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Marsha Freeman, Volume Editor

Rick W. Sturdevant, Series Editor

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Chapter 8

History of the American Astronautical Society (AAS), 1954–2014*

Rick W. Sturdevant,[†] James R. Kirkpatrick[‡] and Michael L. Ciancone[‡]

The American Astronautical Society (AAS) has been a key pioneer in promoting space exploration and spacecraft development since its founding in 1954. Composed of industry experts, leaders in academia, and others who are keenly interested in space, the AAS grew from humble origins to become a globally recognized organization. The Society's programs and journalistic productions have placed it at the forefront of space discovery, consistently covering topics that are important to the advancement of astronautics, education, and space exploration.

The AAS can trace its roots to the 1952 founding of the Staten Island Interplanetary Society (SIIS) by the noted astronomer and geologist Hans Behm. He wanted to create an organization that would help spur interest in space exploration, much like the British Interplanetary Society, of which Behm was a fellow. James Rosenquist of RCA Communications was also a charter member; he was critical of other space-related associations and thought that the public needed "more in the way of science knowledge and less in the way of science fiction." After the first few meetings, attendance fell and the SIIS decided to move its op-

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[†] U.S. Air Force Space Command, USA.

[‡] American Astronautical Society (AAS), USA.

erations to New York City to gain more exposure and to seek the participation of industry professionals such as Wernher von Braun.

In late summer of 1953, Behm, with the support of Hayden Planetarium director Joseph Chamberlain, announced the “first meeting of an American counterpart to the British Interplanetary Society” to be held in New York. Plans for the new organization were drawn up in the following months, and on January 22, 1954, the American Astronautical Society was officially established by thirty-seven individuals intent on championing serious proposals for spaceflight. Those at this first meeting represented a variety of backgrounds, from the aerospace industry to scientific institutions. Although the meeting took place in the New York State Civil Defense Commission, there were representatives present from at least six states (New York, New Jersey, Connecticut, Pennsylvania, Maryland, and Rhode Island). Hans Behm was elected President and the AAS received its certificate of incorporation on February 17. The first meeting of the Board of Directors that February also marked a major milestone—the Society’s first publication, the journal *Astronautics*, was approved by its members.

In December 1954, the AAS began an enduring tradition of holding an Annual Meeting so that members could interact with each other and hold engaging conversations to discuss the past, present, and future of astronautics. The first meeting was highlighted by a presentation from von Braun concerning orbital supply systems. This brought an additional level of prestige to the organization and spurred further growth, including the introduction of corporate partners and the joining of multiple associations, such as the International Astronautical Federation (IAF).

At its Second Annual Meeting on December 1, 1955, renowned spaceflight professionals, such as von Braun, Hermann Oberth, Ernst Stuhlinger, Fred Singer, Fred Durant, and Paul Sandoff, attended or delivered presentations. More than fifty different academic, government, and industrial organizations and thirteen magazines and newspapers sent representatives. Aerojet, General Electric, Glenn L. Martin, Goodyear Aircraft, Reaction Motors, and Sperry Gyroscope provided exhibits. For his pioneering work in spaceflight theory, Oberth received the first AAS Space Flight Award.

Unfortunately, in November 1956, seven of the twelve AAS board members, including von Braun, Krafft Ehricke, and Fred Singer, resigned over disagreements about organizational management, journal policies, and other business matters. The *New York Times* reported, “Planet Scientists Collide, Break Up.” The reconstituted board of directors identified major objectives and implemented a strategic plan to achieve them. To supplement its journal, the society initiated an “Advances in the Astronautical Sciences” series to have the AAS

conference proceedings available in published form. Von Braun, Ehricke, and Singer would later rejoin the society and become AAS Fellows.

With the launch of *Sputnik* by the Soviet Union in October 1957, a paradigm shift occurred in the way the public thought of space exploration. Suddenly, man-made objects could exit the outer limits of the atmosphere and be put to productive use. At the IAF Congress that month, AAS representatives were finally able to realistically talk about manned spaceflight.

The year 1958 brought the establishment of the National Aeronautics and Space Administration (NASA). In turn, AAS membership increased by over 65 percent and demand from scientists and libraries for *The Journal of the Astronautical Sciences* skyrocketed.

Engineers in NASA's human spaceflight program fueled AAS membership growth and kept the society at the forefront of space planning in the early 1960s. In December 1960, a joint AAS-American Association for the Advancement of Science (AAAS) symposium in New York City on lunar flight included sessions on "Lunar Exploration," "Lunar Spacecraft Systems," and "Is There a Need for a Manned Space Laboratory?" In 1961, the AAS also began its annual Goddard Memorial Symposium in Washington, DC, in conjunction with the National Space Club's Robert H. Goddard Memorial Dinner. Enthusiasm for human spaceflight drew more than 900 people to Denver in June 1963 for an AAS symposium on human exploration of Mars, and subsequent AAS sponsorship of "Case for Mars" conferences, held every three years, drew enthusiastic supporters. As an interesting historical side note, a proposal by the American Rocket Society (ARS) to merge with the AAS was unanimously rejected by the AAS Board of Directors in January 1961.

After the Apollo lunar landing in July 1969, public and governmental interest in the space program dwindled. As a result, the AAS began to establish relationships with U.S. Congressmen and other special interest groups to encourage their support for the space program. The Society also sponsored conferences on technology transfer to other fields, as well as helped some 60,000 unemployed aerospace workers find jobs in textiles and health care that would involve their prior expertise. The Society's influence on the development of the national space program was shown when its President, Paul Dergarabedian, was involved in preliminary discussions on a program that would become the Space Shuttle.

In the mid-1970s, as the Society approached its 25th year, it remained steadfast in its promotion of astronautics. It continued holding conferences and joint meetings with other organizations concerning various space-related topics. The AAS also began to attract experts in other fields, such as space law and history, and encouraged them to become involved.

During its third decade, the AAS concentrated on infusing itself with “new blood,” enhancing its image in Washington, DC, eliminating wasteful operations, and strengthening its business office. In addition to its Annual Meeting and the Goddard Memorial Symposium, the society held regional meetings on subjects such as Skylab, satellite communications, Space Shuttle and Spacelab utilization, and commercial space operations. A jointly sponsored biannual AAS-AIAA astrodynamics conference also commenced.

To gain more members, the society further broadened its fields of interest to attract non-technical specialists, including those in space law, history, and public policy. Beginning in 1977, the society’s History Series introduced memoirs and historical reflections on spaceflight and related disciplines. To celebrate the society’s 25th anniversary in 1979, a symposium on its history featured recollections by former presidents and other members. Eugene Emme edited their accounts in a Univelt volume, titled *Twenty-Five Years of the American Astronautical Society, 1954–1979*.

In the wake of the first Space Shuttle launch in 1981, the AAS branched out to an organization previously untouched by any other astronautical association—the U.S. military. Amid concerns about exclusivity due to the need for all involved to have security clearances, the Classified Military Space Symposium was created in 1982 and was met with much enthusiasm from the Pentagon. The Symposium opened a whole new audience to the latest in space innovation and brought perspective to the military’s proposed space projects.

The mid-1980s also brought a time of international outreach for the AAS. The Society reached out to the European Space Agency, the Japanese, and the Chinese. In 1984, the Chinese Society of Astronautics (CSA) invited AAS leaders for a tour of the country and, surprisingly, to see its experimental space programs. Gayle L. May, Dr. Charles A. Sheffield, Dr. Peter M. Bainum, and Dr. Ted Speaker represented the AAS during the CSA-sponsored tour. After more than two and half years of coordination and planning, the AAS and the Japanese Rocket Society (JRS) sponsored the first International Space Conference of Pacific-basin Societies (ISCOPS) in Honolulu, Hawaii, during December 1985. Having witnessed the success of that conference, the CSA expressed interest in becoming one of the sponsoring organizations for the biennial event. The CSA hosted the second ISCOPS in Beijing, China, during June 1987.

Marcia Smith, first woman AAS president, worked during 1985–1986 to prepare the organization for the future. The most dramatic change altered the constitution and bylaws to allow the AAS to present technical options on space subjects in political settings, such as congressional committees, thereby more directly influencing U.S. and global space programs. The society established pro-

cedures for drafting policy statements, and chartered a Public Policy Committee. Furthermore, Walter Froehlich, AAS vice president for publications, pushed hard in board meetings for redesigning the society's newsletter as a bimonthly *Space Times* magazine to better serve its members. Under Froehlich's editorship, the new magazine combined AAS news with general-interest articles.

In the late 1980s, the society hired its own staff (previously contracted out)—an executive director and an administrative assistant—and purchased office space and equipment. The society also started using cost-saving capabilities, such as desktop publishing.

In 1990, the AAS extended its reach to education, as it placed excess revenues into sponsoring space-related activities in schools across the Washington, DC, area. A few years later, the Society also initiated a scholarship program.

As the Cold War drew to a close, the national space budget was slashed, with a negative impact on the AAS membership, and the astronautics industry as a whole. However, a sense of optimism remained as a new era of space exploration emerged. With the introduction of the International Space Station in 1998 came an international platform for space experimentation and discovery, one that continues to serve its purpose today.

The beginning of the 21st century brought increased visibility to AAS as it introduced three new annual events. A Student CanSat Competition kicked off in Texas in 2005, and the Wernher von Braun Memorial Symposium was inaugurated in Alabama in 2008. In 2012 the first annual International Space Station Research and Development Conference was held in Colorado, organized by AAS with the support of NASA and the Center for the Advancement of Science in Space. AAS continued to host the widely respected Space Flight Mechanics and Astrodynamics Specialist Meetings with AIAA, and its Rocky Mountain Section Guidance and Control Conference remained popular. From 2000 to the present, AAS individual membership, while not growing significantly, remained stable.

The AAS celebrates its 60th anniversary in 2014 with approximately 1,400 individual members and 48 corporate and institutional members and sponsors, located in the United States and around the world. As was true in the early days of the Society, the membership of the AAS is composed of people of many different disciplines and background. Although many of the Society's members are engineers and scientists, an increasing number of administrators, military space specialists, lawyers, educators, historians, journalists, artists, students, and others interested in spaceflight, have joined.

Through its regular conferences and symposia, tailored workshops and seminars, public outreach programs, educational activities and respected publications, the AAS has proven itself to be a leader in promoting space travel and ex-

ploration, and continues to be one of the most well-respected astronautical organizations in the world. Unquestionably, there will always be a group of people planning for humankind's future in space, and the AAS will be in the lead.

Selected Bibliography

AAS-published Proceedings of the AAS/AIAA Astrodynamics Specialist Conferences, AAS/AIAA Space Flight Mechanics Meetings, and AAS Rocky Mountain Guidance and Control Conferences. Most of these appear in published form in the Advances in the Astronautical Sciences series (San Diego, California: published for the American Astronautical Society by Univelt, Inc.).

AAS-published Proceedings of the AAS/JRS/CSA ISCOPS (formerly PISSTA) Symposia, Volumes 60, 73, 77, 91, 96, 110, 117, and 138, of the Advances in the Astronautical Sciences series (San Diego, California: published for the American Astronautical Society by Univelt, Inc.). The AAS publishes the proceedings when the AAS and JRS hosts and the CSA do their own when they are the host.

Exploration of Mars (Proceedings of the AAS Symposium on the Exploration of Mars, June 6–7, 1963, Denver, Colorado), George W. Morgenthaler, editor, Advances in the Astronautical Sciences, Volume 15, (New York: American Astronautical Society, 1963).

International Series of Monographs in Aeronautics and Astronautics, Division IX Symposia, Vol. 18 (Proceedings of the First Goddard Memorial Symposium: Interactions of Space Vehicles with an Ionized Atmosphere, March 17, 1961, Washington, DC), S. Fred Singer, editor (Pergamon Press, 1965).

Lunar Exploration and Spacecraft Systems (Proceedings of the Symposium on Lunar Flight, December 27, 1960, New York City), Ross Fleisig, Edward A. Hine, and George J. Clark, editors (New York: Plenum Press, 1962).

Numerical/Chronological/Author Index 1954–1978, Horace Jacobs and Robert H. Jacobs (San Diego, California: Univelt, Inc., 1979); *Numerical/Chronological/Author Index 1979–1985/86*, Horace Jacobs and Robert H. Jacobs (San Diego, California: Univelt, Inc., 1987); *Numerical/Chronological/Author Index 1986–1992*, Horace Jacobs and Robert H. Jacobs (San Diego, California: Univelt, Inc., 1993). For a summary of the chronology of AAS-sponsored and co-sponsored conferences and the associated published proceedings for the conferences see the Appendices in these volumes.

The Case for Mars (Proceedings of the First Case for Mars Conference, April 29 – May 2, 1981, Boulder, Colorado), Penelope J. Boston, editor, Science and Technology Series, Vol. 57 (San Diego, California: published for the American Astronautical Society, by Univelt, Inc., 1984); *The Case for Mars II* (Proceedings of the Second Case for Mars Conference, July 10–14, 1984, Boulder, Colorado), Christopher P. McKay, editor, Science and Technology Series, Vol. 62 (San Diego, California: published for the American Astronautical Society, by Univelt, Inc., 1985); *The Case for Mars III* (Proceedings of the Third Case for Mars Conference, July 18–22, 1987, Boulder, Colorado), Carol R. Stoker, editor, Science and Technology Series, Vol. 74 and 75 (San Diego, California: published for the American Astronautical Society, by Univelt, Inc., 1989); *The Case for Mars IV* (Proceedings of the Fourth Case for Mars Conference, June 4–8, 1990, Boulder, Colorado), Thomas R. Meyer, editor, Science and Technology Series, Vol. 89 and 90 (San Diego, California: published for the American Astronautical Society, by Univelt, Inc., 1997); *The Case for Mars V* (Proceedings of the Fifth Case for Mars Conference, May 26–29, 1993, Boulder, Colorado), Penelope J. Boston, editor, Science and Technology Series, Vol. 97 (San Diego,

California: published for the American Astronautical Society, by Univelt, Inc., 2000); *The Case for Mars VI* (Proceedings of the Sixth Case for Mars Conference, July 17–20, 1996, Boulder, Colorado), Kelly R. McMillen, editor, Science and Technology Series, Vol. 98 (San Diego, California: published for the American Astronautical Society, by Univelt, Inc., 2000).

Twenty-Five Years of the American Astronautical Society (Proceedings of an AAS History Workshop held in conjunction with the Seventeenth AAS Goddard Memorial Symposium, March 28–30, 1979, Washington, DC), Eugene M. Emme, editor, AAS History Series, Volume 2, (San Diego, California: published for the American Astronautical Society, by Univelt, Inc., 1980).