

**Fourth Annual Atmospheric Science Librarians International Meeting**  
**ASLI 2001 : Space Odyssey – Past, Present, and Future**  
**January 17-19, 2001; Albuquerque, New Mexico**  
***Highlights/Minutes***

Wednesday, January 17

Registration and coffee began at 8:30 am with a Welcome Address given by Evelyn M. Poole-Kober, Librarian, Atmospheric Sciences Modeling Division (ASMD) Library, Air Resources Laboratory (ARL), NOAA, Research Triangle Park, NC, Chair of ASLI.

The first session was on Librarians and Information-Seeking Behavior, moderated by Julia (Judie) H. Triplehorn, Librarian, Geophysical Institute, University of Alaska at Fairbanks. Roundtable discussion was held starting at 9:00 am, moderated by Evelyn M. Poole-Kober. Each person gave a short presentation about their library and its unique collection. Some people gave out brochures and went online to their library's website.

Dr. Julie Hallmark, Professor, Graduate School of Library and Information Science, University of Texas at Austin was the next speaker. Her topic was "Information-seeking Behavior in the Atmosphere Sciences: New Roles for Information Specialists in the 21<sup>st</sup> Century. Dr. Hallmark interviewed several people at the University of Texas, Oklahoma University, and Texas A & M University. She spoke with several "academic scientists" and began by asking for recent preprints and how they accessed research material – their use of conference proceedings, individual authors, and journals. How did they keep current in their field, and did they use their library? Her "profile" of the academic scientist is they suffer from lack of time, are frustrated with the huge amount of literature out there, and not always aware of material available to them in their own library. They tend to rely on the Internet very heavily and online journals. She did point out that most of the interviewees gave warm, positive remarks about librarians and libraries, even if they did not use their library.

Law of proximity is major factor of library use. This also applies to WEB pages. It should be easy for users to get right to their WEB. Most of the university librarians she spoke with felt that print journal literature would stop growing. Some imagine a total electronic library. Dr. Hallmark felt that librarians are the "gatekeepers – information gurus." We need to educate our users. Some ideas on this were: brown bag lunches in the library, be everywhere your users are, market your services, photocopy material for your users too (not just your clerical staff), and make appointment with your users every three to four months to see how it is going. Librarians can help with problems on funding, grants, etc.

Maria A. Latyszewskyj, Environment Canada Library at Downsview spoke next on the "Usage of Atmospheric Science Journals" in the library. The staff uses these statistics for weeding purposes, for check-out amounts, and whether to

keep subscribing to a particular journal or not. The typical user was defined as an anonymous in-house user or borrower. The statistics were kept on journals used in the library or checked out, but only on 15 titles. This measurement took place in the years 1997 and 1998. Maria showed quite a few graphs of different usage statistics. A lot of times there was a high usage of older journals, such as “Boundary Layer Meteorology” and “Monthly Weather Review.”

“Experiments in Indexing” was the topic addressed by Lawrence F. Buckland, Editorial manager, Meteorological & Geostrophysical Abstracts, Inforonics Inc., Littleton, MA. He felt that indexing needed to be improved on the MGA database as it helps in searching. For instance, an author search can be inflexible as some publishers will spell out the first name and other publishers will use only initials. MGA wants to try and get end users to look at other articles written by the same author. End users do not often search any farther, but librarians do. The “classification system” should be broadest category to smallest detail. This would be the easiest to use. UDC code has more numbers available for each topic versus Library of Congress Classification or Dewey Decimal Classification.

Moderators of the next session on Knowledge Keepers and Information Providers were Maria A. Latyszewskyj and Doria A. Grimes, NOAA Central Library, Silver Spring, MD. Maria read the paper presented by Morley Thomas, retired meteorologist, Environment Canada at Downsview, as he was unable to attend the conference. Mr. Thomas said that the Toronto Observatory is where the nucleus of meteorologists are. The Canadian Meteorological Service started in 1871, and in 1910 the first meteorologist with a degree came to the Service. Advanced degrees in meteorology were finally obtained starting in 1933. The library changed a couple of times with their library management systems. In 1994, desktop searching was available, and from 1998 on, electronic journals were available for searching.

Next, Timothy Keel, Cataloging Librarian, Curtis Laws Wilson Library, University of Missouri at Rolla, gave a dynamic presentation of “A Whirlwind of Information; Accessing Research, Historical, and Popular Publications About Tornadoes and Thunderstorms.” This presentation was even more exciting due to the fact that it was based on his own private collection of materials.

Part one was on “Severe Storms Literature; main author Thomas Grazulis. 1) Historic Period – pre 1880, mainly from newspapers; 2) Early Period – 1880-1915, Father of tornado activity = John Park Finley, and “Monthly Weather Review”; 3) Middle Period – 1916-1949; 4) Modern Period – 1953-1970, formal use of tornado “watches”; and 5) the Golden Age – 1970s to present, widespread use of the Fujita Wind Scale, photogrammetry, and Doppler Radar.

Part two was on type of publication—monograph versus serial, and was this an individual commercial publisher, a research publication, or an academic publication. The five categories under this subject were journals, preprints,

technical reports, theses or dissertations, and the Internet. The main journals used were from the American Meteorological Society, the Royal Meteorological Society (Great Britain), and the American Geophysical Union.

Part three was on accessing the literature: electronic databases as research tools. These databases consisted of: MGA, different AMS journals online, Science Citation Index, Ei Compendex, Expanded Academia, General Science Abstracts, Infotrac, ERIC, GPO access, UMI, and OCLC (FirstSearch and World Catalog). Older publications could be found through such resources as the "Reader's Guide to Periodical Literature."

Jinny Nathans, Librarian/Archivist, American Meteorological Society, Boston, MA, spoke on archival initiatives at the AMS. The Library was to serve as the repository for the AMS from 1919 to the present. Precursor to AMS was the New England Meteorological Society from 1884-1896. Blue Hill Observatory also held many older records. Access to the material at AMS was limited to AMS Staff, AMS members, qualified scholars by appointment with a letter describing research needs, and outside requests or basic research taking 30 minutes or less time to answer. Current and future projects include--better "finding" aids, produce oral histories of pioneers (done in conjunction with NCAR), and have historical "exhibits."

Doria Grimes gave a fascinating report on "NOAA's Treasures." There are 2,502 "treasures" in their Rare Books Room; 2 from the 1400s, 32 from the 1500s, 93 from the 1600s, 306 from the 1700s, 1429 from the 1800s, and 640 from the 1900s. The oldest of these is a translation of a treatise written by Hippocrates on the effect of climate on health. This was printed in Latin in 1485. You can get to the website describing these treasures at <http://www.lib.noaa.gov>. The library received funds of \$2500.00 to rebind Benjamin Franklin's "Experiments and Observations on Electricity, Made at Philadelphia."

There was a group dinner of ASLI conference attendees and guests that evening at an authentic Mexican restaurant. A good time was had by all.

#### Thursday, January 18

The morning session began with "Floating Buoys and Flying Laboratories." The moderators for this session were Evelyn M. Poole-Kober and Susan Tarbell, Air Force Weather Technical Library, Asheville, NC.

Nancy N. Soreide, Associate Director for Information Technology, NOAA/PMEL/OD, Seattle, WA, gave a "Brief Overview of Buoy Observations and Data Dissemination." Buoys have been deployed throughout history for a variety of purposes, initially for navigational warnings and more recently as platforms bearing sensors to monitor oceanic and near-surface atmospheric conditions. The need for continuous in-situ marine environmental observing systems has

become increasingly important for improved weather forecasts, detecting climate change, understanding physical, chemical and biological processes in coastal and oceanic waters and understanding and predicting the effects of human activities on marine ecosystems and ultimately living resources.

The NOAA/PMEL/TAO web site gives an overview of many different buoys. This address is <http://www.pmel.noaa.gov/tao/>. Nancy gave an overview of a few buoys such as the “Next Generation ATLAS Buoy.” When the satellite goes over the buoy, the buoy gathers information, stores it, then transmits to PMEL. This information is immediately sent around the world. The “Tsunami Warning Buoy” gives an acoustic signal and uses very different configurations. The intent is to see if an earthquake will produce a tsunami, and how big it will be. ARGO is a global array of profiling floats.

Buoy trends – to observe beneath the sea-surface. Technology overall is increasing in this field, while costs are decreasing. Data is usually available by web in realtime.

The next speaker, Dr. C. Bruce Baker, NOAA/NESDIS/NCDC, Asheville, NC, gave a description of the Climate Reference Network (CRN) Program. This is a network of climate stations now being developed as part of the National Oceanic and Atmospheric Administration (NOAA) Climate Services Initiative that will answer the question “How has the climate changed over the last 50 years?” The CRN Program uses United Nations World Climate Research Programme (August 1997), the NRC, and 250 long-term climate stations across the United States. Nine action teams have established project requirements and are very careful about site selections. Two test areas are now in use at UNC at Asheville Arboretum and at North Carolina Mountain Horticultural Crops Research Station near the Asheville Airport. They measure temperature, precipitation, wind speeds, solar radiation, and surface temperature. The CRN program includes a project with NCAR on frozen precipitation and the use of “snow fences.”

In the future, the CRN wants to expand the Program Office, and get 25 “paired” sites throughout the United States. The web address for information is <http://www.ncdc.noaa.gov/crn.html>.

Dr. Kirk L. Clawson, Research meteorologist and Deputy Division Director, Field Research Division, Air Resources Laboratory, Idaho Falls, Idaho, gave a “Brief Overview of the NOAA Field Research Division (FRD).” The Air Resources Laboratory has 6 sites, of which the FRD is one. They are experts at designing and conducting field experiments that produce high quality data for developing and testing air quality models. Dr. Clawson is at the Idaho National Engineering and Environmental Laboratory (INEEL), which was one of the first laboratories to develop telemetry. Their mission is to do observations and record data, do atmospheric transport modeling, do forecasts, and give severe weather notices; In other words -- all climatological services. Their web site is [www.noaa.inel.gov](http://www.noaa.inel.gov).

Major systems used for this mission are: INEEL Mesonet (33 stations); Radar Wind Profiler; INELVIZ (Mesoscale meteorological visualization tool); MDIFF output – emergency response data; and, Emergency Operation Center (EOC) to DoE and DoD. Quality control factors are the ANSI standards, the EPA regulations, and DoE orders. The Research Division conducted 119 experiments from the 1970s through the 1990s. Major research involves air quality, atmospheric tracer studies, and airborne geosciences. The FRD uses chemical tracers, balloon tracers, and various satellite technology. The balloons can stay up for several days.

Another project involving the FRD is the environment aircraft called the Long-EZ-N3R. This aircraft uses the “BAT” probe (Best Atmospheric Turbulence) and the “ET” probe (Extreme Turbulence). Dr. Clawson had just returned from another project involving the 2002 Olympics. He was part of a major atmospheric study in Salt Lake City where atmospheric tracer gases are being used to help 2002 Olympic organizers prepare for potential toxic gas releases by terrorists.

The next presentation was on “Hurricane Hunting: the Continuing Need for Airborne Weather Reconnaissance” given by Richard Woodford, Senior Research Analyst, AFMC/DR/Office of Aerospace Studies, Kirtland AFB, NM. Satellite technology and remote sensing techniques have improved by many orders of magnitude in the past decade. This advancement in remote data generation, collection and dissemination combined with increasing fiscal constraints levied on all government agencies, have brought into question the continuing need for manned aerial weather reconnaissance, which is a preliminary survey to gain information of or related to aircraft. Mr. Woodford has logged almost 3,000 hours in a variety of positions while serving with the 53<sup>rd</sup> Weather Reconnaissance Squadron (Air Force Hurricane Hunters), flying into well over 100 tropical storms and hurricanes on missions supporting the National Hurricane Center (NHC).

The players in the art of aerial weather reconnaissance are the USAF Reserves at Keesler AFB, Miss. (fly WC-130H/Js) and the NOAA Hurricane Research Division (fly P-3s/Gulfstream IVs). These two units are tasked by the National Hurricane Center to fly 3,500 hours per year. The data from these flights supports the NWS and the NCEP via the Gulf of Alaska in predicting major East Coast winter storms.

Tropical missions are 500 feet to 10,000 feet above the ocean surface. “They fly directly into the storm.” Flight patterns are determined by the mission and location of the disturbed weather. NHC will tell you where to fly. The most challenging flights are profiles taken over the water. Flight levels are close as possible to the surface, 500 to 1500 feet, for observations. Storms can be 1) Tropical depressions – winds under 39 miles per hour; 2) Tropical storms – winds from 39 miles per hour to 73 miles per hour, or 3) Hurricanes – winds over 74

miles per hour. The Hurricane Hunters try and get information from all 4 quadrants of the storm. The system gathers information 8 times a second.

A West Coast winter storm mission is done by NCEP through NHC. These missions are tasked when a major winter storm is expected to affect the West Coast of the United States. Flight levels are as high as possible and provide three-dimensional information.

Why are manned aerial weather reconnaissance flights needed? Because 1) satellites can not see through clouds that well, 2) satellite imagery does not give the whole picture, and 3) forecasts are based heavily on what data is used in a forecast model. With an aerial reconnaissance mission, light increases forecast by 25 per cent, and “overwarning” status can be shrunk by up to 25 per cent. One storm mission could save millions of dollars and many lives. Newer aircraft, and integration of more research efforts with the operational support missions are planned for the future of airborne weather reconnaissance.

The next session was on Air Quality Modeling, Fire Weather Forecasting, and Climate Monitoring. Susan Tarbell and Evelyn M. Poole-Kober were the moderators. Dennis Atkinson, Meteorologist, Atmospheric Sciences Modeling Division, Air Resources laboratory, Research Triangle Park, NC, gave a presentation on “Air Dispersion Models at the U. S. Environmental Protection Agency (EPA).

In an effort to protect humans and ecosystems, the U. S. EPA provides state-of-the-art air dispersion models for use to determine compliance with the National Ambient Air Quality Standards (NAAQS). These models are highly specialized and address certain physical situations encountered by emitters of air pollutants. The EPA Models Directory consists of two entries – CREM (Council on Regulatory Environmental Models) established in January 2000, and MCW (Model Clearinghouse Workgroup) which includes 10 members from various areas of the EPA. Non-EPA air quality models are put out by the OFCM and DoD, for example. For information on various EPA modeling contact Dennis at his website [atkinson.dennis@epa.gov](mailto:atkinson.dennis@epa.gov).

Next was a demonstration of SCRAM (Support Center for Regulatory Air Models) presented by Dennis Atkinson. This website is the focal point for distribution of EPA’s air dispersion models to the public. It is divided into 2 partitions; left is Table of Contents, right is pictures. This was done in PDF format. SCRAM shows EPA addresses of all the states you can click on and find your point of contact. The address for SCRAM is [www.epa.gov/scram001](http://www.epa.gov/scram001).

Richard Ochoa, NWS/NOAA, Boise, ID, gave a presentation on “Weather Factors Related to the 2000 Fire Season.” The 2000 fire season will be remembered as one of the longest and toughest in U.S. history. El Nino ended in

1998, the La Nina started. La Nina affects the jet stream and produces rain in the higher elevations of the United States. However, the Southeast can be quite dry during La Nina's realm. During 1998-1999, there was record-breaking snowfall in the Pacific Northwest (300% of normal), wildfires in Florida, and fires in Appalachia during the Fall. It was very hot and dry in the West from August to October. This leads to an active fire season in Idaho and Montana.

The stage was set for the year 2000 in Montana and Idaho. It was very hot, a moisture deficit, May-June rains did not happen, lots of dry lightning, and fuels were at record levels of dryness. Unprecedented activity occurred. There were over 3,800 fires with 2.4 million acres burned. Suppression of fires took 213 million dollars. Over 18,000 firefighters from throughout the United States, the military, even people from Australia, Canada, and New Zealand helped with the suppression of these fires. The major economic loss was from tourism and ranching. Lightning was the main cause of these fires. There were 7,900 strikes on July 13<sup>th</sup>, and 13,487 strikes on August 10<sup>th</sup>. The "season" ends with the Labor Day rains, which did occur. The overall fire statistics for the record setting year of 2000 were: 92,250 fires, 7,393,493 acres burned, 861 structures lost, and over 1.6 billion dollars in suppression costs.

The last session of the day was "Publishers and Vendors Discuss New Products and Services." Keith Seitter, AMS, Boston, MA, was the first speaker. He said

that 24,500 pages were scanned for electronic access. This is almost 2,000 over last year's production. "Earth Interactions" is now part of AMS journals online – only electronic access. The Web PTA (Pages To Appear) can include full text prior to publication. There is free access to these pages and will be cited as "in press" on the bibliography. Their target is \$.14 or \$.15 a page as journals continue to grow. For online subscriptions, a 3-tier structure is \$30.00, \$90.00, and \$150.00 over print subscriptions for perpetual online access. See AMS website for details <http://www.ametsoc.org/AMS>.

Mr. Seitter discussed the AMS Journal Legacy Data. Almost every article ever published by the AMS is online and available. The "Bulletin" and the "AMS Newsletter" will be 2 publications now. "BAMS" will be glossier and have a broader audience. The "AMS Newsletter" will be information about AMS members. The next meeting will be in Orlando, January 13-18, 2002.

Lawrence Buckland, Editorial Manager, Meteorological & Geostrophical Abstracts (MGA), Inforonics Inc., Littleton, MA, discussed how the MGA links to the AMS journals. The bi-directional links often get full text results. Joe Schumacher, GCRIO User Services, CIESIN at Columbia University, Palisades, NY, discussed how ASLI members can get "Our Changing Planet" mailed to them. They have back issues to FY96. His address is <http://www.gcrio.org/>

Next there was a panel discussion with representatives from Academic Press, American Geophysical Union, Cambridge University Press, and Kluwer Academic Publishers. The Academic Press is coming out soon with a new edition of an encyclopedia of atmospheric sciences. The representative from Kluwer stated that the journal "Water, Air and Soil Pollution" will now be split into two journals. One is "Water, Air and Soil Pollution" and the other is "Water, Air and Soil Focus."

Friday, January 19.

Some of the folks went on a field trip to the Los Alamos Library and Museum, 2 hours away from Albuquerque in the mountains. Beautiful country up there. The Los Alamos Library has 50 staff members -- 20% are non-US citizens; 20% are professional librarians; 10% are clerical staff; and 50% are computer/technical people. They had 1800 hard copy journal subscriptions, and now have 3600 journals online. They use an Adobe Acrobat Scanner. Their philosophy is to "Work as a Business." They sell their products to different Air Force Laboratories. One example is the "Flashpoint" database. This is really a neat multi-database search tool. The web address is <http://lib-www.lanl.gov>. We then drove to the Museum and spent quite a bit of time perusing the different articles, posters, and artwork on the making of the Atomic bomb, plus saw a video.

Respectfully submitted,  
Susan A. Tarbell

