

## 30 Years ago: First SpaceLab Flight (Spacelab-1)



First SpaceLab Mission Patch

On 28th November 1983 the 'First Spacelab Flight' (FSLP) lifted off from the Cape on the Space Shuttle flight STS-9 with Ulf Merbold, the first German Astronaut onboard a US spacecraft. The 10-day mission not only marked ESA's entry into human spaceflight activities but also DLR's endorsement as an equal partner in the design, construction and operating of human spaceflight activities.

Dr. Ulf Merbold was selected, qualified and trained from a field of some 2.000 applicants at DLR's Astronaut Center near Cologne, Germany supported by Lufthansa's pilot training facilities in Bremen. During the flight, the German Space Operations Control Center (GSOC) in Oberpfaffenhofen/Bavaria functioned as the prime 'Remote Payload Support Center' – also a 'first' for a NASA manned mission, which usually was controlled entirely under the sole responsibility of the Johnson Space Flight Center (JSC) in Houston.



SpaceLab System Model



Ulf Merbold inside the SpaceLab Module during Flight

The SpaceLab system was built by a European consortium led by German industry (Fokker/ ERNO, later MBB/ERNO now EADS) under a cooperation agreement between ESA and NASA. It was the first purpose built space laboratory – realizing Herman Oberth's vision of another 60 years ago because "during free flight, the apparatus is not exposed to the pull of gravity. Therefore, many physical and physiological experiments can be performed that are impossible on Earth because of gravity" (Die Rakete zu den Planetenräumen, 1923).

During the Spacelab-1 mission over 70 scientific experiments were successfully conducted covering the fields of Astronomy, Solar Physics, Space Plasma Physics, Earth Observation, Material Science, Technology and Life Sciences. The crew of STS-9 consisted of Commander John Young and Pilot Brewster Shaw, Mission Specialists Owen Garriott, Robert 'Bob' Parker, and Payload Specialists Byron Lichtenberg and Ulf Merbold who worked in two 12 hour shifts to use the time available under zero gravity to the maximum extent possible.

Two more dedicated SpaceLab missions (D-1 and D-2) followed in 1985 and 1993, before the SpaceLab system was turned over to NASA who flew SpaceLab and 'Get-Away Specials' in over more than 20 additional Shuttle flights.

The significance of this first flight, from a German point of view, was that after the second dedicated successful SpaceLab flight D-1 (1985), the Bavarian Prime Minister Franz-Josef Strauss decided to establish a 'Houston-like' control center at DLR Oberpfaffenhofen as a 'cutting-edge' contribution to further ESA activities in human spaceflight, and supported it to tune of 50 Million Deutsch Marks (25 Mio. Euro) for a new 'Manned Space Laboratories Control Center (MSCC)'

The rest is history: DLR's Col-CC (Columbus Control Center) is now one of the three major control centers being responsible for operating the International Space Station (ISS), the largest permanently manned space structure ever built by mankind as equal partner to NASA.



F.J. Strauss (Bavarian Prime Minister) and Ulf Merbold at GSOC during the D-1 Mission

SpaceLab



Then new Manned Space Laboratories Control Center (MSCC) completed in 1991  
Now home of the Columbus Control Center (Col-CC)

28th November 2013: Joachim J. Kehr (Editor SpaceOps News)