"IT WAS WORTH IT"

SPACE

By Ben Bova

n the early morning sunlight thousands of us searched the empty sky, waiting in the desert like religious pilgrims, waiting for a sign from above.

America's space shuttle Columbia had reentered the atmosphere, halfway across the world, and was going through radio blackout—bathed in a sheath of air so hot that radio waves could not penetrate it. No one spoke much, out there on the desert at Edwards Air Force Base, next to the seven-mile-long dry lake bed. We all knew that this was the critical time, the real test of Columbia, her reentry-heat-shield tiles, and her two-man crew.

She had been launched two days earlier, after years of delays and frustrations. Launched, by happenstance, exactly on the twentieth anniversary of Yuri Gagarin's pioneering one-orbit spaceflight. The spaceship and the two astronauts piloting her, John Young and Robert Crippen, had performed magnificently so far. But those heat-shield tiles were a questionable item. Had they really stayed put on *Columbia*'s underside, or had significant numbers of them peeled off during the thundering

launch from the Kennedy Space Center?

The loudspeakers that NASA had set up for the visitors awaiting *Columbia*'s return were silent for long, agonizing moments. Then, abruptly, the morning air was shattered by the voice of the mission controller in Houston:

"We have radar fix on you, Columbia. You're looking good."

Young's reply was drowned out by the cheers of thousands.

"Columbia," mission control reported, "we show you at 151K [151,000 feet altitude] now, 8.4 Mach, looking good."

"What a way to come to California!" Crippen exulted.

The pilgrims on the desert expanse surged expectantly now. By the tens of thousands they had come, in campers, in buses, in limousines, in dust-covered family cars. Children, grandparents, businessmen, pensioners, college kids — most of them had come out to the desert the night before and camped out while waiting for the return of the first space shuttle. Across the dry lake from where we stood, we could see a long, dark

line against the base of the distant mountains: thousands of visitors, glittering in the sunlight with cameras and binoculars around their necks.

Columbia announced her arrival over Edwards Air Force Base by a double clap of thunder, like a goddess coming out of the sky to visit her worshipers. The sonic boom rang across the Mojave and pulled another cheer from the vast crowd.

Mission control: "Columbia, you're coming right down the track. The tracking data, map data, and preplan trajectory are all one line on our plot boards here."

We knew *Columbia* was overhead, but we could not see her. At an altitude of more than 40,000 feet, she was an invisible speck in the bright blue California sky. But we strained our eyes anyway, searching, glancing at the maps NASA had provided to show the long, sweeping course the spaceship was taking out over the dry lake, peeking every few seconds at the television sets that had been positioned around the visitors' area. High up in that crystalline, cloudless sky we could see the thin white scratches of vapor trails from the T-38 chase planes that were ushering *Columbia* earthward.

And then we saw her! A speck of white coming in low over the distant, bluish blur of mountains, the word made flesh—and metal. She grew before our widening eyes into a stately machine with wings, seemingly suspended above the shimmering floor of the ancient lake.

She was coming in nose-high, regally, her wheels down, her white flanks agleam in the sunlight. A puff of dust as the wheels touched the landing strip.

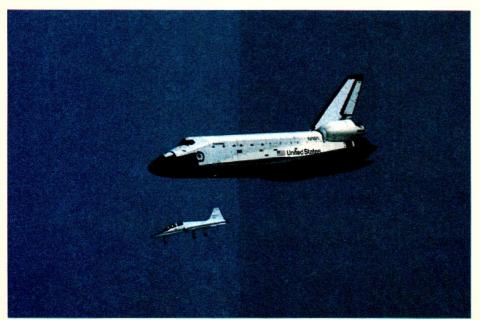
"Welcome home, Columbia!" mission control said for all of us. "Beautiful!"

And she was. We screamed. We laughed. We shouted and hugged one another in our joy. People wept. Some danced. Some made a brief, silent prayer of thanksgiving.

At the controls of the world's first true spaceship, Young quipped coolly, "Do you want us to take it up to the hangar?"

Mission control: "You got a lot of people

smiling back here. Good to have you back."
Astronaut Crippen: "This is really the
CONTINUED ON PAGE 114



Columbia: America's new achievement will set off incendiary budgetary discussions on Capitol Hill.

neatest thing in the whole world."

Mission control: "Where can I sign up?" And then Christopher C. Kraft, who had been a part of the Mercury, Gemini, and Apollo programs and who was now one of the "wise gray heads" of NASA and director of the Johnson Space Center, in Houston, summed it all up with one sardonic line:

We just became infinitely smarter. The pilgrims in the desert were cele-brants now. The Coors truck was passing out free beer. The *Omni* area had turned into a champagne party. The years of frustration and delay, the budget cuts and engineering problems, the criticisms and threats to cancel the shuttle program altogether-they were forgotten now. We had all just become infinitely smarter. We had a spaceship sitting out there on the desert, a visitor from outer space: Columbia and her sister craft being built by Rockwell are meant to work in orbital space. Her time here on the surface of our planet is only the time between missions—waiting time.

By now Young, who has flown more space missions of greater variety than any other human being, impatient almost to the point of testiness, had finally climbed down out of Columbia and was circling the craft, inspecting it like a rookie pilot who has to see and touch the machine that carried him aloft.

All that took place three months ago. Columbia is now back at Cape Canaveral, being readied for her second trip into space. Challenger, under construction in California, will be ready for flight next year

In Washington the new team heading NASA now has a powerful argument to convince our political leaders that a new era in space transportation has truly begun. Never again can the debate be over whether the space shuttle will fly or not. Now the question is, How much do we want to accomplish with the shuttle? How soon will we use her capabilities to help build a permanent American presence in near-Earth orbit?

For the first time since its inception Space Week will have an entirely new and different American achievement to celebrate. We are in space again. And this time we are there to stay. No longer the glamorous, one-shot missions that grabbed headlines and then faded into oblivion. Spaceflight is on its way to becoming as routine as commercial air travel.

Even the longest journey is started with a single step. Columbia has taken that first step for all of us.

Crippen said it best, the day after the landing, when he told a press conference in Houston that, despite all the problems and setbacks that had beleaguered the shuttle program, "It was worth it."

None of the pilgrims who ventured into the desert that morning to see the dawn of the Shuttle Era would disagree.