Table Ronde HiCANS- ICONE Journées de la Neutronique 2023, Erquy, 12 Octobre 2023

Following the presentation of the HiCANS and the ICONE project, the SFN organized a "Table Ronde" to initiate discussions within the user community on various aspects which should be considered if a new French neutron scattering facility would be built.

Disclaimer: The discussion was very open and this report is not a detailed transcription of all the exchanges. It simply compiles various opinions from individual users and does not reflect an official position of the Société Française de Neutronique.

Neutron beamtime access

- The current system at existing facilities is to open calls for proposals every 6 months. This corresponds to 2 experiments / year. This is in principle sufficient for even very active users. Only very few people are performing more than 2 experiments per year.
- BAG Block Allocation time system
 - The goal of the system is to provide access "more often for shorter times"
 - o It is supposed to allow dragging along new users
 - Warning: with BAG, someone has to do the data analysis because a lot of people know nothing about scattering
 - o BAG for Bio-SANS is efficient because analysis is automatically done
 - o Without proper analysis tools, data simply get lost
- Fast Access
 - o The possibility already exists at several facilities but not much used
 - o not advertised enough
 - o At ISIS: Fast access only for "simple" or "standard" experiments measurements.
- Long Term Proposals (ex. LTP 3 Years)
 - o no benefit for the facilities nor the community
 - At ESRF, there are less and less Long Term Proposals
- Thesis work with guaranteed beam time
- Priority Access for specific thematics
 - No clear cut opinion
 - o It conflicts with the criterion of "excellence" of the proposals
 - Has been under discussion at the ILL. Follow how it develops

Points to consider when defining a new neutron scattering facility

- <u>Data analysis is the bottleneck</u> → Make all steps easy
 Few people are only neutron users. They are usually using other spectroscopies data analysis must be made as easy and straightforward as possible
- Consider hiring people (ex. CNRS/IE) dedicated to data analysis

- Invest into science, not only in instrumentation
- National sources better suited to thematic access
 - They work closely with local institutes
 - They have long term relations with other institutes
- Flux is not everything
 - The most productive beamline at ESRF (in terms of impact and publications) is the Swiss-Norwegian CRG BM01 and BM31 on bending magnet (which provides only 1% of the max flux at ESRF)
- Attract the best scientists
 - o Give / provide freedom
 - Introduce new topics
- Show that a national source is complementary to European sources (ILL/ESS)
 It is part of an ecosystem
- Attract new people
 - o specific actions, ex. "spectroscopy for the dummies"
 - o form students (ex. HERCULES and FAN courses)
 - make formations on the internet more visible. There exist a lot of resources, see SINE 2020 initiatives)
- New users need a national source
 - "A national source is the entry point for European facilities"
 - CRGs are acting this way by bringing in new users
- A national source interacts with the "local community"
- Advanced users are the best ambassadors of neutron scattering techniques
- Broad projects involving neutrons and other tools are easier at a national level
- A national source is essential to develop expertise
- The community has to be involved within the project
 - Avoid duplication (e.g. with other European projects)
 - 2FDN has calls for "mini-projects" which may initiate actions
 - o How can we make efforts which are sustainable
- Specific actions on sample environments

Actions to be undertaken within the ICONE project

- A detailed science case has to be defined within 2 years to justify the construction of a new National French scattering facility at the beginning of the next decade (NB: ESS is upgrading their science case)
- Do not multiply surveys. There was an ENSA survey 2 years ago (little success)
- More interactions between (SFN 2FDN) and (ILL ESS)
- Workshops within GDRs might be a good opportunity.