

CERN LIBRARIES, GENEVA



CM-P00046128

PH.III-75/24
30 September 1975

SC COMMITTEE

DRAFT MINUTES OF THE OPEN
MEETING OF THE SC COMMITTEE

held on 29 September 1975 at 14.30 hrs

and of the CLOSED MEETING

held on 30 September 1975 at 08.30 hrs

PRESENT : See Annex

1. MINUTES OF THE MEETING OF 2 JULY 1975

The Draft Minutes (PH.III-75/20) were approved.

2. ANNOUNCEMENTS

The Chairman announced the names of the six external members of the new SC Committee viz

- I. Bergström (Stockholm)
- T. Bressani (Turin)
- L. Grenacs (Louvain)
- R. Klapisch (Orsay)
- L. Simons (CERN)
- C. Wilkin (UC London)

He thanked the many people who had sent him letters proposing names for the Committee. He also mentioned that in future, at the suggestion of L. Van Hove, the Physics III Committee would be known as the SC Committee. (The Committee documents will continue to bear the code PH.III until the end of 1975.)

3. PROPOSALS

U. Gastaldi presented the proposal from the CERN-Daresbury-Mainz-TRIUMF collaboration on "The Study of the Muonic and Pionic X-ray Cascades in Hydrogen, Deuterium and Helium"(PH.III-75/14).

T. Bressani gave a brief summary of the status of the apparatus for the Omicron Spectrometer. He reported that the construction of the magnet is well advanced, that the multi-wire proportional chambers would be ready by December and the drift chambers would be ready by March/April 1976. A decision had been taken on the electronics and orders had been placed. The off-line programmes should be ready by December while work had started on the on-line programmes. The first of the computers required should be available early in December. Bressani then presented the initial physics experiment proposed for the Omicron Spectrometer as given in PH.III-75/22. The request for machine time was for :

- a) 10 shifts of parasitic time in a pion beam from January onwards;
 - b) 30 shifts of main user time (some of which could be shared with other users) from July/August onwards;
- and c) 30 shifts of main user time for data taking for the experiment.

A. Robertson presented a request for extra running time for the Birmingham-Rutherford-Westfield collaboration (Experiment SC 54).

4. SIN PROGRAMME

H.-J. Gerber gave a survey of recent experimental results obtained at SIN. A written summary can be found in News Letter No. 5 which is available upon request from SIN.

5. NUCLEAR CHEMISTRY IRRADIATIONS

H. Ravn reported that 1 parasitic irradiation of $\sim 7 \times 10^{17}$ protons had been made in the period 2 July to 29 September 1975 for experiment SC 64.

6. SC STATUS REPORT

E.G. Michaelis presented a report on the present status of the SC; details are given in PH.III-75/23. H. Beger briefly reported on the present status of the project to accelerate ${}^3\text{He}^{++}$ (PH.III-75/25).

7. SC SCHEDULE

E. Zavattini commented that the SC schedule had been provisionally arranged up to 1 December, taking into account various boundary conditions. One consequence was that ISOLDE would not get very much time in the next few months but that he would endeavour to make up for this in 1976.

8. NEXT MEETING

The next meeting of the SC Committee will be held on Monday 1 December, starting at 14.30 hrs, and of the closed Committee on the morning of Tuesday 2 December.

CLOSED MEETING, TUESDAY 30 SEPTEMBER

Present : T. Bressani, T.E.O. Ericson, P. Falk-Vairant, R. Grenacs, P.G. Hansen, W. Jentschke (part-time), R. Klapisch, W.O. Lock (Secretary), E.G. Michaelis, O.B. Nielsen, L. Simons, V. Soergel (Chairman) C. Wilkin and E. Zavattini.

Apologies for absence were received from I. Bergström and F. Scheck (SIN representative).

1. OPENING REMARKS

The Chairman said that he saw two main functions for the Committee:-

- (i) to determine the scientific programme around the SC;
- and (ii) to take up the duties of the previous SCIP Panel i.e. to act as a link between the physics community and the SC Division.

2. PROPOSALS AND/OR REQUESTS FOR MACHINE TIME

The Committee considered six proposals and/or requests for machine time and made recommendations as given below:-

- (a) Request for a further 8 shifts for experiment SC 57 (Hadron Radiobiology). The Committee approved this request and the time will probably be scheduled in December.

- (b) Request for an extra 20 days to complete experiment SC 54 (Calibration of neutron detectors used in PS experiment S 112; Birmingham-Rutherford-Westfield collaboration). Their original request for time was based on the assumption of a mono-energetic neutron beam and on SC duty cycle of 80%. In fact only 20% of the neutrons are within the high energy peak while the SC duty cycle thus far has only been about 15%. Hence the collaboration has not yet been able to take enough data to give a good calibration of their neutron counter. In the light of these circumstances the Committee approved their request.
- (c) Request for machine time in January for experiment SC 60 (Louvain Group) and for assistance in setting up a suitable pion beam. The request was approved while Bressani and Tanner (together with help from the SC Division) agreed to help with the beam, possibly starting in December during Technical Development time.
- (d) The Chairman reported that Professor Hauser of Heidelberg had commented favourably on the scientific interest of the proposal from the Parma group on Muonium Chemistry in Condensed Matter (PH.III-75/12). It was agreed to recommend the proposal to the NPRC with the proviso that the time allocation and scheduling would be decided when results of beam studies are available, but with an upper limit of 20 shifts as requested in the proposal. The experiment code will be SC 68.
- (e) Proposal from the CERN-Daresbury-Mainz-TRIUMF collaboration "Study of the Muonic and Pionic X-ray Cascades in Hydrogen, Deuterium and Helium" (PH.III-75/14). It was agreed to recommend this proposal to the NPRC for a first machine allocation of 20 shifts it being understood that this time would be used for runs at high pressures. A request for machine time to run at low pressures could be considered later in the light of the results obtained at high pressures. The experiment code will be SC 69.

(f) Request for machine time from the Omicron collaboration for setting up of the apparatus and for a first physics experiment to study pion and muon backward scattering on light nuclei (PH.III-75/22). The Committee approved the allocation of 10 shifts of parasitic time per month from January to June 1976 to test chambers and other apparatus and of 30 shifts of main user time from July 1976 onwards for the setting up of the Spectrometer. It deferred a decision on the request for time for data taking for the proposed physics experiment. Since the space required for the chambers to be tested is at present occupied by the MIT-Pisa group it was agreed that this latter group must attempt to finish their chamber tests by January when priority for the space and for the parasitic beam would be given to the Omicron collaboration.

3. EXTENSION OF APPARATUS HALL AT THE SC

Michaelis briefly outlined plans for an extension of the hall now used for the maintenance and repair of the rotary condensers in order to have space for the handling of radioactive targets and apparatus. After a brief discussion the Committee supported the proposal as outlined by Michaelis.

4. METHOD OF WORKING OF THE COMMITTEE

The Chairman said that it was important to have a mechanism by which rapid decisions could be taken concerning the SC programme. He therefore proposed that different members of the Committee, according to their particular field of research interest, should be asked to act as referees for new proposals before a presentation of the proposal at an Open Meeting of the Committee. The Committee agreed to this suggestion. The Chairman said that he envisaged about 4 meetings per year of the Open Committee with perhaps one or two extra meetings of the Closed Committee to consider, for example, some of the problems needing study which were outlined by Michaelis in his status report (PH.III-75/23).

5. DATE OF NEXT MEETING

The date of the next Open Meeting was fixed for Monday 1 December (at 14.30) and of the closed Committee for Tuesday 2 December in the morning (time to be decided later).

ANNEX

PRESENT

ALLARDYCE B.W.	CERN	KLUGE J.	CERN/Mainz
ANDERSSON G.	CERN	KOFOED-HANSEN O.	CERN
ARVIEUX J.	SIN/Grenoble	LECHANOINE C.	Geneva
BAARLI J.	CERN	LE DALLIC G.	CERN
BAILEY J.	Daresbury	LOCK W.O. (Secretary)	CERN
BEGER H.	CERN	MICHAELIS E.G.	CERN
BERGSTROM I.	Stockholm	MUNDAY G.L.	CERN
BERTIN A.	Bologna	MUSSO A.	Turin
BRESSANI T.	Turin	NIELSEN K.O.	CERN
CERNIGOI C.	Trieste	NORLIN L.O.	Uppsala
CHIAVASSA E.	Turin	O'CEALLAIGH C.	Dublin
D'AURIA J.	SFU/CERN	PASINETTI A.	Milan
DAVIES J.D.	Birmingham	PAULI G.	Trieste
DEUTSCH J.	Louvain	RAISBECK G.	Orsay
EKSTROM C.	Göteborg	RAVN H.	CERN
ENGELHARDT D.	Karlsruhe	REIBEL K.	CERN
ERDMAN K.	TRIUMF/CERN	ROBERTSON A.	Westfield
ERICSON T.	CERN	SCHECK F.	SIN
FARAGGI H.	Saclay	SCHWENK H.	Mainz
FAVART D.	Louvain	SIMONS L.	CERN
FURIC M.	Zagreb	SKARESTAD M.	CERN
GALLIO M.	Turin	SOERGEL V. (Chairman)	Heidelberg
GASTALDI U.	CERN	STANDLEY P.H.	CERN
GERBER H.J.	SIN	TAKEUTCHI F.	Karlsruhe
GORINI G.	CERN	TANNER N.W.	Oxford/SIN
GRENACS L.	Louvain	TIBELL G.	Uppsala
HAGBERG E.	Göteborg	ULLRICH G.	Karlsruhe
HAGEBO E.	Oslo	VITALE A.	Bologna
HANSEN P.G.	CERN	WALTHER V.	Mainz
HERRLANDER C.	Stockholm	WESTGAARD L.	CERN
INGELMAN S.	Uppsala	WHITE B.	TRIUMF
JONSON B.	CERN	WILKIN C.	UC London
KLAPISCH R.	Orsay	ZAVATTINI E.	CERN
KLEMP T. E.	Mainz		

Apologies for absence were received from :-

G. KERNEL, Ljubljana, H. VERHEUL, Amsterdam and D.H. WILKINSON, Oxford.

Code	Experiment	Team	Documents	NPRC Approval	Conditions concerning running time	Remarks
SC21	2S-2F energy separation in muonic helium (laser techniques)	CERN-Pisa: Zavattini et al.	74/48	pending	4 weeks parasitic	Preparatory work for continuation at SC 2
SC50	Measurement of nuclear cross-sections of astrophysical interest	Orsay: <u>Yiou</u> , <u>Raisbeck</u> , Foates, Ferron	73/18	17.4.74	About two shifts per month (less initially)	Progress report and continuation request to be submitted at least once a year
SC51	Study of neutron-deficient nuclei between Pb and U, using helium-jet transport technique	Marburg-Giessen: Brandt, Jungclas, Molzahn, Patzelt, Westmeier, Wilhelm, Wolnik, Kornahl, Wagner, Walcher	74/15	17.4.74	Must be totally parasitic	Parasitic to ISOLDE
SC52	Measurement of average energies, forward momenta and anisotropies of specific fission products from disintegration of Pb by 600 MeV protons	Marburg-Oslo: <u>Habbestad</u> , Alstad, Olmset, <u>Hagebø</u> , Haldorsen, Johansen, Pappas, Methasiri	74/21 (III)	17.4.74	4 x 2 hours internal plus two long parasitic runs in external beam	To run in 1975, Cannot run downstream of ISOLDE target
SC53	Study of products of binary fission in disintegration of U, Pb, Pr, Ag, Sr and Cu by 600 MeV protons	Lund-Oslo: Andersson, Araskoug, Gustafsson, Hytén, Schröder, Hagelö	74/12	17.4.74	No undertaking as to rate at which programme will be implemented	To start in 1975
SC54	Calibration of neutron detectors used in PS experiment S112	Birmingham-RHEL-London (Westfield): <u>Strong</u> , <u>McMahon</u> et al.	73/5 74/1	17.4.74	Must not absorb more than one month of physics time with beam sharing. See remarks.	Additional time may be made available in a manner so as not to impede machine development or other experimental programmes
SC55	Study of particle emission in absorption of stopped π^- in ^{16}O	Karlsruhe-Trieste: Bassalleck, Engelhardt, Haase, Lewis, Takoutchi, L'Illich, Cernigoi, Pauli, Moschini	71/22 74/6	17.4.74	See remarks	Testing facilities requested as early as possible; very poor beam quality acceptable for tests
SC56	Tests for experiment at SIN	University of Geneva: Mess et al.	74/8	17.4.74		Suitable beam likely to be available early, during first 6 months of operation
SC57	Radio-biological effectiveness, and its dose-rate dependence, of 595 MeV neutrons	CERN Health Physics: <u>Barli</u> , Bianchi, Nordell, Sullivan	74/11	17.4.74	About 18 shifts at dose rates similar to those obtained in SC1. See remarks.	Cannot run before SC2 operation has become stable and reliable. Experiments require advance notice for preparation of material.
SC58	$U(p,X)^{24}\text{Na}$ reactions with protons between 170 and 600 MeV	Marburg-Oslo: <u>Habbestad</u> , Alstad, Olmset, <u>Hagebø</u> , Haldorsen, Johansen, Methasiri, Pappas	74/21 (II)	17.4.74	6 x 1 hour internal plus two parasitic runs in external beam	Cannot run downstream of ISOLDE target
SC59	Tests for partial μ capture rate ${}^6\text{Li} \rightarrow {}^5\text{He}_{g.s.}$	Louvain: <u>Deutsch</u> et al.	74/9 74/36	17.7.74	Up to 25 shifts	To be scheduled when uncertainty concerning population of hyperfine levels resolved
SC60	Search for $\pi^- + A \rightarrow B + 2\gamma$	Louvain: <u>Deutsch</u> , Favart et al.	74/10 74/37	17.7.74	See remarks	25 shifts approved in principle. Further time allocation to be discussed later.
SC61	Tests for experiment on weak neutral currents in μ atoms	CERN-Karlsruhe-Basel: Backenstoss, Peterscher, Hugelberg, Koch, Pavlopoulos, Poth, <u>Simons</u> , Tauscher	74/39	17.7.74	See remarks	Scheduling to be decided later
SC62	Tests of equipment for SPS experiment (Proposal P9)	CERN-Genova-Orsay-UC London: Gracco et al.	74/47	9.10.74		
SC63	Cross-sections for elastic scattering of ${}^3\text{He}$ and ${}^4\text{He}$ atoms against p and D	Bologna: <u>Bertin</u> , Massa, Vannini, Vitale	74/50	9.10.74		Request for scheduling and time allocation to be submitted when adequate beam available
SC64	Tests for fast separations of products of nuclear reactions	Darmstadt: <u>Büchmann</u> , Neidhart, Rudolph	75/2	9.4.75	See remarks	to run at SC only
SC65	Study of local magnetic fields in ferromagnetic materials by observation of μ^+ precession	Uppsala-CERN: <u>Karlsson</u> , Hartmann, Norlin, Borghini, Niinikoski	74/59 75/7	9.4.75	See remarks	Time allocation and scheduling to be decided when results of beam studies are available
SC66	Ultraviolet spectrometer	Turin, Oxford, Amsterdam, Birmingham, Ljubljana, CERN Collaboration (Allardyce et al.)	74/41 75/11	9.4.75		Each specific experiment to be approved separately
SC67	Pion absorption on nuclei	Basel-Karlsruhe-Stockholm Group (Blum et al.)	75/13	9.7.75	30 shifts requested	
SC68	Muonium chemistry in condensed matter: search for transient radicals in DNA	Parma: <u>Bucci</u> , <u>Crippa</u> , <u>de' Munari</u> , <u>Guidi</u> , <u>Mafradi</u> , <u>Vecli</u>	75/12	8.10.75	Upper limit of 20 shifts	Time allocation and scheduling to be decided when results of beam studies are available
SC69	Study of the muonic and pionic X-ray cascades in hydrogen and deuterium	CERN-Daresbury-Mainz-TRIUMF: Gastaldi et al.	75/14	8.10.75	20 shifts for runs at high pressures in the gas proportional counter	Request for runs at low pressures to be submitted later in the light of the results obtained at high pressures
1	ISOLDE programme	ISOLDE Collaboration (Chairman: O.B. Nielsen)	73/15 74/16 74/49 75/6	17.4.74 9.4.75	15 shifts/month but see remarks	Machine occupation time not to exceed 35%