



## The Terrestrial Planets - Edutainment and Science for Grades 7-9

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Over the last years, public outreach has become an integral part of scientific work. In order to motivate the next generation of scientist and in cooperation with the JuniorUniversity program of the University of Cologne and the Cologne Science Adventure “Odysseum” we at the I. Physikalisches Institut developed a concept to introduce our up-to-date scientific work to teenagers between 13 and 15 years of age.

The main idea was to motivate adolescents, to provide a cheerful contact with science and the local university, and to have fun.

The focus of our scientific work are wind measurements in the upper atmospheres of Mars and Venus by high resolution infrared spectroscopy. The main concept of these observations is quite simple, just involving spectroscopic measurements of light and the well-known Doppler effect.

This observational concept as well as general information on the planets were transported during one day consisting of various events. The morning was organized by the Odysseum. Two instructional workshops (“Venus, Earth, Mars”, “Mission to Mars”) with high “fun-factor” were offered providing an appropriate environment for the children and easy access to the subject. Basic information about the planets Mars and Venus was conveyed as well as some aspects on possible space missions to these planets. Based on that information the children visited our institute in the afternoon where two workshops with hands-on experiments provided deeper inside to the technique of spectroscopy (“Information from the Universe”) and the problems of conducting astronomical observations (“Hitch-hiking through the universe”). The latter was also used to introduce the basic methods of how to write a scientific proposal for telescope observing time.

Finally, to round up the day and to increase our targeted audience, parents and friends where invited to attend a presentation of the results of the day given by the participants as well as a brief introduction into our scientific work on investigations of dynamical properties on Mars and Venus expanding the knowledge gathered during the day.