

# SFB-676 Student Council Evening Lecture

Philosophy meets Physics



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**Let's have a look – observations, theories,  
philosophical troubles**

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17:30 h, Main Auditorium

DESY, Hamburg

What is the aim of science? Some would say that scientists want to offer true descriptions of the world. Apparently, scientific observations and experiments help to achieve this aim. They yield data to check scientific hypotheses. But do we really have decisive evidence at our disposal? Observational and experimental practices crucially depend on instruments of different kinds. For example, the discovery of the Higgs boson did not only presuppose the world's largest particle accelerator, the LHC, but also various detecting technologies. This discovery seems to be a big success in the history of science. Other experimental results, however, that were no less depending on scientific instruments and formerly also regarded as important scientific achievements turned out to be complete failures. For instance, no astrophysicist talks about Martian canals today. They were artefacts of observational practices – of biased interpretations. Yet what exactly tells us that the detection of the Higgs boson wasn't similarly biased?

This talk is an introduction to the problem of theory-ladenness of observation which is lurking in the background. What exactly is it about? How is it related to the social embedding of scientific practices?

Food and Drinks will be provided.

