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CERN-ISRC/70-28

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EUROPEAN ORGANISATION FOR NUCLEAR RESEARCH

MINUTES OF THE FOURTEENTH MEETING OF THE  
INTERSECTING STORAGE RINGS COMMITTEE  
HELD ON NOVEMBER 24 AND 25, 1970

Present : W. Jentschke (Chairman), M.H. Blewett, F. Bonaudi, G. Charpak,  
B.P. Gregory, K. Johnsen, E. Lillethun, A. Minten, L. Resegotti,  
H. Schopper, J.C. Sens, J. Steinberger, W. Thirring, L. Van Hove,  
J. Weyers, K. Winter.

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

- Addendum for the Improvement of Elastic Scattering Apparatus, by Aachen-CERN-Genova-Torino Collaboration, CERN-ISRC/69-19 Add.2.
- Memorandum on Future Activity at the ISR, by J.V. Allaby, et al., CERN-ISRC/70-7 Add.2.
- Proposal for a Search for Dirac Magnetic Monopoles at the ISR with the Plastic-Detector Technique, by Rome-Saclay-Strasbourg Collaboration, CERN-ISRC/70-21.
- Report on Background Measurements at the PS in Preparation of the Small Angle ISR Elastic Scattering Experiment, by CERN-Rome Group and E. Jones (ISR, CERN), CERN-ISRC/70-25.
- The ISR Luminosity Monitor in Crossing Point I-5, by B. de Raad, CERN-ISR-BT/70-58.

- Luminosity and Background Studies during the Running-In Phase of the ISR, by a Working Party consisting of A. Agoritsas, et al., CERN-ISRC/70-26.
- Memorandum on I-6 Experiments, by G. Bellettini, G. Matthiae, P. Strolin (CERN-Rome), CERN-ISRC/70-27.

1. The Minutes of the Thirteenth Meeting of the ISRC were approved.

2. Beam Tests in the ISR

K. Johnsen reported on the recent beam tests in ISR Ring 1 and added a few comments on the plans for further tests which will start around mid-January, 1971. The ISRC congratulated him and the ISR Department on the success of the tests in Ring 1.

3. Split-Field Magnet Facility

A. Minten outlined the present progress and future plans for the detector system in the SFM (see Memorandum of 31.8.1970, Ref : D.Ph.II/AM/ge), with some additional comments by G. Charpak. The schedule calls for decision on the chambers by April, 1971, in order to be ready for installation in the magnet by the end of 1972.

L. Resegotti brought the Committee up to date on the magnet, itself, showing graphs of field patterns obtained from model measurements and computations.

4. Luminosity and Background Measurements at the ISR

a. K. Johnsen reported on the work in progress and planning for luminosity and beam-profile measurements in the ISR Department. In addition to beam probes and the sodium-curtain monitor, there had always been foreseen the need for a simple device to determine whether collisions were occurring, during the commissioning period of the ISR. B. de Raad has been asked to undertake preparations for this work and has been taking some preliminary background measurements at I-5, with the help of equipment

and personnel from the NP Division. His plans are outlined in Internal Report CERN-ISR-BT/70-58.

The ISRC expressed its interest in this work and requested the ISR Department to keep it informed about results of the measurements and future activities of this nature.

b. J. Sens informed the Committee that a Working Party, comprising persons from some of the groups preparing for experiments at the ISR, some of those who had been taking background measurements at the CPS, and from the NP Division. It was proposed that, to aid both the ISR and the groups involved in the accepted experimental program, some apparatus be set up at I-4 during the running-in period, to obtain data on luminosity and background effects.

The ISRC was pleased to learn of these plans and accepts, in principle, that some data of this kind be obtained. The Committee requested Sens to prepare, for one of its next meetings, a more detailed outline of the proposal, including the required equipment and the personnel involved.

In this connection, the Committee emphasized (i) that this work should be well co-ordinated with the ISR Department both with respect to its work of this kind and to prevention of interference with the running-in of the machine ; (ii) that the planning should involve all the groups now making preparations for the experimental program so that all preliminary testing can be confined to one area ; (iii) that the work should be organized (preferably under some single direction) in a way that can shield the ISR Department from pressures to undertake other preliminary testing before the start of the experimental program.

## 5. New Proposals

a. The Committee considered the possibilities of exploiting the ISR to search for "quarks" after the presentation of considerable background material by J. Sens (including material from the proposals CERN-ISRC/70-20 and CERN-ISRC/70-22).

However, the Committee feels that it is not sufficiently informed to come to a decision, either with respect to these new proposals or to the possibilities in experiments of the accepted program. Therefore, it proposes :

- i. a sub-committee, comprising J. Steinberger, F. Heymann, J. Sens and K. Winter, to review the situation ;
- ii. all groups now preparing experiments for the accepted program, and who are including a search for quarks in these plans, immediately send to the Committee a short review of these plans, including any modifications envisaged in previous proposals ;
- iii. an Open Meeting be convened on December 8, 1970, for a presentation of the proposals of the Santa Barbara group (CERN-ISRC/70-20) and the Oxford group (CERN-ISRC/70-22), together with brief presentations of the plans mentioned in (ii).

K. Johnsen reminded the Committee that it was difficult to forecast when the luminosity of the ISR would reach the design figure, and that a lower figure should be considered during 1971.

b. The Committee was unable to discuss the other new proposals it has received, but it is foreseen that another Open Meeting for their presentation can be held early in 1971.

## 6. Program Preparations

The Committee requested J. Sens to prepare a written status report on the preparations of the experimental groups, including modifications.

The Committee also asked F. Bonaudi and J. Sens to prepare, for a meeting early in 1971, a tentative schedule (or alternate possibilities) of installations for experiments. Bonaudi will also present schedules on equipment and facilities.

## 7. Other Business

a. The Committee took note of the Memorandum from J.V. Allaby, et al.,

(CERN-ISRC/70-7 Add. 2) which informs it of the collaboration between this group and the CERN-Rome group (CERN-ISRC/69-20).

b. The Committee requested H. Schopper to review, for it, the plans incorporated in the accepted program for survey of neutral particles.

8. Next Meetings

The ISRC will hold special meetings as follows :

- a. an Open Meeting to discuss proposals to search for "quarks" at the ISR, to be held on December 8, 1970 at 2:30 p.m.
- b. a closed meeting on December 9, 1970 at 9:30 a.m.