# Instructions for the assignment

Instructions that hopefully helps you with the assignment.

### 1 Idea

The idea behind the assignment is:

- 1. You will be trained in writing scientific text (in the past, some students on the physics program have asked for more training in this). You have probably already written many lab-reports, but this is supposed to be a bit different. For example, the report should **not** be written for me as the lecturer, but for the students on the course. You should convey the physics to them.
- 2. You will get the chance to get a bit deeper into one particular problem, as compared to when you solve regular problems. It is not only about solving a problem, but actually also formulating and explain the problem in your report. And moreover, you will have to do some self-study in order to do the assignment.
- 3. Due to the assignments, some topics covered in the course will not be taught in the traditional way with the lecturer telling you about it. Here it will be a combination of self-studies and discussions.
- 4. It gives the possibility for you as a student to pick a topic you hopefully find a bit extra interesting.
- 5. My own experience is that peer reviewing is a very efficient way to learn how to write good text. One often thinks that what one writes is very clear, but then when someone else reads it it turns out that maybe it was not as clear as one thought.

### 2 Written report

Whatever you do that will be graded (a course, applying for a job, or writing an article/thesis), a good starting point is to write the grading criteria and instructions. If you know what will be graded you can structure the assignment accordingly. If you have read the grading criteria for the assignment you will know that most important is that the report is pedagogical. To be pedagogical you need first of all a good structure, for example:

- 1. *Formulation of the problem*. Give a brief introduction where the problem is stated and explained.
- 2. Solution/results. Describe how the problem is solved.
- 3. Analysis and conclusion. Discuss the solution, what it means physically. It can also imply that you analyze the crucial steps in how the problem was solved. Make connections to the course, *e.g.* which concepts have been used? Sometimes it can also be good to give a summary that wraps things up.

When you write the report, try to be self-critical: "is this well explained?", "will some other student from the course understand this, will they get the point?", "is there a logic structure of the report?". A related advice, think as if you're a potential reader of your own text, will you appreciate it, if not how could it be improved?

## 3 Peer reviewing

The peer reviewing is an exercise in analyzing scientific texts. Hopefully it makes you reflect about what you like/dislike with some text. If you know this, most likely it will influence (in a positive way) how you write text yourself. When you do the reviewing, follow the grading criteria and check if the different points in them are fulfilled. Give concise and constructive feedback. Writing "I enjoyed reading this report" or "I found it difficult to understand what the report was about" are examples of non-constructive feedback. You must say what you liked/disliked and why you liked/disliked it. The reviewing task in this assignment is mainly for the reviewer, but also for the author to learn something.

### 4 Discussion

The discussion is the most "open" part. One reason for having it is for everyone in the course to get an idea about the topics they neither have studied (written reports on) nor reviewed. I will be the moderator in the sense that if the discussion gets stuck I will try to make it move forward. It is natural to expect that the persons having written about the topic or been a reviewer will have more to say. My goal is that it should be a relaxed discussion, which is allowed to slightly drift away from the main topic.