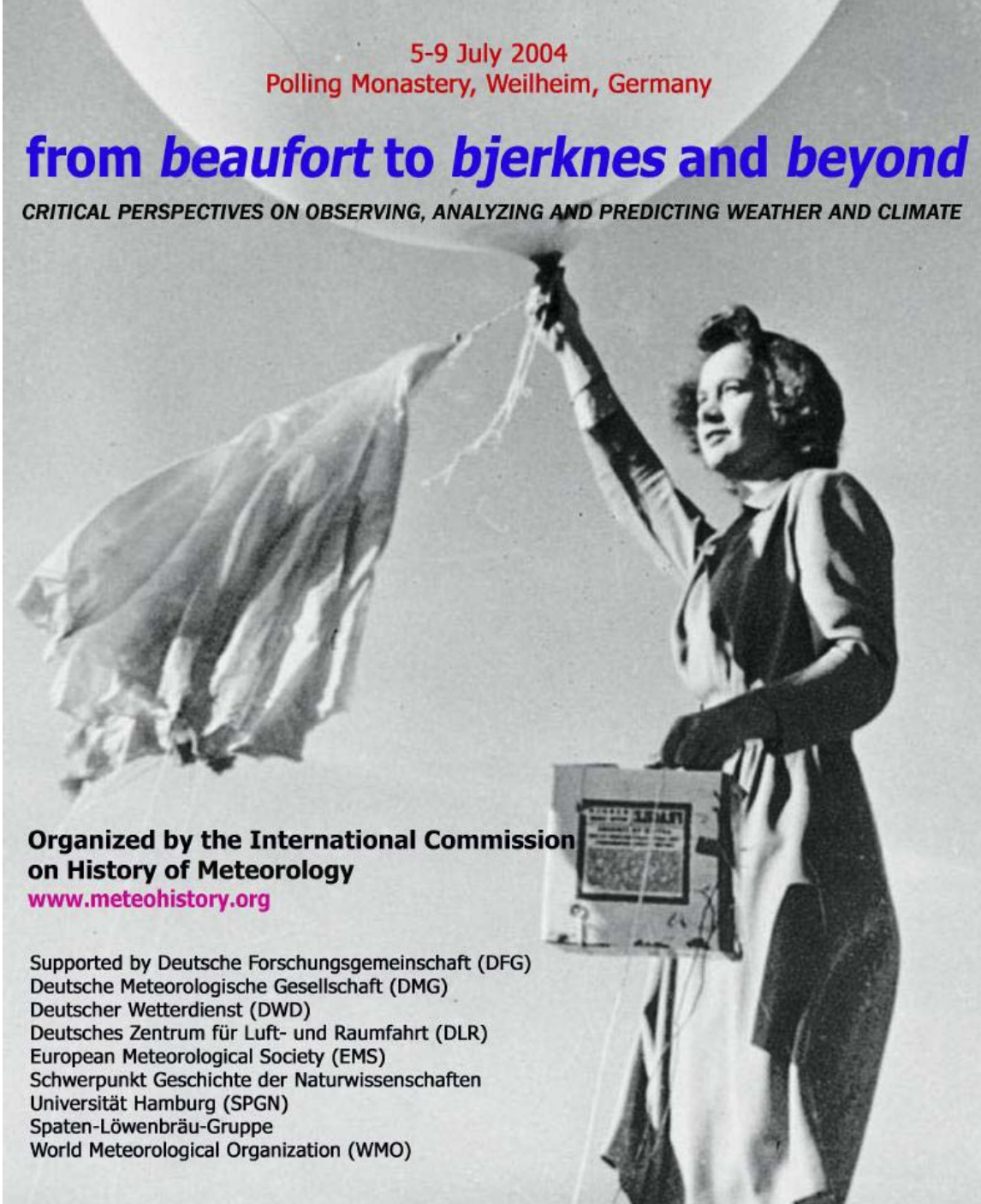


INTERNATIONAL COMMISSION ON HISTORY OF METEOROLOGY
Conference Programme



5-9 July 2004
Polling Monastery, Weilheim, Germany

from *beaufort* to *bjerknes* and *beyond*

CRITICAL PERSPECTIVES ON OBSERVING, ANALYZING AND PREDICTING WEATHER AND CLIMATE

**Organized by the International Commission
on History of Meteorology**
www.meteohistory.org

Supported by Deutsche Forschungsgemeinschaft (DFG)
Deutsche Meteorologische Gesellschaft (DMG)
Deutscher Wetterdienst (DWD)
Deutsches Zentrum für Luft- und Raumfahrt (DLR)
European Meteorological Society (EMS)
Schwerpunkt Geschichte der Naturwissenschaften
Universität Hamburg (SPGN)
Spaten-Löwenbräu-Gruppe
World Meteorological Organization (WMO)

Barocker Bibliothekssaal, Kloster Polling
Weilheimer Straße, D-82398 Polling, Germany

Entry through courtyard opposite of *Alte Klosterwirtschaft*

Monday, 5 July

09:00-10:30 Registration

10:30-12:00 Conference Opening and Keynotes

Chair: Hans Volkert

Welcome and Opening

Cornelia Lüdecke Vice-president of ICHM, President of DMG-FAGEM, Programme Chair

Heinrich Nöth President of Bayerische Akademie der Wissenschaften, München, D
“Polling and the academy – a 18th century competence centre”

Stefan Emeis Vice-president of DMG-FAGEM, Local Arrangements Chair

Conformity to observations: A banner and bane in the development of weather prediction

Huw C. Davies Vice-president of the International Association for Meteorology and Atmospheric Science and Institute for Atmospheric and Climate Science, ETH, Zürich, CH

Climate dynamics, science dynamics, and technological change, 1804-2004

James R. Fleming President of ICHM and Science, Technology and Society Program, Colby College, Waterville, Maine, USA

12:00-14:00 Lunch

14:00-16:00 Early Modern Issues

Chair: Vladimir Jankovic

A Renaissance depiction of a tornado

Klaus P. Hoinka Institut für Physik der Atmosphäre, DLR, Oberpfaffenhofen, D

Manuel de Castro Dpto. Ciencias Ambientales, Univ. Castilla-La Mancha, Toledo, E

An eighteenth-century meteorological society in the Netherlands: An investigation on early organization, instrumentation and quantification of the science of weather

Huib J. Zuidervaat Bloemendaal, NL

Early investigations of an aquaplanet

Joseph Egger Meteorologisches Institut, Ludwig Maximilians Universität, München, D

Joseph Stepling and windstorms in Europe from 17-19 February 1756

Jan Munzar Academy of Science of the Czech Republic, Brno, CZ

Lightning and gunpowder in the 18th Century

E. Philip Krider Institute of Atmospheric Physics, University of Arizona, Tucson, Arizona, USA

Discussion

16:00-16:20 C o f f e e break and posters

16:20-18:00 Nineteenth Century I

Chair: Mott Greene

The dialectic of the atmosphere: Heinrich Wilhelm Dove's meteorology in its philosophical and political context

Bernhard Fritscher Lehrstuhl für Geschichte der Naturwissenschaften, Univ. München, D

Heinrich Wilhelm Dove's position in the history of meteorology of the 19th century

Karl-Heinz Bernhardt Leibnitz Societät, Berlin, D

K.E.v. Baer's contribution to the research into the climate of polar regions during the period of 1830 to 1840

Erki Tammiksaar Baer-Museum, Tartu, Estonia

On the verge of a new science: Meteorology in John Herschel's terrestrial physics

Gregory Good Dept. of History, West Virginia University, Morgantown, USA

Discussion

Presentation of the EMS Young Student Travel Award

Werner Wehry President European Meteorological Society, Freie Univ., Berlin, D

18:30-20:00 Ice-breaker party, Alte Klosterwirtschaft Polling (<http://www.klosterwirtschaft-polling.de>)

T u e s d a y, 6 J u l y

09:00-10:40 The Dynamics of Climate Change

Chair: Gregory Cushman

Eduard Brückner's analysis of climatic change and climate impact

Hans von Storch Institute for Coastal Research, GKSS Research Center, Geesthacht, D
Nico Stehr ITAS, Forschungszentrum Karlsruhe, Karlsruhe, D

Influence of climate on fisheries: Overview of emergence, approval and perception of the idea, 1850-1950s

Julia A. Lajus Institute for the History of Science and Technology, Russian Academy of Sciences, and Centre for Environmental and Technological History, European University at St. Petersburg, RUS

From weather modification to climate change: The work of Gordon J.F. MacDonald

Naomi Oreskes University of California San Diego, San Diego, California, USA

Toy models and MIPS: Science and technoscience in climate modeling, 1957-2004

Mott Greene University of Puget Sound, Tacoma, Washington, USA

Discussion

10:40-11:00 C o f f e e break and posters

11:00-12:40 The Societas Meteorologica Palatina

Chair: Stefan Emeis

The very first beginning of the Observatorium Hohenpeißenberg

Klaus Wege Deutscher Wetterdienst, Observatorium Hohenpeißenberg, D

Astrometeorological weather prediction at the time of the Societas Meteorologica Palatina

Cornelia Lüdecke SP Geschichte der Naturwissenschaften, Universität Hamburg, D

From observant station of the Societas Meteorologica Palatina at Pyshma to the Ural region administration of GIDROMET: History of development of meteorological supervision at the border of Europe and Asia (Ural)

Vladimir Litovsky The Russian State Vocational-Pedagogical University, Yekaterinburg, RUS

Early observations of and knowledge on air electricity and magnetism at Hohenpeißenberg during the Palatina era

Peter Winkler Deutscher Wetterdienst, Observatorium Hohenpeißenberg, D

Discussion

12:40-14:30 L u n c h

14:30-15:00 Bus Trip to the Hohenpeißenberg Observatory of Deutscher Wetterdienst (DWD)

15:00-17:00 Tour of the Observatory and coffee break

17:30 Return

W e d n e s d a y, 7 July

09:00-10:20 Focus on the Americas

Chair: Katharine Anderson

Abbot Lawrence Rotch: Observer extraordinaire

Jinny Nathans American Meteorological Society, Boston, Massachusetts, USA

American meteorological culture during World War II

Roger Turner History and Sociology of Science Department, University of Pennsylvania, Philadelphia, Pennsylvania, USA

Bergen South: The Americanization of the meteorology profession in Latin America during World War II

Gregory T. Cushman History Department, University of Kansas, Lawrence, Kansas, USA

Discussion

10:20-10:40 C o f f e e break and posters

10:40-12:00 Practical and Theoretical Issues

Chair: Togo **Tsukahara**

The unknown history of Schwarzschild's equation

Joachim **Pelkowski** Institut für Meteorologie und Geophysik, J.W.Goethe-Universität
Frankfurt, Ober-Mörlen, D

Weather, finance and meteorology: Forecasting and derivatives

Samuel **Randalls** University of Birmingham, Birmingham, UK

The 18th and 19th century temperature observations, how reliable are they?

Øyvind **Nordli** Norwegian Meteorological Institute, Oslo, N

Discussion

12:00-14:00 L u n c h

14:00-16:00 Focus on Asia

Chair: Huw **Davies**

Varahamihira, the earliest meteorologist

Kottapalli S. **Murty** Co-ordinator of Geoarchives, INHIGEO, Nagpur, India

Soldiers, missionaries and merchants on the road: Early meteorological observations carried out by westerners in China

Gaston R. **Demarée** Royal Meteorological Institute, Brussels, B

Meteorological instruments of Joseon dynasty (15th century) in Korea

Youngsin **Chun** Meteorological Research Institute, Seoul, Korea
Sang-woon **Jeon** Former President of the Sung-Shin University, Seoul, Korea

The dust storm: Historical evolution of Inner Mongolia and the impacts of the climate change

Gao **Tao** Inner Mongolia Meteorological Institute, Hohhot, Inner Mongolia, China

Nineteenth-century East Asian climate reconstruction from the perspective of history of science

Togo **Tsukahara** Kobe University, Kobe, Japan

Discussion

16:00-16:20 C o f f e e break

16:20-18:00 Tools and Techniques

Chair: Gregory **Good**

The Chapman wind scale of 1779

Tage **Andersson** Swedish Meteorological Society, Norrköping, S

Clouds, sounding balloons and stratosphere: Teisserenc de Bort, a life in meteorology

Mickaël **Fonton** University of Paris, Paris, F

The role of weather flights in the history of meteorology

John A. **Kington** Climatic Research Unit, University of East Anglia, Norwich, UK

Fog, dust and rising air: Understanding cloud formation, cloud chambers, and the role of meteorology in Cambridge physics in the late 19th Century

Richard **Staley** University of Wisconsin-Madison, USA, and Max Planck Institute for the History of Science, Berlin, D

Discussion

20:00 Concert, Barocker Bibliothekssaal

Thursday, 8 July

09:00-10:40 Nineteenth Century II

Chair: Manuel **Palomares**

Atmospheric constitutions: A taxonomy of issues in European medical meteorology (1750-1850)

Vladimir **Jankovic** University of Manchester, Manchester, UK

The contribution of Alexander Buchan to the development of climatology and synoptic meteorology

Marjory **Roy** Scottish Centre of the Royal Meteorological Society, Edinburgh, UK

The case for weather forecasting: Victorian meteorology and the press

Katharine **Anderson** York University, Toronto, Ontario, Canada

Nice weather, meteors at the end of the day

Christina H. **Barboza** Museum of Astronomy and Related Sciences, Rio de Janeiro, Brazil

Discussion

10:40-11:00 Coffee break and posters

11:00-12:20 Early Institutions, Networks, and Observations

Chair: Gaston **Demarée**

The meteorological history and future perspectives in Latvia

Dinara **Gershinkova** Latvian Hydrometeorological Agency, Riga, Latvia

The observation of the upper troposphere in Tenerife Island during the last centuries and the mountain observatory in Izaña

Fernando De **Ory** Nacional Institute of Meteorology, Tenerife, E

Manuel **Palomares** Nacional Institute of Meteorology, Madrid, E

The discovery of latent heat 250 years ago

Stefan **Emeis** Institut für Meteorologie und Klimaforschung, IFU Garmisch, D

Discussion

12:20-14:00 L u n c h

14:00-15:00 Particular Locales I

Chair: Luci Nunes

Contributions by scientists of the Central Institute of Meteorology and Geodynamics in Vienna on observing, analyzing and predicting since the foundation in 1851 to 1938

Christa Hammerl Zentralanstalt für Meteorologie und Geodynamik, Wien, A

Scaling down: Mapping the "Austrian" climate between empire and republic

Deborah Coen Harvard University, Cambridge, Massachusetts, USA

Danish ice core research 1952 - 1982

Maiken Lolck History of Science Department, Aarhus, DK

Discussion

15:20-15:40 C o f f e e break

15:40-16:40 Particular Locales II

Chair: Youngsin Chun

Investigation and forecast of droughts in Brazil: A historical view

Silvia Figueirôa Institute of Geosciences, State University of Campinas, Campinas, Brazil

Luci Nunes Institute of Geosciences, State University of Campinas, Campinas, Brazil

Global cooling and the cold war: A chilly beginning for the United States' Climate Analysis Center?

Robert Reeves) National Oceanic and Atmospheric Administration,

Daphne Gemmill) National Weather Service,

Robert Livezey) Silver Spring,

Jim Laver) Maryland, USA

Discussion

17:45-18:00 ICHM Business Meeting

19:00 Conference Dinner, Tassilosaal, Pollinger Catering Service

Friday, 9 July

09:00-10:20 Pedagogical Issues

Chair: Cornelia Lüdecke

How lecture notes reflect the states of science and of technology: From Vilhelm Bjerknes's type-scripts of 1914-17 to pdf-files in 2004

Hans Volkert DLR, Institut für Physik der Atmosphäre, Oberpfaffenhofen, D

Michael Börngen Universität Leipzig, Institut für Meteorologie, Leipzig, D

Ludwig Weickmann Starnberg, D

Hann's thermodynamic foehn theory and its presentation in meteorological textbooks in the course of time

Petra Seibert Institute of Meteorology, University of Natural Resources (BOKU), Wien, A

The didactic importance of the historical context in the teaching of climatology

Lucí H. **Nunes** Institute of Geosciences, State University of Campinas, Campinas, Brazil
Ana Maria H. **Avila** Institute of Geosciences, State University of Campinas, Campinas, Brazil

Discussion

10:20-10:40 C o f f e e b r e a k

10:40-11:40 “Bjerknes and beyond”

Chair: Richard Staley

Bjerknes “like father, like son”

Doria B. **Grimes** NOAA Central Library, Silver Spring, Maryland, USA

The world according to GARP: Scientific internationalism and the construction of global meteorology, 1961-1980

Erik M. **Conway** NASA Langley Research Center, Maryland, USA

Discussion

11:40-12:00 C l o s i n g C e r e m o n y

Relevance of historical perspectives for current research activities

Jutta **Graf** DLR, Forschungszentrum Oberpfaffenhofen, D

Poster Presentations on permanent display:

POSTER 1: The ICHM current bibliography project

Brant **Vogel** New York, New York, USA

POSTER 2: Treasures of the NOAA central library

Doria B. **Grimes** NOAA Central Library, Silver Spring, Maryland, USA

POSTER 3: The Ben Nevis meteorological observatory, 1883-1904

Marjory **Roy** Scottish Centre, Royal Meteorological Society, Edinburgh, UK

POSTER 4: Reconstruction of historical severe convective storms from 25-26 May 1872

Miloslav **Müller** Institute of Atmospheric Physics, Praha, CZ



Ceiling detail in the Baroque Library Hall of Polling monastery:

The nine classical muses and ‘Scientia’ with telescope and globe