

# Draft Minutes of the 80th Meeting of the ISOLDE Collaboration Committee held on November 7th 2017

Present: K. Bharuth-Ram, B. Blank, R. Catherall, J. Cederkall (via vidyo), D. Doherty, H. Fynbo, S. Gilardoni, K. Johnston, Y. Kadi (P.T.), A. Negret (replacing N. Marginean), A. Nannini, G. Neyens, J. Pakarinen (replacing P. Greenlees), M. Pfützner, K. Riisager (P.T.), L. Schweikhard, N. Severijns, O. Tengblad, M. Veselsky (replacing M. Venhart)

Excused: P. Greenlees, N. Marginean, S. Siem, M. Venhart

Absent: S. Harissopulos

Invited: R. Page (P.T.), S. Rothe (P.T.), T. Stora (P.T.), F. Weinholtz (P.T.)

(P.T. = Part Time attendance)

The meeting starts at 09:00 h

#### 1. Introductory remarks

The ISCC chairperson, B. Blank, opens the meeting and welcomes A. Negret, J. Pakarinen and M. Veselsky who are replacing N. Marginean (Romania), P. Greenlees (Finland) and M. Venhart (Slovakia) respectively.

#### 2. Approval of the Minutes of the last meeting of June 27th, 2017

The minutes from the previous meeting are approved.

#### 3. Status and Planning of HIE-ISOLDE phase 2 – Y. Kadi

The committee is reminded that Phase 2A of the HIE-ISOLDE project involved the addition of a cryomodule (CM3) and a HEBT line (XT03) as well as the modification of the XT03 HEBT line. This work, as well as the maintenance and repair of the cryoplant and the installation of the ISS magnet, was carried out during the 2016/2017 shutdown. Y. Kadi explains that in 2016 heat losses caused the LHe to vaporise so it took a long time to fill the cryomodules but the maintenance of the cryoplant carried out during the last shutdown has produced a much improved performance during 2017. Filling the three cryomodules with LHe this year took 8 hours compared to the 5 days to fill two cryomodules in 2016. In 2017, it took 9 days to cool the three cryomodules from 300K to 5K whereas it took 15 days to cool the two cryomodules last year. During the 2017/2018 shutdown the annual maintenance plus the necessary consolidation of the Cryoplant, which will be carried out by the manufacturer, will begin as soon as protons finish.

Y. Kadi then briefly summarises the performance of REX/HIE-ISOLDE during the 2017 physics campaign that started with stable beam delivered to Miniball in week 25 and then the first radioactive beam in week 27. The committee is told that a large improvement in the reliability of the linac has

been seen in 2017 compared to 2016. The operators and the cryogenics teams are thanked for their continued efforts.

Phase 2 of the HIE-ISOLDE project is due to be completed during the end of year shutdown 2017/2018 and involves the addition of a fourth cryomodule CM4 so the status of the assembly of CM4 is then summarised. Production costs of the cavities with the new design have proved to be lower than the original cavities. Tests have shown the performance of the five cavities for CM4 to be above required specifications and all five have now been installed. The installation and commissioning planning for CM4 is presented; a detailed plan can be found via <a href="https://espace.cern.ch/HIE-ISOLDE-mgt/Presentations/Forms/AllItems.aspx">https://espace.cern.ch/HIE-ISOLDE-mgt/Presentations/Forms/AllItems.aspx</a>. Work will start during the end of year shutdown as soon as the machine is warm and will include 7 weeks of hardware commissioning and 7 weeks of commissioning with beam. The committee is told that it is planned to have five spare cavities, which should all be ready by June 2018.

Y. Kadi informs the committee that design and installation of the ISS magnetic shielding is ongoing and the project planning is presented briefly.

It is clarified that the cryoplant has to be switched off during each end of year shutdown because the water at ISOLDE is turned off and warming up the machine leads to the need for 3 months commissioning the following year. Hence, if water was available during the shutdown period time required for commissioning could be reduced.

#### 4. Beam and target-ion-source developments – S. Rothe

The current Target and Ion Source Development (TISD) team is presented as J. Ballof, F. Boix Pamies, D. Leimbach, Y. Martinez, T. Stora, S. Rothe and J. Ramos. The mandate of the team is to provide a large choice of intense and pure radioactive beams as well as the constant development required to keep ISOLDE at the forefront of RIB facilities. The committee is told that both Y. Martinez and J. Ballof will leave the team during 2018 but a new CERN fellow is expected to be appointed from the middle of next year.

Research and development for ion source and beam manipulation (ISBM) is carried out in collaboration with the RILIS team so S. Rothe presents the current members as being V. Fedosseev, B. Marsh, S. Wilkins (CERN Fellow), C. Buitrago (CERN Fellow), K. Chrysalidis (PhD student) and P. Larmonier (CERN trainee). The ISBM working group was set up because of the overlap in developments; the current ongoing projects are listed. The committee is reminded that all the activities take place using resources, such as the ISOLDE workshop, the offline test bench and beamtime, which are shared with the ISOLDE physics programme. Of the 8 TISD projects expected to be carried out during 2017 and which were presented at the GUI meeting in February, 3 have been completed, 4 are ongoing and one is still pending.

S. Rothe then goes on to summarise the status and results of TISD projects at ISOLDE. This includes the record of five elements being tested in one week at RILIS with new ionisation schemes for Selenium and Samarium. The LIEBE target is now fully assembled, mounted and coupled to offline separator 1; beamtime is scheduled this month for online testing. The dedicated test stand for ion source development is now in place and being used to search for suitable low work function materials in the development of negative ion sources. A new version of the LIST source is being developed with the University of Mainz and there are plans for full integration into the ISOLDE infrastructure during LS2. Development of volatile carbonyl beams and neutron deficient SeCO beams are ongoing while progress on Boron fluoride beams depends on the new tape station, which is on hold due to the backlog of work of the CERN sections responsible for the controls systems. Clean 206Hg beams have been produced with the VADLIS ion source and tests with the new design of the VADIS source are encouraging. The new design of the ISOLDE neutron converter, which is being carried out in

collaboration with TRIUMF, is advancing well. A method of automatic UCx production without human intervention is being tested and it is possible to complete the process in about 4 days.

An update of the progress of the development of the new ISOLDE yield database is given and it is explained that anyone with a CERN NICE account will be able to access the database. A link to the new database can be found on the ISOLDE website.

Finally, S. Rothe lists the potential TISD projects to be carried out during 2018.

#### **5. MEDICIS: Commissioning and start-up plans** – *T. Stora*

The committee is informed that stable beam commissioning of MEDICIS, which was planned for September, should now take place during November. It is still hoped to start up the facility this year with low-level radioactive isotopes (44Sc/155Tb) irradiated at CERN; the use of 169Er irradiated at ILL, Grenoble has been postponed until 2018. The start up and the MEDICIS collaboration budget are to be clarified at a meeting of the collaboration on 29<sup>th</sup> of November.

T. Stora presents a detailed planning for the operation and commissioning of MEDICIS this year and informs the committee that the inspection of the facility by Swiss (OFSP) and French (ASN) authorities that took place on the 4<sup>th</sup> of October went well although the official report has not yet been received. The hardware permit is due to be signed on the 7<sup>th</sup> of November while it is expected to receive the facility permit at the end of this month although the gas exhaust/storage system still has to be commissioned.

The committee is informed that, since the previous ISCC meeting, the beamline has been installed but the collection box has not yet been connected. It is planned to install the shielding and shielded fume hood during the end of year shutdown. On the 31<sup>st</sup> of October, the vacuum in the beamline was tested and the target heated at 5kW and 1050A, which is beyond what is nominal at ISOLDE. The MEDICIS elogbook has been created and a high level LabVIEW control application is being commissioned.

T. Stora presents the tentative list of members of the first MEDICIS Collaboration board and informs the committee that preparations are underway for the full cycle of MEDICIS.

On questioning, T. Stora states that there is no overlap of resources between the LIEBE target project and MEDICIS commissioning.

#### 6. Status of MR-TOF for ISOLDE - F. Wienholtz

F. Wienholtz briefly reminds the committee of the motivation behind the project and summarises its status. It still has to be decided where the device is to be installed but, whether this is at LA1 or LA2, it must be as compact and as neat as possible. The decision on the design being vertical or horizontal will be determined by future tests.

The committee is informed that in order to identify a suitable power supply for the project, the performance of various 60kV power supplies are being characterised. It has been found that, as the temperature in the ISOLDE hall varies, temperature stabilisation of the power supplies will have to be taken into account.

F. Wienholtz explains that a new digitised detection system, already used at CERN and which is suitable for MR-TOF, has been identified.

The committee is shown the preliminary design of the MR-TOF mass separator and told that simulations are ongoing although more input from the tests with ISCOOL, power supply characteristics and from users is required. F. Wienholtz then briefly summarises the results of tests carried out using the ISCOOL beam injected into the ISOLTRAP MR-ToF. As more beamtime is required to carry out tests required by the project, S. Rothe suggests using the offline 2 setup.

The people and institutes that have had input into the project up until now are acknowledged and F. Wienholtz tells the committee that it would be feasible to have a completed design by the end of 2018, although at present his CERN fellows contract ends in December 2017. An extension to the contract has been requested; a decision will be taken at the next fellows board on 21<sup>st</sup> November.

### 7. Status and plans of the Hifi project – O. Tengblad

The committee is reminded that the Hie Isolde Fragment Identifier (HiFi) project was initiated by Y. Blumenfeld and a workshop was held in Lund in March 2011 to identify the need for a zero-degree spectrometer. At that time, there were 16 proposals approved by the INTC that would profit from such a spectrometer and it had the full support of the Miniball community. It was identified that the first leg of the TRIµP facility, which is no longer in use at KVI, Groningen, could be used for the HiFi project. However, the project was then frozen due to the priority of the TSR@ISOLDE project.

In April 2016, M.J.G. Borge, J. Cederkall and O. Tengblad had a meeting in Groningen with K. Jungmann and L. Willmann from the Van Swinderen Institute (VIS), which owns TRIµP. At this meeting, the decision was taken and plans initiated to move and install TRIµP at ISOLDE. In 2018, it is hoped to sign a memorandum of agreement between VSI and the HiFi collaboration to transport and receive TRIµP at CERN. It is planned to install the spectrometer downstream from the Miniball setup and it should have a footprint of approximately  $25m^2$ . The best components will be used to obtain the optimum separator and the rest will be used as replacement units.

The committee is informed that since the meeting in 2016, the HiFi power supplies, donated by Lund University, have been delivered to CERN and the TRIµP separator has been declared non-radioactive and therefore suitable for transport. A quotation of 6.7k Euros for the packing and transport of the device has been received; this is to be paid by the ISOLDE collaboration. CERN has accepted a request from the HiFi collaboration to assign space in building 180 to install TRIµP and to have access to cooling and power supplies for hardware testing. A. Welker has been appointed as a CERN fellow to take care of HiFi preparations, simulations and installation.

In return for donating  $TRI\mu P$ , VIS would like to initiate collaboration with ISOLDE and, as a first step, L. Willmann submitted a LOI to the INTC in June this year of which the physics case was endorsed by the INTC. B. Blank states that it should be clarified to VSI that the donation of the equipment will not lead directly to the Dutch membership of the ISOLDE collaboration and that the HiFi project and membership of the collaboration should be decoupled.

O. Tengblad tells the committee that, during 2018, it is planned to dismantle  $TRI\mu P$  in Groningen, transport it to CERN and carry out hardware tests for the HiFi separator in building 180 as well as install and test the new detector systems. M.J.G. Borge has made a funding application for the vacuum system and a second student while an application for the detection system funding has been made by K. Riisager.

The committee is informed that a workshop will take place at ISOLDE in 2018 in order to form the HiFi collaboration. G. Neyens states that, due to the impact that the HiFi project will have on Miniball, it is important to involve the Miniball collaboration in the workshop.

O. Tengblad tells the committee that installation of HiFi in the ISOLDE experimental area as well as in situ testing is planned for 2019. The proposed layout in the hall is presented. E. Siesling is aware that HiFi will require certain technical installations such as water but a more detailed agreement needs to be prepared.

#### 8. Status and plans for ISS – R. Page

The committee is reminded that the ISOLDE Solenoidal Spectrometer (ISS) project officially began in January 2015 when 5 million pounds of funding was received from the UK STFC to construct 2 spectrometer systems, ISS and a Si detector on CRYRING@ESR. The progress of the ISS project since the previous status report at the ISCC meeting in February is then reported to the committee. The magnet was successfully cooled with liquid helium and energised to 2.75T in February before being moved from building 180 to the ISOLDE experimental hall in March. R. Page thanks everyone involved at CERN for the careful planning and execution of the move.

The magnet base frame, manufactured in Daresbury and funded by KU Leuven was tested in May 2017 before being shipped to the ISOLDE hall in June. The Magnet was then successfully placed on the frame, aligned and connected to the beamline. The magnetic shielding design was completed by a team at CERN including J. Bauche and K. Buffet while the manufacture of the shielding was funded by KU Leuven. It is planned to install the shielding in this month to allow the magnetic field mapping to begin on 13th of November. It is then hoped to start XT02 beam tuning so that it can be completed before the winter shutdown.

R. Page explains that it is hoped to carry out two INTC approved experiments (IS621 and IS631) in 2018 before the long shutdown (LS2). During this period, ISS will use the Si array and DAQ from Argonne; details of the technical integration required were discussed at a meeting in Manchester in July 2017.

The committee is told that progress towards the complete ISS is going well, with additional funding secured from the UK, and stable beam tests with the new Si array should take place during LS2 so that ISS is ready for physics with radioactive beams after the long shutdown.

The institutes that make up the ISS collaboration are presented and the committee informed that a collaboration physics meeting took place in Manchester in July this year <a href="http://npg.dl.ac.uk/isolsrs/ScienceMeeting2017.html">http://npg.dl.ac.uk/isolsrs/ScienceMeeting2017.html</a>.

#### **9. News from the ISOLDE Group** - *G. Nevens*

The present manpower situation in the ISOLDE Physics Group is summarized by G. Neyens.

- **Associate**: Andrei Andreyev (April 2017 to March 2018), Joachim Cederkall (October 2017 to September 2018). Deadline for new applications 16<sup>th</sup> March 2018.
- **Corresponding Associate**: There is an excellent candidate for May to September 2018. Deadline for new applications 16<sup>th</sup> March 2018.
- **Staff Members:** Magda Kowalska (ERC betaDropNMR) (October 2015 to September 2018), Stephan Ettenbauer (ERC MIRACLS)(February 2017 to January 2021)
- User: Jenny Weterings (User Support) (2002-)
- Research Fellows: Liam Gaffney Miniball (October 2016 to September 2019), Kara Lynch CRIS (January 2015 to December 2017), Vladimir Manea ISOLTRAP (January 2016 to April 2018), Hanne Heylen COLLAPS/VITO (October 2017 to September 2020). Three outstanding candidates were recommended to the recent selection committee meeting.
- Applied Fellows: Andree Welker HIFI Spectrometer/WIZARD (August 2017 to July 2019), Stavroula Pallada –BetaDROPNMR (April 2017 to March 2019), Frank Wienholtz MR-TOF-MS (January 2016 to December 2017). A one year extension has been requested for F. Wienholtz and there is an excellent new candidate for ERC-MIRACLS. Deadline for new applications 5<sup>th</sup> March 2018.
- **Doctoral Students**: Robert Harding (CERN-ERC Betadrop) (January 2017 to December 2018), Jonas Karthein (CERN via Gentner Doctoral Program) (November 2017 to October 2020).

As well as those people mentioned above there are many others at ISOLDE paid by their home

institute and some receiving subsistence from the collaboration. The committee is informed that there is a CERN Doctoral student position, funded by CERN, open from February 2018. The position requires a university doctoral school registration and good candidates are encouraged to apply.

G. Neyens tells the committee that, after the AGATA collaboration requested bids to house AGATA for the period 2021-2030, a conditional bid has been submitted to bring the detector to ISOLDE. The conditions of the bid are as follows:

- The ISCC should be informed. Peter Reiter will present the motivation for bringing AGATA to ISOLDE at the ISCC meeting in February 2018.
- The physics case and benefit to the ISOLDE physics program has to be clarified.
- The necessary funding to install and run the machine during the foreseen period of 3-4 years will have to be secured (shared by ISOLDE and AGATA collaborations).
- Little to no funding for investment in 'logistics' is available till 2023 at ISOLDE.
- A solution has to be found for the backlog of more than 400 shifts of HIE-ISOLDE experiments (mostly using Miniball).
- Two periods were proposed: 2021-2023 or after LS3 (~2026 onwards).

The events that took place on October 16<sup>th</sup> to celebrate fifty years of radioactive beams at ISOLDE are briefly summarised. The Facebook Live event encountered some technical issues but the video itself reached 46,669 people. The meet ISOLDE articles and videos that were available via the CERN home page proved to be a great success. The videos had more than 12,000 views while the articles had almost 10,000; CERN considers an article with over 2000 views to be a success. G. Neyens suggests that some kind of visible event is held next year to celebrate the completion of HIE-ISOLDE Phase 2.

The status of preparations for the EMIS 2018 conference is summarised. The conference, chaired jointly by R. Catherall and G. Neyens, will take place in the main auditorium at CERN from the 16<sup>th</sup> to 21<sup>st</sup> September next year. The welcome reception on the Sunday and a public lecture on the Tuesday will be held in the CERN Globe. There will be a choice of excursions to Annecy or the Olympic museum in Lausanne; both followed by wine tasting in the Geneva area. The conference banquet will take place on a boat on Lake Geneva. A block booking of 150 rooms has been made at the CERN hostel.

G. Neyens informs the committee that the first reporting period for the ENSAR2 project ended in August 2017. Meetings of the Facility Coordination Group and the Project Coordination Committee took place at GANIL from 10-12 October as well as the General Assembly at which the financial and scientific reports were approved for the first reporting period. It is explained that up to 20% of Transnational Access funding is available for users from institutes outside Europe based on an exchange agreement. Hence, members of non-European institutes or facilities are only eligible for TNA support if the institute/facility has signed the exchange agreement. At present, the following institutes have signed the agreement:

• Japan: RCNP Osaka, RIKEN Tokyo, KEK@RIKEN, CNS@RIKEN

• China: IMP-CAS Lanzhou

• South Africa: iThemba Labs Cape Town

• **Russia**: JINR Dubna

• United States: NSCL East Lansing

TRIUMF in Vancouver has expressed no interest in signing the agreement while there has been no response from Argonne Nation Laboratory and Indian laboratories.

Members of the committee are asked to stimulate the ISOLDE users from their country to upload publications arising from work at ISOLDE, including PhD theses, to the CERN CDS system. This is extremely important as CERN is undertaking an inventory of all publications that will be used to compare the output of all small/medium sized experiments at CERN. A call for publications will soon

be emailed to all ISOLDE users and will include instructions/links on how to upload to CDS which is very quick if the DOI is known.

The cost of Open Access for ISOLDE publications is under discussion with CERN. It is possible that CERN may be willing to cover the cost if at least one CERN staff member is an author of the paper. However, CERN would require some fore warning of such publications so it would be very important to upload pre-prints.

G. Neyens informs the committee that, at a recent EP department retreat at which the long-term future of non-LHC experiments was discussed, it was decided that ISOLDE will continue after LS2 with approximately the same level of support.

### **10.** News from the ISOLDE running period – *K. Johnston*

K. Johnston informs the committee that protons have been delivered to ISOLDE since week 17 this year and an extension of the running period by two weeks was negotiated giving 224 days of physics up until 4<sup>th</sup> December. The schedule for the last few weeks of the running period is still uncertain but the extra days of beam should allow runs that are usually more difficult to schedule.

The committee is told that the beam requests for 2017 amounted to over 1000 shifts and the distribution of these shifts between the different set-ups at ISOLDE is presented. Out of the 49 approved HIE-ISOLDE experiments, 27 requested shifts in this year making up 59% of the total shifts requested.

The experiment schedule for 2017 is then presented and the problems encountered are briefly discussed. This includes the leaking of a re-used target for an ISOLTRAP run in May and the unexpectedly low yield of Se beam for the coulomb excitation experiment IS597 as well difficulties with laser spectroscopy. Certain solid state experiments have experienced safety issues regarding open sources but these issues are now being resolved. After safety concerns from the Swiss authorities a new collection chamber and separation system has been designed for the medical radionuclides experiment IS528 and, in order to improve target handling in the GLM/GHM, area the EP department has ordered a new shielded fume cupboard.

The committee is informed that the interweaving of high and low energy experiments has worked well during 2017 with 12 HIE-ISOLDE experiments scheduled, nine of which were at Miniball and three on the XT03 beamline. Energies, in general, were not pushed to above 5MeV/u which allowed for a more stable running of the machine. However, the running of HIE-ISOLDE still requires a major effort by the operators and the local Miniball support who are thanked for their contribution to the success of this year's experimental runs.

K. Johnston tells the committee that it has been a good year for physics at ISOLDE and goes on to summarise some of the runs and results from experiments at COLLAPS, CRIS, IDS, ISOTRAP, MINIBALL and VITO. The committee is also informed that ISS tests took place in week 49 and the WISARD magnet was successfully re-energised to 9T ready for stable beam in 2018.

A preliminary distribution of 2017 shifts between the different areas of physics is presented; there is a reduction in medical physics compared to previous years due to safety issues that occurred this year. An overview of machine use during 2017 shows relatively little downtime compared to 2016 which is a benefit of interleaving HIE-ISOLDE and low energy experiments.

K. Johnston then moves on to the subject of the shift backlog at ISOLDE. An overview of how remaining shifts are distributed between the different set-ups is presented. It is shown that there is little change in the distribution between the beginning and end of 2017. The major contribution to the backlog is from HIE-ISOLDE experiments.

The committee is told that the safety training requirements for users to enter the ISOLDE hall have not changed (three online and two hands-on courses) but the hands-on radiation protection course will be hard linked to access in December. Recent cancellations of the hands-on courses, due to travel problems of the external training who comes from Belgium every week, have caused problems; there will soon be a meeting with the CERN training office to discuss this.

Finally, K. Johnston tells the committee that the beam requests for 2018 will be sent out in January with first protons expected towards the end of March. HIE-ISOLDE phase 2 should be running from the end of June so from then on interleaving of high and low energy experiments will again take place.

## 11. INTC matters: Backlog of shifts and future strategy – K. Riisager

The committee is informed that so far this year 310 shifts have been accepted by the INTC, 150 for low energy experiments and 160 for those running at high energy. Another 140 shifts have been requested by proposals that will be considered at the INTC meeting to take place on the 8<sup>th</sup> November. However, the INTC will only be approving shifts from experiments that are technically ready to run before LS2.

Presently, about the same number of shifts are approved each year as can be scheduled at ISOLDE. Hence, even though some experiments with shifts remaining have been closed this year, the shift backlog is not being reduced. Until now, a status report has always been requested from an experiment if its shifts have not been scheduled after three years. During LS2 it is planned to look at the status of all remaining accepted shifts at ISOLDE by asking for a re-justification from both HIE-ISOLDE and low energy experiments. It has not yet been decided what format this re-justification will take. K. Riisager states that a backlog of about 600 shifts for low energy experiments is acceptable in order to allow efficient scheduling.

The committee is informed that proton beam will stop at the end of 2018 ready for LS2 and there will be no resources for the running of any kind of physics experiments in 2019. During the final few months of 2020, it is hoped to start up with stable beam for the commissioning of ISOLDE, both high and low energy sections. This would also allow for the stable beam commissioning of certain experiments, such as SPECMAT and the new KVI experiment.

#### 12. Financial situation of the ISOLDE collaboration – <u>G. Neyens</u>

The present cost of the HIE-ISOLDE project is presented. G. Neyens informs the committee that the second CERN loan, which is required to cover the cost of Phase 2, should soon be signed. The first loan was for 700kCHF and is being repaid at the rate of 140kCHF a year from 2016 to 2020. The second loan for 1779KCHF will be paid back by the collaboration from 2019 to 2023. Hence, the following funds are required from the collaboration over the next six years in order to pay for HIE-ISOLDE Phases 1 and 2:

	Loan repayments/kCHF	Direct HIE-ISOLDE Payments/kCHF
2018	140	504
2019	140+200	
2020	140+400	
2021	400	
2022	400	
2023	379	

The status of the collaboration budget is then summarised and the committee informed that all member countries except Greece have paid their contributions for 2016 and that during 2017 all member countries except Spain and Greece have signed the new MoU and paid their fees. Showing the expenditure and account balance for 2016 and 2017 as well as the forecast expenditure for 2018,

G. Neyens concludes that the cost of the HIE-ISOLDE project means that the collaboration's financial reserves are being used at a rate of 50-60kCHF a year. Hence, there is no room for new projects until 2023.

The committee is told that M. Venhart will organise a workshop in Slovakia in early 2018 to present ISOLDE non-nuclear activities in order to attract more Slovak users to ISOLDE. This will be in preparation for Slovakia having to pay the full membership fee in 2021.

G. Neyens informs the committee that according to the Greek national representative at CERN, C. Fountas, Greece will be able to pay several years of its outstanding ISOLDE fees at the beginning of 2018. He is also pushing for the new MoU to be signed by the Greek Science Secretary by December.

As the financial situation could, of course, be improved by bringing new members to the collaboration, G. Neyens then outlines the present status of negotiations with possible new member states:

- **India**: After requesting information about membership fees, D. Gupta from the BOSE institute has been informed about the possible new institute observer status.
- Bulgaria: G. Rainovski is in touch with the CERN representative but the ever-changing
  complex political situation in Bulgaria means no progress has been made in signing the
  MoU.
- **Portugal**: T. Camporesi, a senior scientist in the CERN EP department, who is a member of the scientific council in Portugal that awards funding, has been informed about the possible new institute observer status. However, as Portugal has a number of institutes active at ISOLDE, he will help push for a country membership, initially at a reduced fee, at a meeting of the Portuguese scientific council in November.
- **Serbia**: J. Nikolov from the University of Novi Sad has requested that an agreement be signed between her institute and CERN in which it is explicitly stated that the funding of 10kCHF is to be used to support her Serbian colleagues and the NICOLE experiment. G. Neyens has suggested to J. Nikolov that her institute could become an institute observer but that the 10kCHF fee would be used for the collaboration.

A discussion follows about the new proposed institute observer status. The observer yearly fee would be 10 kCHF per institute but the agreement would not provide the rights given to full members of the collaboration. This means that the agreement would not give the right to be a sole spokesperson of an experiment at ISOLDE but, of course, they could still be co-spokesperson alongside a spokesperson from a member country. A representative could be invited to attend ISCC meetings but they would not have voting rights. The agreement would be for a limited time only which would be stated in the agreement itself. The CERN legal service will need to be consulted about the format of the proposed document before the collaboration can move forward with this issue. It is clarified that the observer status would be in preparation of a full membership that should also be specified in the agreement itself.

#### 13. A.O.B.

• A discussion takes place about co-authorship on papers arising from work taking place at ISOLDE, both from technical developments and from INTC-approved experiments. The committee expresses the view that ISOLDE users (in-house or external) should appear on technical development papers written by ISOLDE support teams, if the user has contributed to the technical research and development (for example by doing measurements with an user set-up). Vice versa, members of ISOLDE support teams should be co-authors on papers originating from approved experiments, if the person has contributed beyond standard duties to the experiments success. The committee advises that the matter should be discussed and

- decided before or at least during the experimental campaigns (be it R&D or user experiments).
- The committee decides to prolong the three year contract of K. Johnston as the ISOLDE Physics Coordinator by one year.

## 17. Dates of the next meeting

The date of the next ISCC meeting is  $Tuesday 6^{th} February 2018$ . The dates of the other meetings in 2018 will be  $Tuesday 26^{th} June$  and  $Tuesday 6^{th} November$ .

Meeting ends at 16:00

N.B. The overheads of the above presentations can be found via  $\underline{\text{http://indico.cern.ch/event/671461/}}$ .