



EUROPEAN LABORATORY FOR PARTICLES PHYSICS

CERN/SPSC 98-14
SPSC 38/ **Revised**
25 June 1998

SPS AND PS EXPERIMENTS COMMITTEE

Decisions taken at the 38th meeting on 26-27 May 1998

OPEN SESSION

Status report from COMPASS [NA58] : F. Bradamante.

The CERN Neutrino beam to Gran Sasso : K. Elsener.

Status report from CRYSTAL-BARREL [PS197] : U. Wiedner.

Status report from OBELIX [PS201] : A. Rotondi.

Status report from JETSET [PS202] : A. Palano.

CLOSED SESSION

Present: P. Bagnaia, W. Braunschweig, M. Cavalli-Sforza, B. D'Almagne (Chairman),
A. De Roeck, Y. Déclais, D. Drijard* (Secretary), L. Foà, G. Goggi, P. Grafström,
K. Hübner, D. Jacobs, K. Jakobs, K.-H. Kissler, B. Koene, K. Königsmann*,
R. Landua*, M. Neubert, M. Pennington, A. Pich, L. Ristori, J.-P. Riunaud, D. Simon,
J. Stachel, E. Tsesmelis, M. Tyndel, D. Websdale, G. Wilquet, A. Zalewska.

* Part-time

Apologies: J.-P. Blaizot.

1. Introduction:

The Chairman presented apologies from one member of the Committee. He then welcomed Kay Königsmann who will take over as Chairman of the Committee from 1st August 1998.

2. Approval of the minutes:

The minutes of the 37th meeting were approved without modifications.

3. Report on the meeting of the Research Board:

The Research Board took note of the status of the experiments that presented a report to the open session of the SPSC. It agreed with the conclusions drawn about TOP, the prototype for the TOSCA project.

4. Status report on the SPS:

The SPS was running under very good conditions. The performance was close to that of last year.

5. Status report on the PS:

The new radio-frequency systems for the PSB and PS complex had been commissioned. This was a major step towards the preparation of the PS complex for the LHC beams. The total number of protons accelerated in the PS for SPS proton operation during the first 60 days of run was larger than in the preceding years, although slightly smaller than in 1997. The global integrated luminosity was slightly smaller than in 1997. The limiting bottleneck was probably in the PS and was actively being scrutinized.

The AD is being installed and will start the operations with protons in September; everything is under control. One should then proceed with antiprotons by the beginning of next year.

6. Status report on SPS experiments:

The Coordinator presented the status of the experiments. CHORUS had a very successful calibration run and had a physics run on antineutrinos. NOMAD had been taking good data but with a number of protons-on-target somewhat below expectations. For NA48, the LKr calorimeter was performing well with the successful exchange of the capacitors allowing to run with a high tension of 3 kV throughout; the detector and DAQ upgrades were very satisfactory. NA49 had an additional 19 days in May that allowed to take pp reference data at 40 and 100 GeV/c, respectively 250,000 and 500,000 events. NA50 took p-Be data totaling 6,000 ψ' and 300,000 ψ and calibrated the electromagnetic calorimeter. They had tests of the vertex spectrometer: the data analysis is underway.

7. Discussion of the open session:

7.1 COMPASS [NA58]:

The layout of the detector that can be assembled from the start of the experiment, given the available resources, was presented at the open session. This showed that the collaboration could undertake an important experimental program on μ scattering and, in particular, give access to a measurement of $\Delta G/G$ with a precision close to that expected from the proposal. Extensions of this physics program will be subject to collecting additional resources in order to complete the detector. The Committee was satisfied with the coherence of the approach indicated and agreed with the priorities adopted. The SPSC decided to recommend to the Research Board to proceed to the preparation of the experiment. It asked the referees to keep in contact with the collaboration and follow the development of the program.

7.2 Neutrino beam to Gran Sasso:

The Committee was very pleased with the presentation and thanked the Technical Committee for the important study accomplished. It noted that there is a need for flexibility in the beam set-up to accommodate experiments on ν_τ appearance and experiments on ν_μ disappearance, the latter requiring lower energies than the former to reach lower Δm^2 . It asked what could be done for a wide band low energy beam to complement the satisfactory high energy project. In this low energy option, a small nearby detector might be needed. It could be accommodated in a modest size cave. The Committee asked the study group to reconsider in this direction the project of an experimental site at Meyrin and, in particular, to estimate the civil engineering costs corresponding to this operation.

Finally the Committee expressed the opinion that the long baseline ν program at Gran Sasso should be considered an integral part of the CERN research activity performed in collaboration with INFN. The scientific programme should therefore be defined and run jointly by CERN and INFN.

7.3 CRYSTAL-BARREL [PS197]:

The Committee was happy with the progress of the analysis of the large bulk of data and the quality of the physics results produced. It recommended to pursue the analysis with a sustained rate and was eager to see a further status report in due time.

7.4 OBELIX [PS201]:

The SPSC was glad with the report presented. The Committee appreciated the diversity of data sets that turned out to be extremely useful for this analysis. It encouraged the formation of a working group with CRYSTAL-BARREL to gather the spectroscopy information in a consistent way in order to produce a document finalizing the results from LEAR.

7.5 JETSET [PS202]:

The Committee was pleased to see the set of results presented. It noted with satisfaction that the last publications will emerge soon.

8. AQUA-RICH:

The Committee received a memorandum concerning a detector for an atmospheric and long baseline neutrino experiment at Gran Sasso. The present request was to assemble a scaled down prototype to be tested at CERN. The SPSC judged that this project was not well enough defined in its technical and planning aspects for the Committee to allocate beam time.

9. Schedules of the machines:

The Coordinator showed the updated schedule of the SPS fixed target program and of the PS East Hall upgrade. He then outlined various scenarios for the schedule of the accelerators for the years 1999-2002, in order to initiate a discussion.

10. Any other business:

The Director of Research thanked the Chairman for the wisdom and competence with which he has led the Committee and for the quality of the program of Research that he directed. In turn, the Chairman wished to thank all members of the Committee for their help.

The 39th meeting will be held on **Tuesday 1** and **Wednesday 2 September 1998**

The 40th meeting will be held on **Tuesday 3** and **Wednesday 4 November 1998**

11. Documents received:

Memorandum to the SPSC: *Use of crystals as "quarter-wave plates"* (Ulrik Mikkelsen, Mayda M. Velasco); CERN/SPSC 98-12/M607.

Memorandum from The ACCESS Collaboration: *The Advanced Cosmic Composition Experiment at the Space Station (ACCESS): A request for testbeam facilities at the CERN SPS* (Contactperson: R. Wigmans); CERN/SPSC 98-13/M608.

D. Drijard