Laboratory excercises

There are two laborarory excercises in the course:

ALS Atomic and Laser Spectroscopy (**Tuesday 4 March 12.00-16.00**)

AM36 (Nuclear Physics) (**Wednesday 5 March 8.00-12.00**)

The laboratory excercises are carried out in the KTH physics course lab, Roslagstullsbacken 33 (the yellow building at the bus stop Ruddammen). **Note: the laboratory exercises start without the anademic 15 min, i.e. they start at the hour!**

Examination

To pass the laboratory part of the course you are required to actively carry out the laboratory excercise and provide an approved lab report.

Lab instructions

Lab instructions for the atomic spectroscopy: Laser_spectroscopy_updated2.pdf

Lab instructions for AM36: AM36_lab.pdf

The lab report

The following conditions for submission and judgement apply (see below the requirements on the report):

- The lab reports are to be written in English.
- Hand in one lab report per laboratory group (normally two students per group).
- The report must be submitted within two weeks after the excercise.
- **The lab assistant will inform you how to submit the report**.
- If the report is not approved after the first submission, you will have one more chance to submit a revised report (within two weeks after receiving comments from the lab assistant).
- If the report is failed, the next possibility to submit a report is during the exam period in the end of May (**dead-line: end of May 2014**).

Basic requirements on the lab reports are as follows. Reports not fullfilling these requirements will not be considered for corrections. Reports fullfilling them may still need to be corrected if the lab assistant so requires. (If you have questions about the rules, please contact the lab assistants):

- The name and date of the lab excercise, the course code (SH2008) and the name and civic registration numbers of the students in the group must appear on the front page of the report.
- If you submit a revised report, this must be clearly stated on the front page.
- The KTH logotype is reserved for official KTH publications and may not be used on the lab report.
- The report should be clearly written and easy to follow. Divide the report in suitable sections, e.g. Introduction, Theory, Experimental Setup, Results, Discussion/Conclusion.
- There should be no spelling or language errors in the report.
- Present all measurements in table format.
- Clearly indicate the obtained results and discuss their physical implication.
- Be careful to use correct units and symbols in the text, tables and figures.
- Included pictures must be of high quality.
- Plots should have clear details, i.e. axes should have units, suitable letter size etc.
- Discuss and estimate the different sources of errors that may affect your results. **Ask the lab assistant for each lab which level of error analysis is required.**
- Compare your results to published data (list sources) in your report. Discuss if your results are in good agreement or not. Are your results expected? Discuss reasons, if your results differ from the published data.
- Give all results and measurement values with a correct/resonable number of significant digits.

Good Luck!