

## STOCKS

Dow Jones  
average up 2.52  
to 1,558.94.

Prices on A-20  
Business on A-19

## FOOD

■ Buffalo, Pasta, Pate,  
Gourmet Lettuce and  
other Taste Trends

Section D

## SPORTS

■ Pros Bear Watching  
■ Patriots' Problems  
■ UH Baseball Outlook

Section E

## INDEX Vol. 75, No. 29

Astrology .....	E-7	Dear Abby .....	B-2
Business .....	A-19	Editorials .....	A-22
Stock List .....	A-20	Obituaries .....	A-9
Classified .....	E-8	Sports .....	E-1
Comics .....	E-7	Today .....	B-1
Crossword .....	E-7	TV Logs .....	B-2
Donnelly .....	E-7	Weather .....	A-2

62 Pages, Six Sections

HOME EDITION

WEDNESDAY

# Honolulu Star-Bulletin

Jan. 29, 1986 Honolulu, Hawaii

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## Ships Retrieve Pieces of Challenger; Probers Seek Cause of Shuttle Blast

### Speculation Focuses on External Fuel Tank

By Harry F. Rosenthal

CAPE CANAVERAL, Fla. (AP) — The sea yielded bits and pieces of Challenger today to ships combing 5,500 square miles for clues to the fireball that killed five men and two women and halted all U.S. space flights in the foreseeable future.

Speculation focused on an ominous bright flash that was visible at the base of the fuel tank before the explosion, but shuttle director Jesse Moore said he wanted to discourage that.

"You are asking me to lay out causes," he said. "I'm not prepared to do that."

None of the bodies had been recovered. NASA scheduled a memorial service at the Johnson Space Center in Houston on Friday and said President and Mrs. Reagan will attend.

IN THE CAPE Canaveral area, plans were formed to name a school after Christa McAuliffe of Concord, N.H., who was aboard the shuttle as the first "common citizen" to fly in space. She had planned to teach two lessons from space to schoolchildren all across the country.

Killed along with McAuliffe were commander Francis R. Scobee, 46; pilot Michael J.

Smith, 40; Judith A. Resnik, 36; Ronald E. McNair, 35; Ellison S. Onizuka, 39, and Gregory B. Jarvis, 41.

An investigation team held its first meeting to start the long inquiry into why the \$1.2 billion shuttle, appearing to be on a perfect course, suddenly exploded 74 seconds after liftoff yesterday, raining fiery debris into the Atlantic Ocean.

The space agency impounded every scrap of paper, film and data connected with the launch and pleaded with people to turn in anything they find on the beaches in this central Florida area.

"We need every piece of that because we don't know where the clue might be," said Richard Smith, the director of the Kennedy Space Center.

THE LARGEST remnant was a chunk of metal 12 feet by 4 feet and Moore said it was unlikely bodies of the crew members would be found.

"I would always like to hold out hope," he said. "However, we've seen a lot of small debris." The crew apparently had no warning.

"We have no indication that

Turn to Page A-4, Col. 1



**A CHILD'S SORROW**—A young girl rubs her eyes during a memorial service for teacher Christa McAuliffe at St. John the Evangelist Church in her hometown, Concord, N.H., this morning. More than 300 adults and children attended. —AP Photo.

## Town Devastated by Teacher's Death

By George Esper

CONCORD, N.H. (AP) — Concord died with Christa McAuliffe.

"Everything just kind of came to a standstill," said Karen Nelson. "People are not moving around like they normally do."

High school classes were canceled. Legislative hearings and court trials were called off. Flags flew at half-staff.

The town cried. A celebration by McAuliffe's students at Concord High School turned into a wake. McAuliffe's legion of admirers.

Turn to Page A-4, Col. 2

## Scientists Assess Delays in Future Space Missions

By Helen Altonn  
Star-Bulletin Writer

The explosion of the space shuttle Challenger has thrown the nation's space program into uncertainty, with possible effects on Hawaii's space research programs.

University of Hawaii astronomers and planetary scientists are involved in two major space missions scheduled this year. They

*Reaction in  
Hawaii, Page A-3  
Journalist Page  
Delayed, Page A-6  
Editorials and  
Commentary, A-22*

are the Galileo mission to Jupiter in May and the Hubble space telescope in October.

Both the Galileo spacecraft and the Earth-orbiting telescope are to be launched from manned space shuttles.

"It is a very serious situation," said a UH scientist, who asked not to be identified because "it is too sensitive a topic."

The military has some space launches from the ground using "throw-away boosters," he said. "But the civilian space program is highly dependent on the shuttle. The entire space capability of the United States is concentrated in that one system. Every launch requires a crew to kick out the satellite."

UH PLANETARY scientist

Jonathan Gradie said, "The seven people who lost their lives (in the Challenger) are the true heroes...the people who risk their lives to go up into space to do all this stuff."

"It's so sad to see them go like this...But, as long as man is going into space there is going to be more of this," Gradie said.

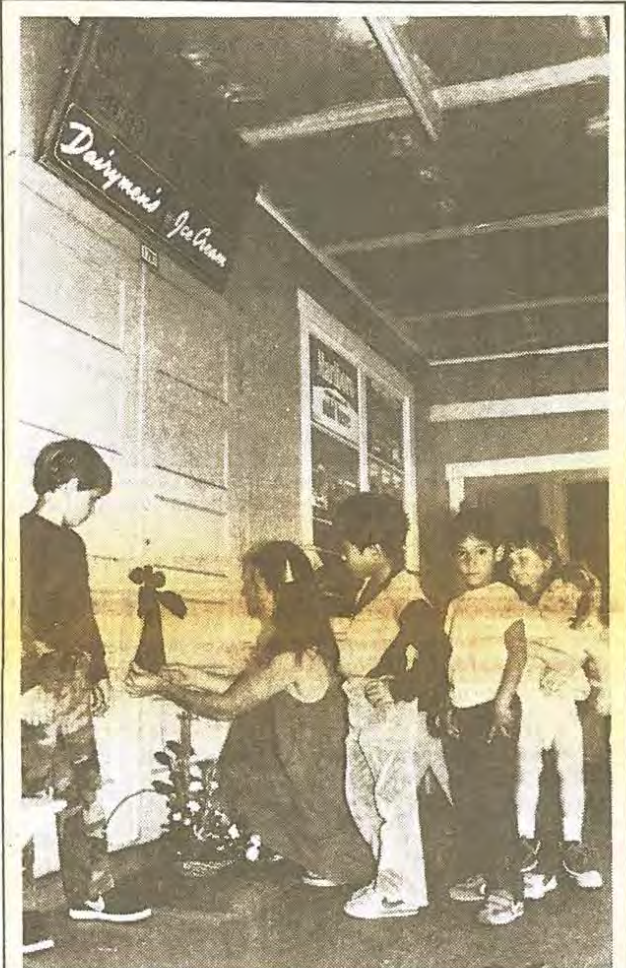
"It is no different than Christopher Columbus coming to America. Everything possible happened to people back then... Similar, analogous things are going to happen in space... It's so unfortunate that we get to see it first-hand..."

Gradie said the tragedy yesterday "certainly throws the whole space program into a real state of flux — not just because it's a \$1.4 billion spacecraft and seven people were killed, but because of ramifications down the line on what kind of space vehicles can be launched."

There are only four shuttles and one is scheduled to go every six weeks, with "tremendous pressure to get these things launched on time," he said. The immediate effect of the Challenger's loss is that "25 percent of the available launch force is missing," he said.

SCIENTISTS ARE especially concerned about a delay in the Galileo mission, scheduled for launch May 20. It is considered the most important planetary mission to be launched by the National Aeronautics and Space Administration in a decade. But it can only be launched within a certain period for "celestial me-

Turn to Page A-6, Col. 1



**REMEMBERING AN ASTRONAUT**—Terry Frehm places a black bow on the door of the Onizuka store as her children and other neighborhood kids gather around. —Star-Bulletin Photo by Rod Thompson.

## Onizuka Neighbors Are Saddened by Challenger Tragedy

By Rod Thompson  
Big Island Correspondent

KEOPU, Hawaii — Terry Frehm knelt before the closed doors of the Onizuka Store and tied a bow from a length of black cloth on to one of the knobs.

She cut the cloth with a pair of scissors so the bow looked just right.

Earlier in the day, someone had placed a bouquet of flowers on the door mat on

the store's porch. Whoever left the simple arrangement didn't want any attention. There was no card, no signature, no name to take credit for the thoughtfulness.

Frehm and her children live near the store run by Mitsue Onizuka whose son Ellison died when the space shuttle Challenger exploded yesterday.

"We see Mrs. Onizuka every

Turn to Page A-6, Col. 3

## Bishop Museum Funding Drive Opens

By Helen Altonn  
Star-Bulletin Writer

Five Honolulu business leaders today presented \$75,000 to the Bishop Museum in a campaign to inspire other businesses to support the museum as "our legacy to the future."

Alexander & Baldwin made the lead gift of \$25,000 and pledged \$75,000 in matching funds for individual and family contributions and new Bishop Museum Association memberships.

A&B also gave the museum \$10,000 to administer the challenge campaign.

The two-part campaign — for business support and community donations — was announced at a news conference today in the museum's historic Hawaiian Hall.

The occasion launched a newly formed Business Support Council, headed by Robert E. Black, president and chief executive of E.E. Black, Ltd., and a museum trustee, and Robert J. Pfeiffer, chairman and chief executive officer of A&B.

"I have a very warm spot in my heart for the Bishop Museum," Pfeiffer said, noting that he started visiting there in 1929 as a fifth grader at Lincoln School. He returned often to the museum and served as one of its trustees a few years ago, he said.

"I'm doing this, not because it's my job or A&B, but because Bobby Pfeiffer has a great debt to pay to the Bishop Museum."

As a museum trustee the

past 1½ years, Black said he has become "totally impressed with the substance of this organization" and its efforts to be fiscally responsible.

He said the support council's goal is to raise \$175,000 from the business community to provide "the continuing support that the museum needs."

Leading the way today were A&B's contribution of \$25,000 and \$10,000 each from the Gannett Foundation, AT&T Hawaii Area Operations, the Honolulu Advertiser and Black Development Corp.

Presenting the checks with Black and Pfeiffer were Philip T. Gialanella, publisher of the Honolulu Star-Bulletin and president of the Hawaii Newspaper Agency, representing the Gannett Foundation;

Ken Sandefur, Hawaii Area vice president of AT&T, and John Griffin, Honolulu Advertiser editorial page editor.

A&B also will give the museum \$2 for every \$1 donated by people who have never given to the museum before or for additional money given by previous donors. For a \$25 donation, for example, the museum will receive \$75 through the A&B program.

The challenge applies to all individual gifts received by the museum between Jan. 1 and June 30 this year, up to a maximum of \$75,000. (Corporate, foundation and government grants will not be matched under the A&B program).

A&B gave the museum \$10,000 to cover the campaign costs

Turn to Page A-6, Col. 1



**MUSEUM BACKERS**—Bishop Museum Director W. Donald Duckworth, left, accepts a \$25,000 check for the museum from Robert J. Pfeiffer, right, co-chairman of the museum's new Business Support Council. The Gannett Foundation, which also made a large contribution to the council, was represented by Philip T. Gialanella, center, publisher of the Honolulu Star-Bulletin. —Star-Bulletin Photo by Terry Luke.



# Moanalua Students Mourn Shuttle Crew

By Phil Mayer  
Star-Bulletin Writer

The bulletin board on which Moanalua High School students had planned to track the space shuttle Challenger's flight was draped in black ribbon.

The ribbon surrounded photographs of teacher Sharon Christa McAuliffe and astronaut Judy Resnik and a carefully typed memorial listing the names of the crew members who died when the shuttle exploded yesterday.

On that list was the name of Hawaii's Ellison Onizuka, who last April spent a day at the school his nephew, Jason Sakamoto, attends.

Jason was not in school yesterday. He had gone to Cape Canaveral with his parents, John and Norma Sakamoto, to watch his uncle's second flight into space.

His classmates, all apparent space program enthusiasts, had watched the explosion "over and over again" on the school's audio-visual equipment.

Moanalua is the only public school in the state to have its own satellite dish. It is a 10-foot antenna that can receive signals coming from any space satellite, and among the transmissions it's been taking each day are those of the National Aeronautics and Space Administration.

THOSE MESSAGES and material mailed by NASA have enabled Moanalua's Computer Club to become part of NASA's Mission Watch, a public relations and educational effort aimed at serious students of space.

Peter Garretson, 17 and a junior, explained that "we were all looking forward so much to taking part in the lessons" teacher McAuliffe "was going to send back."

NASA was to make the first of those two lessons available tomorrow to all U.S. schools through the Public Broadcasting System.



**IN MOURNING**—Moanalua High School students, including from left, Reyna Sakamoto, Michael Minakami, Tisa Seely, Brian Kang, Peter Garretson, Tim Oswandel and Kevin Iga, put up a bulletin board about the Challenger. Yesterday, after the shuttle exploded, the board was draped with black ribbon. —Star-Bulletin Photo by Dean Sensui.

Michael Minakami, 16, said the Computer Club may rename itself to honor Onizuka.

The junior recalled that on Onizuka's visit last spring, the astronaut congratulated him for winning second place in last year's Science Fair with his computer project.

Minakami said, Onizuka told him "I'm glad there are still people interested in learning and striving for excellence."

TIM OSWANDEL, a 15-year-old sophomore and Computer Club member, recalled Onizuka as "very friendly. He was such a regular guy. He talked to everybody."

Brian Kang, 17, was "especially impressed by him because he was local boy who had big dreams and made them come true."

Reyna Sakamoto, a senior, re-

called Onizuka as "really down to earth" and said that she hoped yesterday's accident wouldn't destroy "the credibility of the (space) program."

Kevin Iga, 15, who is a sophomore, was seconded by all the others when he added, "I certainly don't think that the accident means that we should send only unmanned craft into space."

All of them agreed with Tisa

Seely, 17, when she said, "I don't think I'll be able to do any space travel... my children, maybe, and my grandchildren."

Only Dusty Eckerd, the Moanalua faculty member in charge of the school's TV system, disagreed. "I've seen so many things I never expected to see, I think space travel is going to become routine in my lifetime," he said.

## Push Made to Name Center for Onizuka

### Senator Holt Makes Proposal

State Sen. Milton Holt yesterday proposed renaming the University of Hawaii's Mauna Kea observatory on the Big Island in honor of Air Force Lt. Col. Ellison S. Onizuka.

Onizuka, the first astronaut from Hawaii, was born in Kealahou. He and six other crew members died in yesterday's fiery explosion of the space shuttle Challenger.

Holt said Onizuka should be remembered for his contributions to the nation and state, as well as for his humility, warmth and belief that the challenge of space travel was greater than the risks.

The UH Board of Regents is responsible for the naming of university buildings and facilities.

Regents Chairwoman Gladys Brandt told Holt and members of his Higher Education Committee yesterday, "I, in a personal way, think this is a very wonderful thought. It is testimony to the people of Hawaii and their caring quality."

She noted that Onizuka is a native of the Big Island, "where all our space facilities are."

Brandt said the board would discuss the matter once it receives a resolution proposing the name change. Holt said he intends to present the resolution for vote by the full Senate soon.

Big Island Sen. Malama Solomon also said she thought it was a good idea.

## Onizuka Family Requests Privacy

The family of Hawaii astronaut Ellison Onizuka, who died in the space shuttle explosion yesterday, has been flown to the Johnson Space Center in Houston.

Onizuka's wife, two daughters and his mother — along with a group of family members and friends from the Islands — were at Cape Canaveral in Florida to watch the shuttle Challenger take off yesterday.

The Onizukas, along with the families of the six other astronauts killed in the accident, were taken to Houston last night.

A spokeswoman at the center said this morning that the families have all requested privacy. No information on where they are staying or what their plans are will be released, she said.

Vice President George Bush met with the families late yesterday. A spokeswoman there said she believed the families were gathered together in the crew quarters in their meeting with Bush.

## Other Isle Astronaut in Houston

Hawaii's other astronaut, Charles Veach, spent yesterday at Mission Control in Houston, Texas.

Veach of Kahala was selected for astronaut training in May 1984 along with 16 other candidates.

However, Veach, 40, declined to make a statement about yesterday's tragic shuttle accident because "astronauts are instructed not to make any statements to the media," he said.

"I hope you can appreciate the orders we are under," Veach said.

John Lawrence, public affairs officer at the space center, yesterday said that all media contact with the astronauts has been temporarily suspended.

"We (NASA) need some breathing room, some time to gather ourselves from this tragedy," Lawrence said.

Veach, a 1962 graduate of Punahou School, was a combat pilot in Vietnam and also spent two years with the Thunderbirds, the Air Force's precision jet fighter flying team.

Most recently, he was working for NASA as an aerospace engineer and pilot at the Johnson Space Center near Houston

## School Children Briefed on Space Science



**SPACIOUS SPACESUIT**—Ten-year-old Robert Lewis gets to try on an adult-sized spacesuit as he helps NASA consultant George O'Neil during a demonstration at Hale Kula Elementary School today. —Star-Bulletin Photo by Dean Sensui.

By Hildegaard Verploegen  
Star-Bulletin Writer

Robert Lewis, 10, liked being engulfed in a spacesuit in the cafeteria at Hale Kula Elementary School so much this morning that he didn't want to get out of the astronaut's uniform.

Lewis bluntly said, "No," when NASA consultant George O'Neil asked "Are you ready to get out of there?"

The fourth-grader reluctantly relinquished the spotlight, standing on top of an equipment trunk in front of 500 classmates at the Schofield Barracks school when O'Neil said, "I've got to continue my lecture."

Earlier, O'Neil dubbed Lewis "Astronaut Robert" as he helped him into the adult-sized spacesuit. Robert grinned and flapped his arms like wings.

With that, the mood in the cafeteria that had been serious and somber turned to laughter and enthusiasm as the sandy-haired O'Neil explained America's space program.

O'Neil, a professor of earth-space science at Oklahoma State University, has served as an educational consultant to NASA since July. This month he began giving lecture-demonstrations in Central Oahu schools.

He and William S. Horvath, another NASA consultant and a specialist in space medicine, will visit schools in other districts in the coming weeks. Horvath also is a professor of science education at Oklahoma State.

O'NEEL HAD scheduled one at Moanalua Intermediate School yesterday, but it was canceled after he learned that seven astronauts had been killed when the space shuttle Challenger exploded shortly after liftoff.

"Today will be a day of reflection," O'Neil said yesterday, but "tomorrow I'll continue the education program."

And that he did.

"We're all aware we lost a shuttle and astronauts," O'Neil told students today at the start of his lecture demonstration.

He told the students Challenger pilot Mike Smith, killed in yesterday's disaster, "Was a good friend of mine."

But he didn't dwell on the tragedy and told the young crowd, "I'm going to talk to you about what we're doing" in space.

O'Neil said the National Aeronautics and Space Administration "has been criticized

for talking too much about safety," but safety is foremost.

He went on to explain the meaning for each initial in NASA. The last "A," for example, stands for administration, he said, and "administration is a bunch of people who make sure everything works properly."

He then showed students models of airplanes and explained how a wind tunnel works.

"JET MOTORS and prop motors just get the airplane going down the runway." It's the speed of the air going across the top of the wing that gets the plane off the ground, he explained.

His manner with the children was easy and relaxed as he explained two "languages" — music and mathematics — used to talk back-and-forth between satellites.

He showed how sounds are collected by an incoherer and relayed on a decoder by computer.

The students laughed when O'Neil said "If you all fed your names to me at once, I'd get gobbledygook." But he explained computers can receive information from sensors on shuttles simultaneously and record it properly.

O'Neil explained satellites in space "do a lot of work for us."

Cameras on satellites take photos that tell Kansas farmers about moisture in their fields, he said. He also said medicine can be made in space in ways that it cannot be made on earth.

He showed students a model of the Challenger shuttle and demonstrated how tiles are glued on the outside of all shuttles so they can withstand 2,000-degree heat.

HE ASKED fourth-grader Kenyatta Francis, 10, to hold a tile as he used a butane torch to demonstrate aspects of the gluing process.

Along with the red-white-and-blue spacesuit, O'Neil showed the students packages of freeze-dried peaches, chocolate pudding and cream-style corn that the astronauts eat during space flights.

He encouraged students interested in becoming astronauts to study foreign languages because he said they are needed to talk to scientists and astronauts from other countries.

Also needed is knowledge of mathematics, engineering and computer science.

## Onizuka's Japan Relatives Mourn Astronaut's Death

TOKYO (AP) — Ellison Onizuka, one of the seven astronauts killed in the explosion of the space shuttle Challenger, was mourned by families and acquaintances today in the mountainside town of his ancestors.

"I saw it on television but I

still can't believe it," said Tatsuki Tonegawa, 67, of Ukiha on the western island of Kyushu.

She said Onizuka, a Japanese-American whose grandparents moved from Ukiha to Hawaii, visited his family's ancestral gravesite in

the town in 1983 and planned to return in April. The former aerospace engineer and pilot who died in the explosion yesterday was the first Japanese-American to participate in the U.S. space program.

Mrs. Tonegawa, whose husband Minoru is a distant rela-

tive of the astronaut, said in a telephone interview that they had received letters from Onizuka and other astronauts last October and again Monday inviting the family to Florida to watch the Challenger's launching.

YOSHIKO ONIZUKA, wife

of Isamu, another distant relative, remembered Onizuka as a "quiet man who became friends with everyone in town. I just cannot believe he was one of the seven space crewmen killed."

Onizuka visited his ancestral home, a town of 20,000, with his mother, Mitsue, his wife, Lorna Leiko, and their two children.



## A Day of Tragedy for Space Program

The horror of yesterday's space shuttle explosion will be etched in the minds of millions for years to come. Lulled into complacency by decades of spectacular successes for the space program, Americans were completely unprepared for the disaster that took the lives of six astronauts and one schoolteacher.

After 55 U.S. manned space flights in which no one had died, Americans took success for granted. That made the shock greater, the tragedy harder to bear.

Of course, there had been problems before, and one disaster — the 1967 fire on the launch pad of Apollo 1 that killed three astronauts during a rehearsal. But that was 19 years ago, and every time a problem had arisen since then NASA's technicians had always come up with a solution. People assumed they always would. Space flights had become routine.

The inclusion of teacher Christa McAuliffe on yesterday's flight reflected the strong confidence in the shuttle's safety and made disaster even more unthinkable.

This time, however, there was no time for solutions. There was apparently no indication of trouble before the explosion came, no opportunity to react. Now we must wait while the experts determine what went wrong.

There can be no question, however, of turning back. As President Reagan said, "... you don't back up and quit some worthwhile endeavor because of tragedy."

The space program has been set back by this disaster but we have no doubt that it will continue. The question is when, not if. The seven men and women whose deaths we mourn would not have it otherwise.

### Ellison Onizuka

Hawaii had a particular reason to mourn the explosion of the space shuttle: the Islands' first astronaut was one of the victims. Lt. Col. Ellison Onizuka, 39, had gone from a Kona coffee farm to the space program. He had completed one successful shuttle flight and was embarked on a second when disaster struck.

The grandson of immigrants from Japan, Mr. Onizuka was born in Kealahou on the Big Island. He attended Honokahau Elementary School and Konaheana High School and went on to study at the University of Colorado, eventually earning a master's degree in aerospace engineering.

He entered the Air Force in 1970 and became a test pilot. That led to his selection as an astronaut in 1978. In January 1985 he was a crew member on a flight of the shuttle Discovery.

After that flight he returned to Hawaii on an official visit for NASA, speaking to students and receiving honors from the state Legislature. We are fortunate he was able to share his experiences with many Hawaii residents, particularly on the Big Island.

Friends and relatives said that he was aware of the danger in space missions but wasn't afraid. He felt "the challenge was greater than the risk."

Ellison Onizuka is dead but the challenge of space remains. There will be others from Hawaii with the courage and ability to follow in his footsteps.

### Dismissal of Charges in Child-Abuse Case

Circuit Judge Robert Klein made a very difficult decision in ruling that two small girls could not testify in the trial of the man accused of kidnapping and sexually assaulting them.

The ruling was based on the judge's finding that the girls' memory of what had actually happened could not be relied upon. They had undergone repeated and intensive questioning by parents and criminal investigators, and the judge concluded that the children may have confused reality with suggestions that had been made to them.

The judge's subsequent dismissal of the charges against James McKellar was made inevitable by the judge's previous ruling. Coincidentally, the dismissal followed similar actions in widely publicized child-abuse cases on the Mainland.

As in the Mainland cases, questions remain regarding the judgment shown by the prosecutor in obtaining an indictment and whether the police investigation was conducted properly.

In addition, civil suits continue against the preschool from which the children were allegedly abducted. And the acquitted defendant says he is considering legal action to recover his financial losses.

The defendant has described the ordeal he experienced as a result of his indictment. He contends that his acquittal does not restore his good name or compensate him for his suffering.

Under our system of justice, the accused is presumed innocent by the court until proven guilty. But that presumption unfortunately is not always understood by the general public. To many people, accusation and guilt may seem the same.

Consequently, to be accused of a crime can be terribly damaging. Subsequent vindication may not undo the damage.

This case ought to remind us of the importance of the presumption of innocence. And it should emphasize to prosecutors and grand jurors the necessity of conducting their duties with full awareness of the impact their decisions can have on the community and the personal lives of its individuals.

# Lessons of the Space Tragedy

By James Reston

WASHINGTON — The president's State of the Union address remains one of the majestic occasions of national and even world politics. It assembles together, before a vast television audience, the chief executive in the well of the House, addressing the representatives of the people, in the presence of the members of his Cabinet, the Supreme Court and the diplomats of the nations.

But this year it was different. For the first time, a tragedy of American astronauts sent a shudder through Washington, and forced the president to postpone his address on the State of the Union.

This explosion over the Florida Keys reminded everybody here of the accidents of life. In Washington, they were so sure before that there was an answer to human conflicts — some economic, military, philosophic or scientific answer — until the explosion over Cape Canaveral made them pause and wonder.

For then people around here of both parties began to realize that they were dealing with weapons that could blow up the world and over which, even with the uttermost care, they could not always control. This is the vague lesson here of the tragedy in the Florida skies.

PRIOR TO THAT calamity, it was a pleasant but controversial thought here, as President Reagan proposed to discuss in his State of the Union address, that the United States had a new defense against nuclear weapons that would bring the Soviets to their senses and to the negotiating table. But the tragedy at Cape Canaveral forces him to reconsider the accuracy of his space weapons and postpone his address to the nation.

In some ways, he must have been relieved to avoid a clear, plain and honest definition of the present State of the Union. His own folks in the White House were divided about what he should say.

On the one side, he had his pollsters, who were reminding him that he was riding high, more popular than President Eisenhower, or even Franklin D. Roosevelt, after five years in the White House.

On the other side, everything was going for him but the facts: He was all right on inflation,



down just where he wanted it and on unemployment, down slightly at 7.2 percent over the last two years.

This year's trade deficit, \$85 billion, the largest ever.

This year's federal deficit, more than \$200 billion, the largest ever and, over the last five years, doubling the nation's trillion dollar debt.

IN THE CONTROVERSY over his State of the Union message, some of his aides said he had to deal with the problem of the

### The State of the Union.

American family, one of his favorite subjects.

But the facts were not on his side. According to the statistics of his own administration, almost 12 million families in the United States are now headed by a single person — one out of every four.

Half as many people, his administration says, are divorced

every year as are married; more than half of all black children are born out of wedlock; and one out of six children, again according to the Reagan administration, are living under the poverty level defined by the administration, while half of the black children do the same.

Some of the folks writing Reagan's State of the Union message suggested that maybe he should have to pay attention to these facts, but others, including the president, thought this was a bum idea.

For now, the State of the Union address has been postponed to deal with the tragedy of Cape Canaveral, and the president will resume talk about the State of the Union later. There are so many fundamental questions involved here: What really is the purpose of space exploration? Could it be done without men-missiles? Is the risk worth the cost?

WHEN REAGAN GIVES his address, the question will be whether his view of the State of the Union will stand alone, or

whether it will be debated seriously in the House and the Senate.

It would be interesting if, for the first time, the House and the Senate were given equal time on television to discuss the State of the Union.

The other day, we are told, more than 100 million people in this country watched the Super Bowl and wondered whether the big Refrigerator of the Chicago Bears could make it, which he did, in his clumsy way. Would those same viewers watch if the Senate debated not only the state, but the fate, of the nation on television?

There is nothing in the Constitution that forbids it. I talked the other day with the leaders of Congress, who would welcome it — allowing the members of the Cabinet and even the president himself to defend his view of the State of the Union. None of them thought it would happen, but they all agreed it wouldn't be a bad idea.

(c) N. Y. Times News Service

## The President's Eloquent Speech

By R. W. Apple Jr.

WASHINGTON — A national disaster like the destruction of the space shuttle Challenger presents a leader with an especially difficult problem. He must identify with the ensuing national grief — lead the mourning, in a sense — but he must also confine it and direct it, lest it evolve into a sense of national despair and futility.

That need to channel emotion, to share it but shape it and, if possible, to transform it eventually from a negative into a positive force, lay behind President Reagan's decision yesterday to defer his State of the Union message and substitute for it a brief televised speech to the American public.

Reagan needed not only to head off any suggestion of cutting back the space program, or of eliminating future "citizen passengers" such as Christa McAuliffe, the 37-year-old social studies teacher from Concord, N.H., who was killed along with the six crew members.

He also needed to guard against any diminution of the sense of adventure, of self-confidence, of destiny to lead that he has striven so hard to rekindle in the American people after the will-sapping failures that befell the United States in Vietnam and Iran.

SO THE PRESIDENT assured his listeners that "nothing ends here," that other teachers would make the journey into space and that the United States would continue to explore far horizons. "They had that special grace,

that special spirit that says, 'Give me a challenge and I'll meet it with joy,'" Reagan said. "The future doesn't belong to the fainthearted, it belongs to the brave. The Challenger crew was pulling us into the future, and we will continue to follow them."

The need that the president

### The right words for a tragic time.

addressed last night is a need as old as organized societies. In crises past, it has been successfully met by the celebration of heroes and martyrs, by the defiant rhetoric of Charles de Gaulle after the fall of France and Winston Churchill during the Blitz, even by the popularization of gritty, bittersweet songs like "Tipperary" or "Praise the Lord and Pass the Ammunition."

Failure to meet the need is inevitably costly. It ruined Herbert Hoover's presidency after the Great Crash, Lyndon B. Johnson's presidency after the Tet offensive, Jimmy Carter's presidency after the capture of the American Embassy in Tehran.

THE SENSE of national catastrophe is inevitably heightened in a television age, when the whole country participates in it. A first hint of the power of the electronic media to bring disaster directly into living rooms came with the radio broadcast of the explosion of the zeppelin Hindenburg in 1937; but that was as nothing compared with the pictures yesterday morning of the space shuttle exploding, disintegrating and etching chaotic, sickening contrails against the blue sky.

White House staffs always urge in moments of stress that presidents carry on with their

schedules, with "business as usual," to give an impression of steadiness and continuity in the Oval Office. According to several sources, that was the initial intention of Reagan with regard to the State of the Union speech.

But he himself, as he said shortly after the explosion, had found the television pictures "traumatic," and he obviously sensed that the country as a whole would find them similarly wounding. He quickly decided to change his plans.

By remarking that he and his wife had been "pained to the core" by the catastrophe, Reagan established an elegiac tone, but by his homiletic words about the need to press ahead and by recalling a great explorer of another era, Sir Francis Drake, he sought to ensure that the initial shock and sadness would evolve, in time, into a renewed sense of determination.

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## Space Shuttle Benefits

By Stuart Diamond

NEW YORK — The space shuttle and the technology that spawned it are part of an expanding industry responsible for numerous existing and projected benefits worth billions of dollars in medicine, communications, food production, energy exploration and other fields.

The shuttle is considered an integral link in the building of factories, research laboratories and other extraterrestrial facilities that could far advance current technology. In space, purer medicines, stronger materials and better measurements can be made. The result can be major improvements in life on Earth, according to experts.

Among the dozens of experiments that had been performed aboard the Challenger, which exploded yesterday, was the production of microscopic latex spheres that last year became the first space-manufactured product to be sold. The spheres are much more uniform than those made on Earth and are used to calibrate instruments that measure blood cells, paint particles, flour, cosmetics and other materials for which size is considered critical.

Another effort aboard the Challenger was measurement of soil moisture content, aimed at providing more data for farmers on when to water, when to apply pesticides and fertilizers and how to grow crops. Such studies promise enormous benefits in energy and water saving

and higher crop yields, researchers say.

THE CHALLENGER yesterday carried the second of three satellites that was to be deployed to replace space-tracking stations on the ground. The new system of three satellites was designed to provide more reliable data on space flight.

Isaac T. Gillam, head of the space commercialization program for the National Aeronautics and Space Administration, said in an interview yesterday that the business prospects evidenced by the shuttle are only in their infancy. "But we have seen it can succeed in business with communications satellites," he said.

The satellite communications business has risen from virtually nothing two decades ago to an estimated \$3 billion a year, according to the Center for Space Policy, a Cambridge, Mass., consulting firm specializing in space business opportunities. The center estimates that annual space business revenues from the many new technologies could reach \$50 billion by the year 2000.

David W. Lippy, president of the center, said 200 businesses in Massachusetts alone could trace their roots to the Apollo moon-landing program.

"It would be a double tragedy if this disaster led people to question whether the investment was worth it," he said.

SO MANY NEW products and

advances have occurred from the space program, of which the shuttle is the latest embodiment, that the United States cannot afford to slow the program and let other countries forge ahead, Lippy added.

Many of the space benefits thus far have been from unmanned satellites sent up in expendable vehicles. Such satellites have enhanced communication, monitored weather patterns, explored for oil and enabled better maps to be drawn.

More broadly, the entire space program, including the manned flights, also has resulted in strong, lightweight materials now used in everything from car parts to bicycles to packaging. Alternative energy sources and devices, from solar cells to fuel cells, have advanced further due to research connected with the space program.

The shuttle expands those efforts by providing an orbiting space laboratory and factory where gravity, pollution and atmosphere do not interfere.

"The shuttle has tremendous value in trying out new technologies," said Ray A. Williamson, a space expert at the Office of Technology Assessment, an arm of Congress. "The ability to do testing in space and bring the objects back is extremely important, especially in materials research. Without the shuttle, the possibilities for space commercialization are pretty limited."

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President Reagan