Climate Variability and Extremes During the Past 100 Years

24-26 July 2006, Gwatt near Thun, Switzerland

NCCR CLIMATE Swiss Climate Research

sc | nat ProClim– Forum for Climate and Global Change Platform of the Swiss Academy of Sciences

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Conference Board

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Jürg Luterbacher, Univ. Bern
Henry Diaz, NOAA/ESRL
Richard Stolarski, NASA/GSFC
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Tracy Ewen, ETH Zurich

Monday morning		**Session 1: Extending the observational record**
09:30	Stefan Brönnimann	Introduction
09:45	Cornelia Lüdecke	I From the bottom to the stratosphere - Arctic climate as seen form the 1st International Polar Year (1882-1883) until the end of World War II
10:10	Genrikh Alekseev	I Arctic sea ice data sets in the context of the climate change during the 20th century
10:30	Coffee	
11:00	Scott Woodruff	I The Evolving SST Record from ICOADS
11:25	Tara Ansell	I Global historical SLP and (land) temperature data sets for climate variability and extreme studies.
11:50	Susanne Bachner	Statistical properties of long-term daily hydrometeorological data
12:10	Blair Trewin	Century-scale temperature data sets for Australia
12:30	Lunch	

Monday afternoon		**Session 1 (continued)**
13:30	Joel Norris	I Observed Interdecadal Changes in Cloudiness
13:55	Sakari Uppala	I Reanalysis in climate research
14:20	Valentina Khan	I Comparison of air temperature trends based on reanalysis data, model simulations data and aerological observations
14:45	Dian Seidel	I Signals of climate variability and change in radiosonde data
15:10	Carl Mears	I Constructing Climate-Quality Atmospheric Temperature Data Records from Satellite-Borne Sounders.
15:35	Coffee	
16:00	Anne Douglass	I Contributions of satellite observations to understanding climate change
16:25	Guy Brasseur	I Creating knowledge from the confrontation of observations and models: the case of stratospheric ozone
16:50	Discussion	
20:00		Public panel discussion (in German) in Hotel Freienhof (Thun) with Pamela Heck (SwissRE) Heinz Wanner (University of Bern)

Martin Beniston (University of Freiburg)

Tuesday morning		**Session 2: Climate variability, trends and large-scale modes**
08:45	Mark Liniger	I European and Swiss temperature distribution changes in observations and climate scenarios
09:10	Baruch Ziv	The impact of humidity on heat stress variability and trends in the Mediterranean summer conditions under global warming
09:30	Hans von Storch	I Regional storm climate and related marine hazards in the NE Atlantic
09:55	Jucundus Jacobeit	Large-scale atmospheric circulation patterns in relation to Central European temperature and precipitation extremes
10:15	Coffee	
10:50	Annette Menzel	I Climate variability, trends, and NAO – assessed by impacts in European plant phenology over the 20th century
11:15	Bin Yu	An enhanced PNA-like climate response to Pacific interannual and decadal variability
11:35	Dörte Jakob	Climate change detection and attribution - causes of increased rainfall in north-west Australia
11:55	Adam A. Scaife	Low frequency variability in European winter climate and the stratosphere
12:15	Jeff R. Knight	The Atlantic Multidecadal Oscillation: evidence for an internal climate mode and its impacts on 20th Century climate
12:35	Lunch	

Tuesday afternoon		**Session 2 (continued)**
13:30	Cornelia Schwierz	Atmospheric blocking - an avenue for a better understanding of large-scale climate variablity?
13:50	Christoph Raible	I On the stability of large-scale atmospheric teleconnection patterns in reconstructions and ensemble GCM simulations of the last 500yr
14:15	Nicholas Graham	I Comparing 20th Century and Inferred Medieval Climate: Is the Modern Climate Record Representative?
14:40	Julienne Stroeve	Arctic Sea Ice Variability in the 20th and 21st Century
15:00	Wieslaw Maslowski	On accelerating Arctic climate change - Modeling the Arctic Ocean and sea ice in the last 25 years
15:20	Posters	
16:50	Andreas Roesch	Variations and trends of simulated and observed snow cover and surface albedo.
17:10	Martin Wild	I Variations in surface radiation and associated effects on climate
17:35	David R. Easterling	I A comparison of model produced maximum and minimum temperature trends with observed trends for the 20th Century.
18:00	Discussion	
19:30	Conference Dinner	

Wednesday morning			**Session 3: Climate extremes**
08:30	Manola Brunet		Exploring changes in climatic extremes occurrence during the 20th Century and the recent period of forced warming over Spain
08:50	Ricardo Trigo		Atmospheric circulation associated to the outstanding 2004-2005 drought and major precipitation trends in Iberian Peninsula
09:00	Martin Beniston	I	Changes in variability and persistence of climate in Switzerland:exploring 20th century observations and 21st century simulations
09:25	Paul Della-Marta	I	The length of western European summer heatwaves has doubled since 1880
09:50	Phil Jones	I	Indices for daily temperature and precipitation extremes in Europe analysed for the period 1901-2000
10:15	Coffee		
10:45	Sonia Seneviratne		Land-atmosphere coupling and climate variability in Europe
11:05	Heiko Paeth		Regional modelling of greenhouse forcing and land use changes: a bad perspective for Africa
11:20	Siegfried Schubert	I	The Nature and Predictability of Long-Term Drought over North America
11:45	Georgiy Stenchikov	I	Volcanic Impact on the Stratospheric Composition, Temperature, and Circulation
12:10	Ulrike Lohmann	I	Are aerosols contributing to droughts and extreme precipitation events?
12:30	Lunch		

Wednesday afternoon			**Session 4: Chemical climate variability and the stratosphere**
13:30	Didier Hauglustaine	I	Evolution of the tropospheric composition over the last 40 years
13:55	Johannes Staehelin	I	Long-term tropospheric ozone trends: A critical review
14:20	Drew Shindell	I	Chemistry-climate interactions in the last 100 years
14:45	Ulrike Langematz		Dynamical Changes in the Stratosphere and their Attribution to Stratospheric Ozone Depletion
15:00	Martin Dameris	I	Simulation of long-term evolution of stratospheric dynamics and chemistry – role of natural and anthropogenic forcings
15:25	Coffee		
16:00	Eugene Rozanov	I	Response of the Earth's atmosphere to the solar variability
16:25	Charles H. Jackman	I	Stratospheric Ozone Variations Caused by Solar Proton Events between 1963 and the Present
16:50	Yasmine Calisesi		Decadal scale signals as extracted from ground-based and balloon-borne NDSC measurements using time-domain digital filtering.
17:05	Karin Labitzke	I	Sunspots, the QBO and the stratosphere in the North Polar region - 20 years later
17:30	Discussion		

List of Posters

Blair Trewin	Homogenised Australian climate data sets used for climate change monitoring
Andrea Grant	Validation of radiosonde data prior to 1958
Aurel Persoiu	Are ice caves reliable recorders of past and present climatic variability?
Dörte Jakob	Towards a high-quality wind dataset for Australia
Thomas Griesser	Reconstruction of global monthly upper-level fields back to 1900
Christian Vogler	Historic total ozone data from Spitsbergen and Oxford
Paul Della Marta	A Method of Homogenising the Extremes and Mean of Daily Temperature Measurements and a New Daily Temperature Dataset for Western Europe
Joel Norris	Solar Dimming and Brightening over Europe in Observations and AR4 Global Climate Models
Genrikh Alekseev	Surface air temperature in the Arctic during last century and role of summer melting for the shrinking of sea ice extent and freshwater efflux
Ksenija Zaninovic	Trends in indices of temperature extremes in Croatia, 1901-2004
Marjana Gajic-Capka	Trends in indices of precipitation extremes in Croatia, 1901-2004
Thomas Toniazzo	The influence of ENSO on winter North Atlantic climate
Yair Goldreich	Changes in Length of Summer Season in the Middle East
Jeff R. Knight	20th Century climate variability and European circulation change identified in natural and 'all forcings' AGCM ensembles
Jeffrey Annis	Forecasting Drought across the Midwest during the 20th Century
Mark A. Liniger	Realistic greenhouse gas forcing and short term climate forecasts from 1958 till 2001
Andrey Nagurny	Multiyear variability of sea ice thickness in the arctic basin measured by elastic-gravity waves on the ice surface
Martine Rebetez	Summer 2003 maximum and minimum daily temperatures in Europe and in Switzerland
Knut Makowski	Impact of greenhouse effect and global radiation on diurnal temperature range between 1970 and 2000
Okuku Ediang	Networking:A management strategy for Future of Climate extremes in Nigeria
Okuku Ediang	Research and capacity building in future of Climate extremes in Nigeria
Christoph Schleip	Bayesian analysis of climate change impacts in European phenology
Giorgio Bartolini	Trends in Tuscany (Italy) summer temperature, indices of temperature extremes and heatwaves (1955-2004)
Rajmund Przybylak	Poland's climate extremes index in the period from 1951 to 2000
Christoph C. Raible	Extreme northern hemispheric cyclones and their relation to the general circulation in ERA-40
Andreas Fischer	The chemistry-climate signal of the 1940/41 El Niño in the Northern Hemisphere
Georg Hansen	Latitude dependent influence of climate tele-connection patterns on total ozone and UV radiation levels in Northern Europe
Martin Schraner	Validation of updated version of the CCM SOCOL