



11th MEETING OF THE SNX COUNCIL

Lugano (Switzerland)
Thursday 11th and Friday 12th June 2009

In Attendance: SNX Council Members, SNBL Administrative Manager, Observers from RCN and SER, BL Scientists, Outside Observers (Ragnvald Mathiesen and Marc Schiltz).

1. Approvals and Review

[D. Nicholson]

1.1. Approval of the Agenda

The agenda is approved by all.

Appendix No. 1. Approved Agenda.

1.2. Approval of the minutes of the 10th SNX Council

Martin STEINACHER underlined that it is crucial for SNX members to keep on having the possibility to read the minutes before the final version is printed. This procedure should definitely be maintained.

The minutes of the 10th SNX Council are approved by all the members.

1.3. Review and results of actions decided at last meeting

10.1.1. Evaluation of the needs and of the extra work for SNBL staff. Helge Larsen. Deadline: June 2009

Educational aspects and SNBL, see *Appendix No. 2*.

Helge LARSEN reported on the evaluation of the needs for a SR-based PhD course at SNBL :

- The course should be broad and of an introductory character emphasizing practical aspects
- It should consist from a preparatory theoretical part (prepared by active researchers within relevant fields)
- It should include 4-5 days of practical tutorials at SNBL and subsequent data analysis
- The number of participants (based on the Norwegian level of activity) is around 8-10
- The course should be organized during the autumn 2010 to spring 2011.

This course is important on the Norwegian side as there is no local synchrotron facility.

The implications for SNBL are the following : beamtime to be allocated for such courses (16 bunch mode– 4 to 5 days of beamtime), tutorials, supervision and follow up from SNBL staff, administrative actions and costs (such as site entry, accommodation). There would be around 8-10 students.

SNBL is to provide an estimate cost of this set-up so that this can be budgeted and paid to SNBL

Philip PATTISON suggested contacting the organizers of the Hercules courses in order to come up a cost estimated based on similar PhD courses.

Philip PATTISON mentioned that the ESRF is likely to close down from July 2011 to December 2011 for the Upgrade Programme.

11.1.1. Helge LARSEN to get an estimated cost to have students at SNBL. Philip PATTISON and Chantal HEURTEBISE. Deadline 22 June 2009. Done 17th June 2009.

10.5.1. A working group is to be organised to find solutions to the problems on Station-B. Vladimir DMITRIEV. Report for SNX Meeting in June 2009.

Vladimir DMITRIEV underlined that a working group was not officially organized. Hermann EMERICH worked in collaboration with BM 29. Hermann EMERICH is to present his solution during his presentation.

10.5.2. SNBL is to provide a prioritised list of equipment needed. Vladimir DMITRIEV. Deadline : beginning December 2008 if possible.

Vladimir DMITRIEV distributed, first week of June 2009, the prioritised list of equipment to SNX Members. See list in *Appendix No. 3*.

10.5.3. Regarding the upgrade programme, a list of expenses should be issued. Vladimir DMITRIEV. Deadline December 2008/June 2009.

Vladimir DMITRIEV commented that we still do not know how this will be dealt with by the ESRF. Will there be a temporary office, or will we go directly to new offices? Furniture and workshop costs will have to be estimated. This action is reissued.

11.1.2. A list of expenses should be issued regarding the upgrade programme (moving to new offices, purchase of furniture and expenses related to the workshop). Vladimir DMITRIEV. Deadline December 2009.

10.5.4. Enquiry as to an eventual collaboration with BM29, details to be obtained from the ESRF as to the conditions, including staff issues and technical support. Rafael ABELA. Deadline June 2009.

Gervais CHAPUIS reported that Rafael ABELA stressed that this point should be discussed at the meeting. There will be in the future some available beamlines, the ESRF is keen to have groups collaborating and use these beamlines. We do not have any further information from the ESRF at present.

Christoph QUITMANN commented that we should decide whether SNBL is interested in other to access to beamlines.

11.1.3. Christoph QUITMANN to contact Rafael Abela to find out the position of the ESRF on this collaboration with ESRF. Deadline December 2009

2. Report of the SNX Director

[V. Dmitriev]

2.1. SNX and A-SNG operations

Vladimir Dmitriev's presentation, see *Appendix No. 4*.

A- Technical operations

B- Administrative Actions

SNBL – MAX Lab Cooperation : A Memorandum of Understanding between MAX-Lab and SNBL will be of benefit to both parties.

PILATUS Project : Regarding the PILATUS Project, it was reported that the corresponding request has been submitted to the Swiss NSF. Aase Marie HUNDERE enquired as to when the decision will be official in Switzerland. The Swiss side answered that the decision will be announced in December 2009, and that the money should be available beginning of 2010

Gervais CHAPUIS requested a support letter from the Norwegian User Community as to their interest in participating in this funding.

It was agreed that the SNX Council supports the initiative concerning the research council on the Norwegian side to match the corresponding Swiss application.

2.2. Report on Meetings and Workshops

Vladimir Dmitriev's presentation, see *Appendix No. 5*.

- Simultaneous Raman-X-ray diffraction / absorption studies. SNBL/ESRF, Grenoble. France. 18-19 June 2008. Proceedings are published in Phase Transitions.
- Diffuse Scattering in Crystalline Materials, SNBL/ESRF, Grenoble, France. 25-26 June 2009.

At this stage it was mentioned that the SNBL Annual Report should be sent to faculties in Switzerland and Norway. SNX Members to send an e-mail to Vladimir DMITRIEV for the requests of copies of the Annual Report.

Martin STEINACHER reported that he is impressed by the progress made on the collaborations accomplished over the past few years. This is outstanding and figures speak for themselves: high number of publications, increase of impact factor and salary levels adapted to ESRF standards. However, outside contract income was rather low in 2008, this should clearly be increased.

The future financial contribution is being prepared as from 2012. The funds invested so far produced very good results. The SNBL staff Members are warmly thanked.

Aase Marie HUNDERE gave her full support to the above statement.

3. Financial Matters

3.1. Audit 2008 (Income 2008)

[C. Heurtebise]

Income 2008, compte d'Exploitation (Spending 2008), Audit report and Balance 2008, see *Appendix No. 6*.

Martin STEINACHER requested to include his e-mail sent to Chantal HEURTEBISE on 8th June 2009 :

"I went through the audit documents and would like to congratulate you for the excellent execution of the 2008 financial year. I didn't spot any serious business I must raise on Thursday; that there is no provision for the VAT risk is not new. I'm also glad that the new regulation in Switzerland for auditing of foundations doesn't put SNBL - SNX in the category of "ordinary audit" for important companies. So let's stay a small but efficient one..."

Aase Marie HUNDERE supports the content of this message.

The "limited" audit is approved by all.

The Accounts for 2008 are approved by all.

3.2. Income and Spending 2009 as of May 2009 (compte d'exploitation)[C. Heurtebise]

Income 2009 and Spending as of 31st May 2009 see *Appendix No. 7*.

11.3.1. David NICHOLSON is to organize consultations so as to find the outside baseline amount, namely CHF 52'500 for 2008 and CHF 50'000 for 2009. **Deadline : December 2009.**

11.3.2. Christoph QUITMANN suggested that each SNX Member is to indicate how contributions can be found. **Deadline December 2009.**

3.3. Financial Summary of the Refurbishment program

[C. Heurtebise]

See *Appendix No. 8*.

The final figures regarding refurbishment were presented. This program is now considered as being finished.

4. Status of the SNBL operations

4.1. Beamline A: Operations

[P. Pattison]

See Philip PATTISON's presentation in *Appendix No. 9*.

Operational aspects

- Beamline is operational and schedules as normal
- No beamtime lost during last 6 months
- Heavily oversubscribed
- Service visit by Oxford Diffraction March 2009
- Operation of new precision slits close to sample

Main activities

(around 60 publications per year)

- High resolution x-ray diffraction under electric fields (Trondheim + public beamtime)
- Hydrogen storage materials + in-situ catalysis (EMPA, Geneva, IFE, Oslo + public beamtime)
- In-situ Raman + diffraction (Oslo, EMPA, Geneva, In-house research)
- High pressure diffraction using diamond anvil cells (In-house research + public beamtime)

BM1A – New Projects

- Focusing mirror (Xenocs) for “micro” crystals. The high precision multi-axis alignment stage was funded by EPFL.
- Secondary mirror focusing.

Future development and trends

Heavily oversubscribed

Improved focusing

Trend towards new detectors

Questions

Martin STEINACHER enquired whether there is an imbalance of Norwegian users and Swiss users for BM1A, and whether this has always existed, to which Philip PATTISON answered that this fluctuates over the years.

4.2. Beamline B: Operation

[H. Emerich]

Summary Hermann Emerich's Talk:

In the first part of the talk recent progress was reported :

- Monochromator reliability: Indium seals are used between the flanges and the crystals of our Exafs monochromator. The use of **Mn** based “sacrifice” electrodes in the cooling water bath has expanded the lifetime these In-seals.

In a preliminary statement one can say that their lifetime has been extended from some few weeks to now 1 ½ year of operation (and still going).

- The old channel-cut monochromator crystal (used for powder diffraction) has been replaced by a new one. This allows now to receive two parallel beams of different energies at the same time into the SNB hutch which brings us another step closer to fully simultaneous PD/Exafs measurements.
- To take full advantage of these two beams a new set of water-cooled in-vacuum slit system has been developed. It is foreseen to install this new system during the 2009 summer shutdown.

The second part was dedicated to recent improvements on the quality of EXAFS data :

- In a first introduction the origin of monochromator glitches and the effect on Exafs data was explained.
- In some real cases the importance of monochromator crystal (surface-) quality was shown . A (re-) polishing of our monochromator crystals lead to drastic improvements of the EXAFS data quality. Comparison between measurements of (homogeneous) samples done at BM29 and SNB suggest that BM01 produces data of similar if not superior quality.
- It was also shown that these modifications are only beneficial in case of high harmonic suppression (detuning $\geq 50\%$).

In the third part more strategies to further improve the EXAFS data quality have been presented :

- Averaging strategies and their respective results
- 2D beam detectors for “Pixel-EXAFS”
- Possible improvements on the detector chain
- Sagittally focusing Exafs monochromator for glitch suppression
- Installation of a mirror system for harmonic suppression

In the summary the importance of a mirror system for the Exafs data quality was stressed and a cost estimate was given. It was also pointed out that the recent improvements are only one more step to accomplish the overall goal of a beamline where truly simultaneous PD/EXAFS/Raman measurements of high quality can be performed in a routine fashion.

5. CoF and BLR: follow-up discussion

[D. Nicholson]

A. Priority of installation related to the secondary focussing and the MYTHEN detector.

David NICHOLSON underlined that a concrete plan of action is needed.

Ragnvald MATHIESEN and Marc SHILTZ are of the opinion that the SNX council should decide on what actions should be taken from the Beamline Review Report, from SOC conclusions, from Users' input, and from the wish list. A planned list of actions should be prepared.

Vladimir DMITRIEV commented on the MYTHEN detector – The drawings should be ready in a couple of months, this will be followed by engineering, then installation will start. The MYTHEN detector has highest priority.

Marc SHILTZ stressed that if time is needed for development and installation of equipment, instead of granting beamtime, this should be made clear, as this should not be a problem for users to accept. This would relieve the staff from Users' support.

Kenneth KNUDSEN underlined that beamtime should be allocated for this type of work.

11.5.1. Establish a roadmap with timetable, costs, manpower, for work to be accomplished on the beamlines. Vladimir DMITRIEV – Deadline : December 2009.
Roadmap/timetable/costs/manpower - to be approved by SNX Council.

Vladimir DMITRIEV is to contact Ragnvald MATHIESEN and Marc SHILTZ in order to establish the list.

B. The need to make use of the full six circles for the KM6 diffractometer.

Ragnvald MATHIESEN reported that, from the users' input, six circle diffractometers would attract new users. SNX Council should make it clear that a four circles only is now available, and should decide whether a six circle diffractometer should be fully operational.

Vladimir DMITRIEV underlined that whether it is a four circles or a six circles, this makes no difference to the result of the experiment. On the other hand, each improvement on SNBL implies additional development work, either from SNBL staff or from outside companies, in which case it is costly.

Helge LARSEN commented that a collision model is indispensable in order to use the software. Philip PATTISON added that ordinary users cannot use the six circles option.

Gervais CHAPUIS suggested that a professional programmer could be hired in order to solve the problem of the software. This should be added in the roadmap to be presented in December 2009.

Marc SCHILTZ recommended having an assessment of the cost involved and if this is too expensive, SNX can decide not to go for that software.

Martin STEINACHER enquired as to when the funding agencies will be made aware of the financial request. It would be appreciated to have the figures involved for December 2009. See action above.

6. In-house beamtime: definition of

[D. Nicholson]

A lengthy discussion took place. During the discussion, **Vladimir DMITRIEV** explained that SNBL has no budget for this in-house research, this is the reason why there are collaborations. On the other hand, SNBL staff members should be evaluated on the same basis as Norwegian and Swiss Users.

Christoph QUITMANN stressed that SNBL staff members should be encouraged to put in proposals so as to have publications and be recognized on international level.

The following is agreed upon :

In-House Beamtime. Five per cent is reserved for in-house beamtime, to be used at the discretion of the SNBL Director.

The SNX Council encourages staff to apply for beamtime in the same way as Norwegian and Swiss users. All proposals will be evaluated in the same manner and according to scientific merit. However, Council reserves the right to adjust the number of proposals from the staff for a given beamtime allocation if there should be an imbalance between the numbers of allocations to staff and ordinary users. The balance point will be defined by the Council.

7. New detector system(s)

[D. Nicholson/G. Chapuis]

That point is included in the roadmap.

8. SLS - SNX collaboration:

[D. Nicholson]

a. Status of observers

In the past we had an SLS observer attending our meetings. Frode MO was attending the SLS User Meeting, Hans-Beat BUERGI was a delegate to the SLS.

Christoph QUITMANN is willing to be the link with SLS.

b. Agreement giving Norwegian SNBL users access to SLS (especially transfer agreement for protein crystallography).

Survey on the future role of SNBL in macromolecular crystallography, document presented by David NICHOLSON, see document in *Appendix No. 10*.

Christoph QUITMANN underlined that there is fierce competition for proposals on protein crystallography, nonetheless all users are welcome to submit proposals to the SLS.

Ragnvald MATHIESEN and **Helge LARSEN** underlined that SNBL should be encouraged to accommodate Users, including those coming from Tromsø.

Christoph QUITMANN asked to be put in contact with the Tromsø Team so as to see how arrangements can be made so as not to penalize the SNBL.

9. Recruiting researchers

[D. Nicholson]

This point was covered under the point 13. Review and Results of Actions Decided at Last Meeting, *Educational Aspects at SNBL*, presented by Helge LARSEN.

10. EU projects

[D. Nicholson]

Ragnvald MATHIESEN suggested that SNBL staff members be included in those projects.

David NICHOLSON wondered whether SNBL should participate in those projects.

Vladimir DMITRIEV remarked that SNBL experience so far, was discouraging. SNBL is neither Swiss, nor Norwegian nor French. The European Commission accepts and approves the projects, but the SNX Foundation is not a scientific laboratory, and is therefore not eligible to get funds from those EU projects.

11. MAX-IV status

[D. Nicholson]

David NICHOLSON reported that no further information is available regarding the MAX IV, which is now supported also by Denmark.

12. Any other business

[D. Nicholson]

12.1. SNX Members : Election and/or replacement of Members

In December 2009, Rafael ABELA informed SNX Members that he would step down from the Council, therefore the Vice-Chairman, David NICHOLSON, acted as interim Chairman until June 2010.

David NICHOLSON is elected unanimously Chairman for the next three years.

The Vice-Chairman will be a Swiss Member; Gervais CHAPUIS is to communicate the name of the Vice-Chairman.

12.2. Decoupling the personal financial liability of the President of ASNX (by-laws)

[D. Nicholson/Chantal Heurtebise]

The by-laws are approved by all.

By-Laws, see *Appendix No. 11*.

12.3. Internal Matters

There is no further development for the time being.

12.4. Any other business

Martin STEINACHER is looking forward to the next meeting. The organizers, Gervais CHAPUIS and his wife, and Chantal HEURTEBISE are thanked for the perfect organization. All the participating members were warmly thanked for their input.

Martin STEINACHER and Aase Marie HUNDERE will get in contact for the next financial period 2012 to 2015.

13. Discussion of Proposals

[Shepherds]

Requests and Allocations of Beamtime on BM1 A and BM1 B, see *Appendix No.12*.

BM1 A

Total Number of shifts available		227
Shifts for ESRF	- 75	
Shifts available for scheduling		152
Long Term	- 18	
Shifts available for discussion		134

Total Shifts requested by users : 408

All proposals with Grade A and over will receive beamtime. Proposals with grades A- and B + will receive beamtime if available. The Main proposer will be contacted by the Beamline Scientist.

BM1 B

Total Number of shifts available		227
Shifts for ESRF	- 57	
Minus ESRF Industrial beamtime (18 + 9)	- 27	
Shifts available for scheduling		143
Long Term	- 24	
Shifts available for discussion		119

Total Shifts requested by users : 265

All the proposals with Grade A and over will bet beamtime.

14. Summary of actions to be taken

[C. Heurtebise]

11.1.1. Helge LARSEN to get an estimated cost to have students at SNBL. Philip PATTISON and Chantal HEURTEBISE. **Deadline 22 June 2009. Done 17th June 2009.**

11.1.2. A list of expenses should be issued regarding the upgrade programme (moving to new offices, purchase of furniture and expenses related to the workshop). Vladimir DMITRIEV. **Deadline December 2009.**

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11.5.1. Establish a roadmap with timetable, costs, manpower, for work to be accomplished on the beamlines. Vladimir DMITRIEV – **Deadline : December 2009.**
Roadmap/timetable/costs/manpower - to be approved by SNX Council.

15. Concluding remarks

[D. Nicholson]

12th SNX Meeting. This meeting will take place in Grenoble, on Wednesday 2nd and Thursday 3rd December 2009.

13th SNX Meeting. This meeting will take place on Thursday 27th and Friday 28th June 2010. Kenneth KNUDSEN and Aase Marie HUNDERE are to make suggestions for next SNX Meeting in December 2009.

14th SNX Meeting. This meeting will take place in Grenoble, on Wednesday 1st and Thursday 2nd December 2010.

David NICHOLSON thanked Gervais CHAPUIS for organizing a very successful meeting in Lugano.

Vladimir DMITRIEV thanked all the participants on behalf of SNBL staff members. The discussions on Thursday 11th June were very successful. *We are on a new road as SNX is now working smoothly.*

Martin STEINACHER passed on Jean-Pierre RUDER's greetings to all the participating members; he wishes a successful continuation of the SNBL.

List of appendices, showing the page number on which they appear in the minutes.**Appendix A are available only to SNX Members and Observers****Appendix B are available to all.**

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Appendix No. 7 A	P.3	Income and Spending 2009, as of 31 st May 2009.
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