

**MAGICAL MAPS OF VENUS – TEACHING THE GEOGRAPHY OF VENUS.** M. Sundin, Department of Physics, University of Gothenburg, 412 96 Gothenburg, Sweden, [maria.sundin@physics.gu.se](mailto:maria.sundin@physics.gu.se)

**Introduction:** One lecture was devoted to the exploration and current knowledge about Venus in a course named *Space Exploration* during 2022 at the University of Gothenburg, Sweden. As part of the examination, the students could choose to make their own maps of Venus. Most maps were faithful renderings of the surface of Venus. A few were done with an unexpected level of creativity making them useful for outreach activities as well as teaching and learning. In this poster some of the maps are shown. The purpose is to show how it is possible to combine art and science, to inspire other teachers to do similar assignments and to discuss future possible pedagogical uses of the maps.

**Magical Maps:** A few of the students choose to create maps in a style reflecting maps from ancient or more modern mythology. For example, one map was inspired by the maps of JRR Tolkien's Middle Earth. Another map was created using Lego which adds the feature of 3D. A third map shows Venus as it would have looked with water and life.

**Maps as teaching tools:** There is strong evidence supporting enhanced learning of students when combining text and illustrations, see e.g. [1]. Many people, perhaps especially children and young adults, are intrigued by maps. This interest creates an excellent opportunity for learning [2]. However, there are also students who are quite negative towards assignments where they sketch or draw. For the teacher, the chosen style of the map and the included features gives insights into the way the students think and learn. Various sources for the geography of Venus are available. Data could for instance be used from Magellan [3], Venus Express [4] or Google Venus.

**Maps in astronomy education:** One of the aims of the poster is to discuss further use of maps in astronomy education. In what ways do we use maps when teaching astronomy? Why should the students make maps? How can we encourage students to create their own maps? How can we evaluate advantages of using maps in astronomy education?

**References:**

[1] Purnell K.N. and Solman R.T. (1991) *Reading Research Quarterly*, Vol. 26, No. 3, 277-299

[2] Wiegand P. (2006) *Learning and Teaching with Maps*. London: Routledge

[3]<https://sci.esa.int/web/venus-express/-/50372-radar-map-of-venus-surface>

[4]<https://solarsystem.nasa.gov/news/930/30-years-ago-magellan-off-to-map-venus/>