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CERN/ISRC/72-8

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EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

DRAFT MINUTES OF THE TWENTY-SEVENTH MEETING

OF THE INTERSECTING STORAGE RINGS COMMITTEE

HELD ON MARCH 21, 1972

Present: B.P. Gregory (Chairman), J.S. Bell, M.H. Blewett, F. Bonaudi, G. Charpak (part time), G. von Dardel, G. Giacomelli, H. Grote (part time), K. Hübner, W. Jentschke, J. Lefrançois, A. Minten (part time), D. Morrison, E. Picasso, K. Potter, L. Resegotti, H. Schopper, J. Steinberger, K. Tittel (part time), H. Wind (part time), E. Zavattini.

Since the last meeting, the ISRC has received the following document:

- Study of Particle Correlations at Large Angles at ISR Using the Split-Field Magnet: Track Recognition Studies and Proposal for Detector Layout, by the Liverpool-Scandinavian and M.I.T.-Orsay Collaborations, CERN/ISRC/72-7.

1. The Draft Minutes of the Twenty-sixth Meeting of the ISRC were approved.

2. Status Report

The ISR Co-ordinator, K. Potter, reviewed the present status of the machine and the experimental programme. He reported that, just prior to the vacuum accident on 15 March, a new record intensity of 11.1 A in Ring 1 was achieved, gave some of the details of the incident wherein holes were burned by the beam in the vacuum chamber, and reported that the machine was in operation again by 20 March with almost all groups taking data.

He also reported that discussions have started among the ISR experimental teams on measurements of luminosity and means for co-ordinating them.

3. The Split-Field Magnet Facility

At the request of the Committee, several short reports were given on plans for the SFM programme and its detector system, as follows:

(a) Vacuum Chamber

The SFM Co-ordinator, K. Tittel, reported that in addition to the chamber described by E. Fischer at the previous ISRC meeting, a new corrugated chamber is being made that will not need such a heavy supporting structure, thus much less material will be traversed by emerging particles.

(b) Detector Layout and Construction Schedule

A. Minten presented some aspects of the detector layout, with drawings. In the forward direction, this layout is similar to that previously presented, the design of the 24 chambers is frozen, construction started, and these should be ready for test in November-December of this year.

In the central region, a new design involving "close-packed" chambers was presented that would greatly improve resolution and track reconstruction. Since there may still be technical problems with this design, the schedule is somewhat uncertain but they may be able to be ready early in 1973.

Minten pointed out that there is still some question about the operation of the detection system with respect to how much technical help will be needed for the experimental groups that will be using it.

(c) Co-ordination of Programme of Accepted Experiments

K. Tittel outlined some of the salient points concerning mutual or partial compatibility of the group of experiments that had been recommended by the ISRC for acceptance at its twenty-third meeting (CERN/ISRC/71-44), particularly in the light of the new proposals for detector layout.

The Committee also took note of the report sent to it by the Liverpool-Scandinavian and M.I.T.-Orsay Collaborations concerning a desirable layout for the studies at large angles. (CERN/ISRC/72-7).

In discussion, it was the general feeling of the Committee that the layout proposed by Minten appears to provide compatibility, at least in the first stages, for the programme of accepted experiments, with relatively short changeovers, and the ISRC encourages the SFM Detector Group to proceed along these lines. It is still too early to make any decisions about later stages but, at this time, there do not appear to be any major conflicts.

(d) Track Recognition and Reconstruction

H. Grote reported on some work on the track-finding program MARC and a geometry program NICOLE. A parametrization method for SFM tracks was described by H. Wind.

It appeared to the Committee that considerable work remains to be done in this area of analysis of the data.

4. Item Pending from Previous Meetings

On the Proposal for Studies of Particle Production in the Forward Direction at the ISR, by the CERN-Rome Collaboration (CERN/ISRC/71-41 and /71-41 Add.1), it was reported that the ISR Department could not accept the proposed modifications to the machine because of the serious effects on its performance. F. Bonaudi outlined some of the features for carrying out this experiment without these modifications, including a preliminary sketch of a possible vacuum chamber.

In view of this situation, the Committee requests the CERN-Rome group to examine the arrangement now proposed and to send it a report on the experiment under these conditions.

5. Next Meetings

For the next meeting of the ISRC it is planned to hold an Open Session to hear reports on the status and plans of Experiments R 203 and R 204 together with a brief review of reports of ISR experiments given at the Oxford Conference.

The next meeting of the ISRC will be held on Wednesday, 26 April, 1972:

Open Session - 9:30 a.m. in the Council Chamber

Closed Session - 2:30 p.m. in the ISR Conference Room

Tentatively, the following meeting of the ISRC will be held on 24 May, 1972.

M.H. Blewett