In 1997, SSC started the development of a new Service Module for the MASER microgravity rocket. It was decided early in the project that a test-flight (MERMAID) of this module was required before using it on a full-blown four experiments MASER mission. A suitable experiment payload from ESA was quickly identified, the Cyrene microgravity experiment from CEA in France. After establishment of the mass budget and performance of the trajectory calculations, it turned out that there would be about 20 kg of additional payload capability.

In line with its belief to motivate and foster a new generation of space enthusiasts and in order to promote space activities among the Swedish general public SSC then decided to launch a Student Contest among Swedish school children between 10-12 years of age. SSC decided to finance this contest, including the development and testing of the experiment hardware.

Although the response time was very short and towards the end of the school spring term, an overwhelming number of proposals was received. After a difficult evaluation by the internal, independent, SSC jury the winner was selected, an experiment named “Space Water” from a school in southern Sweden. During a small ceremony at the school in presence of the headmaster, all the teachers and children of the school, the two girls behind the winning proposal were congratulated and the first price presented. In addition to the experiment and rocket flight, SSC also decided to sponsor a trip for the entire school class to our launch facility at Esrange to participate during the launch of Mermaid!!! All this was celebrated by eating a rocket cake.

The development of the experiment itself was then performed in close co-operation between the students and the SSC engineers during some intense months. In addition to building hardware and performing tests, the students contributed with a lot of unorthodox thinking and artistic work which made this really fun!

Then on Monday 26 January 1998, 1236 UT (13.26 local time), the MERMAID rocket was launched from the SSC launch facility Esrange and reached 140 km altitude. Onboard the rocket was, of course, the winning experiment of the Student Experiment Contest, "Space Water". The experiment was filmed during the flight and the TV pictures were broadcasted down to the ground. The pictures showed how the experiment was affected by the acceleration and the vibration of the rocket motors during launch. The student experiment module contained two glasses of ordinary water, one glass with mineral water and in addition some other experiments involving a tomato, some milk and Alfa-alfa seeds. It spent three minutes in microgravity and the students controlled their experiment for 80 seconds. The liquid was pasted on the walls of the glasses and inside perfectly shaped balls of air were formed. The air balls, the tomato and the seeds floated around inside the containers.

Due to technical problems with the parachute during the test-flight, the payload could not be recovered immediately following the launch in spite of an extensive search operation using helicopters and snow-mobiles.

The experience gained by SSC during this student project was extremely positive in many ways. To co-operate with students of this age is very rewarding and we hope that this story, which was followed closely by both Swedish and international media (even CCN was there during the launch!), will have stimulated many youngsters to go into science and engineering studies.

See more about Mermaid