

MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)  
Facilities and Operations of Microgravity Experiments (5)

Author: Dr. Alexander Schmidt  
German Aerospace Center (DLR), Germany, alexander.schmidt@dlr.de

Mr. Peter Turner  
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, peter.turner@dlr.de  
Dr. Andreas Stamminger  
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, andreas.stamminger@dlr.de

DLR'S MOBILE ROCKET BASE - 47 YEARS OF MICROGRAVITY AND TECHNICAL  
EXPERIMENTS ON SUBORBITAL FLIGHTS

**Abstract**

Mobile Rocket Base (MORABA), a division of the Space Operations and Astronaut Training Department of DLR (Deutsches Zentrum für Luft- und Raumfahrt) provides the national and international scientific community with the opportunity to prepare and implement rocket- and balloon-borne experiments. The fields of research include aeronomy, astronomy, geophysics, material science and hypersonic research and are conducted in cooperation with a variety of international partners. MORABA offers a number of mechanical and electrical systems for use on rocket, balloon and short term satellite missions. During the last four decades more than 250 campaigns have been performed in Antarctica, Australia, Brazil, France, Greenland, India, Italy, Japan, Norway, Spain, Sweden and USA. Depending on the scientific objective, an appropriate launch range is selected and complemented or fully equipped with MORABA's mobile infrastructure, such as launcher, telemetry and tracking stations. MORABA supplies the suitable converted military surplus or commercial launch vehicles, as well as all necessary mechanical and electrical subsystems to the customers. This paper gives an overview of the MORABA infrastructure for sounding rocket launching and satellite TTC as well as over the capabilities for microgravity experiments on sounding rockets.