

# World and Nation

## Scientists reflect on Voyager success

By EMILIE VAN POUCKE  
Staff Writer

Scientists got their first opportunity to thoroughly examine the solar system's eighth planet this summer as the 12-year-old space probe Voyager 2 made its closest planetary contact with Neptune on Aug. 25.

"It's a very remarkable achievement and has completely exceeded all expectations," said National Academy of Sciences astronomer Paul Uhler.

NASA had originally only included Jupiter and Saturn in the Voyager's space trek because the normal life expectancy of a space probe is five years. But since its launch on Aug. 20, 1977, Voyager's command center was able to rechart the craft's course for Uranus and Neptune.

"It's like having a car last you for 10 million miles," Uhler said. "It's one of the best results per dollars we've had in space science." The project cost \$865 million.

The work of Voyager 1 and 2 has produced more than 5 trillion pieces of data, which exceeds the total amount of information from all past missions.

One big payback from Voyager is the discovery of the six moons of Neptune. All six moons will be named after a voting session at the International Astronomical Association.

Another major discovery from Voyager was the startling features of Neptune's moon Triton. Voyager got its closest look at Triton as it passed over Neptune's north pole. Photographs of Triton show long fault lines, cliffs, various ice structures and rugged terrain.

Scientists believe the numerous fault lines indicate Triton quakes may have occurred.

"Triton first froze on the surface, then the interior," said Edward Stone, chief scientist of the Voyager 2 project. "As the ice froze on the interior (and) the ice extruded, it caused the Triton quakes."

Even more surprising are Triton's active nitrogen volcanoes, which are believed to have erupted within the last 100 years. Stone said hypotheses about volcanic eruptions on Triton predict that its volcanoes do not have to be as hot as earth volcanoes when they erupt,

and that volcanic geysers reach a height of 40 kilometers on Triton. Scientists have not yet viewed an actual eruption, he said.

Three complete rings composed of pepperlike debris surrounding Neptune were also discovered. The rings were originally called arcs because first photographs showed the rings encircling only two-thirds of the planet.

The outermost ring is approximately 63,000 miles from the center of Neptune. A sheet of debris from Neptune's surface can be seen between each ring and beyond the outermost ring.

According to Randee Exler, public information officer at NASA's jet propulsion laboratory, Voyager 2 will obtain the largest amount of data possible because it is only 20 miles off target and a few minor deviations have been corrected by the use of its hydrazine jets.

Voyager 2 will now record radiation and plasma waves as it exits the solar system within the next year, said James Hooks, director of the Planetarium Science and Technology Center in Robeson County. The craft will search

for heliopause, the boundary between solar winds and interstellar winds. It will not reach a star for 1,000 years and will eventually pass through the constellation Sagittarius.

In the event Voyager 2 makes contact with other life forms, a record was placed on the outside of the craft as a means of communication. The outside of the record shows in mathematical language where our planet is located in relation to a nearby pulsar, where Voyager came from and where the sun and planets are situated. The record contains more than 100 photos that can be converted from sound to images. Photos of the earth include sounds of animals, people, machines and music.

"We hope that we would express that we have emotions," said Carolyn Young, Stone's assistant and a public relations officer.

In 40,000 years, Voyager will pass star 248, which is 1.7 light years away. In 296,000 years, it will reach the star Sirius, 4.3 light years away. The space robot has already traveled more than 7.136 billion miles along its trajectory.

## Anti-apartheid group attacks U.S. policy in South Africa

From Associated Press reports

WASHINGTON — A leading anti-apartheid advocacy group lambasted President Bush on Wednesday for not condemning the South African government and not supporting the escalating defiance campaign by the black majority.

TransAfrica urged the Bush administration to prevent the rescheduling of \$21 billion that South Africa owes U.S. banks. The loans are due next June.

"Bush has been an extraordinarily indecisive president," Randall Robinson, executive director of TransAfrica, told a news conference. "We can't afford an American president who fears taking a moral position."

Bush has not made any statement since the defiance campaign began several weeks ago with boycotts and demonstrations at segregated public places. It was capped Wednesday with a general strike to protest Wednesday's South African legislative elections, from which blacks were excluded.

At the White House, officials said Bush sent a letter several weeks ago to Anglican Archbishop Desmond Tutu, a leading black South African foe of apartheid. Tutu was teary-eyed by police and briefly detained last week.

Hurricane whips Atlantic waters

MIAMI — Hurricane Gabrielle veered northward in the Atlantic on Wednesday, taking its 135 mph winds away from the U.S. mainland, but threatening to sideswipe the island of Bermuda.

Gabrielle lashed the seas all the way to the East Coast, forming swells of five to 13 feet from Maryland to Florida, said Bob Sheets, director of the National Hurricane Center.

"We have a very large wind field around this hurricane," Sheets said. "It's generating swells over almost the entire western Atlantic."

Winds 40 mph or greater stretched

### News in Brief

500 miles across the storm's path as it curved to the north out in the mid-Atlantic, forecasters said.

#### Chilean military leaders resign

SANTIAGO, Chile — All 47 army generals handed in their resignations Wednesday to allow the president and army commander, Augusto Pinochet, to reorganize the high command, the government said.

The resignations came at the end of a four-hour annual meeting of the Army Qualification Board headed by Pinochet, according to a brief statement from the presidential press office.

Every year, the board meets to decide promotions and new assignments within the army high command. Pinochet makes the final decision.

Wednesday was the first time all the generals resigned.

They are giving Pinochet "freedom of action" to decide on changes, the government statement said without elaborating.

Press reports in recent days indicated this year's army reorganization would be more far-reaching than in recent years in anticipation of the end of 16 years of military rule and the generals' move from politics to the barracks.

Chileans vote Dec. 14 on a successor to Pinochet. The new president is to take office March 11.

Pinochet, who seized power in a bloody 1973 military coup, was forced to call the election after voters in an October national referendum rejected a military proposal to extend his rule until 1997.

Patricio Aylwin, 70, a moderate former senate president and candidate of a 17-party opposition coalition, is widely favored to win the election.

## Explosion rumored at Iraqi missile plant

From Associated Press reports

NICOSIA, Cyprus — Many sources report an Aug. 17 explosion at an Iraqi missile plant south of Baghdad, and some put the death toll at more than 700, but Iraq's obsessively secret government has said nothing.

Western diplomats reached by telephone Wednesday in Baghdad, capital of Iraq, confirmed an explosion occurred at the huge missile complex but said they had no details.

No information was available on what caused the explosion, but there was no immediate indication of sabotage.

In London, the daily Independent quoted diplomats and Middle East sources Wednesday as saying 700 people were killed, including Egyptian engineers helping the Iraqis develop a

new missile.

An official of the rebel Patriotic Union of Kurdistan reported by telephone that sources in Iraq said 700 bodies were removed from the plant and the casualty toll might reach 2,500 dead and wounded. The official, known to The Associated Press, asked that his name and location be concealed.

A British Broadcasting Corp. report said Egypt's Defense Ministry confirmed the explosion, but an army general at the ministry said privately: "I have no knowledge of an explosion or of Egyptian wounded coming to Cairo from Iraq."

The Independent said the casualties included Egyptian personnel who were flown to Cairo in three Egyptian air force transports Aug. 18.

Iraq, with Egyptian help, is believed

to be developing a modified version of Argentina's medium-range Condor 2, which the Iraqis call the Badr 2000, at the plant 40 miles south of Baghdad.

The Independent quoted Egyptian sources as saying Egyptian casualties were taken to the Maadi military hospital in Cairo. The report said the hospital was closed to civilians Aug. 19 and specialists in skin grafts, burns and respiratory ailments were brought in.

A senior official of the hospital told The Associated Press on Wednesday it had not been closed to civilians. He denied reports that large numbers of Egyptian casualties from Iraq had been taken there.

According to the Kurdish rebel official, the explosion started a fire that destroyed at least 30 percent of the missile complex, which is said to in-

clude laboratories, factories and living quarters for workers.

Several reports said the Iraqis used firefighting aircraft to fight the blaze but could not bring it under control until Aug. 25.

The number of people who worked at the plant was not known.

Sources linked to other Kurdish rebel groups said the facility included a chemical weapons factory and that some casualties had wounds consistent with chemical agents.

There was no independent confirmation, but Iraq is known to produce poison gases. The United Nations cited Iraq several times for using chemical weapons, outlawed under a 1925 Geneva protocol, during the eight-year war with Iran.

## British soccer fans run wild in Stockholm

From Associated Press reports

STOCKHOLM, Sweden — Police arrested about 100 British soccer fans who rampaged through downtown Stockholm on Wednesday before a World Cup qualifying match, the national TV news agency reported.

The hooligans, many drunk, ran through Stockholm's shopping district shouting, slapping passers-by and ripping clothing off sales racks outside stores. Police with riot shields chased and scuffled with them.

The news agency quoted a police duty officer as saying busloads of young Britons were taken into custody, but she did not know the exact number. "It could be 80, it could 120," she said. Most of them appeared to be teenagers.

Scattered incidents of brawling and vandalism were reported earlier from restaurants and on trains as some 2,000 visitors filtered through the city, waiting for Wednesday evening's game between Sweden and England.

The Swedes had braced for a display of British soccer hooliganism after one

fan drowned Monday after he jumped into the North Sea from a ferry carrying hundreds of would-be spectators to Stockholm.

British police said the man was under the influence of drugs and panicked when his companions sprayed him with a fire extinguisher.

Security was unprecedented for a Swedish sporting event. Police assigned 600 officers to the Rasunda soccer pitch in suburban Stockholm, and Swedish Radio said authorities were ready to stop the match if trouble broke out.

The Swedish Football Association said that at the request of its British counterpart, it withheld nearly 4,000 tickets it normally would have put on sale in Britain.

"The (British) FA told us they didn't want any tickets sold in England because of the trouble with hooligans when England has played in other countries abroad," said Lena Linborg, the association's ticket manager.

A few British fans bought tickets before they were sold out and would be seated in a special section heavily

guarded by police, Linborg told reporters.

She said those without tickets "won't see the match."

But Swedish Radio quoted some fans as saying "no police can stop 2,000 angry English fans."

Spectators were to be subjected to body searches, and television cameras were placed to monitor the crowd. Riot fences surrounded the stadium.

Five Britons were arrested Monday after they rampaged through a restaurant. Three were released and two were held on charges of assault and causing serious damage.

On Wednesday, about 20 fans helped themselves to beer at a self-service cafe without paying. "They didn't seem to be drunk."

They behaved quietly. They just took the beer and left," said Jelena Stanichik, the manager. One was nabbed by a patrolman and the rest fled.

British football clubs were banned from playing in European club competition after their fans were blamed for a

1986 riot-sparked stampede in Belgium that killed 39 spectators, mainly Italians.

Wednesday's events in Stockholm could affect a decision earlier this year by the UEFA, the French-based European soccer clubs' governing body, to readmit the British clubs next year if troublemakers are brought under control.

Ferry companies and travel agencies refused to accept group bookings from Britain to Sweden preceding the match. The Tudor Arms, which claims to be the only English pub in Stockholm, closed its doors to avoid trouble.

"Everybody recognizes there is a problem with the hooligans in England," the British charge d'affaires, Brian Austin, said in a radio interview.

Austin, responding to calls in the Swedish media to expel the British soccer fans, said it is difficult to distinguish between "people who want to see the match and who genuinely like football, and the other sort."

## American diplomats desert Beirut embassy

From Associated Press reports

BEIRUT, Lebanon — Helicopters yesterday evacuated U.S. Ambassador John McCarthy and his American staff to Cyprus after hundreds of Christians besieged the U.S. Embassy, accusing Washington of allowing Syria a free hand in Lebanon.

The 30 diplomats were flown to Cyprus because "deteriorating local circumstances... no longer permitted the embassy to function effectively," said Keith Peterson, a spokesman for the U.S. Embassy in Nicosia.

The sudden decision to pull out of Lebanon, where Christian forces and Syrian troops have been battling for six months, came after hundreds of angry Christians surrounded the embassy compound Tuesday in hopes of forcing Washington to take a tougher stand against the Syrian presence in Lebanon.

Gen. Michel Aoun, who heads the Christian Cabinet in Lebanon's dual government, said in a statement released by his office, "It seems the American Cain couldn't endure the stare of the Lebanese Abel, so he left."

Peterson called the evacuation temporary. Dismissing accusations the traditionally pro-American Lebanese Christians have repeated in recent days, he stressed, "The United States of America is not abandoning Lebanon."

He said the diplomatic staff would return "when the situation permits."

The U.S. Embassy is in the country's Christian enclave, where some 1 million Christians have been trapped for six months, ringed by the

hostile Syrians and their allies and angry that the West has not come to their rescue.

Peterson added, "The personnel were evacuated to Cyprus and are being flown from Cyprus to their final destination." He would not give details of their travel plans.

Asked about earlier reports that the American diplomats were flown aboard three helicopters to the British base of Akrotiri in southern Cyprus, Peterson said, "I cannot confirm that."

But unofficial sources in Cyprus said a U.S. transport plane and "several" helicopters flown from Sixth Fleet ships in the Mediterranean landed at Akrotiri Tuesday night.

Three helicopters took off at first light Wednesday and returned about two hours later, landing at Akrotiri at about 8:45 a.m. with the diplomats aboard, the usually reliable sources said, insisting on not being identified further.

One of the sources said the helicopters airlifted McCarthy and the diplomats from the embassy compound in Aoukar, and not from any of the regular Lebanese army air bases in the Christian heartland.

He said the diplomats "probably will be flown home by the transport plane." British officers at Akrotiri refused to comment on the base's role in the evacuation.

A diplomatic source, insisting on anonymity, said the British Embassy in Beirut was informed of the decision to evacuate the American embassy staff Tuesday night.

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## NATO to request military restrictions in Europe

From Associated Press reports

BRUSSELS, Belgium — NATO plans to propose limits on military maneuvers by Western and Soviet armed forces in Europe, the first time the alliance has suggested non-nuclear military constraints, NATO officials and diplomats said Wednesday.

Negotiators for the North Atlantic Treaty Organization will likely offer detailed plans for restricting military activities during the third round of negotiations aimed at reducing non-nuclear arms in Europe, said an alliance official, who requested anonymity.

The talks begin today in Vienna. Discussions between the 16 NATO nations and the seven Warsaw Pact countries began in early March to cut

troops, tanks, combat aircraft and helicopters, and armored personnel carriers. The bargaining covers an area spanning the Atlantic Ocean to the Ural Mountains in the Soviet Union.

The negotiations are designed to produce a treaty setting equal ceilings on NATO and Warsaw Pact tanks, artillery, armored troop carriers, aircraft, helicopters and possibly manpower.

President Bush in June said he wanted to complete the agreement within a year, but the two alliances have not agreed on a number of basic issues, including measures to verify how an agreement would be kept.

The latest NATO proposals mark "the first time Western countries are planning to introduce military constraints," said a NATO official, who

also spoke on condition of anonymity. "Major military activities should be cut, like maneuvers," he said.

The proposals would set a threshold limiting the size of these exercises to several tens of thousands of soldiers or several hundreds of battle tanks, he said. One maneuver exceeding the limit could be held every two years.

Also, officials were working on details of proposals for exchanging information on force structures and verifying compliance with a treaty.

In Vienna, a Western diplomat requesting anonymity said "some tough issues" remained to be resolved on verification.

He specifically mentioned divisions between countries like the United States and Canada, which want maximum surveillance, and European nations, which are concerned about constant visits by Soviet-bloc military personnel.

The Europeans, he explained, say, "I don't want to live with Soviet inspectors climbing in and out of my bases all the time."

Another Western diplomat, who spoke on condition he not be further identified, said he expected the verification proposals to be presented during the current six-week session.

The senior NATO official said the Western nations want to set up ways to monitor in detail the arms cuts suggested by the treaty.

"Once the reductions are achieved... we want to have confirmation by intrusive measures of compliance," he said.

He said the allies want regular on-site inspections of places where equipment targeted in the treaty would be located. "Each participant is liable to receive on its territory an agreed quota of such inspections," he said.

A separate package of proposals, he said, would cover the exchange of information between the East and West on the command structure of their ground and air forces.

It also would give the locations of units singled out for reductions, storage depots and armored vehicle-launched bridges.

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