

a) Proposals

No.	Labs.	Contact	Experiment	Apparatus	Remarks	References
P 1	CERN, Dortmund, Heidelberg, Saclay	J. Steinberger	High-energy neutrino interactions.	Magnetic muon spectrometer + hadronic shower detector; WANF	Approved by NPRC 17.4.74 as described in CERN/SPSC/74-38/M 25; H ₂ /D ₂ target excepted	CERN/SPSC/P 73-1 CERN/SPSC/M 73-11 CERN/SPSC/P 73-1/Add.1 CERN/SPSC/74-5/P 1/Add.2 CERN/SPSC/74-38/M 25 CERN/SPSC/74-53/M 30
P 2	Geneva, Heidelberg, Lausanne, Orsay, RHEL, Strasbourg	G. Sauvage	1) Elastic scattering and production of strange particle resonances by diffractive excitation in $\Sigma^- p$ and $\Xi^- p$ interactions between 75 and 150 GeV/c. 2) Study of the leptonic decays $\Xi^- \rightarrow \Lambda e^- \bar{\nu}$, $\Xi^- \rightarrow \Sigma^0 e^- \bar{\nu}$ and $\Sigma^+ \rightarrow \Lambda e^+ \bar{\nu}$	Hyperon beam; MWPC (backward) + forward spectrometer	WA	CERN/SPSC/I 73-11 CERN/SPSC/P 73-2 CERN/SPSC/74-32/P 2/Add.1 CERN/SPSC/74-48/M 28
P 3	CERN, Hamburg, Karlsruhe, Oxford, RHEL, Westfield College	K. Winter	Study of inelastic neutrino interactions using a counter set-up	Target-calorimeter and air-cored muon spectrometer; WANF		CERN/SPSC/P 73-3 CERN/SPSC/74-8/P 3/Add.1 CERN/SPSC/74-40/M 26
P 4	Bari, Caen, CERN, Liverpool, Milan	B. French	1) Dependence of high P_t events on the incident particle (π^+, K^+, p^+). 2) Composition of the events as a function of P_t and the nature of the high P_t particle on which one triggers. 3) Occurrence of jet like correlations, suggestive of parton-parton scattering. 4) Jet cross section, multiplicity, composition and mass distribution. 5) Existence of massive objects such as e.g. heavy "fire balls", resonances, charmed particles, etc. Negative beam at 150 GeV/c	MWPC magnetic vertex detector and forward lever arm with \bar{C} -counters and drift chambers.	Not recommended by SPSC on 24.4.74 for WA	CERN/SPSC/74-3/P 4 CERN/SPSC/74-45/P 4/Add.1

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No.	Labs.	Contact	Experiment	Apparatus	Remarks	References
P 5	Indiana University, Saclay	P. Bareyre	Measurement in the 20-120 GeV/c range, of two-body and quasi two-body baryon exchange reactions for $ u \leq 1$ (GeV/c) ² ; π^+ , K^+ and p on unpolarized and polarized protons.	Two spectrometers ("Mimosa" and "Goliath") with hodoscopes and MWPC vertex detector	Recommended by SPSC on 24.4.74 for backw. scattering part, on common beam line with P 8	CERN/SPSC/74-10/P 5 CERN/SPSC/74-41/P 5/Add. 1
P 6	Bologna, Frascati, Milan, Pisa, Rome	L. Foà	Comparative study of hadron fragmentation, induced by different projectiles interacting with protons and nuclei. Energy range from 100 GeV/ upwards.	Forward magnetic spectrometer with 5 standard PS beam transport magnets. Vertex detector with MWPC inside magnet	NA (H 2)	CERN/SPSC/74-15/P 6 CERN/SPSC/74-23/P 6/Add. 1
P 7	Amsterdam, CERN, Munich, Oxford, RHEL	P. Weilhammer	Study of the quasi-two-body hadron reactions $\pi^+ p \rightarrow (\pi^+ \pi^+) n$, $(K^+ K^+) n$, $(pp)n$, $\pi^+ p \rightarrow (\pi^+ \pi^+) n$, $K^+ p \rightarrow (K^+ \pi^+) n$, $n^+ p \rightarrow (K^+ K^+) p$, and $K^+ p \rightarrow (K^+ \pi^+) p$ over a wide kinematic range and at energies up to 80 GeV.	Modified version of CERN-Munich spectrometer; beam spectrometer; target with 4 π anticoincidence counters; forward spectrometer with MWPC, Čerenkov hodoscopes and trigger	WA Recommended by SPSC on 24.4.74	CERN/SPSC/74-14/P 7
P 8	CERN, Trieste, Vienna	G. Fidacaro	Measurement of polarization in pp and πp elastic scattering at large momentum transfer in 50-150 GeV/c range.	Polarized target with magnet for recoil particle analysis by MWPC. Forward spectrometer with MWPC, threshold Čerenkov counter and hodoscope	WA (H 1) Recommended by SPSC on 24.4.74, on common beam line with P 5	CERN/SPSC/74-17/P 8 CERN/SPSC/74-54/P 8/Add. 1

No.	Labs	Contact	Experiment	Apparatus	Remarks	References
P 9	CERN, Geneva, Orsay, Oslo, University College London	V. Gracco	<p>$\pi^+ p \rightarrow \pi^+ p$ and $pp \rightarrow pp$ would be measured in the angular range 20° to 90° cm with incident momenta 20, 40, 60 and 80 GeV/c. In the forward region one gets data on $K^+ p \rightarrow K^+ p$, $pp \rightarrow pp$ ($-\pi^+ \pi^+$ and $K^+ K^+$).</p>	AEG magnet (+ one C-magnet at higher energies). MWPC + C-counter for forward particles, MWPC or drift ch. for recoil protons.	WA (H 1) Recommended by SPSC on 24.4.74; document on commitment of groups to produce.	CERN/SPSC/74-28/P 9 CERN/SPSC/74-49/P 9/Add.1 CERN/SPSC/74-61/P 9/Add.2
P 10	Bonn, CERN, Daresbury, DESY, Ecole Polytechnique, Glasgow, Lancaster, Manchester, Orsay, Sheffield	Ph. Duke	Photoproduction and electroproduction of hadrons for incident particle energies from 10 to 60 GeV.	Omega with tagged photon beam	WA Recommended by SPSC on 24.4.74 for tagged photon part; document on commitment of groups to produce.	CERN/SPSC/74-29/P 10
P 11	Geneva	M. Martin	<p>Measurement with high statistics of production and decay properties of $S = 0$ and 1 bosons and $S = 0$ baryons produced in the quasi two-body reactions</p> $K^+ p \rightarrow K^+ \pi^+ p \quad \pi^+ p \rightarrow X^+ p$ <p>and</p> $\begin{pmatrix} p \\ p \end{pmatrix} p \rightarrow N^+ p \quad \begin{pmatrix} \Lambda K^+ \\ \Lambda K^- \end{pmatrix}$ <p>with incident beam momentum in the range 20-100 GeV/c, in the momentum transfer interval $0.05 \leq t \leq 0.6$ (GeV/c)² for all beam momenta and with masses of up to 5 GeV/c² at 100 GeV/c.</p>	Recoil proton detector with MWPC and scintillation counter. Forward arm without magnet, with MWPC and γ -detector.	WA (H 1 or H 3) Not recommended by SPSC on 24.4.74.	CERN/SPSC/74-31/P 11

No.	Labs.	Contact	Experiment	Apparatus	Remarks	References
P 12	CERN, Orsay, Oxford	L. Dick	Spin-dependent effects in hadron-proton interactions: measurement of polarisation in np , Kp and pp elastic and inclusive scattering (or inelastic "diffractive" processes) between 25 and 100 GeV/c.	Polarized target; recoil spectrometer with C-magnet, hodoscopes and Cerenkov counter with TOF; forward arm with hodoscopes.	WA Not recommended by SPSC on 24.4.74	CERN/SFSC/74-44/P 12
P 13	Athens, Democritus, Liverpool, Vienna	H. Muirhead	To take 50,000 pictures at antiproton momenta of 25,50 and (hopefully) 100 GeV/c (i.e. 150,000 pictures). The aim is to test the feasibility of annihilation studies at high momenta and to examine inclusive and exclusive $\bar{p}p$ reactions, especially in relation to pp data at corresponding energies.	BEBC	WA	CERN/SFSC/74-60/P 13

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b) Letters of Intent

No	Labs.	Contact	Expt.	Apparatus	Remarks	References
I 1	Marburg	R. Brandt	Nuclear chemistry (absolute monitor σ ; reactions in Cu, Au, Bi, U; "strange" decays as spontaneous fission)	(no detail)	no internal irradiation facility available. Would be "Beam Dump" expt. NA (WA?)	CERN/SPSC/I 73-1
I 2	Orsay	F. Yiou	Nuclear chemistry for astrophysics	internal irradiation facility	is not available	CERN/SPSC/I 73-2
I 3	CERN	B.G. Pope	$p + \text{nucleus} \rightarrow \mu^+ \mu^- + \text{anything}$ at 400 GeV to $\sigma \sim 10^{-33}$ cm with 10^{12} p/p. $\Delta M/M = \pm 5\%$ for $5 \text{ GeV} < M < 25 \text{ GeV}$.	Beam dump in 1m target 10m steel wall MWPC-planes with $\epsilon = \pm 0.5$ mm	NA, behind zone 2	CERN/SPSC/I 73-3
I 4	HEPL Stanford	R. Hofstadter	Backw. inelastic inclusive proc. $p + p \rightarrow p + p + p \rightarrow p + x$ $\rightarrow \pi^+ + x$ $\rightarrow \pi^- + x$ $\rightarrow K^+ + x$ etc., etc. Coincidence with High Res. Spectr. (1 arm) + TANC detector or particle or γ -detector 2nd arm: $p + p \rightarrow p + p + x$ (+ elast.)	168" 2.5 GeV/c high resolution large acceptance spectrometer 180° bend $\Delta p/p = 10^{-4}$	NA possible Not recommended by SPSC	CERN/SPSC/I 73-4
I 5	Bergen	O. Skjeggstad	ν -physics	Gargamelle	WA	CERN/SPSC/I 73-5
I 6	Bari	S. Natali	ν -physics	Gargamelle	WA	CERN/SPSC/I 73-6
I 7		P. Schlein	High P_t processes	Total absorption calorimeter	NA	CERN/SPSC/I 73-7

No	Labs.	Contact	Expt.	Apparatus	Remarks	References
I 8	Daresbury, Birmingham, Glasgow, Lancaster, Manchester, Sheffield, Orsay, Ecole Pol., Bonn	P.J. Duke	γ e-physics 20-100 GeV	Omega	WA (NA: combined e-hadron beam planned) See P 10	CERN/SPSC/I 73-8
I 9	CERN-Trieste-Vienna	G. Fidicaro	$d\sigma/dt$ and polariz. parameter P for $p\bar{p} \rightarrow p\bar{p} : p\bar{n} \rightarrow np \rightarrow pn$ between 25 \rightarrow 150 GeV/c and $t \lesssim 3$ (GeV/c)	Little detail. MWPC or drift ch. $> 10^6$ p/p	WA (H 1) for low E NA (H 4, H 8) for high E. See P 8	CERN/SPSC/I 73-9
I 10	Athens, Democritos, Liverpool, Nijmegen, Vienna	R. van de Walle	$K^+ p$ 70 GeV/c	BEBC (H ₂) (+EHI?)	WA	CERN/SPSC/I 73-10
I 11	Geneva, Heidelberg, Lausanne, Orsay, RHEL, Strasbourg	G. Sauvage	Charged hyperon interactions; leptonic decays	Hyperon beam, MWPC (backw.) + forw. spectrometer	WA See P 2	CERN/SPSC/I 73-11 CERN/SPSC/74-48/M2
I 12	Aachen, CERN, Oxford	D. Cundy	ν -physics	BEBC (Ne) +EMI	WA	CERN/SPSC/I 73-12
I 13	Brussels	J. Sacton	ν -physics	Bubble chamber	WA	CERN/SPSC/I 73-13
I 14	LPNHE	J. Duboc	$K^+ p$, 70 GeV/c	BEBC (H ₂) hybrid (charged particle identifier, TST, ext. γ -detector)	WA	CERN/SPSC/I 73-14

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I 15	Daresbury, Lancaster, Liverpool, Oxford, Sheffield, R.M.C. Schriftenham, Coll. de France, IPN Orsay, Bonn, (DESY), Wupper- tal, CERN	E. Gabathuler	μ -physics up to 250 GeV	Forw. spectrometer 3 stages. Trajec. meas. by W1-W8: $\epsilon = \pm 0.15$ mm Large ξ detector: 2 x 2m x 1m gap C-magnet; beam through yoke. Wire ch. inside + out- side or streamer	NA zone 2 magn. length: 2, 4 + 8 Tm _g 200 evts/10 p 2 litre polarized target planned.	CERN/SPSC/I 73-15 CERN/SPSC/I 73-15 Rev CERN/SPSC/74-62/R 10
I 16	University College	D.J. Miller	p, π^- -proton up to 200 GeV/c	BEBC (H ₂ +Ne) + TST (H ₂)+forwd. Y-detector	WA	CERN/SPSC/I 73-16
I 17	University College	F.W. Bullock	ν -physics	Gargamelle	WA	CERN/SPSC/I 73-17
I 18	Glasgow, Oxford, RHEL, Saclay	G. Kalmus	$K^+ p, 45+65$ GeV/c	BEBC (H ₂) EHI	WA	CERN/SPSC/I 73-18
I 19	Mons	F. Grard	K^+ 30-75 GeV/c \bar{p} 25-100 GeV/c	BEBC (H ₂) EHI	WA	CERN/SPSC/I 73-19
I 20	Strasbourg	M. Paty	ν -physics	BEBC (H ₂ + Ne) or GGM + EMI	WA	CERN/SPSC/I 73-20
I 21	Birmingham, CERN, Genova, Saclay	E. Quercigh	K^+, \bar{p} at 40-60 GeV/c	BEBC (H ₂) EHI	WA	CERN/SPSC/I 73-21

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I 22	Aachen, Berlin, Bonn, CERN, Cracow, Heidelberg, London, Vienna, Warsaw	D.R.O. Morrison	K^- , 75-110 GeV/c	BEBC (H ₂) later with Cerenkov- beam-tagging; TST	WA	CERN/SPSC/I 73-22
I 23	CERN, Hamburg, Karlsruhe, Oxford, RHEL, Westfield College	K. Winter	v-physics	Hadron ionisation calorimeter	NA See P 3	CERN/SPSC/I 73-23
I 24	Orsay	B. Dauteray	π^+ , highest momentum	BEBC (H ₂)	WA	CERN/SPSC/I 73-24
I 25	Orsay	B. Dauteray	π^+ , π^- , high momentum	BEBC (H ₂ +Ne) TST with deuterium	WA	CERN/SPSC/I 73-25
I 26	Ecole Polytech- nique	P. Petitau	v-physics	Gargamelle, BEBC (Ne)	WA	CERN/SPSC/I, 73-26
I 27	Bari, Birmingham, CERN, Genova, Oslo, RHEL, Stockholm	C. Damerell	Hadron physics \rightarrow 150 GeV/c	Focussing spectrometer	WA	CERN/SPSC/I 73-27
I 28	Aachen, CERN, Oxford	G. Myatt	v-physics	BEBC (H ₂) + EMI	WA	CERN/SPSC/I 73-28

No.	Labs.	Contact	Expt.	Apparatus	Remarks	References
I 29	Aachen, Bari, Bergen, Brussels, U.C. London, CERN, Milano, Padova, Ecole Polytechn. Orsay, Strasbourg, Torino	A. Lagarrigue	v-physics	Bubble chambers	WA; review of v-programme of 12 laboratories.	CERN/SPSC/I 73-29
I 30	CERN	A. Rousset	v-physics	BEBC, GGM	WA	CERN/SPSC/I 73-30
I 31	College de France	C. Ghesquiere	π^+ , K^+ , \bar{p} ; 30-50 GeV/c	BEBC (H ₂) + EHI + wire ch. in beam + γ -detection (+TST)	WA	CERN/SPSC/I 73-31
I 32	Athens (Democritos + Univ.), Liverpool, Vienna	H. Muirhead	\bar{p} ; 50 + 100 GeV/c	BEBC (H ₂) (+EHI)	WA See P 13	CERN/SPSC/I 73-32
I 33	IPN Orsay	T. Willits	$\pi^+ p \rightarrow \pi^0 n$; 10, 25 and 50 GeV/c	Frozen spin polar. target + n-detector + γ -detectors	WA	CERN/SPSC/I 73-33

No	Labs.	Contact	Expt.	Apparatus	Remarks	References
I 34	Oxford	A.M. Segar	Search for heavy leptons	W-target spectrometer with magnetized Fe + drift ch.	NA; beam dump expt.	CERN/SPSC/I 73-34
I 35	Naples, Padua, Rome-Frascati, Trieste	D. Zanello	External γ -detector for BEBC.	MWPC + lead glass counters	WA	CERN/SPSC/I 73-35
I 36	Milan, Pisa, Rome	L. Foà	Comparative study of hadron fragmentation	Cylindrical chambers around target + forw. spectrometer	NA See P 6	CERN/SPSC/I 73-36
I 37	Glasgow	I.S. Hughes	K^+ p-processes at 35 and 65 GeV/c	Omega with MWPC (and downstream χ -counter with wire ch.)	WA	CERN/SPSC/I 73-37
I 38	Bari, Bonn, CERN, Daresbury, Glasgow, Liverpool, Milan	B.R. French	Meson physics with Omega in RS separated beam	as in 37)	WA	CERN/SPSC/I 73-38
I 39	Saclay	Y. Ducros, L. van Rossum	Polarization measurements in πp and $K p$ inelastic reactions; elast. scatt. at large momentum transfer	Polarized target large angle detector system + forw. χ -counters		CERN/SPSC/I 73-39
I 40	Bonn	K. Böckmann, R. Hartmann, W. Meincke	ν^- and $\bar{\nu}^-$ interactions	BEBC (H_2)	WA	CERN/SPSC/I 73-40
I 41	Prague	J. Sedlak	$\bar{p}p$ interactions at 70-100 GeV/c	BEBC	WA	CERN/SPSC/I 73-41

No	Labs.	Contact	Expt.	Apparatus	Remarks	References
I 42	College de France, Ecole Polytechnique, Orsay, MPI + Univ. Munich, Saclay	J. Lefrançois	Hadron, electron and photon physics	Multi-particle spectrometer	NA	CERN/SPSC/I 73-42
I 43	Geneva	M. Martin, C. Nef	Energy dependence of two-body reaction $K^+ p \rightarrow K^{*+} p$ $K^0 \pi^+$	C-counter + hodoscope in beam; proton + decay analyser with PWC	WA See P 11	CERN/SPSC/I 73-43
I 44	Milan	E. Fiorini	ν -physics	Gargamelle	WA	CERN/SPSC/I 73-44
I 45	Lausanne, Neuchâtel	E. Jeannot	incident part. + $p \rightarrow \Lambda^0 + \dots, K^0 + \dots, \Sigma^0 + \dots$ $\Sigma^0 + \dots$; fragmentation of proton-target; coherent reactions on He	Stramer chamber "Dardanelle"		CERN/SPSC/I 73-45
I 46	Geneva	O. Guisan	Form factor of π 's and K's	γ C-counter; forw. analyzing system with wire ch (+ shower detector)	NA	CERN/SPSC/I 73-46
I 47	CERN, MPI Munich	P. Weilhammer	Few body reactions	CERN-Munich spectrometer	WA See P 7	CERN/SPSC/I 73-47
I 48	Bristol, Southampton	S.G.F. Frank	Form factor of π 's	Forw. particle identifiers + analyzing magnet	WA	CERN/SPSC/I 73-48
I 49	Oxford	N.E. Booth	ν -e interactions	100 modules each with 3 rad. lengths Fe + MWPC layer		CERN/SPSC/I 73-49
I 50	Bari, Caen, CERN Liverpool	B.R. French	Study of high p_t^- events and resonance physics	Multiparticle spectrometer with MWPC + 2 Morpurgo magnets.	WA See P 4	CERN/SPSC/I 73-50

No.	Labs.	Contact	Experiment	Apparatus	Remarks	References
I 51	Ecole Polytechnique	V. Brisson	ν -physics	BEBC (H_2 ; D_2)	WA	CERN/SPSC/I 73-51
I 52	Graz, Illinois Inst. Techn., Purdue	T. Erber	High-energy magnetic Bremsstrahlung	Pulsed megagauss fields	Not recommended by SPSC	CERN/SPSC/I 73-52
I 53	Orsay	A. Lagarrigue	ν -physics	GGM, BEBC	WA	CERN/SPSC/I 73-53
I 54	CERN, ETH	W. Beusch	Reggeon-nucleon scattering	Shower detector (with Omega)	WA	CERN/SPSC/I 73-54 CERN/SPSC/74-51/M 29
I 55	Pavia	S. Ratti	Hadron fragmentation (30-70 GeV/c)	Magnetic spectrometer in Ω -beam	WA	CERN/SPSC/I 73-55
I 56	Amsterdam, Bologna, Padua, Pisa, Saclay, Torino	A. Tenner	ν -physics	BEBC (D_2)	WA	CERN/SPSC/I 73-56 CERN/SPSC/74-9/I 56/Add. 1
I 57	Scand. BC-Collab. (Helsinki, Stockholm)	S. Nilsson	$\bar{p}p$ -reactions 30-70 GeV/c	BEBC	WA	CERN/SPSC/I 73-57
I 58	Prascati, Naples	G. Barbiellini	ν -lepton scattering	Scintill. counter + spark chambers	WA	CERN/SPSC/74-1/I 58
I 59	Aachen	J. von Krogh/ K. Schultze	ν -physics	GGM	WA	CERN/SPSC/74-2/I 59

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I 60	DESY	H. Meyer	v-e scattering	Streamer chamber with CH ₂ plates and scintillation counters.	WA	CERN/SPSC/74-5/I 60
I 61	Birmingham	J.D. Dowell	Rare meson systems from K ⁺ p collisions at 16 and 32 GeV/c	Omega (with lever arm for 32 GeV/c)	WA	CERN/SPSC/74-50/I 61
I 62	Leningrad, Uppsala	T. Ekelöf	Hadronic interactions at very small momentum transfers	Ion chamber spectrometer (recoil) + magnetic spectrometer	WA	CERN/SPSC/74-56/I 62
I 63	Imperial College	P. Astbury, D. Websdale	Measurement of helicity amplitudes in hypercharge exchange between 5 and 12 GeV/c	Magnet spark chamber in shortened S 1 beam	WA	CERN/SPSC/74-57/I 63