

OPEN SCIENCE CONFERENCE



⇒ Program and Information



➔ Program

XXVIII SCAR & COMNAP XVI Meeting

25-31 July 2004 · Congress Centre, Bremen, Germany

SCAR Open Science Conference

➔ 26-28 July 2004

Antarctica and the Southern Ocean in
the Global System

XI SCALOP Symposium

➔ 28 July 2004

Towards the International Polar Year
and Beyond

Industry Exhibition

➔ 26-28 July 2004

Engineering and Technology Meet
Antarctic Science and Operations

Editor

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➔ XXVIII SCAR meeting

25 - 31 July 2004, Bremen, Germany



Introduction

For the first time since its foundation in 1958 the Scientific Committee on Antarctic Research (SCAR) will be holding an open international and interdisciplinary scientific conference on "Antarctica and the Southern Ocean in the Global System". The Open Science Conference will review our present understanding of the close couplings between Antarctica, the Southern Ocean and the other parts of the Earth System. Antarctic scientists from 35 countries accepted the invitation of SCAR to participate in the Open Science Conference submitting more than 700 abstracts. It is anticipated that the outcome of the conference will influence the planning of SCAR's future Antarctic research programs.

The structure of the conference is related to the new structure of SCAR. The "SCAR Symposium" on Monday will be the flagship activity of the SCAR meeting. Senior scientists will present papers which define the current state of knowledge in "Antarctica and the Southern Ocean in the Global System". The "SCAR Symposium" will publicize the activities of SCAR and bring them to the attention of politicians, the media and the public.

On Tuesday morning the "Symposium of the Standing Scientific Groups" will provide a set of plenary keynote addresses. Invited speakers will describe scientific matters of strong current interest, so that the community will be informed about progress in a wide variety of SCAR scientific activities.

On Tuesday afternoon and all Wednesday up to ten parallel sessions will reflect the cutting edge of knowledge in Antarctic science. Poster sessions will be held on Tuesday and Wednesday afternoon.

Thursday and Friday are reserved for business sessions of SCAR groups and subgroups.



➔ COMNAP XVI meeting

25 - 31 July 2004, Bremen, Germany



Introduction

COMNAP was established in 1988 to facilitate liaison between the managers of national agencies responsible for the conduct of logistics operations in support of Antarctic science. The membership now includes twenty-nine countries from the Americas, Africa, Asia, Europe and Oceania.

COMNAP aims to enhance the conduct of scientific research, operational efficiency, safety and environmental stewardship in Antarctica of national Antarctic programs through

- exchanging information, views and experience;
- creating and maintaining reference materials such as manuals and guidelines;
- examining common operational problems and seeking solutions;
- facilitating international cooperation in planning and support of Antarctic science;
- interacting with and advising SCAR and other organisations with related interests and
- providing technical information and advice upon request to the ATCMs

Every second year the COMNAP annual meeting is held in conjunction with SCAR, which enables national program managers to interact with the science community and consider the logistics and financial implications of major programs. Antarctic science is highly expensive and some major projects would never begin without the logistical and financial support of many nations.

COMNAP will hold the Symposium on Monday together with SCAR presenting an overview over COMNAP's support of Antarctic Research. On Tuesday, Thursday and Friday various working groups discuss cooperative logistics and scientific programs, develop standard operational procedures, and formulate technical advice, on request, to Antarctic Treaty Consultative Meetings (ATCMs) and its Committee on Environmental Protection (CEP).

XI SCALOP

COMNAP has established a Standing Committee on Antarctic Logistics and Operations (SCALOP) which is under the direction of the Council providing COMNAP with technical advice on Antarctic logistics and operations and investigating and, where necessary, arranging for research on operational problems identified by COMNAP and its working groups. SCALOP will convene the XI SCALOP Symposium in conjunction with the COMNAP meeting on Wednesday under the topic: "Toward the International Polar Year and beyond".



→ The Congress Centre

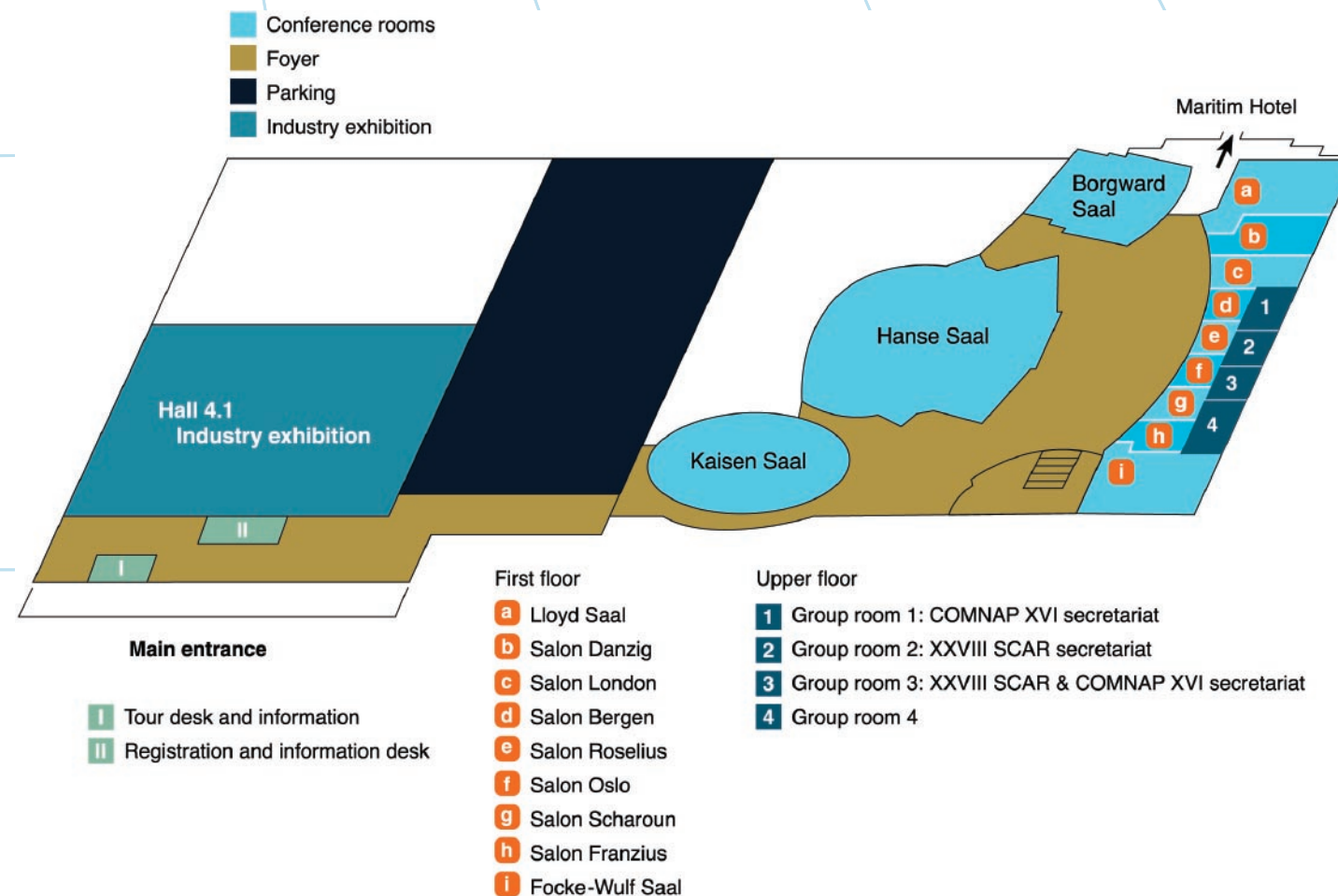
25 - 31 July 2004, Bremen, Germany



Bremen Exhibition Centre has been part of the Hanseatic City since 1997: seven modern halls with an exhibition area of about 39,000 square metres in an exposed position in the heart of the city. It is only a few minutes' walk from the railway station to the Exhibition Centre – a benefit valued not only by exhibitors and organizers but also by the visitors of the varied events that take place there. But those who come to Bremen by car will not be disappointed, either. An electronic traf-

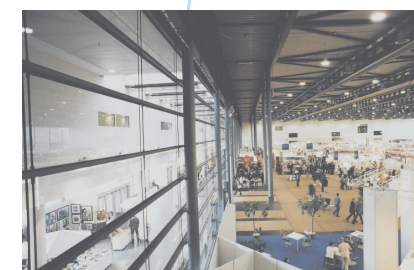
fic guidance system directs car-drivers through the city to their destination in the Exhibition Centre. And right in front of the halls is a 100,000 square metre open space, the Bürgerweide, with parking facilities for about 2,500 cars, plus a further 250 in the exhibition centre's own multi-storey car park.

Another advantage: it's only about 15 minutes to Bremen airport. A good starting point for a successful event.



As an exhibition location, Bremen offers a clever assortment of exhibition halls, Congress Centre, hotel and multi-purpose hall all under one roof which permits a great variety of events. A flexible hall partition system enables variable usage of the individual halls. Bremen Congress Centre offers space for congresses and conferences in 16 imaginatively designed rooms with a direct link to a first-class hotel. There are twelve rooms on the first floor and 4 group rooms on the upper floor.

The biggest room with gallery can accommodate 1,600 people. In combination with the exhibition halls the capacities of the conference rooms can easily be extended. And the exhibition halls themselves are always a pleasant surprise to first-time visitors: Large areas of the north side are fully glazed and offer a wonderful view of the green expanse of the Bürgerpark.



➔ XXVIII SCAR program

25 - 31 July 2004, Bremen, Germany

Time	Sunday 25 July 04	Monday 26 July 04	Tuesday 27 July 04	Wednesday 28 July 04	Thursday 29 July 04	Friday 30 July 04	Saturday 31 July 04
8					IPY Panel Discussion		
9		Opening SCAR, COMNAP and Industry Exhibition	Symposium of the Standing Scientific Groups Keynote Speakers only	Parallel Sessions Oral Presentations	SCAR SSGs, SPPGs Business, Reports Scientific Planning Meetings		
10							
11		SCAR Symposium Presentation by COMNAP					
12	Registration	Lunch	Lunch	Lunch	SCAR/COMNAP Executive Meeting	Lunch	Excursion
13							
14	SSGs Business Meetings	SCAR Symposium Presentation by COMNAP Keynote Speakers only	Parallel Sessions Oral Presentations	Parallel Sessions Oral Presentations	SCAR SSGs, SPPGs Business, Reports Scientific Planning Meetings		
15							
16							
17			Poster Session	Poster Session			
18		Open Door Industry Exhibition					
19	Ice-Breaker-Party			Reception in the Bremen City Hall			
20		Public Lecture (in German)	Reception at the "Universum"				
21				SCAR Dinner			
22							
	SCAR Open Science Conference Antarctica and the Southern Ocean in the Global System						

➔ Antarctica and the Southern Ocean in the Global System

Sunday, 25 July 2004

- ➔ Focke-Wulf Saal 13.00 - 17.45
SSG business meeting: Geoscience
- ➔ Lloyd Saal 13.00 - 17.45
SSG business meeting: Physical Science
- ➔ Salon Danzig 13.00 - 17.45
SSG business meeting: Life Science
- ➔ Group room 2 13.00 - 17.45
SCAR Executive Committee meeting 17.45 - 18.30
SCAR Executive Committee meeting and chief officers SSG

- ❄️ Icebreaker party ❄️ 19.00 - 22.00 · SOCIAL EVENT
❄️ Übersee-Museum (see social events and social visits)

Monday, 26 July 2004

- SCAR Open Science Conference
➔ Hanse Saal 09.30 - 11.00
Official opening ceremony for SCAR, COMNAP and the industry exhibition
- SCAR Symposium "Antarctica and the Southern Ocean in the Global System"
Keynote presentations
Chairman: Robert Rutherford – Jörn Thiede 11.00 - 11.45
Eric Wolff, United Kingdom: Understanding the past – climate history from Antarctica 11.45 - 12.30
Erik Ivins, USA: Continent-wide glacio-isostasy in Antarctica: current status of modelling 14.00 - 14.45
Angelika Brandt, Germany: Evolution of the Antarctic biodiversity in the context of the past: the importance of the Southern Ocean deep sea 14.45 - 15.30
Chris Rapley, United Kingdom: A new phase of exploration and understanding: planning for the International Polar Year - 2007/2008 16.00 - 16.45
Karl Erb, USA: COMNAP in the 21st century 17.00 - 19.30

- Carsten Gohl: IPY gateways
- Industry exhibition
➔ Hall 4.1 18.00 - 19.30
➔ Open door industry exhibition
➔ Hanse Saal 19.30 - 20.30
Public lecture (in German)
Georg Kleinschmidt, Germany: Antarktis – Vereister Schlüssel zu unserer Erde

Tuesday, 27 July 2004

- SCAR Open Science Conference
➔ Hanse Saal
Symposium of the Standing Scientific Groups
Keynote presentations
Chairman: John Turner – Philip O'Brien – Steven Chown 08.30 - 09.00
John Storey, Australia: Astronomy from Antarctica 09.00 - 09.30
Lloyd Peck, United Kingdom: Prospects for survival in the Southern Ocean: extreme temperature sensitivity of benthic species 09.30 - 10.00
Terry Wilson, USA: Integrated studies on Antarctic neotectonics – neotectonics for the International Polar Year 10.30 - 11.00
Jay Zwally, USA: ICESat and ice sheet mass balance 11.00 - 11.30
Diana Wall, USA: Biodiversity and ecosystem functioning in terrestrial habitats of Antarctica 11.30 - 12.00
Philip O'Brien, Australia: Marine acoustic technology and the Antarctic environment

➔ Sessions

Parallel sessions and poster sessions

No.	Session	Convenor	Tuesday 27 July 04	Wednesday 28 July 04
1	Variability and change in the Antarctic biota: molecules to ecosystems	Pierre Jouventin, France and Eva Pisano, Italy	•	
2	Pelagic predators and the Southern Ocean system	Yvon Le Maho, France and Mark Hindell, Australia	•	
3	Structure and function of Southern Ocean ecosystems	Eileen Hofmann, USA and Steve Nicol, Australia	•	
4	Evolution and biodiversity of life in polar regions	Guido di Prisco, Italy and Sam Bowser, USA	•	
5	Ecology of the Antarctic sea ice zone	Mitsuo Fukuchi, Japan and Edith Fanta, Brasil		•
6	Human responses to the Antarctic environment	Claude Bachelard, France and Antonio Peri, Italy	•	
7	Ocean-atmosphere-land interactions	Ian Renfrew, United Kingdom	•	
8	Climate history of the Antarctic from ice cores and meteorological reports	Eric Wolff, United Kingdom		•
9	Astronomy from the Antarctic	John Storey, Australia	•	
10	Arctic-Antarctic conjugacy in solar terrestrial physics	Vladimir Papitashvili, USA		•
11	Evolution of the Antarctic and Southern Ocean climate and biota: the geological record	Miquel Canals, Spain and Ross Powell, USA		•
12	Antarctic neotectonics and geodesy	Alesandro Capra, Italy, Terry Wilson, USA and Anya M. Reading, Australia	•	
13	Growth of the Antarctic continent	German Leitchenkov, Russia and Georg Kleinschmidt, Germany		•
14	Antarctic permafrost	James Bockheim, USA	•	
15	Geospatial information, data management and information portals: management and application in science	Dean Peterson, New Zealand and John Manning, Australia	•	
16	Ozone, aerosols and atmospheric composition	Takashi Yamanouchi, Japan and S. L. Jain, India	•	
17	Physical oceanography and sea ice	Eberhard Fahrbach, Germany		•
18	Upper atmospheric physics and geospace	Maurizio Candidi, Italy		•
19	Subglacial lakes exploration	Robin Bell, USA, Martin Siegert, United Kingdom and Mahlon Kennicutt II, USA		•
20	Bathymetry of the Southern Ocean	Hans-Werner Schenke, Germany		
21	ISMASS/ITASE (only poster) Thursday business meeting: Symposium on ISMASS/ITASE	Paul Mayewski, USA		•
22	Antarctic history		•	

• Poster session

➔ Parallel sessions

Tuesday, 27 July 2004 · 13.30 - 17.10

Lloyd Saal	Session 1		Variability and change in the Antarctic biota: molecules to ecosystems	
	Chairman Eva Pisano			
	13.30 - 13.50	Veit-Köhler G.	Large scale species-level diversity of Antarctic deep-sea Paramesochridae (Copepoda: Harpacticoida)	
	13.50 - 14.10	Gutt J. et al.	Dispersal and limitations of the Antarctic benthos, a case study and a perspective	
	14.10 - 14.30	Loeb V. et al.	Hydrographic control of salp and copepod distributions in the South Shetland-Elephant Island and Bransfield Strait region	
	14.30 - 14.50	Philipp E. et al.	Polar marine bivalves stay younger than their North Sea relatives	
	14.50 - 15.10	La Terza A. et al.	The Antarctic ciliate <i>Euplotes focardii</i> as valuable model for evolutionary, biochemical, and genomics studies on cold-adaptation	
	15.30 - 15.50	McMinn A. and Hegseth E.N.	Effects of global climate change on primary and secondary production in Arctic and Antarctic marine ecosystems	
	15.50 - 16.10	Geibert W. et al.	The Eastern Weddell Gyre - an overlooked high productivity region	
	16.10 - 16.30	Wulff A. et al.	Short-term effects of ultraviolet radiation on Antarctic benthic diatoms	
Salon Danzig	16.30 - 16.50	Heise K. et al.	Physiological stress response to warm and cold acclimation in polar and temperate fish	
	16.50 - 17.10	Pisano E. et al.	Cytogenetic differences between the Patagonian (<i>Dissostichus eleginoides</i>) and the Antarctic toothfish (<i>Dissostichus mawsoni</i>)	
	Session 2		Pelagic predators and the Southern Ocean System	
	Chairman Mark Hindell			
	13.30 - 13.50	Southwell C. et al.	Abundance and distribution of pack-ice seals off East Antarctica	
	13.50 - 14.10	Costa D.P. et al.	Habitat utilization by crabeater seals: using seals as autonomous bathythermographs	
	14.10 - 14.30	Ribic C. et al.	Associations between seabird distribution and physical and biological oceanographic features during Winter, 2001-2002 in the Marguerite Bay area on the western Antarctic Peninsula	
	14.30 - 14.50	Hucke-Gaete R. et al.	The consequences of historical perturbations in the Southern Ocean as evidenced through the long-term population monitoring of a top predator	
	14.50 - 15.10	Weimerskirch H. et al.	Climate and population dynamics of Southern Ocean seabirds	
	Chairman Yvon Le Maho			
	15.30 - 15.50	Fraser W.R. et al.	Winter foraging movements of Adélie penguins in the western Antarctic Peninsula region	
	15.50 - 16.10	Connan M. et al.	Lipid biomarkers and stable isotopes indicate that short-tailed shearwaters prey upon myctophids in Antarctic waters while breeding in Tasmania	
	16.10 - 16.30	Van de Putte A. et al.	An individual-based model of ontogenetic habitat shifts in the life-history of the Antarctic silverfish, <i>Pleuragramma antarcticum</i> , in the Ross Sea	
	16.30 - 16.50	Gilbert C. and Ancel A.	Huddling emperor penguins: not so cold to over winter in Antarctica!	
	16.50 - 17.10	Jouventin P.	The vocal signature of penguins	

Parallel sessions

Tuesday, 27 July 2004 - 13.30 - 17.10

Session 5

Ecology of the Antarctic sea-ice zone

Chairman Edith Fanta

13.30 - 13.50	Kawaguchi S. et al.	Modelling Antarctic krill growth: a new approach
13.50 - 14.10	Takahashi K.T. et al.	Life cycle strategy of the herbivorous copepod <i>Calanoides acutus</i> in the Antarctic Ocean
14.10 - 14.30	Hunt B.P.V. and Hosie G.W.	Seasonal succession of zooplankton communities in the sea-ice zone: results of a multi-ship survey in East Antarctica
14.30 - 14.50	Melnikov I.A.	Organic carbon and chlorophyll within the Antarctic coastal and pelagic sea ice zones
14.50 - 15.10	Fritsen C.H.	Mesoscale distributions, seasonal development and inter-annual variability in Antarctic pack ice microbial communities: is there an emerging paradigm for when where and why?

Chairman Mitsuo Fukuchi

15.30 - 15.50	Cummings V. et al.	Ecology and biodiversity of Ross Sea coastal benthic communities
15.50 - 16.10	Knust R. et al.	Response of Antarctic benthic systems to disturbance: the iceberg disturbance and recolonisation experiment (BENDEX)
16.10 - 16.30	Fanta E. et al.	On the relation between the morphology of the gills of some Antarctic fish and the adaptability to environmental changes
16.30 - 16.50	Mincks S.L. et al.	Persistence of labile organic material in Antarctic shelf sediments: evidence of a sediment 'food bank' due to cold-limited microbial activity?

Session 6

Human responses to the Antarctic environment

Chairman Claude Bachelard

13.30 - 13.50	Antignani P.L. et al.	Vascular reactivity in extreme conditions: the past, present and future
13.50 - 14.10	Mäkinen T.M. et al.	Seasonal changes in thermoregulation and thermal perception during cold exposure in circumpolar residents
14.10 - 14.30	El Naggar S. et al.	Personal related UV-B-dosimetry at Neumayer-Station, Antarctica
14.30 - 14.50	Obinata K. et al.	The morbidity and human responses during winter-over at Antarctic highland, Dome Fuji base in 3810 m a.s.l.
14.50 - 15.10	Pillon S. et al.	Telespirometry testing in Antarctica

Chairman Antonio Peri

15.30 - 15.50	Palinkas L. et al.	Influence of latitude on physiological and psychological correlates of the polar T3 syndrome
15.50 - 16.10	Decamps G. et al.	Psychological reactions to stress during a winter-over in Antarctica: definition of the winter-over adaptive troubles
16.10 - 16.30	Decamps G. et al.	Presentation of a simple tool allowing to detect winterers with potential adaptation troubles
16.30 - 16.50	Moiseyenko E. and Madyar S.	Polychromatic spectrum modification influence on the psychic-physical human status in Antarctica
16.50 - 17.10	Dye T.D. et al.	The experience of injury in Antarctica: ethnographic insights on work, life, and ecology in an isolated environment

Session 7

Ocean-atmosphere-land interactions

Chairman Ian Renfrew

13.30 - 13.50	McPhee M.G.	Climate and Southern Ocean convection
13.50 - 14.10	Flocco D. et al.	A numerical simulation of the variability of the Prydz Bay polynya in 1995-1999
14.10 - 14.30	Fuoco R. et al.	Global diffusion process of pollutants: the role played by the marine aerosol and the sea-surface microlayer
14.30 - 14.50	Chen L. et al.	Studies of air-sea fluxes of CO ₂ in the Southern Ocean and the western Arctic Ocean
14.50 - 15.10	Zaitseva N.A.	Climatic characteristics of long-wave radiation in the Antarctic atmosphere
15.30 - 15.50	Allison I. et al.	Antarctic science issues within the WCRP climate and cryosphere project and their relevance to SCAR research
15.50 - 16.10	Van Lipzig N.P.M. et al.	The near-surface wind field over the Antarctic continent
16.10 - 16.30	Abu Samah A. and Sheeba N.C.	Analysis of a katabatic wind event in the region of Cape Denison, Antarctica using an array of automatic weather stations
16.30 - 16.50	Renfrew I.A.	Katabatic winds in Coats Land, Antarctica

Session 9

Astronomy from the Antarctic

Chairman John Storey

13.30 - 13.50	Fossat E.	French prospects for astronomy at Concordia
13.50 - 14.10	Cacciani A. et al.	Seismology of the solar atmosphere, at low and high resolution
14.10 - 14.30	Schmider F.X. et al.	Jovian seismology from the Antarctica
14.30 - 14.50	Du Foresto V.C.	Extrasolar planets science from the high Antarctic Plateau
14.50 - 15.10	Olmi L. and the ASO collaboration	ASO: the proposal for the realization of an international Antarctic submillimeter observatory

Chairman Eric Fossat

15.30 - 15.50	Boella G. et al.	CMB polarimetry from the Antarctic Plateau
15.50 - 16.10	Masi S. and the BOOMERanG collaboration	Measuring brightness and polarization of the microwave sky with BOOMERanG
16.10 - 16.30	Cortiglioni S. et al.	The BaR-SPOrt experiment
16.30 - 16.50	De Clercq C. for the AMANDA collaboration	Neutrino astronomy at the South Pole: results from AMANDA
16.50 - 17.10	Spiering C. for the IceCube collaboration	IceCube: towards the world's largest particle detector

Parallel sessions

Tuesday, 27 July 2004 - 13.30 - 17.10

Session 12

Antarctic neotectonics and geodesy

Chairman Anya Reading

13.30 - 13.50	Ivins E.R. et al.	Continent-wide glacio-isostasy in Antarctica: a new assessment
13.50 - 14.10	Salvini F. and Storti F.	Intracontinental accommodation of oceanic transform shear: a new geodynamic scenario for east Antarctica neotectonics
14.10 - 14.30	Behrendt J. et al.	Late Cenozoic volcanism in the West Antarctic rift system and its relation to the West Antarctic Ice Sheet
14.30 - 14.50	Galindo-Zaldivar J. et al.	Compressional and extensional recent deformations in Elephant Island area (NE Antarctic Peninsula)
14.50 - 15.10	Powell R.D.	Assessment of erosion history and creation of topographic relief in the McMurdo Sound area during Cenozoic glaciation

Chairman Terry Wilson

15.30 - 15.50	Wilson G.S. et al.	Geology and geophysics of and beneath the southern McMurdo ice shelf - a potential ANDRILL target
15.50 - 16.10	Reading A.M.	Seismic structure and tectonics of the Lambert Glacier region: results from the SSCUA broadband seismic deployment, East Antarctica
16.10 - 16.30	Pinat T. et al.	A new insight to the lithospheric structure of Scotia Sea region
16.30 - 16.50	Ghidella M.	Antarctic Peninsula path since breakup: review and implications for James Ross Basin development
16.50 - 17.10	Mueller C. and Eckstaller A.	Recordings of iceberg generated tremor at the Neumayer seismological network

Session 14

Antarctic permafrost

Chairman James Bockheim

14.30 - 14.50	Cannone N. et al.	Active layer characteristics across a latitudinal gradient in Victoria Land (Continental Antarctica) as indicator of functional processes in permafrost environments and ecosystems
14.50 - 15.10	Cannone N. and Guglielmin M.	Interactions between ground surface temperature, active layer thickness and vegetation in Continental Antarctica: a sensitive system for monitoring climate change effects
15.30 - 15.50	Sletten R.S. et al.	Constraining formation and stability of subsurface ice in the Dry Valleys: an integrating study of observations of stable isotopes, salt translocation, and climatic data
15.50 - 16.10	Guglielmin M.	Active layer and permafrost monitoring programme in Northern Victoria Land. First results and future perspectives
16.10 - 16.30	Boelhouwers J.	Permafrost and soil frost processes in the sub-Antarctic: significance, ecosystem interactions and responses to current climate change
16.30 - 16.50	López-Martínez J. et al.	Permafrost-landforms-soils-freshwater presence and interactions in ice-free areas of the South Shetland Islands. Data from Byers Peninsula, Livingston Island
16.50 - 17.10	Costa L.M. et al.	Chemical analysis of melting water from Admiralty Bay, King George Island, Antarctica

Session 15

Antarctic geospatial information, data management and information portals: management and application in science

Chairman Dean Peterson

13.30 - 13.50	Belbin L.	eAntarctica: from data management to information portals
13.50 - 14.10	Peterson D.	The Joint Committee on Antarctic Data Management (JCADM): past, present and future
14.10 - 14.30	Leicester S. and Olsen L.	Discovering the growing data resources in the Antarctic
14.30 - 14.50	De Bruin T.F.	Data flow and data dissemination during the 'International Polar Year 2007-2008': building on experiences in oceanography
14.50 - 15.10	Diepenbroek M. et al.	Publishing and citing scientific primary data

Chairman John Manning

15.30 - 15.50	Hallam C. et al.	The on-line atlas of Antarctic research
15.50 - 16.10	Macario A. et al.	A discovery service for knowledge related to research platforms
16.10 - 16.30	Peterson D.	Antarctica on my desktop
16.30 - 16.50	McKenna J. et al.	Serving Antarctica: making topography available on the web
16.50 - 17.10	Cooper A.P.R.	Standards in Antarctica: a report on the liaison between SCAR and ISO TC211

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➔ Parallel sessions

Tuesday, 27 July 2004 · 13.30 - 18.45

➔ Parallel sessions

Wednesday, 28 July 2004 · 8.30 - 12.10

🕒 Session 16

Ozone, aerosols and atmospheric composition

Chairman Takashi Yamanouchi		
13.30 - 13.45	Streibel M. et al.	Ozone loss over the Antarctic in the winter 2003: a lagrangian approach
13.45 - 14.00	Godin-Beekmann S. et al.	Study of Antarctic stratospheric ozone loss and its influence on southern mid-latitude regions
14.00 - 14.15	Grytsai A. et al.	Planetary waves in ozone layer at the edge region of Antarctic polar vortex during springtime (1996-2003)
14.15 - 14.30	Storini M. et al.	Search of solar induced effects in Antarctica General Belgrano Base on total ozone data: 1995-2003
14.30 - 14.45	Jain S.L. et al.	Measurement of green house gases and ozone at Maitri, Antarctica
14.45 - 15.00	Yamanouchi T. et al.	Observations of greenhouse gases at Syowa Station, Antarctica: coordination of long-term monitoring and balloon-borne campaign

Chairman S.L. Jain

15.30 - 15.45	Minikin A. and Weller R.	Condensation particles and aerosol chemical properties at Neumayer and future plans for airborne aerosol studies in Antarctica
15.45 - 16.00	Virkkula A. et al.	Chemical and physical characteristics of summertime atmospheric aerosols at the Finnish Antarctic station Aboa
16.00 - 16.15	Nardino M. et al.	Determination of cloud fraction, cloud type and Cloud Radiative Forcing (CRF) at different polar sites
16.15 - 16.30	Birnbaum G. and Brauner R.	Synoptic situations causing high precipitation rates on the Antarctic plateau of Dronning Maud Land
16.30 - 16.45	Laska K. et al.	Surface energy balance of the vegetation oasis at Vernadsky Station, Galindez Island, Argentine Islands
16.45 - 17.00	Cacciani A.	The sodium layer @ 90 Km observed in daylight for adaptive optics and mesospheric dynamics studies

🕒 Session 20

Bathymetry of the Southern Ocean

Chairman Hans-Werner Schenke		
13.30 - 13.50	Haxby W.F. et al.	The Antarctic multibeam bathymetric synthesis
13.50 - 14.10	Caress D. et al.	Current and projected bathymetric data sources for the Ross Sea, Antarctica, for the IBCSO from USCG icebreakers and autonomous underwater vehicles
14.10 - 14.30	Stagpoole V. et al.	Bathymetry of the Ross Sea region
14.30 - 14.50	Klenke M. and Schenke H.W.	Contributions to an improved Southern Ocean bathymetry
14.50 - 15.10	Jakobsson M. et al.	US nuclear submarine, icebreaker and ice island bathymetric data revisited: learning from IBCAO for IBCSO

🕒 Poster Session I

17.15 - 18.45	(Overview and plan of poster presentations, see abstract volume)
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SCAR / COMNAP

🍷 SOCIAL EVENT

20.00 - 22.00	Reception at the „Universum“ (see social events and social visits)
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🕒 Session 1

Variability and change in the Antarctic biota: molecules to ecosystems

Chairman Pierre Jouventin		
08.30 - 08.50	Le Maho Y.	How king penguins face the consequences of climatic changes on their pelagic resources
08.50 - 09.10	Barbosa A. et al.	Geographic variation in immune response in three species of penguins
09.10 - 09.30	Woehler E.J. and Bergstrom D.	The impacts of climate change on Heard Island during the 20 th century
09.30 - 09.50	Bried J. et al.	Insular bird populations can be saved from rats: a long term experimental study of white-chinned petrels <i>Procellaria aequinoctialis</i> in the Crozet archipelago
09.50 - 10.10	McKay S. et al.	Investigating the seasonal presence of humpback whales, <i>Megaptera novaeangliae</i> , in the western Antarctic Peninsula by combining data from multidisciplinary sources

Chairman Y. Frenot

10.30 - 10.50	Bergstrom D.M. et al.	RiSCC Three Island Study: variability in performance and phenotypic expression in plants and invertebrates across the subantarctic
10.50 - 11.10	Cannone N.	Vegetation communities and their patterns for the monitoring of environmental conditions and climate change effects along a transect through continental Antarctica
11.10 - 11.30	Schaefer C.E.G.R. et al.	Nutrients bioavailability of ornithogenic cryosols on volcanic rocks from Admiralty Bay, King George Island, Antarctica
11.30 - 11.50	Sancho L.G. et al.	Unexpectedly high number of lichen species at 84°S, Southern Victoria Land: flattening the biodiversity cline
11.50 - 12.10	Sancho L.G. et al.	Slowest to fastest: extreme range in lichen growth rates supports their use as an indicator of climate change in Antarctica

🕒 Session 3

Structure and function of Southern Ocean Ecosystems

Chairman Steve Nicol		
08.30 - 08.50	Smetacek V.	Testing ecological and biogeochemical hypotheses with in situ iron fertilisation experiments in the Southern Ocean
08.50 - 09.10	Croot P.	Adding iron to the Southern Ocean - what iron enrichment experiments can tell us about natural sources and sinks for iron
09.10 - 09.30	Peeken I. et al.	Does seasonality affect phytoplankton dynamics during iron fertilisation experiments in the Southern Ocean? Comparison between EisenEx and EIFEX
09.30 - 09.50	Hiscock M.R. and Barber R.T.	Regulation of primary productivity in the Southern Ocean
09.50 - 10.10	Barber R.T. et al.	Response of Southern Ocean ecosystems to the climate of 2050

Chairman Eileen Hofmann

10.30 - 10.50	Gili J.-M. et al.	A new Antarctic food chain?
10.50 - 11.10	Gallager S. et al.	Abundance, distribution, swimming behaviour, and feeding of under ice larval krill along the western Antarctic Peninsula
11.10 - 11.30	Tarling G.A. et al.	Krill fecundity in the South Georgia region: its influence on population dynamics and the wider implications
11.30 - 11.50	Nicol S. et al.	Krill and currents - temporal and spatial variability in krill populations off East Antarctica
11.50 - 12.10	Hofmann E.E. and Murphy E.J.	Advective processes and effects on Antarctic marine ecosystems

Parallel sessions

Wednesday, 28 July 2004 · 8.30 - 12.10

Session 4

Evolution and biodiversity of life in polar regions

Chairman Guido di Prisco

08.30 - 08.50	Storch D. and Pörtner H.O.	Temperature dependent protein synthesis capacities in cold adapted (Antarctic) and temperate (North Sea) fish (Zoarcidae)
08.50 - 09.10	Verde C. et al.	Structure and function of the Gondwanian hemoglobin of <i>Pseudaphritis urvillii</i> , a primitive notothenioid fish of temperate latitudes. The structure of the heme environment by molecular modelling
09.10 - 09.30	Detrich H.W. et al.	Discovery of bloodthirsty, a tripartite motif (TRIM) gene required for erythropoiesis, by comparative genomics
09.30 - 09.50	Ozouf-Costaz C. et al.	Comparative cytogenetics within Antarctic fish species of the subfamily Trematominae, using conventional bandings and molecular markers
09.50 - 10.10	Ghiogliotti L. et al.	Comparative cytogenetic analysis in three Arctic fish species (<i>Arctogadus glacialis</i> , <i>Boreogadus saida</i> , <i>Gadus morhua</i> , family Gadidae)

Chairman E. Parisi

10.30 - 10.50	Koubbi P. et al.	Fish diversity in the coastal zone of Terre Adélie
10.50 - 11.10	Voskoboinikova O.S.	Morphogenetical bases of origin and relationships of the notothenioids
11.10 - 11.30	Parisi E. et al.	Functional divergence of duplicated globin genes in Antarctic, Arctic and temperate fish
11.30 - 11.50	Sanchez S. et al.	Phylogeny of the Nototheniidae (Teleostei)
11.50 - 12.10	Dettaï A. and Lecointre G.	In search of Notothenioid relatives

Session 8

Climate history of the Antarctic from ice cores and meteorological reports

Chairman Eric Wolff

08.30 - 08.50	Van Ommen T. and Vin Morgan	A glacial and high resolution climate record from Law Dome, Antarctica
08.50 - 09.10	Petit J.-R. et al.	EPICA-Dome C ice core: extending the dust record over the last 7 climatic cycles (740 kyr B.P.)
09.10 - 09.30	Raynaud D. et al.	Air content along the Vostok and EPICA Dome C ice cores: a new proxy for the Antarctic insulation?
09.30 - 09.50	Oerter H. et al.	Stable isotope records from Dronning Maud Land: results from the EPICA ice core
09.50 - 10.10	Mayewski P.A. et al.	Solar forcing of the polar atmosphere

Chairman Alexander Klepikov

10.30 - 10.50	Turner J. and Colwell S.	Antarctic climate change over the last 50 years - results from the SCAR READER project
10.50 - 11.10	Carrasco J.F.	El Niño Southern Oscillation and the behavior of meteorological variables at the Chilean Antarctic stations
11.10 - 11.30	Setzer A.	Atmospheric pressure patterns in the last decade at King George Island
11.30 - 11.50	Lagun V. and Jagovkina S.	Antarctic Peninsula warming diagnosis
11.50 - 12.10	Kovalenok S. et al.	Small ice cap dynamic in the Antarctic Peninsula rapid climate change conditions

Session 11

Evolution of the Antarctic and Southern Ocean climate and biota: the geological record

Chairman Miquel Canals

08.30 - 08.50	Livermore R. et al.	The opening of Drake Passage
08.50 - 09.10	Brown B.J. et al.	Constraining the history of circum-Antarctic circulation with palaeo-bathymetry maps for the Southern Ocean
09.10 - 09.30	Raine J.I. et al.	Eocene to Miocene vegetation history and climate, Ross Sea region, Antarctica
09.30 - 09.50	Wellner J.S. and Anderson J.B.	Seismic and glacial stratigraphy of the James Ross and Larsen Basins, northwestern Weddell Sea
09.50 - 10.10	Uenzelmann-Neben G. et al.	Depositional patterns observed at Drift 7, Antarctic Peninsula

Chairman Ross Powell

10.30 - 10.50	Cortese G. et al.	Opal sedimentation shifts in the World Ocean over last 15 Myr
10.50 - 11.10	Barrett P.J.	Antarctic Neogene climate record - significance of tectonic context
11.10 - 11.30	Francis J.E. et al.	Plants and climates of the Middle Pliocene Sirius Group, Antarctica: evidence from fossil plants, climate and biome models
11.30 - 11.50	Olney M.P.	Biostratigraphic and taxonomic reassessment of Antarctic nearshore drillcores: the marine diatom genus <i>Kisseleviella</i>
11.50 - 12.10	Harwood D. et al.	Stratigraphic drilling project in Southern McMurdo Sound (SMS): an overview of site surveys and scientific objectives (ANDRILL Program)

Session 12

Antarctic neotectonics and geodesy

Chairman John Manning

08.30 - 08.50	Dietrich R. et al.	Mass distribution and mass changes in Antarctica: the role of recent and upcoming satellite missions
08.50 - 09.10	Holt J.W. et al.	An airborne geophysical survey of the Amundsen Sea Embayment, Antarctica for interdisciplinary studies of ice sheet variability and coupling to geologic and climatic boundary conditions
09.10 - 09.30	Dongchen E. and Chunxia Zhou	Application of SAR interferometry on ice surface topography of Grove Mountains
09.30 - 09.50	Nixdorf U. et al.	Airborne gravity measurements in Dronning Maud Land for the validation, densification and interpretation of new satellite data
09.50 - 10.10	Rau F. et al.	Ice-front changes on the Antarctic Peninsula from satellite image data, 1986 - 2003

Chairman Jan Cisak

10.30 - 10.50	Vey S. and Dietrich R.	Comparison of GPS derived atmospheric water vapor observations among the Antarctic Peninsula and East Antarctica
10.50 - 11.10	Cisak J. et al.	The second order refraction effects of GPS signal in ionosphere at high and middle latitudes
11.10 - 11.30	Sarti P. et al.	Water vapour content at Terra Nova Bay retrieved by radiosonde and GPS
11.30 - 11.50	Schulte D. and Schenke H.W.	GPS-meteorology: validation of GPS-measurements for remote sensing of atmospheric water vapour in Antarctica
11.50 - 12.10	Zablotskyj F.	Analysis of the zenith tropospheric delay value in different Antarctic regions

Parallel sessions

Wednesday, 28 July 2004 · 8.30 - 12.10

Salon Oslo

Session 13

Growth of the Antarctic continent

Chairman Georg Kleinschmidt		
08.30 - 08.50	Boger S.D. and Miller J.McL.	Terminal suturing of Gondwana and the onset of the Ross-Delamerian Orogeny: the cause and effect of an Early Cambrian reconfiguration of plate motions
08.50 - 09.10	Tessensohn F.	West-Antarctica: 500 Ma of crustal accretion
09.10 - 09.30	Dunkley D. et al.	The structural development of Pan-African granulites: Skallevikhalsen, Lützow-Holm Complex, East Antarctica
09.30 - 09.50	Jacobs J. et al.	The East African/Antarctic Orogen: a Neoproterozoic-Cambrian analogue of the Indo-Asian (Himalayan) collision belt
09.50 - 10.10	Ménot R.P. et al.	Structural setting of the Archean terrains in the Commonwealth Bay area (143°-145°E, Terre Adélie - George V Land, East Antarctica)

Chairman German Leitchenkov		
10.30 - 10.50	Winberry J.P. and Anandakrishnan S.	West Antarctic crustal structure
10.50 - 11.10	Storey B.C. and Vaughan A.P.M.	A Jurassic superplume event centred on Antarctica and its effect on the Earth System
11.10 - 11.30	Hunter M.A.	Break-up of Gondwana and the birth of the Antarctic continent
11.30 - 11.50	Koenig M. et al.	The opening of the Weddell Sea - new data - new constraints - new models
11.50 - 12.10	Eagles G. et al.	Development of the southernmost Pacific Ocean since 90 Ma

Session 15

Antarctic geospatial information, data management and information portals: management and application in science

Chairman Dean Peterson		
08.30 - 08.50	Grobe H. et al.	PANGAEA - longterm-archive and library for multidisciplinary data from Antarctic research
08.50 - 09.10	Vogt S. and Jaña R.	Can the SCAR feature catalogue help in providing common semantics for Antarctic spatial data? - The KGIS experience
09.10 - 09.30	Cogan C.B. et al.	Biodiversity studies in Antarctic shelf environments: opportunities and challenges for geographic information systems
09.30 - 09.50	Smolyanitsky V. et al.	Web-portal of Russian Antarctic Program - gate to meta and factual information
09.50 - 10.10	Pillon S. et al.	Web site for medical information sharing in Antarctica

Chairman John Manning		
10.30 - 10.50	Berkman P.A.	Antarctic Treaty Searchable Database - 1959 to the present
10.50 - 11.10	Pulsifer P.L. and Taylor D.R.F.	Building a data infrastructure in support of the Cybercartographic Atlas of Antarctica
11.10 - 11.30	Dani N. et al.	A geographical information system applied to the Antarctic Specially Managed Area (ASMA) of Admiralty Bay
11.30 - 11.50	Papitashvili V.O. et al.	A virtual international Antarctic magnetometer network
11.50 - 12.10	Woods B.A. et al.	Visualization of earth science spatial data for Antarctic research as part of the Cybercartographic Atlas of Antarctica project

Salon Franzius

Session 17

Physical oceanography and sea ice

Chairman Eberhard Fahrbach		
08.30 - 08.50	Rintoul S.R. et al.	Understanding the role of the Southern Ocean in the global climate system: recent progress and future challenges
08.50 - 09.10	Olbers D.	The Antarctic Circumpolar Current: its circulation, transport and dynamical balance
09.10 - 09.30	Williams A. et al.	Observed variability in the water mass properties of the Antarctic Circumpolar Current across the Drake Passage (1926-2003)
09.30 - 09.50	Sijp W.P. and England M.H.	On the role of the Drake Passage in controlling the stability of the ocean's thermohaline circulation
09.50 - 10.10	Zhaoqian Dong et al.	Fronts with strong currents across the ACC in the upper ocean east of 70°E in the southeast Indian Ocean

Chairman Michael Sparrow		
10.30 - 10.50	Spezie G. and CLIMA Group	The Italian contribution to the oceanography of the Ross Sea
10.50 - 11.10	Bergamasco A. et al.	Modelling downslope flow across the Ross Sea shelf break
11.10 - 11.30	Barbini R. et al.	Biochemical structure and properties of the Ross Sea during the Austral summer 1997-98
11.30 - 11.50	Hofmann E.E. et al.	Seasonal and interannual variations in hydrographic distributions in Marguerite Bay and environs
11.50 - 12.10	Klinck J. et al.	Circulation and oceanic exchange on the west Antarctic Peninsula shelf using a numerical model

Session 18

Upper atmospheric physics and geospace

Chairman Maurizio Candidi		
08.50 - 09.10	Villante U. et al.	ULF fluctuations of the geomagnetic field in Antarctica
09.10 - 09.30	Gwal A.K. and Singh S.K.	Observation of Very Low Frequency (VLF) phenomena at Indian Antarctic Station, Maitri (L ~ 4.6)
09.30 - 09.50	Bezrodny V.G. et al.	ELF polarization monitoring of the earth thunderstorm activity from the Antarctica
09.50 - 10.10	Yampolski Y. et al.	Atmospheric-space weather system interaction in Antarctic Peninsula region

Chairman Vladimir Papitashvili		
10.30 - 10.50	Korepanov V. et al.	Automatic meteo-magnetic station for atmospheric gravity waves registration in Antarctica
10.50 - 11.10	Abdul Rashid Z.A. et al.	Initial results of ionospheric scintillation measurements during a minor to major storm event on November 2002 at Scott Base Antarctica
11.10 - 11.30	Abdul Rashid Z.A. et al.	Initial results of GPS ionospheric TEC and ionosonde measurement during a minor to major storm event on November 2002 at Scott Base Antarctica
11.30 - 11.50	Lübken F.-J.	The CAWSES program of SCOSTEP

Parallel sessions

Wednesday, 28 July 2004 · 13.10 - 16.50



Session 1

Variability and change in the Antarctic biota: molecules to ecosystems

Chairman P. Koubbi

13.10 - 13.30	Thatje S. and Arntz W.	Conflicting concepts in Antarctic science - a biological view
13.30 - 13.50	Bock C. and Pörtner H.O.	Non-invasive methods for physiological research in Antarctic organisms
13.50 - 14.10	Stark J.S. and Riddle M.J.	Assessing the remediation of an Antarctic waste dump: biological and chemical monitoring of benthic communities at different spatial and temporal scales to distinguish natural variability from anthropogenic induced changes
14.10 - 14.30	Richards S.E. et al.	Spatial and temporal variation in the small motile fauna of the shallow water benthos at Casey Station, East Antarctica: detecting human impacts
14.30 - 14.50	Detrich H.W.	Antarctic and Arctic biology in the genomic era

Chairman Pierre Jouventin

15.10 - 15.30	Riddle M.J. and Chapman P.M.	Are environmental guidelines based on temperate ecotoxicology appropriate for polar regions?
15.30 - 15.50	Allegrucci G. et al.	Molecular phylogeny of Antarctic Chironomidae investigated by 28S rDNA sequencing
15.50 - 16.10	Cremer H. et al.	Oligotrophic, low-diversity freshwater ecosystems in continental East Antarctica: limnology of lakes in the Amery Oasis
16.10 - 16.30	Bahrim G. et al.	The effect of some surfactants on α -amylase production with <i>Bacillus subtilis</i> polar strains in solid-state fermentation system
16.30 - 16.50	Brinkmann M. et al.	Microbial communities in Antarctic polygon soils of Coal Nunatak: a molecular approach

Session 3

Structure and function of Southern Ocean Ecosystems

Chairman Steve Nicol

13.10 - 13.30	Odate T. et al.	Time series of primary and secondary production south of 61°S, along 140°E, during 2001/2002 and 2002/2003 Austral summers (STAGE, Studies on the Antarctic Ocean and the Global Environments)
13.30 - 13.50	Brichta M.	The role of life cycle stages of diatoms in decoupling carbon and silica cycles in polar regions
13.50 - 14.10	Kasamatsu N. et al.	Influence of zooplankton grazing on concentrations of DMS and dissolved DMSP in the Southern Ocean
14.10 - 14.30	Mellard J. et al.	Behavioral adaptations of a polar copepod
14.30 - 14.50	Nyssen F. and Graeve M.	Combination of trophic biomarkers to distinguish among Antarctic amphipod trophic guilds

Chairman Eileen Hofmann

15.10 - 15.30	Bowser S.S. et al.	Preliminary results of sampling benthic biota under the Ross Ice Shelf
15.30 - 15.50	Palma A.T. and Poulin E.	Highly disturbed shallow Antarctic benthos: is this the main condition behind the patterns of distribution of invertebrates with contrasting developmental modes?
15.50 - 16.10	Tsarin A.	Structure and function of Antarctic ichthyofauna in region near island Galindez
16.10 - 16.30	Bathmann U. et al.	Zooplankton contribution to matter export after iron fertilisation in the Southern Ocean

Session 4

Evolution and biodiversity of life in polar regions

Chairman Sam Bowser

13.10 - 13.30	Pawlowski J. et al.	Molecular analysis of polar benthic foraminifera
13.30 - 13.50	Böer M. et al.	Are exceptional lipids responsible for the evolutionary success of the pteropod genus <i>Clione</i> (Gastropoda) in Antarctic and Arctic waters?
13.50 - 14.10	Brix S. and Brandt A.	What is interesting about the Family Desmosomatidae Sars, 1897? Some new aspects about the small benthic isopoda (Crustacea)
14.10 - 14.30	Brökeland W.	Haploniscidae (Crustacea: Isopoda) in the deep sea of the Southern Ocean

Chairman Guido di Prisco

15.10 - 15.30	Murray A.E. et al.	Bridging the gap between the Antarctic marine environment, prokaryotic diversity and function
15.30 - 15.50	Jungblut A.-D. et al.	Diversity of cyanobacterial mat communities, McMurdo ice shelf, Antarctica, with regards to global distribution, using a combined morphological and molecular approach
15.50 - 16.10	Dinamarca J. et al.	Identification and characterization of responsive genes from the extremophile hair grass <i>Deschampsia antarctica</i> desv.
16.10 - 16.30	Engelen A. et al.	Inland terrestrial habitats in Antarctica - initial colonisation processes, species diversity and environmental influences
16.30 - 16.50	De Broyer C. et al.	Towards a SCAR 'Marine Biodiversity Information Network' (SCAR-MarBIN)?

Session 8

Climate history of the Antarctic from ice cores and meteorological reports

Chairman Jefferson Simoes

13.10 - 13.30	Siegert M.J.	Ice sheet radio-echo layering in central West Antarctica and their implications for Holocene ice sheet changes
13.30 - 13.50	Xiaohan Liu et al.	Measurements of past ice sheet elevation in interior East Antarctica
13.50 - 14.10	Karstkarel N.	Shelf ice dynamics in West Antarctica between 1840 and 1960. Analysing historical maps in a Geographical Information System
14.10 - 14.30	Liston G.E. and Winther J.G.	Antarctic surface and sub-surface snow and ice melt fluxes
14.30 - 14.50	Bye J. et al.	Control of the Antarctic Ice Cap by ocean-ice interaction

Chairman Andrew Carleton

15.10 - 15.30	Reusch D.B. et al.	Nonlinear paleoclimatology: reconstructions in West Antarctica
15.30 - 15.50	Dixon D.A. et al.	Connections between West Antarctic ice core sulfate and climate over the last 200+-years
15.50 - 16.10	Carvalho L.M.V. et al.	Opposite phases of the Antarctic oscillation and relationships with intraseasonal to interannual activity in the tropics during the Austral summer
16.10 - 16.30	Ryan Banta J. et al.	Correlation of atmospheric circulation indexes with high resolution trace element flux records from West Antarctica
16.30 - 16.50	Edwards R. et al.	Decadal to century scale variability in the atmospheric deposition of iron to Siple Dome during the past 400 yr

Parallel sessions

Wednesday, 28 July 2004 · 13.10 - 16.50

⌚ Session 10

Arctic-Antarctic conjugacy in solar terrestrial physics

Chairman Maurizio Candidi

13.10 - 13.30	Papitashvili V.O.	The ICESTAR scientific programme: interhemispheric conjugacy effects in solar-terrestrial and aeronomy research
13.30 - 13.50	Bristow W.A. et al.	South-Pole SuperDARN conjugate studies
13.50 - 14.10	Lukianova R.	The polar CAP Index (PC) in the northern and southern hemispheres: consistency and discrepancy
14.10 - 14.30	Amata E. et al.	Two HF coherent radars at Dome C to expand the Southern SuperDARN chain
14.30 - 14.50	Villain J.-P. et al.	Interhemispheric study of bursty convection events in the midnight sector

Chairman Vladimir Papitashvili

15.10 - 15.30	Stephenson J.A.E.	Conjugate ULF pulsations in Antarctica and the Arctic, generated by the solar wind and Walker A.D.M.
15.30 - 15.50	Smith A.J. et al.	A solar cycle of ELF/VLF radio wave observations in the Antarctic and Arctic: an overview and application to the problem of electron acceleration in the outer radiation belt
15.50 - 16.10	LaBelle J.	Arctic and Antarctic observations of LF/MF/HF waves associated with auroral substorm onsets
16.10 - 16.30	Natsuo Sato et al.	Conjugate ionospheric disturbances affected by the 23 November 2003 solar eclipse
16.30 - 16.50	Liu R. et al.	Magnetic conjugate studies between Zhongshan Station and the stations in the Arctic

⌚ Session 11

Evolution of the Antarctic and Southern Ocean climate and biota: the geological record

Chairman Miquel Canals

13.10 - 13.30	Gersonde R. et al.	A giant splash in the Southern Ocean - the late Pliocene impact of the >1 km sized Eltanin asteroid and its environmental consequences
13.30 - 13.50	Larter R.D. et al.	Investigations of a major palaeo-outlet of the West Antarctic Ice Sheet in the southern Bellingshausen Sea: preliminary results from RRS <i>James Clark Ross</i> Cruise JR104
13.50 - 14.10	Scheuer C. et al.	Sedimentation processes on the continental rise in the western Bellingshausen Sea, West Antarctica: new constraints from reflection seismic data
14.10 - 14.30	Naish T. et al.	Stratigraphic drilling beneath the McMurdo-Ross Ice Shelf: an overview of site surveys and drilling objectives (ANDRILL Program)
14.30 - 14.50	Allen P.P. et al.	Antarctic Dry Valley lake sediments: preliminary results from long sediment cores

Chairman Ross Powell

15.10 - 15.30	Köhler P. and Fischer H.	Transient changes in the global carbon cycle during the last glacial/interglacial transition
15.30 - 15.50	Hass H.C.	Brine-controlled deep-water formation in the Riiser Larsen Sea (Eastern Weddell Sea)?
15.50 - 16.10	Del Negro P. et al.	Composition of organic matter in the Ross Sea sediments as a proxy for paleoenvironmental changes
16.10 - 16.30	Domack E. et al.	Holocene climate: a marine geologic perspective on a circum-Antarctic signal
16.30 - 16.50	Dunbar R. et al.	Holocene climate variability along the Antarctic continental margin and linkages with terrestrial paleoclimate records from the Southern Hemisphere

⌚ Session 12

Antarctic neotectonics and geodesy

Chairman John Manning

13.10 - 13.30	Rülke A. and Dietrich R.	Reference frame realisation in Antarctica: new results of the SCAR GPS campaigns
13.30 - 13.50	Manning J. et al.	Crustal motion in Antarctica derived from GPS observations
13.50 - 14.10	Mayer M. and Heck B.	The highly precise regional deformation network Antarctic Peninsula - improved site movement rates
14.10 - 14.30	Capra A. et al.	Geodetic approach for regional deformation control in Antarctica: VLNDEF project results
14.30 - 14.50	Willis M. et al.	Horizontal crustal motions in the Antarctic interior: comparison of GPS measurements and post-glacial rebound model predictions

Chairman Reinhardt Dietrich

15.10 - 15.30	King M.	Ocean tide loading of Antarctica from GPS, gravity and numerical tide models
15.30 - 15.50	Ravi Kumar N. et al.	Significance and importance of collocating permanent GPS and seismic observatory at Maitri, Antarctica
15.50 - 16.10	Ahola J. et al.	GPS work in western Dronning Maud Land for geodynamics, glaciology, and absolute gravity
16.10 - 16.30	Combrink A. and Combrinck L.	The impact of a permanent dual-frequency GPS receiver and collocated tide gauge at Marion Island on tropospheric, ionospheric, geological and tide data
16.30 - 16.50	Schlüter W. et al.	Geodetic observatory O'Higgins - results of continuous and seasonal observations since 1992

⌚ Session 17

Physical oceanography and sea ice

Chairman Giancarlo Spezie

13.10 - 13.30	Fahrbach E. et al.	Decadal-scale variations of water mass properties in the deep Weddell Sea
13.30 - 13.50	Schodlok M.P. et al.	Southern Ocean iceberg drift, melting and dust inputs: model, buoy and satellite data
13.50 - 14.10	Pandey P.C. et al.	Antarctica sea ice monitoring from space and its relevance in global change studies
14.10 - 14.30	Kern S.	Analysis of remotely sensed Antarctic sea ice cover of 1991-2002: total and regional area and extent, and contribution of different ice concentration classes
14.30 - 14.50	Cullather R.I. and Holland M.M.	Southern Ocean sea ice variability and its relation to atmospheric parameters in station data and re-analyses

Chairman John Klinck

15.10 - 15.30	Zambianchi E.	The international programme for Antarctic buoys: past achievements and future plans
15.30 - 15.50	Schmitt C. et al.	A new digital atlas of Antarctic sea ice drift
15.50 - 16.10	Timmermann R. et al.	Using a coupled sea ice-ocean model to evaluate the ASPeCt sea ice thickness dataset
16.10 - 16.30	Markus T. et al.	Snow depth on Antarctic sea ice: variability and climatic implications
16.30 - 16.50	Compagnucci R. and Barreira S.	Antarctic sea ice concentration related to tropical signal

Parallel sessions

Wednesday, 28 July 2004 - 13.10 - 18.20

Session 19

Subglacial lakes exploration

Chairman Mahlon Kennicutt II – Michael Diegert

13.10 - 13.30	Studinger M. et al.	Bathymetry, water circulation, and melting and freezing in Lake Vostok
13.30 - 13.50	Dietrich R. et al.	Ice dynamics in the Lake Vostok region: new results from field observations and remote sensing
13.50 - 14.10	Bulat S.A. et al.	Is the subglacial Lake Vostok, East Antarctica, lifeless? A case of forensic biology study of accretion ice
14.10 - 14.30	Petit J.R. et al.	Stable isotope composition of the accreted ice constrains the geographical location of the melting area for Lake Vostok
14.30 - 14.50	Salamatin A.N. et al.	Lake Vostok isolation-time estimations from ice modelling of the melting area

Chairman Robin Bell - Mahlon Kennicutt II

15.10 - 15.30	Bell R. et al.	Lake Vostok environments sampled in the Vostok 5-G Ice Core
15.30 - 15.50	Petit J.R. et al.	Helium enrichments in Vostok lake ice samples suggest contribution from seismotectonic activity
15.50 - 16.10	Tabacco I.E. et al.	Detection and characterization of subglacial lakes in Vincennes and Aurora Basins (East Antarctica)
16.10 - 16.30	Siegert M.J. et al.	A candidate for Antarctic subglacial lake exploration



IPY International Polar Year - Discussion and information forum

13.10 - 13.40	Rapley C. (BAS, chair, ICSU IPY planning group)	Overview of the IPY planning process
13.45 - 14.05	Bell R. (LDEO, vice-chair, ICSU IPY planning group)	Implementation plans for IPY 2007-2008
14.10 - 14.25	Petersen H. (Danish Polar Centre, planning group member)	Towards an outreach and education strategy for IPY
14.30 - 14.45	Sarukhanian E. (WMO, IPY planning group member)	The role of WMO in IPY
15.10 - 15.30	Summerhayes C. (SCAR secretariat)	SCAR involvement in IPY
15.35 - 15.55	TBA (International Arctic Science Committee)	Opportunities for Arctic science in IPY
16.00 - 16.15	Kuhn M. (IUGG, IPY planning group member)	An Electronic Geophysical Year (e-GY)
16.20 - 16.35	Janoschek W. (IUGS, IPY planning group member)	The Year – International Year of Planet Earth
16.40 - 16.50	Concluding discussion	



Poster Session II

16.50 - 18.20	(Overview and plan of poster presentations, see abstract volume)
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SCAR / COMNAP

SOCIAL EVENT

19.00 - 20.00	Reception in the Bremen City Hall (see social events and social visits)
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SCAR dinner

SOCIAL EVENT

20.00 - 22.30	(for all participants formally registered at the SCAR Open Science Conference) (see social events and social visits)
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XXVIII SCAR business meetings

Thursday, 29 July 2004 - Friday, 30 July 2004

Thursday, 29 July 2004

SCAR business meetings

Borgward Saal

08.00 - 09.00

Panel discussion on the International Polar Year (IPY)

Convenor: Chris Rapley, United Kingdom, chairman, ICSU IPY planning group

Group room 1

12.30 - 14.00

Joint SCAR/COMNAP Executive meeting

Hanse Saal

09.00 - 18.30

STEPS, MADREP, APTIC, ICESTAR

Borgward Saal

09.00 - 18.30

Paul Mayewski, USA: **Symposium on ISMASS/ITASE**. Posters only; Poster session on Wednesday

Focke-Wulf Saal

09.00 - 18.30

Phil O'Brien, Australia: **Geoscience business meeting**

Lloyd Saal

09.00 - 18.30

Dean Peterson, New Zealand: **Joint Committee on Antarctic Data Management (JCADM)**

Salon Danzig

09.00 - 18.30

Steven Chown, South Africa and Ad Huiskes, The Netherlands: **Life science business meeting**

Salon London

09.00 - 18.30

Antonio Peri, Italy: **Human biology and medicine**

Salon Bergen

09.00 - 18.30

Takashi Yamanouchi, Japan: **Workshop of the Antarctic tropospheric aerosols and their role in climate (ATAC)**

Salon Roselius

09.00 - 18.30

John Storey, Australia: **Meeting of the astronomy action and expert groups**

Salon Scharoun

09.00 - 18.30

Terry Wilson, USA and Andrea Morelli, Italy: **ANTEC business meeting**

Salon Oslo

09.00 - 18.30

Hans-Werner Schenke, Germany and Reinhard Dietrich, Germany: **Antarctic Geodesy Symposium (AGS'04): reports and planning**

Group room 4

A meeting of the Antarctica and the global system PPG

Friday, 30 July 2004

SCAR business meetings

Borgward Saal

08.00 - 09.00

Panel discussion on the International Polar Year (IPY)

Convenor: Chris Rapley, United Kingdom, chairman, ICSU IPY planning group

Borgward Saal

09.00 - 18.30

John Turner, United Kingdom: **Physical science business meeting**

Focke-Wulf Saal

09.00 - 18.30

Phil O'Brien, Australia: **Geoscience business meeting**

Salon Danzig

09.00 - 18.30

Steven Chown, South Africa and Ad Huiskes, The Netherlands: **Life science business meeting**

Salon London

09.00 - 18.30

Antonio Peri, Italy: **Human biology and medicine**

Salon Franzius

09.00 - 18.30

Dean Peterson, New Zealand: **Joint Committee on Antarctic Data Management (JCADM)**

Salon Scharoun

09.00 - 12.30

SSG Geoscience workshop: **Advances in airborne and spaceborne mapping technologies and GIS: applications to Antarctic research**

14.00 - 18.30

SSG Geoscience workshop: **Enabling technologies for remote geophysical observatories: status and requirements for continent-wide deployments**

Salon Oslo

09.00 - 18.30

Hans-Werner Schenke, Germany: **International Bathymetric Chart of the Southern Ocean (IBCSO)**

Salon Roselius

09.00 - 12.30

Jörn Thiede: **European Polar Board**

Group room 2

18.30 - 19.30

SCAR Executive Committee meeting and chief officers SSG

Saturday, 31 July 2004

18.30 - 19.30

SCAR/COMNAP excursion (see social events and social visits)

Salon Oslo

Salon London



Hall 4.1

City Hall

Ratskeller

COMNAP XVI program

25 - 31 July 2004, Bremen, Germany

Time	Sunday 25 July 04	Monday 26 July 04	Tuesday 27 July 04	Wednesday 28 July 04	Thursday 29 July 04	Friday 30 July 04	Saturday 31 July 04
8		Joint COMNAP/ SCALOP Plenary	SCALOP Plenary	SCALOP Symposium	IPY Panel Discussion		Excursion
9		Opening SCAR, COMNAP and Industry Exhibition			SHIOPS Meeting	EXCOM Meeting	
10							
11		SCAR Symposium Presentation by COMNAP	MOLIBA, CENMAN, TANGO		STADM & SYMP Meeting	COMNAP/ SCALOP Plenary	
12	Registration		Lunch 	Lunch 	SCAR/ COMNAP Executive Meeting	Lunch 	
13		Lunch 					
14	EXCOM Meeting	SCAR Symposium Presentation by COMNAP	AIROPS Meeting CENMAN/ ENMANET Workshop	SCALOP Symposium	COMNAP/ SCAR Meeting on the IPY	COMNAP/ SCALOP Plenary	
15		Keynote Speakers only			Preparation of group meetings' report		
16			CEDAT, ECG & COMED CENMAN/ ENMANET Workshop	Poster Session	COMNAP Meeting on the IPY		
17		Joint COMNAP/ SCALOP Plenary					
18							
19	Ice-Breaker- Party	Public Lecture (in German)		Reception in the Bremen City Hall			
20			Reception at the “Universum”		COMNAP Dinner by Invitation		
21							
22							
		Industry Exhibition			National Display		

Sunday, 25 July 2004

Group room 1

14.00 - 16.00

COMNAP Executive Committee (EXCOM) meeting

Icebreaker party

19.00 - 22.00 · SOCIAL EVENT

* "Übersee-Museum" (see social events and social visits)

Monday, 26 July 2004

Kaisen Saal

08.00 - 09.30

Joint COMNAP/SCALOP plenary

SCAR Open Science Conference

Hanse Saal

09.30 - 11.00

Official opening ceremony for SCAR, COMNAP and the industry exhibition

Hanse Saal

11.00 - 11.45

SCAR Symposium "Antarctica and the Southern Ocean in the Global System" Keynote presentations

Kaisen Saal

17.00 - 20.30

Joint COMNAP/SCALOP plenary

Industry exhibition

Hall 4.1

18.00 - 19.30

Open door industry exhibition

Hanse Saal

19.30 - 20.30

Public lecture (in German)

Georg Kleinschmidt, Germany: Antarktis – Vereister Schlüssel zu unserer Erde

Tuesday, 27 July 2004

Kaisen Saal

08.30 - 10.00

SCALOP plenary

10.30 - 12.00

Group meetings: working group to monitor the liability annex (MOLIBA), coordinating group on energy management (CENMAN) and working group on tourism and NGOs (TANGO)

13.30 - 15.10

Group meeting: working group on air operations (AIROPS), CENMAN/ENMANET workshop on sustainable energy management

15.30 - 18.00

Group meetings: coordinating group on education and training (CEDAT), environmental coordinating group (ECG) and medical co-ordinating group (COMED)

Group room 4

13.30 - 18.00

CENMAN/ENMANET workshop on sustainable energy management

20.00 - 22.00 · SOCIAL EVENT

SCAR/COMNAP: Reception at the „Universum“ (see social events and social visits)

Wednesday, 28 July 2004

Kaisen Saal

XI SCALOP Symposium

(More details on page 28)

Thursday, 29 July 2004

Kaisen Saal

09.00 - 10.30

Group meeting: working group on ship operations (SHIOPS)

11.00 - 12.30

Group meetings: joint SCAR/COMNAP group for data management (STADM) and symposium working group (SYMP)

14.00 - 18.30

Preparation of group meetings' reports

Group room 1

12.30 - 14.00

Joint SCAR/COMNAP Executive Committees' meeting

14.00 - 16.00

COMNAP meeting on the IPY with a few representatives of SCAR/IPY

16.30 - 18.30

COMNAP members meeting on the IPY to discuss logistics and cooperation for support to IPY

20.00 - 23.00 · SOCIAL EVENT

COMNAP/SCALOP dinner (by invitation only) (see social events and social visits)

Friday, 30 July 2004

Kaisen Saal

11.00 - 12.30

COMNAP/SCALOP plenary

14.00 - 16.00

COMNAP/SCALOP plenary

16.30 - 18.30

COMNAP/SCALOP plenary

Group room 1

09.00 - 10.30

COMNAP Executive Committee (EXCOM) meeting

Saturday, 31 July 2004

08.00 - 19.00 · SOCIAL EVENT

SCAR/COMNAP excursion (see social events and social visits)

➔ XI SCALOP Symposium

Wednesday, 28 July 2004 · 08.30 - 18.30

🕒 1st Session

08.30 - 08.40	Opening address	invited presentations chaired by H. Gernandt, AWI
08.40 - 09.25	Stolten D., Germany	Overview on hydrogen and fuel cells as energy technologies
09.25 - 10.10	Bodger P., New Zealand	Assessment of non-fossil fuel energy and field waste minimisation – research opportunities for Antarctica

🕒 2nd Session

Chairman K. Shiraishi, NIPR		
10.30 - 10.55	Zielinski O. et al.	Sensor technologies and networks for polar research aircraft
10.55 - 11.20	Frearson N.	The development of an airborne polarimetric radar
11.20 - 11.45	Rack W. et al.	Planning a new traverse route from Neumayer to SANAE IV
11.45 - 12.10	Godon P. and Cucinotta A.	Concordia traverse organization

🕒 3rd Session

Chairman V. Klovov, AARI		
13.10 - 13.35	Adamek L. et al.	Fuel cell technology for sensitive environmental areas
13.35 - 14.00	Lasseur C. et al.	Concordia water treatment and recycling systems
14.00 - 14.25	Papalia B.	Scientific missions by means of an Autonomous Underwater Robot
14.25 - 14.50	Enss D. et al.	Considerations for Neumayer III Station rebuild and chosen design

🕒 4th Session

Chairman P. Eberhard, INACH		
15.10 - 15.35	Setzer A.	Tracking the Antarctic scientist in fieldwork with NOAA/ARGOS transmitters
15.35 - 16.00	King E.C.	Enabling technology - wing-in-ground-effect vehicles
16.00 - 16.25	Carsey F. and Behar A.	Proposing an international collaboration on lightweight autonomous vehicles to conduct scientific traverses and surveys over Antarctica and the surrounding sea ice
16.25 - 16.50	Blake D.	The application of unmanned aerial vehicles in Antarctica

🕒 5th Poster Session

Chairman S. El Naggar, AWI	
17.00 - 18.30	Poster session of the XI SCALOP Symposium (Overview and plan of poster presentation, see abstract volume)
18.30	Closing of XI SCALOP Symposium

🕒 SCAR / COMNAP

🍷 SOCIAL EVENT

19.00 - 20.00	Reception in the Bremen City Hall
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Kaisersaal

Hall 4.1

City Hall

➔ XI SCALOP proceedings

All oral and poster contributions of the XI SCALOP Symposium will be published as "XI SCALOP Symposium Proceedings" in a special issue of the journal "Terra Nostra" by the GeoUnion Alfred-Wegener-Stiftung. The print-ready manuscripts have to be submitted as word and PDF files copied to a CD to the SCALOP Symposium organizer at the beginning of the conference.

The formatting should be as follows:

- Page margin settings:
2.5 cm left, 2.0 right,
2.5 cm above, 2.5 cm below
- Font:
Times New Roman
- Font size:
Title (18 bold),
Author/organisation (12 bold),
Subsection title (14 bold),
Text (12; line spacing 1.5)

Printing, including figures and pictures, will be black and white only.

➔ COMNAP XVI/XI SCALOP

Polar research aircraft show 26 - 30 July 2004

For the first time in the history of COMNAP/SCALOP meetings scientists and operators will get the opportunity to visit aircraft operated for polar research and logistics. On the occasion of the COMNAP/SCALOP meeting both CASA 212 from Australia and Dornier 228 (Polar 4) aircraft from Germany can be visited at the regional Luneort airport (www.flughafen-bremerhaven.de) close to the city of Bremerhaven.

The Australian Antarctic Division (AAD) is preparing to operate this new, ski-equipped CASA 212 aircraft as part of its Antarctic operations. For about 20 years the Alfred Wegener Institute for Polar and Marine Research (AWI) successfully operates two Dornier 228 aircraft. Flight missions contribute to geophysical, glaciological and atmospheric science.

At the Luneort airport the AWI and Optimare Sensorsysteme AG (www.optimare.de) have established all facilities for maintenance and service of the scientific mission equipment of the Dornier 228 aircraft. There will be a demonstration of this instrumentation and of selected scientific applications together with the aircraft.

The aircraft presentation is scheduled for 26 - 30 July 2004 at the regional Luneort airport (Bremerhaven). A shuttle bus will be available every day on demand for meeting participants. This shuttle service will be arranged by Optimare Sensorsysteme AG.

For registration and further details please contact directly the Optimare booth at the industry exhibition or the information desk upon your arrival at the meeting venue.



Industry exhibition

Hall 4.1 · Fair Centre Bremen, Germany



Engineering and Technology Meet Antarctic Science and Operations

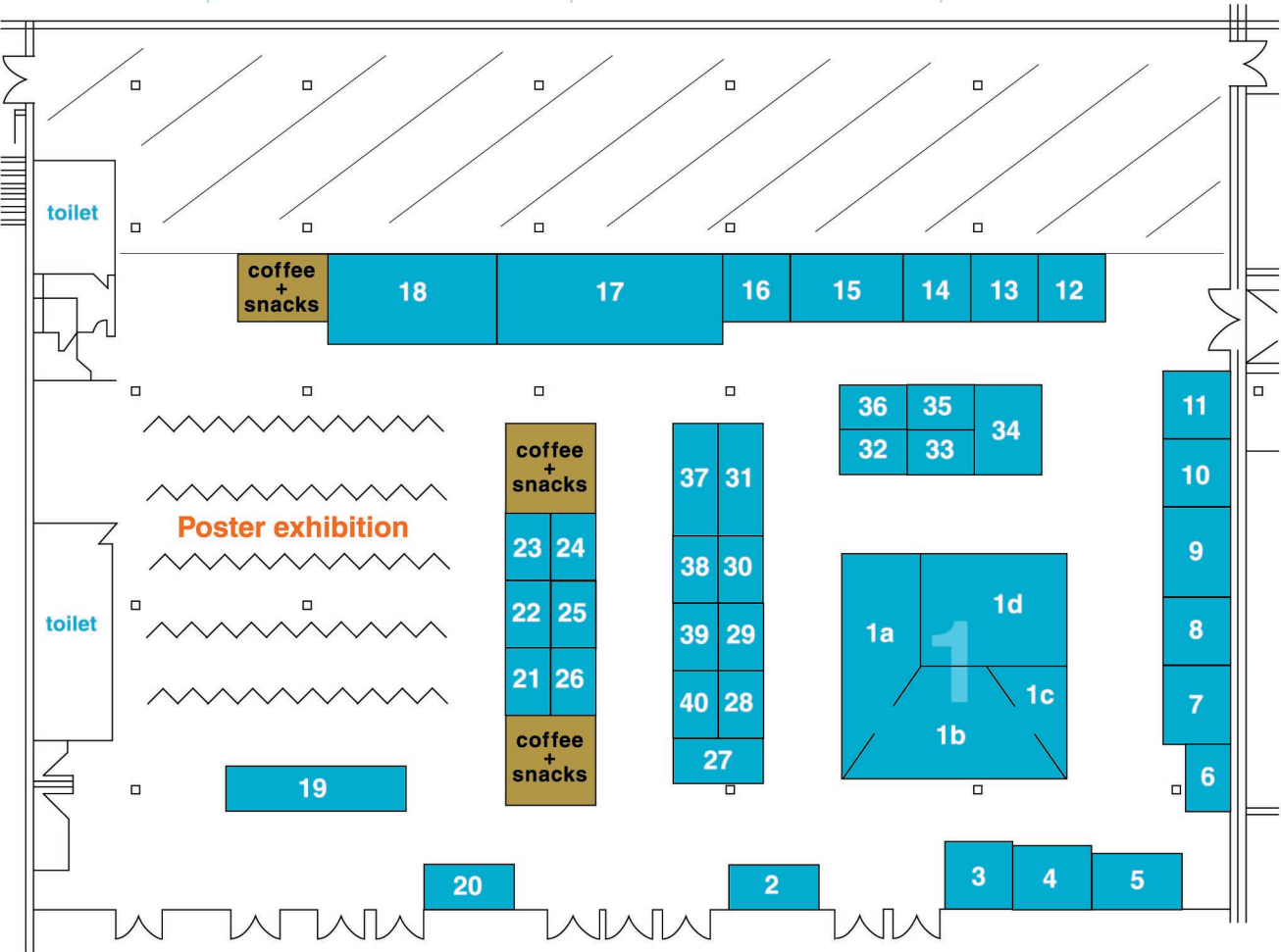
In parallel with the XXVIII SCAR and COMNAP XVI meeting, the Council of Managers of National Antarctic Programs (COMNAP) together with the national organizers of the XXVIII SCAR and COMNAP XVI meetings organizes an industry exhibition on “Engineering and technology meet Antarctic science

and operations” at the Congress Centre Bremen, 26 - 28 July 2004. This industry exhibition provides an ideal platform to offer latest and proven techniques, instrumentation, transportation facilities, support services, and technologies appropriate for Antarctic operations and science to the SCAR

and COMNAP community. It is the largest and most efficient gathering between industry providers and users as well as decision makers in the field of Antarctic research and operations.



Plan of exhibiting companies and institutions



Exhibiting companies and institutions

Name	Street	Post Code	Town	Country	No.
AANDERAA Instruments AS	Nestunbrekken 97	N5221	Nestun	Norway	31
ALCI Antarctic Logistics Centre International (PTY) Ltd	97 Keerom Street	8001	Cape Town	South Africa	7
ATLAS Hydrographic GmbH	Kurfürstenallee 130	28211	Bremen	Germany	28
AWG Construction Services Ltd	Shand House, Matlock	DE4 3AF	Derbyshire	United Kingdom	13
AWI Alfred-Wegener-Institut für Polar- & Meeresforschung	Postfach 12 01 61	27515	Bremerhaven	Germany	1
Basler Turbo Conversion, LLC	255 West 35th Street	54902	Oshkosh	Wisconsin, USA	22
Berco Produktion AB	Plastvägen 3	93142	Skelleftea	Sweden	36
Blackwell Publishing	9600 Garsington RD	OX4 2DQ	Oxford	United Kingdom	
Bundesanstalt für Geowissenschaften & Rohstoffe (BGR)	Stilleweg 2	30655	Hannover	Germany	20
denkmanufaktur gmbh	Vor der Reihe 1	26197	Großenkneten	Germany	26
DLR Deutsches Zentrum für Luft- und Raumfahrt Oberpfaffenhofen	Münchner Straße 20	82234	Weßling	Germany	3
European Space Agency	P.O. BOX 299	2200 AG	Noordwijk	The Netherlands	17
FIELAX Gesellschaft für wissenschaftliche Datenverarbeitung mbH	Schifferstraße 10-14	27568	Bremerhaven	Germany	2
FOGTEC Fire Protection Office Marine	Hermann-Maul-Str. 4	21073	Hamburg	Germany	21
France Telecom Mobile Satellite Communications GmbH	Hochstadenring 50	53119	Bonn	Germany	9
GS Elektromedizinische Geräte G. Stemple GmbH	Hauswiesenstr. 26	86916	Kaufering	Germany	6
HATLAPA Uetersener Maschinenfabrik GmbH & Co. KG	Tornescher Weg 5-7	25436	Uetersen	Germany	14
HELI TRANSAIR GmbH	Hans-Fleissner-Str. 1	63329	Egelsbach	Germany	34
J.H.K. Anlagenbau und Service GmbH & Co. KG	Labradorstraße 5	27572	Bremerhaven	Germany	18
K.U.M. Umwelt- und Meerestechnik Kiel GmbH	Wischhofstr. 1-3, Geb. D5	24148	Kiel	Germany	25
Kässbohrer Geländefahrzeug AG	Kässbohrerstr. 11	88471	Laupheim	Germany	8
Kenn Borek Air Ltd	290 McTavish Road NE	T3A5S2	Calgary AB	Canada	38
Lehmann & Michels GmbH & Co. KG	Marlowring 4	22525	Hamburg	Germany	15
Lehmann Maschinenbau GmbH	Jocketa-Bahnhofstraße 34	08543	Pöhl	Germany	35
Lloyd Werft Bremerhaven GmbH	Brückenstr. 25	27568	Bremerhaven	Germany	24
MBT Meerestechnisches Büro Turla GmbH	Wischhofstr. 1-3, Geb. 11	24148	Kiel	Germany	25
Missing Link Versandbuchhandlung	Westerstraße 114-116	28199	Bremen	Germany	19
MWB Motorenwerke Bremerhaven AG	Barkhausenstraße 60	27568	Bremerhaven	Germany	11
Nautilus Marine Service GmbH	Blumenthalstraße 15	28209	Bremen	Germany	31
NIWA National Institute of Water & Atmospheric Research Ltd	P.O. Box 14-901	Kilbirnie	Wellington	New Zealand	33
Optimare Sensorsysteme AG	Am Luneort 15 a	27572	Bremerhaven	Germany	10
Peter Frisch GmbH	Isar-Ring 11	80805	München	Germany	32
Reederei F. Laeisz (Bremerhaven) GmbH	Barkhausenstraße 37	27568	Bremerhaven	Germany	4
RF Forschungsschiffahrt GmbH	Blumenthalstraße 15	28209	Bremen	Germany	31
Rieber Shipping AS	P.O. Box 1114 Sentrum	N-5809	Bergen	Norway	30
Rochem UF-systeme GmbH	Seegelkenkehr 4	21107	Hamburg	Germany	12
Siemens AG (Marine Solutions) c/o PUBLICIS Relationship GmbH	Lindenplatz 2	20099	Hamburg	Germany	27
SIMRAD GmbH & Co. KG	Hellgrundweg 109	22525	Hamburg	Germany	40
Tasmanian Polar Network Inc.	GPO BOX 824	7001	Hobart	Australia	37
Tempex GmbH Schutzausrüstungen	Plouquetstr. 11	89522	Heidenheim	Germany	29
Thermo Electron (Bremen) GmbH	Barkhausenstraße 2	28197	Bremen	Germany	23
Top Housing AB	P.O. BOX 16010	20025	Malmö	Sweden	39
Uwe Kloska GmbH	Pillauer Str. 15	8217	Bremen	Germany	5
Weatherhaven	5700 Marine Way	V5J 5C8	Vancouver	Canada	16
WERUM Software & Systems AG	Wulf-Werum-Straße 3	21337	Lüneburg	Germany	2

➔ Social events & social visits

Please do not forget your personal badges to simplify your admittance!



➔ Icebreaker party in the Übersee-Museum (SCAR, COMNAP)

Sunday, 25 July 2004
19.00 - 22.00
Bahnhofplatz 13, Bremen

How to get to the venue?

Under guidance: join a group at 18.40 in front of Hall 4 of the Congress Centre Bremen.

By yourself: starting point Congress Centre, Hall 4; 7 - 10 minutes walking distance. Cross the square in front of you, go through the passage of the Central Railway Station, i.e. you enter the north entrance (= Bürgerweide) and go through to the south exit (=city). To the right hand you will see the neo-classicist building of the Übersee-Museum.

Reception at the Universum Science Centre Bremen (SCAR, COMNAP)

Tuesday, 27 July 2004
20.00 - 22.00
Wiener Str. 2, Bremen

How to get to the venue?

Under guidance: join a group at 19.15 in front of Hall 4 of the Congress Centre Bremen.

By yourself: starting point Congress Centre, Hall 4. Cross the square and go through the passage of the Central Railway Station (you enter the north entrance (Bürgerweide) and go through to the south exit (City)). Go to the traffic junction in front of you, take the tram no. 6 from platform E direction University. Get out at the stop "NW1/ Universum Science Centre". Follow the street straight ahead for 300 m until you see the "Universum". Signs will show you the way to your destination. Tram tickets are available at the tour desk.

Reception in the Bremen City Hall (SCAR, COMNAP)

Wednesday, 28 July 2004
19.00 - 20.00
Am Markt 21, Bremen

How to get to the venue?

Under guidance: join a group at 18.20 in front of Hall 4 of the Congress Centre Bremen.

By yourself: starting point Congress Centre, Hall 4; 20 min. walking distance. Cross the square in front of you, go through the passage of the Central Railway Station (you enter the north entrance (Bürgerweide) and go through to the south exit (City)). Cross the railway station-square to the street Herdentorsteinweg. Follow Herdentorsteinweg. After the first cross (Bahnhofstraße) you see Marriott Hotel in front of you, go further straight ahead. After the second crossing (street Am Wall) you see a sculptural group "Herdman and pigs". It is the beginning of the street Sögestraße. Follow it to the end and then turn to the left. Here you are on the Bremen Market Square (Marktplatz). A North Gothic style building with an impres-

sive Weser Renaissance façade in front of you is the City Hall Bremen. If you stay frontal to this building then at the corner to the left is the entrance into the "Ratskeller" (City Hall Cellars) and at the right corner (east entrance) you can enter the City Hall.

SCAR Dinner in the Ratskeller

(for all participants formally registered at the SCAR Open Science Conference)

Wednesday, 28 July 2004
20.00 - 22.30
Am Markt 21, Bremen

How to get to the venue?

Please look under Reception in the City Hall.

COMNAP/ SCALOP Dinner on the ship "MS Oceana" (by invitation only)

Thursday, 29 July 2004
20.00 - 23.00
Martinianleger, Bremen

How to get to the venue?

Under guidance: join a group at 19.10 in front of Hall 4 of the Congress Centre Bremen.

By yourself: starting point Congress Centre, Hall 4; 40 min. walking distance. After you have reached the City Hall as described above (under "Reception in the City Hall) look for a dark-green column with touristic guidance opposite of the City Hall directly on the Market Square. Find the pointer "Martinianleger" and follow it. You should enter the street Böttcherstraße and follow it to the end. At the end of the street you see the second pointer. Please take the pedestrian subway. Now you are at the shore of the river Weser. Turn to the right. The third moorage is the "Martinianleger". Enter the ship "MS Oceana".

Excursion Worpswede and Bremerhaven

Excursion to the artists' village
Worpswede and to Bremerhaven
(SCAR/COMNAP)
Saturday, 31 July 2004
08.00 - 19.00

Meeting point:

at 07.45 in front of Hall 4 of the Congress Centre Bremen

Worpswede

Worpswede is situated some 25 km to the northwest of Bremen in the midst of Devil's Moor. It became widely known particularly thanks to the artists who settled there at the end of the 19th century: thus Heinrich Vogeler, Otto Modersohn, Paula Modersohn-Becker, Rainer Maria Rilke and Clara Rilke Westhoff founded the tradition of Worpswede, which has been maintained up to the present day as an artists' colony also known as a „world village“. The beautiful landscape, the historical sites associated with the first generation of artists and numerous galleries attract many visitors each year.

Bremerhaven

Bremerhaven is a major seaport for the world trade and one of the biggest container terminals in Europe. After the visit of Worpswede we will have lunch at the Alfred Wegener Institute for Polar- and Marine Research (AWI). Then we will visit:

- the German Maritime Museum (Hans-Scharoun-Platz 1, Bremerhaven) where you can explore the history of ships and sea travel. In the emigration exhibition you learn about the people who left Europe for America from this port and follow exciting life stories,
- and the Alfred Wegener Institute for Polar- and Marine Research (AWI) (Columbusstraße, Bremerhaven). There you have the choice between several guided tours.

Social visits

Please note that all tours are based on a minimum capacity. Registrations will be accepted on a first-come-fist-serve basis. Late registration during the congress only upon availabilities for all tours. Tour cancellations: BTZ reserves the right to cancel any tour if the minimum pre-registration is not met.

Walk through the historic city centre

Sunday, 25 July 2004 and
Thursday, 29 July 2004, 15.00

Discover and experience Bremen's key attractions that include the idyllic Schnoor Quarter and Böttcherstreet. Let yourself be enchanted by stories on patrician buildings round the Market Square, the history of the city and local residents and take a picture of the statue of the famous Bremen Town Musicians and Bremer Roland.

Meeting point:

at 14.50 in front of Hall 4 of the Congress Centre Bremen

Duration: 2 hours walking tour including English speaking guide; Ending – market square

Minimum: 15 persons
Cost: € 8.00 per person

Brewery Beck and visitor centre

Sunday, 25 July 2004,
14.45

The world-class Pils "Beck's" is one product of the Bremen Brewery Beck & Co., which has guaranteed consistent quality for over 125 years now. Learn about the art of beer brewing and sample the brewery's quality products. The transfer will be in proper style by a horse-drawn carriage.

Meeting point:

at 14.40 in front of Hall 4 of the Congress Centre Bremen - transfer by bus

Duration: 3 hours return to Maritim Hotel/ Congress Centre by a horse-drawn carriage

Minimum: 15 persons
Cost: € 32.00 per person

Art Museum "Kunsthalle Bremen"

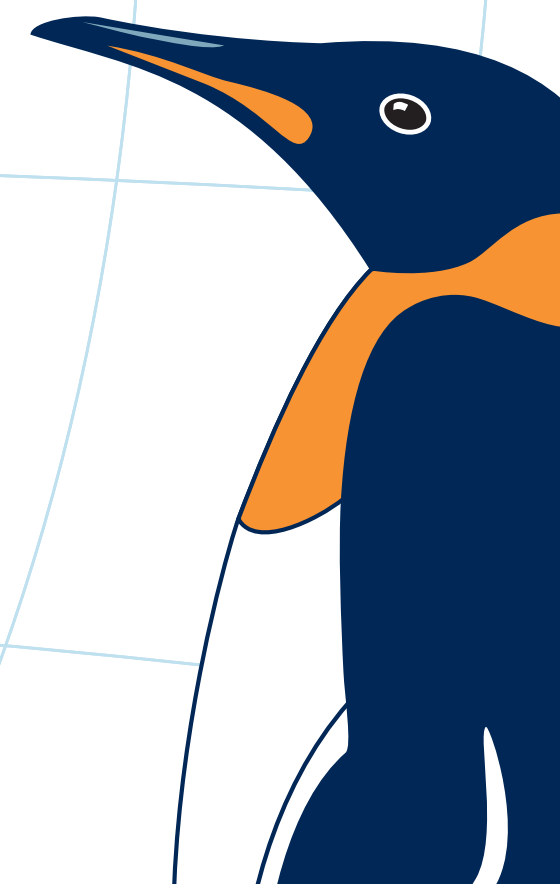
Monday, 26 July 2004,
17.15

The Bremen Art Museum exhibits a collection of painting and sculpture, spanning from the 15th century to the present day and including works of Delacroix, Liebermann, Corinth, Modersohn-Becker and Beckmann. With some 220,000 sheets, the graphics gallery houses one of the largest collections in Europe, highlighting mainly German and French drawings and prints from the 19th century.

Meeting point:

at 17.10 in front of Hall 4 of the Congress Centre Bremen - transfer by bus
Duration: 2 hrs including English speaking guide (assistance by BTZ), English speaking museum guide, entrance fee and one way by bus; Ending – Kunsthalle Bremen

Minimum: 15 persons
Cost: € 23.00 per person



➔ Conference information

➔ Registration and information desk ➔ Secretariats

Registration will be conducted in the entrance of Hall 4, fairground next to the Congress Centre

Phone +49 (0) 421 - 35 05 - 473

Date and time

Sunday, 25 July 2004, 12.00 - 18.00
Monday, 26 July 2004, to
Friday, 30 July 2004, 08.00 - 18.00

➔ Opening hours

Congress Centre:
Sunday, 25 July 2004
12.00 - 19.00

Monday, 26 July 2004
07.30 - 21.00

Tuesday, 27 July 2004
08.00 - 19.30

Wednesday, 28 July 2004
08.00 - 19.00

Thursday, 29 July 2004
07.30 - 20.00

Friday, 30 July 2004
07.30 - 20.00

Hall 4.1:

Monday, 26 July 2004
09.00 - 20.00

Tuesday, 27 July 2004
08.00 - 19.30

Wednesday, 28 July 2004
08.00 - 18.30

➔ Press conference

A press conference will be at the Salon Scharoun on Monday, 26 July 2004, 11.15 - 12.30. It will be an opportunity for journalists to meet and question the world's experts of Antarctic research. Registered journalists at XXVIII SCAR Open Science Conference can attend all scientific sessions by showing their free press pass.

XXVIII SCAR and COMNAP XVI meeting secretariat

Congress Centre, group room 3
Phone: +49 (0) 421 - 35 05 - 388
Fax: +49 (0) 421 - 35 05 - 787

SCAR secretariat

Congress Centre, group room 2

COMNAP secretariat

Congress Centre, group room 1

➔ Polar stamp exhibition

The Alfred-Wegener-Institute will host a polar stamp exhibition on its booth during the industry exhibition. The exhibition is organized by the German "Polarphilatelie e.V. Arbeitsgemeinschaft im BDPH e.V." and will show a variety of rare polar stamps. A special postmark for the XXVIII SCAR & COMNAP XVI meeting has been created and will be available with special polar issue stamps at a booth of the Deutsche Post AG on Monday, 26 July 2004, foyer Hall 4.

➔ Cell phones

Please be courteous of your fellow attendees and turn off all electronic devices while attending technical sessions.

➔ Personal computers & internet service

14 personal computers (MS Windows) connected to the Internet are set up at the Internet Café in the foyer of the Conference Centre. Black and white printing will be possible through network printers.

A conference local network (LAN) will be installed. A high speed router with "firewall" security features will give access to the Internet. The "firewall" may restrict certain Internet features. Access to the LAN will be organized through DHCP. Laptops (Windows, Mac, Linux) can be connected through plugs (RJ45) in all lecture halls and working group rooms or through a Wireless LAN (WLAN) in the foyer.

Technical assistance will be given.

Germany operates at 230 Volts for electrical appliances. The frequency is 50 Hz. Special plugs are needed.

The Local Organizing Committee is unable to provide an Internet mail service for participants. You may, however, be able to access your e-mail by logging into the mail server of your home institutions via the Internet. Access to your home server will depend on the security settings of your router.

➔ Presentations

Each speaker in his session will give a 15 minutes presentation followed by 5 minutes discussion in general.

Keynote speakers of the SCAR Symposium (Monday, 11.00-16.45) will dispose of 45 min presentation including discussion.

Keynote speakers of the Symposium of the Standing Scientific Groups (Tuesday, 8.30-16.00) have 30 min including discussion.

XI SCALOP Symposium keynotes will last 45 min including discussion while the other presentations will take 25 min including discussion.

Talks have to be presented in Microsoft PowerPoint, only. Exemptions have to be clarified with the technical staff well in advance.

Presentations have to be copied to a central server since personal laptops are not allowed in the lecture halls. The PowerPoint slides will then be distributed through the local network to the lecture rooms. You will find a central service point close the Information Centre to submit your PowerPoint presentation. Technical support will be available, but keep in mind that technical problems may arise. Allow enough time since there will be no possibility to postpone your presentation.

➔ Posters

Please consider that the poster should not exceed the size of maximum 120 cm in height and 85 cm in width. Poster set-up will be either on Tuesday or Wednesday as indicated starting at 08.00. Posters should be removed right after the poster session. Posters not removed will be discarded.

➔ National display

COMNAP members will present up to three posters on their national activities and logistic facilities in the foyer of the Congress Centre from 26 to 30 July 2004. The poster size should not exceed 120 cm height and 85 cm width.

Poster boards will be available for all national operators.

➔ Copying and fax service

Participants should request copying of papers by presenting the order form in the copy centre.

Out going faxes will be delivered at the copy centre.

Order forms are available at the information desk and the copy centre.

➔ Catering arrangement

Coffee breaks

Coffee, tea and mineral water will be served as indicated on the timetable in the morning and in the afternoon. During the Open Science Conference the three stations will be available in the industry exhibition (Hall 4.1). During the business meeting coffee and tea will be served in the foyer of the Congress Centre.

Lunch

A light lunch will be served on own expenses in the foyer of the Congress Centre. A number of cheaper restaurants can be found in walking distance of the Congress Centre (overview over restaurants see below).

➔ Pigeonhole boxes

Papers will be distributed via pigeonhole boxes located at the information desk. Papers will be distributed to SCAR participant by SCAR group and to COMNAP and SCALOP by country.


➔ Message board

All messages will be displayed on the message board in the foyer of Hall 4.

➔ First aid



A medical service will be available at the Congress Centre. If you should find a person not feeling well, please report to a nearby staff or to the information desk.

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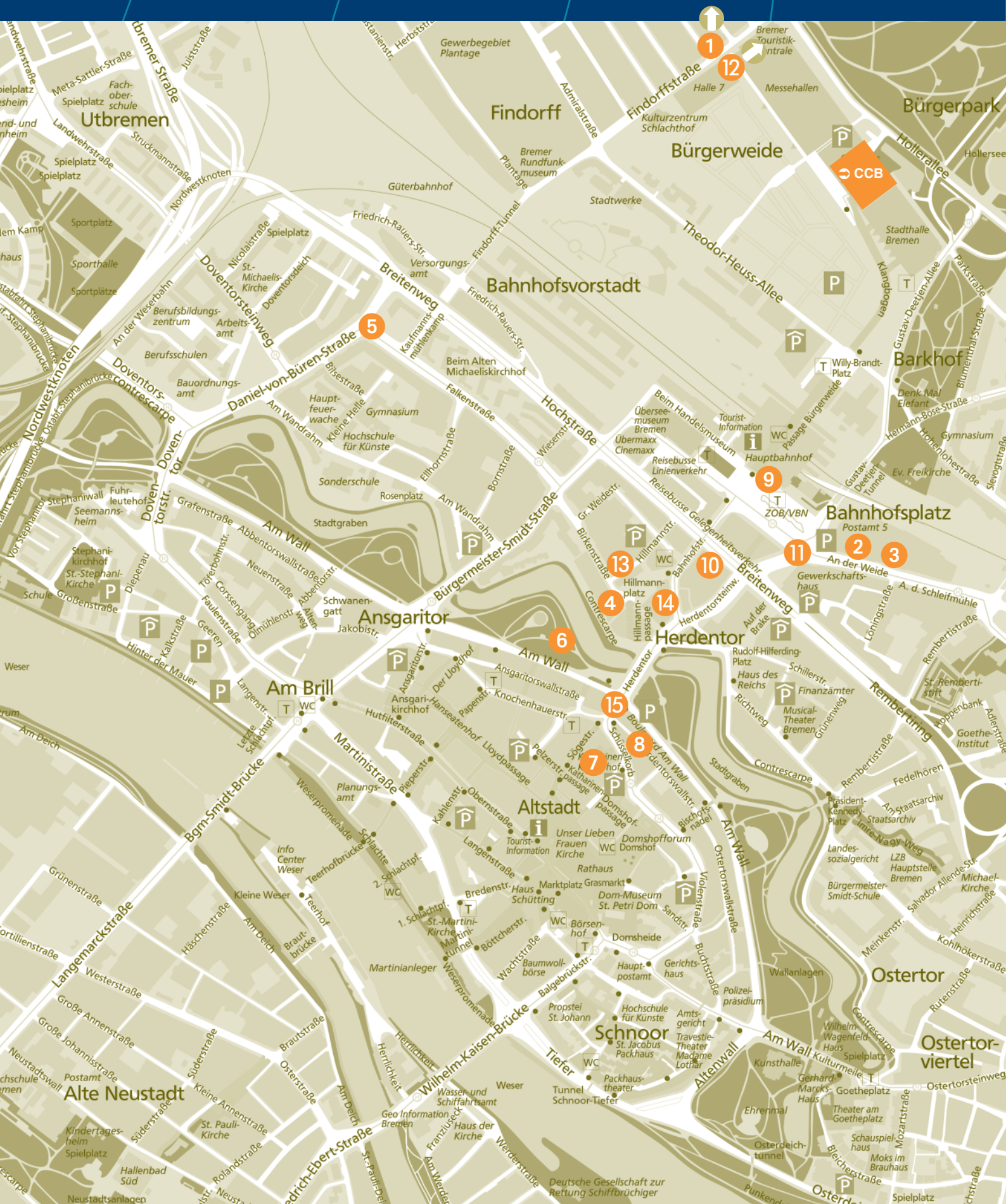



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ALCI

www.alci.info

➡ Restaurants and bistros



Italian

➡ **Don Camillo**
Ristorante Pizzeria · Neukirchstraße 1
☎ +49 (0) 421 - 35 50 40
🕒 Tu. - Fr. + Sun. 12:00-14:30 & 18:00-23:30, Sat.: 18:00 - 23:30, Mo. closed · Places: 73
Prices in the evening (warm dishes): € 7.00 (pizza) - 17.00 (meat, filet)
Lunch prices: € 7.50 (3 courses), Mo. - Fr. 12:00 - 14:30

Ristorante Italiano
➡ **Famiglia Perrone**
An der Weide 18 (in the City Hotel)
☎ +49 (0) 421 - 364 99 66
🕒 daily 12:00 - 14:30 + 18:00 - 23:00, in summer closed on Tu. · Places: 100
Prices in the evening (warm dishes): € 8.00 (pizza) - 18.00
Lunch prices: € 7.50 (buffet)
Mo. + Wed. - Fr. 12:00 - 14:30

Turkish, mediterranean & international cuisine
➡ **Oasis** An der Weide 27-29
☎ +49 (0) 421 - 364 85 57
🕒 daily 12:00-02:00 (at night) · Places: 350
Prices in the evening (warm dishes): € 7.80 - 25.00
Lunch prices: € 7.50 (buffet)
Mo. - Fr. 12:00 - 15:00

Mexican & Californian Restaurant & Bistro ➡ **El Sol**
Birkenplatz 47-48 Am Hillmannplatz
☎ +49 (0) 421 - 17 10 40
🕒 daily - open end · Places: 100
Prices in the evening (warm dishes): € 6.00 - 15.00
Lunch prices: € 5.20 - 5.90
Mo. - Fr. 11.30 - 15:00

Indian
➡ **Bombay** · Daniel v. Büren Str. 29
☎ +49 (0) 421 - 17 05 96
🕒 daily 17:30 - open end · Places: 80
Prices in the evening (warm dishes): € 9.70 - 15.20
Lunch prices: € 4.90 - 7.50
Tu. - Fr. 12:00 - 15:00 + Buffet (Fr. + Su.) € 9.50

German & international
➡ **Kaffeemühle am Wall**
Am Wall 212 ☎ +49 (0) 421 - 144 66
🕒 Mo. - Fr. 12:00 - 14:00 + 18:00 - 22:00, Sat.: 12:00 - 22:00 · Places: 100
Prices in the evening (warm dishes): € 12.50 - 19.50 · (you can pay with credit card by the sum more than € 25.00)
Lunch prices: business lunch € 6.00
Mo. - Fr. 12:00 - 14:00

➡ **Der Andechser**
Katharinenklosterhof 7
☎ +49 (0) 421 - 276 19 90
(Ex Katharinen-Abbey, Benedictine tradition, 7 beers of own brewing)
🕒 daily 11:00 - 24:00 · Places: 42
Prices in the evening (warm dishes): € 4.10 - 12.50
Lunch prices: € 5.00 (you can choose 1 out of 4 courses) 11:00 - 15:00

Fish restaurant (Brauns Rest. & Bistro)
➡ **Knurrhahn** · Schlüsselkorb 32/33
☎ +49 (0) 421 - 32 31 28
🕒 Mo. - Wed. 11:00 - 19:00 Thurs. - Fr. 11:00 - 20:00, Sat.: 11:00 - 17:00, Sun. closed · Places: 145
Prices in the evening (warm dishes): € 5.90 - 14.50
Lunch prices: € 5.90 (the whole day)

Steigenberger Restaurants and bars
➡ **Oscar's** · Bahnhofplatz 16
(in the passage of the Central Railway Station, south exit)
☎ +49 (0) 421 - 163 22 30
🕒 Mo. - Fr. 7:00 a.m. - 23:00, Sun.: 8:00 a.m. - 22:00 · Places: 215
Prices in the evening (warm dishes): 3 courses-menu + 1 bottle wine (0,75 l) = € 31.00 (price for 2 persons)
Lunch prices: € 5.80 - 7.80
Mo - Sat. 11:00 - 15:00

Thai
➡ **Siam** · Bahnhofstr. 11
☎ +49 (0) 421 - 165 23 93
🕒 daily 11:00 - 24:00 · Places: 80
Prices in the evening (warm dishes): € 10.00 - 20.00
Lunch prices: € 7.20 (3-courses-menu)
Mo. - Sat. 12:00 - 15:00

Chinese
Chinese & Thailand ➡ **Cansin**
Bahnhofplatz 22 ☎ +49 (0) 421-32 62 60
🕒 Mo. - Fr. 11:30 - 15:00 + 17:30 - 23:30, Sat., Sun. 11:30 - 23:30, Tu. closed.
Places: 70 · Prices in the evening (warm dishes): € 7.00 - 17.00
Lunch prices: € 5.80 - 8.00
(3-courses menu) Mo.- Sat. 11:30 - 15:00

➡ **Florasia** · Findorffstraße 114
☎ +49 (0) 421 - 378 33 55
🕒 daily 12:00 - 15:00 + 17:30 - 23:00, Sat. 17:30 - 23:00 · Places: 100
Prices in the evening (warm dishes): 5 courses menu = € 12.00
Lunch prices: € 6.10 - 7.80
(3-courses menu) 12:00 - 15:00

Syrian
➡ **Palmyra** · Hillmannplatz 13/15
☎ +49 (0) 421 - 957 99 34
🕒 Mo. - Fr. + Sun. 12:00 - 14:30 + 18:00 - 24:00, Sat. 18:00 - 24:00 · Places: 80
Prices in the evening (warm dishes): € 10.00 - 26.50 · (5-courses menu)
Lunch prices: € 5.00 - 8.50 (+ soup gratis)

Bistro
Taverna Mediterranean
➡ **Popol** · Hillmannplatz 20
☎ +49 (0) 421-120 09
🕒 Mo. - Tu. 11:00 - 03:00
Fr. - Sun. 11:00 - open end · Places: 100
Prices in the evening (warm dishes): € 4.00 - 7.00
Lunch prices: € 4.00 - 7.00
Mo. - Sat. 12:00 - 15:00

International Café · Snacks · Bar
➡ **Energiecafé**
Sögestraße / Am Wall
🕒 Mo. - Sat. 09:00 - 20:00, Sun. closed
Places: 50
Prices in the evening (warm dishes): € 6.50 - 14.00
Lunch prices: € 5.00 - 7.00
Mo. - Fr. 12:00 - 15:00



➔ General information

Telephone numbers, bank, ATMs, etc.

➔ Important telephone numbers & web links

Police emergency	110
Fire emergency or ambulance	112
Telephone information Inland	+49 (0)421 11837 (in Engl.) www.telefonbuch.de
Timetable Deutsche Bahn AG (Railway)	www.bahn.de
Lost-property office Deutsche Bahn AG	+49 (0)1805 - 99 05 99
ADAC breakdown service	+49 (0)1802 - 34 35 36
ACE breakdown service	49 (0)1802 - 22 22 22
Bremen city information	www.bremen.de
Bremen airport	www.airport-bremen.de
Frankfurt airport	www.frankfurt-airport.de
Registration & information desk	+49 (0)421 - 35 05 - 473
Tour desk	+49(0)421 - 35 05 - 474/-5
XXVIII SCAR & COMNAP XVI meeting secretariat	
Phone	+49 (0)421 - 35 05 - 388
Fax	+49 (0)421 - 35 05 - 787

➔ Bank & ATM

Business hours

Monday to Friday (usually)
9.00 - 12.00 and 14.00 - 16.00

Saturdays, Sundays & Holiday closed

You can find banks accepting Cirrus, Maestro and major credit cards at

Sparda-Bank

Monday and Wednesday 09:00 - 16:00,
Tuesday and Thursday 09:00 - 18:00,
Friday 09:00 - 13:00
Bahnhofstraße 1-4

Sparkasse Bremen

Monday to Wednesday 09.00 - 16.30,
Thursday 09:00 - 18:00,
Friday 09:00 - 14:30
EC, Visa, Visa Electron, Plus, Master Card,
Cirrus, Maestro
Bahnhofstraße 32

Sparkasse Bremen (Reisebank)

Exchange Office
Monday to Sunday 08:00 - 20:00
American Express, Diners Club, Master Card,
EC International, Cirrus, Maestro, Visa
Main Station

➔ ATMs (Automated Teller Machine)

Deutsche Bremen Privat &
Geschäftskunden AG
Domshof 25

Sparkasse Bremen
Am Brill 1-3

Sparkasse Bremen
Sögestraße 34 / Am Markt 12

Postbank
Bahnhofplatz 21 Stand / Domsheide 15

Sparda-Bank
Beim Handelsmuseum 1

CC-Bank
Violenstraße 39

Wüstenrot Bank
Langenstraße 30

Allbank
Knochenhauerstraße 18/19

Citibank
Knochenhauerstraße 15

Norisbank
Am Wall 179-181

Commerzbank
Schüsselkorb 5-11

SEB
Schüsselkorb 3

Bremische Volksbank
Domsheide 14

➔ Currency exchange

Only Euro (€) is acceptable at regular stores and restaurants. You can buy Euro at foreign exchange banks and for some currencies even in your hotel on presentation of your passport.

➔ Traveller's check & credit cards

Traveller's checks, preferable in €, are accepted by bank and major hotels. VISA, MasterCard, Diners Club, and American Express Credit Cards are widely accepted at hotels, department stores, shops, restaurants and nightclubs.

➔ Tipping

In restaurants and taxis 5 - 10 % of the amount is usually given as tip depending on the quality of service. If the service is insufficient don't tip.

➔ Shopping

The business hours of most department stores last from Monday to Friday 10.00 to 19.00. On Saturday they mostly close already at 16.00. On Sundays and holidays nearly all shops are closed.

➔ Insurance

All personal insurance is the participant's responsibility. The local organizer cannot be held responsible for any accident, sickness, death, loss of property etc. All participants are strongly recommended to arrange for short-term health and accident insurance prior to their departure.

➔ Tour desk

The tour desk will be located closely to the registration and information desk in Hall 4, foyer and will assist your personal tour planning and reconfirmation of tickets.

Opening hours

Sunday, 25 July 2004, 12.00 - 18.00
Monday, 26 July 2004 to
Friday, 30 July 2004, 08.00 - 18.00

Tour desk +49 (0)421 - 35 05 - 474 /-5



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www.atlashydro.com

→ Committees

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