

CLIVAR 2004

1st International CLIVAR Science Conference
June 21-25, 2004, Baltimore, Maryland USA

Understanding and Predicting Our Climate System



www.clivar2004.org
info@clivar2004.org



Scientific Organizing Committee

Lennart Bengtsson, Chair ... MPI for Meteorology, Germany and
ESSC, Univ. Reading, Reading, UK

Antonio Busalacchi ESSIC, Univ. Maryland, College Park, USA

Howard Cattle International CLIVAR Project Office, Southampton, UK

John Church CSIRO, Hobart, Australia

Valery Detemmerman WCRP, Geneva, Switzerland

Jonathan Overpeck Univ. Arizona, Tucson, USA

Tim Palmer ECMWF, Reading, UK

Jagadish Shukla George Mason Univ., Fairfax, and COLA, Calverton, USA

Kensuke Takeuchi Frontier Research System for Global Change, Tokyo, Japan

Kevin Trenberth NCAR, Boulder, USA

Jürgen Willebrand IfM – Univ. Kiel, Kiel, Germany

Guoxiong Wu IAP – Chinese Academy of Science, Beijing, China

Local Organizing Committee

David Legler, Chair U.S. CLIVAR Office

Antonio Busalacchi ESSIC, Univ. Maryland

Cathy Clark UCAR - JOSS

Jim Hurrell NCAR

Jim Kinter George Mason Univ., COLA

Sponsors

National Aeronautics and Space Administration (NASA)

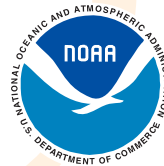
National Science Foundation (NSF)

National Oceanic and Atmospheric Administration (NOAA)

World Climate Research Programme (WCRP)

U.S. Climate Change Science Program (CCSP)

American Meteorological Society



Introduction

The international CLIVAR (Climate Variability and Predictability) program, under the auspices of the World Climate Research Programme (WCRP), focuses on describing and understanding variability and change of the physical climate system on time scales from months to centuries and beyond. The goal is to assess predictability and develop information systems and practical prediction capabilities through the use of new suites of observations, historical records, paleo records, analysis of data, development of products, and application of coupled climate system models.

Since its official launch at the first International CLIVAR Conference in Paris (1998), CLIVAR has emphasized cross-disciplinary perspectives in exploring the dynamics of the coupled atmosphere, land, and ocean climate system. Guided by the CLIVAR Science and Implementation Plans, CLIVAR has coordinated activities leading to advancements in many areas.

The CLIVAR 2004 Conference, June 21-25, 2004 in Baltimore, Maryland, USA will highlight the many advances in understanding and predicting climate resulting from CLIVAR. A major purpose of the conference will be to look to the future. Speakers have been charged to identify current research challenges and provide a roadmap for future research, in particular, taking into account how CLIVAR can best contribute to advancing the universal goals of economic and social well-being.

This Second Circular announces the program for the Conference and includes a call for papers. It also presents information on conference logistics including the venue, travel information, housing, registration, and requesting financial assistance.

Additional information and more detailed conference information will be distributed to registrants in the months prior to the conference. Questions or comments can be addressed to the Conference Organizers.

CLIVAR 2004 Conference Secretariat

JOSS/PSO

University Corporation for Atmospheric Research

3300 Mitchell Lane, Room 1112

Boulder, CO 80301

USA

Email: info@clivar2004.org

Phone: +1-303-497-8667

Fax: +1-303-497-8633

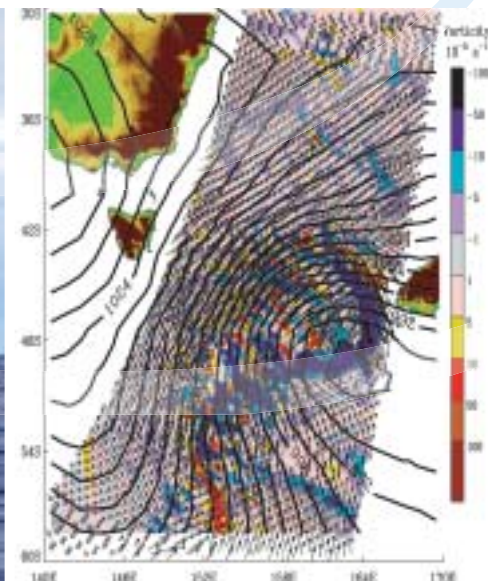
www.clivar2004.org



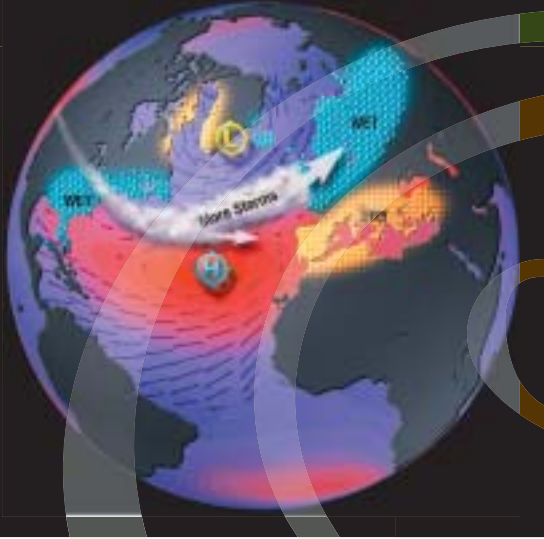
Courtesy Mike Douglas, NOAA/NSSL



Courtesy of Bob Weller, WHOI.



Courtesy of Mark Bourassa, FSU.



Courtesy of Martin Visbeck, IDEO.

Important Dates

December 15, 2003	Abstract submission deadline
December 15, 2003	Deadline for application for financial assistance
February 15, 2004	Poster Acceptance Notification (by email/fax)
February 15, 2004	Notifications regarding financial assistance
March 15, 2004	Deadline for early registration discount
May 16, 2004	Housing deadline

Conference Organization

The conference focuses on the CLIVAR program's successes and future challenges. These include consideration of the broader climate research environment and how best to contribute the knowledge, products, and information brought about by CLIVAR to those who could best use it in decision- and policy-making.

The Conference is comprised of a series of half-day sessions focused on specific themes:

- Short-term (seasonal-to-interannual) prediction
- The monsoon systems
- The challenge of decadal prediction
- Understanding long-term climate variations
- The role of the oceans in climate
- Human influence on climate
- CLIVAR science and societal benefits
- Future challenges for CLIVAR

Each session will highlight the accomplishments, breadth, and challenges of its respective theme through the presentation of a stimulating white paper developed by an expert international team, followed by invited presentations on more specific issues.

A major feature of each session will be the viewing of posters, which will provide an opportunity for CLIVAR scientists from all over the world to meet and discuss the latest developments in the field with their colleagues.

To make the best use of available time and because of the anticipated large number of abstract submissions, **all contributed papers will be in the form of posters.**

Baltimore: Cultural Capital of the Chesapeake Bay

One of America's most historic, industrious, and innovative port cities, Baltimore is the cultural capital of the Chesapeake Bay area. Once famous for shipbuilding, Maryland's largest city is now renowned for its museums, performing arts facilities, institutions of higher learning and, in particular, the spectacular Inner Harbor. The harbor's celebrated renovation blends tradition with soaring imagination: sailboats, cargo ships, and military vessels ply the waters as they have for centuries, while around the harbor is a festive mix of shops and restaurants, a world-famous aquarium, and a futuristic, hands-on science center. Along the spacious pedestrian promenade, musicians, jugglers, and other street performers entertain passers-by.

Nestled near the harbor are ethnic neighborhoods famous for their friendliness and fine cuisine. Little Italy, as its name implies, offers Italian food served up in both elegant restaurants and casual cafes. The quaint cobblestone streets of Fells Point feature lots of seafood restaurants (Maryland crab is a local specialty), as well as an array of galleries, boutiques, and nightclubs.

For further information on Baltimore's history, visitor attractions, nightlife, shopping, sports and recreation, visit the Baltimore Area Convention and Visitors Association web site: www.baltimore.org.

General Information

Conference Venue

All sessions of the CLIVAR 2004 Conference will be held in the Baltimore Convention Center in Baltimore, Maryland, USA. This centrally located facility offers over 100,000 sq. ft. of meeting space. Several tourist attractions and restaurants are within walking distance. The Baltimore Inner Harbor, all harbor attractions, nearby neighborhoods, and several hotels are accessible via a skywalk (3 blocks).

Registration

Registration will be possible from autumn 2003 onwards. Early registration and student discounts will be available as follows:

	On or before March 15, 2004	After March 15, 2004
Scientists	\$200	\$250
Accompanying Persons*	\$50	\$50
Students**	\$80	\$125

*Includes Aquarium dinner and poster sessions

**Students must supply a letter from their advisor stating the student is currently enrolled at a college or university.

Registration fees cover admission to all sessions, coffee breaks, and the Conference Dinner at the Baltimore National Aquarium on Wednesday, June 23. [Register on-line at www.clivar2004.org/registration](http://www.clivar2004.org/registration).

Credit cards may be safely used on the secure on-line registration web page (see below). Alternatively, the enclosed registration form may be completed and faxed/mailed to the Conference Secretariat. Fees may be paid by VISA, Mastercard (American Express cannot be accepted), or by a check in US dollars drawn on a US bank, made payable to "UCAR."



Lunches

Lunches are not included as part of the conference registration. There are many restaurants located within walking distance of the conference center. The most convenient are those located at the Inner Harbor, a 5-minute walk via the Skywalk.

Exhibition

Interested agencies, programs, and corporations will find this conference to be an excellent opportunity to promote their activities to the climate research community. There is limited space for exhibitions at the conference. Interested representatives should contact the Secretariat for details.

Press Center

A press center will be available to media representatives and attendees for interviews and media-related activities. Members of the press should contact the Conference Secretariat to register their intent to attend.

Student Opportunities

Reduced Registration Fee

To encourage student participation, students are eligible for reduced registration rates.

Poster Awards

The best student posters from each session will be recognized with cash prizes.

Additional Activities

CLIVAR leaders and sponsors will meet with students and young scientists at a special complimentary breakfast. Additional activities will be announced on the conference web site.

Preliminary Program

Sunday, 20 June 2004

1800 – 2000 Registration (set up posters)

Monday, 21 June 2004

0830 – 0930 Registration (set up posters)

0930 – 0945 Conference convenes – welcoming remarks

0945 – 1030 Keynote: Societal importance for a sustainable world. *R. Colwell*

1030 – 1100 Refreshments

1100 – 1130 Keynote: Why Clivar? *L. Bengtsson*

1130 – 1200 Keynote: What is CLIVAR? Progress to date. *A. Busalacchi*

1200 – 1230 Keynote: Predictability of the coupled climate system: 100-year evolution from weather forecasting to climate prediction. *J. Shukla*

1230 – 1400 Lunch (set up posters)

Session 1: Short-term climate prediction

1400 – 1445 Mechanisms of climate variability. *B. Hoskins and M. Wallace*

1445 – 1505 Seasonal to interannual predictability (modeling aspects). *P. Delecluse*

1505 – 1525 Evolution of observing system for seasonal to interannual prediction. *M. McPhaden and A. Hollingsworth*

1530 – 1715 Posters/Refreshments

1715 – 1800 Discussion: Value of climate forecasts. *T. Palmer and S. Zebiak*

Tuesday, 22 June 2004

Session 2: The monsoon systems

0830 – 0915 Monsoon circulation systems: variability and predictability. *J. Slingo, C.R. Mechoso, and P. Webster*

0915 – 0935 Variability of the Asian-Australian monsoon and major roadblock to seasonal prediction. *B.N. Goswami, T. Yasunari, and G. Wu*

0935 – 0955 The monsoon systems of the Americas. *C. Vera and W. Higgins*

0955 – 1015 The African monsoon system. *L. Ogallo and C. Thorncroft*

1000 – 1200 Posters/Refreshments

1200 – 1330 Lunch

Session 3: The challenge of decadal prediction

1330 – 1415 Climate variability and predictability on decadal to century time scales. *A. Weaver, E. Sarachik, and G. Boer*

1415 – 1435 Atlantic variability and predictability. Progress and challenges for CLIVAR. *M. Visbeck and J. Hurrell*

1435 – 1455 Pacific variability and predictability. *N. Schneider and S. Minobe*

1500 – 1700 Posters/Refreshments

1700 – 1745 Discussion: Challenges for long-term climate prediction. *M. Latif and G. Boer*

Wednesday, 23 June 2004

Session 4: Understanding long-term climate variations

0830 – 0915 Observational evidence (centennial to multi-centennial). *M. Mann and K. Briffa*

0915 – 0935 Paleoclimatic evidence of climate variability. *J. Overpeck and R. Alley*

0935 – 0955 Climate variability on longer time scales – modeling results. *M. Cane and S. Jousaume*

1000 – 1200 Posters/Refreshments

1200 – 1330 Lunch

Wednesday, 23 June 2004, continued

Session 5: The role of oceans in climate

- 1330 – 1415 Key ocean mechanisms in climate. *S. Wijffels and J. Marotzke*
1415 – 1435 The role of tropical oceans. *P. Chang and T. Yamagata*
1435 – 1455 The role of extratropical northern oceans. *P. Rhines and R. Dickson*
1455 – 1515 The role of extratropical southern oceans. *S. Rintoul and A. Gordon*
1500 – 1700 Posters/Refreshments
1900 – 2130 Conference Dinner (Baltimore National Aquarium)

Thursday, 24 June 2004

Session 6: Human influence on climate

- 0830 – 0915 Assessing climate change: A current perspective on progress and directions in the IPCC Working Group I. *S. Solomon and D. Qin*
0915 – 0935 Climate change detection and attribution: Beyond mean temperature signals. *G. Hegerl, T. Karl, M. Allen, N. Bindoff, D. Karoly, B. Santer, P. Stott, and F. Zwiers*
0935 – 0955 Climate change prediction. *J. Mitchell and E. Roeckner*
1000 – 1200 Posters/Refreshments
1200 – 1330 Lunch

Session 7: Application of CLIVAR science to society

- 1330 – 1350 Health. *M. Thomson*
1350 – 1410 Water. *S. Sooroshian*
1410 – 1430 Energy. *A. Moura*
1430 – 1450 Agriculture and land ecosystem. *S. Gadgil, G. Hammer, M.V. Sivakumar, and J. Hansen*
1450 – 1510 Fishery and marine ecosystem. *P. Lehodey*
1510 – 1700 Posters/Refreshments
1700 – 1745 Discussion: Energy, agriculture, and health: links to IPCC. *R. Pachauri and H. Grassl*

Friday, 25 June 2004

Session 8: CLIVAR – Future challenges

- 0830 – 0900 Monitoring and prediction of the Earth's climate - A future perspective. *K. Trenberth, B. Moore, T. Karl, and C. Nobre*
0900 – 0930 Observations and data assimilation (atmosphere) – A future perspective. *A. Simmons and J. Derber*
0930 – 1000 Observations and data assimilation (oceans) – A future perspective. *D. Stammer, M. Rienecker, and N. Smith*
1000 – 1030 Comprehensive modeling – A future perspective. *T. Matsuno and H. Drange*
1030 – 1100 Refreshments
1100 – 1200 Discussion. *P. Lemke, G. Brasseur, and D. Carson*
1200 – 1245 Conference wrap-up. *L. Bengtsson and D. Legler*

Abstract Submissions

We strongly encourage electronic submission of abstracts to www.clivar2004.org/abstracts. If electronic submission is not possible, abstracts can be submitted to the Conference Secretariat (contact the Secretariat for instructions).

All contributed papers will be in the form of posters.

Potential contributors must submit an abstract for consideration for presentation at the conference. Accepted abstracts will be published in an abstract volume distributed to Conference attendees. Submission of an abstract implies that CLIVAR has permission to reproduce the abstract in programs and reports related to the Conference.

Abstract Format

Because abstracts will be published in a consistent format, all abstracts will be limited to 400 words and cannot contain formulae, figures, or non-English text. Abstracts cannot be accepted if they do not include all required information such as authors and their affiliations, presenter's name and contact information, and the abstract text. Complete details for submitting an abstract can be found on the Conference web site.

Grants to Assist Attendance

Extremely limited resources are available to support deserving young scientists, selected international participants, and Ph.D. candidates. Applications for assistance should be submitted using a form that can be obtained from the Conference Secretariat. Support is contingent upon acceptance of an abstract. Requests for assistance must be received by the abstract submission deadline, December 15, 2003. Decisions regarding acceptance of abstracts for those requesting support will be completed by the organizing committee and communicated by February 15, 2004. Participants whose abstracts have been accepted will also be notified of the availability of funding.

Submission Deadlines

www.clivar2004.org/abstracts

December 15, 2003

Abstract Submission Deadline

February 15, 2004

Poster Acceptance Notification (by email/fax)

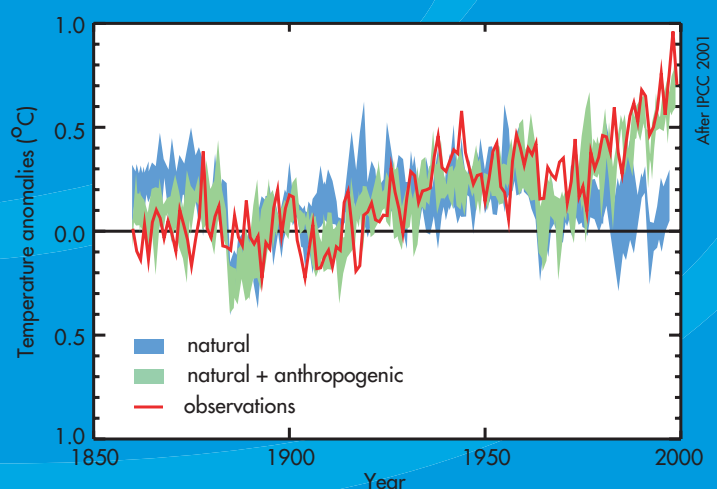
Poster Format

Posters should be no wider than 4 ft (1.2 m). A height of 4 ft (1.2 m) or less is recommended, although slightly taller posters are acceptable. Pins will be provided at the meeting for affixing posters. Electrical power and/or Internet access can be provided at cost to those requesting it; please contact the Conference Secretariat.

Posters will be on display throughout the duration of the Conference, but presenters are expected to stand by their poster during their selected poster session.

Commissioned and invited presentations as well as the day-ending discussions will highlight relevant poster results; this will work more effectively if posters are submitted in pdf format to the Conference Secretariat in advance of the Conference. Instructions will be provided to authors.

Simulated annual global mean surface temperatures



Travel Information

Passport, VISA

Because the rules and process (hence the processing time) for applying for entry into the United States can change suddenly, travelers are advised to monitor the situation closely. We recommend these sites:

- **US National Academy Int'l Visitor's Office:**
www.nationalacademies.org/visas/Traveling_to_US.html
- **US State Department, Non-Immigrant Visas:**
travel.state.gov/nonimmigrantvisas.html

Visas may be necessary for entry into the United States to attend the CLIVAR Conference. Citizens of certain countries may benefit from the Visa Waiver Program (VWP) if they meet the necessary qualifications (see below). Non-qualifying foreign citizens must apply for a visa at an American embassy or consulate abroad, when desiring to travel to the United States.

Visa Waiver Program (www.travel.state.gov/vwp.html)

Currently, 27 countries participate in the Visa Waiver Program: Andorra, Australia, Austria, Belgium, Brunei, Denmark, Finland, France, Germany, Iceland, Ireland, Japan, Liechtenstein, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Portugal, Italy, San Marino, Singapore, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

To enter the US on the VWP, travelers from participating countries must:

- Be seeking entry for 90 days or less, as a temporary visitor.
- Be a citizen (not merely a resident) of the Visa Waiver country.
- Have a valid passport issued by the participating country. Additionally, starting October 1, 2003, the passport presented at the US port of entry must be a machine-readable passport.
- If entering by air or sea, have a round-trip transportation ticket issued on a carrier that has signed an agreement with the US government to participate in the VWP, and arrive in the United States aboard such a carrier.
- Hold a completed and signed Nonimmigrant Visa Waiver Arrival-Departure Record.
- Form I-94W, on which he/she has waived the right of review or appeal of an immigration officer's determination about admissibility, or deportation. These forms are available from participating carriers, from travel agents, and at land-border

ports-of-entry. (Travelers should consult carriers to verify which ones are participating before making travel arrangements.)

- Entry at a land border crossing point from Canada or Mexico is permitted under the VWP. Travelers who apply for entry at a land border crossing point are not required to present round-trip transportation tickets or arrive at the border entry point aboard a carrier who has signed an agreement with the US to participate in the VWP. All other VWP requirements apply to such travelers.

You can use the VWP for business and tourism. You can do things on the VWP that you can do on the B-1/B-2 non-immigrant visa. If you don't know whether your planned activities are permitted on the VWP, please contact the consular section of the embassy or consulate that serves your area for information.

Obtaining a Visa

travel.state.gov/visa;visitors.html

As soon as you contemplate travel to the US, and after identifying that a visa is needed, contact the US embassy or consulate for information about current visa processing time estimates and processes. It is important to apply very early. As of this date, visa applications should be sought at least three months in advance of anticipated travel.

All visitor visa applicants must have the following:

- Nonimmigrant Visa Application, Form DS-156, completed and signed
- Current, valid passport or travel document
- Photograph (2 x 2 inches, passport type)
- Application fees. All applicants must pay the application fee. Some applicants, according to nationality and type of visa, must also pay an issuance fee
- Evidence of funds to cover expenses in the United States
- Evidence of compelling social and economic ties abroad
- There may be other forms and documentation. Please check the indicated web site or contact a local US embassy or consulate for further information

Letters of Invitation

Attendees needing letters of invitation should contact the Conference Secretariat (see Introduction) with details of their travel to the US. Letters of invitation are intended to assist travelers who need permission and are not an expression of support.

Insurance

Medical costs can be quite expensive in the United States. CLIVAR will not be providing insurance for this event and cannot accept responsibility for medical needs of attendees that might occur during this conference. Participants are encouraged to purchase travel insurance before leaving their home country to cover such things as accidental loss of belongings, medical costs in case of injury or illness, and other international travel risks.

Social Events

Conference Dinner, Wednesday, June 23

Come have dinner with the fish! The National Aquarium in Baltimore is the region's leading attraction and sits conveniently on the Inner Harbor, just a short walk from the Convention Center. The CLIVAR Conference Dinner will be held in the aquarium on Wednesday, June 23. Enjoy dining on regional specialties from Maryland while enjoying the many exhibits of marine habitats and wildlife. The exhibits start small with samples of marine life from local waters, but visitors soon find themselves eye-to-eye with sharks, rays, and other very large creatures and even a simulated rainforest ecosystem. www.aqua.org

The Baltimore Orioles

Baltimore's professional baseball team, the Baltimore Orioles, plays home games at Camden Yards, just blocks from the Inner Harbor and the Convention Center. While the Orioles' 2004 playing season has not yet been announced, if there are home games during the CLIVAR conference, CLIVAR will organize a group ticket purchase. baltimore.orioles.mlb.com

Using Credit Cards and Traveler's Checks

Most establishments in Baltimore accept some or all commonly issued credit cards, such as VISA, Mastercard, and American Express; some also accept traveler's checks. ATM's are conveniently located at banks very near the Convention Center. Currency exchange and other financial transactions may be carried out at several banks near the Baltimore Convention Center.

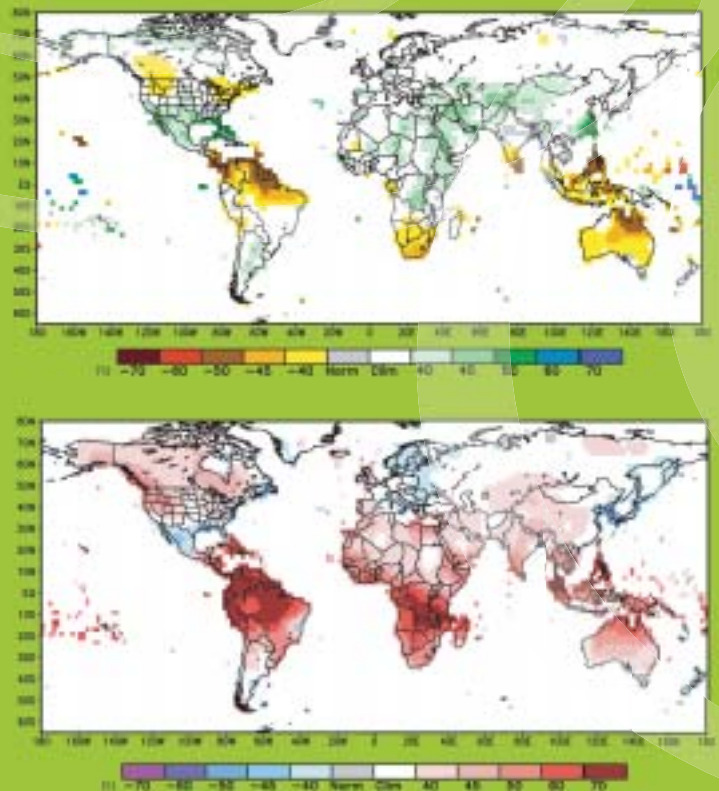
Baltimore's Weather

Baltimore has a temperate climate. In June, the city's average high temperature is 83°F (28°C); the average low temperature is 66°F (17°C). However, summer weather in the Baltimore-Washington area can be quite unpredictable. Attendees are advised to come prepared for the possibility of temperatures that are above or below normal, and for the possibility of rain.

Local Diversions

The Baltimore Visitors Bureau will have information at the Conference for those seeking suggestions and information on local attractions, places of interest, restaurants, and shopping.

IRI Multi-Model Forecast: JFM 2003 Precip (top) and Temperature (bottom) [made in Dec 2002]. Probability (percent) of most likely tercile (positive) is for above normal; (negative) for below normal.



Courtesy of IRI.

Getting to Baltimore

Auto

Several major interstate highways will bring you to Baltimore, including north-south routes along I-83 and I-95, and east-west along I-70. All of the city's major hotels have garage space or valet parking. The Convention Center itself has no parking facility, but there are several parking garages located nearby.

Baltimore Washington Airport

The Baltimore-Washington International (BWI) Airport (www.bwiairport.com) is the closest major airport serving Baltimore and is conveniently located 10 miles south of the city. Several US and international airlines serve this airport. There are multiple transportation options between BWI and the city:

Light Rail Service. Tram service from the BWI Airport directly to the Inner Harbor at Camden Yards is the least expensive option. This service takes approximately 15 minutes and will leave you 1-3 blocks from the hotels. For those choosing university dormitory housing, the closest stop is Baltimore/Penn Station (from there take a taxi or the Maryland Transit Authority bus - see the Accommodations section for more details).

Taxi Service. Taxis are available outside of the baggage claim area of the airport. Cost for a trip from BWI to downtown hotels is approximately \$20.

SuperShuttle (door-to-door service from the airport). SuperShuttle is a shared-ride service that uses 15-passenger vans. Upon arrival at the airport, go to the lower level and follow signs to the SuperShuttle desk located between baggage claims 6 and 7. Reservations are not required, but they can be arranged on-line at supershuttle.com/html/cities/bwi.htm. The cost of a one-way trip from BWI to downtown Baltimore is currently \$12 per person.

Amtrak (800-USA-RAIL). Amtrak offers regular train travel from the BWI Rail Station (take the free shuttles from the terminal to the station). The train line will leave you at the Baltimore Penn Station/Amtrak train station, which is relatively close to the university housing. Hotels are a short taxi ride away.

Amtrak Baltimore Station
1500 N. Charles Street
Baltimore, Maryland 21202
+1-410-291-4261



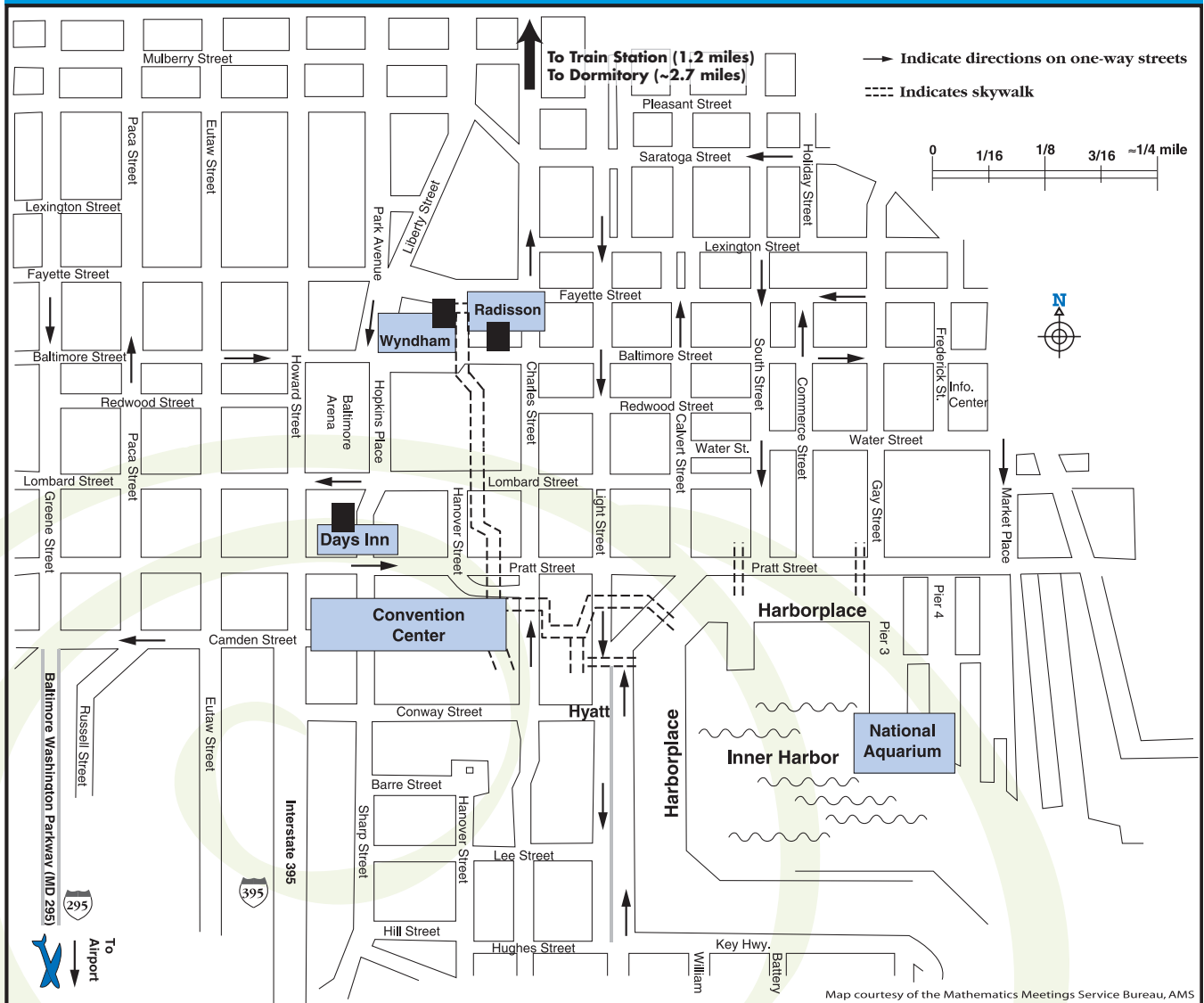
Alternate Airports

Two other airports serve the DC/Baltimore metropolitan area, but transportation from these airports is far from convenient and potentially costly depending on the desired transportation mode.

National Airport (42 miles from Baltimore). The airport is located just south of Washington, DC. The most economical transportation option is to take the Metro subway Yellow line to Gallery Place, transfer to the Red line at Gallery Place to Union Station and take Amtrak to Baltimore's Penn Station or the MARC Camden Line to Camden Yards.

Dulles International Airport (61 miles from Baltimore). Take the Washington Flyer Coach to West Falls Church Metro station. Board the Orange line to Metro Center, and transfer to the Red line to Union Station and take Amtrak to Baltimore's Penn Station or the MARC Camden Line to Camden Yards. Taxi fare from Dulles to Union Station is approximately \$60.

Downtown Baltimore



Accommodations

Because June is the beginning of the tourist season in Baltimore, attendees are encouraged to make accommodation arrangements as soon as possible. With the exception of the dormitory housing, reservations should be made directly with the hotels. The organizers cannot accept responsibility for lost or incorrect reservations, so please confirm all details with the hotels before leaving for Baltimore.

	Radisson Plaza Hotel	Wyndham Baltimore Inner Harbor	Days Inn Inner Harbor	Johns Hopkins Dormitory
Telephone	+1-410-539-8400	+1-410-752-1100	+1-410-576-1000	+1-303-497-8667 Conf. Secretariat
Nightly rate* (single)	\$137 + taxes	\$137 + taxes	\$119 + taxes	\$37.70/\$30.10
Distance to Convention Center	3 blocks	3 blocks	Across the street	3 miles (30 min by bus)
Number of rooms	439	707	250	TBD
Room service	yes	yes, but limited	yes	no
Data port/internet access	yes	yes	yes	yes
Exercise facilities	yes	yes	nearby	TBD
Airport shuttle	yes	yes	no	no

*All rates are exclusive of room tax (currently 12.5%)

Radisson Plaza Hotel

Baltimore Inner Harbor
20 West Baltimore Street
Baltimore, MD

Tel: +1-410-539-8400
Toll Free: +1-800-466-4644
Fax: +1-410-332-4229

www.radisson.com/lordbaltimore



A restored, historic landmark hotel located in the heart of Baltimore's business district and connected to the Inner Harbor and Convention Center via skywalks. Oversized guest rooms and suites reflect warmth and elegance. In a setting that reflects the opulence and grandeur of yesteryear, the Radisson historic hotel offers a long-standing tradition of first-class accommodations. No expense was spared in preserving the murals, carved moldings, brass railings, and marble pillars that are integral to the luxurious surroundings. Within walking distance of the Inner Harbor, Convention Center, Baltimore Arena, Camden Yards, and Aquarium.

A block of rooms is being held for our group at \$137 plus tax per night single, \$157 plus tax per night double. This amount reflects the current US government rate, and if it should change before the conference, the room rate will change accordingly, up or down. You will need to contact the hotel and reserve your

room prior to May 16, 2004 to receive this special group rate. Be sure to indicate that you are with the "CLIVAR Group" when you book your room.

Wyndham Baltimore Inner Harbor

101 West Fayette Street
Baltimore, MD 21201
Tel: +1-410-752-1100
Fax: +1-410-752-0832

www.wyndham.com/hotels/BWIIH/main.wnt

With its most recent renovations, the Wyndham Inner Harbor is one of Baltimore's premier meeting locations. Complete with brass, glass, marble, and stunning chandeliers, the Wyndham also offers spacious guest rooms that are fully equipped with dual telephone lines, Herman Miller ergonomic work chairs, pil-



Accommodations Reservation Process

Reservations at the conference hotels should be made directly with the selected hotel. For those wishing to stay at Johns Hopkins University dormitories, please contact the Conference Secretariat.

low top beds, high-speed Internet access, mini-bars, and much more. Shula's Steakhouse offers a more formal dining experience, while the Steak 2 sports bar offers a great alternate choice. Enjoy the enlarged fitness center and outdoor swimming pool, as well. The hotel also has special arrangements for transportation to/from the BWI airport at reasonable costs. Details are available from the hotel.

A block of rooms is being held for our group at \$137 plus tax per night single, \$157 plus tax per night double. You will need to contact the hotel and reserve your room prior to May 16, 2004 to receive this special group rate. Be sure to indicate that you are with the "CLIVAR Group" when you book your room.

Days Inn Inner Harbor

100 Hopkins Place
Baltimore, MD 21201
Tel: +1-410-576-1000
Fax: +1-410-576-9437
www.daysinnerharbor.com



Located just across the street from the Baltimore Convention Center, The Days Inn's location and modern facilities combine to make it a perfect lodging choice when visiting Baltimore. In the heart of Downtown Baltimore's exciting Inner Harbor area, the Days Inn offers 250 beautifully appointed guest rooms, Hopkins Bar and Grill, and all of the amenities you would expect from a full service hotel. There are exercise facilities, heated outdoor pool, in-room safes, voice mail, and data ports, along with convenient covered parking.

A block of rooms is being held for our group at \$119 plus tax per night. You must reserve your room prior to May 16, 2004 to receive this special group rate. Be sure to indicate that you are with the "CLIVAR Group" when you book your room.

Johns Hopkins University Dormitory

A more economical, but less convenient option for accommodations during the conference are the dormitories at Johns Hopkins University. These dormitories offer suites (both with and without a kitchenette) consisting of two bedrooms (each with two beds) and a shared bathroom. The rooms are supplied with linens and two towels and two wash cloths. The towels are refreshed every two days. The suites are air-conditioned and offer computer access, and phones for local calls only. Long distance calls can be made using a personal credit card. Lodging rates for this option are \$37.70 per person/night for a single person in a bedroom, and \$30.10 per person/night for a two persons sharing a double room.

Reservations should be arranged through the Conference Secretariat. Deadline for reservations is May 16, 2004. No changes can be made after this date. Cancellations made after this date are subject to a penalty.

Eating options for the dormitory rooms are typical for US universities. There is an all-you-can-eat breakfast in Wolman Station Dining Hall (just across the street) for an extra \$7.50 per person/day (payable in advance of the conference), and there are also plenty of eateries.

Transportation between the dormitory and the Baltimore Convention Center is via Maryland Transit buses that run between the campus and have convenient stops within a block of the Convention Center. The bus takes approximately 30 minutes and operates every 15 minutes during rush hours and every ~45 minutes during mid-day and evenings. The fare is \$1.60 for a one-way trip.

Publication of this report was supported by the University Corporation for Atmospheric Research under award NA17GP1376 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the National Oceanic and Atmospheric Administration or the Department of Commerce.

CLIVAR 2004 Conference Registration Form

www.clivar2004.org/registration

If unable to register electronically, please complete and return this form by mail or fax with the appropriate fees to:

CLIVAR 2004 Conference Secretariat
UCAR/JOSS/PSO
3300 Mitchell Lane, Rm. 1112
Boulder, CO 80301 USA
Tel: +1-303-497-8667
Fax: +1-303-497-8633

Name: _____ Address: _____
Affiliation: _____
Title/Position: _____ City: _____
Highest Degree/Year: _____ Prov/State: _____
Tel/Fax: _____ Postal/Zip Code: _____
E-mail: _____ Country: _____

REGISTRATION: Registration fees cover admission to all sessions, coffee breaks, and the Conference Dinner at the Baltimore National Aquarium on Wednesday, June 23.

	On or before March 15, 2004	After March 15, 2004
Scientists	<input type="checkbox"/> \$200	<input type="checkbox"/> \$250
Accompanying Persons*	<input type="checkbox"/> \$50	<input type="checkbox"/> \$50
Students†	<input type="checkbox"/> \$80	<input type="checkbox"/> \$125

* Fee includes aquarium dinner and poster sessions.

† Students must supply a letter from their advisor stating that the student is currently enrolled at a college or university.

Will you be attending the Aquarium Dinner on June 23, 2004: Yes No Number of accompanying persons: _____

Do you plan to stay at: a conference hotel the dormitory other

Remittance is for \$_____ paid by: Visa Mastercard Check or Money Order

Please make checks payable in US dollars drawn on a US bank to "UCAR." Credit cards will be billed in US dollars.

Credit Card Number: _____ Expiration Date: _____

Cardholder Name: _____ Signature: _____

Billing address of credit card:

ADDRESS: _____ CITY: _____

PROV/STATE: _____

COUNTRY: _____ POSTAL/ZIP CODE: _____

CANCELLATION/SUBSTITUTION POLICY:

Cancellations received and post-marked prior to May 1, 2004 will receive an 80% refund to be mailed after the Conference. After May 1, 2004 there will be a 20% refund issued.

Please note: This registration entitles ONLY the above-named registrant entrance to the Conference. No substitutions will be allowed.

CLIVAR 2004

1st International CLIVAR Science Conference
June 21-25, 2004, Baltimore, USA



www.clivar2004.org