Memorial Tributes: National Academy of Engineering, Volume 1
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Wernher Von Braun

1912-1977

By George E. Mueller

Wernher Von Braun, whose name has become synonymous with rocketry and space exploration, died in Alexandria, Virginia, on June 16, 1977, after a long illness. At the time, Dr. von Braun was Vice-President of Engineering and Development at Fairchild Industries and a Director of Flight Safety International.

Dr. von Braun's career spanned the entire history of rocketry. He never doubted his early vision of man in space, and cited Jules Verne's statement, "Anything one man can imagine, other men can make real." In less than forty years, Wernher saw his dream become reality. His work was instrumental in transforming a scientific curiosity into the power vehicles that took man to the moon.

Wernher von Braun was an extraordinary engineer. Trained as a mechanical engineer, he had the unique ability to visualize entire complex systems and make sense of them. He was one of our first system engineers, and he continued to apply this rare skill throughout his many years managing major programs.

He was more than a manager-he was a leader. With this technical ability, passionate optimism, immense experience, and uncanny organizing ability, he was able to forge an extremely capable technical team-not once, but repeatedly throughout his career. One of his associates once remarked, "Working for the government, you don't wind up a rich man. But working for von Braun, you feel you're a member of a great team."

Dr. von Braun's talents and interests extended beyond engineer

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ing to all phases of science and the arts. While playing a major role in the U.S. Space Program, he was also the driving force behind building a cultural center and bringing a university extension to his adopted home of Huntsville, Alabama. He was always willing to give of his much-sought-after time and energy to support projects and causes he believed in.

Wernher von Braun was born in Wirsitz, East Prussia, on March 23, 1912, one of three sons of a Prussian aristocrat who became Secretary of Agriculture in the Weimar Government. Baron Magnus von Braun had always assumed that his son would take up the dignified duties of a Prussian landholder. The young von Braun decided that space travel was his life's goal, however, and he enrolled at the Berlin Institute of Technology, where he immediately became fascinated with the exciting new field of rocketry.

He performed many experiments on liquid-fuel rockets during his two years as an undergraduate student at the Berlin Institute and his two years as a graduate student at the University of Berlin. His Ph.D. thesis was a landmark document, containing a complete theoretical investigation, supported by experiments, of the injection, combustion, equilibrium, and expansion phenomena involved in a liquid-fueled rocket engine.

During the next ten years, Dr. von Braun rose rapidly in the German rocket program. By the time he was twenty-five, he was developing a fully inertial-guided rocket designed to climb to an altitude of fifteen miles, with a 100-pound payload. By the time he was thirty, he had developed the V-2 long-range ballistic missile.

After the war, von Braun plunged immediately into the infant U.S. missile program. For the next fifteen years, he led the U.S. Army development programs that resulted in such missiles as the Redstone, Jupiter, Jupiter C, Juno II, and Pershing. These were the missiles that launched many of the early satellites and space probes of the 1950's.

All the while, Dr. von Braun had not forgotten his dreams of space travel. He wrote several books on the subject between 1952 and 1958, and in 1952 he forecast a space station in "ten or fifteen years." He took his case for space exploration directly to Washing

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ton, proposing Project Orbiter-a plan to hurl a small satellite in space by 1956-a full year before the Sputnik launch. The plan was disapproved, and Dr. von Braun's space work was delayed until Explorer 1 in 1958. Explorer 1, which discovered the Van Allen radiation belt, was the first success of the U.S. space program.

In 1960, von Braun was transferred to the National Aeronautics and Space Administration (NASA) and named Director of NASA's Marshall Space Flight Center. For the next decade he developed the launch vehicles that put man in space, then on the moon. Von Braun's Redstone booster successfully placed two Mercury astronauts in the first manned suborbital flight. Then, under von Braun's direction, the Saturn I, Saturn IB, and Saturn V launch vehicles were developed.

Wernher von Braun had always worked independently, leading his technical staff on specific scientific projects. Because of the national priority of the Manned Space Program, however, he was asked to channel his work and integrate it with that of the other Space Flight Centers. Because of yon Braun's stature in the field, this could have created a ticklish situation. It did not; von Braun immediately saw the importance of a coordinated Manned Space Program effort, and was instrumental in establishing an entirely different method of operation at the Marshall Center.

Dr. von Braun never dwelt on what had been done; he was always much too busy addressing what needed to be done. The contribution of the Marshall Center to the Manned Space Program proved to be incalculable. The Saturn V, undertaken in 1962, was to be by far the largest rocket ever built, four times more powerful than any rocket ever launched. Despite this technical challenge, the Saturn V program was a complete success. In thirteen flawless launchings, Saturn V rockets sent nine crews of astronauts to the vicinity of the moon, with six of the crews landing and exploring the lunar surface.

While that historic moment was certainly the pinnacle of von Braun's extraordinary career, it was by no means the end of his work. He considered space exploration to be vital to the future of mankind, and, if anything, he increased his pace to expand our foothold in space. Long before the Apollo program was over, von

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Braun was working toward space stations and space transportation systems. It was his keen interest in expanded space exploration, as well as his talent, that caused NASA in 1970 to name von Braun to direct its planning operations.

Despite Dr. von Braun's continuing efforts to build a foundation for public understanding of the importance of the space program, however, public and congressional support was declining. So, too, was NASA's budget. Seeking new challenges, Dr. von Braun resigned from the Agency in 1972 and joined an aerospace company, Fairchild Industries.

Wernher von Braun was one of the most honored scientists this country has ever known. He received more than fifty honorary awards and more than twenty honorary degrees. He was a pioneer in rocketry and propulsion and was indefatigable in promoting the new science, both through professional societies and hundreds of publications. Most of all, he was a warm, sensitive human being; a great leader; and a true friend. He leaves behind him a rich heritage, indeed.

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