

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)

Human Space Endeavour - Overview (1)

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SELECTING ASTRONAUTS – THE EUROPEAN PERSPECTIVE

Abstract

For the first time since 1992 the European Space Agency (ESA) has conducted a selection campaign for new astronauts in support of its participation in the ISS programme. This ESA astronaut selection, which started in May 2008, differed significantly from the one in 1992: no national pre-selections were held, ESA invited citizens from all seventeen member states to apply. More than 8300 complete applications were received.

The presentation describes the various phases, which had been employed to filter this large number of applicants. Particularly important was the development of a questionnaire, which aimed at a preliminary ranking of the applicants without introducing cultural biases. The questionnaire highlighted education and professional experience as well as certain skills, which were considered important for a potential astronaut candidate. The underlying model was tested and resulted in a nearly perfect Gaussian distribution. More than 1600 applications were retained and reviewed in detail by specialists from Human Resources and the ESA astronaut division. In the end 918 applicants were invited to participate in the first round of psychological tests.

During these tests the applicants were examined with respect to their technical knowledge, English language and mathematical skills. In addition cognitive tests were performed to rate memory function, attention and perception, spatial comprehension, multiple task capacity and psychomotor function.

The second round of psychological tests, to which 192 applicants were admitted, investigated the personality inventory using standard tests (NEO, Temperament Structure Scales, TSS), and looked at the applicants behaviour and performance, both as individuals and in groups. Group tests, cooperation test, a projective hand test, and individual interviews resulted in a ranking of the applicants. Highly qualified applicants advanced to the medical tests, which were performed at MEDES in Toulouse and at the DLR Flight Clinic in Cologne according to internationally agreed standards for all ISS partners. The ESA Medical Board considered 22 applicants qualified for astronaut duty.

As this abstract is written the final professional interviews are being held under the leadership of the Director of Human Spaceflight. It is expected that the Director General will select from the recommended applicants the new ESA astronaut class at the latest by end of May.