

## **HE Space Seeks First German Female Astronaut: 'Die Astronautin'**

The international space company HE Space Operations [1] plans to send the first female German astronaut into space before 2020. The search for the right candidate is on: women were able to apply until 30<sup>th</sup> April 2016 to take part in the mission, more than 400 candidates applied.

In 1963, Russia sent Valentina Tereshkova, the first woman astronaut into space, followed by the Sally Ride (USA), 20 years later. Helen Sharman (UK) visited the Mir station in 1991 (Soyuz TM-11) and in 1996, Claudie Haignere was the first French woman to go into orbit. Today, half of the astronauts in the US and China are women.

All of the eleven astronauts sent by Germany on missions into space were men. And yet a number of politicians have come out strong in favor of a first German woman astronaut in space. Last year, Brigitte Zypries, Parliamentary State Secretary at the Federal Ministry for Economic Affairs and Energy and Federal Government Coordinator of German aerospace policy explained that after eleven men it would be her "personal preference" to finally send a German female astronaut to the space station (ISS). [2]

For the sake of fairness it should be mentioned that over 30 years ago, the second class of German astronauts, recruited for the spacelab D-2 mission, comprised already two female astronauts: The then acting research minister Riesenhuber presented the five candidates to the public in August 1987. Heike Walpot (with 27 years as the youngest in the team), the teacher and meteorologist Renate Brümmer and the physicists Gerhard Thiele, Hans Schlegel and Ulrich Walter were the finalists for German D-2 astronaut corps. After the final choice for participating in the STS-55/D-2 mission fell on Schlegel and Walter in 1992, Renate Brümmer and Gerhard Thiele were appointed as their "back-up" astronauts and both completed the full-fledged training together with their other colleagues.

During the actual D-2 flight Renate Brümmer worked as CapCom at the DLR Control Center in Oberpfaffenhofen for the two "flying" German astronauts. After the successful termination of the D-2 mission, she left the German astronaut corps and returned to the USA in 1994 in Colorado to work at NOAA as meteorologist. [4]

Heike Walpot decided also to leave the German astronaut corps. During the D-2 flight Heike alternated with Renate Brümmer as CapCom at the DLR Center in Oberpfaffenhofen. In summer of 1996 she became a professional pilot for Lufthansa. [3]

## **The "Female Astronaut" project**

The project pursues the following goals: a women astronaut will bring new life to Germany's aerospace sector. A female astronaut will be a role model encouraging women and girls alike to set their sights on aviation and aerospace. During the mission, the astronaut will also conduct medical tests designed to examine the female body's response to zero gravity. Prof. Hanns-Christian Gunga, Director of the Institute of Physiology at Chante Berlin, responsible for the scientific management of the tests. He explains: "Up to now, there have been very few examinations of the physiology of female astronauts. The planned mission will help to better examine and understand the extent of the changes that occur during space travel, especially with a view on changes to the cardiovascular system, temperature regulation and the salt and water balance as well as the skeletal system and the muscles of the body. It is likely that there are differences between male and female astronauts in space especially since men and women have different hormones". [2]

The "female astronaut" ("Die Astronautin") project was initiated by Claudia Kessler, CEO and managing director of the Bremen space personnel service provider HE Space. SpaceOps News (SoN) had the opportunity to talk to Claudia Kessler and ask some operations oriented questions. HE Space secured the sponsorship and funding to promote the program. The ride on a Soyuz capsule could be between \$50 - \$80M, however HE Space still needs to identify and secure commercial sponsorship and "crowd-funding" participants.

In the meantime the applicants have been narrowed down to six candidates [2], the finalist(s) will be announced in April 2017.



From Left: Nicola Baumann (Eurofighter pilot), Magdalena Pree (Galileo Ground Operations engineer), Susanne Peters (Dr.-Ing), Lisa Marie Haas (Design & development engineer), Suzanna Randall (Astrophysicist), Insa Thiele-Eich (Meteorologist).

Claudia, we followed your campaign in the Internet and on facebook. The initiative is long due and very inspirational. The SpaceOps community is interested in some operational aspects of this enterprise and we would appreciate your thoughts and ideas on those subjects. It would be great if one day in the not so far future your selected “Astronautin” would play a role in Jan Woerner’s Moon Village vision.

**SoN:** Although never flown, two German female astronauts were recruited, trained and finally served as crew interface coordinators (CapCom) during the D-2 mission (STS-55) at the control center at Oberpfaffenhofen. Did you try to get in contact with Renate Brümmer and Heike Walpot to “capitalize” on their experience?

**Claudia Kessler:** Not yet, but I am in close contact with several other German astronauts like for example Prof. Ulrich Walter who also chairs our final selection committee.

**SoN:** Are there any thoughts about what would happen after the flight? From a career point of view it might not be an easy decision to spend 2...3 years interrupting your professional plans for a two week long stay on the space station. Are there arrangements for the prime candidate (and her back-up, if any) to return to their original job, or would they be offered an opportunity from within the system?

**Claudia Kessler:** First of all, we plan at least one year for outreach and education activities after the work, and as our “Astronautin” will not become an employee of a space agency she also will be in contact with her employer during training and the actual mission (depending on who that is). So, she very likely will return to her original job afterwards.

**SoN:** Being supported by DLR/ESA for their training – the astronauts will be trained excellently. Are there any thoughts about providing any other “hands-on” science experimentation with the rest of the crew besides the announced life science experiments?

**Claudia Kessler:** Yes, we have already been approached by researchers, and of course there will be also commercial experiments provided by the sponsoring companies.

**SoN:** Assuming a successful flight of the first German female astronaut – would the initiative have been a “one-time-shot” affair or would you consider to follow up any opportunities which might develop e.g., recruit, train and offer more (female) astronauts for private or commercial enterprises?

**Claudia Kessler:** I am sure that there will be a lot of follow on activities, looking at the changing space sector, all the so called “New Space” activities.

Claudia, we would like to thank you for your outspoken answers and wish you great success for the “Astronautin”.

***References:***

- [1] <https://www.hespace.com/about-he-space/what-sets-us-apart/>
- [2] <http://dieastronautin.de/english-version/>
- [3] [https://de.wikipedia.org/wiki/Heike\\_Walpot](https://de.wikipedia.org/wiki/Heike_Walpot)
- [4] [https://de.wikipedia.org/wiki/Renate\\_Br%C3%BCmmer](https://de.wikipedia.org/wiki/Renate_Br%C3%BCmmer)

March 2017, Joachim J. Kehr, Editor SpaceOps News, Journal of Space Operations & Communicator <http://opsjournal.org>  
joachimkehr@aol.com