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January 21, 1987

COMING UP

NOAA Science Seminar Series: "Sea Level Time Series in the Equatorial Pacific from the GEOSAT Radar Altimeter." Robert Cheney, NOS, WSC-5, Room 926, 10:30 a.m., Jan. 23.

National Meeting of the American Association for the Advancement of Science in Chicago, Ill., Feb. 14-18.

GOES-H launch from Cape Canaveral, Fla., Feb. 19.

Symposium on 180th anniversary of the founding of the "Survey of the Coast" in Rockville, Md., Feb. 26.

Meteorologists Say El Nino May Be Under Way: El Nino - the unusual warming of the Pacific associated with disasters that took many lives and wrought billions of dollars in damage in 1982 with outbreaks ranging from drought to severe storms, flood, and dislocation of fish and bird life - is in the news again. The following statement was issued by NOAA on January 20:

The National Weather Service's Climate Analysis Center has issued an advisory that atmospheric and oceanic conditions indicate the presence of a warm episode in the tropical Pacific, and that "the fields for December resemble those observed during the mature phase of an El Nino-Southern Oscillation (ENSO) warming."

The present oceanic and atmospheric irregularities in the tropics, while similar in many ways to those found in earlier ENSOs, are weaker than those observed during the most recent 1982-83 episode.

El Nino is a warming of the surface waters of the eastern equatorial Pacific which occurs at irregular intervals of 2-7 years and lasts for 1 to 2 years. The Southern Oscillation is a global-scale seesaw in atmospheric pressure between Indonesia-North Australia and the southeast Pacific. Together, they are interacting parts of a single global system of climate fluctuations popularly known as ENSO--the El Nino/Southern Oscillation.

A large-scale sea surface warming in the central Pacific has expanded in area and increased in intensity. Sea surface temperatures, 1 to 2 degrees centigrade above normal, continue from the date line eastward to 120 degrees west.

Atmospheric convection has strengthened near the date line at the Equator during the past few months, and dryer than normal conditions prevail in the region of the Philippines, Indonesia and northern Australia.

In addition, an ocean general circulation model at the Center indicates that strong, low-level westerlies in the western equatorial Pacific which were observed during November and December have resulted in a strong eastward flow in the upper 100 meters along the equator to the west of 170 degrees west. There was also a substantial deepening of the thermocline (the boundary between the warm homogeneous upper ocean and the cold, stratified water below) in the central Pacific. This deepening, accompanied by an increase in sea level, has been moving eastward in the model simulations.

The model's findings have been confirmed by observations at buoys and islands in the western and central equatorial Pacific. The buoys are operated by the Tropical Ocean and Global Atmosphere Program (TOGA), a major, 10-year international effort to determine to what extent regional climate effects from events like El Nino can be predicted. The U.S. portion of the program is coordinated by NOAA.

Because ENSO is global in nature, a strong episode may lead to climate anomalies, as well as disruptions of the marine ecosystems along the west coast of South America, and sometimes North America.

Hallgren To Head AMS:--NOAA Assistant Administrator for Weather Services Richard E. Hallgren has been elected Executive Director of the American Meteorological Society. He is scheduled to leave NOAA to assume the directorship in April 1988. The Society is the Boston-based organization serving the nation's meteorological community.

Weather Impact Assessments In Electronic Bulletins:--NOAA's Assessment and Information Services Center is working out arrangements with the Department of Commerce's Office of Business Analysis and Economic Affairs to place the monthly U.S. weather impact assessments on the DOC electronic economic bulletin board. The computer bulletin board provides DOC-generated economic information by telephone lines to commercial enterprises across the nation. The center expects to have the bulk of its assessments for the December energy and U.S. economic reports placed on the DOC computer during January.

Air Resources Lab Begins New Projects:--NOAA scientists have begun releasing tracer gases into the atmosphere from two sites in Montana and Minnesota, measuring concentrations downwind to infer the movement and behavior as the gases cross the eastern half of the United States and southern Canada. Two types of harmless perfluorocarbon gas, posing as pollutants, are being evaporated into the atmosphere, according to project head Roland R. Draxler of NOAA's Air Resources Laboratory. The project is being conducted to collect data on the atmospheric transport of pollutants for use in verifying computer models, and to provide new information on how pollutants behave in the atmosphere. "The adverse effects of air pollutants on man and the environment during their long-range transport and dispersion continue to be a major concern," Draxler said. "The acid rain situation and the Chernobyl accident are prime examples of the need for this type of information."

The release sites are near Glasgow, Mont., in the northeast corner of the state, and St. Cloud, Minn., northwest of Minneapolis.

Air samples are being taken down-wind of the release sites at about 75 ground-based sampling stations. About half of these are scattered across the eastern United States and Canada near weather balloon-launch stations, while others are along two arcs about 600 and 1,000 miles east of Glasgow.

Supplementing the ground measurements are air samples being collected by three aircraft -- a NOAA plane operating from Minneapolis and two contractor planes flying downwind of Glasgow -- and five 650-foot towers spaced along an arc from Oklahoma City, Okla., to Green Bay, Wisc.

Scientists will use the collected air samples to estimate how pollutants become dispersed horizontally and vertically while moving through the atmosphere.

Two different tracer release sites, each evaporating a different perfluorocarbon gas into the atmosphere, are being used to let researchers study whether it is possible to identify the specific source of a pollutant from air samples, and determine the contributions by that source to the total sample measurement.

Each site releases gas for three hours every two and one-half days, in an alternating day-night cycle.

The research program began January 5, and will continue through the end of March, Draxler said. It is funded largely by the Department of the Air Force.

In related research the Air Resources Laboratory is beginning a year-long effort to help improve the accuracy of a computer model to be used in predicting airflow across the eastern half of the United States and the concentrations of acid rain-producing chemicals carried by the moving air masses.

A specially-instrumented NOAA Beechcraft King Air research aircraft will fly a series of flights during a week-long period next month, gathering air samples and meteorological data along a 1000-mile path parallel to, and about 125 miles west of, the Mississippi River. The series of flights, originating from Little Rock, Ark., will be repeated during April, July, and October according to project head Joe Boatman.

The Regional Acid Deposition Model, developed at the National Center for Atmospheric Research, has reached a point in its development where verification with actual observations would be fruitful, Boatman said.

Dr. Derr Named Distinguished Executive:--Dr. Vernon E. Derr, Director of NOAA's Environmental Research Laboratories, has been named the recipient of the Distinguished Executive Service Award, given annually by the Senior Executives Association/Professional Development League.

The award recognizes career senior executives in government service who have made significant contributions to improving the efficiency, effectiveness and productivity of the federal government.

Derr was cited for his leadership as Director of the Environmental Research Laboratories since 1983. The organization presenting the award, the Senior Executives Association, is an independent professional organization of some 7,000 present or former career executives who manage federal agencies or bureaus.

Great Lakes' Lab To Relocate:--After 12 years in "temporary quarters" in Ann Arbor, Mich., NOAA's Great Lakes Environmental Research Laboratory will move across town to a new, modern laboratory and office facility next week. Phone numbers are expected to stay the same. The new mailing address, effective Feb. 2, is:

NOAA/GLERL
2205 Commonwealth Blvd.
Ann Arbor, MI 48105

Fish Imports Up in 1986--Imports of edible fishery products were up 14 percent in 1986 (through November) compared with 1985. NMFS fishery experts say there was a large increase of imports in November, up 99 million pounds, compared with the same period last year. They believe that the spurt in November was an effort by importers to obtain deliveries of products before a new Custom's users fee went into effect the first of this year.

EarthSat Sponsors Meeting:--The Earth Satellite Corp. will hold a public meeting at the University of Maryland to obtain information on the historical, scientific, and technical requirements for the National Satellite Land Remote Sensing Data Archive February 3. The meeting is expected to attract broad academic, industrial, and government participation.

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National Oceanic and Atmospheric Administration

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