Majumdar (U. Miami): *Evaluating ensemble track forecasts of tropical cyclones*

Jana Campa and Heini Wernli (U. Mainz): *Extratropical cyclone tracks in the TIGGE data set*

M. Fuentes (ECMWF): *ECMWF technical developments in support of THORPEX activities*

Piers Buchanan, Christine Johnson, Ken Mylne, Robert Neal, Richard Swinbank, Helen Titley and Caroline Woolcock (UK. Met Office): *Ensemble forecast applications for forecasters and external customers at the UK Met Office*

Xia Jiangjiang (Inst. Atm. Phys. , Beijing), **Han Jiarui, Yan Zhongwei, and Zhao Linna**: *User-oriented evaluation of summer rainfall forecast in the Huaihe basin, eastern China, based on TIGGE products*

Pedro L. Silva Dias (NLSC, Brazil), **Demerval S. Moreira, and America M. Espinoza**: *The MASTER Super Model Ensemble System (MSMES): 4 years of experience*

John A. Knaff (NESDIS), **Mark DeMaria** and **Charles R. Sampson**: *Strategies for providing tropical cyclone wind probability products from ensemble forecast systems*

SERA Poster Session

Jim Hansen (NRL, Monterey): *Confidence guidance: streamlining the forecast process through the use of ensemble-based uncertainty and sensitivity information*

Xun Li (BWIS, Beijing), **Xun Li Deping** and **Ding Qian Ye**: *The analysis of end user need and benefits evaluation for FDP application*

Sadibou Ba (ANAMS, Senegal), **Abdou Aziz Diop** and **Mamina Kamara**: *Case study: weather-media, a tool more requested in Senegal*

Oleg Pokrovsky (MGO, Russian Federation): *Decision making for NWP forecast economical efficiencies based on operational research approach*

Djibrilla Ariaboncana Maiga (DNM, Mali): *Meteorological services: A tool for sustainable development: The case of Mali*

Brian Mills (Environment Canada): *Weather information and surface transportation in Canada: the long and winding road*

Duan Yuxiao (BMB, Beijing), **Wang Yingchun** and **Ye Qian**: *Assess the impact of improved forecast system in Beijing 2008 Olympic Games weather service*

Aminata Ndiaye (FLSG-Ucad, Senegal) *Policies and strategies of adaptation to the climatic vulnerability in Senegal*

Jorge-Luis Vazquez Aguirre (U. East Anglia) and Juan Cervantez-Perez: *Status of SERA for weather and climate information in Mexico*

Yan Zhongwei (Inst. Atm. Phys., Beijing), **Han Jiarui**, **Xia Jiangjiang**, **Tu Kai** and **Zhao Linna**: *Formation of an interactive user-oriented forecast system experience from application of TIGGE rainfall data in Linyi, eastern China*

Om Prakash Singh (New Delhi, India): *Indian THORPEX Programme*

Martina Suaya (Buenos Aires, Argentina): *Southern Hemisphere THORPEX Programme*

Friday, 18 September 2009

Session: TIGGE–D	Applications of TIGGE data, Chair: Ken Mylne
09:00-09:30	Thomas Hamill (NOAA) and Renate Hagedorn (ECMWF) <i>On the value of reforecasts for the TIGGE database</i>
09:30-09:45	Garry Wick et al. (NOAA ESRL) <i>Using TIGGE data to understand systematic errors of atmospheric river forecasts</i>
09:45-10:00	David Monkam et al. (U. of Douala, Cameroon) <i>Predictability of the high impact weather event associated with a Kenya Airways crash in Douala using the TIGGE database</i>
10:00-10:15	Lars Wiegand et al. (U. Mainz) <i>An unusual Saharan dust outbreak into central Europe and heavy precipitation event at the southern side of the Alps</i>
10:15-10:30	J. Keller et al. (U. Karlsruhe), Sarah Jones and Doris Anwender <i>Investigation of predictability during the extra-tropical transition of tropical cyclones using TIGGE</i>
<hr/>	
Coffee	
11:00-12:30	Future Directions: Panel Discussion
