Astronomy Project for 8th and 9th grade students at the Alfried-Krupp-Schülerlabor

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During the spring and autumn school break we offer 8th and 9th grade students to come to the Ruhr-University Bochum. During one week they can experience everyday life at university and can do research on one of our projects at the *Alfried-Krupp-Schülerlabor* and the Department of Physics and Astronomy.

One of these projects has the topic "Astronomy - how we get to know whats out there" (*Astronomie - woher wir wissen, was da draußen ist*). We want to spark their interest in astronomy and physics and be sure that their fascination lasts. With the materials we provide they can continue performing their own experiments at home. Our central theme is to discover how much different information astronomers can get from only light. We want them to find answers through their own experimentation.

One topic is telescopes, how they work and what kind of telescopes are needed for the observation of different wavelengths. We give the students the opportunity to observe the nightsky with our roof-top observatory. Through experimentation with spectrographs they examine the composition of light and its application in astronomy. They also use the freeware program "Aladin Sky Atlas" and different archiv data in order to create their own color images of astronomical objects. By creating them they learn how to interpret such images. Furthermore, the students learn how to orientate oneself in the nightsky. For this purpose they construct star maps, learn how to use them, how the celestial coordinates work, and which constellations are typical for the seasons. Additionally, the students study the sun and observe it with our solar telescopes.

Up to now the project has taken place five times with a total of 68 participants. 94% answered "How did you like your project?" with very good or good.