



UNIVERSITY OF COPENHAGEN

RECFA visit to Denmark 2013

Carlsberg Academy

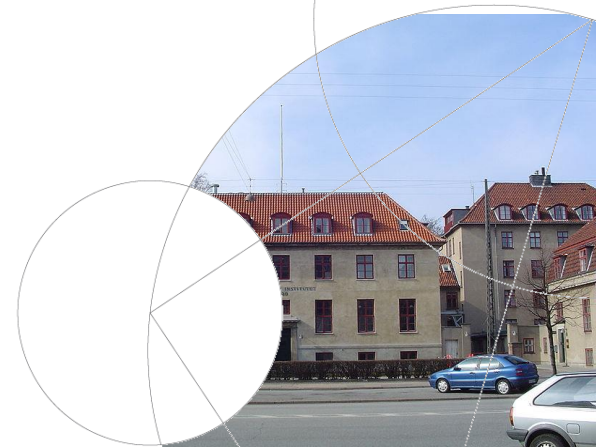
3rd May 2013

Prof. John Renner Hansen

Dean of the Faculty of SCIENCE



07-05-2013
Dias 1



Niels Bohrs 3 articles from 1913

On the Constitution of Atoms and Molecules.
By N. BOHR, Dr. phil. Copenhagen *.

Introduction.

IN order to explain the results of experiments on scattering of α rays by matter Prof. Rutherford† has given a theory of the structure of atoms. According to this theory, the atoms consist of a positively charged nucleus surrounded by a system of electrons kept together by attractive forces from the nucleus; the total negative charge of the electrons is equal to the positive charge of the nucleus. Further, the nucleus is assumed to be the seat of the essential part of the mass of the atom, and to have linear dimensions exceedingly small compared with the linear dimensions of the whole atom. The number of electrons in an atom is deduced

Juli (Indleveret april)

On the Constitution of Atoms and Molecules.
By N. BOHR, Dr. phil. Copenhagen *.

PART II.—SYSTEMS CONTAINING ONLY A SINGLE NUCLEUS †.

§ 1. *General Assumptions.*

FOLLOWING the theory of Rutherford, we shall assume that the atoms of the elements consist of a positively charged nucleus surrounded by a cluster of electrons. The nucleus is the seat of the essential part of the mass of the atom, and has linear dimensions exceedingly small compared with the distances apart of the electrons in the surrounding cluster.

September

On the Constitution of Atoms and Molecules.
By N. BOHR, Dr. phil., Copenhagen *.

PART III.—SYSTEMS CONTAINING SEVERAL NUCLEI †.

§ 1. *Preliminary.*

ACCORDING to Rutherford's theory of the structure of atoms, the difference between an atom of an element and a molecule of a chemical combination is that the first consists of a cluster of electrons surrounding a single positive nucleus of exceedingly small dimensions and of a mass great in comparison with that of the electrons, while the latter contains at least two nuclei at distances from each other comparable with the distances apart of the electrons in the surrounding cluster.

November



Higgs boson: Budget cuts leave US science lagging



William J. Richards

Apathy towards basic research in the United States is coupled with an increasing reluctance to invest in science projects that do not have a foreseeable pay-off. But let's not forget that the pioneers of quantum mechanics in the 1900s — Niels Bohr, Albert Einstein and Erwin Schrödinger — were unable to offer any practical ideas about commercial uses for the subatomic particles, quarks and leptons they were bringing to light at the time. However, if you are reading this on a computer, tablet or smart phone, you have quantum mechanics to thank.

An estimated 30–35% of today's US gross domestic product is based on inventions derived from quantum theory, from semiconductors in computer chips and lasers in compact-disc players to magnetic resonance imaging in hospitals and much more.

Volume 488 Number 7409 pp5-124
2 August 2012



Faculty of Science (SCIENCE) - a new faculty at University of Copenhagen

On January 1, 2012, a new faculty was born at the University of Copenhagen - the Faculty of Science (SCIENCE).

The faculty is the product of a merger between two-thirds of the University's Faculty of Life Sciences and its entire, former, Faculty of Science. Two faculties who, over the years, have developed a close partnership that will be further strengthened through the merger.

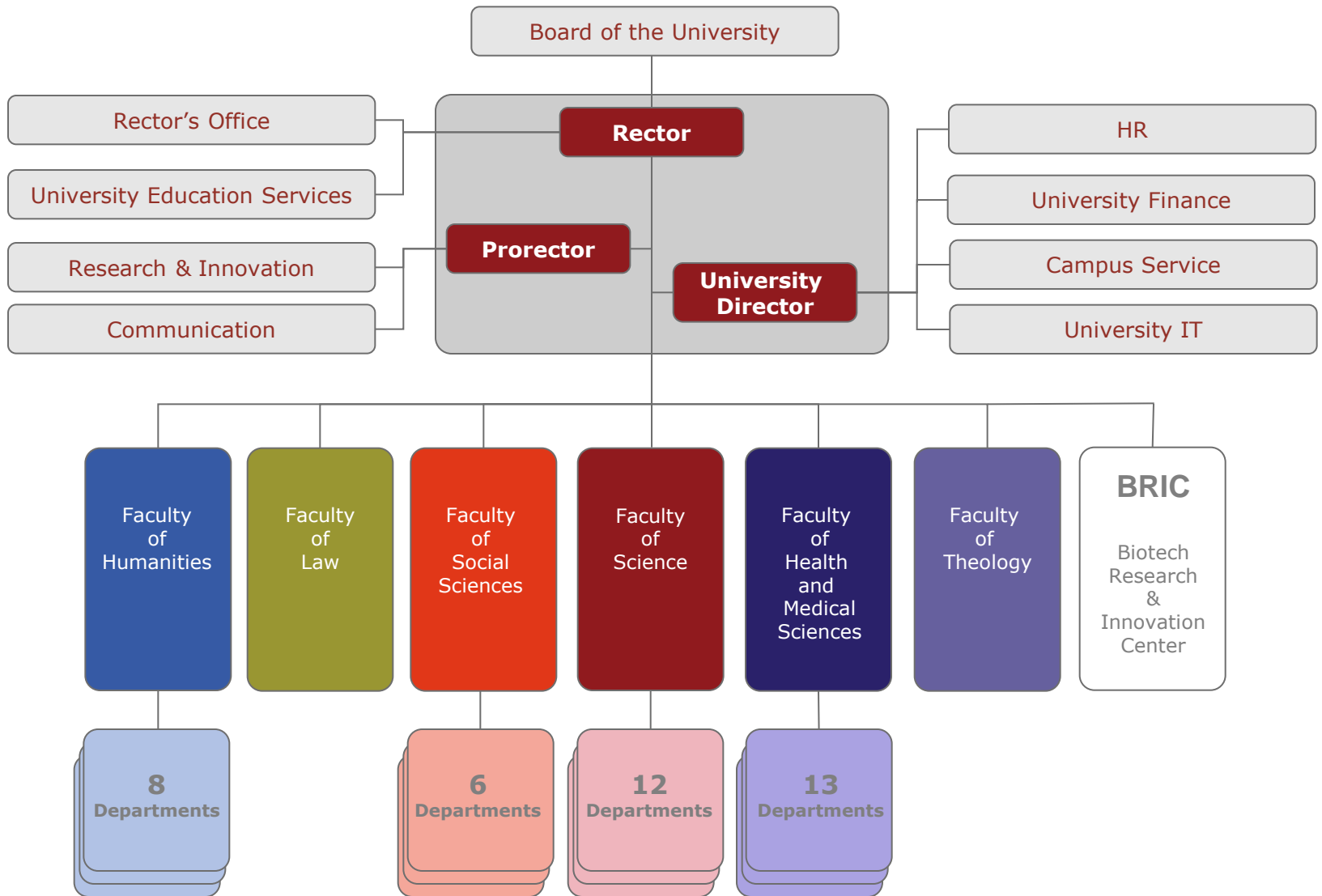


Strong research in natural sciences and life sciences

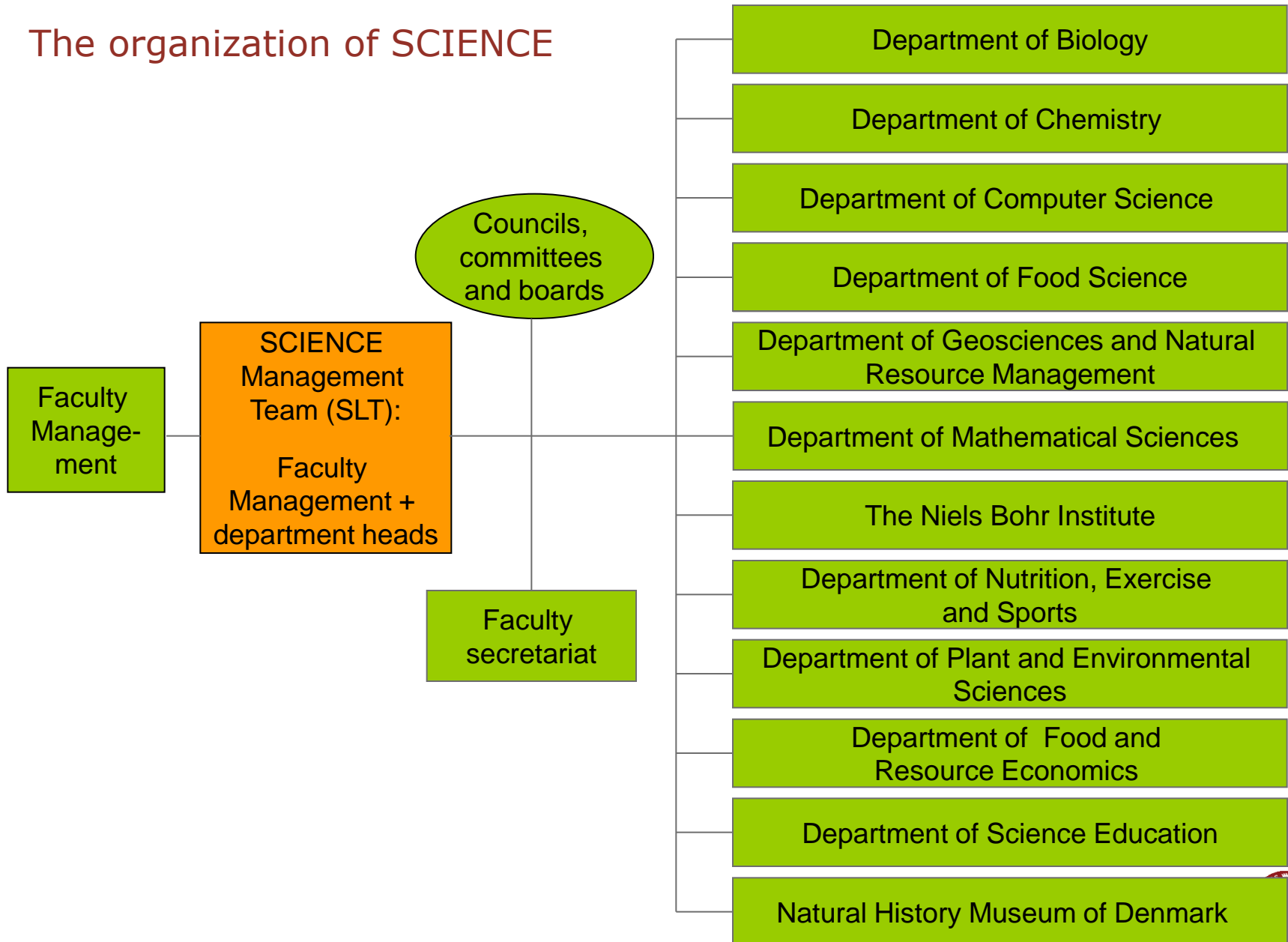
The global challenges we are facing require innovative thinking. SCIENCE wishes to establish strong national and international partnerships to help solve global societal challenges such as:

- Population growth
- Sustainable energy supply
- Malnutrition and life style diseases
- Scarcity of resources
- Climate change





The organization of SCIENCE



Key figures for SCIENCE

- 350 M€ in annual turnover
- 3,400 full-time equivalents (academic staff + technical and administrative staff)
- 1,200 PhD students
- 9,000 full-time BSc and MSc students
- 22 BSc programmes and 40 MSc programmes
- 15 basic research centres, 2 UNIK grants and 13 ERC grants
- A large number of contracts with businesses and authorities



The Niels Bohr Building

A new common home for Physics, Mathematics, Informatics, Chemistry and Science Didactics @CU

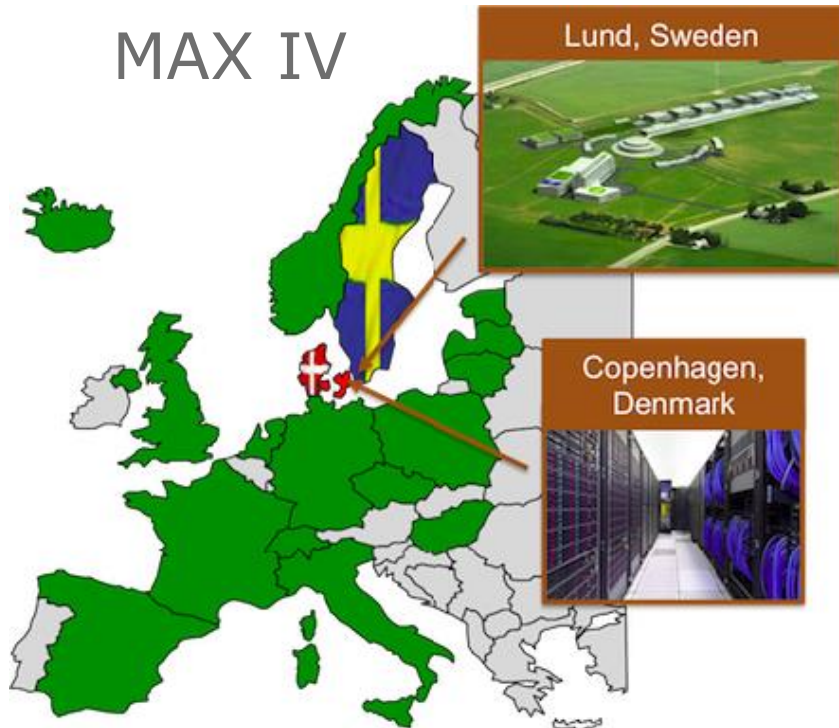


Ready 2016-Q4



European Spallation Source (ESS)

MAX IV



Lund, Sweden



Copenhagen, Denmark



The Data Management and Software Center



See by date

Dias 11



Thank you for your attention!

See you at:

University of Copenhagen: www.ku.dk/english

Faculty of Science: www.science.ku.dk/english

