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Author: Dr. Charles Lundquist  
University of Alabama in Huntsville, United States

Mr. Frank L. Williams  
Aerospace Executive retired, United States

## HEINZ-HERMANN KOELLE AND HIS CONTRIBUTIONS TO SPACE DEVELOPMENT

**Abstract**

Heinz-Hermann Koelle was an early leader of the team that conceived, promoted and defined the Saturn Program that put mankind on the Moon. He did this in his role as Chief of the Preliminary Design Office of the U. S. Army Ballistic Missile Agency (1955-60) and subsequently as Director of the Future Projects Office of the NASA Marshall Space Flight Center (1960-65). His earlier career began in Europe, where he was born in the free state of Danzig on 22 July 1925. During World War II he was a pilot in the Luftwaffe. After the war, he got his Dipl.-Eng in mechanical engineering in 1954 from the Technical University Stuttgart. He was a founder of the post-war German Society of Space Research. In 1955 he was recruited by Wernher von Braun to join his team at the Army Ballistic Missile Agency in Huntsville, Alabama. Besides Koelle's engineering expertise, he was a gifted writer and editor. He could skillfully organize, consolidate and clearly present large bodies of factual material, a valuable capability for a future planner. Several examples illustrate his editorial skills: 1) Literature-Index of Astronautics, with H.J. Kaeppler, 1954, 2) Project Horizon, 1959, 3) a collection of some 100 technical reports demonstrating MSFC systems capability, 1961 and 4) Handbook of Astronautical Engineering, 1961. Of these, the report on Project Horizon, prepared by the Preliminary Design Office and edited by Koelle, suggested an Army demonstration in the Cold War to 'seize the high ground' on the Moon through developing the Saturn rocket family. The subsequent revised report proposed the same Saturn rocketry to achieve a civilian presence on the Moon. The analyses in the report were used to convince the Kennedy Administration that travel to the Moon was in fact a near-term possibility. Remarkably, in 1963, Koelle found time to complete his Dr.-Eng at the Technical University at Berlin, while still satisfying von Braun's continuing requirements that he formulate future project options for MSFC and the U.S. In 1965, he succumbed to the call of academia and accepted a professorship of space technology at the Technical University in Berlin (1965-1991). After retirement in 1991, he remained active in the International Academy of Astronautics. He resided in Berlin until his death on February 20, 2011.