Minutes

Date	LNL LAE Meeting Room, 13-October-2016
Meeting Topic	User Community Annual Meeting. Closed meeting
Participants	G. Benzoni INFN Mi D. Bisello Univ. Pd and INFN Pd G. Maggioni Univ. Pd and INFN LNL T. Marchi IKS - KU Leuven D. Mengoni Univ. Pd and INFN Pd D. Pierroutsakou INFN Na E. Vardaci Univ. Na and INFN Na E. Fioretto - LNL User Services coordinator V. Rigato – AN/CN Coordinator
Excused	M.Mazzocco –TAP Coordinator
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Definitions

LNL	Legnaro National Laboratories
UB	User Board committee
PAC	Program Advisory Committee
USIP	User Selection Panel for Interdisciplinary Research
TAP	Tandem –Alpi-Piave

AGENDA:

1. LNL Users general meeting: feedbacks and discussion
2. Discussion on requests for experimental halls for new set-up
3. Issues of the technical division
4. Discussion on actions
5. AOB

The User Board meets in closed session after the general User Community meeting, which was held in the morning.

The User Community meeting was attended by approximately 30 people. The talks reported in table 1 was presented. Both the present and future directors participated, contributing to a fruitful discussion.

Welcome - LNL Director	FIORENTINI, Giovanni / BETTONI, Diego
Welcome - User Board	BENZONI, Giovanna
Status of the TANDEM-ALPI_PIAVE/SPES facilities and 2017/2018 planning	BISOFFI, Giovanni
Notes from the TAP Beam Time Coordinator	MAZZOCCO, Marco
Status of the CN-AN2000 facilities	CANELLA, Stefania
Notes from the CN-AN2000 Beam Time Coordinator	RIGATO, Valentino
LNL User Service	FIORETTO, Enrico
CN pulsed beam facility	MASTINU, Pierfrancesco
ENSAR2	ROMANO, Stefano

The slides of the talks can be downloaded from the indico page of the meeting:
https://agenda.infn.it/conferenceDisplay.py?confId=12050

In the following the main topics discussed during the Users' Meeting are presented, together with notes from the UB

1. TAP acceleration complex:

The status of the TAP complex has been reviewed in details, in particular regarding the PIAVE-ALPI accelerators which exhibited criticalities in the past semesters.

The Tandem accelerator required an extraordinary maintenance in September-October 2016. The Laddertron charging belt, the high-energy heat exchanger and the conductive inserts of the belt wheels were replaced. Due to some technical issues and to the problems in the alignment procedure of the laddertron wheels, the maintenance period has been delayed by one week with respect to the original schedule.

The ALPI accelerator is at design performances, and the upgrade towards SPES is on the way. The PIAVE ECR source + injector, instead, could only work at 50% of the nominal accelerating field during last semester. Many components are undergoing revisions. Changes also in the control systems are ongoing, and should be exploited in the coming operations.

The calendar for the coming semester sees the operation of Tandem only and will consist of fewer weeks than planned in November and December owing to a shortage of budget for operator-shifts hours in 2016.

In the first semester of 2017, starting in May, the operation of the full Tandem-ALPI-PIAVE complex is foreseen.

The discussion longed on the proposed machines stops, needed in order to maximize the efforts to keep SPES on schedule. The Accelerator Division proposes a 1-year long stop at the end of 2017, followed by one year of operations and another year of stop. The exact timing for the machine stops will become more clear at the beginning of coming year.

The request of machine stops is motivated by the need to involve all the available technical personnel in the SPES installation.

Concerns from people responsible of the main experimental set-ups and from the Users have been raised, as many physics programs will be delayed by these stops. Some experiments are performing major upgrades (GALILEO, GARFIELD, PRISMA, PISOLO) involving important and planned investments to refurbish the set-ups. A non-coordinated and shared stop of the accelerating machines could delay their timely and effective commissioning and exploitation.

The UB envisages a close contact with both the director and Accelerator Division in order to efficiently program the machine scheduling, giving a direct feedback to the community as of starting and finishing time of the operations. The UB is aware of the need of this stop, especially in the SPES perspective. Nevertheless, the UB would like to propose and investigate the possibility of having a reduced operation, involving the Tandem only. Another possible alternative would be to train the Users to follow the basic machine operations, as it is currently done in the AN-CN accelerators, in order to have a self-service operation at least of the XTU Tandem unit. This will only regard basic operations, and not starting or stopping the machine, beam transportation, energy changes or main intervention. Issues related to this idea have been raised, mainly from the radio-protection point of view since regulations require the constant presence of two fully trained operators.

The UB express its major concern regarding the machine stop due to an unexpected budget cutoff for the operating personnel. The UB express its support to the machine operation personnel and wishes to collaborate with the LNL direction in finding viable solutions and requesting the needed resources for the standard operation of the LNL facilities. A letter on this topic will be prepared and submitted to LNL management.

Another issue, closely related to the installation of the SPES equipment, is the availability of the Hall III for experimental programs in particular related to the GARFIELD array.

The UB will collect specific instances from the different experimental groups and act as interface with the Accelerator Division. The UB proposes a constant monthly update under the form of news or e-mails to be sent from the accelerator division and then distributed using the Users' mailing list.

2. AN-CN machines:

The status of the AN-CN machines was illustrated: it has been pointed out that, though conveying a large number of users (both internal and external, mostly INFN or from Italian Universities), the machines are very old and their reliability in terms of machine hours and specific requirements (energy, time bunching etc.) is getting worse.

The Users of these small accelerators belong to different fields of research and there are peculiar applications, such as the use of the micro-beams available at the AN2000 facility, which are very attractive for external Users. The possibility to have a pulsed beam at the CN accelerator drives specific research fields.

The idea of buying a new accelerator has been raised already in the past and addressed to the LNL director.

The coordinator of the AN-CN complex asks if the annual meeting of the USIP-related Users could be merged to the general meeting of the LNL Users' community, which therefore will be extended including updates from Users'.

The UB agrees to have an extended general Users' Meeting, which will be held, in connection with the meeting of the Users' of the AN-CN complex, following the PAC-USIP meetings in July 2017.

3. Composition of the PACs:

During the open meeting, the incoming LNL director (prof. D. Bettoni) suggested the possibility of nominating additional PAC members directly by election through the User Community, as it is common practice in several laboratories.

The UB will evaluate this option in the coming meetings, after a deeper discussion with the incoming director and research division.

Starting from this input the question as to merge the PAC and USIP boards has been again raised. The USIP scrutinizes also requests coming from applied physics projects which need beams delivered by both the TAP and AN-CN accelerators complexes. **The proposed merging of the two committees into one large assembly would help the beam-time allocation but seems not applicable due to the relevant number of beam time requests for the CN and AN2000 Van der Graaff accelerators.**

Another important issue that requires clarification, according to the UB, is whether interdisciplinary research activities at the SPES facility (for example for medicine), which plan to use the same beam line as the production target of SPES, will need to undergo the USIP or the TAP PAC. **This has to be defined in due time, before SPES enters in full operation**

4. LNL User Service:

The LNL User Service is mainly devoted to the support of set-ups installed in the experimental areas and experiments in data taking at LNL accelerators. E. Fioretto, responsible of the User Service (Research Division) stressed the critical state of the technical units/laboratories. At the moment the personnel belonging to the User Service is the following:

- Paolo Cocconi, responsible for experimental areas;
- Davide Rosso, responsible for detector laboratory;
- Massimo Loriggiola, responsible for target laboratory;

The request for support on electrical and hydraulic plants in the experimental areas has to be sent to the Technical Division and to the Users' Board.

A number of criticalities have been pointed out:

- Luciano Costa, who retired at the end of 2014 but is still coming to the lab few days per week, has not been fully replaced. Currently, the lab can only offer support on existing vacuum systems, while the design of new lines and the implementation of PLC-based control systems cannot be warranted. The support to experimental groups in data taking at the TAP complex for vacuum systems is in charge to Andrea Conte (Accelerator Division). Within the ENSAR2 Grant Agreement there is a proposal to open a 2-years position for the training of a technician.

- The target laboratory consists of only one full time technician, Massimo Loriggiola. He is working hard to produce targets for experiments performed locally or in outside laboratory (occasionally an in low priority), and produces the stripper foils for the XTU Tandem. He also contributes to the training of people from outside laboratories/institutions. The lab equipment is rapidly aging and some parts cannot be replaced owing to out of production pieces. An investment of the order of >100 k€ would be needed to replace the oldest equipment. A demand for a punctual request for targets at the on-line submission of the proposal is raised, in order to give a feedback on the feasibility of the experiment before the PAC session. A revision of the on-line submission form is needed.

- Detector laboratory,managed by Davide Rosso, is mainly devoted to the annealing and the repairing of HPGe detectors installed at LNL. Occasionally and in low priority, also detectors belonging to other INFN sections are repaired.

- Radioprotection officer is D. Zafiropoulos. It is reminded that the declaration of responsibility, the request for to access the experimental areas and use calibration sources have to be sent, by the spokeperson, well in advance before the experiment, together with the needed documentation regarding the radioprotection records for the participants who are new LNL Users.

The UB expresses its concern about the volatility of such high level competences and strongly encourages the opening of training positions, especially in the fields of target production and detector management. One possibility, emerged in the discussion with ENSAR2 representatives, would be to use part of the ENSAR2 budget for financing such fellowships.

5. Presentation of the activity of the neutron facility at CN:

the responsible of the project, Dr. Pier Francesco Mastinu, showed the peculiarities and potentiality of the facility and the importance which it does have in the context of measuring neutron-capture cross sections.

6. ENSAR2 Grant Agreement:

The Italian scientific coordinator, Dr. Stefano Romano, presented the ENSAR2 project for Transnational Access to the laboratories LNL and LNS, giving useful information on the policy and rules to be attended in order to ask for financial support for non-Italian collaborators coming to the two laboratories to carry out experiments.

As it was done for the previous EU project, the request form has to be presented with the submission of the proposal to the PAC or USIP. A feedback form has to be filled out by the project leader, usually identified in the experiment's spoke-person, at the end of data

taking. The UB is planning to prepare a similar form in order to better monitor the activity in the lab and have a direct feedback from the Users'.

The form will contain the following information:

- Achieved Results (with respects to the plans)
- Duty-Cycle of the Experiment
- Main Problems
- Aspects to be improved
- Overall Evaluation

7. Requests for installation of new set-ups:

Seeing the proposals of bringing new equipment, in preparation of and with the advent of SPES, the procedures to request the installation of a new set-up have to be clarified.

The UB does not consider its duty to evaluate the scientific impact of the requests, rather suggests that the applicant sends a Letter Of Intent to the specific committee (either PAC or USIP), which has the rights to endorse the request. In the case of requests of new equipment related to activities with SPES, the evaluation coming from the SAC will also be considered. Following the official acceptance from the PAC/USIP the UB can help identifying the best location, supporting both the group and the director.

The UB sees this problem as particularly urgent and wishes to have soon a discussion with the LNL direction on this topic.

Actions:

The UB will try to keep the Users' updated on the status of the machine and the possible stops needed for SPES installation. It will push for possible alternatives, such as the operation of the Tandem only.

The UB is preparing an end-of-experiment form to be filled out by the spoke-person. Additional documentation on useful procedures for the Users' are being set-up. Close contacts with radioprotection officer and research division are foreseen.

The UB envisages a discussion with the director on the issues about the specific services and the possible upgrade of the AN-CN complex. The UB agrees to have an extended general Users' Meeting, which will be held, in connection with the meeting of the Users' of the AN-CN complex, following the PAC-USIP meetings in July 2017.

The meeting ends at 16:00.