

Two studies using space sports in education and outreach –

Sailing on Titan and Equestrian Sports on Mars

Maria Sundin – Department of Physics, University of Gothenburg, Sweden (main author and presenter)

Petra Andersson – Department of Philosophy, Linguistics and Theory of Science, University of Gothenburg, Sweden

Christian Finnsgård – Chalmers University of Technology / SSPA Sweden AB, Sweden

Lars Larsson – Department of Mechanics and Maritime Science, Chalmers University of Technology, Sweden

Ron Miller – Black Cat Studios, USA



Numerous people are interested in space and many are interested in sports. Combining these subjects can be one way to create curiosity for astronomy and science far beyond the reach of either subject by itself.



*How will sailing parameters such as floatability, hull resistance, sail forces and stability differ between the Earth and Titan? **Art by Ron Miller***

The idea of space sports most likely originated in science fiction. Since, we have had real examples such as golf on the moon or an astronaut playing baseball in the ISS. Apart from adapting sports from Earth to space, developing new sports could become a reality in the future e.g. in weightlessness. As soon as you leave the Earth, every sport will change. Probably, everyone who is interested in a certain sport will find this intriguing. Discussing why can lead to a deeper understanding of physics and astronomy.

Two concept studies within space sports have been done by our team. (1) Sailing on Titan and (2) Equestrian sports on Mars. The studies have been presented as popular science papers, in radio/TV, at sports conferences, during outreach talks, for teachers and in university courses.



*How high can a horse jump on Mars? How will the paces change? Can a horse withstand the Martian climate? Is it ethical to bring animals to other planets? **Art by Ron Miller***

For different reasons some people find astronomy far from their liking or feel that it has nothing to do with their lives. Using interdisciplinary aspects such as art, history, myths, navigation, psychology or music as an introduction to astronomy can work quite well as a starting point for more learning or as a key to enthusiasm. Space sports fits well in this context.

Take home message

Using space sports is an excellent way of creating curiosity and opening paths to a deeper understanding of astronomy and physics
Please, contact us for further discussions!

For additional information, please contact:

Maria Sundin:

maria.sundin@physics.gu.se

Website: www.physics.gu.se