52nd IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
Germany's Contribution to Astronautics Post WWII (3A)

Author: Mr. Olivier Helbig
Germany

PETER LÜTHGE - SPACE PROPULSION IN BREMEN AFTER WWII

Abstract

The first generation of German space engineers and scientist achieved remarkable success in rocketry, laying some of the fundaments for rockets and launchers not only for years to come, but also on a worldwide scale.
After WWII, Germany had to focus on rebuilding the country and was in no position to pursue space research studies. It was not until the end of the 50's that German universities would be allowed by the allies to form aerospace engineers again. Peter Lüthge, born in 1939, was with Klaus Berge the first German to graduate as space engineer post war; he would be at the tip of a "so-called" second wave of German space engineers. During the 60's, as director of the Propulsion and Innovation department at ERNO (nowadays Airbus in Bremen), Peter was responsible for the development work on Germany's contribution to the European ELDO-A (later EUROPA I) launcher, the Astris upper stage, as well as Hydrazine monopropellant technologies. Later, he was active in the BOOMERANG and ORBITER scaled flight studies, which were part of the early development of NASA's SPACE SHUTTLE. To complement his core launcher and satellite activities he steered the department into diversification, going into domains such as firefighting with UAVs and rescue systems for submarines. Although leaving ERNO during the 70's, to lead his own aerospace company (RTG Aero-Hydraulic), during his professional life he worked on several satellite propulsion systems, ranging from cold gas thrusters to hydrazine systems, with valuable contributions to satellites as HELIOS, AMPTE-UK, GALILEO (NASA), Astrospas, CHAMP, GRACE and SAR-Lupe. On rockets, his original passion, he worked in sounding rockets such as DACHS, UNISTAB and INTA 300, one of the few rockets using CF4. As a multi-talented engineer he worked also in rather non-space related projects such as an earthquake dampening system for observatories and an agriculture tractor for third world countries.
This paper collects and summarizes most of his fundamental contributions to German aerospace describing his work at ERNO and RTG in Bremen, not forgetting the life fire testing activities carried out on the Trauen test site.