

EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

APPROVED EXPERIMENTS CERN PROTON SYNCHROTRON

July 1970

Table 1A : PS Counter Experiments

Table 1B : PS Counter Experiments finished in the Period 16.2.1970 to 10.7.1970

Table 2 : Bubble Chamber Experiments and Exposures made in the Period 16.2.1970 to 10.7.1970

Figure 1 : Layout of beams and experiments in the South Hall - June 1970

Figure 2 : Layout of beams and experiments in the East Hall - June 1970

Figure 3 : Layout of beams and experiments in the South-East Hall - June 1970

Figure 4 : Proposed layout of beams and experiments in the South Hall - Early 1971

Figure 5 : Proposed layout of beams and experiments in the East Hall - Early 1971.

J. V. Allaby
PS Coordinator

Area Tgt.	Expt. Code	B e a m		Description of experiment	Authors	Date of Approval by NPRC	Conditions of Approval/ time alloc.	Status (Appr.wks. remaining)
		Code	Description					
SOUTH HALL - Target 8	S91	m ₈	Separated $K^{\pm} < 2$ GeV/c $\bar{p} < 4$ GeV/c $\pi < 5$ GeV/c (Separated version of q ₈)	$K^{\pm}p, K^{\pm}\bar{p}, \bar{p}p$ forward and backward scattering, annihilation of $\bar{p}p$ in 2π 's or 2 K's at small angles. 2 C magnets, on-line wire chambers, gas Čerenkov counter. IBM 1800	CERN-Ec.Poly., Paris-Orsay (Acc.Lin.)-Stockholm: Lundby, Baglin, Briandet, Fleury; Davier, Gracco, Lehmann, Morand, Treille; Carlson, Johansson	4.6.69 8.4.70	8 weeks +4 weeks	In Prod. (2 wks)
	S86	m ₉	Separated $K^{\pm} < 2$ GeV/c $\bar{p} < 4$ GeV/c $\pi < 5$ GeV/c (Modified version of m ₈)	$\bar{p}p \rightarrow \pi^+\pi^-$ at 4 GeV/c. Differential cross section at small values of t and u. Magnet, scintillators, wire spark chambers, Čerenkov counter	Padova: Calvelli, Centro, Cittolin, Gasparini, Limentani, Mittner, Peranzoni, Ventura, Voci	11.12.68 1.7.70	8 weeks	Start After S91 Aug. 1970
	S76	q ₇	Unseparated π, K, p < 3.5 GeV/c	K^{\pm}, \bar{p} scattering on polarized protons. Polarized target and counters. IBM 1800	CERN-F.O.M.: Albrow, Anderson, Bosnjakovic, Erné, Kimura, Lagnaux, Sens, Udo	3.4.68 12.2.69 24.9.69 3.6.70	5 weeks +12 " +12 " +4 "	In Prod. (6 wks.)
	SI05	q ₁₀	Unseparated π, K, p < 4 GeV/c (Modified q ₇)	Polarisation in backward scattering, $\pi^+p \rightarrow p\pi^+, K^+p \rightarrow pK^+, \pi^+p \rightarrow \Sigma^+K^+$ Polarized target, scintillators, wire spark chambers. HP 2116 B.	CERN-Trieste: Bradamante, Conetti, Daum, Fidecaro G., Fidecaro M., Giorgi, Piemontese, Penzo, Schiavon, Vascotto	6.5.70	Time not allocated	Start After Shut-down 1970
Target 1	S84	d ₂₉	Unseparated π^+, K^+, p^+ < 12 GeV/c	Neutral mesonic resonances in π^-p at high energies and their neutral decay modes. Liquid H ₂ target with localization of interaction. γ rays, spark chambers, neutron spectrometer. TR86	Pisa-Karlsruhe: Bertolucci, Mannelli, Pierazzini, Scribano, Sergiampietri, Vinegelli; Apel, Ausländer, H.Müller, Sigurdsson, Staudenmaier.	6.11.68 11.12.68 24.9.69 1.7.70	8 weeks +4 wks.	In Prod. (6 wks.)

PS COUNTER EXPERIMENTS APPROVED BY THE NPRC

Table 1A (cont'd)

Area Tgt.	Expt. Code	B e a m		Description of experiment	Authors	Date of Approval by NPRC	Conditions of Approval/ time alloc.	Status (Appr. wks. remaining)
		Ccde	Description					
South Hall - Target 1	S91	d ₂₉	Unseparated π^{\pm} , K^{\pm} , p^{\pm} < 12 GeV/c	K^+p , K^-p , $\bar{p}p$ forward and backward scattering, annihilation of $\bar{p}p$ in 2π 's or 2 K 's at small angles. C magnet, on-line wire chambers, Gas Čerenkov counter. IBM 1800	CERN-Ec.Poly., Paris-Orsay (Acc.Lin.)-Stockholm: Lundby, Baglin, Briandet, Fleury; Davier, Gracco, Lehmann, Morand, Treille; Carlson, Johansson	8.4.70	Time not yet allocated	After shut-down 1970
	S95	d _{29a}	Unseparated π^{\pm} , K^{\pm} , p^{\pm} < 12 GeV/c	π^- -He ⁴ elastic scattering and test for inelastic coherent reactions. Detection of recoil alpha particles + ETH magnet	CERN-ETH-Uppsala: Asberg, Beusch, Dahlgren, Ekelöf, Herz, Hoistad, Kullander, Landaud, Tyrèn, Websdale, Yonnet	4.7.69 5.11.69 8.4.70	4 weeks Parasitic + 2 wks. + 6 wks.	In Prod. (2 wks.)
	S104	d _{29a}	Unseparated π^{\pm} , K^{\pm} , p^{\pm} < 12 GeV/c	Strangeness + 1 missing mass in $\pi^-p \rightarrow \Lambda^0 + M$. Scintillators, spark chambers, water Čerenkov counter	University of Rome: Bizzari, Dore, Guidoni, Laakso, Marini, Martellotti, Marsa, Pistilli	6.5.70	No time allocation	Start 1971
	S74	m ₇	Separated counter beam π , K, \bar{p} ; $K < 2.2$ GeV/c $\bar{p} \leq 3$ GeV/c	High precision measurement on $\Delta S/\Delta Q$ rule. Measurements on $K^0 \rightarrow \pi^+\pi^-\pi^0$. Counters and wire chambers. Varian 620 i.	CERN-Orsay-Vienna: Aubert, Bartl, de Bouard, Lepeltier, Massonnet, Niebergall, Pessard, Regler, Steuer, Vivargent, Willitts, Winter, Stier, Yvert	3.4.68 24.9.69 5.11.69 1.7.70	8 wks. (Test) + 8 wks + 6 wks + 4 wks	In Prod. (8 wks)
	S100	m ₇	Separated counter beam π , K, \bar{p} ; $K < 2.2$ GeV/c $p \leq 3$ GeV/c	Differential cross sections for K^-n elastic scattering between 1 and 2 GeV/c. Charpak chambers, neutron detector, C magnet	CERN-Caen-I.I.S.N. (Bruxelles): Ferro-Luzzi, Perreau, Ypsilantis, Bizard, Déclais, Duchon, Séguinot, Bricman	5.11.69	Time not yet allocated	Start March 1971
	S83	q ₉	Unseparated π , K, p < 3.5 GeV/c	Study of neutral resonances decaying into neutral modes in low mass region. A_2^0 splitting. Neutral missing mass spectrum, spark chambers and scintillation shower detectors, neutron detectors	CERN-Bologna: Bollini, Dalpiaz, Frabetti Navach, Massam, Navarria, Schneegans, Zichichi	6.11.68 24.9.69 5.11.69 3.6.70	8 weeks + 1 " + 8 " + 4 "	In Prod. (4 wks)

PS COUNTER EXPERIMENTS APPROVED BY THE NPRC

Table 1A (cont'd)

CERN/EXP/18
10.7.1970

Area Tgt.	Expt. Code	B e a m		Description of experiment	Authors	Date of Approval by NPRC	Conditions of Approval/ time alloc.	Status (Appr.wks. remaining)
		Code	Description					
South Hall - Target 1	S99	m ₁₁	Low energy separated beam to produce high flux of \bar{p} , between 0.6 and 2.0 GeV/c (Modified q ₀)	Differential cross sections for: $\bar{p}p \rightarrow \bar{p}p, \pi^+\pi^-, K^+K^-$ between 0.6 and 2.0 GeV/c. Wire chambers, counters, AEG magnet	RHEL- Queen Mary College-DNPL-Liverpool: A. Astbury, Jones, Parsons, Kalms, Gibson, Eisenhandler, Williams, Kemp, Woulds, Carroll, Range	5.11.69	Time not yet allocated	Start After shut down 1970
	S91	t ₁	Unseparated π, K, p Test Beam ≤ 1 GeV/c	Test for high energy part of experiment S91 in d ₂₉	CERN-Ec.Poly., Paris-Orsay (Acc.Lin.)-Stockholm: Lundby, Baglin, Briandet, Fleury; Davier, Gracco, Lehmann, Morand, Treille; Carlson, Johansson	3.6.70	4 weeks after low energy part in m ₈	(4 weeks)
East Hall - Slow Ejection 62	S92	s ₅	High energy spectrometer line derived from e ₇ the experiment's target being in the e ₇	High energy p-p two-body reactions. 60 m long magnetic spectrometer. Scintillation counters. HP 2116 A	Allaby, Amaldi, Biancastelli, Bosio, Diddens, Dobinson, Klovning, Litt, Matthiae, Rochester, Schlüpmann, Wetherell	4.6.69 3.6.70	10 weeks + 4 weeks	In Prod. (4 weeks)
	S107	s ₅	High energy spectrometer line derived from e ₇ the experiment's target being in the e ₇	π^\pm, K^\pm spectra from high momentum protons on a B ₄ C target. Data needed to calculate ν spectrum for Gargamelle ν experiment	Chounet, Eichten, Haidt, Heusse, Jones, Pattison, Venus, Wachsmuth	3.6.70	2 weeks	After S92 Oct. '70
	S93	b ₁₉	Short neutral beam of the b ₁₃ type derived from e ₉ with a vertical septum	Φ_{η^\pm} measurement, by time dependence of $K^0 \rightarrow \pi^+\pi^-$ and of the charge asymmetry in leptonic decay. Charpak chambers, wide gap magnet, large H ₂ Čerenkov	CERN-Heidelberg: Kleinknecht, Steffen, Steinberger; Filthuth, Luth, Mockry, Vannucci, Tripper, Wahl, Zech	4.6.69	No time allocation	Start after shut down 1970

PS COUNTER EXPERIMENTS APPROVED BY THE NPRC
 Table 1A (cont'd)

 CPS/EXP/18
 10.7.1970

Area	Expt. Code	Beam		Description of experiment	Authors	Date of Approval by NPRC	Conditions of Approval/ time alloc.	Status (Appr wks. remaining)
		Code	Description					
Slow Ejection 62 - East Area	S94	p ₅	Unseparated $\pi^{\pm}, K^{\pm}, p^{\pm}$, < 18 GeV/c, produced from slow ej. proton beam e ₇	$\pi^- p \rightarrow \pi^+ \pi^- n, K^+ K^- n$, effective mass measurement. Large magnet, wire chambers, PDP9 computer	CERN-Munich: Blum, Dietl, Hyams, Koch, Jones, Grayer, Lorenz, Lütjens, Männer, Meissburger, Soechting, Stierlin, Weilhammer	24.9.69 1.7.70	8 weeks + 8 weeks	In Prod. (10 wks.)
	S102	p ₅	Unseparated $\pi^{\pm}, K^{\pm}, p^{\pm}$, < 12 GeV/c	$K^- p$ charge exchange, at 8 GeV/c on polarized target in the range $0 \leq t \leq 0.8 \text{ GeV}^2$, and 5 GeV/c and 8 GeV/c on hydrogen in the range $0.5 \leq t \leq 1.5 \text{ GeV}^2$. Spark chambers + ETH magnet	CERN-ETH-Imperial College-Saclay: P. Astbury, Beusch, Borghini, Freudenreich, Gentit, Guisan, Harckham, Michelini, Mühlemann, Websdale, Wetzel	2.4.70	Time not yet allocated	Start after S94 May 1971
	S106	p ₄	Unseparated $\pi^{\pm}, K^{\pm}, p^{\pm}$ < 18 GeV/c, produced from slow ej. proton beam e ₇	πp elastic scattering in backward direction on polarized target, one momentum in the range 6-8 GeV/c	CERN-Orsay: Aoi, Caverzasio, Dick, Sillou, Gregoire, Jeanot, Kuroda, Michalowicz, Poulet	6.5.70	6 weeks (until shut-down)	Start Aug. 1970 (6 wks.)
	S82	b ₁₇	Neutral beam derived from e ₇	Accurate determination of ratio η_{08} / η_{+} . Wire spark chambers and lead glass Čerenkov counters. IBM 1800	CERN-Aachen-Torino: Darriulat, Deutsch, Ferrero, Grosso, Holder, Pilcher, Rubbia, Sciré, Straude, Radermacher, Tittel	6.11.68 4.6.69 24.9.69 8.4.70	3 weeks (tests) + 8 weeks + 6 weeks	In Prod. (6 wks.)

PS COUNTER EXPERIMENTS APPROVED BY NRC
Table 1A (cont'd)

CPS/EXP/18
10.7.1970

Area Tgt.	Expt. Code	B e a m		Description of experiment	Authors	Date of Approval by NRC	Conditions of Approval/ time alloc.	Status (Appr.wks. remaining)
		Code	Description					
East Hall - Slow Ejection 02	P6	k_{12}	Low energy K meson beam with energy loss separation derived from slow ej. beam e_7	Investigation of hypernuclear gamma rays	CERN-Heidelberg- Warsaw: Bamberger, Lynen, Piekarz, Piekarz, Pniewski, Povh, Ritter, Sepp, Soergel	4.6.69 4.2.70	14 weeks (shared equally between P6 and P7)	In Prod. (6 wks. shared)
	P7			Study of K mesic atoms	CERN-Karlsruhe-Heidelberg: Backenstoss, Bunaciu, Charalambus, Egger, Hamilton, Koch, Povel, Schmitt, Springer	4.6.69 4.2.70		
	S103	y_1	Hyperon beam, produced from slow ejected proton beam e_7 by vertical septum	Setting-up and study of a hyperon beam	Badier, Benaksas, Chollet, Gaillard, Lefrançois, Meunier, Repellin, Sauvage, Vanderhagen	4.2.70	4 weeks	Start after Shutdown 1970
	S97		π beam produced from fast ejected protons (West Hall)	Test of QED by precise measurement of g- z . Large muon storage ring with electrostatic focusing	Bailey, Bassompierre, Borer, Farley, Hattersley, Combley, Petrucci, Picasso, Wickens	24.9.69		Start 1973
	S101		Inside PS Ring	Further background measurements at the PS, study of the ISR background problems. Scintillators, optical spark chamber	Agoritsas, Bott-Bodenhausen, Hyams, Potter	5.11.69	6 hrs/month to end of 1970	In Prod.

PS COUNTER EXPERIMENTS APPROVED BY NPRC
Table 1B
EXPERIMENTS FINISHED IN THE PERIOD 16.2.1970 TO 10.7.1970

CPS/EXP/18
10.7.1970

Expt. Code	Beam		Description of experiment	Authors	Date of Approval/Completion		Total No. of wks.	Status
	Code	Description						
-	a_7 and s_5	Proton beams in the range 1 - 24 GeV/c	Calibration of response of cosmic ray detectors to protons. Detectors previously used in balloon and Satellite cosmic ray experiments	University of Leiden: Burger, Swaenenburg, de Korte, Lefever	3.12.69	27.2.70	2 wks. parasitic + 12 hrs (in s_5)	Completed
S90	p_5	Unseparated π^\pm, K^\pm, p^\pm < 18 GeV/c, produced from ejected proton beam e_7	Magnetic boson spectrometer for masses from 4- 8 GeV. Wide gap magnet and wire chambers. IBM 1800. Tests for a Serpukhov experiment	CERN-Geneva-Munich University: Baud, Benz, Blumenfeld, Botterill, Damgaard, Nef, Focacci, Kienzle, Klanner, Lechanoine, Martin, Lecompte, Roinischvili, Weitsch	23.4.69	6.3.70	4	At Serpukhov
S89	t_1	Unseparated π, K, p test counter beam < 1 GeV/c	Strangeness + 1 missing mass in $\pi^- p \rightarrow \Lambda^0 + M$. Scintillators, spark chambers, water Cerenkov counter. Tests of apparatus + logics.	University of Rome: Bizzari, Dore, Guidoni, Laakso, Marini, Martellotti, Marsa, Pistilli	12.2.69	17.4.70	4	Preparation for expt.
S59	p_4	Unseparated π^\pm, K^\pm, p^\pm < 18 GeV/c produced from slow ej. proton beam e_7	Measurement on the parameter P in $\pi^\pm p, K^\pm p, p^\pm p$ scattering, using a transversally polarized target and counter hodoscopes, IBM 360-44	CERN-Orsay-Pisa: Borghini, Dick, di Lella, Navarro, Olivier, Reibel; Coignet, Grégoire, Poulet, Cronenberger, Silleu, Michalowics, Kuroda; Bellettini, Braccini, Del Prete, Foà, Valdata, Sanguinetti	8.12.66 3.4.68 23.4.69 24.9.69 8.4.70	10.7.70	34	Analysis (some data published)

BUBBLE CHAMBER EXPERIMENTS APPROVED BY NPRC
Table 2
AND EXPOSURES MADE IN THE PERIOD 16.2.1970 TO 10.7.1970

CPS/EXP/18
10.7.1970

Expt. Code	Beam and Chamber	Expt. Beam	Summary	Groups	Approved Date kpx	Total before 16.2.70	Additional approval Date kpx	Taken in period kpx
T170	k ₁₃ Electrostatic separated beam ≥ .6 GeV/c HBC 81	\bar{p} .7 GeV/c	Analysis of the properties of $A_2 \rightarrow KK$ (splitting) $F_1(1540), S^*(1050)$, and other KK threshold effects. $D_0(1285)$ in the process $\bar{p}p \rightarrow D\rho$, $E(1420)$ in the process $\bar{p}p \rightarrow E_0 \pi^0$	CERN, Collège de France	24.9.69 1500	726		0
T175		k ⁻ .6 -.8 GeV/c	$K^{\bar{p}}$ and $K^{\bar{n}}$ interactions between 600 and 800 MeV/c incident momentum. With these two complementary experiments the strange hyperon resonances in the mass region between 1600 and 1700 MeV will be studied with a significant increase in the statistical precision	CERN-Heidelberg	24.9.69 800	0		475
T176	k ₁₃ Electrostatic separated beam ≥ .6 GeV/c DBC 81				24.9.69 800	0		472
T171	k ₈ Electrostatic separated beam K^{\pm} 1.1 - 2 GeV/c HBC 200, H ₂	K^+ .65 -.8 GeV/c	Formation experiment to investigate a new structure in the total cross section of the K^+N interaction in the state of 1- spin zero	Bologna, Glasgow, Rome, Trieste	24.9.69 160	0		196
T155		K^+ 1.2- 1.8 GeV/c	Prod. of 300.000 K^0 of well-known momentum to study $\Delta Q/\Delta S$, using lept. decay; $K^0 \rightarrow \pi^+ \pi^- / K_1^0 \rightarrow \pi^0 \pi^0$; K^0 lifetime; secondary interact. of K_1^0 ; the 3-body reaction $K^+ p \rightarrow K^0 p \pi^+$ (100.000 events) and the decay of $K^+ \rightarrow \pi^+ \pi^+ \pi^-$ (100.000 events)	CERN, Saclay	6.12.67 500	428 (70 bad)	5.11.69 +400 (this includes the residue from the 500 kpx already approved)	447
T130		$K^{\bar{p}}$ 1.4- 1.7 GeV/c	$K^{\bar{p}}$ formation experiment to search for fine structure in the $Y^*(2040)$ region	CERN, Heidelberg	8.11.67 100	247	5.11.69 +100	100

BUBBLE CHAMBER EXPERIMENTS APPROVED BY NPRC
Table 2 (cont'd)
AND EXPOSURES MADE IN THE PERIOD 16.2.1970 TO 10.7.1970

Expt. Code	Beam and Chamber	Expt. Beam	Summary	Groups	Approved date kpx	Total before 16.2.70	Additional approval date kpx	Taken in period kpx
T173	k ₈ Electrostatic separated beam K [±] 1.1-2 GeV/c HBC 200, H ₂	\bar{p} 1.5-2.0 GeV/c	Formation experiment to study the properties of the U (2380) meson, and also to fill a gap in the existing knowledge of $\bar{p}p$ annihilations	Glasgow, Liverpool, IPN Paris, Lausanne, Neuchâtel	5.11.69 380	0		449
T178		K ⁻ 1.1-1.5	Proposal to study K ⁻ p interactions between 1.0 and 1.5 GeV/c with the purpose of carrying out phase-shift analysis on K ⁻ p interactions to establish the existence and properties of S = -1 hyperon states	RHEL	5.11.69 350	0		442
T174	k ₈ Electrostatic separated beam K [±] 1.1-2 GeV/c DBC 200, D ₂	K ⁻ 1.15-1.75 GeV/c	An experiment to study K ⁻ -neutron interactions in the CMS energy range from 1.8 to 2.25 GeV. The principal purpose is to do a partial wave analysis of the reactions $K^-n \rightarrow \pi^- \Lambda^0$ and $K^-n \rightarrow \pi^0 \Sigma^0$ but 3 and 4-body final states will also be studied	Birmingham, Edinburgh	5.11.69 300	0		456
T152	u ₅ RF separated beam K [±] > 8 GeV/c DBC 200, D ₂	π^- 9 GeV/c	The main purpose is to study the $\pi^- d \rightarrow pp \pi^- \pi^0$ reaction in order to confirm the recently published enhancement in $\rho \pi^-$ around 1.3 GeV and to study it in greater detail	Bari, Bologna, Florence, Paris	4.2.70 300	0		324
T179		π^+ 4 GeV/c	Study of neutral meson resonances which contain a single neutral decay product and are unfittable in the charge symmetric π -p interactions	Birmingham, RHEL, Durham	4.2.70 \leq 400	0		0

BUBBLE CHAMBER EXPERIMENTS APPROVED BY NPRC
Table 2 (cont'd)
AND EXPOSURES MADE IN THE PERIOD 16.2.1970 TO 10.7.1970

Expt. Code	Beam and Chamber	Expt. Beam	Summary	Groups	Approved date kpx	Taken before 16.2.70	Additional approval date kpx	Taken in period kpx
T182	u ₅ RF separated beam K [±] > 8 GeV/c DBC 200, D ₂	K ⁺ 5.6 GeV/c	The main objectives are a detailed study of the K [*] (1400) and the 'Q' enhancement in (Kππ)	Oxford	4.2.70 250	0		0
T169		\bar{p} 9 GeV/c	Exploratory experiment to obtain information on energy dependence of the various produced channels. Coherent production on deuterium	Strasbourg	4.2.70 150	0		0
T162		p 20 GeV/c	Investigation of proton-neutron interactions at 20 GeV/c	Alma-Ata	4.2.70 ≤ 75	0		0
T188		K ⁺ 8 GeV/c	Study of production mechanisms of quasi two-body final states, especially in charge exchange reactions on neutrons and in coherent reactions with the D ₂ target. From this and former studies at 3 and 4.6 GeV/c the energy dependence of these processes will be obtained	Brussels, IPN Paris, Saclay	8.4.70 250			102
T180	u ₅ RF separated beam K [±] > 8 GeV/c HBC 200, H ₂	π^- 9 GeV/c	G = ±1 resonances; decay properties, branching ratios and production mechanism in pion-nucleon collisions, with high statistics	Bologna, Florence, Genova, Milan	4.2.70 250	0		0
T177		K ⁻ 16 GeV/c	Study of resonances, two-body processes and many body reactions	Aachen, Berlin, CERN, Imp.College, Vienna	8.4.70 ≤ 300	0		0

BUBBLE CHAMBER EXPERIMENTS APPROVED BY NPRC
Table 2 (cont'd)
AND EXPOSURES MADE IN THE PERIOD 16.2.1970 TO 10.7.1970

Expt. Code	Beam and Chamber	Expt. Beam	Summary	Groups	Approved date kpx	Taken before 16.2.70	Additional approval date kpx	Taken in period kpx
T158	u ₅ RF separated beam K [±] > 8 GeV/c HBC 200, H ₂	p, 24 GeV/c	Complete study of pp collisions at 12 and 24 GeV/c with a statistical accuracy of 5 events/ μ b at each energy	Bonn, Hamburg, Munich	6.12.67 250	129	8.4.70 150	0
T159		p, 12 GeV/c				186	8.4.70 100	0
T148		K ⁺ 16 GeV/c	Study of resonance production at high energy and high mass mesonic resonances	Birmingham, Brussels, CERN, IPN Paris Saclay	3.4.68 100	314	8.4.70 \leq 400	0
T184		\bar{p} , 9 GeV/c	Test of empirical relation for $\bar{p}p$ annihilation into pions and exploration of feasibility and interest of a major experiment at this momentum	Liverpool, Stockholm	1.7.70 50	0		0
T186		K ⁻ 14.3 GeV/c	High mass resonances, resonance production mechanisms and high multiplicity events (continuation of T109)	Ec.Poly., Rutherford Lab., Saclay	3.4.68 23.4.69 200	392 (T109)	1.7.70 \leq 400	0
T187		π^- 3.9 GeV/c	Analysis of $A_2 \rightarrow K\bar{K}, \eta\pi$, and 3π production as function of momentum transfer. E_0 and D_0 properties (continuation of T200)	Saclay	4.6.69 200	214 (T200)	1.7.70 200	0
T167	m ₁₀ Electrostatic separated beam $\pi^+ \leq 3.5$ GeV/c HLBC	π^+ , 3.5 GeV/c	Study of the $\pi\pi$ phase shift δ_0 from 370 MeV to 900 MeV by extrapolation from the reaction $\pi^+ p \rightarrow \pi^0 \pi^0 N^{*00}$ at 3.5 GeV/c	Bergen, Ec.Poly., Madrid, Orsay, Strasbourg	5.11.69 500	0		535

BUBBLE CHAMBER EXPERIMENTS APPROVED BY NPRC
Table 2 (cont'd)
AND EXPOSURES MADE IN THE PERIOD 16.2.1970 TO 10.7.1970

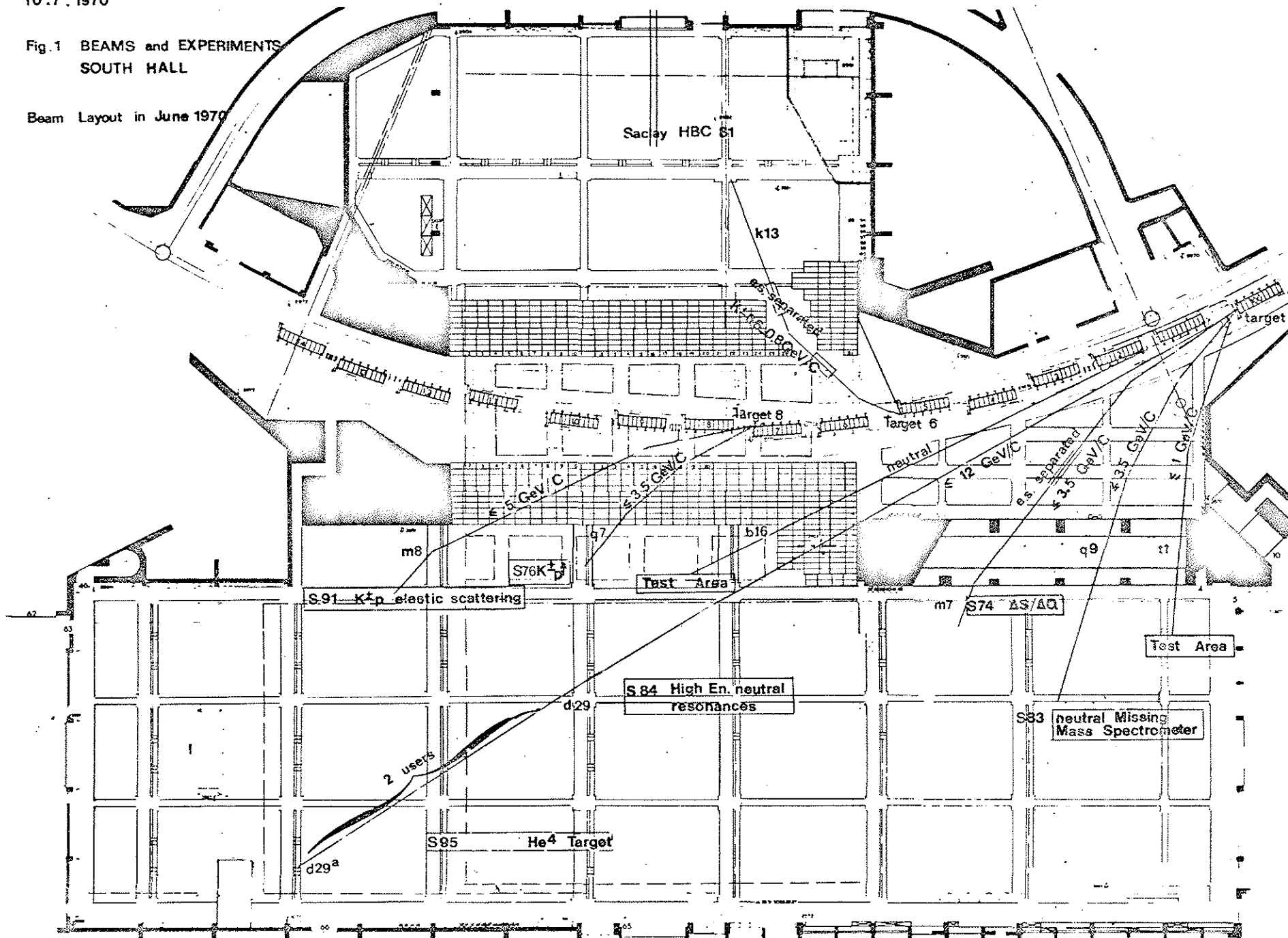
Expt. Code	Beam and Chamber	Expt. Beam	Summary	Groups	Approved date kpx	Taken before 16.2.70	Additional approval date kpx	Taken in period kpx
T185	ν beam Gargamelle HLBC Freon filled	ν beam from FE 74	Total X sections at high energy for ν and $\bar{\nu}$ in-elastic continuum excitation of the hadronic amplitude structure factors and 'partons'. Intermediate W-Boson? Coupling constants- weak interactions. Neutral currents	Aachen, Brussels, CERN, Ec.Poly., Milan, University College	3.6.70 Open	0 in this chamber		0
T181	m_{12} Electrostatic separated beam π^+ 2 GeV/c Gargamelle, Propane-Freon mixture	π^+ , 2 GeV/c	Study of η' (960 MeV) meson $\eta' \rightarrow \gamma\gamma$ branching ratio $\eta' \rightarrow \pi^+\pi^-\gamma$ decay and asymmetry $\eta' \rightarrow \pi^+\pi^-\eta$ decay η meson properties	Bergen, CERN, Strasbourg	3.6.70 Open	0		0

CPS/EXP/18

10.7.1970

Fig.1 BEAMS and EXPERIMENTS
SOUTH HALL

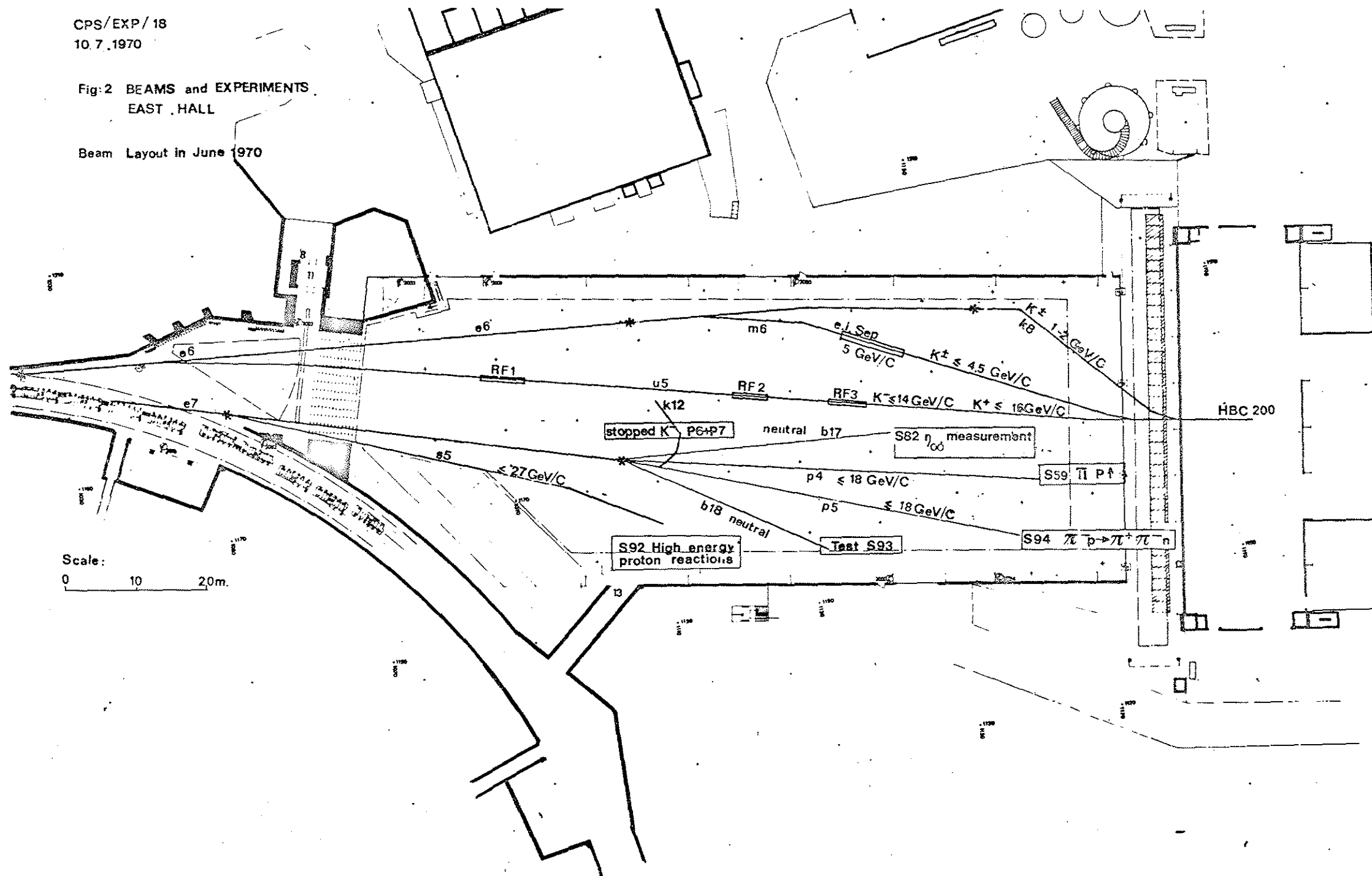
Beam Layout in June 1970



CPS/EXP/18
10.7.1970

Fig:2 BEAMS and EXPERIMENTS
EAST HALL

Beam Layout in June 1970



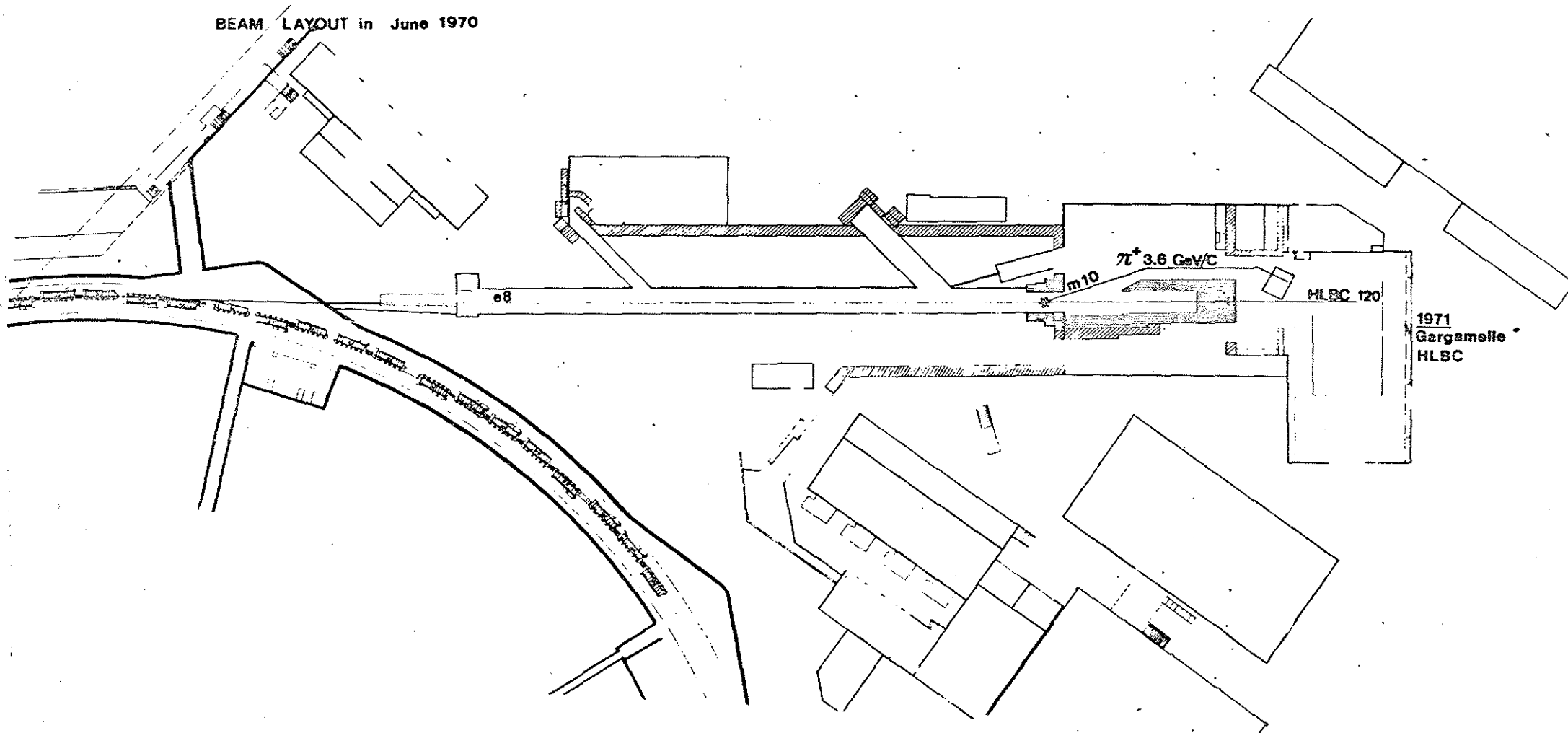
CPS/EXP/18

12.6.1970

Fig.3 BEAMS and EXPERIMENTS

SOUTH - EAST HALL

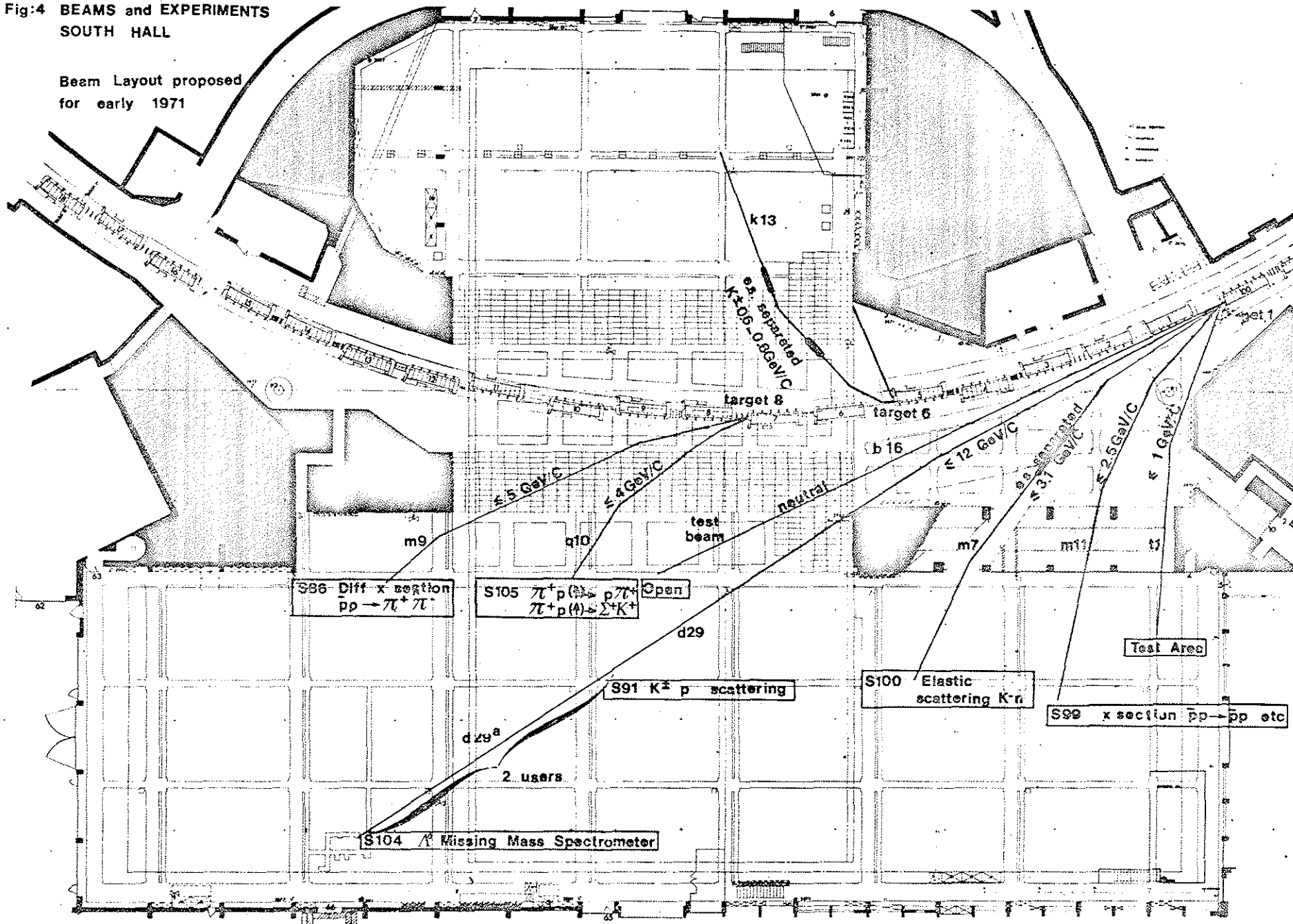
BEAM LAYOUT in June 1970



10. 7. 1970

Fig:4 BEAMS and EXPERIMENTS
SOUTH HALL

Beam Layout proposed
for early 1971



CPS/EXP/18

10. 7. 1970

Fig:5 BEAMS and EXPERIMENTS
EAST HALL

Beam Layout proposed
for early 1971

