

Nyhetsbrev, Fysiska institutionen

LUNDS UNIVERSITET | SEPTEMBER | 2013



Fotograf: Hampus Nilsson

Kära kollegor!

Den 26 Juni offentliggjordes HSVs utvärdering av fysikutbildningarna i landet. Som väl de flesta hört blev resultatet för fysik N-fak nedslående och både kandidat- och mastersexamina bedömdes visa på bristfällig måluppfyllelse. Rapporten i sin helhet kan studeras på uk-ambetet.se. Flera andra lärosäten med profil liknande Lunds (bland annat Stockholm, Göteborg och Uppsala) drabbades av att utbildningar bedömdes som bristfälliga. Till skillnad från andra lärosäten kan vi konstatera att vi endast bedömts bristfälliga på ett halvt av de utvärderade målen - den skriftliga presentationen - vilket gör åtgärdsarbetet något mera lättfokuserat. Det kan tyckas anmärkningsvärt att detta har givit ett ganska hårt utslag i den samlade bedömningen, speciellt med hänsyn att bedömargruppen är positivt inställd till de insatser som redan planerats av Naturvetenskapliga fakulteten och Fysiska institutionen för att förbättra den skriftliga presentationstekniken bland våra studenter.

Vid värderingen har ett slumpmässigt urval av kandidat- och mastersarbeten använts för att studera måluppfyllelsen i respektive utbildning. Varje examensarbete utvärderades och gavs ett betyg mellan 1-3 (1=bristfällig, 2=hög, 3=mycket hög måluppfyllelse) eller 0 om måluppfyllelsen ej kunde bedömas från läsningen av examensarbetet. Vid bedömningen 0 skulle man vända sig till självvärderingen som institutionen genomförde. I denna beskrevs hur undervisningen bedrivs för att målen skall nås. Det är anmärkningsvärt att inga 0 betyg utdelades till våra examensarbeten och att utvärderarna därmed ansåg sig kunna utläsa alla mål från våra skrivna examensarbeten.

Dear Colleagues!

The 26th of June, the evaluation of the Swedish university programs in physics made by HSV, was published. As most of you may have heard, the results for the N-fak physics were negative, and both the exam for the Bachelor level and the one of Master level were considered to show insufficient reach of learning goals. The whole report can be read at uk-ambetet.se. The programs at several other universities with a profile similar to ours at Lund, (Stockholm, Gothenburg and Uppsala, among others) got the same verdict on some exams. Different to the other universities, we can notice that the fulfillment of only one half of one of the goals was deemed insufficient – written presentation. So the verdict was tough but the limited problem area may make it easier to focus the actions we have to take. The fact that this has got rather large consequences for the evaluation result as a whole is remarkable, especially since the evaluation group is positive to the measures already planned by the Science faculty and the Department of Physics for improving the level of the written presentations among our students.

For the evaluations, bachelor and master theses have been randomly chosen and analyzed regarding the learning outcomes. Each single essay was evaluated, getting a mark between 1-3 for each single learning outcome (1=insufficient, 2=high, 3=very high quality) or 0 if it was impossible to evaluate the learning outcome from reading the thesis. If the mark 0 was given, the self-evaluation of the department was taken into account. Here, it was described how teaching worked in practice in order to reach the learning outcomes. It is remarkable

Man kan därför dra slutsatsen att HSVs argumentation baseras i huvudsak på värdering av de skriftliga rapporterna. Från Lund (Fysiska institutionen, N-fak och Teoretisk fysik har utvärderats tillsammans) har i stort sett dubbelt så många arbeten granskats som från något annat lärosäte. Chansen att få med enbart arbeten med god måluppfyllelse är förstås högre om få arbeten studeras. Arbetena har analyserats och resultatet redovisats oidentifierat. Många synpunkter har vädrats kring HSVs metod. Vår rektor gav påpassligt sin syn i [Sydsvenskan](#). Sålunda ställer sig Lunds Universitetet inte bakom metodiken i utvärderingen. Även om nog alla fysiker håller med i rektors kritik av HSVs metod får man ändå ta till sig att kollegor funnit exempel på skriftliga rapporter som man ansett visa på bristfällig måluppfyllelse vad det gäller skriftlig redogörelse. Man menar då inte bara rent teknisk språkkunnet utan även förmågan att uttrycka sitt ämne klart och stringent.

Vad händer nu? Inom ett år skall universitetet (i praktiken institutionen) redovisa vilka åtgärder man vidtar för att tillförsäkra måluppfyllelse på de aktuella punkterna. Hotet, indragen examensrätt, måste tas på allvar även om det är ett uttryck för ett mildt sagt märkligt språkbruk myndigheter emellan. Redan i självvärderingen pekade vi ut en plan för "ännu bättre måluppfyllelse" och denna har redan konkretiserats i en rad tänkbara åtgärder som planeras under läsåret 2013/14. Detta är ett viktigt arbete, oavsett HSV:s utvärdering, och var redan på gång. Parallellt med detta skall en universitetsgemensam analys av läget och planering av responsen till HSV ske, både för fysik och andra utbildningar vid LU som drabbats av utfallet "bristfällig måluppfyllelse". Detta skall påbörjas och belysas vid ett möte under ledning av prorektor Eva Wiberg den 13 september. Eftersom våra examenarbeten är utspridda på fysik-N, fysik-LTH, teoretisk fysik, astronomi och även utanför LU (att det är så många tycker vi ju är en styrka men leder kanske till några problem som vi kan försöka lösa) bör vi försöka komma till en samlad lösning för alla institutionerna. Denna lösning bör även innehålla en gemensam policy för hur vi säkerställer att måluppfyllelsen återspeglas i arbeten som genomförs utanför våra institutioner.

I denna koordinering, spelar förstås även resultatet av utvärderingen av fysik-LTH in. Utvärderingen av denna utbildning (som utvärderas som civilingenjörsutbildning, inte fysik) blir offentlig någon gång i oktober.

*Tomas Brage, Studierektor
Anders Oskarsson, biträdande prefekt*

that the mark 0 was not given to any Lund theses – thus the evaluators meant that they could evaluate everything only based the theses. Concerning LU (The Department of Physics, N-fak and Theoretical Physics were evaluated as one unit) almost the double number of essays have been evaluated compared to the other universities. The possibility of missing insufficient theses is of course higher if only a small number of essays are studied. The results have been analyzed and the result has been presented without identification of the theses. There have been many different opinions about the method used by HSV. Our "rektor" gave his opinions on this question in the newspaper [Sydsvenskan](#). Clearly, LU does not accept the method used in the evaluation.

Although most physicists agree with the criticism against the method one has to accept that evaluating colleagues have found examples of essays that they think show insufficient quality in written presentation. The concern is not only writing correct English but also the ability to present the subject in a clear and understandable way.

What happens next? During the coming year, the university (the department in practice) has to present measures intended solve this problem. The threat, to lose the right to issue bachelor's and master's degrees, has to be taken seriously. Already in the self-evaluation, we pointed at a plan for "even higher level of fulfillment of outcomes", and this plan has already been concretized in a number of possible measures planned for the academic year 2013/14. This is an important question to us, even in spite of the evaluation by HSV, and it was already worked on it at the time of evaluation. In parallel with this, an analysis of the situation and a plan for a response to HSV for the whole university is to be written – both for physics and for other programs at LU with insufficient reach of learning goals. The work on this will begin at a meeting led by "vicerektor" Eva Wiberg on the 13th of September. Since physics theses are supervised at both fysik-N, fysik-LTH, theoretical physics, astronomy and even outside of LU (we regard the diversity as strength, but perhaps this causes some problems that we have to address), we should try to find solutions for all our institutions. We also need to have procedures which secure that reach of learning outcomes is reflected also in theses written outside of LU.

In this coordination, of course also the results from the evaluation of fysik-LTH are important. The evaluation result of this program (evaluated as an education for civil engineers, not as one in physics) will be made public in October.

*Tomas Brage, Director of Studies
Anders Oskarsson, Assistant Head of Department*

NYHETSFLÖDE / THE DEPARTMENT IN MEDIA

- Grundämne 115, nyhetsflöde, 130828
- ERC Starting Grant till docent Kimberly Dick Thelander, FTF
- Kärnfysik på omslaget till Nature
- CATE-projektet bland finalisterna i till Regiostarpriset, Tillväxtverket, 130808
- Laserkamera ger unik insikt i insekters liv, Sydsvenskan 130730
- Fysikutbildning får underkänt, Sydsvenskan 130627
- Carl-Zeiss-Forschungspreis an Professor Anne L'Huillier övergebe, 130620
- Lars Samuelson, professor Fasta tillståndets fysik, på Ny Tekniks lista över den trettio mäktigaste i energisverige, Ny teknik 130619

DISPUTATIONER I SEPTEMBER / DISSERTATIONS IN SEPTEMBER

Javier Nossa, Solid State Physics will defend his PhD-thesis "Nanospintronics with Molecular Magnets - Tunneling and Spin-Electric Coupling", on September 12, 13.00 in room NY227, Kalmar Nyckel, Linnéuniversitetet, Gröndalsvägen 19, Kalmar.

This dissertation investigates theoretically electric control of the magnetic properties of molecular magnets. Two classes of magnetic molecules are considered. The first class consists of molecules that are spin frustrated. As a consequence of the frustration, the ground-state manifold of these molecules is characterized by states of different spin chirality, which can be coupled by an external electric field. Electric control of these spin states can be used to encode and manipulate quantum information. The second class comprises molecules known as single-molecule magnets, which are characterized by a high spin and a large magnetic anisotropy. Here the main goal is to control and manipulate the magnetic properties, such as the anisotropy barriers, by adding and subtracting individual electrons, as achieved in tunneling transport

Gellanki Jnaneswari, Nuclear Physics, will defend her thesis "Comprehensive Gamma-Ray Spectroscopy of ^{62}Zn and Studies of Nilsson Parameters in the Mass $A=60$ Region", on September 16, 15.15 in Rydberg Lecture Hall.

Comprehensive experimental knowledge of the ^{62}Zn nucleus has been obtained from the combined statistics of four different experiments. The Gammasphere Ge-detector array in conjunction with the 4π charged-particle detector array Microball was used to detect the gamma-rays in coincidence with evaporated light charged particles. In total twenty seven bandstructures have been observed in ^{62}Zn , twenty for the first time. The resulting extensive decay scheme comprises almost 260 excited states, which are connected with more than 450 gamma-ray transitions. The multipolarities have been determined for the gamma-ray transitions and as a result spin-parity assignments are given for nearly all energy levels. The collective structures are compared with results from configuration dependent Cranked Nilsson-Strutinsky calculations. The effective alignment method has been applied to check out the spin, parity and theoretical configuration assignments of the existing experimental bands and thereby identify the behaviour of the band structures in the $A \sim 60$ mass region.

KALENDARIUM / CALENDAR 130910-131008

2013-09-10 15.30-16.30	Mötesplats Rydberg, Department meeting, Anders Oskarsson
2013-09-12 13:00	Javier Nossa, Solid State Physics will defend his PhD-thesis "Nanospintronics with Molecular Magnets - Tunneling and Spin-Electric Coupling", in room NY227, Kalmar Nyckel, Linnéuniversitetet, Gröndalsvägen 19, Kalmar.
2013-09-16 15:15	Gellanki Jnaneswari, Nuclear Physics, will defend her thesis "Comprehensive Gamma-Ray Spectroscopy of ^{62}Zn and Studies of Nilsson Parameters in the Mass $A=60$ Region". Faculty opponent: Prof Mark Riley, Florida State University, USA., Rydbergsalen
2013-09-17 15:30-16:30	Mötesplats Rydberg, Women in Leadership Positions - Language and Body Language as Keys to Success, Hildegard Schumacher-Grub. Abstract

- 2013-09-24
15:30-16:30 Mötesplats Rydberg, Dyscalculia doesn't exist. How we make our children ill, Wolfram Meyerhöfer. [Abstract](#)
- 2013-09-27
13:15-15:00 Licentiate thesis presentation Malin Jonsson: "Development of fluorescence-based techniques for quantitative measurements of combustion species" Physics Dept, Combustion Physics Div., E421, Professorsgatan 1, Opponent/granskare: Prof. Mark Linne, Chalmers
- 2013-10-01
15:30-16:30 Mötesplats Rydberg
- 2013-10-08
15.30-16.30 Mötesplats Rydberg, Department meeting, Knut Deppert

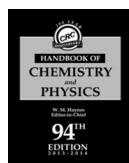
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- ▶ [Bibliotekets nyförvärv, juli 2013/ the Library's new acquisitions, July 2013](#)
- ▶ [Bibliotekets nyförvärv, augusti 2013/ the Library's new acquisitions, August 2013](#)
- ▶ [Bibliotekets nyförvärv, september 2013/ the Library's new acquisitions, September 2013](#)

NYHETER FRÅN BIBLIOTEKET/NEWS FROM THE LIBRARY



APS Set to Launch Applied Physics Journal Physical Review Applied is slated to debut early in 2014, and will feature high quality applied research articles from all areas of physics. [Read more](#)



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NÄSTA NYHETSBRÄV / NEXT NEWSLETTER

- Nästa nyhetsbrev utkommer i oktober. Tipsa [Annika Hansdotter](#), kommunikatör, om nyheter. /Next newsletter will be available in October. Do you want to share some news? Contact [Annika Hansdotter](#), Communications officer.