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ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

ADVISORY COMMITTEE ON THE SC EXPERIMENTAL PROGRAMME

Sixth Meeting

13 May, 1960

EXPERIMENTAL PROGRAMME OF THE SYNCHRO-CYCLOTRON FOR VISITING AND CERN TEAMS

EXPERIMENTAL PROGRAMME OF THE SYNCHRO-CYCLOTRON FOR VISITING AND CERN TEAMS

Since the last meeting of the Advisory Committee on 6 October, 1959, the situation has become clearer from several aspects.

1. The proton synchrotron now becomes more and more available for experiments. Consequently less teams will require machine time to continue experiments with the SC. This concerns teams 321 (Zavattini/Middelkoop), 322 (Merrison/Fidecaro), 323 (Lundby), 800 (PS bubble chamber) and 804 (cloud chamber).

2. Some of the visiting teams have received definite instructions from their home institutes with regard to the length of their stay at CERN. Exp. 2 (Valckx) to continue up to the end of July, 1960. Exp. 4a (Whitehead) and Exp. 4b (Hanna) to continue up to the end of the year. Under these circumstances, the Committee could advise either to allow sufficient time for these experiments to be completed (in which case other experiments would have to wait). Alternatively, if some other experiments were considered to be more important, this would involve that the above-mentioned experiments cannot be finished within the given time (in which case one or more people of groups 2, 4a or 4b would most likely leave immediately).

3. The stochastic acceleration tests increasing the beam intensity have shown very promising results. With the tests set up, a beam of up to 0.5 μ A was reached compared to 0.15 μ A before the shut-down. A definite version is in the course of preparation, and it will be constructed to achieve the reliability, required for continuous operation without attention. This might be ready towards the end of the year and bring about some slight further improvement of the beam.

4. The new wall arrangement, allowing for several meson beams of different energies, is installed, and, in some case, it allows two experiments to be run simultaneously. One condition required is that the polarity of particles used must be the same for both experiments; another condition is that the two channels (or energies) are not so close together that magnets and focusing lenses interfere with the other experiment. The number of generators available may be a further restriction, but more are ordered and will be installed in a new equipment room under construction.

The programme for visiting teams has to be arranged taking these circumstances into account. It is estimated that the time available for all physics will be 55 shifts per month of which the share of the visiting teams will be 40%, viz. 22 shifts, at least until the end of the year.

On the attached list a possible distribution of time between the experiments is shown, on the assumption that the experiments 2, 4a and 4b shall continue. The programme foresees a severe reduction of the time requested for some experiments and the postponement of the start of other experiments, a situation which unfortunately can in no way be avoided.

PROPOSED EXPERIMENTAL PROGRAMME

Number of 8-hour shifts (3 shifts/day)

Code No.	Group	Eff. used 1.1 - 19.11.1959	Further required	Proposed for 1960 1.5 - 31.7/1.8-31.12	
130	Machine Development	47		?	?
210	Maintenance	72		39	52
210	Repairs	68		?	?
	Total Non-Physics:	187		105	140
	CERN Teams:				
310	Citron	42	120		
311	Lederman/Farley	70	113		
321	Zavattini	110	30	Distribution of time between CERN teams not a matter of discussion	
322	Merrison/Fidecaro	100	30		
323	Lundby	72	25		
324	Harting/Kluyver	90	75		
341	Goebel	18	33		
342	Rudstam	18	13		
350	Gibson	11	10		
800	PS Bubble Chamber	12			
804	Cloud Chamber	32			
	Total CERN Teams:	575	449 308	99	132
	Visiting Team experiments:				
Exp.2	Utrecht (Valckx)	19	30(65)	10 30	-
3	~~Liverpool (Voss)~~	8	-	-	-
4a	Harwell (Whitehead)	14	48	10 10	38
4b	London (Hanna)	23	40	3 10	30
9	Bologna (Bassi)	18	13	1 13	-
~~10~~	~~Padova (Loria)~~	5	-	-	-
~~12~~	~~Birmingham (Lock)~~	4	-	-	-
~~20~~	~~Fribourg (Hahn)~~	1	-	-	-
21	Trieste (Cernigoi)		60	3	10
27	Rome (Conversi)		~~30~~ 15	-	-
31	Darmstadt (Brix)		30 15	-	-
33	Various	4	10	-	10
	Totals:				
	Visiting Teams	96	236+	66	88(40%)
	CERN Teams	575	449	99	132(60%)
	Total Physics	671	685	165	220(100%)