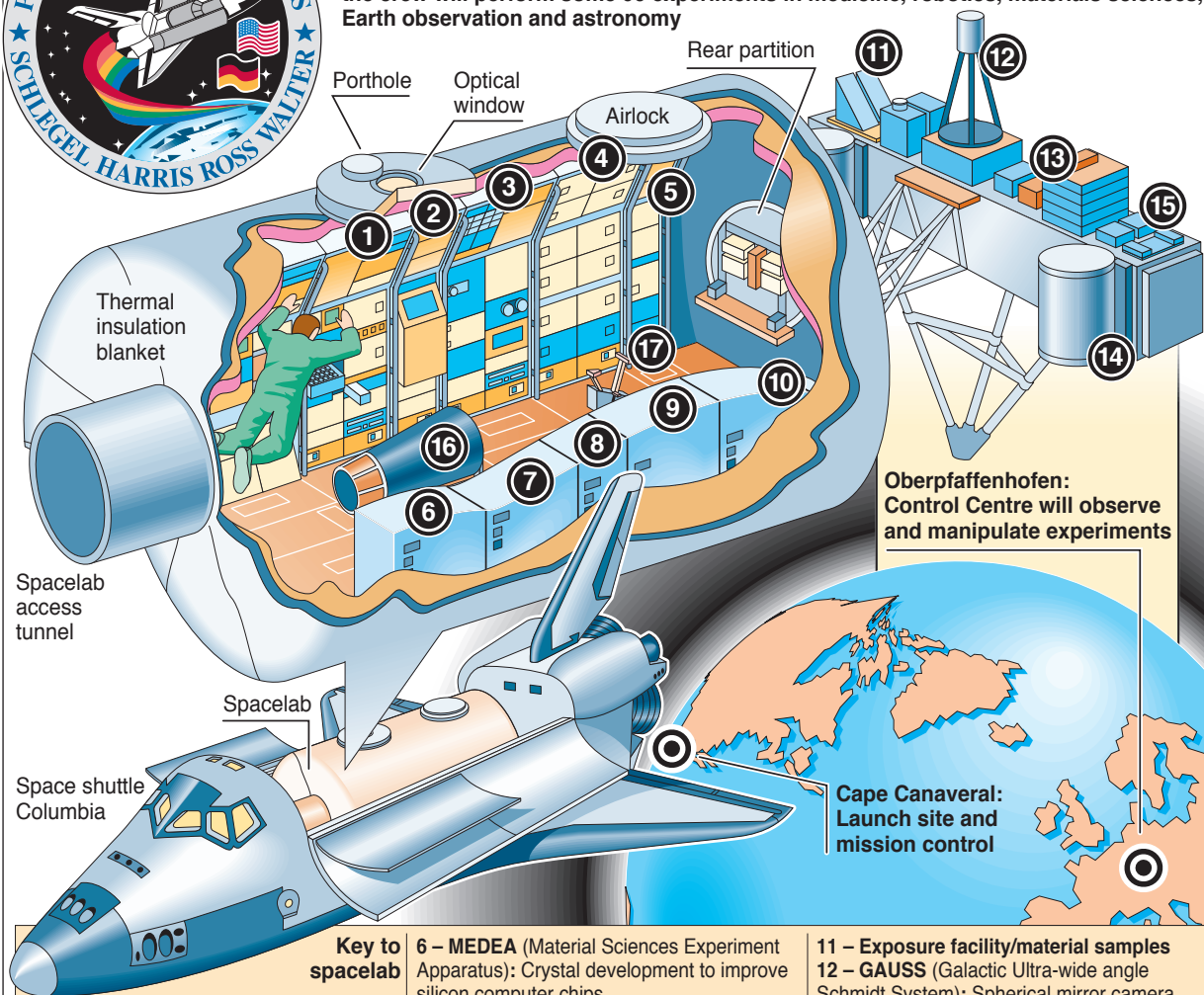


Second German space mission blasts into orbit

Two German astronauts will be among the crew aboard the space shuttle Columbia as Germany's second spacelab mission blasts into orbit. During the nine day mission the crew will perform some 90 experiments in medicine, robotics, materials sciences, Earth observation and astronomy



Key to spacelab

- 1 – System rack:** includes on-board TV system, water cooling system and vacuum measurement system
- 2 – ROTEX rack (Robotic Technology Experiment):** Remote controlled robot arm
- 3 – Material sciences laboratory:** Aims to develop advanced turbine blades to improve aircraft engine performance/life
- 4 – Stowage rack:** Spacelab system parts, payload parts and samples
- 5 – Experiment rack:** includes Baroreflex experiment (cardiac reflex measurement)

- 6 – MEDEA (Material Sciences Experiment Apparatus):** Crystal development to improve silicon computer chips
- 7 – Stowage rack:** Payload parts and samples, spacelab systems parts
- 8 – BIOLABOR:** Cell cultivation. Botanical and zoological experiments
- 9 – ANTHRORACK:** Human Physiology Laboratory will study effects of zero-gravity on man. Previous tests showed a 90 per cent reduction in reproduction of lymphocytes – corpuscles which resist infection
- 10 – HOLOP (Holographical Optical Laboratory):** Research in metallurgy and casting using lasers

- 11 – Exposure facility/material samples**
- 12 – GAUSS (Galactic Ultra-wide angle Schmidt System):** Spherical mirror camera constructed for observation of the galaxy
- 13 – MOMS (Modular Optoelectronic Multispectral Scanner):** Data obtained will allow automatic production of topographical maps for the first time – can also measure crop states and air and water pollution
- 14 – Materials sciences containers**
- 15 – Biological samples for cosmic and UV radiation experiments**
- 16 – Lower body negative pressure device**
- 17 – Bicycle ergometer**