Aloha

The 24 March chapter meeting was held at the Hickam Air Force Base Officers’ Club. Edward M. Carlstead, Chief of the Forecast Division of the National Meteorological Center (NMC), who was serving at the time as the interim director of the National Weather Service Pacific Region, spoke on the operations of the NMC. Since these operations are centered around numerical weather predictions (NWP), Carlstead gave a brief history of NWP, mentioning the contributions of many individuals from Von Helmholtz and V. Bjerknes through Richardson to the more recent scientists such as Von Neumann and Charney to such present day practitioners as Cressman, Smagorinski, Shuman, and Bedient.

The computing capacity at NMC has been continuously improved and expanded over the years to handle increasing data loads and model sophistication. The current major numerical model in use is the spectral global model, which has made great strides in the improvement of forecast accuracy of the global flow patterns out to 72 and 96 h and beyond. Reasons for this improvement seem to be the lack of truncation errors and an increase in satellite and southern hemisphere data.

Carlstead went on to discuss the duties of the various divisions and branches of the NMC. He quoted huge cost savings derived within the aviation industry from the availability from NMC of accurate upper wind and temperature forecasts, allowing airlines to minimize fuel loads carried on long haul flights. Carlstead also briefly touched upon work done within the extended and long-range forecast areas and the national climate program.

At a brief business meeting Tom Schroeder, a professor at the University of Hawaii, agreed to represent the chapter as a judge in the upcoming science fair, while chapter Vice-President Capt. Rodney Henderson will represent the Air Force. A proposal for a new chapter constitution was presented to the membership.—Hans E. Rosendal, Secy.

Asheville

The 86th chapter meeting was held on 19 November 1981 at the Hungry Bull Restaurant in Asheville; 11 members and one guest attended.

Officer elections were held for 1982: Ed Bro tick is Chairman; Alex Popadines, Vice-Chairman; Jon Whiteside, Secretary; and Tom Kotz, Treasurer.

Following the business meeting, Chairman Tom Karl introduced the evening’s speaker, Albert Koscielny, who is employed by the National Climatic Center as a member of the Systems Integration and Planning Program Development Staff. He holds both the M.S. and Ph.D. in meteorology from the University of Oklahoma.

Koscielny dealt with several statistical techniques used in the analysis of geophysical time series. The topics of discussion included Fourier Analysis, Spectral Analysis, and Autoregressive Modeling. He discussed the theory behind each topic and pointed out the advantages and difficulties that one may experience when using any or all of these techniques. Finally Koscielny displayed examples of Spectral Analysis and Autoregressive Modeling for both univariate and multivariate time series.—Michael Mignogno, Vice-Chairman

Chicago

The chapter held its fifth meeting of the year on 2 March at the studio of WM AQ-TV Channel 5 in the Merchandise Mart in downtown Chicago. Jerry Taft and Terry Burhans, the station weather broadcasters, discussed the state of the art in broadcast meteorology, followed by a tour of the studio where the members were allowed to view the 10:00 pm news and weather broadcast live.

Taft noted that the role of the broadcast meteorologist is basically to present the weather in a clear and precise form that everyone can understand. Most viewers (and listeners) have little background or understanding of atmospheric motions; they are more interested in knowing the coming day’s weather. It is important for the broadcast meteorologist to keep this in mind, so that his or her technical training does not spill over into the presentation.

Taft emphasized that the most sophisticated equipment is available to weathercasters to aid in the visual portion of the broadcast. This was verified when the speakers demonstrated the computer graphics which they may use to spruce up their presentations. The equipment included several weather service lines, dial-up radar, and computer software capable of disseminating data from any given region in the country. The highlight of the studio tour was the viewing of an actual broadcast of the nightly news. Several of the members became celebrities, as the cameras panned the group before the presentation of the weather forecast. It was definitely a very informative and interesting look into the world of a television meteorologist.—Bill Phillips, Secy.

El Paso-Las Cruces

The 23 March meeting was held at Fur’s Cafeteria on North Mesa in El Paso. It was a rather interesting meeting. It opened with the news that our chapter Vice-President Doug Copp and his wife, Carol, had a baby girl, Jessica Ellen Copp. Gary McWilliams reported on the southern New Mexico Science Fair. Chapter Secretary-Treasurer Stu Bowersox mentioned the El Paso Science Fair was on 27 March and that judges should be there at 8:00 am. Chapter President Steve Cohn read a thank you letter from Haskell Monroe on the fine way the Meteorological Rocket Network Archives dedication was conducted.

The head of the nominating committee, Willis Webb, read the committee’s choices for the upcoming year. The nominees were Stu Bowersox for President, Doug Copp for Vice-President, and Gary McWilliams for Secretary-Treasurer.

Meeting reports received at headquarters before 30 April are included. Copy from chapter representatives should be typed double-spaced and submitted to the News Editor in duplicate.—News Ed.

1202

Vol. 63, No. 10, October 1982
The actual elections will be held on 13 April. Bowersox then introduced Rita Beebe, an Associate Professor of Astronomy at New Mexico State University, who talked about the climate of Jupiter and Saturn. Beebe based her information on data sent back to Earth from the Pioneer and Voyager missions.

—Stu Bowersox, Secy.

**Farthest North**

The speaker at the 26 March meeting was Capt. Tim Gump of Det. 2, 11th Weather Squadron, Eielson Air Force Base. Gump, who was stationed for two and one-half years at Kincade Air Force Base on Michigan’s Upper Peninsula, spoke on weather forecasting in the Great Lakes region. He concentrated on the wintertime enhancement of snowfall on the leeward side of the Lakes. The important role played by water temperature and ice condition in determining the extent of snowfall enhancement was emphasized.

After Gump’s presentation a general discussion of lake effects on weather ensued. Several members of the audience described their own experiences with weather in the Great Lakes area. Moisture flux through leads in the arctic ice pack, an Alaskan “lake effect,” was also discussed.

New chapter officers were elected at the meeting. Lt. Craig Egeland of Det. 2, 11th Weather Squadron, Eielson Air Force Base, was elected President; Sue Ann Bowling of the Geophysical Institute, University of Alaska, Fairbanks, was named Vice-President; Doug Botner of the Weather Service Forecast Office, Fairbanks, was elected Secretary-Treasurer.

—Doug Botner, Secy-Treas.

**Indiana**

The chapter held its first spring meeting of the year on 17 March at Ball State University. The guest speaker for the night was Thad Godish, who spoke on “Indoor Air Quality.”

Godish has brought to light the fact that illnesses may be caused by chemical gases and vapors released by substances within a building. Of special concern to him is the use of urea-formaldehydes in the home in such sources as foam insulation, carpeting, particle board flooring, and some plywoods and hardwood paneling. Godish has determined that foam insulation is one of the smaller sources of formaldehyde vapors, contrary to recent public belief. He has found that the flooring and paneling is of more importance.

The relative impact and release of these vapors is most prevalent during the first two years. After two years, a baseline concentration will persist. Godish has shown that the concentration of urea-formaldehyde vapors is directly related to the difference between inside and outside temperatures. As the difference increases, the levels of formaldehydes decrease due to natural ventilation.

Godish usually finds that many allergies and cold-like illnesses disappear after the family moves out of the house. People living in mobile homes are particularly susceptible to urea-formaldehyde-induced illnesses due to the large use of paneling, particle board, and plywood.

Although reducing the levels of formaldehyde is possible, it may prove costly. One solution is to eliminate the sources. Many products exist which do not contain the urea type of formaldehyde. Marine plywood is one such product. A second measure is to seal the surface with latex-based paints or varnish. This second method is ineffective for products less than two years old. Special coatings which contain formaldehyde scavengers are available for new wood-based products. Sealing the product can reduce by 99% the formaldehyde levels released from the wood. The third method involves air purification. Most of these systems work by chemical reactions. The least expensive way to reduce urea-formaldehyde levels in the home is by simple ventilation. Fresh air is always the deterrent for high pollutant levels.

A lengthy business meeting followed. The Treasurer reported a balance of $16.72; it was noted that the cost of the members to establish dues for the 1982–83 year of $5.00 for charter members and $2.00 for student members.

The floor was then turned over to Robert Dale of Purdue University. Dale expressed great concern over the possibility of the elimination of the agricultural weather system.

The chapter held its second spring meeting at the Covington Beef House in Covington, Ind., on 17 April. The meeting was held with the East Central Illinois chapter. Approximately 80 members and guests attended.

After an excellent dinner, Grafton Logden from Green castle, Ind., was presented with a 35-year pin for the collection of rainfall data. Logden has been a National Weather Service cooperative observer since 27 January 1947. He is also the only NWS cooperative who is a member of the Indiana chapter. Robert Dale presented a $50.00 “Outstanding Student” award to Richard Smelzer. He will be temporarily employed at the Climate Analysis Center in Washington and then continue his studies at Iowa State University under the
Stanley Changnon of the Illinois State Water Survey spoke briefly on “Is The Climate Fluctuating?” Changnon expressed the need for meteorological data collection and the importance of interpreting the data. The group was requested to complete a short questionnaire about its opinions of the climate. The results showed that most of the group, which comprised both scientific and nonscientific individuals, believed the climate is becoming cooler and wetter. Changnon said that the public needs to be further informed of the findings of the meteorological community (for further information, see Changnon’s correspondence item in this issue.—News Ed.).

The last meeting of the fiscal year was held on 4 May. The informal meeting had no speaker but was held to complete old business and elect officers.

The proposed chapter constitution was presented and discussed in detail. After several changes and clarifications a motion was made for approval. The motion was seconded and passed unanimously. The Constitution was changed to stay abreast of events in the meteorological field. A copy of the new Constitution will be sent in the next mailing to all chapter members.

The new officers for the forthcoming year are Marline Roberts, Chairman; Ron Przybylinski, Program Chairman; and Secretary-Treasurer, Barry Smith.

After the meeting, William Gommel provided the group with a special showing of the moon, Saturn, and Jupiter through Indiana Central University’s 10 in telescope.—Barry A. Smith, Secy.-Tres.

Pennsylvania State University (Student)

The first PSUBAMS meeting of Spring Term 1982 was held 30 March in the Weather Tower.

John A. Dutton, head of the Meteorology Department, presented AMS awards to two students, the latest in a long line of Penn State students to earn such awards.

Senior Alan Tetenbaum was awarded second prize in the Father James B. Macelwane competition for his paper, “An Added Tool for Predicting Thunderstorms—The Method of Minimum Temperatures.” Kevin M. Crupi, also a senior, received honorable mention in the AMS scholarship competitions.

Dutton then announced the inception of a new course designed to familiarize students with the forecasting facilities of Penn State’s Weather Tower. Paul Heppner of the Campus Weather Service had proposed that the course be adopted so that freshmen and sophomore members of the CWS who were unfamiliar with the facilities could become acquainted with them.

Elections were then held for the 1982-83 school year. The new officers are: Doug Brinkman, President; Jim Kosarik, Vice-President/Treasurer; and Steve Weygandt, Secretary.

President Janine M. Acee then discussed the Earth and Mineral Science Exposition, a biennial open house during which the public can view the different departments in the College of Earth and Mineral Sciences and see their day-to-day operations in addition to some special projects. Some of the demonstrations planned by the department of meteorology include the use of satellites and radar, the launching of Pibal balloons, the computer modeling of atmospheric dispersion of pollutants, and remote sensing. In addition, the Campus Weather Service will be videotaping forecasts for the public to view.

Following a film on tornadoes, the meeting adjourned with the usual refreshment of coffee and doughnuts.—Scott Lindstrom, Secy.

Twin Cities

Forty-seven persons attended the meeting at KSTP-TV. President Tom Fahey, who recently returned from Australia, welcomed the group and introduced the speakers without having a business meeting.

Dennis Feltgen, the 6:00 pm and 10:00 pm weather news meteorologist for KSTP-TV, gave a presentation on “Broadcast Meteorology.” Feltgen is also on the AMS Board of Broadcast Meteorology, which was formed in 1957 to establish criteria and evaluate candidates for the AMS Seal of Approval.

He presented a history of TV weathercasting which showed the sorry state of affairs before the influx of meteorologists into the field. To date, out of 1500 media weathercasters, only about 225 have the Television Seal and 90 have the Radio Seal. (Three major TV stations in the Twin Cities have meteorologists with the AMS Seal of Approval.) To have a degree in meteorology is not enough to rate a Seal. The art of communication to the public is evaluated based on videotapes submitted to the board.

John Dooley was introduced and presented the data from the Doppler radar obtained last summer. He stressed that it takes a while for the radar operator to gain confidence in interpreting the display. They need the time for further computer processing of the data for display to help with some of the ambiguities that arise from one radar and reduced response from tangential wind fields.

Dooley pointed out that the only other Doppler used by TV stations is at Channel 9, Oklahoma City. At today’s prices, the Doppler conversion of the WSR-74C at KSTP-TV would run $375,000.

Dooley said that the Doppler provides much more data than just tornado conditions. He mentioned the National Severe Storms Laboratory’s project of looking for fair weather precursor conditions for severe convective activity. Local plans call for a data link to send the Doppler data to the Minneapolis-St. Paul NWS radar room this summer.—Doug Kohl, Secy.

Utah

The 11 March meeting was held at the University of Utah Fletcher Building. The guest speaker was Akira Kasahara, Senior Scientist, National Center for Atmospheric Research, Head, Large Scale Dynamics Section, and Adjunct Professor, University of Utah. His topic was “Recent Advances in Numerical Weather Prediction.”

Kasahara gave an informative presentation on the possible reasons why there have been significant improvements in short to medium range predictions. This improvement has been recently noticed in the prediction skill of 500 mb flow patterns with global models by the National Meteorological Center and by the European Center for Medium Range Weather Forecasts. Although the reason for improvement is
difficult to pinpoint, he presented some of the latest research results that seem to indicate that our increased understanding of the behavior of planetary scale motions may offer an explanation. These include long-period free oscillations of the atmosphere, particularly westward propagating planetary waves with wave number one. His interesting talk was followed by a question-and-answer period.—Elford Astling, Program Chairman

announcements (continued from page 1200)

NCAR Electra is approximately 8000 m above sea level. The size and operating requirements of the Electra are such that it will be available only upon substantial notice. Following the ALPEX project, the Electra was mothballed for one and a half years, while awaiting the next large project which could justify its use.

Generally, all the aircraft are equipped to measure state parameters including temperature, pressure, dewpoint, and winds, etc. Also, a large variety of equipment can be specified by users for a particular project, including cloud and hydrometer particle spectrometers, aerosol spectrometers, shortwave and longwave optical radiometers, and remote radiometric surface temperature instrumentation. Considerable freedom is permitted in mounting user-supplied instrumentation on RIF's NSF-owned aircraft; somewhat less flexibility is permitted for users of the leased University of Wyoming King Air. The RIF assumes responsibility for installing and maintaining the requested instrumentation. Additional, the RAF will assist in the installation of all user-supplied instrumentation to ensure compatibility with existing RAF instrumentation systems and to ensure aircraft safety for normal flight operations and for crash-load specifications.

In order to be considered by the panel at the April meeting in 1983, requests must be submitted in completed form to the Manager, Research Aviation Facility, NCAR, P.O. Box 3000, Boulder, Colo. 80307, not later than 4 February 1983. The precise dates of the April meeting will be established at the October 1982 meeting of the Advisory Panel. Additional information is available at (303) 494-5151, ext. 7829, or through correspondence with the RIF. Interested scientists who may not have completed their requests earlier are invited to call the same number after 1 November 1982 to obtain the exact dates of the April 1983 meeting.

Foreign competition threatens U.S. leadership in civilian space technologies

Foreign competition is beginning to threaten U.S. leadership in commercially profitable and politically significant space technologies, according to a recent report from the Congressional Office of Technology Assessment (OTA).

OTA warns that the United States stands to lose significant revenues as well as prestige and influence as developing European and Japanese systems become operational, and the absence of overall agreement within the Federal government about the future direction or scope of the U.S. civilian space program aggravates the situation.

OTA emphasizes that if the United States is to maintain or regain leadership in aerospace and some high-technology industries, it will need to increase the effectiveness of its space program. OTA found the U.S. civilian space program technologically capable, but in need of developing more flexible policies and institutions to meet changing conditions.

For the past 25 years, the United States has been the acknowledged world leader in developing and using space technology for civilian applications in the private sector and government. However, fiscal constraints, as well as the growth of foreign competition, present Congress with a number of large issues. Among these are determining the appropriate roles of the Federal Government and of private industry in civilian space technology; defining the most productive relationship between the civilian and the rapidly expanding military space programs; and deciding which major new space projects, if any, should follow the space Shuttle.

For civilian space activity to have maximum value to the United States, it is important, OTA believes, for the Government to enlist a greater share of private resources in space technology by developing innovative institutional mechanisms and incentives. In particular, OTA finds it critical to continue and encourage the transfer of Federally-developed technology to the private sector once significant commercial potential has been established.

According to OTA, the Government continues to play a crucial role in at least four areas that are essential to the nation’s future in space: contribution to basic research and development, support of public space science, provision of public goods and services, and the regulation and coordination of national efforts, particularly with respect to international agreements.

OTA examined four space technologies that illustrate both the realities of foreign competition and the importance of government/industry interaction:

Satellite Communications: NASA has conducted important research in two advanced communications technologies (30/20 GHz systems and large communications platforms), but neither has been funded for demonstration. Although foreign 30/20 systems are already being developed, the U.S. private sector has maintained that it cannot take the lead in such risky projects. Since satellite communication is by far the most profitable of current space technologies, relinquishing U.S. technological leadership in this field could lead to a major loss of revenues for domestic firms in the future, according to OTA.

Land Remote Sensing: There is presently no Federal commitment to provide data to U.S. and foreign users beyond the mid-90s, nor is the private sector willing to provide data continuity, leaving the field open to France’s well-advanced SPOT remote-sensing system.