



Germany and China - joint experiments in space

01 November 2011

Successful launch of the German SIMBOX on board the Shenzhou-8 spacecraft

On 31 October at 22:58 CET (on 1 November at 05:58 local time), the Chinese spaceship Shenzhou-8 was launched on board a Long March rocket from the Jiuquan Satellite Launch Center in Inner Mongolia. On board is the SIMBOX (Science in Microgravity Box) experimental facility containing 17 experiments from the fields of biology and medicine, which will be conducted by German researchers together with their Chinese colleagues. This is the first time that the China Manned Space Engineering Office (CMSEO) cooperates with another nation in the use of Shenzhou – the core of China's human spaceflight programme.

The German Aerospace Center's (Deutsches Zentrum für Luft- und Raumfahrt; DLR) Space Administration is responsible for the German mission share. "We congratulate the Chinese space organisation on this outstanding achievement. China will remain a highly interesting cooperation partner for future bilateral space projects, for example in the field of microgravity research. We see an enormous potential to enhance our cooperation with China with respect to the peaceful use of outer space", said Gerd Gruppe, member of the DLR Executive Board, responsible for the German Space Administration, on occasion of the launch. The SIMBOX facility - a combination of intelligent incubator and centrifuge - was built at Astrium in Friedrichshafen. Seven German universities have contributed experiments to the project. The flight of the Shenzhou-8 spacecraft to the first module of the Chinese space station Tiangong, which is currently under construction, will be China's final test for future human space flight.

Biological samples will remain in space for 17 days

On 2 November, Shenzhou-8 will dock to 'Tiangong-1'. After approximately 17 days in space, Shenzhou or 'Divine Craft' will undock and, after re-entering Earth's atmosphere, it will land by means of a parachute. The samples will then be recovered by helicopter search teams and transported to Beijing for evaluation.

In the scope of SIMBOX, plants, nematodes, bacteria and human cancer cells will be exposed to zero gravity and space radiation for nearly three weeks. These experiments will include investigating the crystallisation of medically relevant biomacromolecules. The objective is to tackle fundamental biological and medical questions that also play an important role on the Earth. Researchers at the Universities of Erlangen, Hohenheim, Magdeburg, Tübingen, Freiburg, Hamburg and the Charité Berlin are involved in these studies. In addition to the six German experiments, the Universities of Erlangen and Wuhan are carrying out joint German-Chinese experiments.

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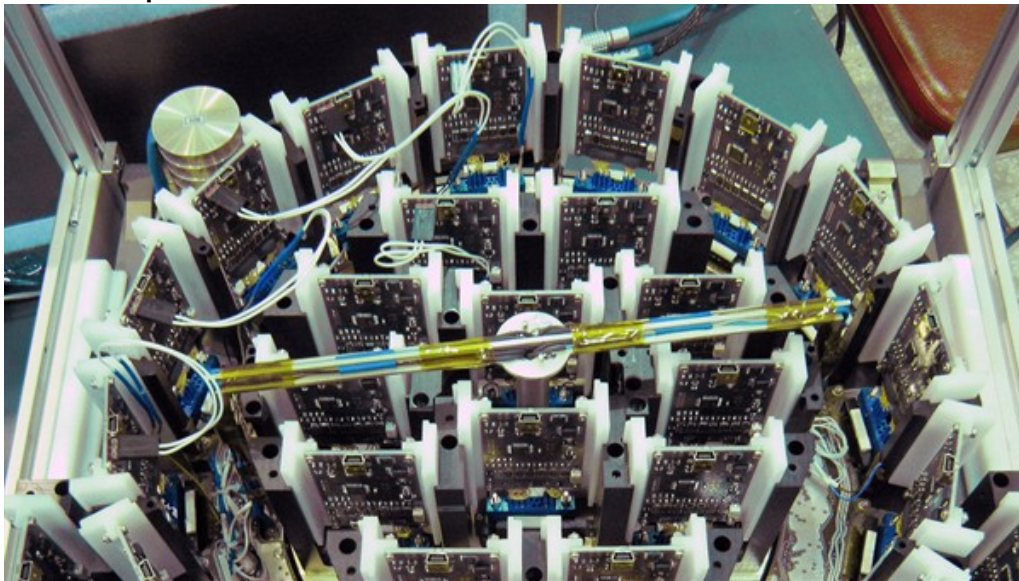
Successful launch of the Chinese spaceship Shenzhou-8 on 1 November at 05:58 local time



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Credit: DLR/Markus Braun.

SIMBOX experiment rack



Bird's eye view of the SIMBOX experiment rack.

Credit: Astrium.

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