

NOAA REPORT



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U.S., Japan Cooperate on Disaster Prediction Data:

The United States and Japan are culminating a two-year effort that will facilitate the exchange of environmental data critical to predicting and preparing for such natural disasters as the Kobe earthquake. The Global Observation Information Network (GOIN) bridges the Pacific Ocean by enabling researchers and policy makers from either country to access data from the other by computer. A wide range of environmental data from various agencies in both countries is being exchanged, contributing to the foundation for a Global Information Infrastructure and to global-scale environmental data access and exchange.

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GOIN users will have access to data such as oceanographic and deep sea data sets; ionospheric sounding data, which provide a look at the atmosphere and climate change; space weather forecasting data, which provide information on solar influences on the atmosphere and near space; and Landsat data and topographic data, which are critical elements for better understanding global environmental change.

New Satellite Manager Named: Gerald J. Dittberner, an engineer and atmospheric scientist, has been named program manager for the nation's new generation of weather satellites. Dittberner will manage NOAA's Geostationary Operational Environmental Satellite (GOES) program.

Before joining NOAA, Dittberner spent 10

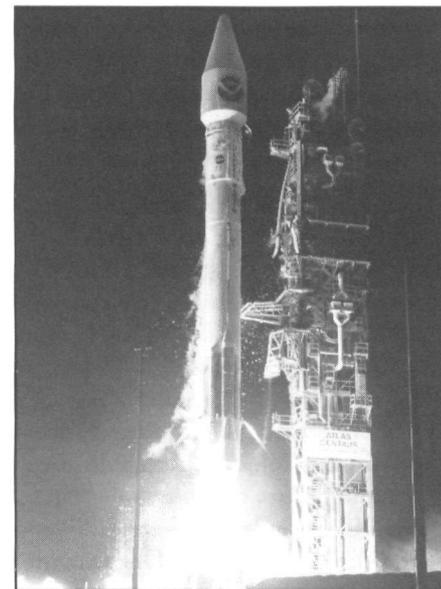
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GOES-J Goes!

The United States entered a new era in weather forecasting with the successful launch of the second state-of-the-art environmental satellite from Cape Canaveral Air Station in Florida last month. When this satellite is fully operational, the United States will have the most technically advanced weather forecasting ability in the world.

The Geostationary Operational Environmental Satellite, now called GOES-J, will be renamed GOES-9 once achieving final orbit. It will join its twin, GOES-8, in providing more

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GOES-J lights up the Florida sky.

NASA

The View From Capitol Hill

...I believe that NOAA will be preserved. There will be many twists and turns in the budget process in the coming weeks, which will require patience and perseverance on our part. In the meantime, we must all focus on fulfilling NOAA's mission with confidence and conviction.

—NOAA Administrator D. James Baker

the House and Senate, I wanted to take the opportunity to share with you the information that I have.

The President's budget addresses the needs for constraint by cutting many programs and restructuring several agencies, while at the same time providing for essential services and investment for the future. In that context, NOAA and the Department of Commerce received an increase in

This is budget time. The President has submitted his FY '96 budget, and Congress is responding with proposals of its own.

You have seen the headlines, dominated recently with news from Capitol Hill, about ways to reduce the Federal deficit and control the Federal debt. The Administration certainly shares this

goal, though there are some differences in the approach. Since many of you are probably wondering about the impact of the budget proposals announced by

D. JAMES BAKER



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Baker: NOAA Has Backing of Sec'y, President

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the President's budget for FY '96. It's clear that NOAA and the Department have the full backing of Secretary Brown and the Administration.

President Clinton is a strong supporter, and he firmly believes that our work is a key to ensuring the future safety and prosperity of this Nation.

However, the budget guidance we've recently received from Congress cuts deeply into both services and investment. The good news is that under both the House and Senate proposals NOAA is funded and would survive. The bad news comes in that both the House and Senate propose major cuts in the NOAA budget and are calling for the elimination of the Department of Commerce. It is not clear where NOAA would reside if the Department were eliminated, but I firmly believe the service we provide to the American people daily will continue.

Both the House and Senate budget committees propose only small increases in total Federal spending for FY '96. The House proposed a budget of \$1.59 trillion, a four percent

...I firmly believe the service we provide to the American people daily will continue.

increase over FY '95. The Senate proposed a budget of \$1.57 trillion, an increase of three percent.

The proposal in the Senate is less detailed than that in the House, but specifically notes that certain parts of the Department must be maintained—namely, NOAA, the Patent and Trademark Office, the Bureau of the Census, the Bureau of Economic Analysis, and most of the Bureau of Export Adminis-

tration. These parts would either become independent agencies or be transferred to other agencies. The House proposal not only eliminates the Department as a whole, but specifically eliminates four Commerce bureaus: The Economic Development Administration, the U.S. Travel and Tourism Administration, the International Trade Administration, and the Minority Business Development Administration. It also eliminates the Department's Advanced Technology Program.

The budget picture is grim. But it is important to view the proposals affecting NOAA in the context of those affecting other parts of Commerce and other departments. Many programs and bureaus are eliminated in the House and Senate proposals, thus NOAA did comparatively well. For

example, the Senate proposal eliminates not only Commerce, but also the Office of Personnel Management.

The House proposal also eliminates the departments of Education and Energy. It eliminates EPA's Environmental Technology Initiative and the Department of Interior's National Biological Survey. In addition, it places a moratorium on land purchases by Interior and the Department of Agriculture. It would privatize the

General Services Administration, the Corporation for Public Broadcasting, and power marketing administrations. Overall, the House proposal privatizes, converts to block grants, or eliminates three Cabinet departments, 284 programs, 69 commissions, and 13 agencies.

While both the House and Senate proposals reduce NOAA's budget, they take different approaches. The Senate proposal reduces NOAA's FY 1996 budget by five percent from the 1995 base—from \$2.0 billion to \$1.89 billion. In later years, spending would be maintained at the same level. In addition, the Senate plan terminates 41 NOAA programs and privatizes portions of the National Weather Service. It is worth noting that Senate maintains funding for the NOAA fleet at current levels.

The House proposal reduces NOAA's budget by 15 percent—from \$2.0 billion this year to \$1.71 billion in FY 1996. In future years, NOAA's budget would continue to drop, reaching \$1.55 billion in FY 2000. That would be 22 percent less than what we are spending now. In addition, the House proposal eliminates funding for the NOAA fleet. It also eliminates programs to promote and develop fishery products and research related to American fisheries. NOAA construction funds would also be cut.

I believe that one reason NOAA fared comparatively well is that we devoted a significant amount of time and energy to educating new members of Congress. Since January, we have

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Chasing Tornadoes to Understand Them

Government and private-sector scientists, in the largest tornado field experiment ever staged, will intercept tornadoes to obtain information that will improve the forecasting of storms and other severe weather conditions.

The experiment takes place from April 1 to June 15 in the southern and central plains states.

The object is to intercept tornadic thunderstorms with coordinated teams of scientists in specially equipped chase vehicles to study the formation and life cycle of tornadoes. A small armada of 18 to 20 cars and vans with meteorological instruments and two-way communications will be deployed

to intercept and study any tornado outbreaks. A chase may range over hundreds of miles and cover part of a day to several consecutive days on the road.

The Verification of the Origin of Rotation in Tornadoes Experiment, or VORTEX for short, is based at NOAA's National Severe Storms Laboratory in Norman, Okla. VORTEX is jointly sponsored by NOAA and the National Science Foundation.

Approximately 20 scientists and 100 graduate and undergraduate students from NSSL, eight universities, NSF, the National Center for Atmospheric Research, and Environment Canada will participate.

The area of operations will include Oklahoma, Texas, Kansas, Nebraska and Iowa, and may extend into Colorado.

Throughout the study period, VORTEX leaders will use research aircraft flights, special research instruments, and the entire suite of National Weather Service sensors to monitor weather conditions.

The National Severe Storms Laboratory will host a VORTEX dry run on March 30. At the half-day symposium on severe storm research, forecasts and warnings, VORTEX 94 results and VORTEX 95 operations were followed by a dry run of the VORTEX armada of instrumented chase vehicles. ☺

Data Center Has New Climate-Controlled Home

The world's largest collection of climate data has a new home. The new federal building housing the data was dedicated on May 15 in Asheville, N.C.

The National Climatic Data Center has more than 150 years of weather data on hand. These data range from handwritten observations taken by volunteers in the 19th century to more sophisticated radar, radiosonde, rocketsonde and satellite observations by state-of-the-art equipment. Data are recorded in a variety of ways, including paper copies of original records, publications, atlases, computer printouts, microfiche, microfilm, movie loops, photographs, magnetic tape, CD-ROM and other media. Some data are available online over the Internet. The new facility provides proper environmental conditions for all types of records, ensuring they will be maintained for generations to come.

"Climate data are integral to our lives; directly or indirectly they save countless lives and property every day," said Kenneth Hadeen, director of the

center. "Engineers and designers use climate data in making capital investments in roads and buildings. These data are also factored into tables that engineers use in construction work. Data such as snow loads and wind loads are absolutely necessary to design buildings and other structures that can withstand the climate."

Climate data play a major role in our economy as well, Hadeen said. "Manufacturers determine the impact of climate on product sales and develop marketing strategies based on the data. Public utilities use the data

to determine levels of energy demand, compute rate adjustments, and research alternative energy sources. The transportation industry uses the data to determine favorable air, sea, and land routes for transport of goods and commodities."

The climate center archives more than 320 million pages of paper records, 2.5 million microfiche records, 403,000 tape cartridges and magnetic tapes, and satellite images dating back to 1960. The center responds to some 143,000 requests each year. ☺



Rows and rows of climatic data are housed at NCDC's new home.

Focus On...

Earth Day in Sri Lanka with the *Baldrige*

What better way to herald the arrival of the 25th Earth Day than aboard a NOAA ship gently bridging land and sea on the other side of the world, a ship whose very mission is to collect information that may help save our environment?

When the *Malcolm Baldrige* pulled into port at Colombo, Sri Lanka, on April 22, celebration of Earth Day and NOAA's 25th anniversary began with a whirlwind schedule of activities that lasted until the ship's departure on April 27.

Just a few hours after the *Baldrige* pulled into port, the celebration was kicked off with a VIP luncheon, where the ship's commanding officer, Captain Craig S. Nelson, and executive officer, Commander Todd A. Baxter, were hosts to such dignitaries as Teresita C. Schaffer, U.S. ambassa-

dor to Sri Lanka and the Maldives, retired U.S. Ambassador Howard B. Schaffer, and top-level Sri Lankan officials. Also invited were Dr. Amy Field, chief scientist of the World Ocean Circulation Experiment (WOCE) cruise, and Dr. Peter Ortner, chief scientist of the Global Ocean Ecosystem Dynamics (GLOBEC) cruise. Both scientists are with NOAA's Atlantic Oceanographic and Meteorological Laboratory.

A briefing followed the luncheon. Capt. Nelson gave U.S. Embassy staff and representatives of Sri Lankan government, education, private organizations and news media a brief overview of the *Baldrige's* year-long, around-the-world cruise. Guests learned about NOAA's marine mammal observation programs in the Indian Ocean from Dr. Lisa Ballance, NMFS's Southwest Fisheries Science

Center. Drs. Field and Ortner talked about their WOCE and GLOBEC cruise programs. Ambassador Schaffer and the Sri Lankan Minister of Science, Technology and Human Resources Development also participated in the briefing, expressing the need for environmental research and protection. When the briefing was over, the ship's officers and crew conducted guided tours for the guests.

During the following several days, an additional 300 invited guests and groups of college students and faculty, young school children, Colombo Hydrographic Office staff, and Arthur C. Clarke Centre for Modern Technologies staff toured the ship.

One of the special highlights of the *Baldrige's* port call in Colombo was a visit by the world-renowned science fiction writer, Arthur C. Clarke. Dr. Clarke, who lives in Colombo, founded and is president of the Arthur C. Clarke Centre for Modern Technologies. He spoke at length with the ship's crew and scientists about several projects he has in progress, including his television series, *Arthur C. Clarke's Amazing World*, and his work on sunken wrecks off the coast of Sri Lanka. Dr. Clarke autographed books for crew members and presented two autographed copies of his books for the ship's library.

The *Malcolm Baldrige* embarked on its voyage on Feb. 13 in support of one of NOAA's primary missions: to search for solutions to such critical environmental problems as the greenhouse effect and potential global climate change. Its port call in Sri Lanka—one of 14 port calls planned throughout the cruise—coincided with the 25th anniversary of Earth Day. NOAA's 25th anniversary also falls this year.

—Jeanne Kouhestani ☺



Earth Day on the Mall

NOAA was well represented on the Washington Mall over the Earth Day weekend, with a number of well-visited exhibits.



To celebrate Earth Day, NMFS in Pascagoula, Miss., demonstrated their Turtle Hurdle, which shows kids how an endangered turtle gets out of a turtle excluder device (TED).

Doing the Turtle Hurdle

Kids Celebrate Earth Day and Learn What It's Like to Be Caught in a TED

In celebration of Earth Day, biologists from the NMFS lab in Pascagoula, Miss., set up the popular Turtle Hurdle at the Gulf Islands National Seashore. Over fifty exhibits on environmental issues educated and entertained the 1000+ visitors at the park. However, the Turtle Hurdle was the hands-down favorite among the younger set.

The Turtle Hurdle is a small shrimp net with a Turtle Excluder Device (TED) installed. It was originally used as a display and demonstration tool. NMFS biologist Karen Mitchell, who has presented programs and conducted tours for students for several

years, realized that the net could be used in an interactive way. The children "become" sea turtles and run through the net, exiting from the TED. They are shown how, without the TED, the turtle would be trapped in the net and possibly drown.

The Turtle Hurdle has been set up at numerous schools and public events and always proves to be a big success with the children. Parents have also responded very enthusiastically to the Turtle Hurdle, not only for the diversion that it provides for the young folks, but for the opportunity that it affords all ages to see and better understand the effectiveness of TEDs. ☺



Whale Watching: Sanctuary volunteers on duty at the Whale Watch station at the of the Hawaiian Island Humpback Whale National Marine Sanctuary during Earth Day.

Save for the Future with Savings Bonds

Saving for the future is tough these days, but there's one way to make it easier—U.S. savings bonds. And there's no better time to start than now, during the NOAA Savings Bond campaign all this month.

Planning for the future requires setting realistic goals and setting aside a portion of every paycheck, financial experts say, and buying savings bonds at work is an easy and flexible solution. Payroll savings gives you the twin benefits of continuous investing and the reinvestment of your earnings.



Currently, only 22 percent of NOAA employees participate in the savings bond Payroll Savings Plan, but NOAA administrator D. James Baker thinks there's room for improvement. "I believe that we can raise that rate to 30 percent and have ten percent of current Bond buyers increase their allotments," he said.

Among the advantages of U.S. Savings Bonds are:

- Bonds may be completely or partially exempt from Federal taxes for college tuition and fees
- Bonds are exempt from state and local income taxes and personal property taxes
- If they're lost or stolen, they can be replaced
- You can hold them as long as 30 years or as short as six months and still get market rate interest. ☺

Aviation Weather Communications System Brings Better Forecasts

Pilots around the world will soon receive more detailed and timely aviation weather forecasts through a new satellite-based communications system dedicated last month

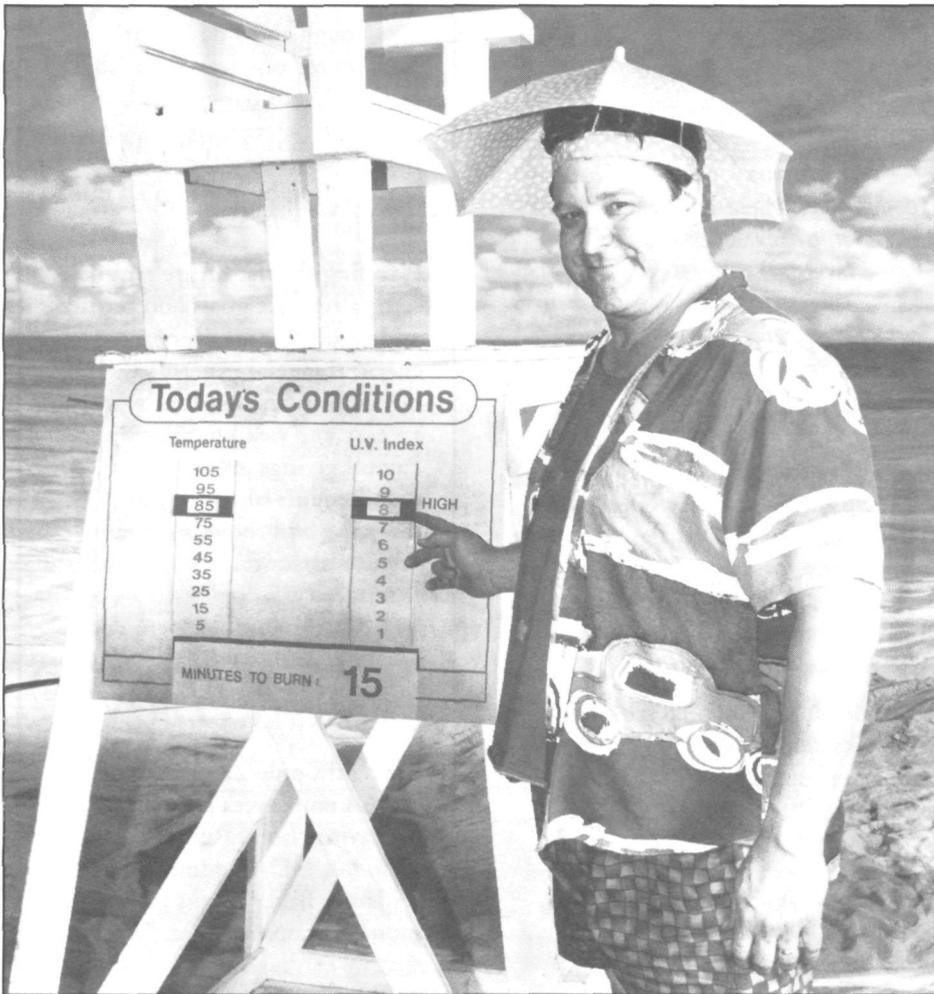
at NOAA's Silver Spring campus.

Representatives of the World Meteorological Organization (WMO) and the International Civil Aviation Organiza-

tion (ICAO) joined NOAA Administrator D. James Baker to introduce the new World Area Forecast System (WAFS). The WAFS program is a cooperative effort between NOAA, the WMO and ICAO, with funding from the U.S. Federal Aviation Administration.

Satellite broadcasts of WAFS products will give pilots on the ground access to more detailed, up-to-date significant weather forecasts and charts of forecast upper-air winds and temperatures for

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Actor John Goodman appears in a 40-second public service announcement this summer to promote the weather service's Ultraviolet Index. Watch for it at your local movie theater.

A Shady Side to John Goodman?

Actor John Goodman, better known for his work in *The Flintstones* and TV's *Roseanne*, has a shady side. Or maybe it's just that he's promoting the weather service's new Ultraviolet Index and sun safety tips in a public service announcement you can see this summer at your local movie theater.

The 40-second spot, developed with the support of the weather service, EPA and the Centers for Disease Control and Prevention, was created

by Partners for Sun Protection Awareness, a coalition of medical, public health environmental and consumer groups.

"We want to teach every American about the important information they can get from a forecast of ultraviolet exposure levels," said Elbert W. Friday, NWS chief. "If people learn how to use a UV Index forecast, they will have a tool that will help them and their families plan for their time outdoors." ☺

GOES-J Brings New Era in Weather Forecasting

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precise and timely weather observation and atmospheric data for weather forecasters across the country.

With the launch of this satellite, one of the most essential elements of NOAA's National Weather Service's modernization program will be in place. The data gathered by the GOES satellites, combined with data from the new Doppler radars and the automated surface observing system, will greatly aid forecasters in providing better advance warnings of thunderstorms, flash floods, hurricanes, and other severe weather—which will save lives, preserve property, and benefit agriculture, marine, aviation, and commercial interests across the country.

GOES-J and GOES-8 are also equipped with instruments designed to provide real-time measurements of solar activity, the charged particle environment, and the Earth's magnetic field at synchronous orbit. In addition, the satellite can relay distress signals from people, aircraft, or ships to search and rescue ground stations of the Search and Rescue Satellite Aided Tracking system. ☺

Adm. Stubblefield Takes Command of Corps

Upon the reading of orders signed by NOAA Administrator D. James Baker, Rear Admiral William L. Stubblefield assumed command of the NOAA Corps on May 22, exactly 78 years after the commissioning of the NOAA Corps' predecessor, the Coast and Geodetic Survey. He succeeds retired Rear Admiral Sigmund Petersen as director of the Corps.

RAdm. Stubblefield, speaking of "troubled times and fertile opportunities," is taking over at a time when the NOAA Corps and its fleet face possible elimination through the efforts of Congress to reduce spending and balance the Federal budget. He said that "we must recognize opportunities and have the courage and confidence to take advantage of them."

The Assumption of Command ceremony, which dates back to the days of sailing vessels and swaying quarterdecks, was held on steady ground in Dr. Baker's office. Dr. Baker

offered RAdm. Stubblefield his congratulations on his promotion to Rear Admiral, Upper Half, and on becoming the fifth director of the Office of NOAA Corps Operations.

RAdm. Petersen presented RAdm. Stubblefield with a NOAA Corps medal of commendation for his

outstanding achievement as deputy director, and with a plaque engraved with George Washington's prayer for the United States of America. He also attached RAdm. Stubblefield's gold shoulder board, which signifies his new rank.

—Jeanne Kouhestani ☺



Outgoing NOAA Corps director Sig Petersen (l.) passes command to William Stubblefield (r.)

Baker: Many Twists and Turns to Come

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made over 175 visits to members of Congress and their staffs to tell them about our programs. Earlier this year, some members of Congress and staffers were suggesting that NOAA should be split apart. Now there seems to be greater support for keeping NOAA intact—perhaps due to our success in explaining the synergies among NOAA programs.

The challenges we face are real, but it's important to remember that this is early in the budget process. The debate is just beginning. The House and Senate have put their proposals on the table, but they are just that—proposals—and they are far from final. It is important to note

that the budget committees' programmatic recommendations are not binding. Only the level of funding for various functions is set. These proposals must still go through floor debates and conference before they are even reported to the authorizing and appropriations committees.

We have taken a proactive approach and will continue to do so. We will be meeting with members and staff of the House and Budget appropriations and authorizing committees as they work to develop the specifics of the budget proposals. Knowledge is our strongest ally. We will make it very clear what the impacts of reducing our programs and infrastructure would be.

These are austere times. But I believe that NOAA will be preserved. There will be many twists and turns in the

budget process in the coming weeks, which will require patience and perseverance on our part. In the meantime, we must all focus on fulfilling NOAA's mission with confidence and conviction. I intend to do that. I ask you to do the same.

If you have any questions about the budget process, please feel free to call NOAA's Legislative Affairs Office or the Office of the Comptroller. I want to thank all of you for your leadership, hard work, and devotion in fulfilling NOAA's missions. I also want to assure you that we will be doing everything that we can to preserve NOAA's programs in the weeks and months to come.

I welcome your comments to column@hq.noaa.gov (Internet) or column@pa.noaa (Banyan). ☺

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years in industry, most recently as a program manager with Mentor Technologies, Inc., in Lanham, Md. He is a Fellow of the Royal Meteorological Society, an Associate Fellow in the American Institute of Aeronautics and Astronautics, a member of the American Meteorological Society's Board of Certified Consulting Meteorologists, and a member of the Wisconsin Academy of Sciences, Arts, and Letters. He holds a B.E.E. from the University of Minnesota, an M.S. in meteorology and space science and engineering, and a Ph.D. in climatology, both from the University of Wisconsin.

Joint Civilian-Military Satellite Program Announced: The Clinton Administration has taken a major step toward combining the country's military and civilian weather satellite programs into a

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single system—a move that is expected to save taxpayers up to \$300 million through 1999 with additional savings through the life of the program.

Secretary of Commerce Ronald H. Brown, Secretary of Defense William J. Perry, and NASA Administrator Daniel S. Goldin signed a formal agreement on May 26, establishing the agencies' roles and responsibilities in support of the new system and implementing a Presidential Decision Directive that was signed last year.

Currently four U.S. polar-orbiting satellites are used to collect operational meteorological, oceanographic, climatic, and space environment data. Two satellites are provided and operated by NOAA, and two by the Department of Defense's Defense Meteorological Satellite Program. The new combined program will consist of three satellites. The first satellite under the new system, called the National Polar-orbiting Operational Environmental Satellite System (NPOESS), is expected to be launched in 2006. ☺



Attending the WAFS dedication were (left to right), Jack Thompson, Federal Aviation Administration; Dr. Elbert "Joe" Friday, NWS chief; Melinda Kimball, State Department; D. James Baker, NOAA Administrator; Robert Landis, World Meteorological Organization; and William R. Fromme, International Civilian Aviation Organization.

Aviation Forecasts More Useful, Accurate

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their use in flight planning.

"The increase in transmission speed with this new system is like changing from the pony express to Federal Express," Baker said. "The World Area Forecast System will give the world aviation community weather information necessary for safer operations, and more economical fuel allocation and departure timing."

Countries will receive the WAFS broadcasts through a dedicated satellite receiving dish connected to a customized computer workstation used to process the data. Pilots will get the weather forecasts in hard copy form through either their country's meteorological services organization or another provider of aeronautical weather information.

The satellite communications capabilities are a dramatic improvement over former land-based systems, jumping data transmission rates from the previous 75 baud to 38.4 kilobits per second.

Using the same satellite link as WAFS is another new network for sharing weather information in WMO Region

IV, which encompasses North America, the Caribbean and Central America. The Region IV Meteorological Telecommunications Network (RMTN) is a two-way communications system for sharing meteorological observations and forecasts between countries that make up Region IV. RMTN is a cooperative effort between the National Weather Service and the WMO. ☺

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