



CASE STUDY:

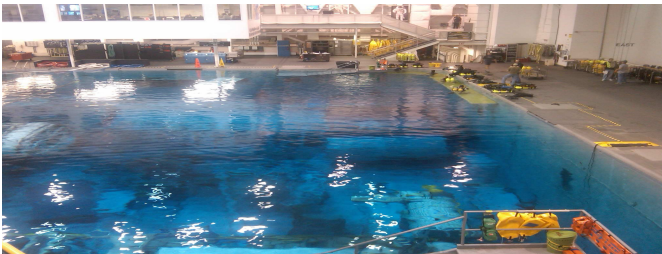
Zero Gravity



NASA Ames and Zephyr have a Space act agreement to collaborate on various physiological experiments in extreme environments. These include NASA using the BioHarness for sleep, fatigue and situations where human physiology is tested.

In 2010 NASA Invited a group of Zephyr employees to take part several Zero gravity experiments on the “vomit comet” based out of in Houston Texas, USA.

Before anyone is allowed on a military controlled aircraft they have to undertake a full day of training on physiology of high altitude and escape procedures from a military aircraft.



This was undertaken at the NASA Zero buoyancy facility where NASA has an entire model of the space station in a swimming pool. Astronauts can be seen in space suits diving around the space station practicing their next mission.



At the end of the training we were all taken to 20,000 feet in hypobaric chamber and asked to perform logic and mathematical tests such as count the legs on a Elephant. ...the math was difficult amongst the giggling. The BioHarness was allowed inside and so we also did an impromptu high altitude hypoxia physiological experiment.

The day of the experiment our hearts were subjected to an echo Cardiogram to measure the cardiac output of the heart as this was to be measured under zero gravity as part of the experiment.



On the Zero Gravity flight with BioHarness we used Zephyr wrist devices with temperature and galvanic skin resistance to measure stress, echo cardio gram to measure cardiac output and BioHarness used to measure physiological response.



The Bio Harness was comfortable and it was terrific to see the acceleration and physiology data together.

Our thanks to NASA for including us in this once in a life time experience.

Note the results of the experiment will be published in a pair reviewed journal shortly.

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