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October 22, 1986

COMING UP

Winter weather media workshop in Chicago, Ill., Oct. 24-25.

NOAA Observation and Prediction Review at WSC-5 in Rockville, Md., Nov. 17-19.

NOAA Climate Program Review at WSC-5 in Rockville, Md., Nov. 19-21.

Meeting of the Interdepartmental Committee for Meteorological Services and Supporting Research at the Office of the Federal Coordinator for Meteorology in Rockville, Md., Nov. 25

Scientists Eye Ozone "Hole":-- A scientific research team led by NOAA's Dr. Susan Solomon reported from Antarctica Monday that the cause of the depletion in the ozone layer over Antarctica is much more complicated than theories have suggested so far and, while the phenomena may be chemically based, they have not ruled out natural processes.

Unusually large ozone depletions have been observed annually in the last decade over much of Antarctica in September and October. Changes of such magnitude are not currently observed anywhere else in the world. Ozone is critically important to life on earth as it screens out harmful ultraviolet radiation.

This year's research, begun in August under the sponsorship of the National Science Foundation, NOAA, and the National Aeronautics and Space Administration, is the first to make a coordinated series of ground- and balloon-based observations to try to determine what causes the hole. Atmospheric scientists had not anticipated the phenomenon and have not yet fully accounted for it in their models.

Some theoretical studies have suggested that the extremely

low temperatures and associated polar stratospheric clouds (which are most prevalent over Antarctica) lead to unusual chlorine chemistry and eventual ozone destruction due to man-made halocarbon compounds. Other studies suggest natural processes such as high solar activity or dynamic processes in the atmosphere, such as upward winds, as the causes of the ozone depletions.

In a news conference held Monday by satellite between McMurdo Station in Antarctica and the NSF in Washington, D.C., Dr. Solomon said "At present, we have not conclusively established the cause of the ozone hole. However, we have strong evidence against theories that upward winds or high solar activity cause the depletion. The cause may well be something not yet thought of. Data collection will continue until mid-November, and a good deal of analysis is required to extract all the information from our data."

NOAA Radars Watch For El Nino:--Two special radar systems providing wind information for identifying ocean and atmospheric conditions preceding El Nino events have been installed by NOAA on islands in the equatorial Pacific. The systems, automated wind profilers which continually record wind speed and direction over a wide range of altitudes above their sites, are in operation on Christmas Island on the Equator south of Hawaii, and at Pohnpei in the East Caroline Islands northeast of New Guinea. Pacific winds are a key variable related to changes in sea surface temperatures along the Equator, an early indicator that an El Nino event - an unusual warming of the ocean often followed by abnormal weather conditions - may be underway. Early warning that an El Nino is developing would alert climatologists to the possibility of climate and weather anomalies occurring in the near future, and would let public planners begin to take appropriate actions. The radars supplement a series of special data buoys deployed at various Pacific Ocean locations, several of which also transmit ocean conditions back to NOAA scientists in Boulder, Colo., via satellite. The ERL-developed wind profilers use ground-based Doppler radar to sense wind speed and direction at altitudes up to 10 miles high.

Columbia River Tidal Forecasts On The Money:--NOAA hydrologists attending the American (River) Pilots Association meeting recently held in Portland, Oreg., learned their forecasts were pure gold to some shippers. Columbia River pilots disclosed they are making good use of the Center's hourly tidal forecasts, according to NWS Deputy Regional Hydrologist Anton Haffer. With this forecast information, the pilots are able to plan departures for the large-draft vessels (grain and container ships) from Portland and other ports along the Lower Columbia River with greater payloads. It was noted that deep-draft vessels have been departing with up to two feet additional draft. This means \$30,000 to \$40,000 of extra cargo per vessel at current rates.

NESDIS Aids National Geographic:--NESDIS has agreed to serve as technical advisor for a new exhibit in the National Geographic Society's Explorers Hall in Washington, D.C. The organization is planning to redesign the exhibit to commemorate the Society's 100th anniversary of the organization in 1988. Representatives of National Geographic recently visited NESDIS to obtain ideas about incorporating remote sensing and interactive computers in the new display to explain the effects of weather on human behavior, the economy, and the environment.

Tagged Tarpon Sets Record:--A tarpon, tagged and released in 1981, under a NOAA program to study the habits and habitats of these fish, was recaptured in May of this year setting a new "time-at-large" record for tagged tarpon. According to Grant Beardsley of the Miami Laboratory of the NMFS Southeast Fishery Center, Capt. Alan Dopirak and Angler Clyde Balch caught a tarpon at Homosassa, Fla., in May that had been tagged and released by Capt. Nat Italiano and angler Stephen Ingwer at Boca Grande Pass, Fla., on June 20, 1981. The tarpon was estimated to weigh 90 pounds on release and 130 pounds at recapture. The five years between tagging and recapture provided valuable data on the growth rate and longevity of tarpon. Although the tarpon tagging project is relatively small scale and essentially confined to the Florida coast, Beardsley says that almost 1,000 fish have been tagged and released since the program's beginning in 1981.

Alfred M. Beeton Heads GLERL:--Dr. Alfred M. Beeton of the University of Michigan, a 30-year veteran of Great Lakes research, has been appointed director of NOAA's Great Lakes Environmental Research Laboratory in Ann Arbor, Mich. Presently director of the university's Great Lakes Marine Waters Center, Beeton will assume his new position in early November. Beeton also is serving as Director of the Michigan Sea Grant College Program of Michigan State University and the University of Michigan, and is Professor of Natural Resources and Professor of Atmospheric and Oceanic Science at the University of Michigan. Dr. Beeton succeeds Dr. Eugene J. Aubert who retired as director of GLERL earlier this year. Beeton earned B.S., M.S., and Ph.D. degrees from the University of Michigan, and began his career-long Great Lakes work in 1955 when he joined the U.S. Fish and Wildlife Service. He was a fisheries biologist with that agency's Great Lakes Fisheries laboratory, heading the Environmental Research Group there, until 1966 when he became a professor and associate director for the Center for Great Lakes Studies at the University of Wisconsin in Milwaukee. In 1976 he moved to his present posts.

Airlines Given Microburst Aid:--NOAA Public Affairs has offered 24 U.S. airlines videotapes of a lecture by Dr. Fernando Caracena of ERL on the meteorology involved in microbursts, the powerful downdrafts from thunderstorm cells which are frequent

precursors to windshears that have caused numerous aircraft accidents and deaths. Dr. Caracena is the author of weather portions of National Transportation Safety Board reports on windshear-related aircraft accidents at New Orleans and Dallas-Ft. Worth Airports.

New Equipment For Space Environment Laboratory:--A recent ribbon-cutting ceremony officially brought on board the new Space Environment Laboratory Data Acquisition and Display System, replacing the old system which had been built around some of the first minicomputers manufactured. The new system acquires and stores data from the Space Environment Monitors on NOAA and GOES satellites and from a global network of solar optical and radio telescopes and magnetometers. The data are processed and displayed in forms useful for making forecasts of space environment conditions and further processing for archiving by NESDIS. The new system, unlike the older one, is able to run numerical prediction programs in real time, a capability which will be implemented and expanded over the next several years.

99th Congress Final Wrap-up:--The 99th Congress adjourned Oct. 18 after wrapping up work on a number of last minute items including the \$576 billion continuing appropriations bill. Items approved by the Congress of interest to NOAA include:

- o Senate confirmation of the nomination of Rear Admiral Wesley Hull to the rank of Admiral to serve as Director of Charting and Geodetic Services for NOS.

- o S. 991, the omnibus fish bill, was further amended by the House and approved as amended by the Senate.

- o S. 1128, a bill to reauthorize and amend the Clean Water Act.

- o H.R. 5300, a \$12 billion deficit-reduction bill designed to lower the federal deficit to meet Gramm-Rudman-Hollings deficit-reduction targets.

- o H.R. 6, a \$16 billion omnibus water projects bill to authorize construction or study of 262 new Corps of Engineers water projects.

- o H.R. 5495, a bill to reauthorize NASA for FY 87.

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National Oceanic and Atmospheric Administration

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July 23, 2010