

*Title:* Experimental sets in optics for Interactive Physics Laboratory

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*Abstract:* As part of this thesis, a literature review focused on the topic of optics experiments was conducted. Building on the results of this review, four experimental stations were designed and realized based on the needs of the Interactive Physics Laboratory (IPL), operated by the Faculty of Mathematics and Physics, Charles University. Corresponding worksheets have also been created and provided to the students participating in each given experiment. The individual experiments, which are focused on the fields of geometrical and wave optics, are described in detail and accompanied by instructions on setting up the stations, as well as important notes on teaching methodology. Following the launch of this Optics experimental suite, a qualitative study exploring the effect of visiting the IPL on the understanding of the related physics concepts was performed by means of a short questionnaire on a small number of respondents. Several conclusions drawn from this study remain as interesting areas of future work.

*Keywords:* physics experiments, labs, optics, secondary school