

THE NIELS BOHR ARCHIVE

Annual Report 2008

The Niels Bohr Archive is an independent institution under the Danish Ministry of Science, Technology and Innovation

Staff:

Director	Finn Aaserud
Academic Assistant	Felicity Pors
Librarian/Secretary	Anne Lis Rasmussen
Conservator	Judith Hjartbro
Scientific Associates	Aage Bohr
	Jørgen Kalckar

Board of directors:

For the Vice-Chancellor of the University of Copenhagen	Carl Henrik Koch
For the Niels Bohr Institute	Andrew D. Jackson, chair
For the Royal Danish Academy of Sciences and Letters	Jørgen Christensen-Dalsgaard
For the Minister of Science, Technology and Innovation	Kirsti Andersen
For the family of Niels Bohr	Hanne Bohr

General remarks

The Niels Bohr Archive (NBA) - website: www.nba.nbi.dk - is a repository of primary material for the history of modern physics, pertaining in particular to the early development of quantum mechanics and the life and career of Niels Bohr. Although the NBA has existed since shortly after Bohr's death in 1962, its future was only secured at the centennial of Bohr's birth in 1985, after a deed of gift from Bohr's wife, Margrethe, provided the opportunity to establish the NBA as an independent not-for-profit institution. Since 1985, the NBA has had its own board of directors and has received a fixed annual sum for running expenses from the Danish Ministry of Education (1985-1998 and 2000-2001), the Ministry of Research (1998-2000) and the Ministry of Science, Technology and Innovation (from 2001); it has also made ample use of its privilege to apply for project support from private sources. In 1985 the NBA had only a couple of offices, its archival collections were scattered in various rooms and the unique book collection was stored in boxes. Since then, the Niels Bohr Institute has gradually provided the NBA with adequate office space, an adjacent library room and storage space for the archival collections. This has made it possible for the NBA's staff to place archival documents in an acid-free environment in fire-proof safes, to register the collections

and to service the many guest researchers.

The core of the collections comprises Bohr's scientific correspondence (6,000 letters and drafts) and manuscripts (500 units). This material was catalogued and microfilmed in the early 1960s as part of the Archive for History of Quantum Physics (AHQP), a project sponsored by the American Philosophical Society and the American Physical Society - www.amphilsoc.org/library/guides/ahqp/ - The outcome was 290 microfilms of various relevant historical material, which have been placed in several repositories world-wide, including the NBA.

In addition, the NBA houses several historical collections that cannot be consulted elsewhere. Thus, in 1985 the Bohr family donated the bulk of the "Bohr Private Correspondence", which includes letters to and from central personalities in culture and politics inside and outside Denmark. The equally extensive "Bohr General Correspondence" documents Bohr's substantial administrative involvement, whereas the "Bohr Political Papers" shed light on his considerable effort, beginning during the Second World War, for an "open world" between nations.

Among papers of Bohr's closest colleagues deposited in the NBA, only the George Hevesy Scientific Correspondence has been microfilmed, but the papers of among others H.A. Kramers, Christian Møller, Oskar Klein and Léon Rosenfeld are also of great historical interest. Some papers of more recent origin - notably those of Niels Bohr's son, Aage Bohr, Niels Bohr's close collaborator, Stefan Rozental, and Danish solid state physicist Allan Mackintosh - have also been deposited. The large collection of photographs relating to Bohr's career, thumbnails of which can be seen on the website, is an especially popular resource. Finally, there are reprint, film, sound tape and video tape collections, as well as a growing library.

The main priority of the NBA practically since Bohr's death has been the publication of the *Niels Bohr Collected Works*, the first volume of which was published in 1972 and the last (Vol. 12) in 2006. A list of the volumes is posted on the NBA website.

In early 1999, upon consultation with the Ministry of Research, the NBA increased its special activities disseminating natural science for the public, particularly gymnasium (high-school) students (for details, see the website).

Activities in 2008

The main task during the first half of the year was the preparation of a new edition of the *Niels Bohr Collected Works*, including an additional Vol.13 comprising a general index to the entire series. The completion of the series and the publication of the new edition was celebrated on 6 June at an event organised jointly by the NBA and Elsevier Science Publishers. A wide variety of participants in the work over the years was invited and there were introductory speeches by philosopher David Favrhøldt,

historian of science Helge Kragh and physicist Ben Mottelson. The *Collected Works* were publicly celebrated on 2 October with a lecture by physics professor Andrew D. Jackson in the Politiken Plus series organised by the major Copenhagen newspaper. The only non-English publication of the series in China is expected to be completed with Volumes 11 and 12 in the near future.

The year has been marked by the death of experimental physicist N.O. Lassen on 19 June at the age of 94. Lassen's research was closely tied up with the cyclotron at Bohr's institute from the installation of the first such machine in the late 1930s until Lassen's retirement in 1984. Upon his death, the papers of Lassen at the NBA (including an oral history interview conducted by Finn Aaserud) were supplemented by additional material deposited by his daughters. The son of the physicist Torkild Bjerger (1902-1974, NBI 1937-1939) has deposited his father's album of photos from the NBI, and retired NBI physicist Sven Bjørnholm (NBI 1955-1996) has completed the preparation of his papers for deposit, including a detailed description of the contents. Aaserud has started a series of interviews with Nobel laureates Aage Bohr and Ben Mottelson, which will be deposited at the NBA.

There has been substantial progress with the project (supported by the Danish Ministry of Science) to add detailed information on the NBA's website about our archival collections as well as to digitise our film and sound collections, together with a selected collection of papers. The scanning of the latter (Bohr's Political Papers) has been completed and the material is being made accessible in the archival software system Archon. It is hoped that NBA's Archon will be made available to the public by early autumn of 2009.

As usual, there have been many visitors at the NBA in 2008. In particular, Anja Skaar Jacobsen continues her research on Bohr's close collaborator Léon Rosenfeld.

In 2008 there have been three lectures in the NBA's series of history of science seminars. The speakers were (in chronological order) Michael Neufeld, Dan Charly Christensen and Anja Skaar Jacobsen. More information about the seminars can be found on the NBA's website.

As part of its dissemination programme, the NBA has hosted several lectures and guided tours as well as contributed to the well-attended arrangement at the Niels Bohr Institute on the annual *Kulturnatten* (Culture Night) in Copenhagen.

In November-December the offices of the NBA were moved to new quarters at the top of the K-building at the NBI premises at Blegdamsvej 17. The library will follow in early 2009.

Publications

New edition of the *Niels Bohr Collected Works* (published by Elsevier, Holland), with a new cumulative index (Vol.13).

Finn Aaserud, review of Klaus Hentschel, *The Mental Aftermath: The Mentality of German Physicists 1945-1949* (Oxford University Press, Oxford 2007), in *Centaurus* 50 (2008), 342-343.