

INTERNATIONAL UNION of the HISTORY and PHILOSOPHY of SCIENCE

Division of History of Science

Scientific Instrument Commission

President:

J.A. Bennett

Museum of the History of Science

Broad Street

Oxford OX1 3AZ

United Kingdom

E-mail: jim.bennett@mhs.ox.ac.uk

Vice-President:

P. Brenni

Istituto e Museo di Storia della Scienza

Piazza dei Giudici 1

50100 Firenze

Italy

E-mail: pbrenni@galileo.imss.firenze.it

Secretary:

P.R. de Clercq

13 Camden Square

London NW1 9UY

United Kingdom

E-mail: pdeclercq.london@virgin.net

Treasurer:

M. Fournier

Museum Boerhaave

Postbox 11280

2301 EG Leiden

The Netherlands

NEWSLETTER

No: 21– May 2000

The Scientific Instrument Symposium in Russia

Each year the Scientific Instrument Commission holds an international symposium, where papers are read and relevant museums and collections are visited. The actual organization of each symposium is the task of a National Organizing Committee. For 1999, the Commission had accepted the invitation of the Russian Academy of Sciences, which offered to host the symposium to mark its 275th anniversary since its foundation by Czar Peter the Great in 1724. The key figures in the National Organizing Committee were: chairman Yuri Guliayev, Director of the Institute of Radio Engineering and Electronics of the Academy of Sciences; vice-chairman Vladimir Sitsev, Vice-President of the Union of Scientific and Engineering Associations; and scientific secretary Vassili Borissov of the Institute of History of Science and Technology of the Academy of Sciences.

The 18th Scientific Instrument Symposium took place in Moscow, 20-22 September 1999, and was followed by an optional two-day excursion to St. Petersburg. The meeting was attended by some 40 delegates. The sessions were held in the building of the Presidium of the Academy of Sciences. Eighteen papers were read, including some on the central theme 'Relations between Russia and other countries in the field of scientific instruments'. The Institute of History of Science and Technology of the Academy of Sciences will publish the proceedings.

The plenary session of the Commission was held on 22 September, see the minutes printed below.

(continued)

The SIC is grateful to the Museum Boerhaave, Leiden, for covering the costs of publication both of this Newsletter and of the Sixteenth Bibliography, issued simultaneously.

(continued from page 1)

In Moscow, group visits were made to the Museum of the Faculty of Physics of the State University; the State Polytechnical Museum; and the State Armoury. In St Petersburg, visits were made to the State Hermitage (which has an important collection of scientific instruments and clocks and watches); the M.V. Lomonosov Museum, housed in the astronomical tower of the old Kunstkamera building, now the Museum of Anthropology and Ethnology; the D.I. Mendeleev Archival Museum of St. Petersburg; and the Museum of Metrology, situated in the building complex of the D.I. Mendeleev Institute for Metrology. For more information see Peter de Clercq, 'The Trip to Russia. A Report on the 18th Scientific Instrument Symposium', *Bulletin of the Scientific Instrument Society* 64 (March 2000), 20-25.

MINUTES OF THE PLENARY SESSION OF THE SCIENTIFIC INSTRUMENT COMMISSION

Held at the Academy of Sciences in Moscow, Russia, on 22 September 1999

In the Chair Dr Jim Bennett
Present some 25 Corresponding members

1. Apologies for absence

Apologies were received from Dr Robert Anderson, Prof Gerard Turner, Dr Inge Keil, Dr Liba Taub, Dr Ileana Chinnici, Dr Efthymios Nicolaidis, Shaw Kinsley and Jeremy Collins.

2. Minutes of the last meeting

The Minutes of the 17th Plenary Session held in Sorø on 24 July 1998 had been circulated in Newsletter No. 20 and were accepted.

3. Report of activities

A meeting on the restoration of scientific instruments was held in Florence in December 1998, organised by the Museo di Storia della Scienza under the auspices of the Commission.

Newsletter No. 20 was published in May 1999.

The Fifteenth Bibliography of books, pamphlets, catalogues, articles and CD-ROMS on or connected with historical scientific instruments was also published in May 1999.

The SIC Website at <http://www.sic.uhps.org> was regularly updated, thanks to the efforts of Dana Freiburger; in particular the whole bibliography - cumulative, supplementary and current - is available on the website.

After discussion, Mr. Freiburger agreed to keep available for reference programmes of former SIC symposiums, as well as abstracts of papers delivered at these symposiums, provided the latter is electronically possible.

4. Financial Matters

The number of officers of the Commission was extended when Dr Marian Fournier of the

Museum Boerhaave, Leiden, accepted an invitation to act as treasurer. With our Secretary moving to London, it seemed important to maintain the spread of countries represented. The Treasurer explained that there are bank accounts in Oxford and Leiden, which will merge into one account after the 19th Scientific Instrument Symposium will have been held in Oxford in 2000. The balance is presently a few hundred Euros.

The IUHPS made a grant of \$1000 in support of the 18th Scientific Instrument Symposium, which was forwarded to the Local Organizing Committee.

Newsletter nr. 20 and the Fifteenth Bibliography were published and distributed with the generous support of the Museum Boerhaave. Now that both documents are available on the Website, it was considered acceptable in due course to discontinue the production and distribution of paper versions of these documents, with two provisos:

- it is important that the history of science community is alerted that these electronic documents are available
- users of the website version must be able to distinguish between old and new information in these documents.

William Andrewes suggested distribution via the Scientific Instrument Society, for example by printing it in or as an appendix to the SIS Bulletin. It was Dr Bennett's understanding that there would be a charge for an enclosure with the Bulletin to cover additional postage, which would be significant in the context of the Commission's slight resources. When the Commission discontinues distributing printed copies, the Society could be asked whether it would wish to print the Newsletter and Bibliography within the Bulletin at their expense.

5. Publications

Prof Maurice Dorikens, Gent, announced that the Proceedings of the 16th Scientific Instrument Symposium, held in Liège in July 1997, already announced in the previous plenary session, are scheduled to appear in early 2000.

Dr Paolo Brenni, Florence, announced that the proceedings of the restoration workshop held in Florence in December 1998 will also be published in early 2000 in a separate volume in the Nuncius format. Details on availability will be given on the SIC Website [and see below]. Dr Jan Tapdrup, Helsingör, explained that the proceedings of the 18th Symposium held in Sorø will not appear in print. An original idea to devote a special issue of Centaurus to this did not materialize.

Dr Vassili Borissov, Moscow, invited speakers at the present symposium to submit their papers to be published by his institution. He announced that the publication will be in English, possibly with Russian translation, and that he will approach speakers with further details.

6. Future Activities

Dr Peter de Clercq discussed the symposium 'Scientific Instruments: Originals and Imitations. The Mensing Connection', to be held in the Museum Boerhaave, Leiden, on 15 and 16 October 1999, under the auspices of the Commission. He will edit the proceedings.

Dr Bennett discussed the 19th Scientific Instrument Symposium, to be held at Wadham College, Oxford, from 4 to 8 September 2000, and distributed the first circular. The Local Organizing Committee consists of Dr Jim Bennett (chairman), Prof Robert Fox, Dr Willem Hackmann (secretary) and Dr Stephen Johnston. There will be no fixed theme for the symposium, but participants are invited to suggest and stage sessions.

After discussion, it was generally agreed that no Scientific Instrument Symposium should be held during the XXIth International Congress of the History of Science in Mexico City from 8-14 July 2001, but the idea of having a session within the main meeting was discussed. Some members felt strongly that something should be undertaken to ensure that our field is noted by mainstream historians of science. Dr Sara Schechner-Genuth, USA, suggested planning sessions with others who have a non-artefact-based attention for instruments, while Klaus Staubermann, USA, supported the idea of forming a working group, which could contribute to the Mexico meeting. No immediate decision was taken, but the Officers noted the interest in making a contribution to the Congress, especially among members based in America.

Dr Olov Amelin, Stockholm, proposed to have the 20th symposium in 2001 in Sweden and issued the invitation on behalf of the Centre of the History of Science and the Observatory Museum, both in Stockholm, which together would act as Local Organizers. It would take place in the Academy of Sciences, with excursions to Uppsala and Skokloster, rather late in the year: October or even November. His institution, the Nobel Foundation, will open the Nobel Centennial Exhibition in September 2001, and will only play a minor role in the organization. The meeting accepted the invitation formally.

Dr Nicolaidis was unable to attend the symposium and hence could not report on preparations for the Scientific Instrument Symposium to be held in Athens in 2002, but Dr Bennett confirmed that the Greek organizers are on schedule.

Possible venues for future meetings are the USA, Spain, Portugal or Germany.

Peter Morris of the Science Museum, London, has invited the Commission to act as one of the sponsoring organizations of a conference at the Science Museum in August 2000 on modern chemical instrumentation. The meeting silently approved that this were to happen, as it will enhance 'visibility' of the SIC [for details see below].

7. On-Line Register of Scientific Instruments

At the 18th Symposium, Giles Hudson and Jim Bennett proposed a web-based register of scientific instruments, which was well received. Since then a pilot version has been running at www.isin.org and several institutions have joined and added records. Dr Bennett now proposed that the meeting formally adopts the register as a recognised project running under SIC auspices, not linked to a particular museum or nation. He submitted a draft manual to the meeting for approval, and expressed his hope that other museums will contribute to maintaining the register as well as contributing records.

The meeting approved of the register being a SIC-based initiative.

Dr Bennett reminded the meeting that there is no editorial policing, and that the register is only a beginning, not the ideal tool. He announced that he would have the manual printed. The address where the register will be maintained, and where entries will be submitted, will possibly be the Museum Boerhaave, but the site keeps its address www.isin.org

VARIA

Support and recommendation by the Commission

By or on behalf of the Scientific Instrument Commission, letters were sent to institutions

holding important collections of historical scientific instruments in London and Rio de Janeiro.

On 30 November 1999, the Commission wrote to Professor Greenfield, the Director of the Royal Institution (RI) of Great Britain in London, recommending a further exploration of the possibility of realising a new and enlarged display of apparatus at the RI. The apparatus invented, improved or used by Davy, Faraday, Tyndall, Spottiswoode, Dewar, Bragg and many other famous scientists and demonstrators, who worked in the RI, represent an exceptional heritage for the history of science and technology. Only a small section of this apparatus is presently on display in the Faraday Museum and in a few showcases in the corridor behind the main lecture room. The collection has recently been re-catalogued by Dr Brenni, Vice-President of the Commission, and Dr Bristow, and they have suggested the possibility of displaying an important part of this material on the first floor of the RI building. A new and larger "museum" of the RI would present a unique display of its kind in London, also considering that several large science and technology museums, such as the Science Museum in South Kensington, have been reducing the space dedicated to historical artefacts.

In December 1999, Dr Brenni spent a week at the Museu de Astronomia e Ciências Afins (MAST) in Rio de Janeiro. Opened in 1985, the MAST comprises a series of buildings belonging to the National Observatory, and preserved by a federal law of 1986 (Brazilian National Historical and Artistic Heritage). The main building of the MAST, which was erected for the National Observatory at the beginning of the twentieth century and was recently restored, houses the offices and the workshops of the teams working in the museum, the collection of scientific instruments, the library and a series of didactic exhibitions. On 16 December 1999, Dr Brenni sent a report with a letter to Dr Henrique Lins de Barros, Director of the MAST, in which he qualifies the collection as "exceptional and certainly comparable to the ones of several similar European institutions", and suggests possible future activities with the collection. His report concludes: "The MAST is certainly an ideal place, where the material heritage of the Brazilian history of science and technology could be preserved, studied and exhibited. Therefore, I hope that, also in the future, the official authorities will constantly support and sponsor the activities of the MAST, which can be an example for all South America."

IUHPS/DHS: Joint Conference of the Commission on the History of Modern Chemistry and the Scientific Instrument Commission

From the Test-tube to the Autoanalyzer: The Development of Chemical Instrumentation in the Twentieth Century. 11-13 August, 2000. Science Museum, South Kensington, UK

The audience will be limited to 50 participants. Registration deadline: 30 June 2000. Fee: GBP40. Inquiries and registration: Peter Morris p.morris@ic.ac.uk

This conference will address the development of modern chemical instrumentation, one of the most serious lacunæ in the "new experimentalism" in history of science. The impact of chemical instrumentation in the latter half of the twentieth century has been both momentous and all-pervasive, and has not only brought about many significant scientific advances, including our understanding of the environment, both terrestrial and extra-terrestrial, but has also transformed the practice and the culture of chemistry, the biomedical sciences, and clinical medicine.

In five sessions, the conference seeks to explore and assess this revolution in terms of the history of 20th century chemistry, using insights and tools obtained from the study of earlier periods. This conference will bring together twenty-five leading scholars in the field, mostly historians of chemistry, but also chemists, philosophers, sociologists, economic and

business historians. The papers will be pre-circulated, in order to maximise the time for discussion, and include:

Davis Baird (Columbia): *Chemical Instrumentation, Material Knowledge*

Joachim Schummer (Karlsruhe): *The Impact of Instrumentation on Chemical Species Identity*

Terry Shinn (Paris): *Instrumentation: Between Science, State and Industry*

Leo Slater (Philadelphia): *Organic Chemistry and Instrumentation: R.B. Woodward and the Reification of Chemical Structures*

Carsten Reinhardt (Regensburg): *Mass Spectroscopy and Structural Organic Chemistry*

Tony Travis (Jerusalem): *Instrumentation in Environmental Chemical Analysis: Synthetic Organic Chemicals, Contaminated Water and Trace Metals*

Peter Morris (London): *Gaia's Nose: The Development of the Electron Capture Detector and its Rivals*

Nicolas Rasmussen (Sydney): *Bioassay: The Organism as Chemical Instrument*

David Brock (Philadelphia): *The Birth in the Clinic: The Story of the Autoanalyzer*

Brian Shaw (Oxford): *The Innovation Process in the UK Medical Equipment Industry*

For a detailed programme see the SIC Website <http://www.sic.iuhps.org>

The Restoration of Scientific Instruments

The proceedings of the Florence Workshop, held under SIC auspices, are now available:

Istituto e Museo di Storia della Scienza / Opificio delle Pietre Dure

The restoration of scientific instruments. Proceedings of the workshop held in Florence,

December 14-15, 1998. Le Lettere, Florence, 2000. 113 pages. ISBN 88 7166 501 5.

Price 35.000 Italian Lire = 18,08 Euro.

Contents:

Robert G.W. Anderson, *Escaping the shipwreck of time*

Louis André, *Scientific instrument restoration: Problems and practice at the Musée des Arts et Métiers and in France*

Paolo Venturoli, *Problems in restoring various manufactures in Turin's Armeria Reale*

Marian Fournier, *The logistics of scientific instrument conservation in the Museum Boerhaave*

Giorgio Bonsanti, *Once again on the restoration of scientific instruments*

Suzanne Keene, *Instruments of History: Appearance and evidence*

Peter Friess, *Never trust a restored clock to show the right time*

Jean-Louis Boutaine, *Non-destructive techniques used at the Laboratoire de Recherche des Musées de France*

Paolo Brenni, *Better than new? Scientific instrument restoration in Italy*

Mara Miniati, *The restoration of scientific instruments: The Italian experience*

Jim A. Bennett, *Report on the Round Table*

The Paul Bunge Prize for History of Scientific Instruments

The Paul Bunge Prize of the Hans R. Jenemann Foundation is awarded each year for

special achievements in the history of scientific instruments. This year two laureates were

equally honored with this prize. Alan Q. Morton (1950) from the Science Museum, London,

received the prize for his complete historical works on scientific instruments, especially for the

catalogue of the instrument collection of King George III, made together with his fellow

curator Jane Wess. Richard J. Sorrenson (1961) from Indiana University, Bloomington, U.S.A.

received the prize for his research on the significance of astronomical and nautical instruments.

The prize was presented on 12 April 2000 in Munich.

The Paul Bunge Prize is offered by the Hans R. Jenemann Foundation which is jointly administered by the German Chemical Society (Gesellschaft Deutscher Chemiker) and the German Bunsen Society for Physical Chemistry (Deutschen Bunsen-Gesellschaft für Physikalische Chemie). The aim of the foundation is to support science and research in the field of historical scientific instruments as well as to sponsor talented young scientists in this area. This award, which has been conferred since 1993, is one of the largest monetary prizes in scientific history worldwide. Previous laureates came from Italy, Great Britain, the USA, Australia and Germany.