

PERSMEDEDELING

PRESS RELEASE



Verhaert Space builds educational experiments for the space flight of Frank De Winne in cooperation with European secondary education schools

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De Winne in the ISS

In the springtime of 2009, the Belgian ESA astronaut Frank De Winne flies to space once again. He will spend approximately 6 months in the 'International Space Station (ISS)'. The ISS is the biggest space project that has ever been realized. The constantly manned space station circles at about 400 km height and with a speed of about 28.000km/hour around the earth. In 2002, Frank De Winne was already on board of the ISS for 10 days. The ISS has become larger since. In February of this year the European lab module Columbus was launched successfully and the Japanese module Kibo was also added to the space station very recently.



Photo (ESA): The international Space Station ISS; the largest international space project of all time

LarISS en FOAM Stability

As was the case in 2002 (for De Winne's previous mission) the engineers of VERHAERT SPACE have been asked to develop and build a number of experiments to be ready for De Winne's flight to the Space Station. Two of the experiments are currently already in development phase: Lariss is a biological experiment consisting of 3 bioreactors to grow blue-green algae (arthrospira) that produce oxygen. The second experiment Foam Stability, is composed of 80 small vials containing different compositions of foamy fluid mixtures to study among other things surface tension in the foam layers. Scientists hope to study and understand better these phenomena and processes in the absence of gravity. Both experiments have environmental objectives (a.o. water purification) but will also contribute to future manned flights e.g. to Mars. Both have also an educational objective.

It is planned that for Lariss universities throughout Europe will be involved in implementation of ground reference experiments. The results of this ground work will be handed over to the scientific team upon the completion of the experiment run. Results of the Foam Stability will be recorded on-board. Together with the didactic content developed by the education experts, results obtained in flight will be offered for educational purposes.

In addition more than 6000 secondary education schools in Belgium will be able to follow-up these space experiments and they will execute them in parallel in their class room during the flight of De Winne, in gravity of course (the so-called reference-experiment). Verhaert Space will develop specific experiment-kits for schools.

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Belgian schools win space experiments

But there is a lot more to gain for enthusiastic students who are interested in science and technology. ESA, the European Space Agency, has recently closed her competition "Take your classroom into space – call for ideas". During this contest teachers and their students (aged between 9 and 18 years) from all over Europe could propose scientific experiments to execute on board of the ISS to clarify the effects of zero-gravity. An international jury of educational experts and scientists (a.o. an engineer of Verhaert Space) together with Frank De Winne elected the most original entry out of approximately 60 proposals. About ten proposals were among the winners. Nevertheless, only two groups of ideas carried off the ultimate present: their experiments will be built by Verhaert Space and will be executed by Frank De Winne on board of the ISS in 2009. Furthermore, these experiments will end up in the experiment-kits of all the other schools. And among the blissfully happy winners there are besides Greek, Spanish and Italian classes also two Flemish classes: The class of Mrs. Mieke Recour from the Onze Lieve Vrouwecollege in Ostend (first price: measuring of mass in space with an harmonic vibration of a mass-spring) and the class of Mr. Jef Luyten of the Rozenberg S.O. in Mol (second price, with special mention of the jury: the study of capillarity and surface tensions in zero-gravity).

Demonstration of the experiments implementation will be made on-board. A live event will take place in one of the winning countries where students will have an opportunity to ask a few questions to the astronaut. Educational material based on the flight experiments will include the recording of the in-flight demonstration and will be made available to schools.

All winners + high resolution picture on:

http://www.esa.int/esaHS/SEMGLSICKHF_education_0.html

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