



EUROPEAN LABORATORY FOR PARTICLES PHYSICS

CERN/SPSC 99-12
SPSC 42
7 April 1999

SPS AND PS EXPERIMENTS COMMITTEE

Decisions taken at the 42nd meeting on 30 March 1999

OPEN SESSION:

1. Status report from NA48 : P. Debu
2. Status report from NA54 : E. Nolte
3. Status report from NA56 : S. Ragazzi
4. European collaboration for high-resolution measurements of neutron cross-sections between 1 eV and 250 MeV (SPSC 99-8/P310) : N. Pavlopoulos

CLOSED SESSION:

Present: P. Bagnaia, M. Cavalli-Sforza, S. Dalla Torre, A. De Roeck, Y. Déclais, C. Détraz, R. Forty, U. Heinz, K. Hübner, K.-H. Kissler, B. Koene, K. Königsmann (Chairman), W. Kühn, A. Magnon, L. Maiani, J. May, N. Pavlopoulos*, M. Pennington, A. Pich J.-P. Riunaud, L. Robertson (replacing M. Delfino), T. Ruf, J. Stachel, E. Tsesmelis (Secretary), R. Voss (replacing G. Goggi), C. Wagner, A. Zalewska.

* Part-time

Apologies: W. Braunschweig, G. Goggi, P. Grafström, D. Simon, M. Tyndel, D. Websdale.

1. APPROVAL OF THE MINUTES

The minutes of the 41st meeting were approved without modification.

2. REPORT ON THE MEETING OF THE RESEARCH BOARD

The Research Board endorsed the SPSC recommendation on the lower momentum of 40 A GeV/c for the entire 1999 Pb-ion run. It is envisaged that the Pb-ion run in 2000 will be again at 158 A GeV/c. In this context it is important that the results of the 1999 run are available during the summer of 2000 at the latest.

The Research Board agreed on the scientific interest of the I216 proposal to study the LSND neutrino oscillation signal. It stressed, however, that a study must be performed on the availability of protons and on the implications on building occupancy in relation to LHC detector testing and construction. The Research Board thanked the SPSC for the very thorough investigation of the evidence for neutrino oscillations.

3. STATUS REPORT ON THE SPS

The SPS has been closed in preparation for the cold check-out. The normal schedule is being followed and no problems have been encountered.

4. STATUS REPORT ON THE PS

The new hardware installed to increase the transfer energy from the PS Booster to the PS to 1.4 GeV has been successfully commissioned. The setting-up of the PS Complex continues as foreseen in the schedule. The commissioning of the AD is progressing well, with the first proton beams to the AD expected in mid-April following the replacement of the extraction septum magnet which had developed a leak. Installation of beam lines in the experimental areas is also underway.

5. REPORT ON THE CERN NEUTRINO BEAM TO GRAN SASSO

The Director General gave a brief oral progress report on the schedule to obtain definite approval for the project. With the aim of obtaining formal approval at the end of 1999, the CERN Management will be providing written reports to the upcoming sessions of the SPC and the Committee of Council, in addition to exploring possibilities for funding. It was stressed that, in the meantime, experimental collaborations should continue developing one experimental proposal along the lines indicated previously and that the relevant documents be submitted by autumn 1999.

6. DISCUSSION ON THE OPEN SESSION

6.1 NA48:

The Committee takes note of the status report which demonstrated that the detector is operating well and that the collaboration is proceeding carefully with the analysis of the 1997 and 1998 data. The Committee also takes note of the collaboration's plans to produce their first result on ϵ'/ϵ . The 1998 run was the first full year of data-taking, tripling the data set obtained in 1997, and the detector and collaboration are ready to double further the size of their data set in 1999. The collaboration plans to run also in 2000 with an emphasis on special runs to improve the precision of their systematic uncertainties. The Committee **encourages** the collaboration to continue their studies on rare decays for future running beyond 2000 and to reach a decision within a year.

6.2 NA54:

The experiment had run mostly parasitically on the M2 muon line during periods over the three years from 1995 to 1997, with the aim of determining the cross-sections of fast muon induced reactions producing cosmogenic radionuclides. The Committee **encourages** the collaboration to bring their analysis to a conclusion and to subsequently submit a written report to the SPSC. Allocation of further beam time will be subject to the satisfactory analysis of the previous data and to the compatibility with the COMPASS experimental set-up.

6.3 NA56:

The Committee **congratulates** the collaboration for successfully reaching the objectives of their proposal. The collection of good quality data and a rigorous analysis have provided results with better than expected precision. These data will have some impact on the models used to predict neutrino fluxes at future neutrino beam lines.

6.4 PROPOSAL P310 (SPSC 99-8/P310):

The Committee recognises with great interest the importance of the scientific programme to be addressed by the proposed neutron TOF facility in the fields of astrophysics and nuclear applications. Further studies are required to understand the impact of the proposed programme of measuring fundamental neutron properties. The Committee is pleased to note that the collaboration has the necessary expertise and manpower available to exploit this facility. The Committee **recommends** P310 for approval to the Research Board, subject to clarification of the project's financing.

7. HEAVY-ION COLLISIONS AT THE SPS

The Committee heard a report summarising the experimental heavy-ion programme at the SPS and its comparison to predictions from different methods based on fundamental theory. A number of issues were addressed, including the heavy-ion observables, hadrosynthesis, thermal hadron radiation and radial flow, size and lifetime from HBT interferometry, initial energy density, and elliptic flow.

8. SCHEDULES OF THE MACHINES

The Coordinator showed the updated schedules of the 1999 SPS and PS Fixed Target Programmes. He then outlined the various supercycle possibilities for 1999 Pb-ion run and showed that the preferred solution for the Pb-ion experiments and for the PS users is to remain with the same supercycle as in previous years. However, the lower momentum of 40 A GeV/c results in a longer flat-top of 7.8 sec. maximum length. Finally, he outlined the planned tests at the LPI in 1999.

9. ANY OTHER BUSINESS

The Committee takes note of the memorandum from the I216 Collaboration concerning the "Oscillation Search with the PS Neutrino Beam" (SPSC 99-10/M630).

The Committee also takes note of the request from the OPERA Collaboration for an additional test beam period in 1999. It decides to leave to the coordinator the freedom to allocate the beam time if it is compatible with the overall programme.

The Director of Accelerators announced a request from RIKEN to obtain half of the hardware making up the former AC stochastic cooling system. In case there is no other request from the European experimental community, this hardware will be transferred to Japan.

The Chairman informed the SPSC of the request from the chairman of the HEP Computing Coordinating Committee to the experimental community in regard to ensuring awareness and proper planning for the potential problems associated with the year 2000 computing bug.

The 43rd meeting will be held on **Tuesday 25** and **Wednesday 26 May 1999**.

The 44th meeting will be held on **Tuesday 31 August** and **Wednesday 1 September 1999**.

10. DOCUMENTS RECEIVED

- Proposal for a Neutron Time of Flight Facility (TOF); CERN/SPSC 99-8/P310.
- Addendum to NA54: Determination of cross sections of fast muon induced background reactions for the low-level experiments LENS, BOREXINO and CRESST; CERN/SPSC 99-13/P286 Add.1.
- Memorandum to SPSC Chairman, from NA57, NA50, NA49, NA45: Plans for Charm Studies; CERN/SPSC 99-7/M629.
- Memorandum: Oscillation Search with the PS Neutrino Beam; CERN/SPSC 99-10/M630.

Emmanuel Tsesmelis