

Talk at Splinter Meeting

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MAGIC MOMENTS IN ASTRONOMY – WITNESS AND COMPREHEND
THE WORLD

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Astronomy can be considered as the history of constant exploration and development of new horizons. As the main idea for a professional as well as a student-oriented education we recommend a procedure in line with the chronological exploration of new horizons. At the beginning of what we nowadays regard as the exact natural sciences lies the visual astronomy and especially the genuine experience of astronomy. The silent and plain observation of a sunrise or the starry sky are both fascinating spectacles of a world full of experience which still constitute along with wide-open glances and looks of inquiry an entryway for the pupils to distant celestial objects. Since the natural desire to understand the new and unknown leads inevitably to the reflection and pondering, the comparison, the observation and experimentation as well as to the first theories, it is imperative to provide enough science-promoting free space for the idea and theory generation of the eager learners and to seriously discuss their responses and suggestions.

Such a subject-didactic approach is underpinned by the findings of cognitive psychology – Parallelism of phylogeny and ontogeny (Parallelität von Phylo- und Ontogenese) – as well as by well-known school practitioners such as Martin Wagenschein To understand is to right on the phenomena (Verstehen heißt stehen auf den Phänomenen) or Christoph Berg Worldview needs world-view (Weltanschauung braucht Welt-Anschauung).

It becomes apparent that with our approach – which looks back on a long tradition at the Department of Physics at the University of Siegen – not only geeks but also several common boys and girls find their own way into the eminently important field of astrophysics.