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Tenth Anniversary of Explorer I

I appreciate the invitation of the National Press Club to join in this observance of the Tenth Anniversary of Explorer I. And I would like to express my appreciation to the members of the Fourth Estate for your ten years of thorough, objective coverage of space, your biggest beat. You have done a comprehensive and commendable job.

I have always admired the news man or woman who can endure a lengthy, technical, and frequently dull press briefing, and come out with a bright, clear story for lay audiences.

This is a happy reunion for me and my fellow workers from the Marshall Space Flight Center with our good friends Bill Pickering, Bruce Medaris, Tom Morrow, Jim Van Allen, and their companions. How little some things have changed since Explorer I, during a decade that has been crammed with excitement and progress in space exploration!

There are, of course, a few obvious -- though slight -- physical changes. I couldn't help but notice that some of the other members of the Explorer I team have grayed a bit at the temples, and a few have gained a little weight.

But it is refreshing to note that the strong inward qualities of these men, if altered at all, have only intensified over the years. The members of the Explorer I team who are here today are still fascinated with space. They are eager to explore further the space near earth, the moon, and the planets. And they are still firmly convinced of the lasting values of space research, exploration, applications, and the benefits of advanced technology.

Today we are marking the Tenth Anniversary of America's entry into space. The United States was left standing at the post when the Space Age started October 4, 1957, by the dramatic launch of Russia's Sputnik I, and a short time later by Sputnik II. We had to run like hell to catch up. But, I believe the achievements of the ten years since Explorer I have left little doubt about this nation's scientific and technological competence.

Once the United States accepted the challenge to apply its technology to its space aspirations, an all-out effort followed. Here was a new physical and scientific frontier, and its mysteries captured the imagination of a pioneering people. Because of the fervor, determination, and the resources devoted to space, this has been one of the finest decades in America's history. As space efforts slowly gained momentum over the years, one scientific and technological advance followed another, in rapid-fire order.

Man himself followed his early instruments into earth orbit. Before the Space Age began, man's explorations were restricted to earth, and his spirit was constrained by a feeling of physical impossibility. Now he is free of this restraint, and more confident of his abilities. Because men have stepped out into space from the highest plateau of science and technology ever engendered, there is a widespread attitude today that anything is possible. And with each new scientific advance, other avenues become open for exploration. The second decade of the Space Age thus ushers in more abundant opportunities and still greater knowledge to capitalize upon them. From the feasibility standpoint, the prospects for space exploration were never more practical.

And yet, as we gather here to commemorate the nation's first milestone in space, there is a disturbing similarity of the situation today to the circumstances in 1957, before the launch of Sputnik I. Three topics that are uppermost in our thoughts today reflect the worries we had more than a decade ago:

First, a deep respect for Soviet science and technology, little knowledge of their plans, and apprehension that the Russians will mine diamonds that are within our reach in the unexplored corners of the solar system.

Second, the necessity for explaining the goals and value of space science and technology in down-to-earth terms so that public interest and support of long-range programs will not waver; and

Third, the annual program approval and funding process.

If you will pardon the personal references, I can bring the present circumstances into sharper focus by citing the workloads at the Jet Propulsion Laboratory and the Marshall Space Flight Center.

Bill Pickering was one of this country's earliest advocates of a space program. He and his associates at the Jet Propulsion Laboratory are responsible for brilliant achievements in lunar and planetary exploration. However -- most of their assigned programs have been completed.

Since the launch of Explorer I JPL has gone on to complete its work in the early Explorer earth satellite series and in the first Pioneer deep space probes to the region of the moon. The series of Ranger spacecraft, which gave us the first close-up photographs of the moon, has ended. The last of the Surveyors, which touched down softly to investigate the moon's surface, was launched earlier this month. Five JPL Mariner spacecraft have been launched to Venus and Mars, giving the world man's first close-up look at both of these planets. The only approved planetary or lunar flights remaining on JPL's once busy agenda are two Mariner spacecraft scheduled to be launched to Mars in 1969. JPL has developed an extremely high competence in lunar and planetary exploration, and the nation can be proud of its scientific contributions.

It only adds to their esteem to note that Bill and his cohorts have worked with a shoe-string budget.

In contrast to our five planetary flights, the U. S. S. R. has launched from 15 to 20 planetary spacecraft, weighing from 1,000 to 3,000 pounds each, with launchings at every Mars and Venus opportunity except one, since 1960.

NASA's planetary missions to date have been modest in size and cost, but they have established an unquestionable record of leadership. As we enter the second decade of the Space Age we are just getting into position to move ahead with much larger and more rewarding planetary payloads.

The Saturn V launch vehicle, which was recently flight tested with full success, and which will be used to boost the three-man Apollo spacecraft to the moon, could also send two highly sophisticated, unmanned Voyager spacecraft, each weighing 20,000 pounds, to Mars in a single launch. These spacecraft could not only map the planet Mars with a resolution comparable to that of our spectacular lunar orbiters, but they could also settle the intriguing question of whether or not Mars is an abode of life.

You know, of course, that Congress eliminated the Voyager program from the Fiscal Year 1968 budget and it is not in the Fiscal Year 1969 budget, either.

Approval was asked for a less ambitious program which would include two orbiters to be dispatched to Mars in 1971, to transmit photographs for about six months. Mars landing craft, weighing about 150 pounds, would be sent to Mars in 1973 by an intermediate launch vehicle. The instruments which would be parachuted through the thin Martian atmosphere would send us televised photos of the terrain, and take readings of winds and temperature conditions. But they would not be able to search for life forms.

We can still hope, however, that those of us here who teamed up with the Jupiter C and the Explorer I in 1958, can get together with the Saturn V and Voyager payloads as soon as funds become available.

The Soviets have just recently demonstrated their planetary capability when they parachuted a spacecraft into the atmosphere of Venus. Frankly, I would not be very surprised if the first soft landing on Mars would be performed by a Soviet spacecraft, depriving the United States once again of an historic scientific first.

On the other hand, we haven't exactly been sitting on our hands. As you know, the Apollo Five flight last week provided a successful test of the lunar module's descent and ascent engines to be used for landing on and taking off from the lunar surface. The flight marked the fifteenth consecutive successful flight of a Saturn launch vehicle.

We were pleased with the results of the propellant dump test in which the remaining liquid hydrogen and liquid oxygen propellants were removed from the stage after orbit had been attained. This is an operation vital to our Orbital Workshop flight in the Apollo Applications Program.

The major task of the Marshall Space Flight Center for the last few years has been the development of these Saturn launch vehicles. This development work is almost completed, and the Saturns are becoming operational. Two additional launches of the Saturn IB and three launches of the Saturn V are scheduled for this calendar year. Five launches of the Saturn V alone are scheduled for 1969. If all goes well, by the ninth launch of the Saturn V we hope to achieve the goal of a manned lunar landing within this decade.

Because of reduced budgetary levels NASA has not been able to plan for post-Apollo projects with any degree of certainty. NASA has attempted

to contract for long leadtime items to hold open the option of continued production of the Saturn IB and the Saturn V at the rate of two each per year. Frankly, this rate is too low to sustain the efficiency and interest of organizations in the program. It is too low to maintain the progress and momentum so painstakingly acquired in the space program over the past decade.

The dismantling of the high competence built up over the years at JPL and the Marshall Center has already begun. Both organizations are already losing valuable, highly trained people because of the insecurity and the lack of challenging work for them to do. And we face the grim reality of even further reductions and cutbacks.

If I sound like a calamity-howler, that is not my intention. The exploration of space has proven its worth, and has become deeply ingrained into the everyday fabric of our society. It has indeliby placed its imprint upon our science, technology, communications, international law and cooperation, education, economics, and even religious thought.

In the press of funding needs for all programs of the federal government, I am certain that the space program will come under close examination in Congress during the coming months. I believe that NASA's record of accomplishments and the ability of its management will bear up well under that scrutiny. In determining what our space program should be during the coming years, I hope that the members of Congress will give careful consideration to where we are today in space, at the end of our first decade, and where we could be ten years from now, by building on the accomplishments of the past.

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