The Honolulu Advertiser

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Aloha!

Today is Wednesday, Jan. 29, 1986

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Chili, America's "bowl of blessedness"

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by Bil Keane

"Want me to scratch something for you, Grandma?"

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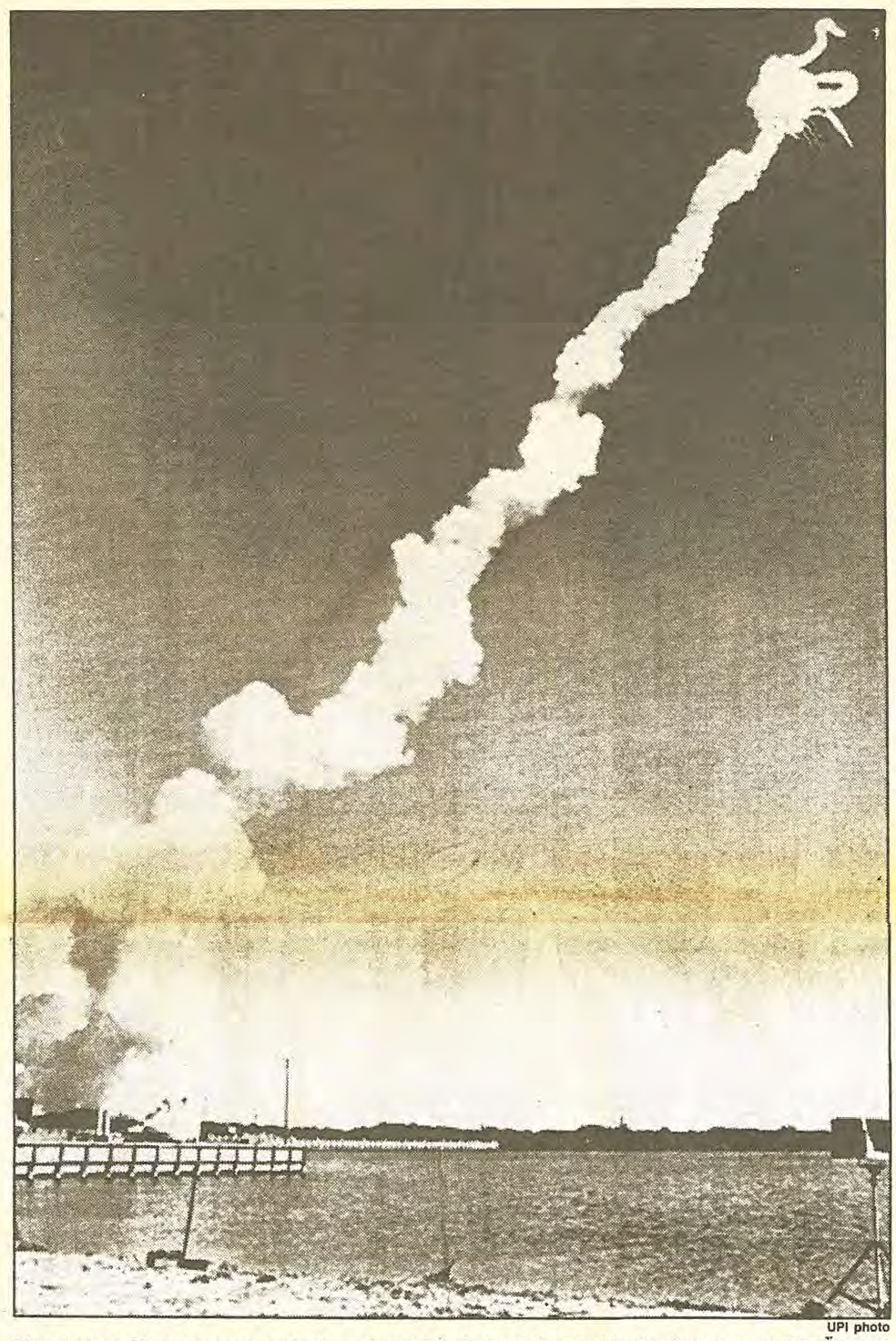

UPI photo

The drama of the space tragedy is captured by photo of the shuttle Challenger as it lifts off (left) and explodes (top right). The plume was visible across Florida from Miami to Tampa.

Combined News Services

CAPE CANAVERAL, Fla. — Hours after the worst space disaster in history, NASA scientists hadn't the slightest idea what had caused the first fatal in-air accident in 56 U.S. manned missions.

The space shuttle Challenger exploded 72 seconds after a spectacular launch yesterday morning, disintegrating 10 miles above the Florida coast and killing a crew of seven — including Christa McAuliffe, America's first teacher in space, and astronaut Ellison Onizuka from the Big Island of Hawaii.

Ships, planes and helicopters rushed to a vast area 50 miles off the Florida coast where flaming debris rained down for an hour after the mighty explosion, but all they found were parts of Challenger's booster rockets.

Hours later, heat-resistant shuttle tiles and other debris began washing ashore south of Cape Canaveral. Passers-by were taking them to the south gate of the Cape, where they were then delivered to the Kennedy Space Center.

Early speculation, based on fuzzy television pictures, was centered on the shuttle's giant external fuel tank, loaded with 526,000 gallons of highly explosive liquid hydrogen and oxygen.

But NASA, normally a fount of information, stopped talking late yesterday, denying requests for interviews with space experts and astronauts.

"We will not speculate as to the specific cause of the explosion based on that footage," said Jesse Moore, NASA's top shuttle administrator. A NASA investigating board will conduct a "careful review" of all data "before we can reach any conclusions," he said. Moore said he did not know how long the investigation might last.

Around the nation, flags flew at half staff while Americans attempted to come to grips with their sudden grief.

"We've never had a tragedy like this," said President Reagan, who postponed for a week last night's State of the Union address. In a short televised speech, Reagan said, "We mourn seven heroes . . . They, the Challenger seven, were pioneers."

on the inside:

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Addressing America's schoolchildren, Reagan said, "The future doesn't belong to the faint-hearted. It belongs to the brave." The space program will continue, he said, as will the policy of sending private citizens aloft.

The 11:38 a.m. EST launch looked picture-perfect. A minute later, cable TV viewers and spectators at the Cape knew otherwise.

Then the voice of Mission Control confirmed. First, the voice said, "Obviously a major malfunction." Then, seconds later, "Vehicle has exploded. . . . We are checking with recovery forces to see what can be done."

Rescue teams boarded ships, helicopters and planes and combed the cold Atlantic waters 18 miles from the coast, searching against hope for signs of the crew. Paramedics leaped into the water amid a rain of spacecraft wreckage.

There was no one to be found.

"Everybody's sick," said Bob Osterblom, an engineer who works on the solid rocket boosters at Cape Canaveral. "It's like a morgue around here. There are so many backup systems, NASA is so cautious, so careful, so safety-minded, that it's incredible this happened."

For a moment, America stood

See Space on Page A-1A

'Challenge you have to take'

Onizuka prepared family for worst

Advertiser sketch by Adam Nakamura

By Beverly Creamer
Advertiser Staff Writer

"You launch, not knowing exactly what is going to happen," Hawaii astronaut Lt. Col. Ellison Onizuka told The Honolulu Advertiser in a frank and lengthy interview several weeks ago.

"And that is the challenge you have to take. Without doing that, one would never be able to accomplish the work you set out to do . . .

"You can always plan for what you expect to see, but the unknown is always there."

For that very reason, the Hawaii astronaut had tried to prepare his family for any eventuality. Before his first shuttle flight a year ago, he sat down with his wife, the former Lorna Yoshida of Naalehu, to go over important documents.

"Before his last flight I said 'Come on, we have to talk about insurance,' " she recalled during the same telephone interview late last year.

"But he did that all without my knowing. The night before he flew, he made me sit down with him and we went through the entire folder. Everything is step-by-step so I don't have to think . . . A will, people to contact . . . He has letters to the children in there and they don't read them unless he meets with a casualty."

But Lorna Onizuka couldn't bring herself to ask if he'd left a letter for her in the folder. "I didn't ask. I felt kind of sad."

After his talk with his wife, Onizuka spoke individually to each of his daughters, Janelle, 16, and Darien, 10.

"They became more emotional than I thought they would be," said their mother. "They had like confessions with him. It surprised me the things they said. Our teenager related she had ups and downs. She apologized for some things and he apologized for not understanding some things sometimes. She said she thought it was because of growing up."

Onizuka's daughters never considered their father's profession as anything out of the ordinary. "They go to school with other kids whose parents do the same thing," said their mother.

"My younger one, when I asked her what Ell does for a living, she was not all that impressed. She said 'Yeah, Daddy is an astronaut but Mr. So and So down the street is a real estate agent and owns all these houses.'"

Onizuka, 39, who grew up in Kealakekua, Kona, helping on the family coffee farm and dreaming of being an astronaut, was one of the seven aboard the space shuttle Challenger yesterday when it exploded.

A year ago he was the first American of Japanese ancestry to fly in space. Yesterday's mission was to be his second shuttle flight.

Onizuka's January 1985 flight on Discovery, the 15th shuttle mission, was the first fully classified American manned space flight. Although the mission was shrouded in secrecy, the shuttle's payload was thought to be a sophisticated satellite designed to eavesdrop on Soviet communications.

In that long and frank telephone interview from his Houston home as he handed out candy last Halloween, Onizuka talked about his early dreams in Kona, his hopes for the space program, and how contingency plans for system failures were built into the astronaut training regimen.

For instance, he explained, in the event of a guidance system failure, the astronauts could bring themselves home anyway.

"If everything else fails," he said, "we can still use the stars to get home. We have about 50 to 80 navigation stars we use — depending on what software you're using — and if we can find those stars we can realign the platform on the orbiter.

"We need to point the star tracker on the shuttle right at the star and then realign the platform. Then we know how to come home, because we can

See Onizuka on Page A-1A

Space shuttle explosion still mystery

from page one

still. Then a nation's anguish began to churn.

Congressmen talked of re-evaluating the nation's space program. Within hours, newspapers published extra editions. AT&T reported a surge in telephone calls around the country between noon and 1 p.m. Wall Street expressed its doubts as stock prices of four shuttle contractors dropped.

Children in classrooms across the country fell silent as their teachers wept at the loss of a colleague. And everywhere, Americans sat by television sets, watching again and again the videotape of the spectacular break-up of the nation's showpiece of space technology.

Challenger rose majestically off the launch pad. It climbed smoothly, trailing a 700-foot geyser of fire as it soared to a speed of 1,977 miles an hour. Then, as the world watched, the mammoth spacecraft erupted in a huge fireball and shot out of control.

For more than half an hour after the explosion, a serpentine trail of white smoke remained in the clear Florida sky, marking the path of the wreckage as it plummeted to the sea 18 miles southeast of the launch pad. The flaming debris was clearly visible across Florida, from Tampa to Miami.

Unlike the shuttle Columbia during its first flights, Challenger had no ejection seats or any other way for the crew to get out of the spacecraft.

The Challenger crew included the first private citizen to fly on a shuttle, McAuliffe, 37, a social studies teacher from Concord, N.H. She was to have taught American children four televised lessons from space.

The other crew members were commander Francis "Dick" Scobee, 46; pilot Michael J. Smith, 40; Judith Resnik, 36; Ronald E. McNair, 35; Onizuka, 39; and satellite engineer Gregory B. Jarvis, 41.

McAuliffe, who was selected from 11,146 applicants to be the first teacher in space, had waited all morning at launch pad 39B through a liftoff delay caused by computer problems and icicles on the pad. A bitter cold front had moved through the spaceport overnight, producing sub-zero wind-chills at the launch pad.

The launch had been postponed five times, two fewer than the record seven delays Columbia suffered earlier this month.

McAuliffe's husband, Steve; their two children, Scott, 9, and Caroline, 6; and members of Scott's third-grade class watched in silence from a viewing area three miles from the Cape. The children carried a large banner that said, "Go Christa."

McAuliffe had received a gift of a $1 million life insurance policy from an international satellite and space insurance firm shortly before takeoff.

As the $1.2 billion spacecraft blew apart in plain view, many cried. Parents hugged children and quickly cleared them off the bleachers and onto buses.

McAuliffe's parents, Edward and Grace Corrigan of Framingham, Mass., stood together arm in arm as the loudspeaker brought the bad news.

A NASA official climbed a couple of rows into the bleachers and told them: "The vehicle has exploded."

Mrs. Corrigan looked back at him and repeated his words as a question: "The vehicle has exploded?"

He nodded silently. The Corrigans were quickly led away.

At Cape Canaveral, Brian Ballard, a 16-year-old reporter for The Crimson Review, Concord High's school newspaper, said he first thought the fireball was "just a regular separation of the booster from the orbiter. I heard ooohs and aaaahs and then, all of a sudden, screams. That's when I got sick to my stomach."

Linda Long, who handled McAuliffe's public relations, said the teacher "anticipated the flight almost the way you anticipate riding on a roller coaster: While you're in line, you're scared and anxious. But she never had any doubt about the safety of the flight."

In fact, McAuliffe had said she felt safer going into space than she did driving in New York City traffic.

Although only Cable News Network showed the launch live, the major television networks later provided continuous coverage for more than six hours, replaying pictures of the explosion dozens of times. NBC anchorman Tom Brokaw assured viewers that the network was not replaying the dramatic footage out of ghoulish glee, but rather, he said, because "Some people might not have seen it."

In Washington, the House of Representatives interrupted its session and the chaplain prayed for the astronauts. The House then adjourned.

The New York and American stock exchanges planned to observe a minute of silence today in honor of the crew.

The explosion was a devastating setback for NASA, which had successfully carried out 24 shuttle missions in fewer than five years. It probably will be months before another shuttle can be launched, while engineers try to determine what went wrong with Mission 51L.

UPI photo

Christa McAuliffe followed by astronauts Ellison Onizuka and Gregory Jarvis on way to launch.

After shuttle disappeared: 'My son, my son, my son'

By Thomas Kaser and Walter Wright
Advertiser Staff Writer

"It was a beautiful blastoff and I could picture Ellison in the spacecraft. Then suddenly there was an explosion . . . and everybody was yelling. 'He's exploded,' 'Dad!' and 'No, no, no.' "

Norman Sakata of Holualoa, Hawaii, who was one of 64 Hawaii friends and relatives of Hawaii astronaut Ellison Onizuka in Florida to watch yesterday's launch, broke down several times as he recounted the fatal launch.

Sakata said he was sitting near the family of another of the seven astronauts, Ronald E. McNair, and heard McNair's mother say at the beginning of the launch, "Yes, sir, that's my son, my son."

Then, after the craft exploded, he heard her crying out, "My son, my son, my son."

Sakata said he was also sitting three rows away from Onizuka's immediate family, including the astronaut's wife, Lorna, 36, and their two daughters, Janelle, 16, and Darien, 10; mother, Mitsue, who runs the family store near Kailua-Kona; brother, Claude, of Kealakekua; sister, Shirley Matsuoka of Kealakekua, and her husband George and their two children; and another sister, Norma Sakamoto of Honolulu, with her husband John and their two children.

"They are very strong, but there was a mass of confusion, and everybody was yelling," Sakata said.

All of the astronauts' immediate relatives were taken by NASA officials to a nearby auditorium for a briefing.

Mrs. Onizuka was later treated for shock at an Air Force hospital, but last night she was described by her mother on the Big Island as out of the hospital and "doing fine, under the circumstances."

The mother, Anna Yoshida of Naalehu, said she learned the immediate family would spend last night at Patrick Air Force Base near the Kennedy Space Center and that Jackie Bolden — wife of another astronaut, Charles Bolden — would be flying to Cape Canaveral today to accompany the family to the Onizukas' home in Houston.

Mrs. Yoshida said she and her husband, Susumu intended to watch the launch on television but slept through it because of the countdown delays.

They got up at 5:30 a.m. to watch the launch but ended up missing it because they fell asleep during the delays, she said. At 6:45 a.m. — a few minutes after the explosion — relatives called them to tell them what had happened.

"My husband and I turned on the TV, and we burst into tears when we saw what had happened. We just couldn't believe it," she said.

The Yoshidas were about the only relatives and close friends of the astronaut who did not go to Cape Canaveral for Onizuka's second launch in the space shuttle.

The Onizuka delegation consisted of 64 Hawaii residents, about half of them relatives of the astronaut. One NASA official told a member of the Hawaii group that it was the largest family delegation he had seen for a launch.

Almost all of the friends and relatives were staying at a Quality Inn International in Orlando and had gotten up early yesterday to go to the Kennedy Space Center for the launch of the Challenger space shuttle.

"We left the hotel about 5 a.m. for the two-hour ride to the space center, and everybody was excited and happy," said Mrs. Robert Fujimoto, who had made the trip with her husband, a Hilo businessman and University of Hawaii regent.

"When we got there, we were told the launch would be delayed till 9:38 a.m, then 10:30 a.m., then 11:38 a.m. Finally it launched, and it was just very beautiful going up. Them there was a big puff in the sky, followed by a boom, and we started looking at each other."

Arnold Onizuka of Honolulu, a first cousin of the astronaut, was in another viewing area — one for family members — about 3½ miles from the launch pad, and he said that initially he and others thought the explosion was that of the rocket's stages separating, "as we had all seen before on TV.

"You could just feel a creeping awareness that something serious had gone wrong. Then came an announcement over the loudspeakers that there had been a 'major malfunction,' and everyone was shocked and stunned.

UH regent Fujimoto said Onizuka had carried a regents' medal and UH banner in his personal pouch on yesterday's fatal flight, just as he had carried macadamia nuts and some Kona coffee with him on his first space fight a year ago.

Fujimoto also said there were reports late yesterday that Vice President George Bush and former astronaut Sen. John Glenn had flown to Cape Canaveral and were meeting with the seven astronauts' immediate families.

"You can just tell — from everybody's behavior and from all the flags flying at half mast — that there's been a great tragedy," he added.

Fujimoto's brother, Fred, who lives in Kona and is a longtime family friend of the Onizuka family, organized the trip to Florida for this launch. He said most of the astronaut's close friends and relatives had made the trip.

Fred Fujimoto accompanied Onizuka on a speaking tour around Hawaii last year and recalled how the astronaut talked about his love of math and science courses in school and his lifelong fascination with space.

Olan Carpenter, wife of Big Island Mayor Dante Carpenter, said she will remember the way the astronaut signed autographs for school children. Above the "El Onizuka" signature, he would write:

"Come fly with me."

Onizuka tried to prepare family for the worst

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tell where we're at."

What he didn't speculate about was an accident during launch.

After his successful space mission last year, Onizuka made a triumphant visit home to Hawaii for a hero's welcome.

The family was also invited to Nisei Week in California, and that's when Darien began collecting autographs of everyone she met on the trip, from hotel maids to restaurant waitresses. She even queued up at the Nisei Week banquet to get her father's autograph.

For Onizuka's two daughters, their father's first mission in space gave them a chance to get to know Hawaii relatives they'd never met. A large family contingent was on hand in Florida for that one, as well as for yesterday's.

Even Onizuka's elderly mother, who attended the first launch, was on hand yesterday at Kennedy Space Center. She still runs M. Onizuka Store, the family general store in Keopu on the upper road above Kailua-Kona.

His parents, Mitsue and Masamitsu Onizuka, were both born in Hawaii, the children of immigrant sugar workers from Fukuoka Prefecture in Japan. His father, Masamitsu, died in 1968.

Onizuka's childhood was typical of the rural existence in a small coffee community. He attended an elementary school with three grades per classroom, belonged to 4-H, once considered becoming a farmer, picked coffee beans and became accustomed to hard work.

He valued those years and is convinced his father bought the small farm "primarily to keep my brother and me walking a straight line." He chuckled at the thought.

"They always told me, 'We're not going to leave you wealthy but we will give you an education.' (Neither of his parents finished high school.)

"The Japanese are very conscious of passing education on. The traditions, the customs, were always there. We were always taught to work hard and to finish projects."

Later, when he studied aerospace engineering at the University of Colorado from 1964 to 1969, those values served him well.

"I do try to set goals for myself and pursue them," he said. "I guess way back when I was growing up a lot of people always said you've got to reach for something a little higher than you think you can get to."

Onizuka began reaching for that something early. He said that he first dreamed of becoming an astronaut when he was 13. His grandfather told him not to waste his time, to study something useful like medicine or dentistry.

But in those days at Honokohau Elementary School and Konawaena High School, space was still a dream.

"At that time if you mentioned it, it brought a lot of blank stares, so I kind of just shelved it," said Onizuka. "People would probably take you off to the doctor to get your head checked if you said you wanted to fly in space or go off to another planet."

Even when he applied for the astronaut program he didn't make a big deal of it. His wife remembered that the morning they found out he'd been accepted in 1978, she was at the dentist and he was on his way to work on the bus because the car had broken down.

While the Onizukas grew up less than 50 miles apart on the Big Island, they didn't meet until college in Colorado. They were married in 1969 after he finished graduate school.

The next year he went into active duty with the Air Force and joined the aircraft flight test program at McClellan Air Force Base in California. A few years later he transferred to the Test Pilot School at Edwards Air Force Base in California.

It was in those years, said Mrs. Onizuka, that she dealt with her fears about his safety.

"I got past the fear part of it eight or nine years ago when he first started flight-testing airplanes. That's when I was worried about him going off to work and not coming home anymore. As far as the shuttle goes I don't have that fear."

As her husband's life became more crowded with the demands of astronaut training, Lorna had to pick up more responsibility for the family.

"He has the trust," she joked during the interview. "I provide the thrust."

"He's lousy about fixing things," she added with a laugh. "He doesn't even know what the lawnmower looks like anymore. He didn't even know how to fix it last week. I said 'Look, I changed the sparkplugs.'"

Onizuka had been in training for this second mission since April and as a result was away from home 95 percent of the time. In fact, said his wife, they joked about how unusual it was to be together in the days he was in quarantine before his first flight.

"I never had dinner with him so much," she laughed. "They drive you out to crew quarters. They force you to be together hours on end which you wouldn't be normally. I said, 'I don't know how to act. I never saw so much of you in all my life.'"

With her husband away so much of the time, and the children older, Mrs. Onizuka had gone back to school to get a masters degree in public administration. She also worked as a substitute teacher and three days a week for a roofing company.

"I'm learning how to drive a forklift," she said, chuckling again. "I can only go backward. They haven't had time to teach me first gear."

Then she became more serious.

"While he's flying around I might as well do something."

Like so many other astronauts, Onizuka had grand visions for America's space future. He talked excitedly about building a space station, exploring the Moon and Mars.

"There are certainly untapped resources out there that can rid this society of the problems we have," he said.

He also talked about the commercial uses of space, for the pharmaceutical industry for example. Because of the lack of gravity, he said, "it would allow you to separate a lot of the compounds in a more pure form."

He saw himself as an integral part of this continuing exploration and said he felt "very fortunate" to have had an opportunity so few others had.

"Being out in space you really realize the potential and you start to understand what this new frontier is all about.

"It was an opportunity for me to do something I had dreamed of doing for a lifetime. And it was also an opportunity to serve our country."

Photo via UPI

A NASA file photo shows the Challenger's crew together. Front, left to right, are Michael Smith, Dick Scobee, Ron McNair. Top, from left, are Ellison Onizuka, teacher Christa McAuliffe, Greg Jarvis and Judy Resnick.

The men and women of Challenger

Los Angeles Times

Brief profiles of the crew members of the shuttle Challenger:

Francis Richard Scobee, 46, a Washington state native, married and father of two, commanded the flight on his second shuttle mission. Scobee flew in Vietnam and became an astronaut in 1979. He once said, "When you find something you really like to do, and you're willing to risk the consequences of that, you really probably ought to go do it."

Michael John Smith, 40, the pilot of Challenger, was on his first space mission. Smith, a U.S. Navy commander, was born and raised in Beaufort, N.C. He was graduated from the U.S. Naval Academy, flew a combat tour in Vietnam, trained as a test pilot and was selected as an astronaut in 1980. He was married and the father of three children.

Ronald Erwin McNair, 35, a shuttle flight veteran, received a doctorate in physics from Massachusetts Institute of Technology and was an expert on lasers. Born and raised in Lake City, S.C., McNair was chosen with the eighth group of astronauts in 1978 and made his first space flight in 1984. He was married and the father of two.

Ellison Shoji Onizuka, 39, was an Air Force lieutenant colonel, a former aerospace engineer and pilot. He taught at the Air Force's test pilot school at Edwards Air Force Base, Calif. He was on his second shuttle mission. Onizuka, married and the father of two children, served as a crewman on a secret Department of Defense shuttle flight last January. He was born in Kona, Hawaii.

Judith Arlene Resnik, 36, classical pianist and research scientist with a doctorate in electrical engineering, became an astronaut in 1979. During her first space flight in 1984, she operated the shuttle's arm to delicately break away ice that had formed on the space shuttle Discovery. Resnik was born and raised in Akron. She was single.

Gregory Jarvis, 41, a former Air Force captain who resigned his commission to join Hughes Aircraft as an engineer, was aboard the Challenger to conduct experiments on the effects of weightlessness on fluid carried in tanks. Jarvis was born in Detroit and earned degrees from two northeastern universities. He was married.

Christa McAuliffe, 37, a high school social studies teacher from Concord, N.H., competed with 11,146 other teachers in NASA's citizen-in-space competition to become the first private citizen to fly on the space shuttle. In preparation for the flight, she underwent 120 hours of space training at Johnson Space Center. She was married and the mother of two.

School children watch in horror as tragedy strikes

By Anne C. Roark
Los Angeles Times Service

The children were crammed into cafeterias and libraries. Some were giggling and squirming in their chairs. Others sat, hunkered down, their eyes glued to widescreen TVs. A few cheered as they watched the takeoff of the space shuttle Challenger.

Then, suddenly, they fell silent. Some began to cry.

This scene was repeated in classrooms across the United States as the realization began to take hold yesterday for more than 2½ million school children: Not only had the first spacecraft exploded in mid-air but the lives of seven Americans — and one of their own, Christa McAuliffe, a teacher — had been lost in the tragic accident.

School districts in thousands of communities had required their students to watch the Challenger liftoff and to monitor its progress over the next week as part of Classroom Earth, the first educational program designed to provide students with a firsthand look at America's space program.

Hall High School in Spring Valley, Ill., was the headquarters for Classroom Earth.

At the shuttle liftoff yesterday, 400 students gathered in a Hall High cafeteria. Many sat inside a roped-off area the size and shape of the Challenger spacecraft — an attempt to give students a sense of being inside Challenger.

Suddenly, as a fiery image filled the screen, there was silence.

Chris Leonatti, a 17-year-old senior, began to cry. Brian Tieman, 16, sitting in the "cargo bay" of the makeshift "shuttle," was too stunned to cry. A few, uncertain what to do, giggled.

Walter Westrum, superintendent of the school and executive director of the project that brought live pictures of the shuttle to schools all over the country, rose to face his students.

"Hush down," he began uncertainly. "What we're seeing is, apparently, it's hard to believe, but it looks like those people have just exploded in mid-air."

A few moments later he added: "This is not some make-believe world, not 'Miami Vice,' not entertainment you're looking at. These people are not coming back. They are wherever they are — and the dream that went with them is temporarily gone."

Because interest in space travel has waned in recent years, it was the first serious glimpse of the space program for many younger children

"Was it a bomb?" cried one first-grader at St. Rose of Lima School in Denver.

At the McCall-Donnelly Elementary School, in McCall, Idaho, some students were so upset they had to be sent home.

The identification with McAuliffe was universal. McAuliffe was more than an ordinary astronaut. She was mother, wife and teacher.

"They see a mother, a teacher, all the emblems of security destroyed in front of their very eyes," said Dr. Donald Cohen, director of the Yale University Child Student Center. "The child's fantasy is there will be Superman to rescue her . . . and there is no Superman."

Shock wave may hit children

And even adults may feel trauma

Combined News Services

BOSTON — Parents and teachers can and should do a number of specific things immediately to help children cope with the deaths of teacher-astronaut Christa McAuliffe and her six crewmates, psychiatrists and psychologists said yesterday.

First, they said, adults should acknowledge to children their own feelings of shock, sadness and loss, even if they cry as they do so.

The worst thing, they said, is to hustle children away from television coverage of the disaster and to avoid discussion of it. Adults should also kindly but clearly use the words "died" and "dead" and not hide behind confusing euphemisms like "expired" or "was lost."

The second step, the specialists said, is to encourage children to discuss not merely their feelings, but also their fantasies or notions of what they think occurred. Preschool children, for instance, may think something bad might happen to their parents, just as it did to the astronauts. Adults should reassure children that feelings, even angry feelings, do not cause accidents like yesterday's disaster.

Third, they said, children should be encouraged to commemorate the deaths of the astronauts by writing letters or sending drawings to the families or holding a ceremony to honor the astronauts.

And once children have grieved, the specialists said, adults should encourage them to go on with their lives, including exciting adventures like McAuliffe had planned. Children may feel they need permission to be happy again, the specialists said.

The psychological impact on the millions of adult Americans who watched the deaths of the shuttle's crew members could also be profound and long-lasting, psychologists said yesterday.

Experts speculated that many people could develop a fear of flying, a reluctance to engage in close relationships, anxiety that the United States has plummeted from its high-technology pedestal and a greater sense of caution.

Because one of the dead was a teacher who represents authority, children could develop at least short-term feelings of insecurity and apprehension, psychologists said.

California psychiatrist Dr. Gilbert Kliman examined the reactions of 800 schoolchildren to President Kennedy's assassination.

"The best behavioral outcomes (after Kennedy's death)," he said, "occurred when teachers and principals actively initiated discussion with children immediately."

Even so, he said in a telephone interview, "there was a chilling of ambition, especially with boys, about being president. Now it may be difficult for children, especially girls, to have a strong urge to be adventurous, so adult and group support are very valuable."

Gerald Koocher, director of training in psychology at Boston's Children's Hospital, noted that preschool children often do not understand that death is permanent and irreversible.

"To the younger ones," he said, adults gently but firmly need to explain that McAuliffe "can't come back" and that "her body is dead."

Virtually all young children, he said, will have three basic questions: How did it happen? Will it happen to me or someone I care about? Who will take care of me?

Good answers to those questions, he said, include telling children what is known factually about the accident, noting that such accidents are rare and reminding them that the astronauts' children do have other adults to care for them.

UPI photo

Christa McAuliffe's students watch in stunned silence as the shuttle explodes. The Concord, N.H., students had gathered in the school cafeteria to watch the liftoff on TV.

After the fireball, agonized silence

By Haynes Johnson
Washington Post Service

WASHINGTON — In the Senate, that forum for speech-making, they were reduced to silence.

The faces were long and the expressions solemn as the senators filed silently into the chamber. Their chaplain, the Rev. Richard Halverson, opened the brief prayer session by saying: "Eternal God, our hearts are smitten, and we are reduced to silence. Let us pray silently." They did.

That same sense of being unable to express the sadness affected Americans everywhere yesterday. A day that was to be a herald of success over the State of the Union and celebration over American scientific proficiency turned instead into one of national tragedy shared by people from the president on down, and all seemed struck by the inadequacy of attempting to put into words what everyone felt.

Once again, it was the technology of the television age that bound together the country and, this time, it was the spectacular technology of the space age that transformed into horror what Americans have come to regard as routinely successful missions into the heavens.

Of all the scenes played repeatedly hour after hour yesterday on television after that fireball explosion over the Atlantic killed the seven Americans aboard the space shuttle Challenger, two were unmatched for emotional impact.

In Concord, N.H., 200 students gathered in the high school auditorium before a television set. They brought with them party horns and hats and confetti in readiness for the ascent into space of their social studies teacher, 37-year-old Christa McAuliffe.

The sound of cheers, the blaring of horns and the sight of shining young faces after the successful countdown and rocket liftoff at Cape Canaveral swiftly turned to silence. Those stricken looks of stunned students, frozen in mute terror after the sudden explosion, were witnessed by countless millions watching in a televised moment replayed continually throughout the day by the networks.

The other, more intimate, scene showed McAuliffe's mother shedding tears of joy as the shuttle soared into brilliant blue skies over Florida. Then came her tears of immeasurable sorrow.

Another scene was not shared by the general public but had an unforgettable power of its own.

This took place in the Senate, where intrusive television cameras are not yet permitted.

Shortly after 2 p.m., after the chaplain opened the brief prayer session, Majority Leader Robert Dole, R-Kan., told fellow senators of the common sense of grief over the personal loss of lives and the collective shock at "the wrenching image of this nation's pride and joy disappearing over the Florida coast."

Then John Glenn, D-Ohio, one of America's first men in space and a presidential candidate in the last election, stood quietly before his small desk. He referred to the quarter of a century that encompassed the nation's space program and said softly:

"Sometimes triumph is accompanied by tragedy. We hoped to push that day behind us forever. But it was not to be."

He paused, and his voice seemed to break. After expressing the hope that in the weeks and months to come "the good Lord will grant a measure of comfort and understanding to the families and friends of the seven courageous crew members," he took his seat and stared intently down.

Not a whisper could be heard. The silence was as deep as it is ever likely to be there.

Broken moments later when the second senator to have flown in space, Jake Garn, R-Utah, stood.

He had not intended saying anything, he began, adding "it was too difficult to do so." His voice was breaking, too, as he paid tribute to the pilot on his own shuttle flight, Navy Cmdr. Michael Smith, whom he called "my mother hen." Smith also piloted the fatal flight yesterday.

"I simply am incapable of going beyond that," Garn said, "except to say thank you to my colleagues for the time they have given here to pay tribute to my friends."

Then he took his seat amid more silence. Not long after, the Senate recessed for the day. Senators and other members of Congress had planned to assemble later at night for President Reagan's sixth State of the Union address, an occasion that Reagan uses each year to express his sense of buoyant optimism over the nation's future and to pay tribute to its newest heroes.

But this, too, was not to be. The speech was canceled. For most of the day the president, like most of the country, was reported to be stunned into silence at what he had witnessed in slow motion, stop-action, on split screen again and again and again over television.

Finally, at 5 p.m., he employed the same ubiquitous medium of communications to address the nation. "We've never had a tragedy like this," he said.

Then he called the roll — two women, five men, of varying backgrounds and experiences — who died in a moment that few among the millions who watched will ever forget. He called them America's newest heroes.

'Oh God, no, please no . . .my best friend. . .'

Combined News Services

KENNEDY SPACE CENTER, Fla. — In a few horrific moments, the ecstasy of Christa McAuliffe's parents turned to shock and silence.

Grace and Ed Corrigan of Framingham, Mass., hugged each other in jubilation as the $1.2 billion spacecraft launched in near-freezing conditions — then turned to each other in stunned shock a few moments later.

Challenger had exploded in the air.

After what many in the crowd of VIP observers thought was a separation of the craft from its rockets, a Mission Control announcer said: "Something has obviously gone wrong. The vehicle has exploded. The vehicle has exploded."

"No! No!" cried McAuliffe's friends, who sat in a grandstand with the third-grade class of McAuliffe's son, Scott.

Scott, 9, his sister, Caroline, 6, and McAuliffe's husband, Steven, were at a separate viewing site.

"Oh God, no, please no" said one man, clasping his hands in prayer. "That's not supposed to happen. Oh God, my best friend is up there."

Another man, breathing heavily, joined him in prayer as the two continued staring upward.

A minute later, when Mission Control confirmed the explosion, McAuliffe's best friend, Jo Ann Jordon, screamed: "It didn't explode. It didn't explode!"

McAuliffe's parents, surrounded by friends, stood in silent disbelief.

Then they wept.

McAuliffe's hometown shocked

'The town is just blown away'

By Richard March
United Press International

CONCORD, N.H. — Hometown pride turned to grief yesterday in the New Hampshire city where Christa McAuliffe taught as shocked residents watched her space shuttle flight explode on television.

"She's dead," said Colleen Murray, who stood with tears streaming down her cheeks and watched a newscast from a TV in a store window. "She followed her dream and she died. It's just unfair."

Main Street, where thousands cheered McAuliffe in a homecoming parade last summer, was nearly deserted.

"The town is just blown away," said Debra Gagnon, whose 5-year-old daughter closely followed McAuliffe's shuttle mission. "She put her faith in Christa. She was made a friend to everyone's children."

Residents of the close-knit city of 32,000 adopted the cheerful McAuliffe as their emissary and shared her excitement in becoming the first ordinary citizen picked to orbit the Earth.

At the Talk of the Town, a Main Street bar and restaurant, about 40 residents gathered to watch the 11:38 a.m. EST blastoff and then watched the disaster unfold on two large-screen televisions.

"Everyone came down to watch the launch. It was a hometown person in space," said Greg Makris, one of the owners.

He said the excitement turned to shocked disbelief as the shuttle exploded on the screen. He said many customers walked away from the screens when the cameras showed McAuliffe's parents watching the explosion at Cape Canaveral.

"They just walked away. It was like too much," he said. "It is a personal loss for everybody."

"These people had tears in their eyes. They went to pieces," said Edward Makris, Greg's father. "It was the greatest blow to hit Concord, New Hampshire."

Rita Ciraso was shopping in downtown Concord and said news of the disaster spread rapidly.

"You could feel it throughout the town," she said. "It's like your sister dying. It's just like somebody close to you dying."

"I can't believe it and I can't stand it," said Susan McLane, a state senator and a friend of the McAuliffes. "I feel like I felt the day Kennedy was shot."

"As a family, they were an ideal American portrait. Christa was very positive, effervescent," the Rev. Chester Mrowka said. "She was an optimistic, forward-looking person."

New Hampshire Roman Catholic Bishop Odore Gendron said he was "shocked and saddened by the terrible tragedy that has befallen the space shuttle."

Said Bob Silva, assistant principal at Concord High School, where McAuliffe taught history, economics and law: "She makes history a living experience. That's why she's a perfect choice for the shuttle."

Friends and colleagues say McAuliffe was a warm and unassuming woman, uncomfortable with an expensive homecoming celebration some had planned for her.

"It's not the Olympics," she told a reporter. "It's Concord, New Hampshire, and a homecoming should reflect the community I'm part of."

She said once that she wanted to teach about both men and women of the common variety — "good people who lived and worked in our history and who you never hear about."

Condolences flow in as world joins in grief

By Daniel J. Silva
United Press International

World leaders expressed shock and sorrow over the explosion of the space shuttle Challenger yesterday, and videotape of the fiery blast was broadcast on television networks around the globe. Worldwide, newspapers threw out domestic news to banner the disaster.

"Space Horror," the Sydney Daily Mirror bannered in a black headline spread across the page. The Daily Mail in Britain headlined: "Spaceship disaster — teacher dies living the American dream" over a half-page picture of civilian victim Christa McAuliffe.

"This is a black hour for manned space flight," West German's Minister of Research and Technology Heinz Riesenhuber said. Japan said it might postpone its 1988 manned space program pending an investigation by U.S. space officials.

In Moscow, Soviet television showed the explosion on its nightly news and Polish television used the disaster to attack the U.S. "Star Wars" program for a space-based nuclear defense.

There was no reaction from the Kremlin, but the Soviet ambassador to the United Nations, Vasily Safronchuk, relayed his mission's "deep sorrow" and "deepest sympathy."

Irish Prime Minister Garret Fitzgerald and President Patrick Hillery sent telegrams to President Reagan expressing condolences. So did King Hussein of Jordan, French President Francois Mitterrand and many others.

The Canadian Parliament rose for a moment of silence.

In Paris, the state-run television network interrupted national broadcasts for about 10 minutes to show videotape of the explosion.

Patrick Baudry, the French astronaut who traveled to space aboard the shuttle Discovery in June, said, "I think the sacrifice of my friends who were on board today will not be for nothing. There have been other accidents before. They have all served some purpose."

British, Italian and Portuguese networks also interupted programming to broadcast news of the shuttle tragedy.

In Geneva, shocked Swiss citizens came to Western news bureaus for information on the Challenger explosion. Among them were members of the U.S. team to the American-Soviet arms negotiations taking place in Geneva.

In Pretoria, South African President Pieter Botha said, "All South Africans were stunned by the tragic news of the explosion. The free world has followed the United States space program with pride."

The 21-nation European Parliament held a moment of silence in Strasbourg, France.

Indian Prime Minister Rajiv Gandhi telephoned Reagan and expressed "his deepest condolences and sympathies," the Press Trust of India news agency said.

At the United Nations, Secretary General Javier Perez de Cuellar expressed his "profound sadness" to Reagan.

"Truly the entire world will grieve this tragic loss of life incurred in the advancement of the frontiers of human knowledge," Perez de Cuellar said.

UPI photo

Spectators in the Kennedy Space Center VIP area react to the explosion of Challenger.

Uncertainty cast on military missions

Combined News Services

WASHINGTON — The Pentagon, which depends on the space shuttle to send vital national security satellites into orbit, is faced with an uncertain launch schedule after yesterday's mid-air explosion of Challenger.

Defense officials have been reluctant to commit their entire space program to the nation's four shuttles.

Now the schedule for four more military launches this year, including one tied to the "Star Wars" program, has gone awry — and officials and others acknowledged that Challenger's destruction could strengthen the Air Force's efforts to use its own rockets to launch military satellites.

"Some of the launches are so valuable we have to have a system that guarantees it," said one Air Force official, speaking on the understanding that he not be identified.

Under an agreement between NASA and the Air Force, the Pentagon was committed to using one-third of the shuttle flights to launch military surveillance and communications satellites.

The military had planned to launch about 80 percent of its payloads aboard the shuttle, with the rest — including critical and time-sensitive spy satellites — slated to be placed in orbit by conventional rocket systems like the modified Titan IIs currently used to carry nuclear warheads.

The Air Force, in arguing for a continued capability to launch satellites atop its own Titans, maintains that it must be able to send orbiters into space at almost a moment's notice if, for example, one of the many satellites scattered across the skies should suddenly fail and create a gap in the net that monitors Soviet space launches.

Reagan, U.S. mourn 'heroes' of space

Combined News Services

A somber President Reagan paid homage yesterday to the "seven heroes" of Challenger and vowed that the U.S. space program would go forward despite the tragedy.

"The future doesn't belong to the fainthearted. It belongs to the brave," Reagan said in a nationally televised speech from the Oval Office. "The Challenger crew was pulling us into the future, and we'll continue to follow them."

Americans were horrified yesterday as they huddled in shock around television sets and watched over and over the fiery explosion of the space shuttle.

A shaken first lady Nancy Reagan watched a live television broadcast of the explosion. Her first words were, "Oh, my God, no."

Rep. Bill Nelson, D-Fla., who flew on the shuttle this month, gave a speech on the House floor, his voice straining, and quoted Helen Keller:

"Life is either a daring adventure or nothing."

In downtown Seattle, as in many cities nationwide, business people and shoppers huddled in stunned disbelief around television sets.

UPI photo

In Concord, N.H., students kneel in prayer at a special Catholic church service for Concord teacher Christa McAuliffe.

Florida Gov. Bob Graham, who said he saw the explosion in the air as he approached Jacksonville airport, canceled the rest of a three-day, 12-city campaign tour.

"I felt a tremendous sense of sadness and depression," Graham said. "There had been such exhilaration . . . and then to learn that in fact what we were seeing was death and tragedy."

At the National Aeronautics and Space Administration headquarters in Washington, D.C., grim-faced employees stood around the hallways or gathered in a small auditorium to watch the latest developments on large television screens.

NASA Administrator William Graham had been paying a call on Capitol Hill to Rep. Manuel Lujan Jr. of New Mexico, and had tuned into the launch on a television set there. "We were dumbstruck by what we saw," said Jack Murphy, an aide who had accompanied Graham.

Sen. Pete Wilson, R-Calif., said, "The only way to adequately honor (the shuttle crew) is to keep their rendezvous with destiny in space." And Sen. Alan Cranston, D-Calif., added: "I am sure those who died would want America's exploration of space to go on undeterred. I am sure it will."

"Terrible thing, terrible thing," murmured House Speaker Thomas O'Neill as he walked from the House floor, shaking his head.

A House Budget Committee meeting turned from jovial to solemn. The chairman, William H. Gray III, D-Pa., called for a moment of silence, then said of the space program:

"It's become routine and we've forgotten how dangerous it really is."

"We'll continue our quest in space," Reagan said in his televised speech. "There will be more shuttle flights and more shuttle crews and, yes, more volunteers, more civilians, more teachers in space. Nothing ends here. Our hopes and our journeys continue."

And, in a poignant message to millions of schoolchildren who had been watching the launch, the president said: "It's hard to understand, but sometimes painful things like this happen."

Reagan said "I can't get out of my mind" the husband and children of McAuliffe. He had planned to mention her in his State of the Union speech last night, White House officials said. The speech was cancelled.

Reagan's concluding words including some from a poem, "High Flight," by John Gillespie Magee Jr.

"The crew of the space shuttle Challenger honored us by the manner in which they lived their lives," Reagan said. "We will never forget them nor the last time we saw them — this morning — as they prepared for their journey and waved goodbye, and slipped the surly bonds of Earth to touch the face of God."

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Wednesday, January 29, 1986

Disaster's lessons. . .

Even though America's space program will go on, it's unlikely that any of us young or old will forget the sight and feeling of yesterday's shuttle disaster.

Somewhat akin to the 1963 shooting of President Kennedy, it was death and national tragedy seen or heard by millions on television and radio, either first hand or on countless reruns.

So now images of explosions, twisting white smoke and spectator faces turning from jubilation to grief have also become part of our history.

LIKE MOST true tragedy, this first one for Americans in space flight can be seen several ways:

For Hawaii there is the added shock and sadness that astronaut Ellison Onizuka was among the seven crewmembers killed. An editorial below discusses that aspect.

Certainly the instant conflagration was for many a reminder of the fleeting joy of life, and that all of us will die, sometimes in unexpected ways. It is the material for a thousand sermons on why we are here.

Moreover, it was a dramatic lesson for countless school children who were watching because the first astronaut-teacher was aboard. Some of them may be traumatized by what seemed a space movie turned to real-life horror. It is not something they would have seen were it not for a false national confidence these flights had become "routine."

Yet, the difference between movies and real life is important in itself. And, as President Reagan's heartfelt statement indicates, there are positive points to be made for children about courage, pioneering and necessary risk-taking.

For, if this was death, it was also with a purpose, a lesson older Americans should also appreciate.

THERE WILL BE many good and necessary questions raised about this accident and the manned space program, as an adjoining article indicates. Perhaps some embarrassments and adjustments lie ahead.

Still, it seems President Reagan, by virtue of launching the teacher-astronaut program and by his statement yesterday, has given himself a special commitment to such programs. So in a way has the nation.

Beyond that, the good reasons for practical pioneering and scientific exploration continue.

Thus yesterday dramatized the point that tragedy as well as triumph is part of manned space programs — indeed, that we have been fortunate for more than two decades, even if safety has been stressed.

It was a failure, to be sure, and any flaws must be corrected. At the same time, we will have to go on, realizing that there will be other accidents in space, but that goals are, on balance over the long term, worth the inevitable risks, costs and national tears.

. . . Hawaii's astronaut

While all Americans mourn the seven Challenger astronauts, Hawaii feels a special shock and grief at the disaster that befell the shuttle. We lost a favorite son.

In common with so many people here, around the country and the world, our deep condolences go to the family and friends of Lt. Col. Ellison Shoji Onizuka of the Big Island.

THOSE ACQUAINTED personally with Onizuka, 39, knew him as a special individual, "a super guy," as one said. For the rest of us, he was a symbol of many things. That is why his death yesterday is so poignant.

Onizuka was one of a group of modern-day American heroes who choose to "push back the envelope" — as the early rocket pilots said of the dangerous attempts to break the sound barrier — and expand human advancement and knowledge in space.

Though the space program is a volunteer effort that brings its share of fame and glory, it inevitably, despite all possible precautions, involves high risk. Onizuka said he believed the challenge was worth that risk.

He was in the space program for eight years before he got a chance to travel in space. Before and after his first journey he was a whole-hearted promoter of the NASA program and America's future in space.

Onizuka was also the first Asian-American in space. He attained this distinction, however, through personal accomplishment. With an advanced aerospace engineering degree, he was a decorated Air Force test pilot with 1,600 hours of flight time in many kinds of aircraft. And he was chosen to become an astronaut from among thousands of applicants.

AND, OF COURSE, Onizuka was a Hawaii native, also the first in space. His was a near-classic story of "local boy made good" far from modest beginnings in a remote rural area. He was a product of Hawaii's public schools.

It is a long way — in miles, hard work and accomplishment — from Kealakekua on the Big Island into space via Cape Canaveral and back again, but Onizuka made that trip last year on the shuttle Discovery and was eager to do it again and again.

Even the tragic end of his second journey into space cannot erase the pride in that achievement or remove Onizuka as a model of ambition and achievement for others, especially here in Hawaii, to follow.

UPI photo

Debris trails from a cloud of smoke after the space shuttle Challenger exploded moments after launch yesterday.

Shuttle program after tragedy

Delays, re-evaluation next

By Lee Dye and Rudy Abramson
Los Angeles Times Service

The tragic loss of the space shuttle Challenger yesterday with seven persons aboard brings the nation's manned space program to a standstill during what was to have been the busiest time in its history.

While the loss of seven lives far overshadowed all other concerns, experts on the space program pointed out that it will be months, at best, before another shuttle blasts off from Cape Canaveral.

The National Aeronautics and Space Administration will not launch again until its own investigation has been completed, the cause of the disaster has been determined, and corrective measures have been taken.

THE MOST optimistic estimate for that process to run its course is at least two months, but it will probably take much longer.

In the long run, the accident may not dramatically alter the space program, but the tragedy's immediate impact will be substantial.

NASA had planned 15 shuttle missions for 1986 — by far the busiest schedule in its history, one that many had said was overly ambitious.

There is no chance now that the shuttle Columbia will be launched in early March for this nation's most important observations of Halley's comet. The Columbia was to have carried a sophisticated observatory, called Astro, into orbit so that scientists in the United States could carry out observations during the same time that five international spacecraft were to encounter the comet.

The schedule was already so tight that scientists feared NASA would not be able to launch Columbia in time to be on station for the encounter, but that issue became moot yesterday. The Columbia was to have launched March 6, but even the preliminary investigations into yesterday's tragedy are not likely to be completed by then.

ALSO IN DOUBT are two important science missions set for May.

The Challenger's next mission had been scheduled for May 15, when it was to have carried the European space craft Ulysses into orbit as part of an ambitious effort to study the polar regions of the sun. After its release from the shuttle, Ulysses was to have used its own rockets to fly near the planet Jupiter, and then use Jupiter's gravitational field to fling itself out of the plane of the Earth's orbit and over the sun's poles.

The timing was already tight because Jupiter will not be in the right position to serve as a gravitational slingshot for another 13 months, so any delay would have jeopardized that mission anyway.

The shuttle Atlantis had been scheduled May 21 to launch the Galileo spacecraft on an ambitious unmanned mission to Jupiter, but that flight also depended on Jupiter being in the right position, so a delay of even a few days could force a one year postponement of that project.

Yesterday's tragic accident means some of these goals will not be met.

"That will force a re-examination of how we will serve the nation's needs through the space program," said Thomas Paine, who is chairman of a presidential commission that is charting the future of the nation's space program.

AND THAT re-examination, he suggested, may not be a bad thing.

It appeared certain, too, that Congress would launch the most intensive investigation of the manned space program since 1967, when both the House and Senate probed the Apollo 1 training fire that killed astronauts Virgil Grissom, Edward White and Roger Chaffee. Monday was the 19th anniversary of that tragedy.

Sen. Albert Gore, D-Tenn., a member of the Senate space subcommittee, called for an "immediate" and "intensive" investigation of yesterday's tragedy.

"In addition to the human tragedy, we've also lost 25 percent of the nation's launch capability in one stroke," added Paine, who headed NASA when Americans first landed on the moon. "And we were already spread pretty thin."

The loss means NASA will have three orbiters rather than four to try to carry out its programs.

Although shuttle chief Jesse Moore said yesterday afternoon that it would be possible for the Rockwell Corp., which built the orbiter, to assemble a new vehicle, Congressional sources said it is virtually unthinkable that in the present budgetary atmosphere lawmakers would approve building another orbiter to replace Challenger.

Paine said the tragedy will force the nation to take a new look at its manned space program.

"The evidence was we could probably manage to carry out the program, but we were counting on a zero accident rate with four vehicles," he said. That, he suggested, was "a little bit ambitious."

WHILE THERE is no way in the months ahead to avoid what Paine termed "a major dislocation in the nation's space program," the long-range impact may not be too severe.

"There's an enormous sense of loss because these people represent all of us," said Bruce Murray of the California Instititue of Technology, who led the Jet Propulsion Laboratory in Pasadena, Calif., during some of its busiest years. "We've lost members of our own family in a psychological sense.

"Where do we go from here? We will continue the manned space program in the same direction as before. There is no possibility we will be detracted from that," added Murray, who has championed unmanned missions in space.

Tragedies such as yesterday's, he said, come with the territory.

"There is no way to do this (manned exploration of space) without risk. The only uncertainty was how that risk would manifest itself. Unfortunately, it manifested itself in a tragic way.

"But there is a lot of resilience in the program and the people of NASA," he said. "This is not going to derail the program. We will continue in the same general direction we were going."

"In addition to the human tragedy, we've also lost 25 percent of the nation's launch capability in one stroke," said Dr. Thomas Paine, former NASA head. "And we were already spread pretty thin."

Paine

Space flight: manned, unmanned

By Murray Dubin
Knight-Ridder Service

PASADENA, Calif. — The loss of life in the Challenger space shuttle tragedy has highlighted the continuing debate over NASA's decision to focus most of its effort on manned space missions.

The proponents of manned missions "think it is the best way to capture the attention of the public and compete in the arena with the Soviets," said Von Eshleman, director of the Center for Radio Astronomy at Stanford University.

ESHLEMAN SAID yesterday he and other scientists have long held that unmanned probes of space were better suited to the technological study of space than the manned shuttles, which are limited by the need to return their crews to Earth.

Eshleman, at the Jet Propulsion Laboratory here for the Voyager 2 encounter with the planet Uranus, has testified on the benefits of unmanned probes before the President's National Commission on Space.

Eshleman, who has been involved in the space program for more than 20 years, said he did not question the motives of those who supported the manned program. But he suggested that a number of scientifically significant missions were still just dreams because of the budgetary commitment to the manned shuttle.

"We could have an unmanned probe going to the surface of Mars and have robot arms collect rocks," he said. "We could explore the outer solar system and the surface of Titan," one of Saturn's moons.

"We could be looking at the dust storms on Mars and the sulphuric acid clouds on Venus," he added, suggesting that there was a "large potential" for learning more about acid rain on Earth from a Venus probe.

"I'd like to separate the disagreement from the emotions of this day," he said, "but one does wish that there had been more emphasis on the fundamental goals of the space program."

HE SAID those goals included expanding the technological understanding of space.

"The space program should be the driver of new technology," Eshleman said, arguing that it now was more concerned with a means of travel than the goal of technological advances.

Jim Kukowski, a NASA spokesman, said he expected that the Challenger tragedy would bring the debate over manned versus unmanned flight into the public arena once again.

He added, however, that NASA had not used an expendable rocket on a major unmanned mission since 1983 and doubted that the space agency would turn back.

Currently, unmanned scientific probes ride piggyback into space on the shuttle. In fact, the shuttle was to serve as a launch pad for unmanned missions this year to observe Halley's comet, to look at the planet Jupiter and to orbit the sun's poles. Those missions are now in jepardy, according to scientists here.

Though Eshleman believes that the Challenger disaster will be a "large setback" for the space program, he does not think that the emphasis on manned programs will diminish.

"I think the space commission will report next year that it favors a manned mission to Mars with the Soviets," he said.