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Abstract for oral presentation (20 min.)

Physics Project Practical for first year's students

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In the last trimester of the first year, students of both Physics and Applied Physics follow the course *Physics Laboratory 2*, which is also known as the *Physics Project Practical*. This course is different from all other practicals in the bachelor curriculum, since there is no predetermined topic and there are no manuals on how to perform measurements. The students in this course carry out a research project about a topic of their own choice in a group of four. Together they formulate a research question based on their topic of interest, derive an hypothesis from it and design an experiment to test this hypothesis. Prior to experimental work, students receive training on scientific literature search and they have to present orally their plans twice (preliminary and improved plans) to an audience of physics lecturers, teaching assistants and fellow students. Feedback on these presentations helps students to better formulate their goals, means and expectations and also ensures sufficient profundity and practicability. Results are presented in a written report and in a final oral presentation. Students are joined by those of Astronomy and Mathematics (following similar courses) on a one day students' symposium, where all groups present their results on posters (assessed as well). The best students' groups of each degree programme present their results orally as well at the symposium, together with a few more talks given by a staff member of each discipline.

The course is well appreciated, not only by students, but also by staff and the visitation committee. Physics topics include classical ones like singing wine glasses, but also rolling cylinders with inhomogeneous mass distribution, flying pens and launching weather balloons for cosmic ray detection. This course runs for a number of years now and we will discuss our experiences and results in the presentation.