Chaired by the Board
President: Rich Kremer
Secretary: Sofia Talas
Treasurer: Janet Laidla

The Scientific Instrument Commission held its thirty-eighth symposium from 23-27 September 2019, in Havana, Cuba. It was hosted by the University of Havana on Monday 23 and Tuesday 24 September, and by the National Museum of Fine Arts the rest of the week. The SIC annual general meeting was held on Friday 27 September at the National Museum of Fine Arts. About 70 members were present.

1) Opening remarks and welcome
President Rich Kremer welcomed the participants to the AGM and reminded the meeting that the SIC is an open organization with no formal membership. All persons actively participating in a SIC Symposium are by definition members and thus are entitled to attend and vote at the AGM.

2) Apologies for absence
Apologies were received from Mara Miniati, George Vlahakis, Silke Ackermann, Sébastien Soubiran, Jan de Graeve, Marta Lourenço, Gloria Clifton, Martina Schiavon, Martin Weiss, Samuel Gessner, Alison Boyle, Karsten Gaulke, Wolfram Dolz, Sibylle Gluch, Emily Margolis, Wolfgang Engels.

3) Review of Minutes from Last Meeting (2018) in Leiden, Netherlands
Secretary Sofia Talas recalled that the minutes of the plenary business meeting from the 37th Scientific Instrument Symposium, held in September 2018 in Leiden, had been posted on the SIC website a few weeks before for circulation and review. She asked for comments or corrections. Hearing none, the minutes were approved as written.

4) SIC Finances
Treasurer Janet Laidla, presented her report on the Commission’s finances from September 2018 to September 2019.

<table>
<thead>
<tr>
<th>Date</th>
<th>Income</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.01.2019</td>
<td>4014.83 €</td>
<td>1770 $</td>
</tr>
<tr>
<td><strong>INCOME</strong></td>
<td>2134 €</td>
<td><strong>DHST GRANT</strong></td>
</tr>
<tr>
<td><strong>EXPENSE</strong></td>
<td>352.05 €</td>
<td>Grant for webmaster</td>
</tr>
</tbody>
</table>
The two external auditors, David Pantalony and Tayce Phillipson, reported that they had read and approved Laidla’s financial report.

5) SIC Publications
Giorgio Strano, general editor of *SIC: Scientific Instruments and Collections*, reported on the SIC series published by BRILL. He announced the publication of the seventh volume of the series, entitled *Scientific Instruments between East and West*, based on papers presented at the 35th SIC Conference held in Istanbul in September 2016. He thanked the editors of the volume, Neil Brown, Silke Ackermann and Feza Günergun.

Neil Brown recalled that Silke Ackermann had long wanted to have a meeting focused on eastern science and she succeeded in organising the Istanbul SIC Conference, which provided an occasion to meet scholars doing excellent work but not well known in Europe. Bridges were established and, to put these contacts on a more permanent basis, the idea of the volume emerged. The book is a wide ranging volume, with a mixture of papers on scientific instruments and their trade between the Eastern and Western world. It includes very detailed papers on Islamic manuscripts, as well as papers based on other archival sources and publications from the 15th to the 20th century. Brown underlined that it is possible to order the volume at a discount price before the end of December.

Strano announced that another volume of the SIC BRILL series is on its way. The volume is based on Günther Oestmann’s PhD dissertation on the Strasbourg Cathedral astronomical clock. Strano also noted that, given our new status as a full series, we should produce one volume per year. For the eighth volume, the possibility of a theme related to the current symposium will be examined.

The Board and the participants underlined the great amount of work necessary to edit these volumes and warmly thanked Strano and all the editors for their invaluable role, work and involvement in the publication of these volumes. Once again, Rich Kremer underscored that, as far as he knows, the SIC is the only commission of the DHST to support such high-quality, long-lived publishing activity.
6) Commission news

6.a Advocacy
Kremer explained that the SIC has been called upon, in the past years, to express its support for threatened collections or institutions, or to encourage new initiatives that would promote the field. He invited participants to present any such situations, recalling that in early September 2019 the Board had posted a message, in this sense, to Rete mailing list.

Pedro Raposo, Curator and Director of Collections at the Adler Planetarium, Chicago, presented the situation of Yerkes Observatory, owned by the University of Chicago. He specified that he is in no way an official representative of the Observatory or of the University, but drew the SIC’s attention to the fact the Observatory was closed in 2018. According to information provided on the University of Chicago’s website (https://physicalsciences.uchicago.edu/about/yerkes/), a local foundation (Yerkes Future Foundation) is in negotiations with the University aiming to find a solution that would keep the Observatory open. Pedro stressed the importance of the Observatory in the history of astronomy, and the fact that it holds several valuable historical telescopes and a collection of over 170,000 photographic plates. The future of this heritage is currently quite uncertain. Pedro suggested that the SIC write a letter to the University of Chicago to underline the importance of the observatory, due to its heritage and its importance for the history of astrophysics. The Board and the participants fully agreed.

No further cases of endangered collections were brought to the attention of the SIC Board.

6.b SIC website update
Janet Laidla asked the participants if they had encountered any problem with the SIC website, but they had not. If anyone does encounter problems, Janet requested that, as before, comments or corrections should be kindly sent to her. Michael Korey recalled that when the new site was started, a call for photos of instruments was launched. Janet confirmed that the call was still open and emphasized that nice photos are always welcome.

6.c SIC bibliography update
Rich Kremer recalled that the SIC website currently offers in non-searchable pdf formats a bibliography on scientific instruments collected over the past 40 years (about 3500 records). Thanks to Hans Hoijmeijers, the Rijksmuseum Boerhaave have agreed to resume their support of the curation of annual additions to our bibliography. Dalila Walle, librarian at Museum Boerhaave, will thus act as SIC bibliographer to go through and collect scientific instruments-related literature. Rich asked the participants to send her bibliographic notices of publications that she would not find easily.

In the meantime, collaboration with the History of Science Society’s Isis Critical Bibliography Explore (on-line, open access), which was discussed in the two last SIC AGMs, has been launched. SIC’s 3500 records will be retroactively introduced into the CB database. In July 2019, Dalila Walle and Rich Kremer attended a two-day workshop in Utrecht, led by Stephen Weldon, the HSS Bibliographer, to learn how to structure our data to correlate with their work processes and databases. Already, Dalila and Rich have converted our earlier SIC bibliographic records (1979-2012) into a database that Stephen will be able to upload directly into the Isis CB. Dalila will be serving as a “contributing editor” in Stephen’s team (see http://isiscb.org/contributing-editors).

SIC records, which previously were not subject-indexed, will henceforth be tagged with searchable subject terms. The list of these terms for the SIC-curated records is currently under discussion. Rich
and Dalila have proposed a list of terms, drawing on those used at the Museum Boerhaave Library, and are now asking experienced instruments scholars for help in refining the list. Volunteers would be welcomed to work with Dalila and Rich in retroactively tagging the earlier 3500 records and in curating the new entries into the SIC-CB bibliography.

Rich underlined how grateful the SIC Board is to Stephen Johnston, curator at Oxford History of Science Museum: thanks to Stephen, much data that were lost due to a crash in the system back in 2012 have been rescued and will be accessible in the CB database.

6.d Use of social media
Pedro Raposo and Taha Arslan reported that, as suggested by the SIC AGM in Leiden, in 2018, they worked with Emily Margolis to continue reflecting about the use of social media channels by SIC. They recalled that the SIC is one of the most active and efficient organisations of historians of science, whose annual symposia provide invaluable academic networking opportunities and whose email listserv, the RETE, creates a lively discussion and sharing platform for research on the history of scientific instruments and the preservation and documentation of collections of instruments. However, SIC is still unknown to many scholars who might find it of interest. There are other researchers, students, and enthusiasts of the history of science who have never heard of the SIC or had an opportunity to participate in any of its activities.

Taha and Pedro thus proposed to use Facebook and Twitter to engage the widest possible audience in the SIC’s mission to “promote interest in the history of instruments.” They proposed an experimental period from October 2019 – September 2020 for posting on these two media. They underlined that SIC’s presence on Facebook and Twitter will not replace RETE, but that it would represent a different tool for communication. The experimental posts will announce fellowships and scholarships, as well as symposia, exhibitions, books, etc, thus boosting visibility of research, scholarly and museum programs, and other activities connected with historical scientific instruments. They will also promote further engagement with scientific instruments by creating the “instrument of the week” series of posts, which will, of course, demand a participatory effort of all the community.

The first trial phase will help us see the potential advantages and risks of having social media accounts for the SIC. It will also provide statistical data, to be shared with SIC members at the 2020 AGM in London.

Several account managers need to be involved and at least one of them should be a member of the SIC board (Janet Laidla). Managerial tasks will include: writing, selecting and reviewing materials to post; scheduling the posts; responding to proper messages on behalf of the SIC (with the approval of the board); overseeing comments and discussion, and intervening when necessary; making sure that all shared content complies with any applicable copyright or privacy restrictions.

6.e Young scholars gathering
As occurred at the 2018 SIC Symposia, an informal get-together took place for emerging scholars attending the Havana Symposium. As there was no time enough to officially organize it, only 11 scholars met, but the meeting was marked by nice discussions and useful sharing of ideas.

6.f Alternative formats of presentations at SIC symposia
At the 2018 SIC Symposium, the program included both “traditional” 20 minute-long papers and “pitch” sessions, where the speakers presented their topic in 8 minutes, focusing on a few central issues and with a longer time for plenary discussions.
The Board asked the participants for their evaluation of this format, and all agreed it worked well. It was underlined that it makes sense to have pitch sessions only around specifically chosen and possibly controversial themes. Participants also suggested that, to give more focus to pitch sessions, they might usefully be organized in advance by several people rather than simply waiting for SIC members to respond in their own way to the pitch call for papers. Other possible presentation formats were proposed, such as round tables with real objects, or sessions where people from other fields are called to discuss one single scientific instrument. Members encouraged the SIC Board to continue exploring new formats for the 2020 SIC Symposium.

7) Future meetings

7.a (2020)
Rich Kremer recalled that at last year’s AGM in Leiden, the possibility of having the 2020 SIC Symposium in London and Greenwich was discussed. The SIC Board explored this option with Alison Boyle, Science Museum, and Louise Devoy, Greenwich National Maritime Museum, and a concrete proposal took shape. Rich asked Louise Devoy to report about it. On behalf of the Science Museum and the National Maritime Museum, Louise invited the SIC to hold its next Symposium in London and Greenwich. The dates will most likely be 14-19 September 2020. The Symposium will be hosted at the Science Museum to celebrate the new instruments gallery Science City 1550-1800. There will also be a day at the National Maritime Museum, Greenwich, with opportunities to see the new Endeavour galleries, the Royal Observatory and the Prince Philip Maritime Collections Centre (conservation studios and storage) in nearby Kidbrooke. The programme will include a range of visits to venues and collections across London; possible examples include the Royal Institution (Faraday lecture theatre, magnetic laboratory and museum), the Monument to the Great Fire of London (a telescope and basement laboratory), the new Crick biomedical institute. Initial plans are under discussion for a day trip to Cambridge with sites potentially including the Whipple Museum of the History of Science; the Cavendish Laboratory Museum (apparatus associated with Maxwell and electrical standards, JJ Thomson and Rutherford, and many more big names in physics), and Mullard Radio Astronomy Observatory. The Symposium and the conference theme will be announced by December. At the moment, the local organisers are considering the theme of ‘Spaces of Science’ such as laboratories, observatories, expedition ships etc, but they will confirm in the announcement. Louise underlined that they are aware that London can be expensive and a large city to navigate, so they will provide guides for arranging affordable accommodation and transport available as early as possible. She urged that people can contact their questions to alison.boyle@sciencemuseum.ac.uk. The AGM voted unanimously to accept the London invitation from Louise and Alison.

7.b (2021)
The 2021 SIC Symposium will be held in Prague, as part of the 26th International Congress of History of Science and Technology of the International Union of History and Philosophy of Science and Technology (IUHPST). This location was approved in July 2017 at the last Congress of the IUPST. Rich Kremer underlined that the Board will have to develop ties with local historians of science, in order to have local support to organise visits to possible interesting museums and sites. Rich is already in touch with two historians of astronomy, Alena Hadravová and Petr Hadrava, who have agreed to help create an attractive program for the SIC (Alena also serves on the Local Organizing Committee for the overall Congress)

7.c (2022 and beyond)
The AGM discussed possible sites for our symposia after 2021, such as Strasbourg, Vienna, Gent, Rome, Madrid or Padua, where the Museum of the History of Physics is currently starting a renovation of its exhibition rooms,
The Board also received, a week before the AGM, an invitation from George Vlahakis to hold the 2022 Symposium in Athens. Efthymios Nicolaidis reported to the AGM about this proposal, explaining that this would be the second time the SIC would meet in Athens, after 20 years. He underlined the possibility of visiting the new display of Antikithera mechanism, as well the Observatory of Athens, which has become a Museum with rooms and facilities for meetings.

Pedro Raposo proposed Chicago as a possible venue after two European places, underlining that the SIC has never met there. He noted that this city provides very interesting possibilities of visits, but the political situation needs to be reviewed as it might be difficult for some people to enter the U.S.A.

Peter Heering and Roland Wittje supported the idea not meeting only in Europe, but meeting once every four years in Latin America or Asia (for instance China); Hans Hoijmeijers and Paolo Brenni liked the idea of going to Vienna, although ties still need to be set up there with local historians of science and museums.

7) Election of the next SIC Board

Janet Laidla announced that an Election Committee has been formed, consisting of Marvin Bolt, Janet Laidla and David Pantalony.

Janet recalled that, following our usual procedure, a call for nominations for the new Board will be sent to RETE mailing list and to the available list of SIC symposia participants, though EU rules on privacy have made the use of such lists somewhat tricky. Anyone who attended at least one of the last five symposia (2016-2020) is eligible to vote and can nominate candidates (with their prior approval). No self-nomination is admitted. On the basis of the nominations received, the Election Committee will prepare ballot to be distributed as was the call for nominations. The election will take place online, in June-July 2020. The results will be announced online but formal approval of the election results will occur at the AGM during the Prague IUHPST Congress in July 2021. During the year before the Prague Congress, the newly elected Board will shadow the current Board to get used to the SIC practices.

Michael Korey stressed that, in order to be eligible, nominated candidates should have not only attended the SIC Symposia but also should have expressed their commitment by playing active roles in the Symposia.

8) News from members

a. Roland Wittje, IIT Madras, asked the SIC to help sponsor the conference on teaching collections that he will organise with Peter Heering from 29 June to 3 July 2020 in Flensburg, Germany. The title of the conference is “Objects of Understanding: Historical perspectives on material artefacts and practices in science education”. The SIC Board reported that they have agreed to provide this sponsorship (without any financial component).

b. Pedro Raposo announced the publication of the wonderful volume entitled *Time of Our Lives: Sundials of the Adler Planetarium*, by Sara J. Schechner. Pedro recalled that the Adler Planetarium has the best and most comprehensive collection of sundials and time-finding instruments in North America. Published by the Adler Planetarium, the lavishly illustrated volume, presents 268 sundials, dating from the 15th to 20th centuries. It can be ordered online. Pedro indicated that the sundial gallery, at the Adler, will have to be refreshed. He also added that he would be interested in learning more about how other institutions use astrolabes for teaching.

d. Christian Forstner, Friedrich-Schiller-Universität Jena, announced the 4th *International Seminar on the Material Culture of Physics*. Funded by the Wilhelm and Else Heraeus Foundation, the seminar will take place at the Deutsches Museum, in Munich, from 2 to 6 March 2020. The lecturers are Forstner, Johannes-Geert Hagmann, Peter Heering, and Rich Kremer. A selection of the student essays presented at earlier seminars has been published on the website of the Europa Universitaet Flensburg ([https://www.uni-flensburg.de/physik/forschung/material-culture/](https://www.uni-flensburg.de/physik/forschung/material-culture/)). Forstner noted that some of these students were attending the SIC Symposium in Havana. Accommodation in Munich will be funded as well as travel costs up to 80€ for students from Germany, and up to 300€ for students from abroad. The seminar is intended for Master and PhD students in the History of Science and Technology, Physics, and Didactics of Physics, but trainees in science museums are also encouraged to apply for participation, as well as early postdocs. Christian asked the participants to spread around the info about the seminar.

e. Osmel Crusata, IMRE, Havana, thanked Pedro Raposo and his wife for their book on the Observatory of Lisbon.

f. Taha Arslan invited the participants to upload to a dedicated platform all the photographs that were taken during the Istanbul SIC Symposium.

g. Jan Tadrup pointed out that it would be good to spread more information about the RETE mailing list. The Board agreed that details about RETE and the way to subscribe will be shown more clearly on the SIC website.

9) AOB

None

At the conclusion of the AGM, Rich Kremer expressed the community's profound gratitude to the local organizers of the 2019 SIC Symposium. He particularly thanked Claudia Felipe and her staff for their wonderful collaboration, both friendly and efficient, and the perfect organization of this year's symposium. All the participants warmly agreed and thanked Claudia and her colleagues.

Minutes compiled by
Sofia Talas, SIC Secretary, in collaboration with Rich Kremer, SIC President, and Janet Laidla, SIC Treasurer