

**Stichting Space Professionals Foundation**

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Copy: Gerard Blaauw, Pieter van Beekhuizen, Marco Beijersbergen

**Dear Dr. Gerard Blaauw, Dear Pieter van Beekhuizen,**

In short:

My experience at the Southern Hemisphere Space Studies Program (SHSSP) has been extremely rewarding, both on a professional and on a personal level. Such a program enables the building of an international, inter-cultural and interdisciplinary network. I highly recommend it.

In detail:

As part of my PhD training and in agreement with my supervisor Prof.dr. M. Beijersbergen, I participated in the Southern Hemisphere Space Studies Program (SHSSP), a winter school from the International Space University (ISU). The program took place in Adelaide, Australia from January, 14th 2019 to February 15th 2019. The 46 participants were a mix of graduate researchers and professionals in industry, government and the defense services coming from countries such as China, India, United Arab Emirates and Australia and with an average age of 32 years old.

The first week started with the program director's (and also chief innovation officer, engineering at NASA) Doctor Omar Hatamleh official welcome. Inspirational speeches followed by many including Anthony Murfett, the acting head of the Australian Space Agency and Hon. Steven Marshall, the premier of South Australia.

Lectures kicked off right after with many guest lecturers, including Flavia Tata-Nardini from Fleet Space, who opened minds with possibilities of Space 2.0 and Michael Davis, former lawyer and former chair of the Space Industry Association of Australia, talking about the foundations of space law. Walter Peeters, economist and former president of ISU, lectured about economic rationals of space. Space medicine and space psychology were addressed as well through several lectures and workshops including a public event about the effects of micro-gravity on humans from Dr. Gordon Cable. Then we, the participants, investigated the impact of space on cultural heritage and national identity as well as demonstrated how art and science influence each other. We also had lectures challenging our view of the ethics of space exploration. Next we had the chance to sit down and have a casual chat with ESA astronaut Paolo Nespoli, and learn about his experiences in space. Paolo has the unique experience of having flown on both the Space Shuttle and the Soyuz.

The following week we teamed up to produce rockets, instructed by John Connolly, in charge of the study and planning of NASA's human mission to Mars. After only two days all the rockets successfully ignited and launched, with a few interesting flight-paths. The winning team reached and apogee of 513 m and retrieved a raw egg intact from the rocket nose cone. Subsequently Prof. Masahiko

Yamazaki and his expert team from Nihon University (Japan) conducted the HEPT-Sat certificate training, leading to CubeSats being designed, constructed and sent on simulated missions around the classroom in a single day.

In the third week, Alan Hale (discoverer of the Hale-Bopp Comet) provided advice and commentary at the Stockport observatory tour. Trapezium and the Orion Nebula were viewed through reflective telescopes with mirrors of over 0.4 meters, taking turns between the banks of clouds. Being able to see the dust and gas clouds of the Orion Nebula with our own eyes was a breath-taking experience.

In the two final weeks the program focused on a team project, this year called “Without Space” in which the goal was to assess the commercial, economic, ethical, legal, political and technical impacts on a world without space assets, considering two case studies (the United States of America and China) over time. The project ended with a one-hour presentation live streamed on YouTube.

Besides the very intense schedule starting at 9 am and finishing at 10 pm everyday, week-end included, they were still a few moments dedicated to non-space activities. For instance we visited the Cleland Wildlife Park and Mount Lofty for a view over the city of Adelaide. This was an exciting chance to meet some Australian wildlife including kangaroos, koalas, emus, and snakes! Also the Chinese participants celebrated the New Lunar Year of the pig and we came along for a special dinner.

Space requires people from different cultures, nationalities and backgrounds to work together. ISU is driven by the 3 Is standing for International, Inter-cultural and Inter-disciplinary, therefore their philosophy is the essence of space. By meeting such an interesting and qualified panel of experts and by working intensely and closely with doctors, lawyers, engineers and artists from China, Australia, India and more, I am now greatly inspired, more confident and highly enthusiastic about space in general and my job in particular. Indeed, the major strength of the program is the building of an incredible network of space professionals. This is achieved very successfully through this intense and memorable experience which I highly recommend.

Best regards,

David Girou