



a) PROPOSALS

CM-P00046403

PROPOSALS AND LETTERS OF INTENT RECEIVED UP TO MARCH 12, 1976

CERN/SPSC/76-29/G 8
March 12, 1976

No.	Expt. Code	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
P 1	WA 1	CERN, Dortmund, Heidelberg, Saclay	J. Steinberger	High-energy ν interactions	Magnetic muon spectrometer + hadronic shower detector	WANF; Approved by NPRC 17.4.1974 as described in CERN/SPSC/74-38/M 25; H ₂ /D ₂ target and vertex localiser approved by NPRC on 3.12.1975.	SPSC/P 73-1 SPSC/P 73-1/Add. SPSC/74-6/P 1/Add.2 SPSC/75-33/P 1/Add.3 SPSC/M 73-11 SPSC/74-20/M 17 SPSC/74-24/M 19 SPSC/74-26/M 21 SPSC/74-38/M 25 SPSC/74-53/M 30 SPSC/75-81/M 53 SPSC/74-65/R 13
P 2	WA 2	Bristol, Geneva, Heidelberg, Orsay, RHEL, Strasbourg	J.-M. Gaillard	1) Elastic scattering and production of strange particle resonances by diffractive excitation in Σ^+p and Σ^+p interactions between 75 and 150 GeV/c. 2) Study of the leptonic decays $E^- \rightarrow Ae^- \bar{\nu}$, $E^- \rightarrow \Sigma^0 e^- \bar{\nu}$ and $\Sigma^+ \rightarrow p e^+ \bar{\nu}$	Hyperon beam; MWPC (backward) + forward spectrometer	WA Study of leptonic decays approved by NPRC on 1.6.1974	SPSC/P 73-2 SPSC/74-32/P 2/Add.1 SPSC/I 73-11 SPSC/74-48/M 28
P 3		CERN, Hamburg, Karlsruhe, Oxford, RHEL, Westfield College	K. Winter	Study of inelastic ν interactions using a counter set-up	Target-calorimeter and air-cored muon spectrometer	WANF Not recommended by SPSC on 26.2.75	SPSC/P 73-3 SPSC/74-8/P 3/Add.1 SPSC/75-7/P 3/Add.2 SPSC/I 73-23 SPSC/74-26/M 21 SPSC/74-40/M 26 SPSC/74-98/M 37 SPSC/75-11/M 44
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 \hat{C} -counters and drift chambers	Not recommended by SPSC on 24.4.1974 for WA	SPSC/74-3/P 4 SPSC/74-46/P 4/Add.1 SPSC/I 73-50

No.	Expt. Code	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
P 5	WA 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). π^+ , K^+ and \bar{p} on unpolarized and polarized protons	Two spectrometers ("Mimoso" and "Goliath") with hodoscopes and MWPC vertex detector	Approved by NPRC on 17.7.1974 for backward scattering part with unpolar. protons. On common beam line with P 8 (H3) Withdrawn; replaced by P 58 = WA 11	SPSC/74-10/P 5 SPSC/74-41/P 5/Add.1 SPSC/76-3/P 58 (EEC/74-24) (EEC/75-12)
P 6	NA 1	Prascati, Milan, Pisa, Rome	L. Foà	Comparative study of hadron fragmentation, induced by different projectiles interacting with protons and nuclei. (Lifetime of $\tau_c(2.8)$). Energy range from 100 GeV/c upwards	Forward magnetic spectrometer with 5 standard PS beam transport magnets. Vertex detector with MWPC inside magnet	NA (H 2). Forw. part without vertex magnet approved by NPRC on 12.3.75	SPSC/74-15/P 6 SPSC/74-23/P 6/Add.1 SPSC/74-83/P 6/Add.2 SPSC/76-23/P 6/Add.3 SPSC/I 73-36 SPSC/75-20/N 47
P 7	WA 3	Amsterdam, CERN, Munich, Oxford, RHEL	P. Wellhammer	Study of the quasi-two-body hadron reactions $\pi^+ p \rightarrow (\pi^+ \pi^-) n$, $(K^+ K^-) n$, $(pp) n$, $\pi^+ p \rightarrow (\pi^+ \pi^+) n$, $K^+ p \rightarrow (K^+ \pi^+) n$, $\pi^+ p \rightarrow (K^+ K_S^0) p$, and $K^+ p \rightarrow (K_S^0 \pi^+) p$ over a wide kinematic range and at energies up to 80 GeV	Modified version of CERN-Munich spectrometer; beam spectrometer; target with 4π anticoincidence counters; forward spectrometer with MWPC, Čerenkov hodoscopes and trigger	WA Approved by NPRC on 12.6.1974. Downstream of P 9 in H 1	SPSC/74-14/P 7 SPSC/I 73-47 SPSC/74-56/I 62 SPSC/74-55/M 31
P 8	WA 6	CERN, Trieste, Vienna	G. Fidecaro	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) Approved by NPRC on 4.9.74, on common beam line (H 3) with P 5	SPSC/74-17/P 8 SPSC/74-54/P 8/Add.1 SPSC/I 73-9 SPSC/76-4/M 54 (EEC/74-24) (EEC/75-12)

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P 9	WA 7	CERN, Geneva, Orsay Oslo, University College London	V. Gracco	$\pi^+ p \rightarrow \pi^+ p$ 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 $K^+ p \rightarrow K^+ p$, $pp \rightarrow pp$ ($\rightarrow \pi^+ \pi^+$ and $K^+ K^+$)	AEG magnet (+ one C-magnet at higher energies). MWPC + C-counter for forward particles. MWPC or drift ch. for recoil protons	WA (H 1) Approved by NPRC on 4.9.74. Upstream of P 7 in H 1.	SPSC/74-28/P 9 SPSC/74-49/P 9/Add.1 SPSC/74-61/P 9/Add.2 SPSC/76-13/I 80 SPSC/74-109/M 39 SPSC/74-110/M 40 SPSC/76-12/M 55 (PHYS III/74-47)
P 10	WA 4	Bonn, CERN, Daresbury, DESY Ecole Polytechnique, Glasgow, Lancaster, Manchester, Orsay, Sheffield	J. Litt	Photoproduction and electroproduction of hadrons for incident particle energies from 10 to 60 GeV (Charm search)	Omega with tagged photon beam	WA Approved by NPRC on 12.6.1974 for tagged photon part	SPSC/74-29/P 10 SPSC/76-17/P 10/Add.1 SPSC/I 73-8. (EEC/75-39) (EEC/75-43)
P 11	WA 10	Geneva, Lausanne	M. Martin	Study of $K^+ p \rightarrow K^+ \pi^+ p$ and reactions of similar topology with high statistics (Zweig's rule test, Charmed events)	Recoil proton detector with MWPC and scintillation counter. Forward arm without magnet, with MWPC and γ -detector	WA Approved by NPRC on 12.3.1975	SPSC/74-31/P 11 SPSC/I 73-43 SPSC/74-114/M 41 SPSC/75-6/M 43 SPSC/76-25/M 56

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P 12		CERN, Orsay, Oxford	L. Dick	Spin-dependent effects in hadron-proton interactions: measurement of polarisation in πp , $K p$ and pp elastic and inclusive scattering (or inelastic "diffractive" processes) between 25 and 100 GeV/c	Polarized target; re-coil spectrometer with C-magnet, hodoscopes and Čerenkov counter with TOF; forward arm with hodoscopes	WA Not recommended by SPSC on 24.4.1974	SFSC/74-44/P 12 SFSC/75-9/P 40 SFSC/I 73-33 SFSC/74-111/I 66
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 pp reactions, especially in relation to pp data at corresponding energies	BEBC	WA Merged with P 22 + P 47; See P 63	SFSC/74-60/P 13 SFSC/I 73-32
P 14		Brussels, CERN, Genova, Mons	J.B. Kinson	500,000 picture exposure in 70 GeV/c K^+ separated beam, with external particle identifier (EPI). Systematic study of hadronic reactions	BEBC + EPI	WA Merged with P 17 + P 32 + P 56; See P 62	SFSC/74-47/P 14 SFSC/I 73-19 SFSC/I 73-21
P 15		Saclay	L. van Rossum	Measurement of polarization parameter or target asymmetry in inclusive πp and pp reactions at large transverse momentum. Momentum region from 50 to 150 GeV/c	Polarized target, analyzing magnet, forward- and side arm detectors. PT magnet and detectors in side arms from proposal P8	WA Not recommended by SPSC on 2.4.75	SFSC/74-71/P 15 SFSC/I 73-9 SFSC/I 73-39
P 16		Amsterdam, Bologna, Padova, Pisa, Saclay, Turin	A.G. Tenner	ν - and $\bar{\nu}$ -reactions in D_2 ; study of weak hadronic current with protons and neutrons separately. 1 Mpx	BEBC (D_2)	WANF; WB with 400 GeV p's then NB	SPSC/74-72/P 16 SPSC/74-105/P 16/Add.1 SPSC/76-5/P 16/Add.2 SFSC/I 73-56 SFSC/74-9/I 56/Add.1

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P 17		Athens, Democritos, Laverpool, Nijmegen, Tel-Aviv	R.T. Van de Walle	400 k pictures with K^+ at 70 GeV/c. Study of charge multiplicities, topological cross sections, exclusive and inclusive reactions	BEBC (+EPI)	WA Merged with P 14 + P 32 + P 56; See P 62	SPSC/74-73/P 17- SPSC/I 73-10 SPSC/74-75/M 35
P 18	NA 2	CERN, Daresbury, DESY, Freiburg, Kiel, Lancaster, Liverpool, Orsay, Oxford, Sheffield, R.M.C. Shrivvenham, Turin, Wuppertal	E. Gabathuler	Test of scale invariance in muon-nucleon scattering at large momentum transfer, followed by programme of muon physics	Forward spectrometer	NA (EHN 2) Forw. spectrom. part approved by NPRC on 12.3.1975	SPSC/74-78/P 18 SPSC/I 73-15 SPSC/I 73-15 Rev. SPSC/75-62/M 51 SPSC/74-62/R 10
P 19	NA 4	CERN, Dubna, Munich, Rome, Saclay	C. Rubbia	Inclusive muon scattering on hydrogen and deuterium to the highest energies and four-momentum transfers available	H ₂ -target (50 m long) surrounded by magnetized iron torus	NA (EHN 2) Reduced version approved by NPRC on 7.5.1975	SPSC/74-79/P 19 SPSC/74-103/P 19/Add.1 SPSC/74-108/P 19/Add.2 SPSC/74-120/P 19/Add.3 SPSC/74-120/P19/Add.3 corr. SPSC/74-82/M 36 SPSC/75-32/R 22
P 20		Orsay	B. Dauger	120 k pictures with π^+ at 110 GeV/c. 4-C physics; inclusive production of K^0 , Λ , $\bar{\Lambda}$, γ , π^0 etc; correlations and cluster production in high multiplicity events	BEBC	WA Withdrawn	SPSC/74-80/P 20 SPSC/I 73-24 SPSC/I 73-25
P 21	WA 8	Birmingham	J.D. Dowell	Study of rare meson system in K^+p collisions at 18 GeV/c and 32 GeV/c	Omega with RF separated beam	WA Approved by NPRC on 22.1.1975	SPSC/74-84/P 21 SPSC/74-50/I 61
P 22		Brussels, Mons	J. Lemonne	2 x 200 k pictures (1) & (2) with \bar{p} at 70 GeV/c. Study of multiparticle final states and properties of annihilation reactions	BEBC + EPI (1) BEBC+TSF+EPI (2)	WA Merged with P 13 + P 47; See P 63	SPSC/74-87/P 22 SPSC/I 73-19

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P 23		Aachen, CERN, Oxford	D.C. Cundy G. Myatt, K. Schultze	Total and differential cross sections of ν and $\bar{\nu}$ on Neon; neutral currents. 250 kpx	BEBE (Ne) + EMI	WANF (NB)	SPSC/74-88/P 23 SPSC/I 73-12 SPSC/75-66/M 52
P 24	NA 3	CERN, Coll. de France, Ec. Pol., Orsay, Saclay	A. Michelini	Hadronic production of high- p_T leptons and hadrons	Forw. spectrometer e- γ detectors, hadron calorimeter	NA Approved by NPRC on 12.3.75.	SPSC/74-90/P 24 SPSC/75-8/R 21
P 25		Aachen, Bonn, CERN, Oxford	G. Myatt	ν and $\bar{\nu}$ interactions in hydrogen. 500 kpx	BEBE (H ₂) + EMI	WANF (WB)	SPSC/74-91/P 25 SPSC/I 73-28 SPSC/I 73-40 SPSC/75-66/M 52
P 26	WA 9	Clermont-Ferrand, Leningrad, Lyon, Uppsala	T. Ekelöf	High precision study of elastic scattering in Coulomb interference region	Ionisation chamber recoil spectrometer; forw. magnetic spectrometer	WA Approved by NPRC on 22.1.1975 for minimum programme	SPSC/74-94/P 26 SPSC/75-34, P 26/Add.1 SPSC/74-56/I 62 SPSC/74-55/M 31
P 27		CERN, Imperial Coll., Oxford	B.G. Pope	Production of muons and muon pairs in hadronic interactions	Tungsten beam dump; iron shield; spectrometer with toroidal magnets	NA	SPSC/74-96/P 27 SPSC/I 73-3 SPSC/I 73-34
P 28		Pavia, Torino	G. Rinaudo	pp-interactions below 100 GeV/c (2 x 50 kpx)	BEBE	WA	SPSC/74-104/P 28 SPSC/76-18/P 28/Add.1
P 29		Bari, CERN, Liverpool, Milan	B. French	Detailed study of hadronic interactions producing high- p_T particles	Vertex detector; forward lever arm	NA SPSC decision deferred on 26.2.75	SPSC/74-112/P 29 SPSC/75-8/R 21 (D.Ph.II/TEC 74-1) (D.Ph.II/PHYS 75-1)
P 30		Bari, Birmingham, Brussels, RHEL, University Coll.	W. Venus	ν and $\bar{\nu}$ interactions in hydrogen filled track sensitive target, 500 kpx	BEBE + TST + EMI	WANF (WB)	SPSC/74-116/P 30 SPSC/75-63/P 30/Add.1 SPSC/75-64/P 30/Add.2 SPSC/I 73-13

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P 31		Bari, Milan	A. Pullia	ν and $\bar{\nu}$ interactions in propane. 1 Mpx	GGM + EMI	WANF (WB)	SPSC/74-117/P 31 SPSC/75-74/P 46/Add.2 SPSC/76-9/P 31/Add.2 SPSC/I 73-6 SPSC/I 73-44
P 32		LPNHE Paris	M. Baubillier J. Laberrighe	K^+ p-interactions at 70 GeV/c. 600 kpx	BEBEC + EPI	WA Merged with P14 + P17 + P56; See P62	SPSC/74-118/P 32 SPSC/I 73-14
P 33		Ecole Polytechnique, LPNHE Paris	P. Petiau	Search for charmed particles; study of neutral current channels with ν and $\bar{\nu}$. 500 kpx	BEBEC (D ₂) + steel plates	WANF (WB)	SPSC/74-119/P 33 SPSC/75-42/P 33/Add.1 SPSC/I 73-26 SPSC/I 73-51
P 34		Bergen, Brussels, Strasbourg, Univ. College London	P.W. Bullock	High energy electronic and muonic ν and $\bar{\nu}$ interactions, 500 kpx	GGM + EMI	WANF (WB)	SPSC/74-122/P 34 SPSC/75-73/P 34/Add.1 SPSC/I 73-5 SPSC/I 73-17 SPSC/I 73-20
P 35		Aachen, CERN, Oxford	K. Schultze	ν interactions with protons and neutrons. 500 kpx	BEBEC (D ₂) + EMI	WANF (NB)	SPSC/74-123/P 35 SPSC/75-66/M 52
P 36		Aachen, Bari, Brussels, CERN, University Coll., London	W. Van Doninck	Detailed study of muonless events induced by ν interactions on protons and neutrons, 500 kpx	BEBEC (H ₂ +N ₂) + TST (D ₂) + EMI	WANF (NB)	SPSC/74-126/P 36 SPSC/I 73-13
P 37	NA 5	MPI Munich	P. Seyboth	Study of hadronic reactions leading to multibody final states with a particle of P_T up to 3 GeV/c	Vertex detector magnet with streamer ch.; downstream lever arm with streamer ch., trigger spectrometer	NA NPRC on 4.6.1975	SPSC/75-1/P 37 SPSC/75-38/P 37/Add.1 SPSC/74-86/I 65
P 38		Glasgow, LPNHE Paris, RHEL, Saclay	R. Barloutaud	K^+ p interactions in BEBEC at 45 and 70 GeV/c, 400 kpx	BEBEC + EPI	WA	SPSC/75-2/P 38 SPSC/I 73-18

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P 39		Aachen	J. Morfin	Purely leptonic and other rare $\bar{\nu}$ interactions in propane-freon mixture. 600 kpx	GGM	WANT	SPSC/75-5/P 39 SPSC/75-73/P 34/ Add.1 P 39
P 40		CERN, IPN Orsay, Oxford	L. Dick	Spin effect and differential cross sections in elastic hadron-hadron scattering	Solenoid spectrometer; polarised proton target; position sensitive scintillation counters forward	NA Not recommended by SPSC on 2.4.75	SPSC/75-9/P 40 SPSC/74-44/P 12 SPSC/I 73-33 SPSC/74-111/I 66
P 41		Cambridge, Michigan State	J.G. Rushbrooke	$\bar{p}p$ annihilation at 150 GeV/c	Rapid Cycling Bubble Chamber; downstream particle identification	NA	SPSC/75-13/P 41
P 42		CERN, Heidelberg, Orsay, Oxford, Rutgers, Stockholm	L. Montanet	Study of multihadron events involving identified particles	RCBC, ISIS, Cerenkov and downstream spectrometer	NA	SPSC/75-15/P 42 SPSC/75-22/P 42/ Add.1 SPSC/75-40/I 68 SPSC/75-21/M 48 SPSC/75-30/M 49 SPSC/74-45/T 14 SPSC/74-95/T 14/ Add.1 SPSC/75-37/R 24 SPSC/75-70/R 28
P 43		Brussels, MIT, Padova Strasbourg	A. Fridman	$\bar{p}p$ interactions at 50, 100, 150 and 200 GeV/c	RCBC with secondary particle identification.	NA	SPSC/75-16/P 43 SPSC/74-127/I 67
P 44		CERN, MIT, Nijmegen	E.W. Kittel	Study of k^+p -interactions at 250-300 GeV/c	RCBC with downstream spectrometer and particle identification	NA	SPSC/75-18/P 44

No.	Exp. Code	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
P 45		Firenze, Genova, Padova, LPNHE Paris, Paris VII, Rome, Trieste	D. Zanella	External γ -ray detector for BEBC with TST	γ -detector	WA	SPSC/75-24/P 45 SPSC/75-60/P 45/Add.1 SPSC/I 73-35
P 46		Ecole Polytechn.	M. Haguenaer	Study of ν induced rare events and of neutral current interactions	GGM; NB beam with 140 GeV parents	WANF	SPSC/75-27/P 46 SPSC/75-72/P 46/Add.1 SPSC/75-74 /P 46/Add.2 SPSC/75-74 /P 31/Add.1 SPSC/76-9 /P 31/Add.2 SPSC/76-9 /P 46/Add.3
P 47		Helsinki, Stockholm	G. Ekspong	Study of \bar{p} , p-interactions at 70 GeV/c	BEBC	WA	SPSC/75-49/P 47 SPSC/I 73-57
P 48		Bari, I.C. London, MPI Munich	R. Hartmann	Study of $\bar{\nu}$ and ν interactions at highest available SPS energies	BEBC (Ne + H ₂) with D ₂ -TST; NB beam	WANF	SPSC/75-50/P 48 SPSC/75-78/P 48/Add.1
P 49		Aachen, CERN, Frascati, Hamburg, Moscow (ITEP), Naples, Rome	K. Winter	High energy ν interactions	Target calorimeter surrounded by magnetized iron	WANF	SPSC/75-59/P 49
P 50		Turin	C. Franzinetti	γ -ray detector in BEBC for ν experiments	BEBC + metal plates or Neon bag	WANF	SPSC/75-61/P 50
P 51		Aachen, CERN, Oxford	G. Myatt	Beam dump test in BEBC Ne + H ₂ experiments	BEBC (Ne + H ₂)	WANF	SPSC/75-65/P 51 SPSC/75-76/R 29
P 52		CERN, Milan, Orsay	Ph. Heusse	Study of neutral current interactions with ν and $\bar{\nu}$ dichromatic beams	GGM; NB beam with 60 GeV parents	WANF	SPSC/75-69/P 52

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P 53		CERN, Orsay, Strasbourg, Ecole Polytechnique (X)	B. Aubert F. Jacquet	Exploratory experiment at very high ν energy in narrow band beam	GGM; NB beam	WANF	SPSC/75-71/P 53
P 54		Turin	C. Franzinetti	ν interactions in freon with narrow band beams from π^+ 's and K^+ 's of 60, 140 and 275 GeV/c	GGM; NB beam	WANF	SPSC/75-77/P 54
P 55		Turin	C. Franzinetti	Experiment in dichromatic ν -beam	GGM; NB beam with 140 GeV parents	WANF	SPSC/75-80/P 55
P 56		Serpukhov	P.V. Chliapnikov V.A. Yarba	Study of K^+p and K^+p interactions at 70 GeV/c (2 x 300 kpx)	BEBC + EPI	WA; Merged with P14 + P17 + P32 See P 62	SPSC/75-84/P 56 SPSC/75-53/I 71
P 57		Aachen, Berlin, CERN, Cracow, Imperial Coll. London, Vienna, Warsaw	P.J. Dornan	K^+p and $\bar{p}p$ interactions at highest available momentum (≈ 110 GeV/c) (300 kpx + 200 kpx)	BEBC (+EPI)	WA	SPSC/75-86/P 57 SPSC/76-26/P 57/Add.1
P 58	WA 11	Saclay, Indiana Univ.	P. Borgeaud	Search of multiparticle decays of high mass states produced with the $\psi(3.1$ GeV)	Vertex spectrometer (Goliath); two pairs of fwd. spectrometer arms. Scintillator hodoscope; muon detector	WA; Approved by RB on 19.02.76 on common beam line with WA6 (H3)	SPSC/76-3/P 58

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P 59		Mons	F. Grard	Study of strange meson production and of reactions with high p_T in $\bar{p}p$ and \bar{p}^+p interactions at 100 GeV/c	RCBC (hybrid system)	NA	SPSC/76-8/P 59
P 60		Cambridge, Imperial College	T.C. Bacon	Study of high energy $K_L^0 p$ interactions (100 kpx + 100 kpx)	BEBC	WA	SPSC/76-11/P 60
P 61		Birmingham, CERN, Neuchâtel, RHEL	P. Sonderegger	Beam dump experiment in Omega	Omega	WA	SPSC/76-14/P 61
P 62		Brussels, CERN, Genova, Mons, Nijmegen Serpukhov, Tel-Aviv	R.T. Van de Walle	Study of 70 GeV/c $K^+ p$ interactions	BEBC + EFT	WA	SPSC/76-15/P 62
P 63		Brussels, Helsinki, Liverpool, Mons, Stockholm	N. Yamdagni	Study of $\bar{p}p$ interactions at 70 GeV/c	BEBC	WA	SPSC/76-16/P 63
P 64		Bologna, Glasgow, RHEL, Saclay, Torino	G. Kalmus	Investigation of direct electron production in hadron interactions	BEBC + TST (+EMI)	WA	SPSC/76-19/P 64 SPSC/76-7/I 79
P 65		Brussels, Liverpool, Mons, Stockholm	J. Lemonne	Study of prompt lepton production in $\bar{p}p$ interactions at 70 GeV/c	BEBC + TST	WA	SPSC/76-20/P 65
P 66		CERN, Glasgow, Liverpool	I.S. Hughes	Search for new bosons and charmed states in $\bar{p}p$ interactions in 4.1 GeV c.m. energy region	Omega	WA	SPSC/76-24/P 66

b) LETTERS OF INTENT

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No.	Labs.	Spokesman	Experiment	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?)	SPSC/I 73-1
I 2	Orsay	F. Yiou	Nuclear chemistry for astrophysics	Internal irradiation facility	is not available	SPSC/I 73-2
I 3	CERN	B.G. Pope	$p + \text{nucleus} \rightarrow \mu^+ + \mu^- + \text{anything}$ at 400 GeV to $\sigma \sim 10^{-39}$ cm with 10^{12} p/p. $\Delta M/M = \pm 5\%$ for $5 \text{ GeV} < M < 25 \text{ GeV}$	Beam dump in 1 m target 10 m steel wall MWPC-planes with $\epsilon = \pm 0.5$ mm	NA, behind zone 2	SPSC/I 73-3 SPSC/74-96/P 27
I 4	HEPL Stanford	R. Hofstadter	Backward inelastic inclusive proc. $p + p \rightarrow p + p$ $\rightarrow p + x$ $\rightarrow \pi^+ + x$ $\rightarrow K^+ + x$ 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	SPSC/I 73-4
I 5	Bergen.	O. Skjeggstad	ν -physics	Gargamelle	WA	SPSC/I 73-5 SPSC/74-122/P 34
I 6	Bari	S. Natali	ν -physics	Gargamelle	WA	SPSC/I 73-6 SPSC/74-117/P 31
I 7	-	P. Schlein	High P_t processes	Total absorption calorimeter	NA	SPSC/I 73-7

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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).	SPSC/I 73-8 SPSC/74-29/P 10
I 9	CERN, Trieste Vienna	G. Fidecaro	α /dt. and polariz. parameter P for $\bar{p}p \rightarrow pp : \bar{p}n \rightarrow np$ $\rightarrow pn$ between 25 + 150 GeV/c and $t \lesssim 3$ (GeV/c)	Little detail. MWPC or drift ch. > 10^8 p/p	WA (H 1) for low E NA (H 4, H 8) for high E.	SPSC/I 73-9 SPSC/74-17/P 8
I 10	Athens, Democritos, Liverpool, Nijmegen	R. Van de Walle	$K^+ p$ 70 GeV/c	BEEC (H_2) (+EHI?)	WA	SPSC/I 73-10 SPSC/74-73/P 17
I 11	Geneva, Heidelberg, Lausanne, Orsay, RHEL, Strasbourg	G. Sauvage	Charged hyperon interactions; leptonic decays	Hyperon beam, MWPC (backw.) + forw. spectro- meter	WA	SPSC/I 73-11 SPSC/P 73-2
I 12	Aachen, CERN, Oxford	D. Cundy	ν -physics	BEEC (Ne) + EMI	WA	SPSC/I 73-12 SPSC/74-88/P 23
I 13	Brussels	J. Sacton	ν -physics	Bubble Chamber	WA	SPSC/I 73-13 SPSC/74-116/P 30 SPSC/74-126/P 36
I 14	LPNHE	J. Duboc	$\bar{K}^+ p$, 70 GeV/c	BEEC (H_2) hybrid (charged particle) identifier, TST, ext. γ -detector)	WA	SPSC/I 73-14 SPSC/74-118/P 32

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 15	Daresbury, Lancaster Liverpool, Oxford, Sheffield, R.M.C. Schriivenham, Coll. de France, IPN Orsay Bonn, (DESY), Wuppertal, CERN	E. Gabathuler	ν -physics up to 250 GeV	Forw. spectrometer 3 stages. Trajec. mea- sured by W_1 -Mg: $\epsilon = \pm 0.15$ mm. Large κ 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. 200 evts/10 ⁸ p 2 litre polarized target planned.	SPSC/I 73-15 SPSC/I 73-15 Rev. SPSC/74-78/P 18
I 16	University College	D.J. Miller	p, π^- -proton up to 200 GeV/c	BEBEC ($H_2 + Ne$) + TST (H_2) + forward γ -detector	WA	SPSC/I 73-16
I 17	University College	F.W. Bullock	ν -physics	Gargamelle	WA	SPSC/I 73-17 SPSC/74-122/P 34
I 18	Glasgow, Oxford, RHEL, Saclay	G. Kalmus	$K^+ p, 45 + 65$ GeV/c	BEBEC (H_2) EHI	WA	SPSC/I 73-18 SPSC/75-2/P 38
I 19	Mons	F. Grard	K^+ 30-75 GeV/c, π^- 25-100 GeV/c	BEBEC (H_2) EHI	WA	SPSC/I 73-19 SPSC/74-47/P 14 SPSC/74-87/P 22
I 20	Strasbourg	M. Paty	ν -physics	BEBEC ($H_2 + Ne$) or GGM + EMI	WA	SPSC/I 73-20 SPSC/74-122/P 34 SPSC/75-71/P 53
I 21	Birmingham, CERN, Genova, Saclay	E. Quercigh	K^+, \bar{p} at 40-60 GeV/c	BEBEC (H_2) EHI	WA	SPSC/I 73-21 SPSC/74-47/P 14

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
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 Čerenkov-beam-tagging; TST	WA	SPSC/I 73-22
I 23	CERN, Hamburg, Karlsruhe, Oxford, PHEL, Westfield College	K. Winter	v-physics	Hadron ionisation calorimeter	NA	SPSC/I 73-23 SPSC/P 73-3 SPSC/75-59/P 49
I 24	Orsay	B. Dauterbas	π^+ , highest momentum	BEBC (H_2)	WA	SPSC/I 73-24 SPSC/74-80/P 20
I 25	Orsay	B. Dauterbas	π^+ , π^- , high momentum	BEBC (H_2 + Ne) TST with deuterium.	WA	SPSC/I 73-25 SPSC/74-80/P 20
I 26	Ecole Polytechnique	P. Petitau	v-physics	Gargamelle, BEBC (Ne)	WA	SPSC/I 73-26 SPSC/74-119/P 33 SPSC/75-71/P 53
I 27	Bari, Birmingham, CERN, Genova, Oslo, RUEL, Stockholm	C. Damérell	Hadron physics + 150 GeV/c	Focusing spectro-meter	WA	SPSC/I 73-27
I 28	Aachen, CERN, Oxford	G. Myatt	v-physics	BEBC (H_2) + EMI	WA	SPSC/I 73-28 SPSC/74-91/P 25

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 29	Aachen, Bari, Bergen, Brussels, U.C. London, CERN, Milano, Padova, Ecole Polyt., Orsay, Strasbourg, Torino	A. Rousset	v-physics	Bubble chambers	WA; review of v-programme of 12 Laboratories.	SPSC/I 73-29
I 30	CERN	A. Rousset	v-physics	BEBC, GGM	WA	SPSC/I 73-30 SPSC/75-71/P 53
I 31	Collège de France	C. Chesquière	π^+ , K^+ , \bar{p} ; 30-50 GeV/c	BEBC (H ₂) + EHI + wire ch. in beam + γ -detection (+TST)	WA	SPSC/I 73-31
I 32	Athens (Democritos + Univ.), Liverpool	H. Muirhead	\bar{p} ; 50 + 100 GeV/c	BEBC (H ₂) (+EHI).	WA	SPSC/I 73-32 SPSC/74-60/P 13
I 33	IPN Orsay	T. Millits	$\pi^+ p + \pi^0 n$; 10, 25 and 50 GeV/c	Frozen spin polar. target + n-detector + γ -detectors	WA	SPSC/I 73-33 SPSC/74-44/P 12 SPSC/75-9/P 40

No.	Labs.	Spokesman	Experiment	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.	SPSC/I 73-34 SPSC/74-96/P 27
I 35	Naples, Padua, Rome-Frascati, Trieste.	D. Zanella	External γ -detector for BEBC	MWPC + lead glass counters	WA	SPSC/I 73-35 SPSC/75-24/P 45
I 36	Milan, Pisa, Rome	L. Foà	Comparative study of hadron fragmentation	Cylindrical chambers around target + forw. spectrometer	NA	SPSC/I 73-36 SPSC/74-15/P 6
I 37	Glasgow	I. S. Hughes	K^+ p-processes at 35 and 65 GeV/c	Omega with MWPC (and downstream K^+ -counter with wire ch.)	WA	SPSC/I 73-37
I 38	Bari, Bonn, CERN, Daresbury, Glasgow, Liverpool, Milan	B. R. French	Meson physics with Omega in RF separated beam	As in I 37	WA	SPSC/I 73-38
I 39	Saclay	Y. Ducros, L. van Rossum	Polarization measurements in η p and K^0 inelastic reactions; elast. scatt. at large momentum transfer	Polarized target large angle detector system + forw. K^+ -counters		SPSC/I 73-39 SPSC/74-71/P 15
I 40	Bonn	K. Böckmann, R. Hartmann, W. Meincke	ν - and $\bar{\nu}$ -interactions	BEBC (H_2)	WA	SPSC/I 73-40 SPSC/74-91/P 25 SPSC/75-50/P 48
I 41	Prague	J. Sedlak	$\bar{p}p$ interactions at 70-100 GeV/c	BEBC	WA	SPSC/I 73-41

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 42	Collège de France, Ecole Polytechnique Orsay, MPI + Univ. Munich, Saclay	J. Lefrançois	Hadron, electron and photon physics	Multi-particle spectrometer	NA	SPSC/I 73-42
I 43	Geneva	M. Martin C. Nef	Energy dependence of two-body reaction $K^+p \rightarrow K^{*+}p \rightarrow K^+p \pi^0 +$ $\searrow K^+ \pi^+$	C-counter + hodoscope in beam; proton + decay analyser with PWC	WA	SPSC/I 73-43 SPSC/74-31/P 11
I 44	Milan	E. Fiorini	V-physics.	Gargamelle	WA	SPSC/I 73-44 SPSC/74-117/P 31 SPSC/75-69/P 52
I 45	Lausanne, Neuchâtel	E. Jeannot	Incident part. + $p + \Lambda^0 + \dots$, $K^0 + \dots$, $\Xi^0 + \dots$, $\Xi^0 + \dots$; fragmentation of proton-target; coherent reactions on He	Streamer chamber "Dardanelle"		
I 46	Geneva	O. Guisan	Form factor of π 's and K 's	C-counter; forward analyzing system with wire ch. (+ shower detector)	NA	SPSC/I 73-46
I 47	CERN, MPI Munich	P. Weilhammer	Few-body reactions	CERN-Munich spectrometer	WA	SPSC/I 73-47 SPSC/74-14/P 7
I 48	Bristol, Southampton	S.G.F. Frank	Form factor of π 's	Forward magnetic spectrometer from P 6	WA	SPSC/I 73-48 SPSC/74-85/I 48/Add.1
I 49	Oxford	N.E. Booth	ν -e interactions	100 modules each with 3 rad. lengths Fe + MWPC layer		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	SPSC/I 73-50 SPSC/74-3/P 4

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 51	Ecole Polytechnique.	V. Brisson	v-physics.	BEBC (H_2 ; D_2).	WA	SPSC/I 73-51 SPSC/74-119/P 33
I 52	Graz, Illinois Inst. Techn., Purdue.	T. Erber	High-energy magnetic Bremsstrahlung.	Pulsed megagauss fields.	Not recommended by SPSC	SPSC/I 73-52
I 53	Orsay.	A. Lagarrigue	v-physics.	GGM, BEBC.	WA	SPSC/I 73-53 SPSC/75-69/P 52 SPSC/75-71/P 53
I 54	CERN, ETH.	W. Beusch	Reggson-nucleon scattering.	Shower detector (with Omega).	WA	SPSC/I 73-54 SPSC/74-51/M 29
I 55	Pavia.	S. Ratti	Hadron fragmentation (30-70 GeV/c).	Magnetic spectrometer in Ω -beam.	WA; withdrawn 25.6.1974.	SPSC/I 73-55
I 56	Amsterdam, Bologna, Padua, Pisa, Saclay, Torino.	A. Tenner	v-physics.	BEBC (D_2)	WA	SPSC/I 73-56 SPSC/74-9/I 56/Add.1 SPSC/74-72/P 16
I 57	Scand. BC-Collab. (Helsinki, Stockholm).	S. Nilsson	$\bar{p}p$ -reactions 30-70 GeV/c.	BEBC	WA	SPSC/I 73-57 SPSC/75-49/P 47
I 58	Frascati, Naples.	G. Barbiellini	v-lepton scattering.	Scintill. counter + spark chambers.	WA	SPSC/74-1/I 58 SPSC/75-59/P 49
I 59	Aachen.	J. von Krogh/ K. Schultze	v-physics.	GGM	WA	SPSC/74-2/I 59 SPSC/75-5/P 39

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 60	DESY	H. Meyer	V-e scattering.	Streamer chamber with CH ₂ plates and scintillation counters.	NA	SPSC/74-5/I 60
I 61	Birmingham.	J.D. Dowell	Rare meson systems from $\pi^+ p$ collisions at 16 and 32 GeV/c.	Omega (with lever arm for 32 GeV/c).	NA	SPSC/74-50/I 61 SPSC/74-84/P 21
I 62	Leningrad, Uppsala.	T. Ekelöf	Hadronic interactions at very small momentum transfers.	Ion chamber spectrometer (recoil) + magnetic spectrometer.	WA	SPSC/74-56/I 62 SPSC/74-94/P 26
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	SPSC/74-57/I 63
I 64	Univ. of Michigan.	A.D. Krisch	Elastic pp-scattering at high transverse momentum, 200 GeV.	Double arm spectrometer.	NA Not recommended by SPSC	SPSC/74-68/I 64
I 65	MPI Munich.	P. Seyboth	Multi-particle hadron physics.	Streamer chamber and vertex magnet.	NA	SPSC/74-86/I 65 SPSC/75-1/P 37
I 66	CERN, IPN Orsay, Oxford	L. Dick	Measurement of spin effect (P ₀ and R) and differential cross-sections in hadron-hadron elastic scatterings	Polarized target; solenoid spectrometer; position sensitive scintillation counters f. forward detector	NA	SPSC/74-111/I 66 SPSC/75-9/P 40
I 67	Brussels, MIT, Padova, Strasbourg	A. Fridman	Study of $\bar{p}p$ interactions at 50, 100, 150 and 200 GeV/c	Rapid cycling bubble chamber + EPI	NA	SPSC/74-127/I 67 SPSC/75-16/P 43

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 68	Heidelberg	K. Tittel	Study of multihadron events in hybrid detector	Rapid cycling chamber	NA	SPSC/75-40/I 68 SPSC/75-15/P 42
I 69	Karlsruhe, Moscow	J. Engler Yu Galaktionov	Neutron small angle elastic scattering at high energies	Proton recoil detector + liq. Ar. neutron calorimeter	NA	SPSC/75-47/I 69
I 70	Serpukhov	Yu D. Prokoshkin	Hadron scattering at large P_T	Multipurpose spectrometer for neutral and charged particles	NA	SPSC/75-52/I 70
I 71	Serpukhov	P.V. Chliapnikov	Study of K^+p and K^-p interactions at 70 GeV/c	BEBC	WA	SPSC/75-53/I 71 SPSC/75-84/P 56
I 72	Serpukhov	S.B. Murushev	Measurement of polarization in hadron-hadron interactions	Polarized target; fwd. spectrometer with MWPC threshold Čerenkov counter and hodoscope; recoil arm with MWPC and hodoscope	WA	SPSC/75-54/I 72
I 73	Moscow (ITEP)	V.S. Kaftanov	Study of ν , e-scattering	Spark chambers	WA	SPSC/75-55/I 73
I 74	Kurchatov Inst. Novosibirsk	I.I. Gurevich	Magnetic monopole search	Beam dump	NA	SPSC/75-56/I 74
I 75	Yerevan	A.G. Oganessian	Hadron identification by transition radiation detector in polarization measurements		WA	SPSC/75-57/I 75
I 76	Padua	M. Baldo-Ceolin	Study of ν -electron interactions	Spark chambers + γ shower counters	WANF	SPSC/75-79/I 76
I 77	Serpukhov	V.A. Yarba	Study of ν and $\bar{\nu}$ interactions (I Mpx)	BEBC + TST (D ₂)	WANF	SPSC/75-83/I 77

No.	Labs.	Spokesman	Experiment	Apparatus	Remarks	References
I 78	Rome	M. Conversi	Study of di-muon events and search of new short-lived particles produced by neutrinos in emulsion stack coupled to BEBC	BEBC + emulsion stack	WANF	SPSC/76-2/I 78
I 79	RHEL	G. Kalms	Investigation of direct electron production in hadron interactions	BEBC + TST (+EMI)	WA	SPSC/76-7/I 79
I 80	CERN, Genova, Orsay, Oslo, Univ.College	A. Lundby	Production of massive muon pairs in hadronic interactions	Double arm spectrometer with μ -detectors	WA	SPSC/76-13/I 80 SPSC/76-12/M 55
I 81	Liverpool, Oxford	J.R. Fry	Antiproton annihilation mechanism in 4π and 6π final states at 16 GeV/c	Omega	WA	SPSC/76-27/I 81