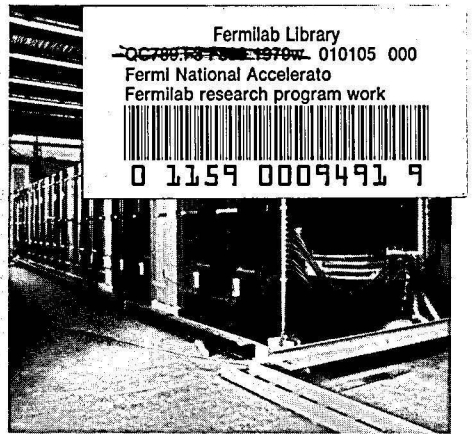
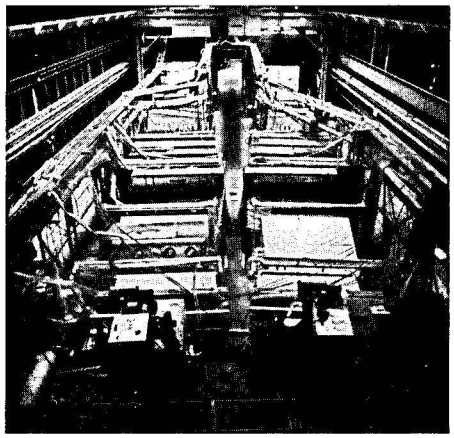
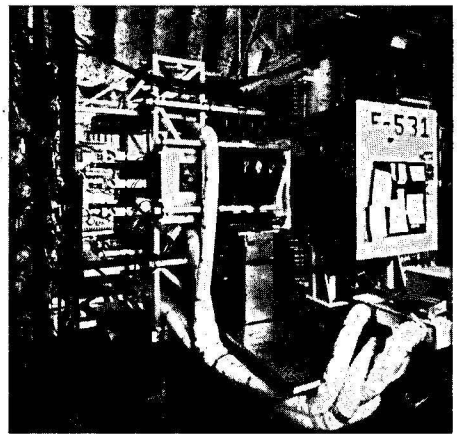
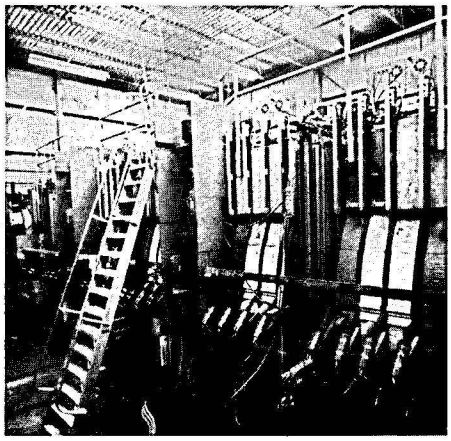
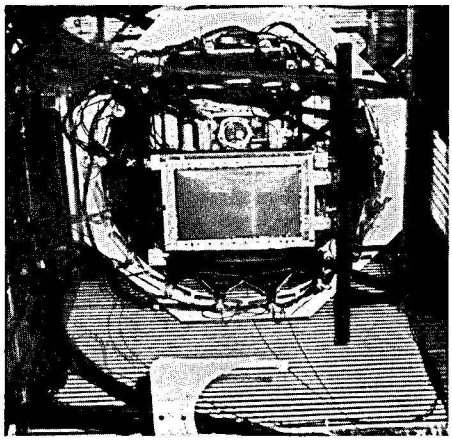
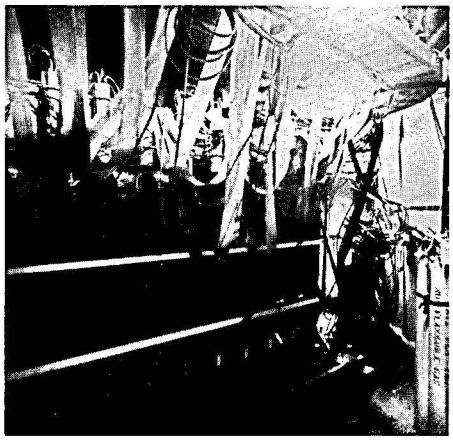






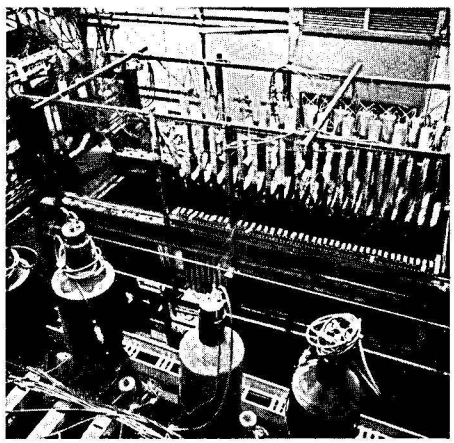


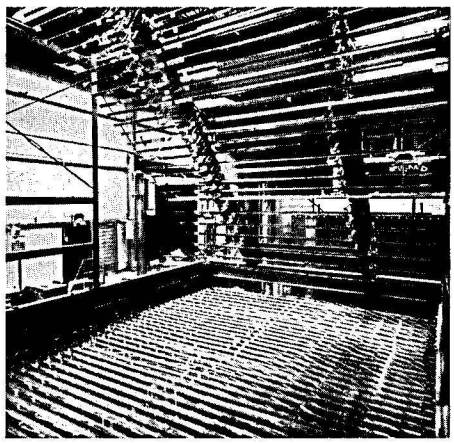


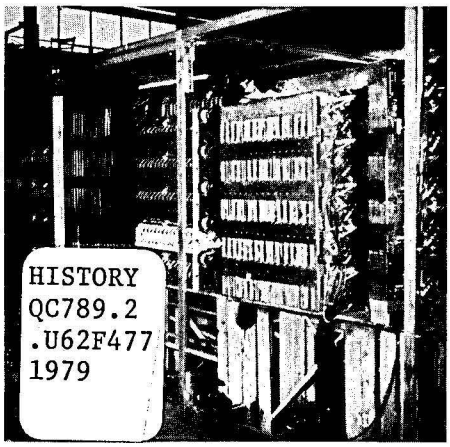


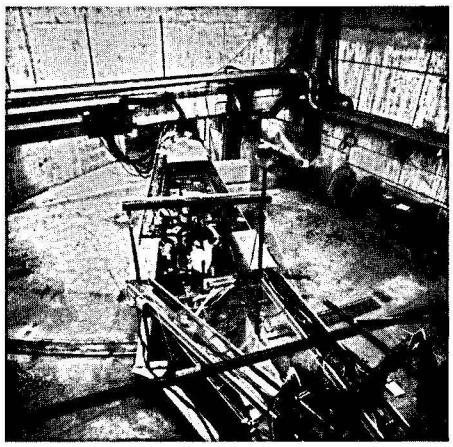
Fermilab Research Program Workbook

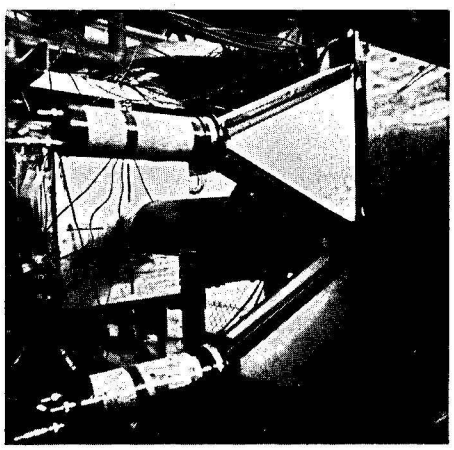
May, 1979











Fermilab Research Program Workbook

May, 1979

T. H. Groves
T. Yamanouchi
A. F. Greene

Price: $5.00

Fermi National Accelerator Laboratory
Batavia, Illinois

Operated by Universities Research Association
Under Contract with the United States Department of Energy.

INTRODUCTION

It is a custom at Fermilab that at the time of the extended summer meeting of the Physics Advisory Committee there be a thorough review of the research program. As part of that review it has proved useful to evaluate the accomplishments of the completed research, to study the emphasis of the research program already approved but not yet finished, and to examine that research recently proposed for the future. The 1979 Workbook is intended to provide information to assist with this review. Although the Workbook is planned primarily for use by Fermilab staff and members of the Physics Advisory Committee, the general information it contains may also prove useful to others interested in the Fermilab program.

There have not been any significant changes in either the format or the basic content of the 1979 Workbook compared with the one prepared a year ago. By referring to the Table of Contents on page v and reading the remarks at the beginning of each section one may quickly gain an overview of the material herein.

Many Fermilab staff physicists have been extremely helpful in providing information contained in the Workbook -- the names are too numerous to mention here. However, special recognition is extended to Angela Gonzales for her artistry; to Anne Burwell for developing and maintaining the data base file and to Raeburn Wheeler for providing assistance with that task; and to Delores Ray for typing and for assembling the materials in final form.

TABLE OF CONTENTS

SECTION I. STATUS OF PROPOSALS

Detailed planning for initial research at the Laboratory began in 1970 when the first proposals were approved. Research began in 1972, and there has been a steady increase in the number of proposals submitted since that time. Thus far well over 600 proposals have been received for consideration.

Each proposal represents a specific research project or area of study. It must describe in writing the basic physics objectives of an experiment, the techniques to be used for the measurements, and the requirements from Fermilab in the form of equipment and beam time. Members of the Fermilab Physics Advisory Committee are then asked to evaluate the research on the basis of both the written proposal and, usually, an oral presentation. Recommendations are then made to the Director who makes final decisions regarding the research program. The proposal is then classified by one of the following categories:

	Categories	Definitions
Approved Proposals	Completed	Proposals that were approved and have completed data-taking.
	Remaining	Proposals that were approved and are running or waiting for data-taking.
Pending Proposals	Unconsidered	Relatively new proposals awaiting consideration.
	Deferred	Proposals for which consideration has been postponed for a specific reason.
Obsolete Proposals	Rejected	Proposals rejected from further consideration.
	Withdrawn/ Inactive	Proposals that were not considered at the request of the spokesperson or ones that are no longer being considered for other reasons.

The number of proposals presently in each of these categories as well as a view of the development of the research program starting with 1971 is shown in Table 1. The dates given there, with the exception of that for 1979, are those following the extended summer meetings of the Physics Advisory Committee. The fluctuations in the number of proposals received and experiments completed since 1970 is evident from that table; in Figure 1 it is described graphically.

Trends in the Fermilab research program are shown in Figure 2, in which the numbers of proposals received, approved and rejected, and the number of experiments completed, are indicated year-by-year. Bare emulsion experiments have been omitted from the totals in this graph. Some of the initial trends evident in Figure 2 result from the large influx of proposals and subsequent approvals as the experimental program was first being developed in 1970. More recently, due principally to restricted funding, there has been a significant increase in the number of rejected proposals and a corresponding decline in the number of approvals. These factors may also have influenced the number of proposals received. Primarily in 1977, but also earlier, some approvals were withdrawn by the Laboratory. In order to reflect these changes in status, the net number of proposals approved is shown in Figure 2.

TABLE 1. STATUS OF PROPOSALS AT FERMILAB

	Aug. '71	Aug. '72	July '73	July '74	July '75	July '76	July '77	July '78	May '79
APPROVED PROPOSALS									
Completed	0	0	16	57	97	152	190	234	248*
Remaining	53	70	75	89	121	100	82	57	52*
Subtotals	53	70	91	146	218	252	272	291	300
PENDING PROPOSALS									
Unconsidered Proposals	16	19	10	0	2	6	12	6	10
Deferred Proposals	35	39	43	54	45	25	24	11	4
Subtotals	51	58	53	54	47	31	36	17	14
OBSOLETE PROPOSALS									
Rejected Proposals	15	20	42	65	85	135	166	185	188
Withdrawn/Inactive Proposals	33	35	47	61	71	80	93	114	123
Subtotals	48	55	89	126	156	215	259	299	311
TOTAL NUMBER OF PROPOSALS	152	183	233	326	421	498	567	607	625

*Progress with the approved proposals is shown as of April 1, 1979.

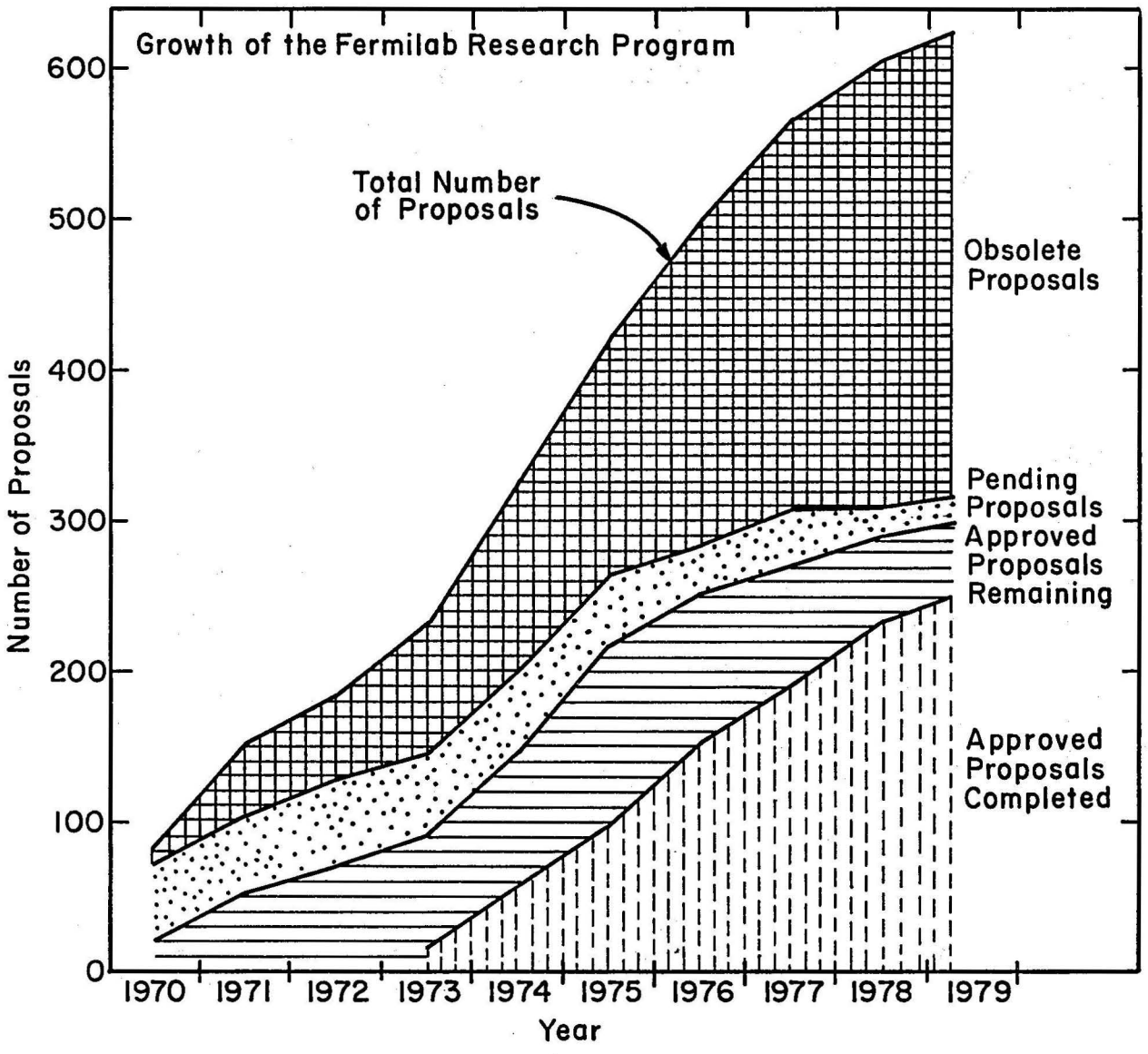


Figure 1. Growth of the Fermilab research program. The total number of approved proposals is obtained by adding the numbers of those shown as completed and remaining. Pending proposals are those which are unconsidered or deferred, and obsolete proposals are rejected or withdrawn/inactive.

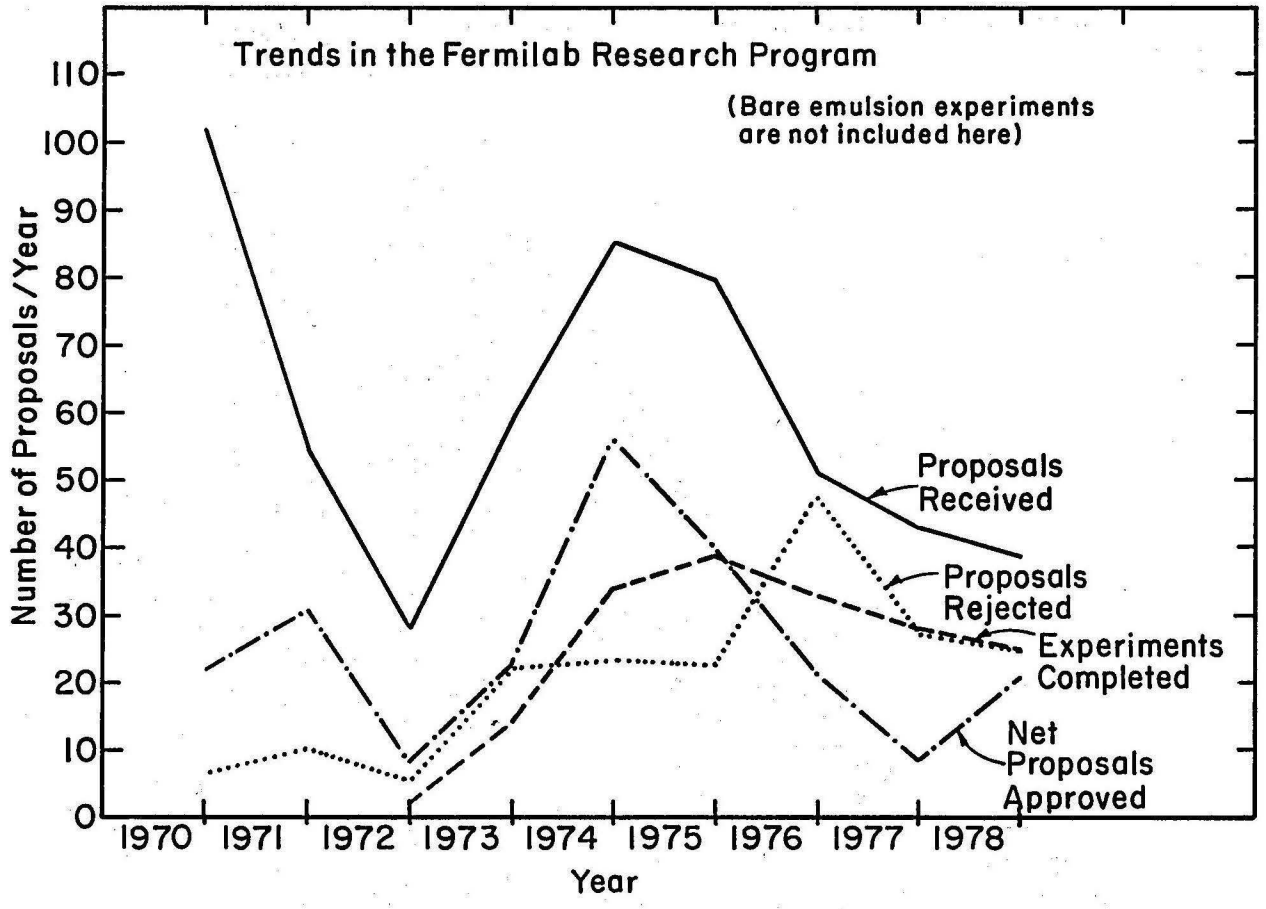


Figure 2. Trends in the Fermilab research program. For each year since 1970 curves describing the numbers of proposals received, those rejected, and the number of experiments completed are shown. The net number of proposals approved is also indicated. These approved data are obtained by subtracting the number of disapprovals from the approval actions. The numbers of bare emulsion experiments are not included in the totals for the curves shown here.

SECTION II. THE EXPERIMENTAL PROGRAM SITUATION REPORT

The Situation Report is a concise summary of the current status of the approved proposals at Fermilab. This report is prepared quarterly and is published in the Fermilab Report. It provides a convenient overview of the experimental program at a specific time. The Situation Report is more than a record of the experimental program at Fermilab. Because of the time dependence expressed therein, it can be interpreted as a long-range plan for approved proposals. In the Situation Report all approved proposals (or experiments) are grouped into categories which best describe their circumstance. The categories used are:

		Categories	Definitions
	A.	Completed	Experiments that have completed data-taking.
Experiments Underway	B.	In Progress	Experiments that have taken some data, but are not finished.
Experiments Underway	C.	In Test Stage	Experiments that are set up and using beam for test purposes.
Experiments To be Done	D.	Being Installed	Experiments that are being set up in an experimental area.
Experiments To be Done	E.	Set Up Within a Year	Experiments for which installation and running are expected within the next year.
Experiments To be Done	F.	Other Approved Experiments	Approved proposals that are unscheduled.

Proposals awaiting action are then listed at the end of the report.

The Situation Report is also used to report every three months the amounts of running time or exposure by experiments in operation at Fermilab. The Program Planning Office compiles the information on the amounts of running time as well as establishing the category assignments.

The Situation Report printed on the following pages has been abbreviated. The only completed experiments which are listed specifically are those which finished data-taking between April 1, 1978, and April 1, 1979.

Information in Table 2 has been extracted from previous Situation Reports. A more concise summary of the information contained in the Situation Report is contained in Table 3.

There the remaining approved and pending proposals in each category are listed by number under specific beam lines; approved proposals are listed in their probable order of scheduling and pending proposals are listed in numerical order. One can see at a glance which beam lines are over-subscribed, and which ones may be available for running.

TABLE 2. EXPERIMENTAL PROGRAM SITUATION AT FERMILAB

	Aug. 1971	July 1972	July 1973	July 1974	July 1975	July 1976	July 1977	July 1978	Apr. 1, 1979
EXPERIMENTS COMPLETED									
A. Completed	0	0	16	57	97	152	190	234	248
EXPERIMENTS UNDERWAY									
B. In Progress	0	5	17	22	31	31	30	19	19
C. In Test Stage	0	3	3	5	10	6	4	3	3
Subtotals	0	8	20	27	41	37	34	22	22
EXPERIMENTS TO BE DONE									
D. Being Installed	9	7	14	8	9	9	4	4	11
E. Within A Year	20	25	18	30	43	25	24	21	6
F. Unscheduled	24	30	23	24	28	29	20	10	13
Subtotals	53	62	55	62	80	63	48	35	30
TOTAL NUMBER OF APPROVED PROPOSALS	52	70	91	146	218	252	272	291	300

SITUATION REPORT-APRIL 1979

FERMI NATIONAL ACCELERATOR LABORATORY

PROGRAM PLANNING OFFICE
14 MAY 1979

EXPERIMENTAL PROGRAM SITUATION REPORT

THE EXPERIMENTAL PROGRAM SITUATION AT FERMILAB IS SUMMARIZED BELOW. THE EXPERIMENTS ARE LISTED SEPARATED BY EXPERIMENTAL AREA UNDER CATEGORIES THAT BEST DESCRIBE THEIR CIRCUMSTANCE AS OF APRIL 1, 1979. FOR EXPERIMENTS WHICH HAVE BEEN COMPLETED OR HAVE RECEIVED BEAM THERE IS INDICATION OF THE AMOUNT OF RUNNING TIME OR EXPOSURE. THE EXPERIMENTAL AREA NAMES ARE ABBREVIATED AS FOLLOWS: MESON AREA (MA), NEUTRINO AREA (NA), PROTON AREA (PA), INTERNAL TARGET AREA (ITA).

TOTAL NUMBER OF APPROVED EXPERIMENTS - 300

AREA-BEAM		SPOKESPERSON	EXTENT OF RUN TO DATE	DATE COMPLETED
A. EXPERIMENTS THAT HAVE COMPLETED DATA TAKING (248):				
(ONLY EXPERIMENTS COMPLETED SINCE 1 APR 1978 ARE LISTED BELOW)				
MA-M2	MULTI-MUON #439	GARELICK	1,700 HOURS	19 MAY 1978
	XI-ZERO PRODUCTION #495	HELLER	700 HOURS	28 AUG 1978
	PROTON POLARIZATION #505	YAMIN	50 HOURS	27 AUG 1978
-M4	INCLUSIVE K-SHORT #383	KOBRAK	2,200 HOURS	7 MAY 1978
-M6	MULTIPARTICLE #110A	DZIERBA	1,600 HOURS	9 APR 1978
	BACKWARD SCATTERING #290	BAKER	1,500 HOURS	31 JUL 1978
	INCLUSIVE SCATTERING #451	BARTON	500 HOURS	6 SEP 1978
	PARTICLE SEARCH #469	CUTTS	400 HOURS	15 MAY 1978
NA-NO-DICHROM	NEUTRINO #356	SCIULLI	1,350 HOURS	17 JAN 1979
-NO-WB HORN	NEUTRINO #310	CLINE	3,800 HOURS	31 AUG 1978
	NEUTRINO #253	NO	2,050 HOURS	7 MAR 1979
	NEUTRINO #531	REAY	1,150 HOURS	14 FEB 1979
	15-FOOT & EMULSION/NEUTRINO#564	VOYVODIC	EMULSION EXPOSURE	21 JAN 1979
-MUON/HADRON	MUON #203A	KERTH	1,200 HOURS	18 MAY 1978
	MUON #391	KERTH		18 MAY 1978
	MUON #448	LOOMIS	900 HOURS	7 MAY 1978
	PARTICLE SEARCH #596	LEDERMAN	200 HOURS	21 MAY 1978
PA-PE	PHOTOPRODUCTION #87A	OHALLORAN	4,800 HOURS	7 MAY 1978
	PHOTOPRODUCTION #152B	HEUSCH	1,950 HOURS	13 NOV 1978
-PC	DI-LEPTON #288	LEDERMAN	6,850 HOURS	23 JUL 1978
	PARTICLE SEARCH #608	BROWN	600 HOURS	7 MAR 1979
-PW	NUCLEAR SCALING #592	FRANKEL	500 HOURS	17 JUL 1978
ITA-C-0	P-N SCATTERING #552	SANNES	950 HOURS	9 APR 1978

B. EXPERIMENTS THAT ARE IN PROGRESS (19):			EXTENT OF RUN TO DATE	DATE OF RECENT RUN
MA-M1	HADRON DISSOCIATION #272	FERBEL	950 HOURS	1 OCT 1978
	PARTICLE SEARCH #490	SANDWEISS	850 HOURS	1 OCT 1978
-M3	PI-MU ATOMS #533	SCHWARTZ	600 HOURS	1 OCT 1978
-M4	KAON CHARGE EXCHANGE #585	FRANCIS	1,100 HOURS	1 OCT 1978
-OTHER	NUCLEAR CHEMISTRY #81A	KAUFMAN	197 BOMBARDMENTS	1 OCT 1978
NA-NO-DICHROM	15-FOOT NEUTRINO/H2&NE #380	BALTAY	96K PIX	1 OCT 1978
-NO-WB HORN	15-FOOT ANTI-NEUTRINO/D2 #390	GARFINKEL	10K PIX	1 APR 1979
	15-FOOT NEUTRINO/H2&NE #53A	BALTAY	163K PIX	1 JUL 1977
	NEUTRINO #553	HAND	1,500 HOURS	1 APR 1979
	15-FOOT ANTI-NEUTRINO/H2&NE#180	ERMOLOV	273K PIX	1 JUL 1977
	15-FOOT NEUTRINO/D2&HIZ #545	SNOW	317K PIX	1 APR 1979
-15-FT	15-FOOT PI- - P @ 100 #83A	KITAGAKI	11K PIX	1 APR 1975
	15-FOOT PI- - P&NE @ 200 #89	FRETTER	4K PIX	1 JUL 1975
	15-FOOT PI- - P @ 360 #384	LANNUTTI	20K PIX	1 APR 1976
-OTHER	MONOPOLE #502	BARTLETT	COSMIC RAY RUNNING	1 APR 1979
	NUCLEAR FRAGMENTS #466	KAUFMAN	26 TARGETS EXPOSED	1 APR 1979
PA-PE	PHOTOPRODUCTION #401	GORMLEY	800 HOURS	1 APR 1979
-PW	PION INCLUSIVE #258	SHOCHET	850 HOURS	1 APR 1979
	PARTICLE SEARCH #567	WITHERELL	600 HOURS	1 APR 1979

C. EXPERIMENTS THAT ARE IN TEST STAGE (3):			EXTENT OF RUN TO DATE	DATE OF RECENT RUN
MA-M2	LAMBDA BETA-DECAY #361	PONDROM	100 HOURS	1 OCT 1978
NA-15-FT	PARTICLE SEARCH #595	BODEK	500 HOURS	1 APR 1979
-OTHER	QUARK #549	LONGO	1 TARGET EXPOSED	1 OCT 1978

D. EXPERIMENTS BEING INSTALLED (11):			EXTENT OF APPROVAL
MA-M1	PARTICLE SEARCH #515	ROSEN	800 HOURS
-M6	ELASTIC SCATTERING #577	RUBINSTEIN	1,000 HOURS
	HADRON JETS #557	MALAMUD	1,600 HOURS
NA-NO-DICHROM	NEUTRINO #616	SCIULLI	4,000 HOURS
	NEUTRINO #594	TAYLOR	PARASITIC RUNNING
PA-PE	PHOTOPRODUCTION #516	WASH	1,000 HOURS
-PC	CHARGED HYPERON #497	LACH	400 HOURS
-PW	DI-MUON #326	SHOCHET	800 HOURS
	C-TEST #302	WITHERELL	400 HOURS
	DI-MUON #537	COX	1,000 HOURS
ITA-C-0	PARTICLE SEARCH #591	GUTAY	800 HOURS

E. EXPERIMENTS TO BE SET UP WITHIN A YEAR (6):			EXTENT OF APPROVAL
MA-M2	NEUTRAL HYPERON #555	DEVLIN	450 HOURS
	BEAM DUMP #613	ROE	1,000 HOURS
-M3	PARTICLE SEARCH #584	WINSTEIN	300 HOURS
-M6	PARTICLE SEARCH #580	JENKINS	800 HOURS
NA-NO-DICHROM	15-FOOT ANTI-NEUTRINO/H2&NE#388	PETERSON	200K PIX
-MUON/HADRON	PARTICLE SEARCH #610	KIRK	1,000 HOURS

NOTE: THE ABILITY TO SET UP THESE EXPERIMENTS DURING THE NEXT YEAR IS CONTINGENT ON THE AVAILABILITY OF FUNDS.

F. OTHER APPROVED EXPERIMENTS (13):			EXTENT OF APPROVAL
MA-M1	HIGH MASS PAIRS #605	BROWN	1,000 HOURS
-M3	CP VIOLATION #617	WINSTEIN	1,000 HOURS
-M6	HADRON JETS #609	SELOVE	UNSPECIFIED
NA-15-FT	15-FOOT P - P & NE @ 400 #291	MANN	25K PIX
-30-IN	30-INCH HYBRID #570	PLESS	1,500 HOURS
	30-INCH HYBRID #565	YAMAMOTO	PARASITIC RUNNING
	30-INCH HYBRID #597	WHITMORE	1,000 HOURS
-OTHER	EMULSION/PROTONS @ 500 #508	WOLTER	EMULSION EXPOSURE
	EMULSION/PROTONS @ 500 #524	WILKES	EMULSION EXPOSURE
	EMULSION/PROTONS @ 500 #576	HEBERT	3 STACKS
PA-PE	PHOTON DISSOCIATION #612	GOULIANOS	1,150 HOURS
	PARTICLE SEARCH #400	PEOPLES	UNSPECIFIED
	PHOTOPRODUCTION #458	LEE	UNSPECIFIED

PAGE 2 EXPERIMENTAL PROGRAM SITUATION REPORT (CONT'D) 14 MAY 1979

PENDING PROPOSALS (14):

AREA-BEAM		SPOKESPERSON	EXTENT OF REQUEST
NA-H1	PHOTON SEARCH #614	ROSEN	300 HOURS
-H2	DI-MUON #589	MOCKETT	750 HOURS
	MUON-NEUTRINO COINCIDENCE #618	GARELICK	400 HOURS
	TRANSITION MAGNETIC MOMENT #619	DEVLIN	250 HOURS
	CHARGED HYPERON MAG MOMENT #620	PONDROM	300 HOURS
	CP VIOLATION #621	THOMSON	1,200 HOURS
	QUARK #622	GUSTAFSON	100 HOURS
-H6	MULTIPARTICLE #523	DZIERBA	800 HOURS
	PARTICLE SEARCH #623	LAI	1,000 HOURS
	PARTICLE SEARCH #624	PLESS	2,000 HOURS
NA-15-FT	DETECTOR DEVELOPMENT #528	ROBERTS	100 HOURS
-30-IN	DETECTOR DEVELOPMENT #550	ATAC	TEST RUNNING
-OTHER	NEUTRINO #625	LEE	2,000 HOURS
ITA-C-0	PROTON-PROTON SCATTERING #500D	FRANZINI	1,000 HOURS

TABLE 3. REMAINING EXPERIMENTS BY BEAM LINE SEQUENCE (INFORMATION AS OF APRIL 1, 1979, WITH PENDING PROPOSALS ADDED)

Note: More details on the amount of running time needed for the experiments with numbers listed here can be found in the Master List in Section VII.

	EXPERIMENTAL AREA AND BEAM LINE										
	INTERNAL AREA	PROTON AREA			NEUTRINO AREA			MESON AREA				
STATUS	C-0	PE	PC	PW	hadron (N3&N5)	ν (N0)	μ/h (N1)	M1	M2	M3	M4	M6
APPROVED PROPOSALS REMAINING (52)												
In Progress (19)		401		258 567	3 exp. in 15'	380 390 53A 553 180 545		272 490		533	585	
					Other beam: 502, 466			Other beam: 81A				
In Test Stage (3)					595 Other beam: 549				361			
Being Installed (11)	591	516	497	326 302 537		616 594		515				577 557
Within a Year (6)						388	610		555 613	584		580
Unscheduled (13)		612 400 458			291 3 exp. in 30" 3 emul. exp.			605		617		609
PENDING PROPOSALS (14)												
	500D				528 550 Other beam: 625			614	589 618 619 620 621 622			523 623 624

SECTION III. EXTENT OF THE RESEARCH PROGRAM

It is useful, in a review of the Fermilab research program, to be able to assess the extent of commitments to proposals which are already approved. The information to make this assessment comes from the Situation Report in Section II, or alternatively, from the Beam Line List in Section VI. Displayed in those lists are the hours, pictures, and exposures already obtained for the approved experiments, some of which are completed. From information about the extent of approvals it is also possible to estimate the amount of running time remaining for the experiments underway and yet to be done. Data regarding the extent of approval come primarily from the Master list in Section VII.

Table 4 is a summary of data about the extent of the research program. In that table the information about the approved proposals is summarized separately by the type of experiment, i.e., bubble chamber, electronic, and others. The approximate extent of the remaining approved program in the two Fermilab bubble chambers and in the various beam lines can be obtained from information in that table.

Section III also includes a detailed summary of Fermilab neutrino experiments in the 15-ft bubble chamber which have collected data, (Table 5). Contained in that summary is information about the types of beams, accelerated proton beam energy, and total flux, which have influenced to a large extent the number of analyzable interactions expected to be available from analysis of the film. The last column of this table gives an estimate of the total number of charged-current events for each exposure. The information on numbers of events was calculated using available data about the fluxes from the various beams and was checked with spokespersons or representatives from each of the experiments. However, the authors of the Workbook assume responsibility for the accuracy of this information.

Figure 3 is a display of the number of protons delivered to external targets for each year beginning with 1973. Using that graph it is possible to make projections of possible future proton exposures.

TABLE 4. EXTENT OF THE APPROVED PROPOSALS REMAINING (AS OF APRIL 1, 1979)

Bubble Chamber Experiments

	No. Of Expts. Underway or To Be Done	Pictures/Hrs. Completed for Expts. Underway or To Be Done	Est.Pictures/Hrs. Needed to Complete Present Approval
In 15-Ft With Incident ν or $\bar{\nu}$			
Hydrogen/Neon & Wide Band Horn	2	436,000	500,000 Pictures
Deuterium & Wide Band Horn	2	327,000	250,000
Hydrogen/Neon & Dichromatic	2	96,000	300,000
			1,050,000
In 30-Inch With Incident Hadrons			
Hydrogen, With Plates	3	-	2,500 Hrs.

Electronic Experiments

Meson Area			
M1 Beam	4	1,800 Hrs.	2,800 Hrs.
M2 Beam	3	100	1,750
M3 Beam	3	600	2,800
M4 Beam	1	1,100	1,400
M6 Beam	4	-	3,400 (plus E-609)
Neutrino Area			
Dichromatic Neutrino (N0-D)	2	-	4,000 Hrs.
Horn Neutrino (N0-H)	1	1,500	-
Muon/Hadron (N1)	1	-	1,000
Hadron Beam (N5)	1	500	500

TABLE 4. (CONTINUED)

ELECTRONIC EXPERIMENTS (CONTINUED)

	No. of Expts. Underway or To Be Done	Hours Completed for Expts. Underway or To Be Done	Est. Hrs. Needed to Complete Present Approval
Proton Area			
Proton-East	5	800	2,550 Hrs. (plus E-400 & E-458)
Proton-Center	1	-	400
Proton-West	5	1,450	3,200
Internal Area	1	-	800 Hrs.

OTHER EXPERIMENTS

11

TOTAL (BUBBLE CHAMBER, ELECTRONIC AND OTHER EXPTS.) 52

TABLE 5. SUMMARY OF FERMILAB 15-FT BUBBLE CHAMBER EXPERIMENTS WITH DATA

	Run Period	Pix	Approx. Protons Targeted	Est. CC Events
Experiment #28A				
ν's in 21% neon, 2 horns, single plane EMI				
(300 GeV)	Apr. '75-June'75	97K	7×10^{17}	ν: 7. K
Experiment #31A				
$\bar{\nu}$'s and ν's in hydrogen, 1 and 2 horns without plug, single plane EMI				
(1 horn, 300 GeV)	Nov. '74-Dec.'74	26K	4×10^{17}	$\bar{\nu}$: .1K
(2 horns)	Jan. '76-Feb.'76	38K	5×10^{17}	$\bar{\nu}$: .4K
(2 horns)	July '77-Aug.'77	147K	22×10^{17}	ν: 2. K
		211K		
Experiment #45/#155				
ν's in hydrogen, 1 and 2 horns, single plane EMI				
(1 horn, 300 GeV)	July '74-Aug.'74	14K	2×10^{17}	
(1 horn, 300 GeV)	Nov. '74	67K	4×10^{17}	ν: .6K
(2 horns)	Dec. '75-Jan.'76	95K	12×10^{17}	ν: 2.5K
		176K		
Experiment #53A				
ν's in 62% neon, bare target and 2 horns, single plane EMI				
(bare target)	Apr. '76	16K	2×10^{17}	ν: 2. K
(2 horns)	Apr. '76-May '76	48K	5×10^{17}	ν:30. K
(2 horns)	Mar. '77	45K	5×10^{17}	
(2 horns)	May '77	54K	8×10^{17}	ν:70. K
		163K		
Experiment #172				
$\bar{\nu}$'s and ν's in 62% neon, 1 horn without plug, single plane EMI				
	May '76	49K	6×10^{17}	$\bar{\nu}$: 3. K

TABLE 5. (CONTINUED)

	Run Period	Pix	Approx. Protons Targeted	Est. CC Events
Experiment #180				
$\bar{\nu}$'s in 21% and 62% neon, 2 horns with plug and SSBT, single plane EMI				
(21%,2 horns,300 GeV)	Apr. '75-May '75	76K	10×10^{17}	$\bar{\nu}$: .6K
(62%, 2 horns)	Feb. '77-Mar.'77	93K	9×10^{17}	$\bar{\nu}$: 5.5K
(62%, SSBT)	May '77-June'77	104K	17×10^{17}	$\bar{\nu}$: .8K
		273K		
Experiment #380				
ν's in 55% neon, dichromatic, double plane EMI	July '78-Aug.-'78			
	dichromatic @200 GeV	23K	2×10^{17}	ν: .3K
	dichromatic @300 GeV	73K		ν: .8K
		96K		
Experiment #460/#546				
ν's and $\bar{\nu}$'s in 58% and 47% neon, triplet, double plane EMI				
(58% neon)	Dec. '76	22K	2×10^{17}	ν: 2. K
(47% neon)	Oct. '77-Jan.-'78	375K	45×10^{17}	ν:17. K
Experiment #545				
ν's in D_2, single horn, double plane EMI, 350 GeV	Nov. '78-Jan. '79	317K	50×10^{17}	ν:~20 K

Notes: 1) Unless otherwise noted, exposures were made using a 400 GeV proton beam.

2) Neon mixtures are expressed in per cent neon by volume.

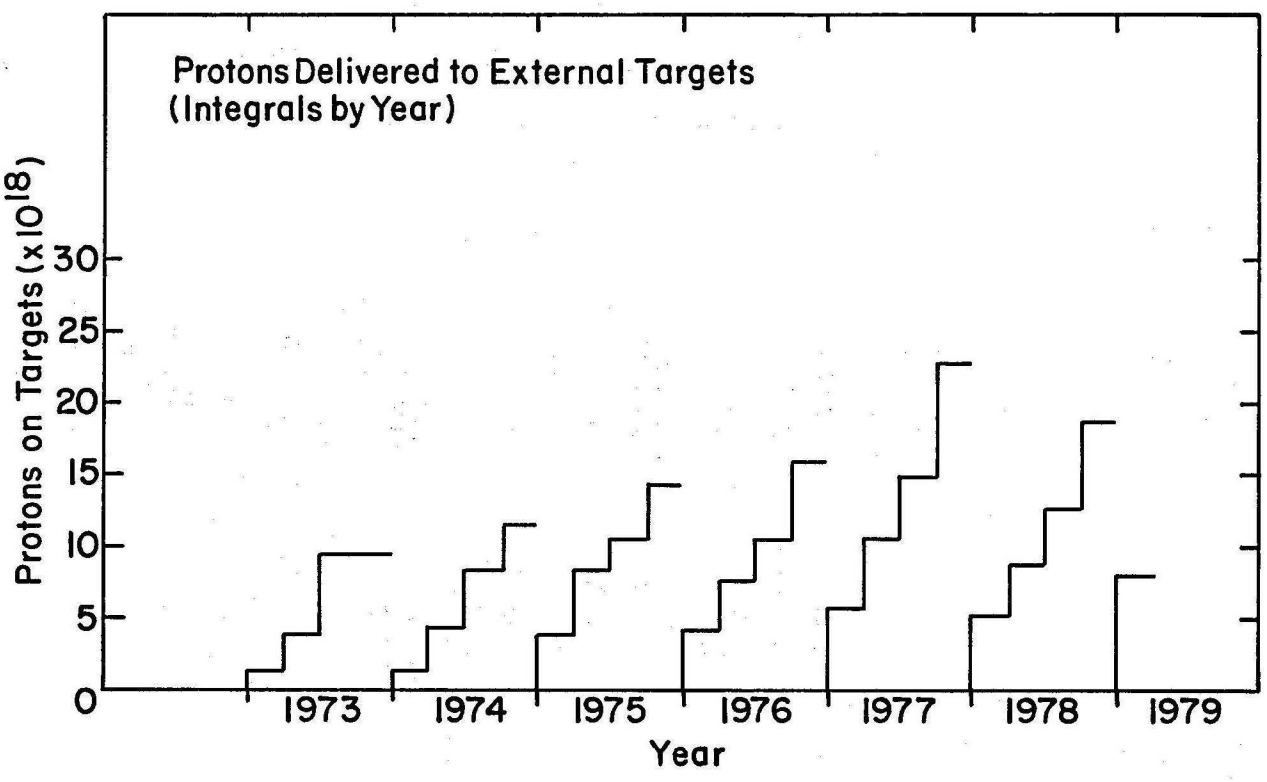


Figure 3. Number of protons accelerated in the Main Accelerator and transported to the external targets from 1973 through the first quarter of 1979. These accelerated protons may be directed to as many as seven primary targets in the external experimental areas. During the one-year period from April 1, 1978, through March 31, 1979, a total of 2.2×10^{19} protons were accelerated and transported to the external targets.

SECTION IV. HISTORY AND DESCRIPTION OF MAJOR RESEARCH ACTIVITIES DURING 1978 AND EARLY 1979

The research activities at Fermilab are presented on the following pages. Information is given about measurements completed by experiments during 1978 and early 1979. Histories of experiments (Figs. 4 and 5) use the numeral assigned to the proposal with an arrow to indicate the approximate dates and duration of beam use. For more information on the experiments listed one may refer to the Master List in Section VII.

In Tables 6 and 7 specific major research activities are described in more detail. There the experiments are listed under the experimental area in which they are located. This arrangement facilitates a comparison of the figures and tables since reference to a specific experiment in the history (Figs. 4 and 5), is possible using the number in parentheses after each entry in Tables 6 and 7.

At the summer Physics Advisory Committee meeting the plans and objectives for the remainder of 1979 and beyond will be discussed and recommendations formulated.

FIGURE 4. SCHEMATIC HISTORY OF FERMILAB EXPERIMENTS DURING 1979 (TO MAY).

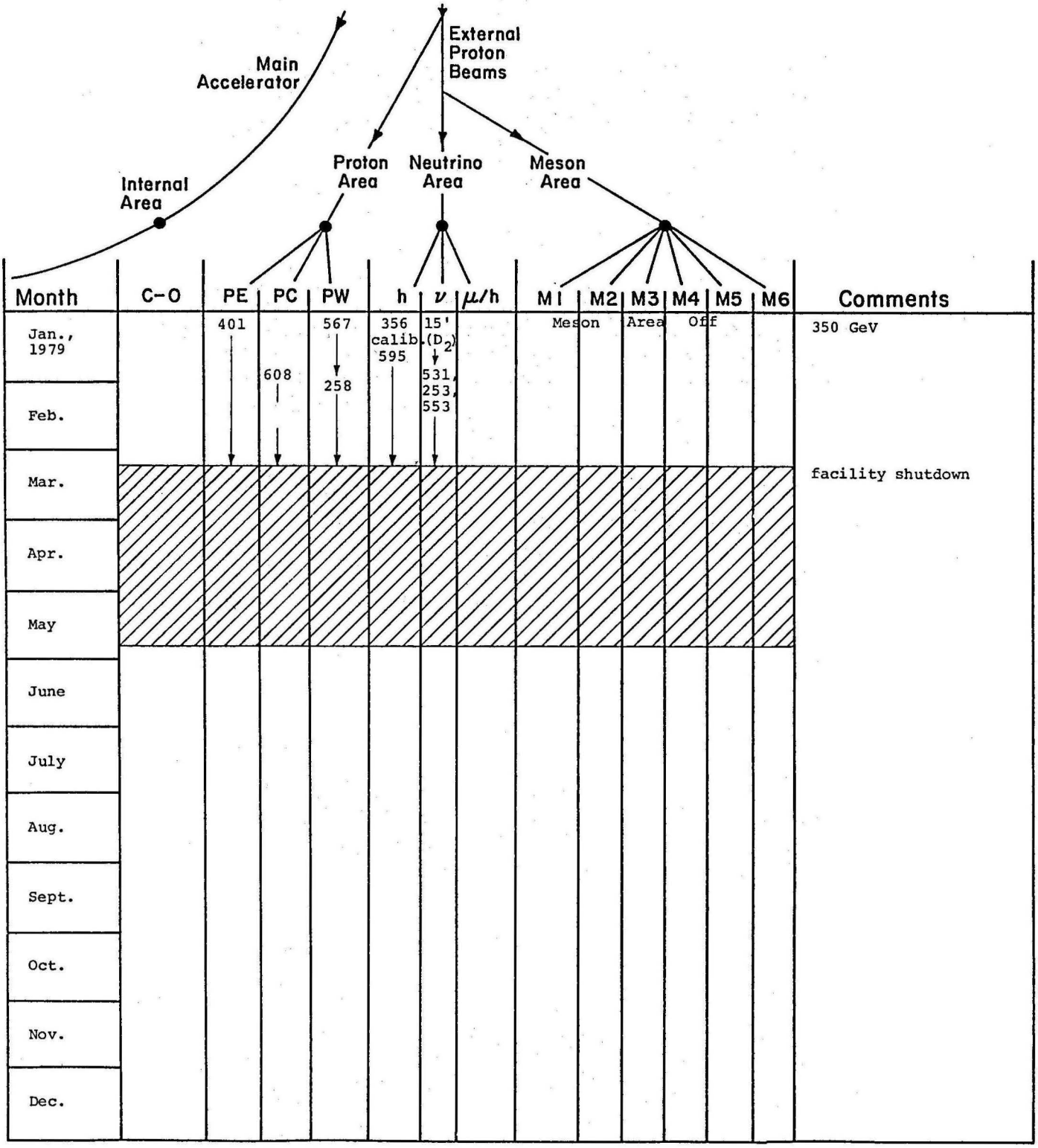


TABLE 6. DESCRIPTION OF MAJOR RESEARCH ACTIVITIES IN THE EXPERIMENTAL AREAS DURING EARLY 1979

(The individual experiment numbers are shown in parentheses.)

Neutrino Area
Continued study of neutrino interactions in the 15-ft bubble chamber filled with deuterium (545)
Continued measurement of elastic ν_μ- electron scattering (253)
Continued search for charmed particle production by neutrinos and study of their decays in emulsion plates (531,553,564)
Tuneup and data for study of particles produced in proton interactions which decay leptonically or semi-leptonically (595)
Proton Area
Photoproduction of two-particle final states (401)
Search for the η_c produced in proton interactions and decaying to $\phi\phi$ (608)
Search for charmed particle decays into three charged hadrons (567)
Study of particle production at large transverse momentum by pions at 100 and 200 GeV/c (258)

FIGURE 5. SCHEMATIC HISTORY OF FERMILAB EXPERIMENTS DURING 1978.

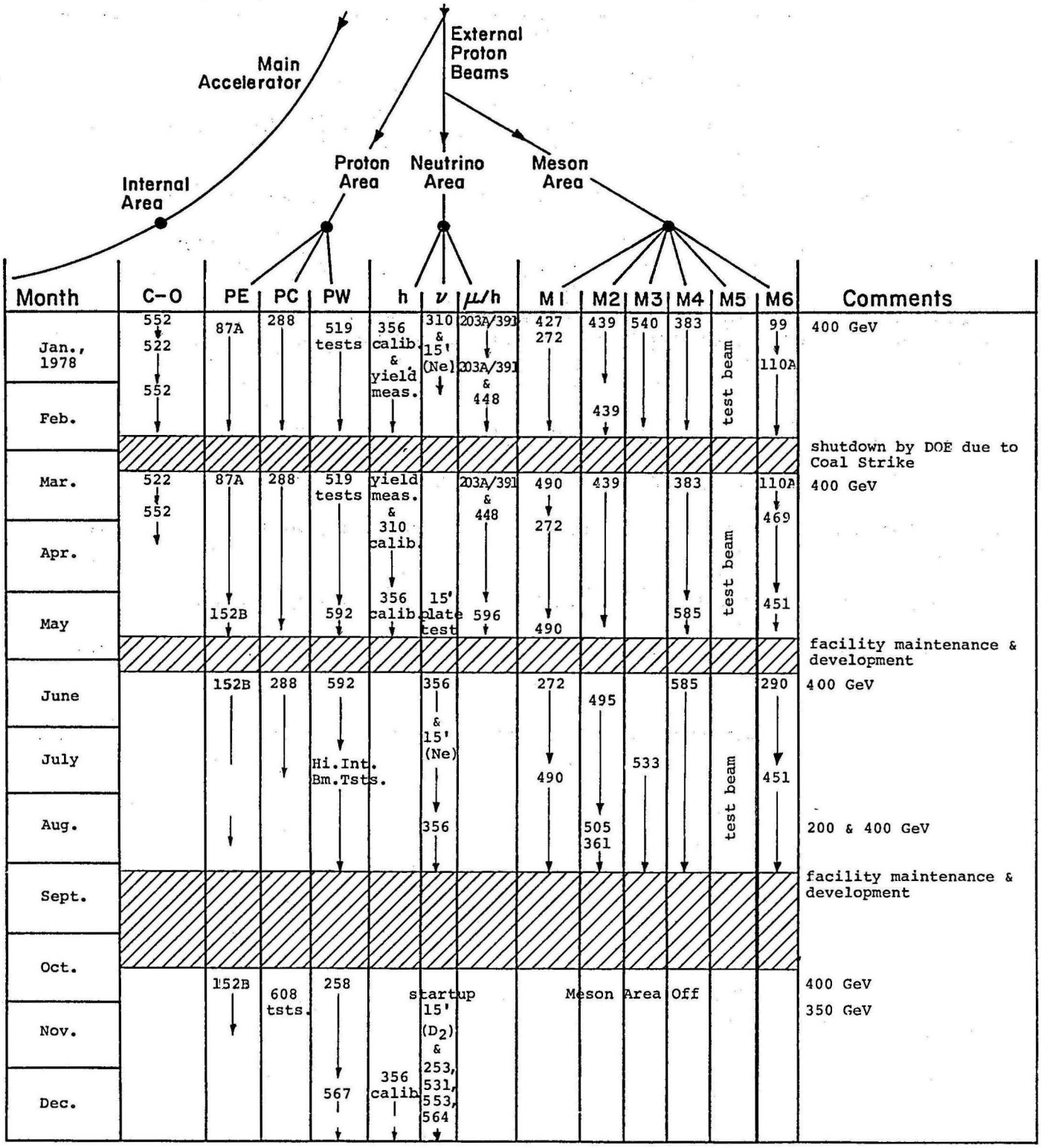


TABLE 7. DESCRIPTION OF MAJOR RESEARCH ACTIVITIES
IN THE EXPERIMENTAL AREAS DURING 1978
(The individual experiment numbers are shown in parentheses.)

Neutrino Area

Search for heavy neutral leptons decaying into two muons and a neutrino; measurement of deep-inelastic virtual Compton scattering; study of deep-inelastic muon scattering - using a 225 GeV/c muon beam (203A/391)

Investigation of virtual photoabsorption by nuclear matter - using a 225 GeV/c muon beam with interactions in several nuclear targets (448)

Use of Cherenkov counter and time-of-flight techniques to search for heavy long-lived particles produced by interactions of the 400 GeV/c primary proton beam (596)

Measurement of elastic ν_μ - electron scattering (253)

Measurement of neutrino total cross sections using neutrinos produced by a dichromatic beam selecting pions and kaons with momenta of 200 and 300 GeV/c (356); simultaneous exposures in the 15 ft bubble chamber filled with a heavy mixture of neon and hydrogen (380)

Study of neutrino interactions in the 15 ft bubble chamber filled with deuterium (545)

Search for charmed particle production by neutrinos and study of their decays in emulsion plates (531,553,564)

Proton Area

Search for charmed particles produced in photon interactions, predominantly with decays into charged and neutral hadrons (87A)

Measurement of elastic Compton scattering using tagged photons with energies of 30 to 150 GeV (152B)

Study of dimuon production from 400 GeV proton interactions (288)

Study of the connections between scaling phenomena and the determination of structure functions in elementary particle and nuclear physics through collisions of 400 GeV protons with nuclear targets (592)

Study of particle production at large transverse momentum by pions at 200 GeV/c (258)

Meson Area

Study of inelastic Coulomb excitation and diffractive production of hadrons (272)

Search for charmed particle production and decay using a high resolution streamer chamber (490)

Meson Area (Cont'd)

Study of high mass dimuon and multimuon spectra produced by 400 GeV proton interactions (439)

Measurement of the production spectrum and polarization of Ξ^0 and $\bar{\Lambda}^0$ hyperons (495); search for polarization of protons produced in 400 GeV inclusive reactions and detected through study of Λ^0 decays (505)

Search for neutral particles produced by bombarding a target with neutrons and detected through delayed energy release (540)

Measurement of the rate of formation of π-μ atoms in K_L^0 -decay (533)

Study of the inclusive reaction $K^- p \rightarrow K_s^0 X$ at 75, 125, and 200 GeV/c (383); measurement of exclusive $K^- p$ charge exchange at 120 and 180 GeV/c (585)

Study of multiparticle states from interactions of π^- at 20, 50, and 175 GeV/c, primarily for study of $\pi^- p \rightarrow \pi^+ \pi^- n$ (110A)

Use of Cherenkov counter and time-of-flight techniques to search for heavy long-lived particles produced by interactions of the 400 GeV/c primary proton beam with the Meson Area production target (469)

Measurement of $\pi^{\pm}$ -p backward scattering at 50 and 70 GeV/c (290)

Study of the A- dependence of inclusive processes (451)

Internal Area

Continued measurement of the polarization of recoil protons from p-p and p-carbon inelastic scattering (522)

Continued study of p-p and p-d elastic scattering (552)

SECTION V. PHYSICS COVERAGE OF APPROVED AND PENDING PROPOSALS

A few years ago a survey was made of the Fermilab experiments and proposals with an eye toward understanding their potential physics contributions. This work resulted in a review article in which the Fermilab experiments were divided into subtopics which best described the emphasis of their measurements within the field of high energy physics. The subtopics used in that study continue to provide the basis for describing the Fermilab research program. However, there have been several changes in the emphasis of the research, particularly in the area of particle search experiments.

While assigning physics categories to experiments or proposals it is evident that many of them may have several objectives. Thus, some proposals are listed several times, leading to a document with multiple entries. The computerized Physics Category List contains detailed information about approved and pending proposals assigned to the various physics categories. Within each physics category the approved proposals are listed first, with those which are completed in numerical order. Those that remain to be completed are listed in the order in which they will probably receive use of the beam. Included next to the entry for each experiment is the extent of running time, either completed or anticipated. A tabular summary of the numbers of proposals shown in the Physics Category List is shown in Table 8. However, considerable abbreviation was necessary and, for example, the detailed outline of the particle search experiments is not evident in that table.

TABLE 8. TABULAR SUMMARY OF APPROVED AND PENDING PROPOSALS BY PHYSICS CATEGORY

Note: Some proposals may be entered under several different physics categories.

Physics Category	Exp. Completed	Exp. Underway	Exp. To Be Done	Sub-Totals	Pending Proposals
Hadron Interactions Using Electronic Detectors (HED)					
1. Total Cross Sect. Exp.	11	0	1	12	0
2. Elastic Scatt. Exp.	17	0	2	19	1
3. Charge Exch. Scatt.	3	1	0	4	0
4. Exclusive Reaction Exp.	5	0	0	5	0
5. Quasi Two-Body Exp.	1	0	0	1	1
6. Inclusive Exp.-Detecting:					
(a) Charged Hadrons	15	1	2	18	0
(b) γ or Neutral Parts.	14	0	1	15	1
(c) Leptons	7	1	0	8	0
(d) Using Missing Mass	16	0	0	16	1
7. Dissociation Exp.	14	1	0	15	0
8. Multiparticle Exp.					
(a) General	1	0	1	2	1
(b) Multi-γ States	3	0	0	3	0
(c) Large-p_t	3	0	2	5	1
(d) Multileptons	9	0	3	12	1
(e) Other Expts.	3	0	0	3	0
9. Hyperon and K^o Exp.	8	1	3	12	3
Particle Interactions in Bubble Chambers - Mostly Hadrons (HBC)					
1. Positive Particle Int.	17	0	4	21	0
2. Negative Particle Int.	13	3	2	18	1
Electromagnetic Interactions Using Electronic Detectors (EM)					
1. Total Cross Sect. Exp.	1	0	0	1	0
2. Initiated by Photons	3	1	3	7	0
3. Initiated by Electrons	0	0	0	0	0
4. Initiated by Muons	7	0	0	7	0
5. Electromagnetic Radii	3	0	0	3	0

TABLE 8. (CONTINUED)

Note: Some proposals may be entered under several different physics categories.

Physics Category	Exp. Completed	Exp. Underway	Exp. To Be Done	Sub-Totals	Pending Proposals
Weak Interactions (W)					
1. Using Electr. Detectors	10	0	2	12	1
2. Using 15-Ft. B. C.	6	5	2	13	0
3. Particle Decays	0	1	1	2	1
Particle Searches (S)					
1. Monopoles	6	1	0	7	0
2. Quarks	6	1	0	7	1
3. W-Bosons	12	2	0	14	1
4. Heavy Leptons	18	2	1	21	0
5. Charmed Particles	37	8	7	52	3
6. Long-Lived Particles	9	0	1	10	1
7. Super-Heavy Elements	4	0	1	5	0
8. Other Particles	1	2	3	6	1
Colliding Beam Expts. (CB)	0	0	0	0	0
Emulsion Experiments (E)					
1. Exposures to Hadrons	55	0	3	58	0
2. Exposures to Leptons	14	1	0	15	0
Miscellaneous Experiments (M)					
1. Transition Rad. Detect.	3	0	0	3	1
2. Other Detectors	4	0	0	4	1
3. Nuclear Chemistry	2	2	0	4	0
4. General Rad. Studies	2	0	0	0	0
5. Other Exps.	4	0	0	0	0

Total Number of Approved Experiments - 300
Total Number of Pending Proposals - 14

PHYSICS CATEGORY LIST

LIST 13. APPROVED AND PENDING PROPOSALS LISTED BY PHYSICS CATEGORY

NOTES: SOME PROPOSALS MAY BE ENTERED UNDER SEVERAL DIFFERENT CATEGORIES
THE EXTENT OF RUNNING FOR EXPERIMENTS UNDERWAY IS SHOWN IN PARENTHESES.

PHYSICS CATEGORY	SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
HADRON INTERACTIONS USING ELECTRONIC DETECTORS (HED)					
1. TOTAL CROSS SECTION EXPERIMENTS					
	NEUTRON CROSS SECTION #4	LONGO, MICHAEL J.	APPROVED	COMPLETED	1,450 HOURS
	NEUTRAL HYPERON #8	PONDROM, LEE G.	APPROVED	COMPLETED	2,450 HOURS
	NEUTRON DISSOCIATION #27A	ROSEN, JEROME L.	APPROVED	COMPLETED	850 HOURS
	PROTON-PROTON SCATTERING #36A	COOL, RODNEY L.	APPROVED	COMPLETED	700 HOURS
	ELASTIC SCATTERING #69A	LACH, JOSEPH	APPROVED	COMPLETED	2,800 HOURS
	K ZERO REGENERATION #82	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	3,500 HOURS
	TOTAL CROSS SECTION #104	KYCIA, THADDEUS F.	APPROVED	COMPLETED	2,650 HOURS
	PION CHARGE EXCHANGE #111	TOLLESTRUP, ALVIN V.	APPROVED	COMPLETED	1,800 HOURS
	NEUTRON DISSOCIATION #305	GOBBI, BRUNO	APPROVED	COMPLETED	1,400 HOURS
	PROTON-NUCLEON SCATTERING #381	MALAMUD, ERNEST	APPROVED	COMPLETED	600 HOURS
	K ZERO CROSS SECTION #486	WINSTEIN, BRUCE D.	APPROVED	COMPLETED	950 HOURS
	CHARGED HYPERON #497	LACH, JOSEPH	APPROVED	BEING INSTALLED	400 HOURS
2. ELASTIC SCATTERING EXPERIMENTS					
	ELASTIC SCATTERING #7	MEYER, DONALD I.	APPROVED	COMPLETED	2,350 HOURS
	NEUTRAL HYPERON #8	PONDROM, LEE G.	APPROVED	COMPLETED	2,450 HOURS
	NEUTRON BACKWARD SCATTERING #12	REAY, NEVILLE W.	APPROVED	COMPLETED	1,300 HOURS
	PROTON-PROTON SCATTERING #36A	COOL, RODNEY L.	APPROVED	COMPLETED	700 HOURS
	POLARIZED SCATTERING #61	CHAMBERLAIN, OWEN	APPROVED	COMPLETED	1,900 HOURS
	ELASTIC SCATTERING #69A	LACH, JOSEPH	APPROVED	COMPLETED	2,800 HOURS
	ELASTIC SCATTERING #96	RITSON, DAVID	APPROVED	COMPLETED	2,550 HOURS
	PROTON-PROTON ELASTIC #177A	OREAR, JAY	APPROVED	COMPLETED	2,400 HOURS
	PROTON-DEUTERON SCATTERING #186	MELISSINOS, ADRIAN	APPROVED	COMPLETED	450 HOURS
	PROTON-NUCLEON SCATTERING #198A	OLSEN, STEPHEN L.	APPROVED	COMPLETED	900 HOURS
	NEUTRON ELASTIC SCATTERING #248	LONGO, MICHAEL J.	APPROVED	COMPLETED	2,400 HOURS
	PROTON-HELIUM SCATTERING #289	MALAMUD, ERNEST	APPROVED	COMPLETED	1,050 HOURS
	BACKWARD SCATTERING #290	BAKER, WINSLOW F.	APPROVED	COMPLETED	1,500 HOURS
	PROTON-PROTON POLARIZATION #313	NEAL, HOMER A.	APPROVED	COMPLETED	850 HOURS
	PROTON-NUCLEON SCATTERING #381	MALAMUD, ERNEST	APPROVED	COMPLETED	600 HOURS
	HADRON DISSOCIATION #396	GOULIANOS, KONSTANTIN	APPROVED	COMPLETED	1,200 HOURS
	P-N SCATTERING #552	SANNES, FELIX	APPROVED	COMPLETED	950 HOURS
	CHARGED HYPERON #497	LACH, JOSEPH	APPROVED	BEING INSTALLED	400 HOURS
	ELASTIC SCATTERING #577	RUBINSTEIN, ROY	APPROVED	BEING INSTALLED	1,000 HOURS
	PROTON-PROTON SCATTERING #500D	FRANZINI, PAOLO	UNCONSIDERED		1,000 HOURS
3. CHARGE EXCHANGE SCATTERING EXPERIMENTS					
	NEUTRON BACKWARD SCATTERING #12	REAY, NEVILLE W.	APPROVED	COMPLETED	1,300 HOURS
	PION CHARGE EXCHANGE #111	TOLLESTRUP, ALVIN V.	APPROVED	COMPLETED	1,800 HOURS
	INCLUSIVE NEUTRAL MESON #350	KENNEY, ROBERT W.	APPROVED	COMPLETED	900 HOURS
	KAON CHARGE EXCHANGE #585	FRANCIS, WILLIAM R.	APPROVED	IN PROGRESS	(1,100 HOURS)
4. EXCLUSIVE REACTION EXPERIMENTS					
	NEUTRON BACKWARD SCATTERING #12	REAY, NEVILLE W.	APPROVED	COMPLETED	1,300 HOURS
	K ZERO REGENERATION #82	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	3,500 HOURS
	ASSOCIATED PRODUCTION #99	DIEBOLD, ROBERT E.	APPROVED	COMPLETED	750 HOURS
	BACKWARD SCATTERING #290	BAKER, WINSLOW F.	APPROVED	COMPLETED	1,500 HOURS
	K ZERO REGENERATION #425	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	1,400 HOURS
5. QUASI TWO-BODY EXPERIMENTS					
	PROTON-PROTON POLARIZATION #313	NEAL, HOMER A.	APPROVED	COMPLETED	850 HOURS
	MULTIPARTICLE #523	DZIERBA, ALEXANDER R.	DEFERRED		800 HOURS
6. INCLUSIVE EXPERIMENTS					
(A). DETECTING CHARGED HADRONS					
	NEUTRON DISSOCIATION #27A	ROSEN, JEROME L.	APPROVED	COMPLETED	850 HOURS
	MISSING MASS #51A	VON GOELER, EBERHARD	APPROVED	COMPLETED	800 HOURS
	LEPTON #70	LEDERMAN, LEON M.	APPROVED	COMPLETED	2,800 HOURS
	ELASTIC SCATTERING #96	RITSON, DAVID	APPROVED	COMPLETED	2,550 HOURS
	PARTICLE SEARCH #100A	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,150 HOURS
	INCLUSIVE SCATTERING #118A	BRANDENBURG, GEORGE W.	APPROVED	COMPLETED	2,550 HOURS
	PROTON-NUCLEON SCATTERING #198A	OLSEN, STEPHEN L.	APPROVED	COMPLETED	900 HOURS
	PARTICLE PRODUCTION #284	WALKER, JAMES K.	APPROVED	COMPLETED	1,150 HOURS
	PARTICLE SEARCH #300	PIROUE, PIERRE A.	APPROVED	COMPLETED	750 HOURS
	INCLUSIVE SCATTERING #324	WEISBERG, HOWARD L.	APPROVED	COMPLETED	1,200 HOURS
	PARTICLE PRODUCTION #418	SANNES, FELIX	APPROVED	COMPLETED	900 HOURS
	INCLUSIVE SCATTERING #451	BARTON, DONALD S.	APPROVED	COMPLETED	500 HOURS
	PROTON POLARIZATION #522	OGREN, HAROLD O.	APPROVED	COMPLETED	700 HOURS
	P-N SCATTERING #552	SANNES, FELIX	APPROVED	COMPLETED	950 HOURS
	NUCLEAR SCALING #592	FRANKEL, SHERMAN	APPROVED	COMPLETED	500 HOURS
	PION INCLUSIVE #258	SHOCHET, MELVIN J.	APPROVED	IN PROGRESS	(850 HOURS)
	C-TEST #302	WITHERELL, MICHAEL	APPROVED	BEING INSTALLED	400 HOURS
	CHARGED HYPERON #497	LACH, JOSEPH	APPROVED	BEING INSTALLED	400 HOURS
(B). DETECTING PHOTONS OR NEUTRAL PARTICLES					
	NEUTRAL HYPERON #8	PONDROM, LEE G.	APPROVED	COMPLETED	2,450 HOURS
	PHOTON SEARCH #63A	WALKER, JAMES K.	APPROVED	COMPLETED	2,600 HOURS
	LEPTON #70	LEDERMAN, LEON M.	APPROVED	COMPLETED	2,800 HOURS
	PHOTON SEARCH #95A	COX, BRADLEY	APPROVED	COMPLETED	3,400 HOURS
	PION CHARGE EXCHANGE #111	TOLLESTRUP, ALVIN V.	APPROVED	COMPLETED	1,800 HOURS
	PHOTON SEARCH #120	CLINE, DAVID B.	APPROVED	COMPLETED	1,200 HOURS
	INCLUSIVE PHOTON #268	MELLEMA, JOEL	APPROVED	COMPLETED	1,050 HOURS
	INCLUSIVE NEUTRAL MESON #350	KENNEY, ROBERT W.	APPROVED	COMPLETED	900 HOURS
	INCLUSIVE K-SHORT #383	KOBRAK, HANS G. E.	APPROVED	COMPLETED	2,200 HOURS
	INCLUSIVE NEUTRON #404	GUSTAFSON, RICHARD	APPROVED	COMPLETED	350 HOURS
	PARTICLE PRODUCTION #415	PONDROM, LEE G.	APPROVED	COMPLETED	100 HOURS
	LAMBDA POLARIZATION #441	PONDROM, LEE G.	APPROVED	COMPLETED	400 HOURS
	XI-ZERO PRODUCTION #495	HELLER, KENNETH	APPROVED	COMPLETED	700 HOURS
	PROTON POLARIZATION #505	YAMIN, SAMUEL PETER	APPROVED	COMPLETED	50 HOURS
	NEUTRAL HYPERON #555	DEVLIN, THOMAS J.	APPROVED	SET UP IN A YEAR	450 HOURS
	PHOTON SEARCH #614	ROSEN, JEROME L.	DEFERRED		300 HOURS
(C). DETECTING LEPTONS					
	MUON SEARCH #48	ADAIR, ROBERT K.	APPROVED	COMPLETED	500 HOURS
	LEPTON #70	LEDERMAN, LEON M.	APPROVED	COMPLETED	2,800 HOURS
	PARTICLE SEARCH #100A	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,150 HOURS
	PARTICLE SEARCH #184	WANDERER, PETER	APPROVED	COMPLETED	800 HOURS
	PARTICLE SEARCH #300	PIROUE, PIERRE A.	APPROVED	COMPLETED	750 HOURS

PHYSICS CATEGORY	SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
	MUON SEARCH #335	PACKLER, ORRIN D.	APPROVED	COMPLETED	300 HOURS
	MUON SEARCH #435	ADAIR, ROBERT K.	APPROVED	COMPLETED	250 HOURS
	PION INCLUSIVE #258	SHOCHET, MELVIN J.	APPROVED	IN PROGRESS	(850 HOURS)
(D).	USING MISSING MASS TECHNIQUE				
	PROTON-PROTON INELASTIC #14A	FRANZINI, PAOLO	APPROVED	COMPLETED	140 HOURS
	PROTON-PROTON SCATTERING #36A	COOL, RODNEY L.	APPROVED	COMPLETED	700 HOURS
	MISSING MASS #51A	VON GOELER, EBERHARD	APPROVED	COMPLETED	800 HOURS
	PROTON-PROTON MISSING MASS #67A	SANNES, FELIX	APPROVED	COMPLETED	600 HOURS
	ELASTIC SCATTERING #96	RITSON, DAVID	APPROVED	COMPLETED	2,550 HOURS
	PROTON-DEUTERON SCATTERING #186	MELISSINOS, ADRIAN	APPROVED	COMPLETED	450 HOURS
	PROTON-NUCLEON INCLUSIVE #188	SANNES, FELIX	APPROVED	COMPLETED	1,050 HOURS
	PROTON-NUCLEON SCATTERING #198A	OLSEN, STEPHEN L.	APPROVED	COMPLETED	900 HOURS
	PROTON-PROTON INELASTIC #221	FRANZINI, PAOLO	APPROVED	COMPLETED	950 HOURS
	PROTON-HELIUM SCATTERING #289	MALAMUD, ERNEST	APPROVED	COMPLETED	1,050 HOURS
	PROTON-PROTON POLARIZATION #313	NEAL, HOMER A.	APPROVED	COMPLETED	850 HOURS
	PROTON-NUCLEON INELASTIC #317	COOL, RODNEY L.	APPROVED	COMPLETED	1,400 HOURS
	PROTON-PROTON INELASTIC #321	LEE-FRANZINI, JULIET	APPROVED	COMPLETED	1,900 HOURS
	PROTON-NUCLEON SCATTERING #381	MALAMUD, ERNEST	APPROVED	COMPLETED	600 HOURS
	HADRON DISSOCIATION #396	GOULIANOS, KONSTANTIN	APPROVED	COMPLETED	1,200 HOURS
	P-N SCATTERING #552	SANNES, FELIX	APPROVED	COMPLETED	950 HOURS
	PROTON-PROTON SCATTERING #500D	FRANZINI, PAOLO	UNCONSIDERED		1,000 HOURS
7.	COULOMB AND DIFFRACTION DISSOCIATION EXPERIMENTS				
	PROTON-PROTON INELASTIC #14A	FRANZINI, PAOLO	APPROVED	COMPLETED	140 HOURS
	NEUTRON DISSOCIATION #27A	ROSEN, JEROME L.	APPROVED	COMPLETED	850 HOURS
	PROTON-PROTON SCATTERING #36A	COOL, RODNEY L.	APPROVED	COMPLETED	700 HOURS
	PROTON-PROTON MISSING MASS #67A	SANNES, FELIX	APPROVED	COMPLETED	600 HOURS
	PION DISSOCIATION #86A	LUBATTI, HENRY J.	APPROVED	COMPLETED	800 HOURS
	PROTON-DEUTERON SCATTERING #186	MELISSINOS, ADRIAN	APPROVED	COMPLETED	450 HOURS
	PROTON-PROTON INELASTIC #221	FRANZINI, PAOLO	APPROVED	COMPLETED	950 HOURS
	PROTON-HELIUM SCATTERING #289	MALAMUD, ERNEST	APPROVED	COMPLETED	1,050 HOURS
	NEUTRON DISSOCIATION #305	GOBBI, BRUNO	APPROVED	COMPLETED	1,400 HOURS
	PROTON-NUCLEON INELASTIC #317	COOL, RODNEY L.	APPROVED	COMPLETED	1,400 HOURS
	PROTON-PROTON INELASTIC #321	LEE-FRANZINI, JULIET	APPROVED	COMPLETED	1,900 HOURS
	PARTICLE SEARCH #369	KIRK, THOMAS B. W.	APPROVED	COMPLETED	1,000 HOURS
	PROTON-NUCLEON SCATTERING #381	MALAMUD, ERNEST	APPROVED	COMPLETED	600 HOURS
	HADRON DISSOCIATION #396	GOULIANOS, KONSTANTIN	APPROVED	COMPLETED	1,200 HOURS
	HADRON DISSOCIATION #272	FERBEL, THOMAS	APPROVED	IN PROGRESS	(950 HOURS)
8.	MULTIPARTICLE EXPERIMENTS				
(A).	GENERAL STUDIES OF MULTIHADRON STATES				
	MULTIPARTICLE #110A	DZIERBA, ALEXANDER R.	APPROVED	COMPLETED	1,600 HOURS
	HIGH MASS PAIRS #605	BROWN, CHARLES N.	APPROVED	UNSCHEDULED	1,000 HOURS
	MULTIPARTICLE #523	DZIERBA, ALEXANDER R.	DEFERRED		800 HOURS
(B).	STUDIES OF MULTIPHOTON STATES				
	MULTIGAMMA #22	COLLINS, GEORGE B.	APPROVED	COMPLETED	350 HOURS
	PHOTON SEARCH #95A	COX, BRADLEY	APPROVED	COMPLETED	3,400 HOURS
	MULTIGAMMA #230	LONGO, MICHAEL J.	APPROVED	COMPLETED	50 HOURS
(C).	STUDIES OF LARGE - PT PHENOMENA				
	HADRON JETS #236A	HOCKETT, PAUL N.	APPROVED	COMPLETED	1,700 HOURS
	HADRON JETS #260	MCLEOD, DONALD W.	APPROVED	COMPLETED	2,300 HOURS
	HADRON JETS #395	SELOVE, WALTER	APPROVED	COMPLETED	1,150 HOURS
	HADRON JETS #557	MALAMUD, ERNEST	APPROVED	BEING INSTALLED	1,600 HOURS
	HADRON JETS #609	SELOVE, WALTER	APPROVED	UNSCHEDULED	
	PARTICLE SEARCH #624	PLESS, IRWIN A.	UNCONSIDERED		2,000 HOURS
(D).	STUDIES OF MULTILEPTON STATES				
	DI-LEPTON #288	LEDERMAN, LEON M.	APPROVED	COMPLETED	6,850 HOURS
	PARTICLE SEARCH #325	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,500 HOURS
	DI-MUON #331	PILCHER, JAMES E.	APPROVED	COMPLETED	1,400 HOURS
	DI-MUON #337	BARTLY, DAVID P.	APPROVED	COMPLETED	5 HOURS
	DI-MUON #358	LEE, WONTONG	APPROVED	COMPLETED	400 HOURS
	PARTICLE SEARCH #365	GARELICK, DAVID A.	APPROVED	COMPLETED	200 HOURS
	DI-MUON #436	ADAIR, ROBERT K.	APPROVED	COMPLETED	200 HOURS
	MULTI-MUON #439	GARELICK, DAVID A.	APPROVED	COMPLETED	1,700 HOURS
	DI-MUON #444	SMITH, A. J. STEWART	APPROVED	COMPLETED	1,100 HOURS
	DI-MUON #326	SHOCHET, MELVIN J.	APPROVED	BEING INSTALLED	800 HOURS
	DI-MUON #537	COX, BRADLEY	APPROVED	BEING INSTALLED	1,000 HOURS
	HIGH MASS PAIRS #605	BROWN, CHARLES N.	APPROVED	UNSCHEDULED	1,000 HOURS
	DI-MUON #589	HOCKETT, PAUL N.	UNCONSIDERED		750 HOURS
(E).	OTHER EXPERIMENTS				
	INCLUSIVE SCATTERING #118A	BRANDENBURG, GEORGE W.	APPROVED	COMPLETED	2,550 HOURS
	MULTIPLICITIES #178	BUSZA, WIT	APPROVED	COMPLETED	800 HOURS
	NEUTRON-NUCLEUS INELASTIC #438	JONES, LAWRENCE W.	APPROVED	COMPLETED	350 HOURS
9.	HYPERON AND K-ZERO EXPERIMENTS				
	NEUTRAL HYPERON #8	PONDROM, LEE G.	APPROVED	COMPLETED	2,450 HOURS
	K ZERO REGENERATION #82	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	3,500 HOURS
	K ZERO CHARGE RADIUS #226	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	1,200 HOURS
	K ZERO REGENERATION #425	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	1,400 HOURS
	LAMBDA MAGNETIC MOMENT #440	BUNCE, GERRY	APPROVED	COMPLETED	250 HOURS
	LAMBDA POLARIZATION #441	PONDROM, LEE G.	APPROVED	COMPLETED	400 HOURS
	K ZERO CROSS SECTION #486	WINSTEIN, BRUCE D.	APPROVED	COMPLETED	950 HOURS
	XI-ZERO PRODUCTION #495	HELLER, KENNETH	APPROVED	COMPLETED	700 HOURS
	LAMBDA BETA-DECAY #361	PONDROM, LEE G.	APPROVED	IN TEST STAGE	(100 HOURS)
	CHARGED HYPERON #497	LACH, JOSEPH	APPROVED	BEING INSTALLED	400 HOURS
	NEUTRAL HYPERON #555	DEVLIN, THOMAS J.	APPROVED	SET UP IN A YEAR	450 HOURS
	CP VIOLATION #617	WINSTEIN, BRUCE D.	APPROVED	UNSCHEDULED	1,000 HOURS
	TRANSITION MAGNETIC MOMENT #619	DEVLIN, THOMAS J.	UNCONSIDERED		250 HOURS
	CHARGED HYPERON MAG MOMENT #620	PONDROM, LEE G.	UNCONSIDERED		300 HOURS
	CP VIOLATION #621	THOMSON, GORDON B.	UNCONSIDERED		1,200 HOURS

****

PARTICLE INTERACTIONS IN BUBBLE CHAMBERS - MOSTLY HADRONS (HBC)

1.	POSITIVE PARTICLE INTERACTIONS				
	30-INCH HYBRID #2B	SMITH, GERALD A.	APPROVED	COMPLETED	479K PIX
	30-INCH P-P @ 300 #37A	MALAMUD, ERNEST	APPROVED	COMPLETED	51K PIX
	30-INCH PI+ & P - P @ 100 #121A	LANDER, RICHARD L.	APPROVED	COMPLETED	104K PIX
	30-INCH P-P @ 400 #138	VANDER VELDE, JACK C.	APPROVED	COMPLETED	52K PIX

PHYSICS CATEGORY	SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
	30-INCH P-P @ 200 #141A	FIELDS, THOMAS	APPROVED	COMPLETED	67K PIX
	30-INCH P - P&NE @ 300 #161	HAPP, JAMES	APPROVED	COMPLETED	51K PIX
	30-INCH P - D @ 100 #194	MURPHY, C. THORNTON	APPROVED	COMPLETED	92K PIX
	30-INCH P - D @ 400 #196	ENGELMANN, RODERICH J.	APPROVED	COMPLETED	109K PIX
	30-INCH P - D @ 300 #209	DAO, FU TAK	APPROVED	COMPLETED	106K PIX
	30-INCH PI+ & P - P @ 200 #217	LANDER, RICHARD L.	APPROVED	COMPLETED	85K PIX
	30-INCH PI+ & P - P @ 60 #228	FERBEL, THOMAS	APPROVED	COMPLETED	37K PIX
	30-INCH P-P @ 100 #252	FERBEL, THOMAS	APPROVED	COMPLETED	33K PIX
	30-INCH P - D @ 200 #280	FIELDS, THOMAS	APPROVED	COMPLETED	103K PIX
	30-INCH PI+ & P - D @ 200 #295	YEKUTIELI, GIDEON	APPROVED	COMPLETED	156K PIX
	30-INCH HYBRID #299	PLESS, IRWIN A.	APPROVED	COMPLETED	431K PIX
	15-FOOT P - P @ 400 #341	KO, WINSTON	APPROVED	COMPLETED	34K PIX
	15-FOOT P - P @ 300 #343	ENGELMANN, RODERICH J.	APPROVED	COMPLETED	27K PIX
	15-FOOT P - P & NE @ 400 #291	MANN, WILLIAM A.	APPROVED	UNSCHEDULED	25K PIX
	30-INCH HYBRID #565	YAMAMOTO, RICHARD K.	APPROVED	UNSCHEDULED	PARASITIC RUNNING
	30-INCH HYBRID #570	PLESS, IRWIN A.	APPROVED	UNSCHEDULED	1,500 HOURS
	30-INCH HYBRID #597	WHITMORE, J. JAMES	APPROVED	UNSCHEDULED	1,000 HOURS
2. NEGATIVE PARTICLE INTERACTIONS					
	30-INCH HYBRID #2B	SMITH, GERALD A.	APPROVED	COMPLETED	479K PIX
	30-INCH PI- - P @ 100 #125	MORRISON, DOUGLAS R. O.	APPROVED	COMPLETED	53K PIX
	30-INCH PI- - P @ 200 #137	HUSON, FRED RUSS	APPROVED	COMPLETED	48K PIX
	30-INCH PI- - P @ 300 #143A	KALBFLEISCH, GEORGE R.	APPROVED	COMPLETED	51K PIX
	30-INCH HYBRID #154	PLESS, IRWIN A.	APPROVED	COMPLETED	105K PIX
	30-INCH PI- - P&NE @ 200 #163A	WALKER, WILLIAM D.	APPROVED	COMPLETED	52K PIX
	30-INCH PI- - D @ 200 #218	YAGER, PHILIP M.	APPROVED	COMPLETED	72K PIX
	15-FOOT ENGINEERING RUN #234	HUSON, FRED RUSS	APPROVED	COMPLETED	57K PIX
	30-INCH HYBRID #281	SMITH, GERALD A.	APPROVED	COMPLETED	301K PIX
	30-INCH PBAR - P @ 100 #311	NEALE, WILLIAM W.	APPROVED	COMPLETED	98K PIX
	30-INCH PI- - D @ 360 #338	MORIYASU, KEIHACHIRO	APPROVED	COMPLETED	53K PIX
	30-INCH PBAR - P @ 50 #344	GUTAY, LASZLO J.	APPROVED	COMPLETED	145K PIX
	30-INCH PBAR - D @ 100 #345	EKSPONG, GOSTA	APPROVED	COMPLETED	61K PIX
	15-FOOT PI- - P @ 100 #83A	KITAGAKI, TOSHIO	APPROVED	IN PROGRESS	(11K PIX)
	15-FOOT PI- - P&NE @ 200 #89	FRETTER, WILLIAM B.	APPROVED	IN PROGRESS	(4K PIX)
	15-FOOT PI- - P @ 360 #384	LANNUTTI, JOSEPH E.	APPROVED	IN PROGRESS	(20K PIX)
	30-INCH HYBRID #570	PLESS, IRWIN A.	APPROVED	UNSCHEDULED	1,500 HOURS
	30-INCH HYBRID #597	WHITMORE, J. JAMES	APPROVED	UNSCHEDULED	1,000 HOURS
	PARTICLE SEARCH #624	PLESS, IRWIN A.	UNCONSIDERED		2,000 HOURS

****

ELECTROMAGNETIC INTERACTIONS USING ELECTRONIC DETECTORS (EM)

1. TOTAL CROSS SECTION EXPERIMENTS

PHOTON TOTAL CROSS SECTION #25A	CALDWELL, DAVID O.	APPROVED	COMPLETED	1,850 HOURS

2. INITIATED BY PHOTONS

PHOTON TOTAL CROSS SECTION #25A	CALDWELL, DAVID O.	APPROVED	COMPLETED	1,850 HOURS
PHOTOPRODUCTION #87A	OHALLORAN, THOMAS	APPROVED	COMPLETED	4,800 HOURS
PHOTOPRODUCTION #152B	HEUSCH, CLEMENS A.	APPROVED	COMPLETED	1,950 HOURS
PHOTOPRODUCTION #401	GORMLEY, MICHAEL F.	APPROVED	IN PROGRESS	(800 HOURS)
PHOTOPRODUCTION #516	NASH, THOMAS	APPROVED	BEING INSTALLED	1,000 HOURS
PHOTOPRODUCTION #458	LEE, WONYONG	APPROVED	UNSCHEDULED	
PHOTON DISSOCIATION #612	GOULIANOS, KONSTANTIN	APPROVED	UNSCHEDULED	1,150 HOURS

4. INITIATED BY MUONS

MUON #26	HAND, LOUIS N.	APPROVED	COMPLETED	900 HOURS
MUON #98	ANDERSON, HERBERT L.	APPROVED	COMPLETED	1,800 HOURS
MUON #203A	KERTH, LEROY J.	APPROVED	COMPLETED	1,200 HOURS
MUON #319	CHEN, K. WENDELL	APPROVED	COMPLETED	900 HOURS
MUON #391	KERTH, LEROY J.	APPROVED	COMPLETED	
MUON #398	WILSON, RICHARD	APPROVED	COMPLETED	1,100 HOURS
MUON #448	LOOMIS, WILLIAM A.	APPROVED	COMPLETED	900 HOURS

5. ELECTROMAGNETIC RADII

FORM FACTOR #216	STORK, DONALD H.	APPROVED	COMPLETED	900 HOURS
K ZERO CHARGE RADIUS #226	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	1,200 HOURS
FORM FACTOR #456	STORK, DONALD H.	APPROVED	COMPLETED	1,450 HOURS

****

WEAK INTERACTIONS (W)

1. NEUTRINO REACTIONS USING ELECTRONIC DETECTORS

NEUTRINO #1A	CLINE, DAVID B.	APPROVED	COMPLETED	2,850 HOURS
NEUTRINO #21A	BARISH, BARRY	APPROVED	COMPLETED	2,450 HOURS
NEUTRINO #253	HO, LUKE W.	APPROVED	COMPLETED	2,050 HOURS
NEUTRINO #254	KALBFLEISCH, GEORGE R.	APPROVED	COMPLETED	550 HOURS
NEUTRINO #262	BARISH, BARRY	APPROVED	COMPLETED	400 HOURS
NEUTRINO #310	CLINE, DAVID B.	APPROVED	COMPLETED	3,800 HOURS
NEUTRINO #320	SCIULLI, FRANK	APPROVED	COMPLETED	500 HOURS
NEUTRINO #356	SCIULLI, FRANK	APPROVED	COMPLETED	1,350 HOURS
NEUTRINO #370	CLINE, DAVID B.	APPROVED	COMPLETED	400 HOURS
NEUTRINO #482	BARISH, BARRY	APPROVED	COMPLETED	1,600 HOURS
NEUTRINO #594	TAYLOR, FRANK	APPROVED	BEING INSTALLED	PARASITIC RUNNING
BEAM DUMP #613	ROE, BYRON P.	APPROVED	SET UP IN A YEAR	1,000 HOURS
NEUTRINO #625	LEE, WONYONG	UNCONSIDERED		2,000 HOURS

2. NEUTRINO REACTIONS USING 15-FT BUBBLE CHAMBER

15-FOOT NEUTRINO/H2&NE #28A	FRY, WILLIAM F.	APPROVED	COMPLETED	97K PIX
15-FOOT ANTI-NEUTRINO/H2 #31A	DERRICK, MALCOLM	APPROVED	COMPLETED	211K PIX
15-FOOT NEUTRINO/H2 #45A	NEZRICK, FRANK A.	APPROVED	COMPLETED	162K PIX
15-FOOT EMI TEST #155	PETERSON, VINCENT Z.	APPROVED	COMPLETED	14K PIX
15-FOOT ANTI-NEUTRINO/H2&NE#172	LUBATTI, HENRY J.	APPROVED	COMPLETED	49K PIX
15-FOOT NEUTRINO/H2&NE #546	HUSON, FRED RUSS	APPROVED	COMPLETED	375K PIX
15-FOOT NEUTRINO/H2&NE #53A	BALTAY, CHARLES	APPROVED	IN PROGRESS	(163K PIX)
15-FOOT ANTI-NEUTRINO/H2&NE#180	ERMOLOV, PAVEL F.	APPROVED	IN PROGRESS	(273K PIX)
15-FOOT NEUTRINO/H2&NE #380	BALTAY, CHARLES	APPROVED	IN PROGRESS	(96K PIX)
15-FOOT ANTI-NEUTRINO/D2 #390	GARFINKEL, ARTHUR F.	APPROVED	IN PROGRESS	(10K PIX)
15-FOOT NEUTRINO/D2&HIZ #545	SNOW, GEORGE A.	APPROVED	IN PROGRESS	(317K PIX)
NEUTRINO #616	SCIULLI, FRANK	APPROVED	BEING INSTALLED	4,000 HOURS
15-FOOT ANTI-NEUTRINO/H2&NE#388	PETERSON, VINCENT Z.	APPROVED	SET UP IN A YEAR	200K PIX

3. PARTICLE DECAYS

LAMBDA BETA-DECAY #361	POMEROY, LEE G.	APPROVED	IN TEST STAGE	(100 HOURS)
CP VIOLATION #617	WINSTEIN, BRUCE D.	APPROVED	UNSCHEDULED	1,000 HOURS
CP VIOLATION #621	THOMSON, GORDON B.	UNCONSIDERED		1,200 HOURS

****

PHYSICS CATEGORY / SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
PARTICLE SEARCHES (S)				
1. MONOPOLES				
MONOPOLE #3	EBERHARD, PHILIPPE	APPROVED	COMPLETED	4 TARGETS EXPOSED
MULTIGAMMA #22	COLLINS, GEORGE B.	APPROVED	COMPLETED	350 HOURS
PHOTON TOTAL CROSS SECTION #25A	CALDWELL, DAVID O.	APPROVED	COMPLETED	1,850 HOURS
MONOPOLE #76	CARRIGAN, RICHARD	APPROVED	COMPLETED	5 TARGETS EXPOSED
TACHYON MONOPOLE #202	BARTLETT, DAVID F.	APPROVED	COMPLETED	COSMIC RAY RUNNING
MULTIGAMMA #230	LONGO, MICHAEL J.	APPROVED	COMPLETED	50 HOURS
MONOPOLE #502	BARTLETT, DAVID F.	APPROVED	IN PROGRESS	(COSMIC RAY RUNNING)
2. QUARKS				
QUARK #72	LEIPUNER, LAWRENCE B.	APPROVED	COMPLETED	500 HOURS
QUARK #75	YAMAMOUCHI, TAIJI	APPROVED	COMPLETED	1,050 HOURS
QUARK #276	VAN GINNEKEN, ANDREAS	APPROVED	COMPLETED	3 TARGETS EXPOSED
QUARK #297	LEIPUNER, LAWRENCE B.	APPROVED	COMPLETED	50 HOURS
PARTICLE SEARCH #325	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,500 HOURS
PARTICLE SEARCH #540	LONGO, MICHAEL J.	APPROVED	COMPLETED	600 HOURS
QUARK #549	LONGO, MICHAEL J.	APPROVED	IN TEST STAGE	(1 TARGET EXPOSED)
QUARK #622	GUSTAFSON, RICHARD	UNCONSIDERED		100 HOURS
3. SEARCHES RELEVANT TO W-BOSONS				
(A). INITIATED BY NEUTRINOS				
(1). USING 15-FT BUBBLE CHAMBER				
15-FOOT NEUTRINO/H2 #45A	NEZRICK, FRANK A.	APPROVED	COMPLETED	162K PIX
15-FOOT ANTI-NEUTRINO/H2&NE#172	LUBATTI, HENRY J.	APPROVED	COMPLETED	49K PIX
15-FOOT NEUTRINO/H2&NE #53A	BALTAY, CHARLES	APPROVED	IN PROGRESS	(163K PIX)
15-FOOT ANTI-NEUTRINO/H2&NE#180	ERMOLOV, PAVEL F.	APPROVED	IN PROGRESS	(273K PIX)
(2). USING ELECTRONIC DETECTORS				
NEUTRINO #1A	CLINE, DAVID B.	APPROVED	COMPLETED	2,850 HOURS
NEUTRINO #21A	BARISH, BARRY	APPROVED	COMPLETED	2,450 HOURS
NEUTRINO #310	CLINE, DAVID B.	APPROVED	COMPLETED	3,800 HOURS
(B). INITIATED BY HADRONS				
(1). DETECTING SINGLE LEPTONS				
MUON SEARCH #48	ADAIR, ROBERT K.	APPROVED	COMPLETED	500 HOURS
LEPTON #70	LEDERMAN, LEON M.	APPROVED	COMPLETED	2,800 HOURS
PARTICLE SEARCH #100A	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,150 HOURS
PARTICLE SEARCH #184	WANDERER, PETER	APPROVED	COMPLETED	800 HOURS
MUON SEARCH #435	ADAIR, ROBERT K.	APPROVED	COMPLETED	250 HOURS
(2). DETECTING DILEPTONS				
PARTICLE SEARCH #379	WOJCICKI, STANLEY G.	APPROVED	COMPLETED	1,250 HOURS
MUON-NEUTRINO COINCIDENCE #618	GARELICK, DAVID A.	UNCONSIDERED		400 HOURS
(C). INITIATED BY PHOTONS				
PHOTOPRODUCTION #87A	OHALLORAN, THOMAS	APPROVED	COMPLETED	4,800 HOURS
4. SEARCHES RELEVANT TO HEAVY LEPTONS				
(A). INITIATED BY NEUTRINOS				
(1). USING 15-FT BUBBLE CHAMBER				
15-FOOT NEUTRINO/H2&NE #28A	FRY, WILLIAM F.	APPROVED	COMPLETED	97K PIX
15-FOOT ANTI-NEUTRINO/H2 #31A	DERRICK, MALCOLM	APPROVED	COMPLETED	211K PIX
15-FOOT NEUTRINO/H2 #45A	NEZRICK, FRANK A.	APPROVED	COMPLETED	162K PIX
15-FOOT ANTI-NEUTRINO/H2&NE#172	LUBATTI, HENRY J.	APPROVED	COMPLETED	49K PIX
15-FOOT NEUTRINO/H2&NE #53A	BALTAY, CHARLES	APPROVED	IN PROGRESS	(163K PIX)
15-FOOT ANTI-NEUTRINO/H2&NE#180	ERMOLOV, PAVEL F.	APPROVED	IN PROGRESS	(273K PIX)
(2). USING ELECTRONIC DETECTORS				
NEUTRINO #1A	CLINE, DAVID B.	APPROVED	COMPLETED	2,850 HOURS
NEUTRINO #21A	BARISH, BARRY	APPROVED	COMPLETED	2,450 HOURS
NEUTRINO #310	CLINE, DAVID B.	APPROVED	COMPLETED	3,800 HOURS
NEUTRINO #356	SCIULLI, FRANK	APPROVED	COMPLETED	1,350 HOURS
NEUTRINO #482	BARISH, BARRY	APPROVED	COMPLETED	1,600 HOURS
(3). USING OTHER DETECTORS				
PARTICLE SEARCH #247	BURHOP, ERIC H. S.	APPROVED	COMPLETED	350 HOURS
(B). INITIATED BY HADRONS				
(1). DETECTING SINGLE LEPTONS				
MUON SEARCH #48	ADAIR, ROBERT K.	APPROVED	COMPLETED	500 HOURS
LEPTON #70	LEDERMAN, LEON M.	APPROVED	COMPLETED	2,800 HOURS
PARTICLE SEARCH #100A	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,150 HOURS
MUON SEARCH #435	ADAIR, ROBERT K.	APPROVED	COMPLETED	250 HOURS
(2). DETECTING DILEPTONS				
PARTICLE SEARCH #379	WOJCICKI, STANLEY G.	APPROVED	COMPLETED	1,250 HOURS
(3). OTHER METHODS				
PARTICLE SEARCH #468	STEINBERG, PHILLIP H.	APPROVED	COMPLETED	300 HOURS
(C). INITIATED BY PHOTONS				
PHOTOPRODUCTION #87A	OHALLORAN, THOMAS	APPROVED	COMPLETED	4,800 HOURS
PHOTOPRODUCTION #458	LEE, WONYONG	APPROVED	UNSCHEDULED	
(D). INITIATED BY ELECTRONS OR MUONS				
MUON #203A	KEETH, LEROY J.	APPROVED	COMPLETED	1,200 HOURS

PHYSICS CATEGORY	SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
5. SEARCHES RELEVANT TO CHARMED PARTICLES					
(A). INITIATED BY NEUTRINOS					
(1). USING 15-FT BUBBLE CHAMBER					
	15-FOOT NEUTRINO/H2&NE #28A	FRY, WILLIAM F.	APPROVED	COMPLETED	97K PIX
	15-FOOT ANTI-NEUTRINO/H2 #31A	DERRICK, MALCOLM	APPROVED	COMPLETED	211K PIX
	15-FOOT NEUTRINO/H2 #45A	NEZRICK, FRANK A.	APPROVED	COMPLETED	162K PIX
	15-FOOT ANTI-NEUTRINO/H2&NE#172	LUBATTI, HENRY J.	APPROVED	COMPLETED	49K PIX
	15-FOOT NEUTRINO/H2&NE #53A	BALTAY, CHARLES	APPROVED	IN PROGRESS	(163K PIX)
	15-FOOT ANTI-NEUTRINO/H2&NE#180	ERMOLOV, PAVEL F.	APPROVED	IN PROGRESS	(273K PIX)
	15-FOOT ANTI-NEUTRINO/D2 #390	GARFINKEL, ARTHUR F.	APPROVED	IN PROGRESS	(10K PIX)
(2). USING ELECTRONIC DETECTORS					
	NEUTRINO #1A	CLINE, DAVID B.	APPROVED	COMPLETED	2,850 HOURS
	NEUTRINO #21A	BARISH, BARRY	APPROVED	COMPLETED	2,450 HOURS
	NEUTRINO #310	CLINE, DAVID B.	APPROVED	COMPLETED	3,800 HOURS
	NEUTRINO #356	SCIULLI, FRANK	APPROVED	COMPLETED	1,350 HOURS
	NEUTRINO #370	CLINE, DAVID B.	APPROVED	COMPLETED	400 HOURS
	NEUTRINO #482	BARISH, BARRY	APPROVED	COMPLETED	1,600 HOURS
(3). SEPARATION OF PRODUCTION AND DECAY VERTICES					
	PARTICLE SEARCH #247	BURHOP, ERIC H. S.	APPROVED	COMPLETED	350 HOURS
	NEUTRINO #531	REAY, NEVILLE W.	APPROVED	COMPLETED	1,150 HOURS
	EMULSION/NEUTRINO #536	NIU, KIYOSHI	APPROVED	COMPLETED	2 STACKS
	15-FOOT & EMULSION/NEUTRINO#564	VOYVODIC, LOUIS	APPROVED	COMPLETED	EMULSION EXPOSURES
	NEUTRINO #553	HAND, LOUIS N.	APPROVED	IN PROGRESS	(1,500 HOURS)
(B). INITIATED BY HADRONS					
(1). EFFECTIVE HADRONIC MASS WITHOUT RESTRICTIONS (INCLUSIVE REACTIONS)					
	15-FOOT ENGINEERING RUN #234	HUSON, FRED RUSS	APPROVED	COMPLETED	57K PIX
	NEUTRON DISSOCIATION #305	GOBBI, BRUNO	APPROVED	COMPLETED	1,400 HOURS
	PARTICLE SEARCH #357	MEYER, DONALD I.	APPROVED	COMPLETED	1,700 HOURS
	PARTICLE SEARCH #366	ABOLINS, HARIS A.	APPROVED	COMPLETED	2,500 HOURS
	DI-HADRON #494	GOOD, MYRON L.	APPROVED	COMPLETED	1,950 HOURS
	PARTICLE SEARCH #608	BROWN, CHARLES N.	APPROVED	COMPLETED	600 HOURS
(2). EFFECTIVE HADRONIC MASS WITH RESTRICTIONS (SEMI-INCLUSIVE REACTIONS)					
	PARTICLE SEARCH #369	KIRK, THOMAS B. W.	APPROVED	COMPLETED	1,000 HOURS
	PARTICLE SEARCH #397	ROSEN, JEROME L.	APPROVED	COMPLETED	1,150 HOURS
	PARTICLE SEARCH #472	STANFIELD, KENNETH C.	APPROVED	COMPLETED	1,100 HOURS
	DI-HADRON #494	GOOD, MYRON L.	APPROVED	COMPLETED	1,950 HOURS
	PARTICLE SEARCH #567	WITHERELL, MICHAEL	APPROVED	IN PROGRESS	(600 HOURS)
	PARTICLE SEARCH #515	ROSEN, JEROME L.	APPROVED	BEING INSTALLED	800 HOURS
	DI-MUON #537	COX, BRADLEY	APPROVED	BEING INSTALLED	1,000 HOURS
	PARTICLE SEARCH #580	JENKINS, EDGAR W.	APPROVED	SET UP IN A YEAR	800 HOURS
	PARTICLE SEARCH #610	KIRK, THOMAS B. W.	APPROVED	SET UP IN A YEAR	1,000 HOURS
	PARTICLE SEARCH #400	PEOPLES, JOHN	APPROVED	UNSCHEDULED	
	PARTICLE SEARCH #623	LAI, KWAN-WU	UNCONSIDERED		1,000 HOURS
(3). EFFECTIVE DILEPTON MASS USING TWO-ARM SPECTROMETER					
	DI-LEPTON #288	LEDERMAN, LEON M.	APPROVED	COMPLETED	6,850 HOURS
	PARTICLE SEARCH #325	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,500 HOURS
	DI-MUON #326	SHOCHET, MELVIN J.	APPROVED	BEING INSTALLED	800 HOURS
(4). EFFECTIVE DILEPTON MASS USING LARGE FORWARD SPECTROMETER					
	DI-MUON #331	PILCHER, JAMES E.	APPROVED	COMPLETED	1,400 HOURS
	DI-MUON #358	LEE, WONYONG	APPROVED	COMPLETED	400 HOURS
	DI-MUON #436	ADAIR, ROBERT K.	APPROVED	COMPLETED	200 HOURS
	MULTI-MUON #439	GABELICK, DAVID A.	APPROVED	COMPLETED	1,700 HOURS
	DI-MUON #444	SMITH, A. J. STEWART	APPROVED	COMPLETED	1,100 HOURS
	DI-MUON #537	COX, BRADLEY	APPROVED	BEING INSTALLED	1,000 HOURS
(5). SEPARATION OF PRODUCTION AND DECAY VERTICES					
	PARTICLE SEARCH #490	SANDWEISS, JACK	APPROVED	IN PROGRESS	(850 HOURS)
	PARTICLE SEARCH #624	PLESS, IRWIN A.	UNCONSIDERED		2,000 HOURS
(6). OTHER METHODS					
	PHOTON SEARCH #95A	COX, BRADLEY	APPROVED	COMPLETED	3,400 HOURS
	PARTICLE SEARCH #363	OLSEN, STEPHEN L.	APPROVED	COMPLETED	650 HOURS
	PARTICLE SEARCH #365	GABELICK, DAVID A.	APPROVED	COMPLETED	200 HOURS
	PARTICLE SEARCH #379	WOJCICKI, STANLEY G.	APPROVED	COMPLETED	1,250 HOURS
	PARTICLE SEARCH #416	LUBATTI, HENRY J.	APPROVED	COMPLETED	400 HOURS
	MULTI-MUON #439	GABELICK, DAVID A.	APPROVED	COMPLETED	1,700 HOURS
	PARTICLE SEARCH #595	BODEK, ARIE	APPROVED	IN TEST STAGE	(500 HOURS)
(C). INITIATED BY PHOTONS					
	PHOTOPRODUCTION #87A	OHALLORAN, THOMAS	APPROVED	COMPLETED	4,800 HOURS
	PHOTOPRODUCTION #401	GOBBLEY, MICHAEL F.	APPROVED	IN PROGRESS	(800 HOURS)
	PHOTOPRODUCTION #458	LEE, WONYONG	APPROVED	UNSCHEDULED	
	PHOTON SEARCH #614	ROSEN, JEROME L.	DEFERRED		300 HOURS
(D). INITIATED BY ELECTRONS OR MUONS					
(2). SEPARATION OF PRODUCTION AND DECAY VERTICES					
	PARTICLE SEARCH #382	HAND, LOUIS N.	APPROVED	COMPLETED	200 HOURS
6. LONG-LIVED PARTICLES					
	QUARK #72	LEIPUNER, LAWRENCE B.	APPROVED	COMPLETED	500 HOURS
	LONG-LIVED PARTICLES #115	STEVENSON, M. LYNN	APPROVED	COMPLETED	6 HOURS
	PARTICLE SEARCH #187	LEDERMAN, LEON M.	APPROVED	COMPLETED	200 HOURS
	MASSIVE PARTICLE SEARCH #199	FRANKEL, SHERMAN	APPROVED	COMPLETED	2 TARGETS EXPOSED
	LONG-LIVED PARTICLES #239	FRATI, WILLIAM	APPROVED	COMPLETED	350 HOURS
	PARTICLE SEARCH #330	GUSTAFSON, RICHARD	APPROVED	COMPLETED	150 HOURS
	PARTICLE SEARCH #469	CUTTS, DAVID	APPROVED	COMPLETED	400 HOURS
	PARTICLE SEARCH #540	LONGO, MICHAEL J.	APPROVED	COMPLETED	600 HOURS
	PARTICLE SEARCH #596	LEDERMAN, LEON M.	APPROVED	COMPLETED	200 HOURS
	PARTICLE SEARCH #584	WINSTEIN, BRUCE D.	APPROVED	SET UP IN A YEAR	300 HOURS

PHYSICS CATEGORY	SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
	QUARK #622	GUSTAFSON, RICHARD	UNCONSIDERED		100 HOURS
7. SUPER-HEAVY ELEMENTS					
	SUPER-HEAVY ELEMENTS #142	STOUGHTON, RAYMOND W.	APPROVED	COMPLETED	1 TARGET
	SUPER-HEAVY ELEMENTS #147	DEBEAUVAIS, MONIQUE	APPROVED	COMPLETED	4 EXPOSURES
	SUPER-HEAVY ELEMENTS #285	LEDERMAN, LEON M.	APPROVED	COMPLETED	3 TARGETS EXPOSED
	SUPER-HEAVY ELEMENTS #371	JURIC, MIRA	APPROVED	COMPLETED	2 STACKS
	PARTICLE SEARCH #591	GUTAY, LASZLO J.	APPROVED	BEING INSTALLED	800 HOURS
8. OTHER PARTICLES					
	TACHYON MONOPOLE #202	BARTLETT, DAVID F.	APPROVED	COMPLETED	COSMIC RAY RUNNING
	PI-MU ATOMS #533	SCHWARTZ, MEL	APPROVED	IN PROGRESS	(600 HOURS)
	PARTICLE SEARCH #595	BODEK, ARIE	APPROVED	IN TEST STAGE	(500 HOURS)
	CHARGED HYPERON #497	LACH, JOSEPH	APPROVED	BEING INSTALLED	400 HOURS
	PARTICLE SEARCH #591	GUTAY, LASZLO J.	APPROVED	BEING INSTALLED	800 HOURS
	HIGH MASS PAIRS #605	BROWN, CHARLES N.	APPROVED	UNSCHEDULED	1,000 HOURS
	MUON-NEUTRINO COINCIDENCE #618	GABELICK, DAVID A.	UNCONSIDERED		400 HOURS
EMULSION EXPERIMENTS (E)					
1. EXPOSURES TO HADRONS					
	EMULSION/PROTONS @ 200 #90	WOLTER, WLADYSLAW	APPROVED	COMPLETED	4 STACKS
	EMULSION/PROTONS @ 200 #103	KING, DAVID T.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 200 #105	MALHOTRA, P. K.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 200 #114	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 200 #116	HEBERT, JACQUES D.	APPROVED	COMPLETED	5 STACKS
	EMULSION/PROTONS @ 200 #117A	KUSUMOTO, OSAMU	APPROVED	COMPLETED	11 STACKS
	EMULSION/PROTONS @ 200 #156	NIU, KIYOSHI	APPROVED	COMPLETED	13 STACKS
	EMULSION/PROTONS @ 200 #171	LORD, JERE J.	APPROVED	COMPLETED	6 STACKS
	EMULSION/PROTONS @ 300 #181	CARI, ARTHUR S.	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 200 #183	TRETJAKOVA, M. I.	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 200 #189	RITSON, DAVID	APPROVED	COMPLETED	2 PLATES
	EMULSION/PROTONS @ 300 #195	LIN, YU K.	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 300 #232	KING, DAVID T.	APPROVED	COMPLETED	2 STACKS
	EMULSION/PROTONS @ 300 #233	HEBERT, JACQUES D.	APPROVED	COMPLETED	8 STACKS
	EMULSION/PROTONS @ 300 #237	LORD, JERE J.	APPROVED	COMPLETED	5 STACKS
	EMULSION/PROTONS @ 400 #238	LORD, JERE J.	APPROVED	COMPLETED	9 STACKS
	EMULSION/PROTONS @ 300 #242	NIU, KIYOSHI	APPROVED	COMPLETED	2 STACKS
	EMULSION/PROTONS @ 400 #243	NIU, KIYOSHI	APPROVED	COMPLETED	7 STACKS
	EMULSION/PROTONS @ 300 #244	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 400 #245	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 400 #249	WOLTER, WLADYSLAW	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 300 #250	KUSUMOTO, OSAMU	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 400 #251	KUSUMOTO, OSAMU	APPROVED	COMPLETED	3 STACKS
	EMULSION/PI- @ 200 #264	YOUNG, POH SHIEN	APPROVED	COMPLETED	2 STACKS
	EMULSION/PROTONS @ 400 #265	YOUNG, POH SHIEN	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 200 #271	GOTTFRIED, KURT	APPROVED	COMPLETED	10 STACKS
	EMULSION/PROTONS @ 400 #279	KING, DAVID T.	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 400 #292	GOTTFRIED, KURT	APPROVED	COMPLETED	12 STACKS
	EMULSION/PI- @ 200 #328	TRETJAKOVA, M. I.	APPROVED	COMPLETED	5 STACKS
	EMULSION/PROTONS @ 300 #329	TRETJAKOVA, M. I.	APPROVED	COMPLETED	2 STACKS
	EMULSION/PROTONS @ 400 #336	OGATA, TAKESHI	APPROVED	COMPLETED	2 STACKS
	EMULSION/PI- @ 200 #339	WOLTER, WLADYSLAW	APPROVED	COMPLETED	4 STACKS
	EMULSION/PROTONS @ 400 #346	EKSPONG, GOSTA	APPROVED	COMPLETED	1 STACK
	EMULSION/PI- @ 200 #362	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 300 #374	DAVIS, D. H.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 400 #385	PRAKASH, Y.	APPROVED	COMPLETED	1 STACK
	EMULSION/PI- @ 200 #387	WILKES, RICHARD J.	APPROVED	COMPLETED	4 STACKS
	EMULSION/PROTONS @ 300 #419	GIACONELLI, GIORGIO	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 300 #421	DZHELEPOV, V. P.	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 400 #423	SUGIMOTO, HISAHIKO	APPROVED	COMPLETED	4 STACKS
	EMULSION/PROTONS @ 400 #428	HEBERT, JACQUES D.	APPROVED	COMPLETED	14 STACKS
	EMULSION/PROTONS @ 400 #434	DAKE, SHOJI	APPROVED	COMPLETED	3 STACKS
	EMULSION/PROTONS @ 400 #461	LORD, JERE J.	APPROVED	COMPLETED	6 STACKS
	EMULSION/PROTONS @ 400 #462	GIACONELLI, GIORGIO	APPROVED	COMPLETED	1 STACK
	EMULSION/PROTONS @ 400 #463	TRETJAKOVA, M. I.	APPROVED	COMPLETED	2 STACKS
	EMULSION/PI- @ 300 #481	TAKAHASHI, YOSHIYUKI	APPROVED	COMPLETED	7 STACKS
	EMULSION/PROTONS @ 400 #499	IWAI, JUNSUKE	APPROVED	COMPLETED	5 STACKS
	EMULSION/PI- @ 300 #503	OGATA, TAKESHI	APPROVED	COMPLETED	4 STACKS
	EMULSION/PI- @ 300 #506	DAKE, SHOJI	APPROVED	COMPLETED	2 STACKS
	EMULSION/PI- @ 300 #525	WILKES, RICHARD J.	APPROVED	COMPLETED	2 STACKS
	EMULSION/PROTONS @ 400 #547	JACQUOT, C. J.	APPROVED	COMPLETED	24 STACKS
	EMULSION/PI- @ 300 #568	HEBERT, JACQUES D.	APPROVED	COMPLETED	3 STACKS
	EMULSION/PI- @ 300 #573	USHIDA, NORIYUKI	APPROVED	COMPLETED	3 STACKS
	EMULSION/PI- @ 300 #574	WOLTER, WLADYSLAW	APPROVED	COMPLETED	4 STACKS
	EMULSION/PROTONS @ 400 #575	LORD, JERE J.	APPROVED	COMPLETED	2 STACKS
	EMULSION/PROTONS @ 500 #508	WOLTER, WLADYSLAW	APPROVED	UNSCHEDULED	EMULSION EXPOSURES
	EMULSION/PROTONS @ 500 #524	WILKES, RICHARD J.	APPROVED	UNSCHEDULED	EMULSION EXPOSURES
	EMULSION/PROTONS @ 500 #576	HEBERT, JACQUES D.	APPROVED	UNSCHEDULED	3 STACKS
2. EXPOSURES TO LEPTONS					
	EMULSION/MUONS @ 150 #205A	KUSUMOTO, OSAMU	APPROVED	COMPLETED	2 STACKS
	PARTICLE SEARCH #247	BURHOP, ERIC H. S.	APPROVED	COMPLETED	350 HOURS
	EMULSION/MUONS @ 150 #255	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
	EMULSION/ELECTRONS @ HI E #340	DAKE, SHOJI	APPROVED	COMPLETED	10 STACKS
	EMULSION/MUONS @ 200 #373	JAIN, PIYARE L.	APPROVED	COMPLETED	2 STACKS
	PARTICLE SEARCH #382	HAND, LOUIS N.	APPROVED	COMPLETED	200 HOURS
	EMULSION/NEW PARTICLES #386	LORD, JERE J.	APPROVED	COMPLETED	1 STACK
	EMULSION/ELECTRONS @ >100 #399	GOLDEN, ROBERT L.	APPROVED	COMPLETED	6 STACKS
	EMULSION/MUONS @ 200 #424	WADA, TOMONORI	APPROVED	COMPLETED	1 STACK
	EMULSION/MUONS @ 200 #509	SHIRAI, T.	APPROVED	COMPLETED	1 STACK
	EMULSION/ELECTRONS @ HI E #510	NIU, KIYOSHI	APPROVED	COMPLETED	6 STACKS
	NEUTRINO #531	REAI, NEVILLE W.	APPROVED	COMPLETED	1,150 HOURS
	EMULSION/NEUTRINO #536	NIU, KIYOSHI	APPROVED	COMPLETED	2 STACKS
	15-FOOT & EMULSION/NEUTRINO#564	VOYVODIC, LOUIS	APPROVED	COMPLETED	EMULSION EXPOSURES
	NEUTRINO #553	HAND, LOUIS N.	APPROVED	IN PROGRESS	(1,500 HOURS)
MISCELLANEOUS EXPERIMENTS (H)					
1. TRANSITION RADIATION DETECTORS					
	DETECTOR DEVELOPMENT #229	YUAN, LUKE C. L.	APPROVED	COMPLETED	300 HOURS
	DETECTOR DEVELOPMENT #261	WANG, CHING LIN	APPROVED	COMPLETED	600 HOURS
	DETECTOR DEVELOPMENT #427	YUAN, LUKE C. L.	APPROVED	COMPLETED	40 HOURS
	DETECTOR DEVELOPMENT #550	ATAC, MUZAFFER	DEFERRED		TEST RUNNING
2. OTHER DETECTORS					

PHYSICS CATEGORY	SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
	DETECTOR DEVELOPMENT #34	HUGGETT, RICHARD W.	APPROVED	COMPLETED	50 HOURS
	15-FOOT EHI TEST #155	PETERSON, VINCENT Z.	APPROVED	COMPLETED	14K PIX
	DETECTOR DEVELOPMENT #327	ALLISON, WADE W. M.	APPROVED	COMPLETED	50 HOURS
	FRAGMENTATION PARTICLES #426	FUKUI, KATSUMA	APPROVED	COMPLETED	16 STACKS
	DETECTOR DEVELOPMENT #528	ROBERTS, ARTHUR	DEFERRED		100 HOURS
3. NUCLEAR CHEMISTRY					
	TEST MUON IRRADIATION #467	FREEDMAN, MELVIN	APPROVED	COMPLETED	4 TARGETS EXPOSED
	TEST MUON IRRADIATION #501	LANDE, KENNETH	APPROVED	COMPLETED	2 TARGETS EXPOSED
	NUCLEAR CHEMISTRY #81A	KAUFMAN, SHELDON	APPROVED	IN PROGRESS	(197 BOMBARDMENTS)
	NUCLEAR FRAGMENTS #466	KAUFMAN, SHELDON	APPROVED	IN PROGRESS	(26 TARGETS EXPOSED)
4. GENERAL RADIATION STUDIES					
	BEAM DUMP #108	AWSCHALOM, MIGUEL	APPROVED	COMPLETED	350 HOURS
	BEAM DUMP #211	GOEBEL, KLAUS	APPROVED	COMPLETED	2 HOURS
5. OTHER EXPERIMENTS					
	PLASTIC DETECTORS #275	ENGE, WOLFGANG	APPROVED	COMPLETED	4 STACKS
	NUCLEAR FRAGMENTS #442	TURKOT, FRANK	APPROVED	COMPLETED	1,200 HOURS
	DETECTOR DEVELOPMENT #498	GRUHN, CHARLES R.	APPROVED	COMPLETED	50 HOURS
	HIGH ENERGY CHANNELING #507	TSYGANOV, EDOUARD N.	APPROVED	COMPLETED	350 HOURS

SECTION VI. BEAM LINE ASSIGNMENTS OF APPROVED AND PENDING PROPOSALS

At Fermilab an extensive array of proton and secondary beams is available for use in experiments. One of the earliest decisions that must be made in formulating a new proposal is the choice of a particle beam.

The beam lines and research facilities available at Fermilab are detailed in Figure 6. Figure 7 is a simplified picture showing where the major experiments are located during the spring and summer of 1979. General information about the properties of the beams is given in Table 9 and Figures 8 to 11. This information was obtained from the Fermilab departments responsible for their operation or from experimenters who are most familiar with them. However, the authors of the Workbook assume responsibility for the accuracy of this information.

The principal changes to the beam lines during the past year have been in the Meson Area. Since September 1978 the Meson Area has not been available for experimental use because of construction work related to upgrading the facilities there; a return to operation is expected in June 1979. One of the most substantial changes affecting the Meson Area beams is the addition of another splitting station in the proton transport to the area and the use of two production targets. One target will serve the M1, M2, M3 and M4 beams; the other will be used for the M5 and M6 beams. Horizontal and vertical adjustments can be made independently to the primary proton beams to both targets which should enable better optimization of beam conditions for experiments. A superconducting bend point is being added to the M6 Beam to enable its use for pions up to 330 GeV (the limit for Cherenkov separation) and for protons up to 400 GeV.

During the last year a new dichromatic neutrino beam (N0-D) has been commissioned in the Neutrino Area. The horn-focused neutrino beam (N0-H) has been modified to utilize a more reliable single-horn configuration and the pulsing system for the horn has been improved to accept a nominal 1 msec. beam spill. In the Proton Area the High Intensity Beam (P3) with a conventional transport system has been fully commissioned and is now being used by experiments.

The computer list of approved and pending proposals by beam line at the end of Section VI may prove helpful. The information contained in that list is summarized in Table 10.

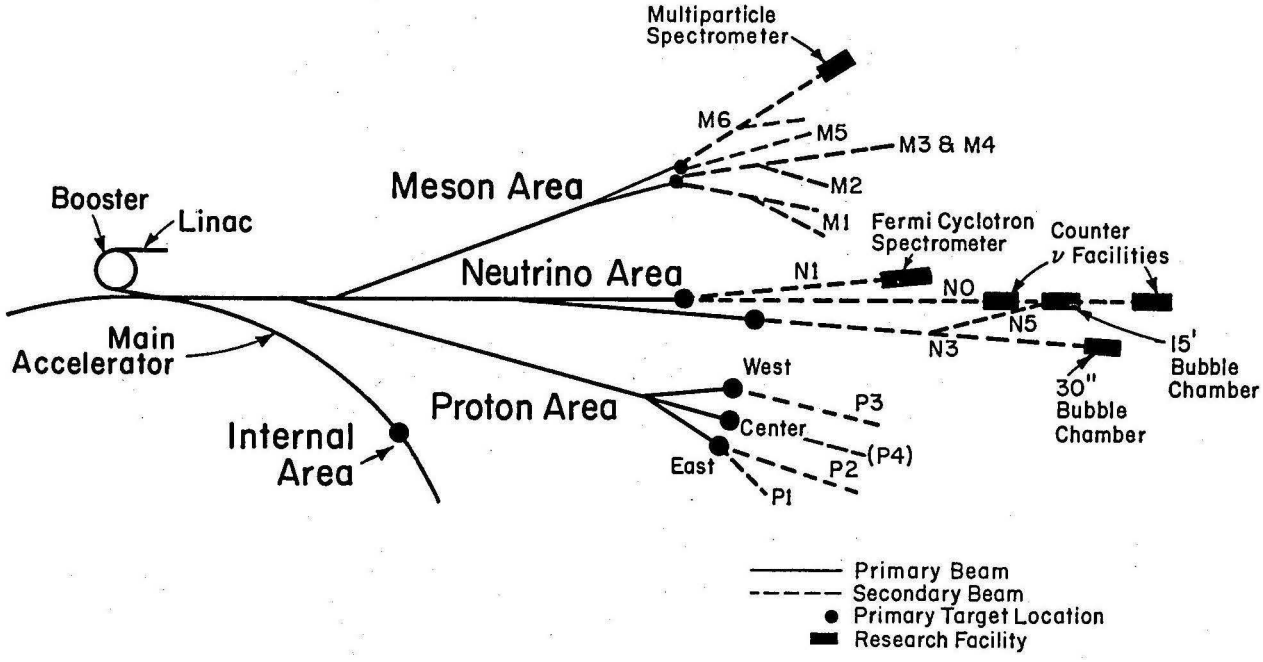


Figure 6. Particle beams and research facilities at Fermilab. The individual beams and their general purposes are listed below.

Meson Area (Spring and Summer 1979)

M1	General-Purpose Charged Hadron Beam
M2	Charged Hadron Beam (diffracted protons)
M3	Neutral Beam (neutrons and K_L^o)
M4	Charged Hadron Beam (with emphasis on K^-)
M5	Test Beam of Low Energy Charged Particles
M6	Charged Hadron Beam

Neutrino Area

N0	Neutrino Beam
N1	Muon/Hadron Beam
N5	15-ft Bubble Chamber Charged Hadron Beam
N3	30-In. Bubble Chamber Charged Hadron Beam

Proton Area
(Primary protons available in all branches)

P1	Proton East Neutral Beam (photons or neutrons)
P2	Proton-East Electron Beam for Tagged Photons
P3	Proton-West Charged Hadron Beam
(P4)	Proton-Center Charged Hyperon Beam (in preparation)

Internal Area - at C-0

Primary Protons circulating inside the Main Accelerator

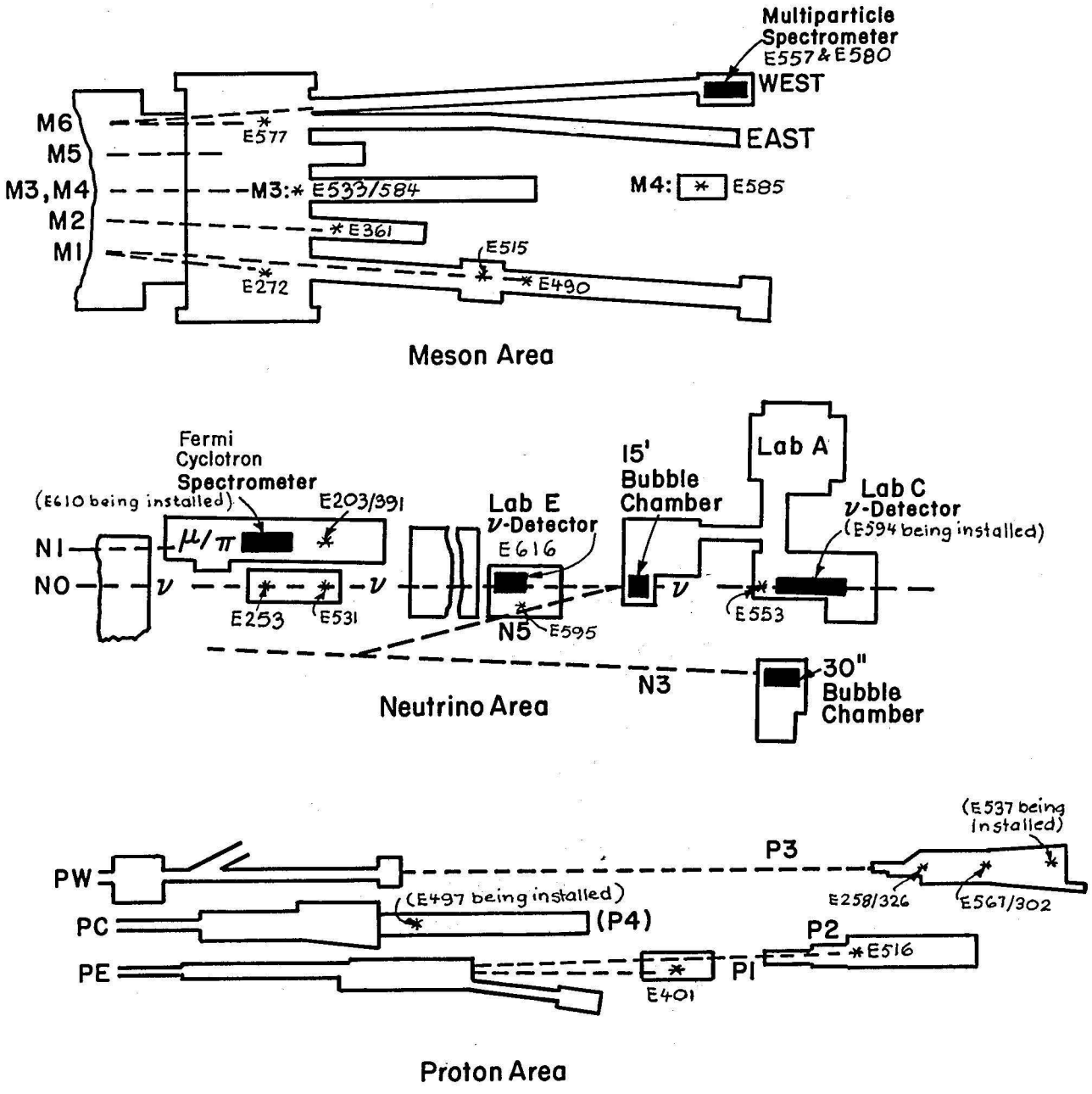


Figure 7. Schematic drawings of the external experimental areas with locations of major experimental equipment, spring and summer 1979. The drawings are not to scale. Further information on the experiments with numbers shown in this drawing can be found in the Master List in Section VII.

TABLE 9. PROPERTIES OF

Note: Quantities given in brackets [ ] are estimates.

Exptl. Area and Beam	Beam Particles	Momentum Range (GeV/c)
Meson Area		
M1	Charged Hadrons	Tune A: 20 - 200 Tune B: 20 - 400
	Charged Hadrons	20 - 400
M3	Neutrons, K_L^o	See Fig. 10 for neutrons
M4	Charged Hadrons	35 - 200
M5	Charged Particle Test Beam	5 - 50
M6	Charged Hadrons	20 - 330 and 400 GeV Protons
Neutrino Area		
N0-D	Dichromatic ν and $\bar{\nu}$	See Fig. 8 & 9
N0-H*	Horn-focused ν and $\bar{\nu}$	See Fig. 8 & 9
N0-S	Sign-selected Bare Target	See Fig. 8 & 9
N0-T	Triplet-focused ν and $\bar{\nu}$	See Fig. 8 & 9
N1	a) Muons	a) 50 - 300
	b) Charged Hadrons	b) 100 - 300
	c) Charged Hadrons	c) 100 - 300
N3, N5	Charged Hadrons	50 - 500
Proton Area		
P1	Wide-Band Photons Neutrons	See Fig. 11
P2	Electrons	40 - 300
	Tagged Photons	See Fig. 11
P3	Charged Hadrons	up to 250
P4 (In preparation)	Charged Hyperons	100 - 350

PARTICLE BEAMS AT FERMILAB

Flux (Per 10^{13} 400 GeV Incident Protons)	Remarks
3×10^7 π^- @ 175 GeV/c 4×10^5 π^- @ 300 GeV/c	$(\Delta p/p)_{max} = \pm 2\%$; two differential $\check{C}$ counters
$\lesssim 2 \times 10^{11}$ protons 3×10^6 π^- @ 200 GeV/c	
$\sim 10^{10}$ neutrons 5×10^7 K^0_L	$< P_K > \sim 70$ GeV
6×10^5 K^- @ 75 GeV/c $\sim 5 \times 10^4$ K^- @ 190 GeV/c	$(\Delta p/p) \approx \pm 4\%$; emphasis on K production; one differential $\check{C}$ counter
$\sim 5 \times 10^5$ $\pi^\pm$ @ 20-30 GeV/c 15,000 electrons @ 10 GeV/c	Threshold $\check{C}$ counter available
4×10^7 π^- @ 100 GeV/c	$(\Delta p/p) = \pm 0.6$; one DISC, one differential and two threshold $\check{C}$ counters.
	*Nominal 1 msec spill
a) $\sim 1.5 \times 10^6$ μ @ 225 GeV/c b) $\lesssim 2 \times 10^6$ π^- @ 225 GeV/c c) $\gtrsim 10^7$ pions @ 225 GeV/c	$(\Delta p/p) = \pm 2\%$ for a), b) or c) b) Using N1 manhole target with limit of 1.5×10^{12} protons c) Using triplet-focused beam
limited to 10^6 particles	Partially enriched $\bar{p}$ beam ($\bar{p}/\pi^- \approx 1$) available
4×10^7 for $E_n > 100$ GeV 2×10^6 electrons @ 200 GeV/c	$\Delta\Omega = 38 \times 10^{-9}$ ster.
3×10^9 π^- @ 200 GeV/c	$(\Delta p/p) = \pm 7\%$
[2×10^5 Σ^- @ 300 GeV/c with 10^{11} inc. protons] [10 Ω^- @ 250 GeV/c with 3.5×10^{10} inc. protons]	Fluxes calculated are at 10 m from target; fluxes limited by 10^6 π^-

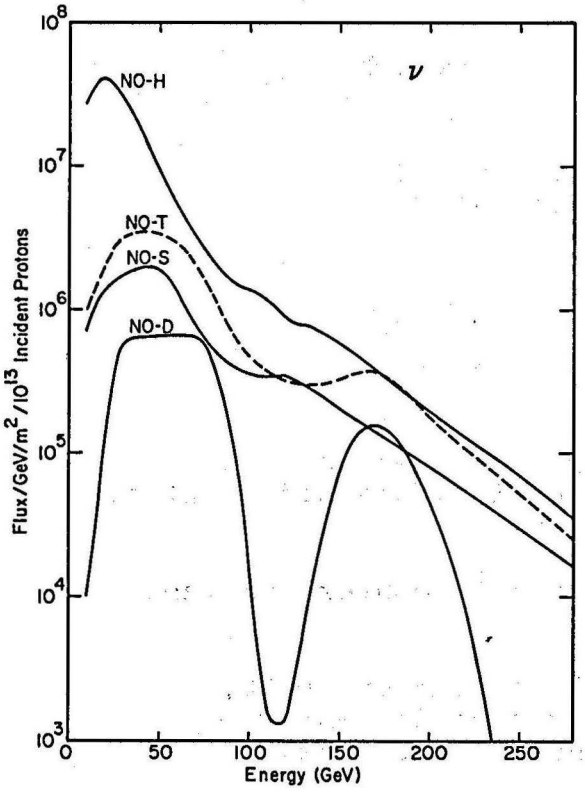


Figure 8.

Calculated fluxes of neutrino beams with various devices. NO-D: Dichromatic beam tuned to 200 GeV/c, NO-H: Single-horn focused beam, NO-S: Sign-selected bare target beam, NO-T: Triplet-focused beam tuned to 200 GeV/c.

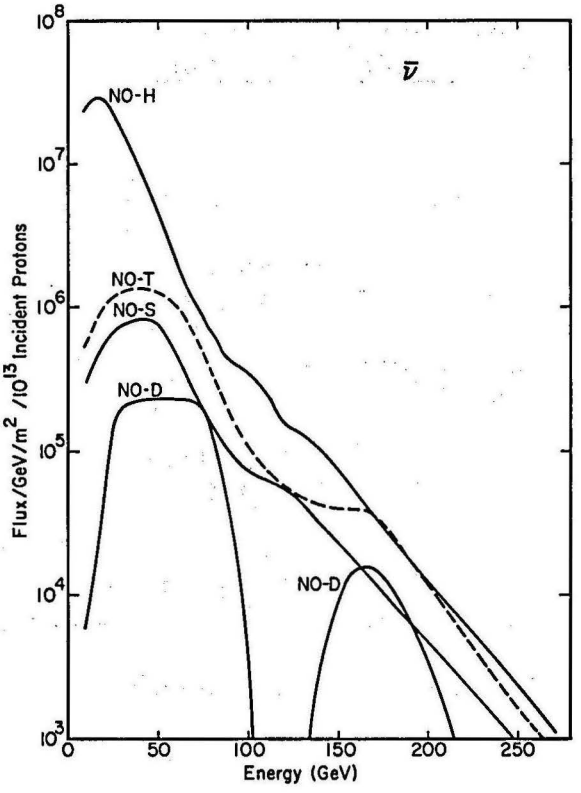


Figure 9.

Calculated fluxes of antineutrino beams with various focusing devices. NO-D: Dichromatic beam tuned to 200 GeV/c, NO-H: Single-horn focused beam without plug, NO-S: Sign-selected bare target beam, NO-T: Triplet-focused beam tuned to 200 GeV/c.

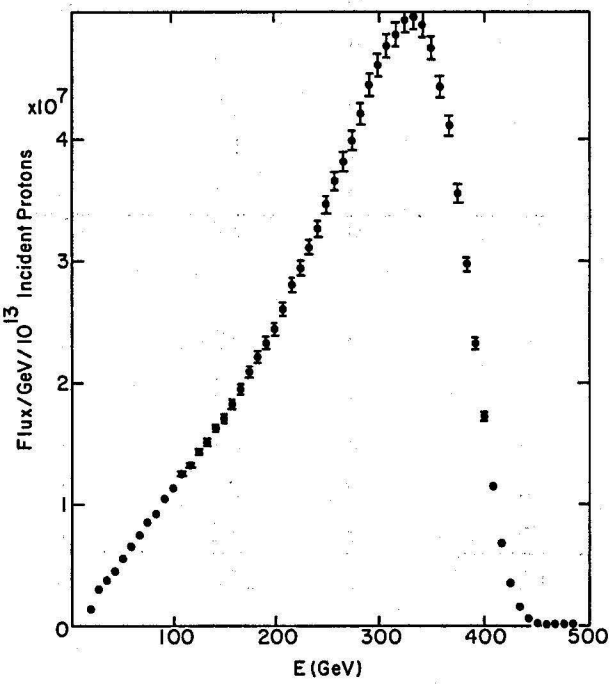


Figure 10.

The M3 neutron spectrum recorded during E-248.

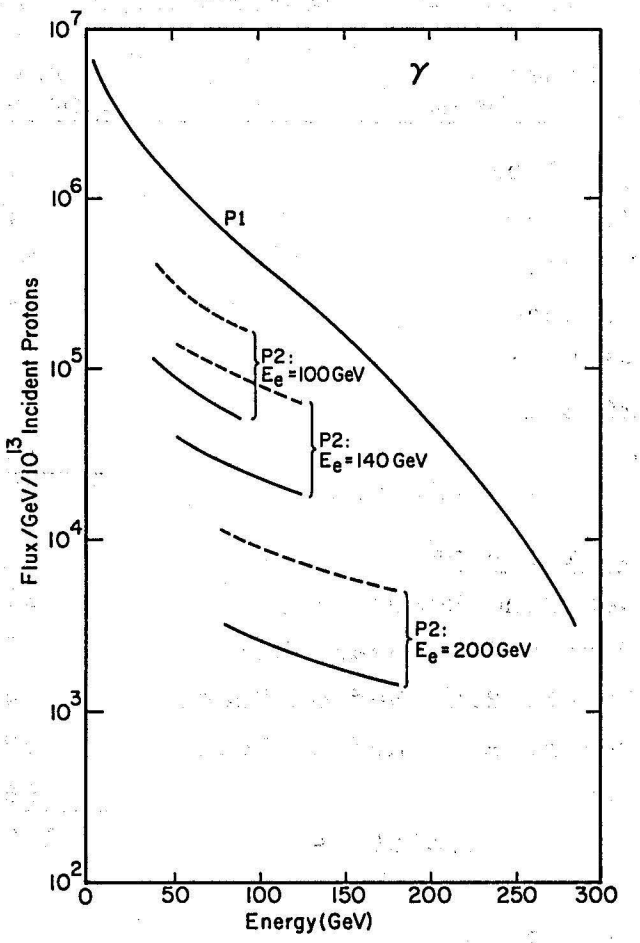


Figure 11.

Photon-fluxes observed in P1 and P2 Beams of the Proton Area. P1 is a broad band photon beam and P2 a tagged photon beam. The tagged photon fluxes shown are for a 20% radiator with three different electron energies (E_e). The solid lines are the observed spectrum with the existing beam. The dashed lines represent anticipated improvement by enlarging the vertical aperture of the beam.

TABLE 10. TABULAR SUMMARY OF APPROVED AND PENDING PROPOSALS ASSIGNED TO FERMILAB BEAM LINES.

Experimental Area and Beam	Exp. Completed	Exp. Underway	Exp. To Be Done	Sub-Totals	Pending Proposals
Meson Area					
M1 Beam	14	2	2	18	1
M2 Beam	20	1	2	23	6
M3 Beam	10	1	2	13	0
M4 Beam	7	1	0	8	0
M6 Beam	11	0	4	15	3
Other	14	1	0	15	0
Subtotals	76	6	10	92	10
Neutrino Area					
Neutrino Beams (N0)	20	6	3	29	0
Muon/Hadron Beam (N1)	13	0	1	14	0
15-Ft. B.C. Hadron Beam	4	4	1	9	1
30-In. B.C. Hadron Beam	27	0	3	30	1
Other	66	3	3	72	1
Subtotals	130	13	11	154	3
Proton Area					
Proton-East	8	1	4	13	0
Proton-Center	8	0	1	9	0
Proton-West	4	2	3	9	0
Other	3	0	0	3	0
Subtotals	23	3	8	34	0
Internal Area					
C-0	19	0	1	20	1
TOTALS	248	22	30	300	14

BEAM LINE LIST

LIST 25. APPROVED AND PENDING PROPOSALS LISTED BY BEAM LINE

NOTE: THE EXTENT OF RUNNING FOR EXPERIMENTS UNDERWAY IS SHOWN IN PARENTHESES.

EXPERIMENTAL AREA AND BEAM LINE SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
MESON AREA-M1 BEAM (CHARGED PARTICLES)				
ELASTIC SCATTERING #7	MEYER, DONALD I.	APPROVED	COMPLETED	2,350 HOURS
POLARIZED SCATTERING #61	CHAMBERLAIN, OWEN	APPROVED	COMPLETED	1,900 HOURS
PION DISSOCIATION #86A	LUBATTI, HENRY J.	APPROVED	COMPLETED	800 HOURS
TOTAL CROSS SECTION #104	KYCIA, THADDEUS F.	APPROVED	COMPLETED	2,650 HOURS
FORM FACTOR #216	STORK, DONALD H.	APPROVED	COMPLETED	900 HOURS
DETECTOR DEVELOPMENT #229	YUAN, LUKE C. L.	APPROVED	COMPLETED	300 HOURS
HADRON JETS #236A	MOCKETT, PAUL M.	APPROVED	COMPLETED	1,700 HOURS
DETECTOR DEVELOPMENT #261	WANG, CHING LIN	APPROVED	COMPLETED	600 HOURS
INCLUSIVE SCATTERING #324	WEISBERG, HOWARD L.	APPROVED	COMPLETED	1,200 HOURS
MUON SEARCH #335	FACKLER, ORRIN D.	APPROVED	COMPLETED	300 HOURS
PARTICLE SEARCH #416	LUBATTI, HENRY J.	APPROVED	COMPLETED	400 HOURS
DETECTOR DEVELOPMENT #427	YUAN, LUKE C. L.	APPROVED	COMPLETED	40 HOURS
FORM FACTOR #456	STORK, DONALD H.	APPROVED	COMPLETED	1,450 HOURS
HIGH ENERGY CHANNELING #507	TSYGANOV, EDOUARD N.	APPROVED	COMPLETED	350 HOURS
HADRON DISSOCIATION #272	FEBBEL, THOMAS	APPROVED	IN PROGRESS	(950 HOURS)
PARTICLE SEARCH #490	SANDWEISS, JACK	APPROVED	IN PROGRESS	(850 HOURS)
PARTICLE SEARCH #515	ROSEN, JEROME L.	APPROVED	BEING INSTALLED	800 HOURS
HIGH MASS PAIRS #605	BROWN, CHARLES N.	APPROVED	UNSCHEDULED	1,000 HOURS
PHOTON SEARCH #614	ROSEN, JEROME L.	DEFERRED		300 HOURS
MESON AREA-M2 BEAM (DIFFRACTED PROTONS)				
NEUTRAL HYPERON #8	POMDROM, LEE G.	APPROVED	COMPLETED	2,450 HOURS
MULTIGAMMA #22	COLLINS, GEORGE B.	APPROVED	COMPLETED	350 HOURS
MISSING MASS #51A	VON GOELER, EBERHARD	APPROVED	COMPLETED	800 HOURS
QUARK #75	YAMANOUCHI, TAIJI	APPROVED	COMPLETED	1,050 HOURS
BEAM DUMP #108	AWSCHALOM, MIGUEL	APPROVED	COMPLETED	350 HOURS
PION CHARGE EXCHANGE #111	TOLLESTRUP, ALVIN V.	APPROVED	COMPLETED	1,800 HOURS
INCLUSIVE PHOTON #268	MELLEMA, JOEL	APPROVED	COMPLETED	1,850 HOURS
INCLUSIVE NEUTRAL MESON #350	KENNEY, ROBERT W.	APPROVED	COMPLETED	900 HOURS
PARTICLE SEARCH #357	MEYER, DONALD I.	APPROVED	COMPLETED	1,700 HOURS
PARTICLE SEARCH #365	GARELICK, DAVID A.	APPROVED	COMPLETED	200 HOURS
HADRON JETS #395	SELOVE, WALTER	APPROVED	COMPLETED	1,150 HOURS
INCLUSIVE NEUTRON #404	GUSTAFSON, RICHARD	APPROVED	COMPLETED	350 HOURS
PARTICLE PRODUCTION #415	POMDROM, LEE G.	APPROVED	COMPLETED	100 HOURS
MULTI-MUON #439	GARELICK, DAVID A.	APPROVED	COMPLETED	1,700 HOURS
LAMBDA MAGNETIC MOMENT #440	BUNCE, GERRY	APPROVED	COMPLETED	250 HOURS
LAMBDA POLARIZATION #441	POMDROM, LEE G.	APPROVED	COMPLETED	400 HOURS
PARTICLE SEARCH #468	STEINBERG, PHILLIP H.	APPROVED	COMPLETED	300 HOURS
PARTICLE SEARCH #472	STANFIELD, KENNETH C.	APPROVED	COMPLETED	1,100 HOURS
XI-ZERO PRODUCTION #495	HELLER, KENNETH	APPROVED	COMPLETED	700 HOURS
PROTON POLARIZATION #505	YAMIN, SAMUEL PETER	APPROVED	COMPLETED	50 HOURS
LAMBDA BETA-DECAY #361	POMDROM, LEE G.	APPROVED	IN TEST STAGE	(100 HOURS)
NEUTRAL HYPERON #555	DEVLIN, THOMAS J.	APPROVED	SET UP IN A YEAR	450 HOURS
BEAM DUMP #613	ROE, BYRON P.	APPROVED	SET UP IN A YEAR	1,000 HOURS
DI-MUON #589	MOCKETT, PAUL M.	UNCONSIDERED		750 HOURS
MUON-NEUTRINO COINCIDENCE #618	GARELICK, DAVID A.	UNCONSIDERED		400 HOURS
TRANSITION MAGNETIC MOMENT #619	DEVLIN, THOMAS J.	UNCONSIDERED		250 HOURS
CHARGED HYPERON MAG MOMENT #620	POMDROM, LEE G.	UNCONSIDERED		300 HOURS
CP VIOLATION #621	THOMSON, GORDON B.	UNCONSIDERED		1,200 HOURS
QUARK #622	GUSTAFSON, RICHARD	UNCONSIDERED		100 HOURS
MESON AREA-M3 BEAM (NEUTRAL PARTICLES)				
NEUTRON CROSS SECTION #4	LONGO, MICHAEL J.	APPROVED	COMPLETED	1,450 HOURS
NEUTRON BACKWARD SCATTERING #12	REAY, NEVILLE W.	APPROVED	COMPLETED	1,300 HOURS
NEUTRON DISSOCIATION #27A	ROSEN, JEROME L.	APPROVED	COMPLETED	850 HOURS
MULTIGAMMA #230	LONGO, MICHAEL J.	APPROVED	COMPLETED	50 HOURS
NEUTRON ELASTIC SCATTERING #248	LONGO, MICHAEL J.	APPROVED	COMPLETED	2,400 HOURS
NEUTRON DISSOCIATION #305	GOBBI, BRUNO	APPROVED	COMPLETED	1,400 HOURS
PARTICLE SEARCH #366	ABOLINS, MARIS A.	APPROVED	COMPLETED	2,500 HOURS
PARTICLE SEARCH #397	ROSEN, JEROME L.	APPROVED	COMPLETED	1,150 HOURS
NEUTRON-NUCLEUS INELASTIC #438	JONES, LAWRENCE W.	APPROVED	COMPLETED	350 HOURS
PARTICLE SEARCH #540	LONGO, MICHAEL J.	APPROVED	COMPLETED	600 HOURS
PI-MU ATOMS #533	SCHWARTZ, MEL	APPROVED	IN PROGRESS	(600 HOURS)
PARTICLE SEARCH #584	WINSTEIN, BRUCE D.	APPROVED	SET UP IN A YEAR	300 HOURS
CP VIOLATION #617	WINSTEIN, BRUCE D.	APPROVED	UNSCHEDULED	1,000 HOURS
MESON AREA-M4 BEAM (NEUTRAL OR CHARGED PARTICLES)				
QUARK #72	LEIPUNER, LAWRENCE B.	APPROVED	COMPLETED	500 HOURS
K ZERO REGENERATION #82	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	3,500 HOURS
K ZERO CHARGE RADIUS #226	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	1,200 HOURS
PARTICLE SEARCH #330	GUSTAFSON, RICHARD	APPROVED	COMPLETED	150 HOURS
INCLUSIVE K-SHORT #383	KOBRAK, HANS G. E.	APPROVED	COMPLETED	2,200 HOURS
K ZERO REGENERATION #425	TELEGDI, VALENTINE L.	APPROVED	COMPLETED	1,400 HOURS
K ZERO CROSS SECTION #486	WINSTEIN, BRUCE D.	APPROVED	COMPLETED	950 HOURS
KAON CHARGE EXCHANGE #585	FRANCIS, WILLIAM R.	APPROVED	IN PROGRESS	(1,100 HOURS)
MESON AREA-M6 BEAM (CHARGED PARTICLES)				
ELASTIC SCATTERING #69A	LACH, JOSEPH	APPROVED	COMPLETED	2,800 HOURS
ELASTIC SCATTERING #96	RITSON, DAVID	APPROVED	COMPLETED	2,550 HOURS
ASSOCIATED PRODUCTION #99	DIEBOLD, ROBERT E.	APPROVED	COMPLETED	750 HOURS
MULTIPARTICLE #110A	DZIERBA, ALEXANDER R.	APPROVED	COMPLETED	1,600 HOURS
INCLUSIVE SCATTERING #118A	BRANDENBURG, GEORGE W.	APPROVED	COMPLETED	2,550 HOURS
MULTIPLICITIES #178	BUSZA, WIT	APPROVED	COMPLETED	800 HOURS
HADRON JETS #260	MCLEOD, DONALD W.	APPROVED	COMPLETED	2,300 HOURS
BACKWARD SCATTERING #290	BAKER, WINSLOW F.	APPROVED	COMPLETED	1,500 HOURS
HADRON DISSOCIATION #396	GOULIANOS, KONSTANTIN	APPROVED	COMPLETED	1,200 HOURS
INCLUSIVE SCATTERING #451	BARTON, DONALD S.	APPROVED	COMPLETED	500 HOURS
PARTICLE SEARCH #469	CUTTS, DAVID	APPROVED	COMPLETED	400 HOURS
ELASTIC SCATTERING #577	RUBINSTEIN, ROY	APPROVED	BEING INSTALLED	1,000 HOURS
HADRON JETS #557	MALAMUD, ERNEST	APPROVED	BEING INSTALLED	1,600 HOURS
PARTICLE SEARCH #580	JENKINS, EDGAR W.	APPROVED	SET UP IN A YEAR	800 HOURS
HADRON JETS #609	SELOVE, WALTER	APPROVED	UNSCHEDULED	UNSPECIFIED
PARTICLE SEARCH #623	LAI, KWAN-WU	UNCONSIDERED		1,000 HOURS
PARTICLE SEARCH #624	PLESS, IRWIN A.	UNCONSIDERED		2,000 HOURS
MULTIPARTICLE #523	DZIERBA, ALEXANDER R.	DEFERRED		800 HOURS
MESON AREA (MISCELLANEOUS)				
EMULSION/PROTONS @ 200 #90	WOLTER, WLADYSLAW	APPROVED	COMPLETED	4 STACKS
EMULSION/PROTONS @ 200 #103	KING, DAVID T.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 200 #105	MALHOTRA, P. K.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 200 #114	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 200 #116	HEBERT, JACQUES D.	APPROVED	COMPLETED	5 STACKS
EMULSION/PROTONS @ 200 #117A	KUSUMOTO, OSAMU	APPROVED	COMPLETED	11 STACKS

EXPERIMENTAL AREA AND BEAM LINE SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
EMULSION/PROTONS @ 200 #156	NIU, KIYOSHI	APPROVED	COMPLETED	13 STACKS
EMULSION/PROTONS @ 200 #171	LOED, JERE J.	APPROVED	COMPLETED	6 STACKS
EMULSION/PROTONS @ 200 #183	TRETJAKOVA, M. I.	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 200 #189	RITSON, DAVID	APPROVED	COMPLETED	2 PLATES
SUPER-HEAVY ELEMENTS #147	DEBEAUVAIS, MONIQUE	APPROVED	COMPLETED	4 EXPOSURES
DI-MUON #337	EARTLY, DAVID P.	APPROVED	COMPLETED	5 HOURS
SUPER-HEAVY ELEMENTS #371	JURIC, MIRA	APPROVED	COMPLETED	2 STACKS
FRAGMENTATION PARTICLES #426	FUKUI, KATSURA	APPROVED	COMPLETED	16 STACKS
NUCLEAR CHEMISTRY #81A	KAUFMAN, SHELDON	APPROVED	IN PROGRESS	(197 BOMBARDMENTS)
NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM				
NEUTRINO #356	SCIULLI, FRANK	APPROVED	COMPLETED	1,350 HOURS
NEUTRINO #21A	BARISH, BARRY	APPROVED	COMPLETED	2,450 HOURS
NEUTRINO #254	KALBFLEISCH, GEORGE R.	APPROVED	COMPLETED	550 HOURS
NEUTRINO #262	BARISH, BARRY	APPROVED	COMPLETED	400 HOURS
NEUTRINO #320	SCIULLI, FRANK	APPROVED	COMPLETED	500 HOURS
15-FOOT NEUTRINO/H26NE #380	BALTAY, CHARLES	APPROVED	IN PROGRESS	(96K PIX)
NEUTRINO #616	SCIULLI, FRANK	APPROVED	BEING INSTALLED	4,000 HOURS
NEUTRINO #594	TAYLOR, FRANK	APPROVED	BEING INSTALLED	PARASITIC RUNNING
15-FOOT ANTI-NEUTRINO/H26NE#388	PETERSON, VINCENT Z.	APPROVED	SET UP IN A YEAR	200K PIX
NEUTRINO AREA-WIDE BAND HORN NEUTRINO BEAM				
NEUTRINO #1A	CLINE, DAVID B.	APPROVED	COMPLETED	2,850 HOURS
NEUTRINO #310	CLINE, DAVID B.	APPROVED	COMPLETED	3,800 HOURS
15-FOOT NEUTRINO/H26NE #28A	FRY, WILLIAM F.	APPROVED	COMPLETED	97K PIX
15-FOOT ANTI-NEUTRINO/H2 #31A	DERRICK, MALCOLM	APPROVED	COMPLETED	211K PIX
15-FOOT NEUTRINO/H2 #45A	NEZRICK, FRANK A.	APPROVED	COMPLETED	162K PIX
15-FOOT EMI TEST #155	PETERSON, VINCENT Z.	APPROVED	COMPLETED	14K PIX
15-FOOT ANTI-NEUTRINO/H26NE#172	LUBATTI, HENRY J.	APPROVED	COMPLETED	49K PIX
PARTICLE SEARCH #247	BURHOP, ERIC H. S.	APPROVED	COMPLETED	350 HOURS
NEUTRINO #253	HO, LUKE W.	APPROVED	COMPLETED	2,050 HOURS
NEUTRINO #531	REAY, NEVILLE W.	APPROVED	COMPLETED	1,150 HOURS
EMULSION/NEUTRINO #536	NIU, KIYOSHI	APPROVED	COMPLETED	2 STACKS
15-FOOT & EMULSION/NEUTRINO#564	VOYVODIC, LOUIS	APPROVED	COMPLETED	EMULSION EXPOSURE
15-FOOT ANTI-NEUTRINO/D2 #390	GARFINKEL, ARTHUR F.	APPROVED	IN PROGRESS	(10K PIX)
15-FOOT NEUTRINO/H26NE #53A	BALTAY, CHARLES	APPROVED	IN PROGRESS	(163K PIX)
NEUTRINO #553	HAND, LOUIS M.	APPROVED	IN PROGRESS	(1,500 HOURS)
15-FOOT ANTI-NEUTRINO/H26NE#180	ERMOLOV, PAVEL F.	APPROVED	IN PROGRESS	(273K PIX)
15-FOOT NEUTRINO/D26HZ #545	SNOW, GEORGE A.	APPROVED	IN PROGRESS	(317K PIX)
NEUTRINO AREA-QUADRUPOLE TRIPLET NEUTRINO BEAM				
NEUTRINO #370	CLINE, DAVID B.	APPROVED	COMPLETED	400 HOURS
NEUTRINO #482	BARISH, BARRY	APPROVED	COMPLETED	1,600 HOURS
15-FOOT NEUTRINO/H26NE #546	HUSON, FRED RUSS	APPROVED	COMPLETED	375K PIX
NEUTRINO AREA-MUON/HADRON BEAM				
MUON #26	HAND, LOUIS M.	APPROVED	COMPLETED	900 HOURS
MUON #98	ANDERSON, HERBERT L.	APPROVED	COMPLETED	1,800 HOURS
MUON #203A	KERTH, LEROY J.	APPROVED	COMPLETED	1,200 HOURS
MUON #319	CHEN, K. WENDELL	APPROVED	COMPLETED	900 HOURS
DI-MUON #331	PILCHER, JAMES E.	APPROVED	COMPLETED	1,400 HOURS
PARTICLE SEARCH #369	KIRK, THOMAS B. W.	APPROVED	COMPLETED	1,000 HOURS
PARTICLE SEARCH #382	HAND, LOUIS M.	APPROVED	COMPLETED	200 HOURS
MUON #391	KERTH, LEROY J.	APPROVED	COMPLETED	UNSPECIFIED
MUON #398	WILSON, RICHARD	APPROVED	COMPLETED	1,100 HOURS
DI-MUON #444	SMITH, A. J. STEWART	APPROVED	COMPLETED	1,100 HOURS
MUON #448	LOOMIS, WILLIAM A.	APPROVED	COMPLETED	900 HOURS
TEST MUON IRRADIATION #501	LANDE, KENNETH	APPROVED	COMPLETED	2 TARGETS EXPOSED
PARTICLE SEARCH #596	LEDERMAN, LEON M.	APPROVED	COMPLETED	200 HOURS
PARTICLE SEARCH #610	KIRK, THOMAS B. W.	APPROVED	SET UP IN A YEAR	1,000 HOURS
NEUTRINO AREA-15-FT HADRON BEAM				
15-FOOT ENGINEERING RUN #234	HUSON, FRED RUSS	APPROVED	COMPLETED	57K PIX
15-FOOT P - P @ 400 #341	KO, WINSTON	APPROVED	COMPLETED	34K PIX
15-FOOT P - P @ 300 #343	ENGELMANN, RODERICH J.	APPROVED	COMPLETED	27K PIX
PARTICLE SEARCH #379	WOJCICKI, STANLEY G.	APPROVED	COMPLETED	1,250 HOURS
15-FOOT PI- - P @ 100 #83A	KITAGAKI, TOSHIO	APPROVED	IN PROGRESS	(11K PIX)
15-FOOT PI- - P&NE @ 200 #89	FRETTER, WILLIAM B.	APPROVED	IN PROGRESS	(4K PIX)
15-FOOT PI- - P @ 360 #384	LANNUTTI, JOSEPH E.	APPROVED	IN PROGRESS	(20K PIX)
PARTICLE SEARCH #595	BODEK, ARIE	APPROVED	IN TEST STAGE	(500 HOURS)
15-FOOT P - P & NE @ 400 #291	MANN, WILLIAM A.	APPROVED	UNSCHEDULED	25K PIX
DETECTOR DEVELOPMENT #528	ROBERTS, ARTHUR	DEFERRED		100 HOURS
NEUTRINO AREA-30-IN HADRON BEAM				
30-INCH HYBRID #2B	SMITH, GERALD A.	APPROVED	COMPLETED	479K PIX
30-INCH P-P @ 300 #37A	MALAMUD, ERNEST	APPROVED	COMPLETED	51K PIX
30-INCH PI+ & P - P @ 100 #121A	LANDER, RICHARD L.	APPROVED	COMPLETED	104K PIX
30-INCH PI- - P @ 100 #125	MORRISON, DOUGLAS R. O.	APPROVED	COMPLETED	53K PIX
30-INCH PI- - P @ 200 #137	HUSON, FRED RUSS	APPROVED	COMPLETED	48K PIX
30-INCH P-P @ 400 #138	VANDER VELDE, JACK C.	APPROVED	COMPLETED	52K PIX
30-INCH P-P @ 200 #141A	FIELDS, THOMAS	APPROVED	COMPLETED	67K PIX
30-INCH PI- - P @ 300 #143A	KALBFLEISCH, GEORGE R.	APPROVED	COMPLETED	51K PIX
30-INCH HYBRID #154	PLESS, IRWIN A.	APPROVED	COMPLETED	105K PIX
30-INCH P - P&NE @ 300 #161	MAPP, JAMES	APPROVED	COMPLETED	51K PIX
30-INCH PI- - P&NE @ 200 #163A	WALKER, WILLIAM D.	APPROVED	COMPLETED	52K PIX
30-INCH P - D @ 100 #194	MURPHY, C. THORNTON	APPROVED	COMPLETED	92K PIX
30-INCH P - D @ 400 #196	ENGELMANN, RODERICH J.	APPROVED	COMPLETED	109K PIX
30-INCH P - D @ 300 #209	DAO, FU TAK	APPROVED	COMPLETED	106K PIX
30-INCH PI+ & P - P @ 200 #217	LANDER, RICHARD L.	APPROVED	COMPLETED	85K PIX
30-INCH PI- - D @ 200 #218	YAGER, PHILIP M.	APPROVED	COMPLETED	72K PIX
30-INCH PI+ & P - P @ 60 #228	FERBEL, THOMAS	APPROVED	COMPLETED	37K PIX
30-INCH P-P @ 100 #252	FERBEL, THOMAS	APPROVED	COMPLETED	33K PIX
30-INCH P - D @ 200 #280	FIELDS, THOMAS	APPROVED	COMPLETED	103K PIX
30-INCH HYBRID #281	SMITH, GERALD A.	APPROVED	COMPLETED	301K PIX
30-INCH PI+ & P - D @ 200 #295	YEKUTIELI, GIDEON	APPROVED	COMPLETED	156K PIX
QUARK #297	LEIPUNER, LAWRENCE B.	APPROVED	COMPLETED	50 HOURS
30-INCH HYBRID #299	PLESS, IRWIN A.	APPROVED	COMPLETED	431K PIX
30-INCH PBAR - P @ 100 #311	NEALE, WILLIAM W.	APPROVED	COMPLETED	98K PIX
30-INCH PI- - D @ 360 #338	MORIYASU, KEIHACHIRO	APPROVED	COMPLETED	53K PIX
30-INCH PBAR - P @ 50 #344	GUTAY, LASZLO J.	APPROVED	COMPLETED	145K PIX
30-INCH PBAR - D @ 100 #345	EKSPONG, GOSTA	APPROVED	COMPLETED	61K PIX
30-INCH HYBRID #570	PLESS, IRWIN A.	APPROVED	UNSCHEDULED	1,500 HOURS
30-INCH HYBRID #565	YAMAMOTO, RICHARD K.	APPROVED	UNSCHEDULED	PARASITIC RUNNING
30-INCH HYBRID #597	WHITMORE, J. JAMES	APPROVED	UNSCHEDULED	1,000 HOURS
DETECTOR DEVELOPMENT #550	ATAC, MUZAFFER	DEFERRED		TEST RUNNING

EXPERIMENTAL AREA AND BEAM LINE SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
NEUTRINO AREA (MISCELLANEOUS)				
MONOPOLE #3	EBERHARD, PHILIPPE	APPROVED	COMPLETED	4 TARGETS EXPOSED
PROTON-PROTON INELASTIC #14A	FRANZINI, PAOLO	APPROVED	COMPLETED	140 HOURS
MONOPOLE #76	CARRIGAN, RICHARD	APPROVED	COMPLETED	5 TARGETS EXPOSED
LONG-LIVED PARTICLES #115	STEVENSON, M. LYNN	APPROVED	COMPLETED	6 HOURS
SUPER-HEAVY ELEMENTS #142	STOUGHTON, RAYMOND W.	APPROVED	COMPLETED	1 TARGET
MASSIVE PARTICLE SEARCH #199	FRANKEL, SHERMAN	APPROVED	COMPLETED	2 TARGETS EXPOSED
BEAM DUMP #211	GOEBEL, KLAUS	APPROVED	COMPLETED	2 HOURS
LONG-LIVED PARTICLES #239	FRATI, WILLIAM	APPROVED	COMPLETED	350 HOURS
QUARK #276	VAN GINNEKEN, ANDREAS	APPROVED	COMPLETED	3 TARGETS EXPOSED
SUPER-HEAVY ELEMENTS #285	LEDERMAN, LEON M.	APPROVED	COMPLETED	3 TARGETS EXPOSED
EMULSION/NEW PARTICLES #386	LORD, JERE J.	APPROVED	COMPLETED	1 STACK
DETECTOR DEVELOPMENT #34	HUGGETT, RICHARD W.	APPROVED	COMPLETED	50 HOURS
DETECTOR DEVELOPMENT #327	ALLISON, WADE W. M.	APPROVED	COMPLETED	50 HOURS
PLASTIC DETECTORS #275	ENGE, WOLFGANG	APPROVED	COMPLETED	4 STACKS
EMULSION/PROTONS @ 200 #271	GOTTFRIED, KURT	APPROVED	COMPLETED	10 STACKS
EMULSION/PROTONS @ 300 #181	CARY, ARTHUR S.	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 300 #195	LIN, YU K.	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 300 #232	KING, DAVID T.	APPROVED	COMPLETED	2 STACKS
EMULSION/PROTONS @ 300 #233	HEBERT, JACQUES D.	APPROVED	COMPLETED	8 STACKS
EMULSION/PROTONS @ 300 #237	LORD, JERE J.	APPROVED	COMPLETED	5 STACKS
EMULSION/PROTONS @ 300 #242	NIU, KIYOSHI	APPROVED	COMPLETED	2 STACKS
EMULSION/PROTONS @ 300 #244	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 300 #250	KUSUMOTO, OSAMU	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 300 #329	TRETJAKOVA, M. I.	APPROVED	COMPLETED	2 STACKS
EMULSION/PROTONS @ 300 #374	DAVIS, D. H.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 300 #419	GIACOMELLI, GIORGIO	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 300 #421	DZHELEPOV, V. P.	APPROVED	COMPLETED	1 STACK
EMULSION/MUONS @ 150 #255	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
EMULSION/MUONS @ 150 #205A	KUSUMOTO, OSAMU	APPROVED	COMPLETED	2 STACKS
EMULSION/MUONS @ 200 #373	JAIN, PIYARE L.	APPROVED	COMPLETED	2 STACKS
EMULSION/MUONS @ 200 #424	WADA, TOMONORI	APPROVED	COMPLETED	1 STACK
EMULSION/MUONS @ 200 #509	SHIRAI, T.	APPROVED	COMPLETED	1 STACK
EMULSION/PI- @ 200 #264	YOUNG, POH SHIEN	APPROVED	COMPLETED	2 STACKS
EMULSION/PI- @ 200 #328	TRETJAKOVA, M. I.	APPROVED	COMPLETED	5 STACKS
EMULSION/PI- @ 200 #339	WOLTER, WLADYSLAW	APPROVED	COMPLETED	4 STACKS
EMULSION/PI- @ 200 #362	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
EMULSION/PI- @ 200 #387	WILKES, RICHARD J.	APPROVED	COMPLETED	4 STACKS
EMULSION/PI- @ 300 #481	TAKAHASHI, YOSHIYUKI	APPROVED	COMPLETED	7 STACKS
EMULSION/PI- @ 300 #503	OGATA, TAKESHI	APPROVED	COMPLETED	4 STACKS
EMULSION/PI- @ 300 #506	DAKE, SHOJI	APPROVED	COMPLETED	2 STACKS
EMULSION/PI- @ 300 #525	WILKES, RICHARD J.	APPROVED	COMPLETED	2 STACKS
EMULSION/PI- @ 300 #568	HEBERT, JACQUES D.	APPROVED	COMPLETED	3 STACKS
EMULSION/PI- @ 300 #573	USHIDA, NORIYUKI	APPROVED	COMPLETED	3 STACKS
EMULSION/PI- @ 300 #574	WOLTER, WLADYSLAW	APPROVED	COMPLETED	4 STACKS
EMULSION/PROTONS @ 400 #238	LORD, JERE J.	APPROVED	COMPLETED	9 STACKS
EMULSION/PROTONS @ 400 #243	NIU, KIYOSHI	APPROVED	COMPLETED	7 STACKS
EMULSION/PROTONS @ 400 #245	JAIN, PIYARE L.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 400 #249	WOLTER, WLADYSLAW	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 400 #251	KUSUMOTO, OSAMU	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 400 #265	YOUNG, POH SHIEN	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 400 #279	KING, DAVID T.	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 400 #292	GOTTFRIED, KURT	APPROVED	COMPLETED	12 STACKS
EMULSION/PROTONS @ 400 #336	OGATA, TAKESHI	APPROVED	COMPLETED	2 STACKS
EMULSION/PROTONS @ 400 #346	EKSPONG, GOSTA	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 400 #385	PRAKASH, Y.	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 400 #423	SUGIMOTO, HISAHIKO	APPROVED	COMPLETED	4 STACKS
EMULSION/PROTONS @ 400 #428	HEBERT, JACQUES D.	APPROVED	COMPLETED	14 STACKS
EMULSION/PROTONS @ 400 #434	DAKE, SHOJI	APPROVED	COMPLETED	3 STACKS
EMULSION/PROTONS @ 400 #461	LORD, JERE J.	APPROVED	COMPLETED	6 STACKS
EMULSION/PROTONS @ 400 #462	GIACOMELLI, GIORGIO	APPROVED	COMPLETED	1 STACK
EMULSION/PROTONS @ 400 #463	TRETJAKOVA, M. I.	APPROVED	COMPLETED	2 STACKS
EMULSION/PROTONS @ 400 #499	IWAI, JUNSUKE	APPROVED	COMPLETED	5 STACKS
EMULSION/PROTONS @ 400 #547	JACQUOT, C. J.	APPROVED	COMPLETED	24 STACKS
EMULSION/PROTONS @ 400 #575	LORD, JERE J.	APPROVED	COMPLETED	2 STACKS
TACHYON MONOPOLE #202	BARTLETT, DAVID F.	APPROVED	COMPLETED	COSMIC RAY RUNNING
TEST MUON IRRADIATION #467	FREEDMAN, MELVIN	APPROVED	COMPLETED	4 TARGETS EXPOSED
MONOPOLE #502	BARTLETT, DAVID F.	APPROVED	IN PROGRESS	(COSMIC RAY RUNNING)
NUCLEAR FRAGMENTS #466	KAUFMAN, SHELDON	APPROVED	IN PROGRESS	(26 TARGETS EXPOSED)
QUARK #549	LONGO, MICHAEL J.	APPROVED	IN TEST STAGE	(1 TARGET EXPOSED)
EMULSION/PROTONS @ 500 #508	WOLTER, WLADYSLAW	APPROVED	UNSCHEDULED	EMULSION EXPOSURE
EMULSION/PROTONS @ 500 #524	WILKES, RICHARD J.	APPROVED	UNSCHEDULED	EMULSION EXPOSURE
EMULSION/PROTONS @ 500 #576	HEBERT, JACQUES D.	APPROVED	UNSCHEDULED	3 STACKS
NEUTRINO #625	LEE, WONYONG	UNCONSIDERED		2,000 HOURS
PROTON AREA (EAST)				
PHOTON TOTAL CROSS SECTION #25A	CALDWELL, DAVID O.	APPROVED	COMPLETED	1,850 HOURS
PHOTOPRODUCTION #87A	OHALLORAN, THOMAS	APPROVED	COMPLETED	4,800 HOURS
PARTICLE SEARCH #100A	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,150 HOURS
PHOTOPRODUCTION #152B	HEUSCH, CLEMENS A.	APPROVED	COMPLETED	1,950 HOURS
PARTICLE SEARCH #300	PIROUE, PIERRE A.	APPROVED	COMPLETED	750 HOURS
PARTICLE SEARCH #325	PIROUE, PIERRE A.	APPROVED	COMPLETED	1,500 HOURS
DI-MUON #358	LEE, WONYONG	APPROVED	COMPLETED	400 HOURS
DETECTOR DEVELOPMENT #498	GRUHN, CHARLES R.	APPROVED	COMPLETED	50 HOURS
PHOTOPRODUCTION #401	GORELEY, MICHAEL F.	APPROVED	IN PROGRESS	(800 HOURS)
PHOTOPRODUCTION #516	NASH, THOMAS	APPROVED	BEING INSTALLED	1,000 HOURS
PHOTON DISSOCIATION #612	GOULIANOS, KONSTANTIN	APPROVED	UNSCHEDULED	1,150 HOURS
PARTICLE SEARCH #400	PEOPLES, JOHN	APPROVED	UNSCHEDULED	UNSPECIFIED
PHOTOPRODUCTION #458	LEE, WONYONG	APPROVED	UNSCHEDULED	UNSPECIFIED
PROTON AREA (CENTER)				
MUON SEARCH #48	ADAIR, ROBERT K.	APPROVED	COMPLETED	500 HOURS
LEPTON #70	LEDERMAN, LEON M.	APPROVED	COMPLETED	2,800 HOURS
PARTICLE SEARCH #187	LEDERMAN, LEON M.	APPROVED	COMPLETED	200 HOURS
DI-LEPTON #288	LEDERMAN, LEON M.	APPROVED	COMPLETED	6,850 HOURS
MUON SEARCH #435	ADAIR, ROBERT K.	APPROVED	COMPLETED	250 HOURS
DI-MUON #436	ADAIR, ROBERT K.	APPROVED	COMPLETED	200 HOURS
DI-HADRON #494	GOOD, MYRON L.	APPROVED	COMPLETED	1,950 HOURS
PARTICLE SEARCH #608	BROWN, CHARLES N.	APPROVED	COMPLETED	600 HOURS
CHARGED HYPERON #497	LACH, JOSEPH	APPROVED	BEING INSTALLED	400 HOURS
PROTON AREA (WEST)				
PHOTON SEARCH #95A	COX, BRADLEY	APPROVED	COMPLETED	3,400 HOURS
PROTON-PROTON ELASTIC #177A	OREAR, JAY	APPROVED	COMPLETED	2,400 HOURS
PARTICLE PRODUCTION #284	WALKER, JAMES K.	APPROVED	COMPLETED	1,150 HOURS
NUCLEAR SCALING #592	FRANKEL, SHERMAN	APPROVED	COMPLETED	500 HOURS
PION INCLUSIVE #258	SHOCHET, MELVYN J.	APPROVED	IN PROGRESS	(850 HOURS)
PARTICLE SEARCH #567	WITHERELL, MICHAEL	APPROVED	IN PROGRESS	(600 HOURS)
DI-MUON #326	SHOCHET, MELVYN J.	APPROVED	BEING INSTALLED	800 HOURS
C-TEST #302	WITHERELL, MICHAEL	APPROVED	BEING INSTALLED	400 HOURS
DI-MUON #537	COX, BRADLEY	APPROVED	BEING INSTALLED	1,000 HOURS

EXPERIMENTAL AREA AND BEAM LINE SHORT TITLE OF PROPOSAL	SPOKESPERSON	PROPOSAL STATUS	EXPERIMENT SITUATION	EXTENT
PROTON AREA (MISCELLANEOUS)				
EMULSION/ELECTRONS @ HI E #340	DAKE, SHOJI	APPROVED	COMPLETED	10 STACKS
EMULSION/ELECTRONS @ >100 #399	GOLDEN, ROBERT L.	APPROVED	COMPLETED	6 STACKS
EMULSION/ELECTRONS @ HI E #510	NIU, KIYOSHI	APPROVED	COMPLETED	6 STACKS
INTERNAL TARGET AREA (C-Q)				
PROTON-PROTON SCATTERING #36A	COOL, RODNEY L.	APPROVED	COMPLETED	700 HOURS
PHOTON SEARCH #63A	WALKER, JAMES K.	APPROVED	COMPLETED	2,600 HOURS
PROTON-PROTON MISSING MASS #67A	SANNES, FELIX	APPROVED	COMPLETED	600 HOURS
PHOTON SEARCH #120	CLINE, DAVID B.	APPROVED	COMPLETED	1,200 HOURS
PARTICLE SEARCH #184	WANDERER, PETER	APPROVED	COMPLETED	800 HOURS
PROTON-DEUTERON SCATTERING #186	MELISSINOS, ADRIAN	APPROVED	COMPLETED	450 HOURS
PROTON-NUCLEON INCLUSIVE #188	SANNES, FELIX	APPROVED	COMPLETED	1,050 HOURS
PROTON-NUCLEON SCATTERING #198A	OLSEN, STEPHEN L.	APPROVED	COMPLETED	900 HOURS
PROTON-PROTON INELASTIC #221	FRANZINI, PAOLO	APPROVED	COMPLETED	950 HOURS
PROTON-HELIUM SCATTERING #289	MALAMUD, ERNEST	APPROVED	COMPLETED	1,050 HOURS
PROTON-PROTON POLARIZATION #313	NEAL, HOMER A.	APPROVED	COMPLETED	850 HOURS
PROTON-NUCLEON INELASTIC #317	COOL, RODNEY L.	APPROVED	COMPLETED	1,400 HOURS
PROTON-PROTON INELASTIC #321	LEE-FRANZINI, JULIET	APPROVED	COMPLETED	1,900 HOURS
PARTICLE SEARCH #363	OLSEN, STEPHEN L.	APPROVED	COMPLETED	650 HOURS
PROTON-NUCLEON SCATTERING #381	MALAMUD, ERNEST	APPROVED	COMPLETED	600 HOURS
PARTICLE PRODUCTION #418	SANNES, FELIX	APPROVED	COMPLETED	900 HOURS
NUCLEAR FRAGMENTS #442	TURKOT, FRANK	APPROVED	COMPLETED	1,200 HOURS
PROTON POLARIZATION #522	OGREN, HAROLD O.	APPROVED	COMPLETED	700 HOURS
P-N SCATTERING #552	SANNES, FELIX	APPROVED	COMPLETED	950 HOURS
PARTICLE SEARCH #591	GUTAY, LASZLO J.	APPROVED	BEING INSTALLED	800 HOURS
PROTON-PROTON SCATTERING #500D	FRANZINI, PAOLO	UNCONSIDERED		1,000 HOURS

SECTION VII. MASTER LIST OF PROPOSALS

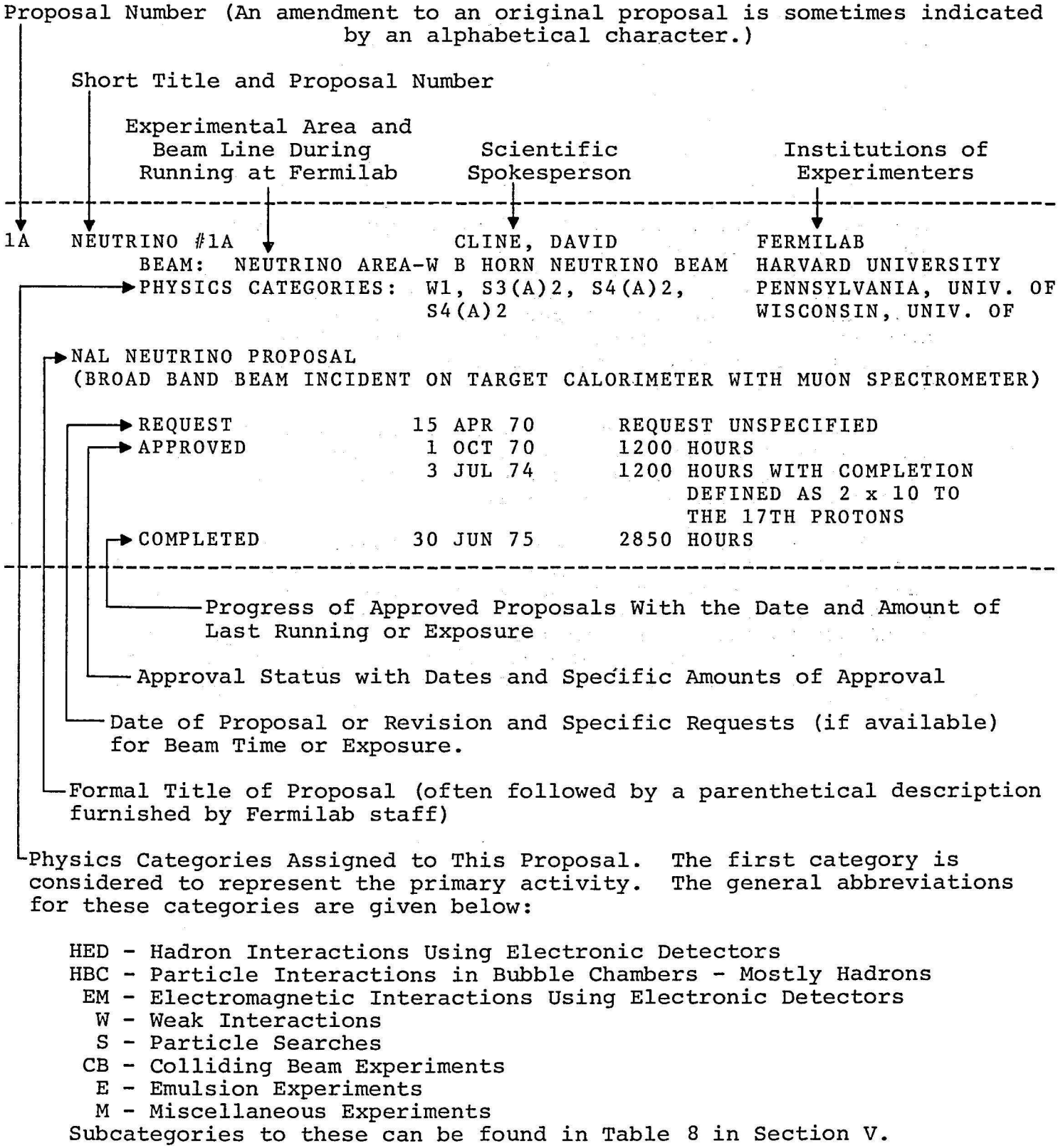
The Master List is a sequential listing of proposals submitted to Fermilab. As such it provides a handy reference when a more detailed reminder is needed of the content of an experiment when in some context only a proposal number is given.

A typical entry in the Master List is explained on the next page. In addition to the formal title of the proposal and a brief parenthetical explanation, the name of the spokesperson and a list of the institutions participating in the research are included. In the lower part of each entry the specific requests for running time to complete the experiment are listed. Accompanying this is information on approval action by the Laboratory with the amount of running time granted if the proposal was approved. Following this, for approved proposals only, the status of running for the experiment and the extent of beam time used so far is given.

Most information about each proposal stored in the data file is shown in the Master List. Therefore, all of the lists of proposals shown elsewhere in this Workbook use information contained in the Master List.

Because there are now so many proposals, the Master List is frequently used as given here in shortened form. Of the proposals with numbers below 500, only those which are active are listed. Those with obsolete status (rejected or withdrawn/inactive) are omitted. This leaves some gaps in the sequential listing. The complete listing starting with proposal 500, for which the submission date was May 1976, is included.

EXPLANATION OF A TYPICAL ENTRY IN THE MASTER LIST



HED - Hadron Interactions Using Electronic Detectors
HBC - Particle Interactions in Bubble Chambers - Mostly Hadrons
EM - Electromagnetic Interactions Using Electronic Detectors
W - Weak Interactions
S - Particle Searches
CB - Colliding Beam Experiments
E - Emulsion Experiments
M - Miscellaneous Experiments

Subcategories to these can be found in Table 8 in Section V.

MASTER LIST

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

1A NEUTRINO #1A — CLINE, DAVID B. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM — HARVARD UNIVERSITY
PHYSICS CATEGORIES: W1, S3(A)2, S4(A)2, S5(A)2 — PENNSYLVANIA, UNIVERSITY OF
WISCONSIN, UNIVERSITY OF

NAL NEUTRINO PROPOSAL.
(BROAD BAND BEAM INCIDENT ON TARGET CALORIMETER WITH MUON SPECTROMETER)

REQUEST	15 APR 70	UNSPECIFIED
APPROVED	1 OCT 70	1,200 HOURS
	3 JUL 74	1,200 HOURS WITH COMPLETION OF THE EXPERIMENT DEFINED AS 20,000 EVENTS WITH 2 X 10 TO THE 17TH PROTONS ON A HORN-FOCUSED BEAM
COMPLETED	30 JUN 75	2,850 HOURS

2B 30-INCH HYBRID #2B — SMITH, GERALD A. — DUKE UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HBC2, HBC1 — IOWA STATE UNIVERSITY
MARYLAND, UNIVERSITY OF
MICHIGAN STATE UNIVERSITY
NOTRE DAME, UNIVERSITY OF
PURDUE UNIVERSITY
TORONTO, UNIVERSITY OF (CANADA)
WISCONSIN, UNIVERSITY OF

STUDY OF MULTIPARTICLE P-P AND PI-P INTERACTIONS FROM 100 GEV/C TO 400 GEV/C WITH A 30-INCH BUBBLE CHAMBER-OPTICAL SPARK CHAMBER HYBRID SYSTEM.

REQUEST	11 MAY 70	UNSPECIFIED BUT TO INCLUDE AN EXPOSURE FOR STUDY OF P - P AND PI- - P INTERACTIONS FROM 75 TO 300 GEV	
	29 APR 71	500K PIX	
APPROVED	1 MAY 71	450K PIX 100K PIX OF P - P @ 200 GEV 100K PIX OF P - P @ 300 GEV) 120K PIX OF PI MINUS - P @ 200 GEV 50K PIX OF PI MINUS - P @ 100 GEV) 80K PIX OF PI PLUS - P @ 100 GEV	ANL/FERMILAB, MSU, ISU, MD DUKE, TORONTO, NOTRE DAME PURDUE, WISCONSIN
COMPLETED	22 APR 74	479K PIX 114K PIX OF P - P @ 200 105K PIX OF P - P @ 300 123K PIX OF PI- - P @ 200 54K PIX OF PI- - P @ 100 83K PIX OF PI+ - P @ 100 BONUS PIX: 350K PIX FROM #37A, #121A, #125, #137, #138, #141A, #143, #252	

---

3 MONOPOLE #3 — EBERHARD, PHILIPPE — LAWRENCE BERKELEY LABORATORY
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: S1

PROPOSAL FOR A SEARCH FOR MAGNETIC MONOPOLES AT NAL.
(FERROMAGNETIC TARGET LOCATED IN A BEAM DUMP)

REQUEST	20 MAY 70	TARGET EXPOSURE TO 1 X 10 TO 18TH PROTONS
APPROVED	1 AUG 70	TARGET EXPOSURE
COMPLETED	4 SEP 74	4 TARGETS EXPOSED

---

4 NEUTRON CROSS SECTION #4 — LONGO, MICHAEL J. — LAWRENCE BERKELEY LABORATORY
BEAM: MESON AREA-M3 BEAM — MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORY: HED1

NEUTRON TOTAL CROSS SECTIONS UP TO 300 GEV.
(TOTAL CROSS SECTIONS ON H2, D2, HEAVY NUCLEI TO < 2%)

REQUEST	20 MAY 70	300 HOURS WITH 100 HOURS FOR TUNE UP AND 200 HOURS FOR DATA TO MEASURE TOTAL CROSS SECTIONS
APPROVED	1 AUG 70	400 HOURS
COMPLETED	20 MAR 74	1,450 HOURS

---

7 ELASTIC SCATTERING #7 — MEYER, DONALD I. — ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M1 BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED2 — INDIANA UNIVERSITY
MICHIGAN, UNIVERSITY OF

A PROPOSAL TO MEASURE PI+(-) - P AND P-P DIFFERENTIAL ELASTIC SCATTERING CROSS SECTIONS FROM 50 TO 170 GEV/C.
(IN ADDITION, DATA WILL BE TAKEN ON K+(-) - P AND PBAR - P SIMULTANEOUSLY; T FROM 0.1 - 2.0 OR 3.0)

REQUEST	10 JUN 70	1,600 HOURS
APPROVED	1 AUG 70	800 HOURS
COMPLETED	28 JAN 75	2,350 HOURS

---

8 NEUTRAL HYPERON #8 — PONDROM, LEE G. — MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM — RUTGERS UNIVERSITY
PHYSICS CATEGORIES: HED9, HED1, HED2, HED6(B) — WISCONSIN, UNIVERSITY OF

EXPERIMENTS IN A NEUTRAL HYPERON BEAM.
(BEAM SURVEY, DELTA S = 2 DECAY SEARCH, AND LAMBDA - P SCATTERING)

REQUEST	12 JUN 70	260 HOURS FOR DATA
APPROVED	1 AUG 70	400 HOURS
COMPLETED	22 MAR 76	2,450 HOURS

---

12 NEUTRON BACKWARD SCATTERING #12 — REAY, NEVILLE W. — CARLETON UNIVERSITY (CANADA)
BEAM: MESON AREA-M3 BEAM — MICHIGAN STATE UNIVERSITY
PHYSICS CATEGORIES: HED2, HED3, HED4 — OHIO STATE UNIVERSITY

A STUDY OF NEUTRON-PROTON CHARGE-EXCHANGE SCATTERING IN THE MOMENTUM RANGE 50-300 GEV/C.
(U FROM 0.002 - 1.0)

REQUEST	15 JUN 70	760 HOURS
APPROVED	1 AUG 70	600 HOURS WITH PRIORITY LOWER THAN EXP #4
COMPLETED	2 DEC 74	1,300 HOURS

14A PROTON-PROTON INELASTIC #14A — FRANZINI, PAOLO — COLUMBIA UNIVERSITY
BEAM: NEUTRINO AREA-MISCELLANEOUS — NEW YORK, STATE UNIVERSITY OF, STONY BROOK
PHYSICS CATEGORIES: HED6(D), HED7

PROPOSAL TO STUDY INELASTIC HIGH-ENERGY PROTON-PROTON COLLISIONS IN THE DIFFRACTIVE REGION.
(T FROM 0.001 - 0.07 AND MISSING MASS TO 10 GEV)

REQUEST	15 JUN 70	200 HOURS
APPROVED	1 MAR 71	150 HOURS WITH LOW PRIORITY
COMPLETED	21 JUN 73	140 HOURS

21A NEUTRINO #21A — BARISH, BARRY — CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: W1, S3(A)2, S4(A)2, S5(A)2

NEUTRINO PHYSICS AT VERY HIGH ENERGIES.
(DICHROMATIC BEAM INCIDENT ON TARGET CALORIMETER WITH MUON SPECTROMETER)

REQUEST	15 JUN 70	750 HOURS
APPROVED	1 AUG 70	1,200 HOURS
	26 JUN 74	1,200 HOURS WITH THE INCLINATION FOR THE COMPLETION OF EXP# 21A (APPROXIMATELY 400 HOURS) TO HAVE A LOWER PRIORITY THAN RUNNING FOR EXP# 320
	11 NOV 74	1,200 HOURS WITH REMAINING RUNNING TO BE COORDINATED WITH EXP# 254
COMPLETED	2 NOV 75	2,450 HOURS

---

22 MULTIGAMMA #22 — COLLINS, GEORGE B. — BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM — VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY
PHYSICS CATEGORIES: S1, HED8(B)

EXPERIMENTAL PROPOSAL TO THE NATIONAL ACCELERATOR LABORATORY FOR A SEARCH FOR MULTIGAMMA EVENTS FROM MAGNETIC MONOPOLE PAIRS.

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

REQUEST 15 JUN 70 100 HOURS FOR DATA
APPROVED 1 AUG 70 200 HOURS FOR HADRON BEAM USE ONLY
COMPLETED 26 JUN 74 350 HOURS

25A PHOTON TOTAL CROSS SECTION #25A — CALDWELL, DAVID O. — CALIFORNIA, UNIVERSITY OF, SANTA BARBARA
BEAM: PROTON AREA-(EAST) — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: EM1, EM2, S1 — TORONTO, UNIVERSITY OF (CANADA)

MEASUREMENT OF THE TOTAL PHOTOABSORPTION CROSS SECTION ON H, D, C, CU, AND PB FOR PHOTON ENERGIES FROM 14 TO 300 GEV, AND A SEARCH FOR THE PHOTOPRODUCED MONOPOLE.

REQUEST 15 JUN 70 400 HOURS FOR DATA
APPROVED 1 AUG 71 600 HOURS WITH 200 HOURS FOR TUNING, 400 HOURS FOR DATA
26 OCT 76 1,000 HOURS WITH ADDITIONAL 400 HOURS FOR THE EXPERIMENT TO CONTINUE DATA TAKING UNTIL 30 NOV 1976
COMPLETED 30 NOV 76 1,850 HOURS

---

26 MUON #26 — HAND, LOUIS M. — CALIFORNIA, UNIVERSITY OF, SAN DIEGO
BEAM: NEUTRINO AREA-MUON/HADRON BEAM — CORNELL UNIVERSITY
PHYSICS CATEGORY: EM4 — LAWRENCE BERKELEY LABORATORY
MICHIGAN STATE UNIVERSITY

HIGH MOMENTUM TRANSFER INELASTIC MUON SCATTERING AND TEST OF SCALE INVARIANCE AT NAL.

REQUEST 15 JUN 70 UNSPECIFIED
APPROVED 1 AUG 70 500 HOURS
6 AUG 73 500 HOURS DEFINED AS 3 X 10 TO THE 17TH PROTONS
COMPLETED 16 APR 74 900 HOURS

27A NEUTRON DISSOCIATION #27A — ROSEN, JEROME L. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M3 BEAM — MASSACHUSETTS, UNIVERSITY OF
PHYSICS CATEGORIES: HED7, HED1, HED6(A) — NORTHWESTERN UNIVERSITY
ROCHESTER, UNIVERSITY OF

PROPOSAL TO STUDY THE COHERENT DISSOCIATION OF NEUTRONS.

REQUEST 15 JUN 70 UNSPECIFIED
APPROVED 1 MAR 71 200 HOURS FOR LOW PRIORITY STAGE I RUNNING
COMPLETED 24 APR 74 850 HOURS

28A 15-FOOT NEUTRINO/H2&NE #28A — FRY, WILLIAM F. — CERN
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM — HAWAII, UNIVERSITY OF
PHYSICS CATEGORIES: W2, S4(A)1, S5(A)1 — LAWRENCE BERKELEY LABORATORY
WISCONSIN, UNIVERSITY OF

SEARCH FOR HEAVY LEPTONS AND HARD PENETRATING RADIATION IN THE NEUTRINO BEAM, STUDY OF DIFFRACTION SCATTERING OF NEUTRINOS; STUDY OF DEEP INELASTIC MUON-NEUTRINO SCATTERING IN A NEON BUBBLE CHAMBER AT NAL, AND TEST OF THE DELTA S = DELTA Q RULE AT HIGH MOMENTUM TRANSFER USING INCLUSIVE REACTIONS.

REQUEST 15 JUN 70 1,000K PIX TO INCLUDE 500K PIX WITH THE PRIMARY PROTONS INCIDENT ON THE HADRON SHIELD AND 500K PIX WITH NORMAL TARGETRY
APPROVED 1 DEC 71 100K PIX WITH 50K PIX OF NEUTRINOS IN NEON (GREATER THAN OR EQUAL TO 30%) WITH THE CONSTRAINST THAT RUNNING CONDITIONS YIELD AT LEAST 10,000 EVENTS; AND 50K PIX OF NEUTRINOS USING SPECIAL TARGETING
9 MAY 75 100K PIX TOTAL OF NEUTRINOS IN THE 22% NEON MIXTURE UNDER HORN FOCUSING CONDITIONS
COMPLETED 11 JUN 75 97K PIX

31A 15-FOOT ANTI-NEUTRINO/H2 #31A — DERRICK, MALCOLM — ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM — CARNEGIE-MELLON UNIVERSITY
PHYSICS CATEGORIES: W2, S4(A)1, S5(A)1 — PURDUE UNIVERSITY

PROPOSAL TO INVESTIGATE MUON-ANTINEUTRINO INTERACTIONS IN HYDROGEN AT NAL.

REQUEST 15 JUN 70 1,000K PIX REQUIRING A TOTAL EXPOSURE OF 10 TO THE 19TH PROTONS WITH 10 TO THE 13TH PROTONS PER PULSE ON TARGET
APPROVED 1 DEC 71 200K PIX MAXIMUM WITH THE CONSTRAINT THAT THE RUNNING CONDITIONS YIELD AT LEAST 7,000 ANTINEUTRINO INTERACTIONS
COMPLETED 13 AUG 77 211K PIX

---

34 DETECTOR DEVELOPMENT #34 — HUGGETT, RICHARD W. — LOUISIANA STATE UNIVERSITY
BEAM: NEUTRINO AREA-MISCELLANEOUS — MAX PLANCK INSTITUTE, MUNICH (GERMANY)
PHYSICS CATEGORY: M2

NUCLEAR-ELECTROMAGNETIC CASCADE DEVELOPMENT STUDY.
(IONIZATION SPECTROMETER DEVELOPMENT)

REQUEST 15 JUN 70 400 HOURS IN TWO CALIBRATION RUNS
APPROVED 1 AUG 70 PARASITIC RUNNING
COMPLETED 26 JUN 74 50 HOURS

36A PROTON-PROTON SCATTERING #36A — COOL, RODNEY L. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: INTERNAL TARGET AREA-(C-0) — JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
PHYSICS CATEGORIES: HED2, HED1, HED6(D), HED7 — ROCHESTER, UNIVERSITY OF
ROCKEFELLER UNIVERSITY

A PROPOSAL TO STUDY SMALL ANGLE P-P SCATTERING AT VERY HIGH ENERGIES.
(USING A GAS JET TARGET AND THE INTERNAL PROTON BEAM)

REQUEST 15 JUN 70 550 HOURS
APPROVED 1 FEB 71 500 HOURS
COMPLETED 24 JUN 73 700 HOURS

37A 30-INCH P-P @ 300 #37A — MALAMUD, ERNEST — CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM — CALIFORNIA, UNIVERSITY OF, LOS ANGELES
PHYSICS CATEGORY: HBC1 — FERMI NATIONAL ACCELERATOR LABORATORY
INDIANA UNIVERSITY

MULTIBODY FINAL STATES IN PP COLLISIONS UP TO 500 GEV.

REQUEST 15 JUN 70 250K PIX OF P - P INTERACTIONS AT 100,200,300,400,500 GEV IN 15-FOOT CHAMBER
3 MAY 71 100K PIX OF P - P INTERACTIONS AT ONE FIXED HIGH ENERGY IN 30-INCH CHAMBER
APPROVED 26 AUG 71 50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED 1 JUN 73 51K PIX

45A 15-FOOT NEUTRINO/H2 #45A — NEZRICK, FRANK A. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM — HAWAII, UNIVERSITY OF
PHYSICS CATEGORIES: W2, S3(A)1, S4(A)1, S5(A)1 — LAWRENCE BERKELEY LABORATORY
MICHIGAN, UNIVERSITY OF

PROPOSAL TO STUDY NEUTRINO INTERACTIONS WITH PROTONS USING THE 15-FOOT BUBBLE CHAMBER AT NAL.

REQUEST 15 JUN 70 200K PIX WITH 10 TO THE 13TH PROTONS/PULSE OF AT LEAST 200 GEV
19 JUL 71 500K PIX WITH 10 TO THE 13TH PROTONS/PULSE AT 350 GEV
APPROVED 17 DEC 71 300K PIX MAXIMUM WITH THE CONSTRAINT THAT THE RUNNING CONDITIONS YIELD ON THE ORDER OF 15,000 EVENTS OF NEUTRINOS IN HYDROGEN
COMPLETED 13 JAN 76 162K PIX

---

48 MUON SEARCH #48 — ADAIR, ROBERT K. — BROOKHAVEN NATIONAL LABORATORY
BEAM: PROTON AREA-(CENTER) — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S3(B)1, HED6(C), S4(B)1 — YALE UNIVERSITY

A MEASUREMENT OF THE INTENSITY AND POLARIZATION OF MUONS PRODUCED DIRECTLY BY THE INTERACTIONS OF PROTONS WITH NUCLEI.

REQUEST 15 JUN 70 200 HOURS
APPROVED 1 DEC 70 200 HOURS FOR AN EXPLORATORY EXPERIMENT
COMPLETED 1 DEC 75 500 HOURS

51A MISSING MASS #51A — VON GOELER, EBERHARD — NORTHEASTERN UNIVERSITY
BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORIES: HED6(D), HED6(A)

MASS SPECTRA AND DECAY MODES FOR HADRONS WITH MASSES UP TO 15 GEV.

REQUEST 15 JUN 70 850 HOURS

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

APPROVED 14 AUG 73 300 HOURS WITH LOW PRIORITY
COMPLETED 23 OCT 74 800 HOURS

53A 15-FOOT NEUTRINO/H2&NE #53A — BALTAY, CHARLES — BROOKHAVEN NATIONAL LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM — COLUMBIA UNIVERSITY
PHYSICS CATEGORIES: W2, S3(A)1, S4(A)1, S5(A)1

SEARCH FOR THE INTERMEDIATE BOSON, LEPTON PAIR PRODUCTION, AND A STUDY OF DEEPLY INELASTIC REACTIONS UTILIZING HIGH ENERGY NEUTRINO INTERACTIONS IN LIQUID NEON.

REQUEST 15 JUN 70 1,000K PIX OF NEUTRINO INTERACTIONS IN 15-FOOT WITH 70% NEON AND 30% DEUTERIUM AND WITH INSERTED PLATE
6 JUL 71 1,000K PIX WITH 900K PIX OF NEUTRINO INTERACTIONS IN NEON WITH SINGLE PLATE AND 100K PIX IN HYDROGEN WITH TWO PLATES
16 JUN 76 200K PIX REQUESTED INCREASE OF THE APPROVED PICTURE TOTAL FROM 100K TO 200K
25 JAN 78 450K PIX TO INCLUDE AN INCREASE OF 300K BEYOND THE APPROXIMATELY 150K PIX PRESENTLY AVAILABLE FOR THE EXPERIMENT; AT LEAST 150K PIX ADDITIONAL ARE REQUESTED DURING THE SUMMER OR FALL OF 1978
19 JUN 78 450K PIX TO INCLUDE AN INCREASE OF 300K PIX; THIS FOLLOWS REJECTION OF THE
APPROVED 17 DEC 71 100K PIX IN NEON OR PLATES TO YIELD AT LEAST 20,000 EVENTS
29 JUN 76 150K PIX TOTAL INCLUDING ABOUT 50K PIX ALREADY TAKEN
28 JUN 78 450K PIX TOTAL INCLUDING AN EXTENSION FOR 300K PIX
IN PROGRESS 1 JUL 77 163K PIX

---

61 POLARIZED SCATTERING #61 — CHAMBERLAIN, OWEN — ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M1 BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED2 — HARVARD UNIVERSITY
LAWRENCE BERKELEY LABORATORY
SUFFOLK UNIVERSITY
YALE UNIVERSITY

A PROPOSAL TO MEASURE POLARIZATION IN P P, PI- P, AND PI+ P ELASTIC SCATTERING AT 50, 100, AND 150 GEV/C.

REQUEST 15 JUN 70 1,100 HOURS FOR SETUP, TESTS, AND DATA
10 MAR 77 1,600 HOURS TO INCLUDE ADDITIONAL TIME FOR 4 WEEKS OF DATA AT 300 GEV AND 1 WEEK AT 100 GEV; RUNNING REQUIRES ACCELERATOR OPERATION AT THOSE ENERGIES
APPROVED 1 AUG 70 800 HOURS
24 JUN 77 1,200 HOURS WITH AN ATTEMPT TO PROVIDE 300 GEV DATA UNDER THE CONDITION THAT THE RUNNING NOT INTERFERE WITH OTHER MAJOR LABORATORY PROGRAMS
COMPLETED 26 OCT 77 1,900 HOURS

63A PHOTON SEARCH #63A — WALKER, JAMES K. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: INTERNAL TARGET AREA-(C-0) — HAWAII, UNIVERSITY OF
PHYSICS CATEGORY: HED6(B) — NORTHERN ILLINOIS UNIVERSITY

SURVEY OF PARTICLE PRODUCTION IN PROTON COLLISIONS AT NAL.
(PHOTON PRODUCTION IN PROTON COLLISIONS AT THE INTERNAL TARGET AREA; ALSO SEE EXP #284)

REQUEST 15 JUN 70 UNSPECIFIED
APPROVED 17 DEC 70 400 HOURS
19 OCT 73 400 HOURS WITH UNDERSTANDING THAT ADDITIONAL PHOTON PRODUCTION DATA WOULD BE TAKEN AT 60, 50, 40, 30, AND 20 MRADS
COMPLETED 13 MAR 75 2,600 HOURS

67A PROTON-PROTON MISSING MASS #67A — SANNES, FELIX — FLORIDA STATE UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0) — RUTGERS UNIVERSITY
PHYSICS CATEGORIES: HED6(D), HED7 — UPSALA COLLEGE

SEARCH FOR BARION RESONANCES UP TO 10 GEV MASS PRODUCED IN P + P TO P + MM WITH A RESOLUTION OF + OR - 25 MEV.
(USING A GAS JET TARGET AND THE INTERNAL PROTON BEAM)

REQUEST 15 JUN 70 UNSPECIFIED
APPROVED 1 FEB 71 100 HOURS
COMPLETED 8 AUG 73 600 HOURS

69A ELASTIC SCATTERING #69A — LACH, JOSEPH — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M6 BEAM — RUTHERFORD HIGH ENERGY LABORATORY (GREAT BRITAIN)
PHYSICS CATEGORIES: HED2, HED1 — YALE UNIVERSITY

ELASTIC SCATTERING OF THE LONG-LIVED HADRONS.
(SMALL ANGLE SCATTERING TO T OF 0.2 AND COULOMB INTERFERENCE)

REQUEST 15 JUN 70 380 HOURS OF 'IDEAL TIME' TO MAKE COULOMB INTERFERENCE MEASUREMENTS WITH STABLE PARTICLES AND DIFFRACTION PEAK MEASUREMENTS WITH HYPERONS
1 DEC 70 180 HOURS OF 'IDEAL TIME' TO MAKE COULOMB INTERFERENCE MEASUREMENTS WITH STABLE PARTICLES; ALSO SEE EXP# 97 AND 497
APPROVED 15 SEP 70 600 HOURS
COMPLETED 3 MAR 76 2,800 HOURS

---

70 LEPTON #70 — LEDERMAN, LEON M. — COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(CENTER) — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED6(C), HED6(A), HED6(B), S3(B)1, S4(B

STUDY OF LEPTON PAIRS FROM PROTON-NUCLEAR INTERACTIONS; SEARCH FOR INTERMEDIATE BOSONS AND LEE-WICK STRUCTURE.

REQUEST 23 JUN 70 2,800 HOURS TO INCLUDE ABOUT 1,700 HOURS FOR STUDY OF SINGLE LEPTON PRODUCTION AND 1,100 HOURS FOR STUDY OF LEPTON PAIRS
APPROVED 1 DEC 70 600 HOURS
COMPLETED 1 DEC 74 2,800 HOURS

---

72 QUARK #72 — LEIPUNER, LAWRENCE B. — BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M4 BEAM — YALE UNIVERSITY
PHYSICS CATEGORIES: S2, S6

EXPERIMENTAL PROPOSAL TO NAL -- QUARK SEARCH.
(BY MEASURING IONIZATION ENERGY LOSS)

REQUEST 15 JUN 70 100 HOURS FOR DATA TAKING
APPROVED 1 AUG 70 200 HOURS
COMPLETED 11 JUN 73 500 HOURS

---

75 QUARK #75 — YAMANOUCHI, TAIJI — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M2 BEAM — NEW YORK UNIVERSITY
PHYSICS CATEGORY: S2

A PROPOSAL TO SEARCH FOR FRACTIONALLY CHARGED QUARKS.
(MEASUREMENT OF IONIZATION AND TOTAL ENERGY OF FRACTIONALLY CHARGED PARTICLES USING MOMENTUM SELECTION)

REQUEST 29 JUN 70 200 HOURS FOR TESTS AND DATA TAKING
APPROVED 1 SEP 70 200 HOURS
COMPLETED 8 SEP 73 1,050 HOURS

---

76 MONOPOLE #76 — CARRIGAN, RICHARD — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: S1

SEARCH FOR MAGNETIC MONOPOLES PRODUCED AT NAL.
(EMPLOYING A BEAM-DUMP TARGET)

REQUEST 15 JUN 70 PARASITIC RUNNING
APPROVED 1 SEP 70 TARGET EXPOSURE WITH PARASITIC RUNNING
COMPLETED 1 DEC 74 5 TARGETS EXPOSED

81A NUCLEAR CHEMISTRY #81A — KAUFMAN, SHELDON — ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-MISCELLANEOUS — BROOKHAVEN NATIONAL LABORATORY
PHYSICS CATEGORY: M3 — CARNEGIE-MELLON UNIVERSITY
CHICAGO, UNIVERSITY OF
ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE
PURDUE UNIVERSITY
RENE BERNAS LABORATOIRE, ORSAY (FRANCE)

PRELIMINARY SURVEY OF 200 GEV PROTON INTERACTIONS WITH COMPLEX NUCLEI.
(NUCLEAR CHEMISTRY ANALYSIS)

NOTE: FCH PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

REQUEST 9 JUL 70 PARASITIC RUNNING
APPROVED 1 AUG 70 TARGET EXPOSURE
IN PROGRESS 1 OCT 78 197 BOMBARDMENTS

---

82 K ZERO REGENERATION #82 TELEGDI, VALENTINE L. CALIFORNIA, UNIVERSITY OF, SAN DIEGO
BEAM: MESON AREA-M4 BEAM CHICAGO, UNIVERSITY OF
PHYSICS CATEGORIES: HED9, HED1, HED4 STANFORD LINEAR ACCELERATOR CENTER
WISCONSIN, UNIVERSITY OF

PROPOSAL TO INVESTIGATE REGENERATION OF NEUTRAL K-MESONS AT VERY HIGH ENERGIES.
(SEE EXP #425)
REQUEST 13 JUL 70 1,000 HOURS FOR PRELIMINARY RUN AND DATA TAKING
APPROVED 15 SEP 70 800 HOURS
22 NOV 74 1,100 HOURS TOTAL INCLUDING ADDITIONAL 300 HOURS WITH COMPLEX NUCLEAR TARGETS
COMPLETED 5 JUL 75 3,500 HOURS

83A 15-FOOT PI- - P @ 100 #83A KITAGAKI, TOSHIO FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM TOHOKU UNIVERSITY (JAPAN)
PHYSICS CATEGORY: HBC2

PBAR - P AND K- - P INTERACTIONS AT 100 GEV/C USING FERMILAB 15-FOOT BUBBLE CHAMBER.
REQUEST 29 JUN 70 100K PIX
APPROVED 4 DEC 74 25K PIX FOR INITIAL EXPOSURE WITH PI- BOMBARDMENT AT 100 GEV
11 MAR 76 175K PIX WITH APPROVAL FOR AN ADDITIONAL 150K PIX
IN PROGRESS 1 APR 75 11K PIX

86A PION DISSOCIATION #86A LUBATTI, HENRY J. LABORATOIRE DE L'ACCELERATEUR LINEAIRE, ORSAY (FRANCE)
BEAM: MESON AREA-M1 BEAM WASHINGTON, UNIVERSITY OF
PHYSICS CATEGORY: HED7

A PROPOSAL TO STUDY INELASTIC DIFFRACTIVE PROCESSES BY OBSERVING COHERENT PRODUCTION OF MULTI-PION FINAL STATES FROM HE NUCLEI.
(USING A STREAMER CHAMBER)
REQUEST 24 JUL 70 1,050 HOURS FOR SETUP, TESTS AND DATA TAKING
APPROVED 28 MAY 71 800 HOURS WITH LOW PRIORITY
COMPLETED 22 MAR 76 800 HOURS

87A PHOTOPRODUCTION #87A OHALLORAN, THOMAS COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(EAST) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: EM2, S3(C), S4(C), S5(C) HAWAII, UNIVERSITY OF
ILLINOIS, UNIVERSITY OF

PROPOSAL TO SEARCH FOR HEAVY LEPTONS AND INTERMEDIATE BOSONS FROM PHOTON-NUCLEON AND PHOTON-NUCLEI COLLISIONS.
REQUEST 30 JUL 70 UNSPECIFIED
25 FEB 71 4,400 HOURS FOR SETUP, TESTS, AND DATA TAKING
APPROVED 1 AUG 71 600 HOURS
13 NOV 75 1,100 HOURS WITH AN EXTENSION OF 500 HOURS OF DATA TAKING
28 JUL 77 3,100 HOURS WITH AN ADDITIONAL 2,000 HOURS FOR STUDY OF CHARMED BARION PRODUCTION
COMPLETED 7 MAY 78 4,800 HOURS

---

89 15-FOOT PI- - P&NE @ 200 #89 FRETTER, WILLIAM B. CALIFORNIA, UNIVERSITY OF, BERKELEY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM
PHYSICS CATEGORY: HBC2

INTERACTIONS OF 150 GEV PI- MESONS IN A LARGE NAL BUBBLE CHAMBER FILLED WITH H2-NE.
REQUEST 20 AUG 70 250K PIX
APPROVED 4 DEC 74 25K PIX
IN PROGRESS 1 JUL 75 4K PIX

---

90 EMULSION/PROTONS @ 200 #90 WOLTER, WLADYSLAW INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

CRACOW NUCLEAR EMULSION EXPOSURES.
REQUEST 23 JUN 70 EMULSION EXPOSURE
APPROVED 1 AUG 70 EMULSION EXPOSURE
COMPLETED 20 SEP 72 4 STACKS

95A PHOTON SEARCH #95A COX, BRADLEY FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(WEST) JOHNS HOPKINS UNIVERSITY
PHYSICS CATEGORIES: HED6(B), HED8(B), S5(B)6

PROPOSAL FOR EXAMINATION OF WIDE ANGLE GAMMA RAYS AT NAL.
(SINGLE AND DIGAMMA PRODUCTION BY PROTON-NUCLEON COLLISIONS)
REQUEST 26 OCT 70 100 HOURS OF DATA TAKING WITH PARASITIC BEAM USED FOR SETUP
12 OCT 76 3,100 HOURS FOR FURTHER STUDY OF DIPHOTON SPECTRA
APPROVED 1 JUN 71 400 HOURS
5 JAN 77 1,650 HOURS WITH AN EXTENSION IN AN EFFORT TO APPROACH THE 12.5 WEEKS OF RUNNING WHICH WAS REQUESTED
12 SEP 77 1,950 HOURS WITH APPROVAL OF AN ADDITIONAL 3 WEEKS OF RUNNING AT 200/300 GEV
COMPLETED 17 OCT 77 3,400 HOURS

---

96 ELASTIC SCATTERING #96 RITSON, DAVID ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M6 BEAM BARI, UNIVERSITY OF (ITALY)
PHYSICS CATEGORIES: HED2, HED6(A), HED6(D) BROWN UNIVERSITY
CERN
CORNELL UNIVERSITY
FERMI NATIONAL ACCELERATOR LABORATORY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
NORTHEASTERN UNIVERSITY
STANFORD UNIVERSITY

FOCUSING SPECTROMETER FACILITY.
(MEASURE ELASTIC SCATTERING AND QUASI ELASTIC SCATTERING OF PI+(-), K+(-), P+(-) ON H2 AND D2 UP TO 200 GEV/C WITH T UP TO 1.5)
REQUEST 3 DEC 70 1,000 HOURS FOR CHECK OUT AND DATA TAKING
APPROVED 1 DEC 70 800 HOURS
COMPLETED 17 FEB 75 2,550 HOURS

---

98 MUON #98 ANDERSON, HERBERT L. CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MUON/HADRON BEAM HARVARD UNIVERSITY
PHYSICS CATEGORY: EM4 ILLINOIS, UNIVERSITY OF
OXFORD, UNIVERSITY OF (GREAT BRITAIN)

MUON-PROTON INELASTIC SCATTERING EXPERIMENT AT THE NATIONAL ACCELERATOR LABORATORY.
(USING A LARGE APERTURE MAGNET TO DETECT SCATTERED MUONS AND CHARGED HADRONS)
REQUEST 2 DEC 70 1,600 HOURS FOR TESTS AND DATA TAKING
APPROVED 19 JAN 71 400 HOURS OF INITIAL RUNNING WITH H2 (100 HOURS OF PARASITIC TESTING)
6 AUG 73 400 HOURS WITH APPROVAL FOR BOTH D2 AND H2
26 JUN 74 800 HOURS WITH ADDITIONAL 400 HOURS FOR DATA TAKING
COMPLETED 17 FEB 75 1,800 HOURS

---

99 ASSOCIATED PRODUCTION #99 DIEBOLD, ROBERT E. ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M6 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED4 STANFORD LINEAR ACCELERATOR CENTER
STANFORD UNIVERSITY

A STUDY OF PI+ P TO K+ SIGMA+ AND PI+ P TO K+ Y-STAR+ USING THE FOCUSING SPECTROMETER FACILITY.
(INCIDENT MOMENTA FROM 20 - 120 GEV/C, T FROM 0.04 - 0.6)
REQUEST 3 DEC 70 500 HOURS FOR TESTS AND DATA TAKING
APPROVED 25 NOV 74 500 HOURS
COMPLETED 24 JAN 78 750 HOURS

100A PARTICLE SEARCH #100A PIROUE, PIERRE A. CHICAGO, UNIVERSITY OF

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

BEAM: PROTON AREA-(EAST) PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED6(A), HED6(C), S3(B)1, S4(B)1
A PROPOSAL TO STUDY PARTICLE PRODUCTION AT HIGH TRANSVERSE MOMENTA.
(MEASUREMENT OF PARTICLE PRODUCTION AT 90 DEGREES IN C.M. FROM PROTON INTERACTIONS WITH NUCLEI)
REQUEST 4 DEC 70 500 HOURS FOR DATA TAKING
APPROVED 1 FEB 71 500 HOURS
COMPLETED 4 APR 74 1,150 HOURS

---

103 EMULSION/PROTONS @ 200 #103 KING, DAVID T. TENNESSEE, UNIVERSITY OF
BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
INTRA-NUCLEAR CASCADE PRODUCED BY 200 GEV PROTONS.
REQUEST 21 DEC 70 EMULSION EXPOSURE
APPROVED 1 FEB 71 EMULSION EXPOSURE
COMPLETED 20 SEP 72 1 STACK

---

104 TOTAL CROSS SECTION #104 KYCIA, THADDEUS F. BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M1 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED1 MAX PLANCK INSTITUTE, MUNICH (GERMANY)
ROCKEFELLER UNIVERSITY
WASHINGTON, UNIVERSITY OF
MEASUREMENT OF TOTAL CROSS SECTIONS ON HYDROGEN AND DEUTERIUM.
(OF PI+-, K+-, P, PBAR)
REQUEST 8 JAN 71 700 HOURS FOR TESTS AND DATA TAKING
16 JUN 76 1,300 HOURS TOTAL WITH ADDITIONAL 600 HOURS FOR COMPLETION OF CROSS SECTION DATA AND PARTICLE SEARCH EXP# 354
APPROVED 8 MAR 71 700 HOURS
29 JUN 76 1,300 HOURS INCLUDING AN ADDITIONAL 600 HOURS FOR THE REMAINDER OF EXP# 104 AND EXP# 354
COMPLETED 22 DEC 77 2,650 HOURS

---

105 EMULSION/PROTONS @ 200 #105 MALHOTRA, P. K. JAMMU UNIVERSITY, JAMMU-TAWI (INDIA)
BEAM: MESON AREA-MISCELLANEOUS PUNJAB UNIVERSITY, CHANDIGARH (INDIA)
PHYSICS CATEGORY: E1 TATA INSTITUTE OF FUNDAMENTAL RESEARCH, BOMBAY (INDIA)
A PROPOSAL TO STUDY SOME CHARACTERISTICS OF PROTON-NUCLEON AND PROTON-NUCLEUS COLLISIONS AT 400 GEV USING NUCLEAR EMULSIONS.
REQUEST 14 JAN 71 EMULSION EXPOSURE
APPROVED 1 APR 71 EMULSION EXPOSURE
COMPLETED 20 SEP 72 1 STACK

---

108 BEAM DUMP #108 AWSCHALOM, MIGUEL FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORY: M4
A BEAM DUMP EXPERIMENT.
(STUDY OF SHIELDING INCLUDING HADRON CASCADE DEVELOPMENT, MUON ATTENUATION, RADIOACTIVITY)
REQUEST 4 FEB 71 40 HOURS FOR IRRADIATION
APPROVED 1 MAR 71 40 HOURS
COMPLETED 2 JUN 75 350 HOURS

110A MULTIPARTICLE #110A DZIERBA, ALEXANDER R. CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: MESON AREA-M6 BEAM CALIFORNIA, UNIVERSITY OF, LOS ANGELES
PHYSICS CATEGORY: HED8(A) FERMI NATIONAL ACCELERATOR LABORATORY
ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE
INDIANA UNIVERSITY
MAX PLANCK INSTITUTE, MUNICH (GERMANY)
PROPOSAL TO STUDY MULTIPARTICLE PERIPHERAL PHYSICS AT NAL.
(USING A LARGE WIRE CHAMBER MAGNETIC SPECTROMETER)
REQUEST 15 FEB 71 400 HOURS FOR TEST RUN AND OVERVIEW
10 AUG 72 900 HOURS FOR TESTS AND DATA TAKING
21 OCT 76 900 HOURS FOR DATA TAKING
APPROVED 5 APR 72 800 HOURS
16 NOV 73 600 HOURS WITH UNDERSTANDING THAT APPROXIMATELY 200 HOURS OF PREVIOUSLY APPROVED 800 HOURS OF RUNNING WILL BE USED FOR EXP# 260
18 NOV 76 1,000 HOURS WITH EXPECTATION THAT 800 HOURS WILL BE USED FOR DATA TAKING AND 2 WEEKS FOR TUNEUP OF BEAM AND EQUIPMENT
COMPLETED 9 APR 78 1,600 HOURS

---

111 PION CHARGE EXCHANGE #111 TOLLESTRUP, ALVIN V. CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: MESON AREA-M2 BEAM LAWRENCE BERKELEY LABORATORY
PHYSICS CATEGORIES: HED3, HED1, HED6(B)
PROPOSAL TO STUDY PI- P TO PIO N AND PI- P TO ETA N AT HIGH ENERGY.
REQUEST 15 FEB 71 450 HOURS FOR TESTS AND DATA TAKING
APPROVED 1 FEB 71 400 HOURS
COMPLETED 19 SEP 78 1,800 HOURS

---

114 EMULSION/PROTONS @ 200 #114 JAIN, PIYARE L. NEW YORK, STATE UNIVERSITY OF, BUFFALO
BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
STUDY OF 200-500 GEV PROTON AND PION INTERACTION WITH NUCLEAR EMULSION.
REQUEST 24 FEB 71 EMULSION EXPOSURE
APPROVED 1 MAR 72 EMULSION EXPOSURE
COMPLETED 20 SEP 72 1 STACK

---

115 LONG-LIVED PARTICLES #115 STEVENSON, M. LYNN LAWRENCE BERKELEY LABORATORY
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: S6
SEARCH FOR LONG-LIVED PARTICLES
(TAU GREATER THAN OR APPROXIMATELY EQUAL 0.1 NSEC; ANALYSIS OF PARTICLES FROM A BEAM DUMP)
REQUEST 1 MAR 71 PARASITIC RUNNING
APPROVED 26 AUG 71 PARASITIC RUNNING
COMPLETED 23 NOV 74 6 HOURS

---

116 EMULSION/PROTONS @ 200 #116 HEBERT, JACQUES D. BARCELONA, UNIVERSIDAD AUTONOMA DE (SPAIN)
BEAM: MESON AREA-MISCELLANEOUS CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
PHYSICS CATEGORY: E1 FERMI NATIONAL ACCELERATOR LABORATORY
LYON, UNIVERSITE DE (FRANCE)
MCGILL UNIVERSITY (CANADA)
MONTREAL, UNIVERSITE DE (CANADA)
OTTAWA, UNIVERSITE D', (CANADA)
VALENCIA, UNIVERSIDAD DE (SPAIN)
INTERACTION OF HIGH ENERGY PROTONS IN NUCLEAR EMULSIONS LOADED WITH B 10 AND LIF.
REQUEST 31 MAR 71 EMULSION EXPOSURE
APPROVED 1 APR 71 EMULSION EXPOSURE
COMPLETED 20 SEP 72 5 STACKS

117A EMULSION/PROTONS @ 200 #117A KUSUMOTO, OSAMU KINKI UNIVERSITY (JAPAN)
BEAM: MESON AREA-MISCELLANEOUS KOBE UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 OSAKA UNIVERSITY (JAPAN)
SCIENCE EDUCATION INSTITUTE OF OSAKA PREFECTURE(JAPAN)
WAKAYAMA MEDICAL COLLEGE (JAPAN)
PHENOMOLOGICAL STUDY OF 200 AND 500 GEV/C PROTON-PROTON COLLISIONS IN EMULSION.
REQUEST 2 MAR 71 EMULSION EXPOSURE
APPROVED 1 APR 71 EMULSION EXPOSURE
COMPLETED 20 SEP 72 11 STACKS

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

118A INCLUSIVE SCATTERING #118A — BRANDENBURG, GEORGE W. — BARI, UNIVERSITY OF (ITALY); BROWN UNIVERSITY; FERMI NATIONAL ACCELERATOR LABORATORY; MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORIES: HED6(A), HED8(E)

HADRON SPECTRA FROM HIGH ENERGY INTERACTIONS.
(SINGLE PARTICLE INCLUSIVE SPECTRA FROM PIONS, KAONS, AND PROTONS USING SINGLE ARM SPECTROMETER)

REQUEST	3 MAR 71	950 HOURS FOR TESTS AND DATA TAKING
	20 JUN 73	1,200 HOURS TOTAL WITH ADDITIONAL 250 HOURS OF DATA TAKING
	22 OCT 76	950 HOURS WITH AN ADDITIONAL 350 HOURS TO EXTEND EXISTING MEASUREMENTS; SEE PROPOSAL #513
APPROVED	25 NOV 74	600 HOURS
	18 NOV 76	950 HOURS WITH ADDITIONAL 350 HOURS FOR CONTINUED DATA TAKING
COMPLETED	20 JUL 77	2,550 HOURS

---

120 PHOTON SEARCH #120 — CLINE, DAVID B. — CHICAGO, UNIVERSITY OF; HARVARD UNIVERSITY; WISCONSIN, UNIVERSITY OF

BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORY: HED6(B)

EARLY PI ZERO PARTICLE PRODUCTION SURVEY WITH THE GAS JET TARGET.
(ALSO DIRECT PHOTON PRODUCTION USING THE INTERNAL PROTON BEAM)

REQUEST	9 MAR 71	UNSPECIFIED
APPROVED	1 JUN 71	200 HOURS
COMPLETED	29 MAY 73	1,200 HOURS

121A 30-INCH PI+ & P - P @ 100 #121A — LANDER, RICHARD L. — CALIFORNIA, UNIVERSITY OF, DAVIS; LAWRENCE BERKELEY LABORATORY

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC1

A PROPOSAL TO SEARCH FOR VERY HEAVY STRANGE PARTICLES USING A SMALL HYDROGEN BUBBLE CHAMBER.

REQUEST	11 MAR 71	100K PIX
	17 MAY 71	200K PIX TOTAL WITH 50K AT EACH OF FOUR INCIDENT PROTON MOMENTA, 100, 200, 300, AND 400 GEV/C
APPROVED	26 AUG 71	50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED	23 JAN 74	104K PIX

---

125 30-INCH PI- - P @ 100 #125 — MORRISON, DOUGLAS R. O. — CERN

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC2

PROPOSAL TO STUDY PI- P REACTIONS AT 60 AND 200 GEV/C IN THE 30-INCH.

REQUEST	7 MAY 71	100K PIX
APPROVED	27 AUG 71	50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED	28 AUG 73	53K PIX

---

137 30-INCH PI- - P @ 200 #137 — HUSON, FRED RUSS — CALIFORNIA, UNIVERSITY OF, BERKELEY; FERMI NATIONAL ACCELERATOR LABORATORY; LAWRENCE BERKELEY LABORATORY

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC2

STUDY OF PI- + P INTERACTIONS AT HIGH ENERGY.

REQUEST	4 MAY 71	50K PIX
APPROVED	26 AUG 71	50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED	10 MAR 73	48K PIX

---

138 30-INCH P-P @ 400 #138 — VANDER VELDE, JACK C. — MICHIGAN, UNIVERSITY OF; ROCHESTER, UNIVERSITY OF

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC1

STUDY OF MULTIPARTICLE PRODUCTION IN A 30-INCH BUBBLE CHAMBER.

REQUEST	10 MAY 71	240K PIX TOTAL; COMBINED EXPERIMENT FROM PROPOSALS #62 AND #80
APPROVED	26 AUG 71	50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED	26 AUG 75	52K PIX

141A 30-INCH P-P @ 200 #141A — FIELDS, THOMAS — ARGONNE NATIONAL LABORATORY; FERMI NATIONAL ACCELERATOR LABORATORY; IOWA STATE UNIVERSITY; MARYLAND, UNIVERSITY OF; MICHIGAN STATE UNIVERSITY

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC1

STUDY OF PP INTERACTIONS IN THE ANL 30-INCH HYDROGEN BUBBLE CHAMBER AT NAL.

REQUEST	25 JUN 71	50K PIX
APPROVED	26 AUG 71	50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED	27 NOV 72	67K PIX

---

142 SUPER-HEAVY ELEMENTS #142 — STOUGHTON, RAYMOND W. — ARGONNE NATIONAL LABORATORY; OAK RIDGE NATIONAL LABORATORY

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: S7

PROPOSAL FOR A SEARCH FOR SUPERHEAVY ELEMENTS BY IRRADIATIONS AT NAL.

REQUEST	12 JUL 71	PARASITIC RUNNING WITYH A TOTAL OF 10 TO THE 18TH PROTONS ON TARGET
APPROVED	26 AUG 71	TARGET EXPOSURE
COMPLETED	4 JUN 75	1 TARGETS

143A 30-INCH PI- - P @ 300 #143A — KALBFLEISCH, GEORGE R. — BROOKHAVEN NATIONAL LABORATORY; CASE WESTERN RESERVE UNIVERSITY

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC2

PROPOSAL FOR A RAPID SYSTEMATIC STUDY OF ALL INTERACTIONS IN A PI- - P EXPOSURE OF THE BARE 30-INCH CHAMBER AT 120 GEV/C.

REQUEST	12 JUL 71	50K PIX
APPROVED	26 AUG 71	50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED	10 APR 74	51K PIX

---

147 SUPER-HEAVY ELEMENTS #147 — DEBEAUVAIS, MONIQUE — CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE); OTTAWA, UNIVERSITE D', (CANADA)

BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: S7

PROPOSAL OF AN EXPERIMENT ON THE FISSION OF VERY HEAVY NUCLEI INDUCED BY 200 GEV PROTONS.

REQUEST	9 JUL 71	TARGET EXPOSURE
APPROVED	6 AUG 73	TARGET EXPOSURE
COMPLETED	11 JUN 75	4 EXPOSURES

152B PHOTOPRODUCTION #152B — HEUSCH, CLEMENS A. — CALIFORNIA, UNIVERSITY OF, SANTA CRUZ

BEAM: PROTON AREA-(EAST)
PHYSICS CATEGORY: EM2

PROPOSAL TO BUILD AN ELECTRON-PHOTON FACILITY AT NAL AND TO MEASURE PHOTON SCATTERING AT HIGH ENERGIES.
(MEASUREMENT OF TOTAL CROSS SECTIONS, ELASTIC AND INELASTIC SCATTERING, MESON PRODUCTION, AND A SEARCH FOR NEW PARTICLES)

REQUEST	19 JUL 71	300 HOURS WITH ACTUAL DATA TAKING OF 160 HOURS
	23 JUN 72	490 HOURS TOTAL WITH AN ADDITIONAL 190 HOURS OF DATA TAKING
APPROVED	4 MAR 74	350 HOURS WITH UNDERSTANDING THAT THERE WILL BE A COLLABORATIVE EFFORT IN DEVELOPMENT AND CONSTRUCTION OF EQUIPMENT WITH EXP# 263
	28 JUN 78	1,800 HOURS APPROXIMATELY WITH THE EXPERIMENT TO BE CONSIDERED COMPLETE BY THE TIME OF THE FALL 1978 SHUTDOWN
COMPLETED	13 NOV 78	1,950 HOURS

---

154 30-INCH HYBRID #154 — PLESS, IRWIN A. — BROWN UNIVERSITY; FERMI NATIONAL ACCELERATOR LABORATORY

BEAM: NEUTRINO AREA-30-IN HADRON BEAM

NOTE: FCR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

PHYSICS CATEGORY: HBC2

ILLINOIS INSTITUTE OF TECHNOLOGY
ILLINOIS, UNIVERSITY OF
INDIANA UNIVERSITY
JOHNS HOPKINS UNIVERSITY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
OAK RIDGE NATIONAL LABORATORY
RUTGERS UNIVERSITY
STEVENS INSTITUTE OF TECHNOLOGY
TENNESSEE, UNIVERSITY OF
YALE UNIVERSITY

TEST OF PROPORTIONAL WIRE CHAMBERS IN HYBRID SYSTEMS.

REQUEST	23 JUN 71	2,000K PIX
APPROVED	27 AUG 71	20K PIX WITH UNDERSTANDING THAT WORK WILL BE DONE IN TWO PHASES. PHASE I - DESIGN, CONSTRUCTION, INSTALLATION, AND INITIAL OPERATION OF UPSTREAM TAGGING SYSTEM PHASE II - USE OF DOWNSTREAM PWC'S FOR FEASIBILITY TEST RUN OF 20K PIX
	6 AUG 73	120K PIX WITH ADDITIONAL 100K PIX TO BE TAKEN WITH SINGLE TYPE INCIDENT PARTICLES AT A GIVEN ENERGY
COMPLETED	13 MAR 74	105K PIX OF PI- - P @ 150 GEV

---

155 15-FOOT EMI TEST #155 PETERSON, VINCENT Z. HAWAII, UNIVERSITY OF
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM LAWRENCE BERKELEY LABORATORY
PHYSICS CATEGORIES: H2, W2

PROPOSAL TO DEVELOP A PHASE I EXTERNAL MUON IDENTIFIER (EMI) FOR USE WITH THE NAL 30 CUBIC METER BUBBLE CHAMBER.

REQUEST	15 JUL 71	TEST RUNNING
APPROVED	27 AUG 71	PARASITIC RUNNING WITH UNDERSTANDING THAT COMPLETION OF PHASE I WILL INCLUDE TESTS IN NEUTRINO BEAM WITH 15-FT BUBBLE CHAMBER IN OPERATION AND NUMBER OF PIX TO BE DETERMINED AT A LATER DATE
	17 DEC 71	PARASITIC RUNNING WITH 100K PIX TO BE TAKEN FROM EXP# 45A EXPOSURES TAKEN WHEN EMI WAS OPERATING; FILM CONTAINING ABOUT 200 EVENTS TO BE DELIVERED AS SOON AS FEASIBLE TO AID IN PRELIMINARY TUNEUP AND CHECKING
	26 JUN 74	50K PIX WITH FORMAL APPROVAL FOR DEDICATED PICTURES TO FOLLOW SUCCESSFUL ANALYSIS OF 200 EVENTS FROM EXP# 45A EXPOSURES
COMPLETED	30 NOV 74	14K PIX

---

156 EMULSION/PROTONS @ 200 #156 NIU, KIYOSHI AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
BEAM: MESON AREA-MISCELLANEOUS KWANSEI GAKUIN UNIVERSITY, NISHINOMIYA (JAPAN)
PHYSICS CATEGORY: E1 NAGOYA UNIVERSITY, NAGOYA (JAPAN)
TOKYO, UNIVERSITY OF, INS (JAPAN)
YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)

STUDY OF SECONDARY PARTICLES PRODUCED BY 200 AND 500 GEV PROTONS IN EMULSION CHAMBERS.

REQUEST	15 AUG 71	EMULSION EXPOSURE
APPROVED	1 SEP 71	EMULSION EXPOSURE
COMPLETED	20 SEP 72	13 STACKS

---

161 30-INCH P - P&NE @ 300 #161 MAPP, JAMES WISCONSIN, UNIVERSITY OF
BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC1

PROPOSAL TO SURVEY HIGH ENERGY PROTON COLLISIONS IN NEON AND TO SEARCH FOR ANOMALOUS PHOTON BUNDLES AT NAL.

REQUEST	13 OCT 71	50K PIX
APPROVED	6 AUG 73	50K PIX
COMPLETED	25 JUN 74	51K PIX

163A 30-INCH PI- - P&NE @ 200 #163A WALKER, WILLIAM D. DUKE UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM NORTH CAROLINA, UNIVERSITY OF
PHYSICS CATEGORY: HBC2

PROPOSAL FOR A STUDY OF THE INTERACTION OF HIGH ENERGY PI- WITH NEON.

REQUEST	4 DEC 71	50K PIX
APPROVED	19 JUL 72	50K PIX
COMPLETED	18 JUN 74	52K PIX

---

171 EMULSION/PROTONS @ 200 #171 LORD, JERE J. WASHINGTON, UNIVERSITY OF
BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

PROPOSED EMULSION EXPERIMENT SEARCH FOR SHORT LIVED PARTICLES AT HIGH ENERGIES.

REQUEST	10 MAY 72	EMULSION EXPOSURE
APPROVED	1 AUG 72	EMULSION EXPOSURE
COMPLETED	20 SEP 72	6 STACKS

---

172 15-FOOT ANTI-NEUTRINO/H2&NE#172 LUBATTI, HENRY J. CALIFORNIA, UNIVERSITY OF, BERKELEY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM HAWAII, UNIVERSITY OF
PHYSICS CATEGORIES: W2, S3(A)1, S4(A)1, S5(A)1 LAWRENCE BERKELEY LABORATORY
WASHINGTON, UNIVERSITY OF

ANTINEUTRINO INTERACTIONS IN THE 15-FOOT H2-NEON BUBBLE CHAMBER.

REQUEST	16 MAY 72	50K PIX
APPROVED	19 JUL 72	50K PIX
COMPLETED	25 MAY 76	49K PIX

177A PROTON-PROTON ELASTIC #177A OREAR, JAY CORNELL UNIVERSITY
BEAM: PROTON AREA-(WEST) LEBEDEV PHYSICAL INSTITUTE, MOSCOW (USSR)
PHYSICS CATEGORY: HED2 MCGILL UNIVERSITY (CANADA)
NORTHEASTERN UNIVERSITY

EARLY MEASUREMENT OF HIGH ENERGY P P LARGE ANGLE ELASTIC SCATTERING.

REQUEST	12 JUN 72	100 HOURS FOR INITIAL RUN
	27 OCT 72	700 HOURS TOTAL WITH ADDITIONAL 600 HOURS FOR DATA
APPROVED	13 AUG 73	100 HOURS FOR PHASE I; COUNTER TESTS TO DEMONSTRATE SUCCESS OF PROPOSED TECHNIQUE
	28 JUN 76	700 HOURS WITH 600 HOURS ADDITIONAL FOR DATA
	19 NOV 76	1,500 HOURS WITH ADDITIONAL 800 HOURS TO COLLECT DATA AT 200 GEV AND 400 GEV TO T-VALUES OF 18 GEV SQUARED; COMPLETION OF RUN EXPECTED BY 15 FEB 1977
	7 MAR 77	2,200 HOURS WITH ADDITIONAL 700 HOURS TO COLLECT DATA IN HIGH T REGION WITH COMPLETION OF EXPERIMENT EXPECTED AT END OF APRIL 1977
COMPLETED	19 APR 77	2,400 HOURS

---

178 MULTIPLICITIES #178 BUSZA, WIT CARLETON UNIVERSITY (CANADA)
BEAM: MESON AREA-M6 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED8(E) MASSACHUSETTS INSTITUTE OF TECHNOLOGY

A STUDY OF THE AVERAGE MULTIPLICITY AND MULTICIPLICITY DISTRIBUTIONS IN HADRON-NUCLEUS COLLISIONS AT HIGH ENERGIES. (USING CERENKOV COUNTER PULSE HEIGHT ANALYSIS)

REQUEST	16 JUN 72	60 HOURS INCLUDING 20 HOURS FOR TESTS
APPROVED	6 AUG 73	100 HOURS WITH UNDERSTANDING THAT RUNNING WILL BE ON A PARASITIC BASIS DURING TUNING OF M6 BEAM LINE BY EXP# 96
	25 OCT 74	200 HOURS WITH AN ADDITIONAL 100 HOURS OF RUNNING IN THE M6 BEAM LINE
COMPLETED	14 AUG 75	800 HOURS

---

180 15-FOOT ANTI-NEUTRINO/H2&NE#180 ERMOLOV, PAVEL F. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM INST. OF THEORETICAL&EXPERIMENTAL PHYSICS,MOSCOW (USSR)
PHYSICS CATEGORIES: W2, S3(A)1, S4(A)1, S5(A)1 INSTITUTE OF HIGH ENERGY PHYSICS, SERPUKHOV (USSR)
MICHIGAN, UNIVERSITY OF

A STUDY OF ANTINEUTRINO INTERACTIONS IN THE NAL 15-FOOT BUBBLE CHAMBER, FILLED WITH HYDROGEN AND NEON.

REQUEST	23 JUN 72	200K PIX
APPROVED	11 JUL 72	50K PIX OF ANTINEUTRINOS TO RUN BEFORE EXP# 172 AND TO HAVE FIRST CHOICE OF THE TWO H2/NEON MIXTURES

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

	29 JUN 76	200K PIX INCLUDING AN ADDITIONAL 150K PIX; WITH THE EXPECTATION THAT THE EXPERIMENT WILL INVOLVE A TOTAL OF 500K PIX	
IN PROGRESS	1 JUL 77	273K PIX	

---

181 EMULSION/PROTONS @ 300 #181 — CARY, ARTHUR S. — HARVEY MUDD COLLEGE

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

THE DIRECT PRODUCTION OF ELECTRON PAIRS IN NUCLEAR EMULSION BY 100 AND 200 GEV PROTONS.

REQUEST	27 JUL 72	EMULSION EXPOSURE
APPROVED	15 NOV 72	EMULSION EXPOSURE
COMPLETED	20 OCT 73	3 STACKS

---

183 EMULSION/PROTONS @ 200 #183 — TRETJAKOVA, M. I. — LEBEDEV PHYSICAL INSTITUTE, MOSCOW (USSR)

BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

A PROPOSAL OF THE PHOTOEMULSION EXPERIMENT AT THE NATIONAL ACCELERATOR LABORATORY (BATAVIA).

REQUEST	7 JUL 72	EMULSION EXPOSURE
APPROVED	1 AUG 72	EMULSION EXPOSURE
COMPLETED	20 SEP 72	3 STACKS

---

184 PARTICLE SEARCH #184 — WANDERER, PETER — CHICAGO, UNIVERSITY OF; HARVARD UNIVERSITY; PENNSYLVANIA, UNIVERSITY OF; WISCONSIN, UNIVERSITY OF

BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORIES: HED6(C), S3(B)1

SEARCH FOR A NEW CLASS OF PENETRATING MASSIVE PARTICLES AT C-0.

REQUEST	14 SEP 72	UNSPECIFIED
APPROVED	5 OCT 72	400 HOURS WITH INSTALLATION TO BEGIN AT TIME OF REMOVAL OF EXP# 120 AND EXTENDING FOR A PERIOD OF ONE MONTH
	6 AUG 73	600 HOURS WITH APPROVAL FOR OCCUPANCY AT C-0 FOR 6 WEEKS
	22 FEB 74	760 HOURS WITH AN AUTHORIZED EXTENSION OF 160 HOURS
COMPLETED	29 MAY 74	800 HOURS

---

186 PROTON-DEUTERON SCATTERING #186 — MELISSINOS, ADRIAN — FERMI NATIONAL ACCELERATOR LABORATORY; JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR); ROCHESTER, UNIVERSITY OF; ROCKEFELLER UNIVERSITY

BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORIES: HED6(D), HED2, HED7

A PROPOSAL TO STUDY SMALL ANGLE PROTON-DEUTERON SCATTERING.
(USING A GAS JET TARGET WITH DEUTERIUM AND THE INTERNAL PROTON BEAM; T FROM 0.001 - 0.020)

REQUEST	19 OCT 72	400 HOURS
APPROVED	1 NOV 72	400 HOURS
COMPLETED	19 AUG 74	450 HOURS

---

187 PARTICLE SEARCH #187 — LEDERMAN, LEON M. — COLUMBIA UNIVERSITY; FERMI NATIONAL ACCELERATOR LABORATORY

BEAM: PROTON AREA-(CENTER)
PHYSICS CATEGORY: S6

PHASE 0.8 - SEARCH FOR LONG-LIVED MASSIVE OBJECTS (HIGH ENERGY CALIBRATION RUN).
(RELYING ON R.F. BUNCHING AND TIME OF FLIGHT MEASUREMENT)

REQUEST	5 SEP 72	UNSPECIFIED
APPROVED	30 OCT 72	100 HOURS
COMPLETED	6 NOV 73	200 HOURS

---

188 PROTON-NUCLEON INCLUSIVE #188 — SAMMES, FELIX — ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE; IMPERIAL COLLEGE, LONDON (GREAT BRITAIN); RUTGERS UNIVERSITY; UPSALA COLLEGE

BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORY: HED6(D)

A PROPOSAL TO MEASURE CROSS SECTIONS FOR P-P TO P-X, N-X AS A FUNCTION OF S AND MX SQUARED USING THE INTERNAL TARGET FACILITY AT NAL.

REQUEST	25 OCT 72	200 HOURS
APPROVED	1 NOV 72	200 HOURS
COMPLETED	9 MAY 73	1,050 HOURS

---

189 EMULSION/PROTONS @ 200 #189 — RITSON, DAVID — STANFORD UNIVERSITY

BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

NUCLEAR EMULSION EXPOSURES TO 400 GEV.
(FOR STUDENT LABORATORY USE)

REQUEST	16 OCT 72	EMULSION EXPOSURE
APPROVED	2 NOV 72	EMULSION EXPOSURE
COMPLETED	20 SEP 72	2 PLATES

---

194 30-INCH P - D @ 100 #194 — MURPHY, C. THORNTON — CARNEGIE-MELLON UNIVERSITY; FERMI NATIONAL ACCELERATOR LABORATORY; MICHIGAN, UNIVERSITY OF; NEW YORK, STATE UNIVERSITY OF, STONY BROOK

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC1

PROPOSAL TO STUDY PROTON-DEUTERON INTERACTIONS IN THE 30-INCH BUBBLE CHAMBER.

REQUEST	13 NOV 72	200K PIX
APPROVED	1 MAR 74	100K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED
COMPLETED	20 AUG 76	92K PIX

---

195 EMULSION/PROTONS @ 300 #195 — LIN, YU K. — AF CAMBRIDGE RESEARCH LABORATORY (CRFC); EMMANUEL COLLEGE; MISSISSIPPI STATE UNIVERSITY; SINGAPORE, UNIVERSITY OF (SINGAPORE)

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

PROPOSAL TO MEASURE THE LIFETIME OF THE NEUTRAL PION.

REQUEST	13 NOV 72	EMULSION EXPOSURE
APPROVED	15 NOV 72	EMULSION EXPOSURE
COMPLETED	10 JUN 75	3 STACKS

---

196 30-INCH P - D @ 400 #196 — ENGELMANN, RODERICH J. — CARNEGIE-MELLON UNIVERSITY; FERMI NATIONAL ACCELERATOR LABORATORY; MICHIGAN, UNIVERSITY OF; NEW YORK, STATE UNIVERSITY OF, STONY BROOK

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC1

PROTON-DEUTERON INTERACTIONS IN THE BARE 30-INCH BUBBLE CHAMBER.

REQUEST	13 NOV 72	100K PIX
APPROVED	21 MAR 74	100K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED
COMPLETED	20 OCT 75	109K PIX

198A PROTON-NUCLEON SCATTERING #198A — OLSEN, STEPHEN L. — IMPERIAL COLLEGE, LONDON (GREAT BRITAIN); ROCHESTER, UNIVERSITY OF; RUTGERS UNIVERSITY

BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORIES: HED2, HED6(A), HED6(D)

A PROPOSAL FOR A MAGNETIC RECOIL SPECTROMETER FOR THE GAS JET TARGET.
(USE OF THE GAS JET TARGET WITH H2 AND D2 TO STUDY P - P AND P - D SCATTERING WITH THE INTERNAL PROTON BEAM; T FROM 0.15 - 3.0)

REQUEST	22 DEC 72	800 HOURS
APPROVED	22 MAR 74	800 HOURS CONTINGENT ON CONSTRUCTION OF C-0 EXTENSION
	26 JUN 74	800 HOURS WITH THE UNDERSTANDING THAT CONCURRENT RUNNING WITH EXP# 313 BE ARRANGED WHENEVER POSSIBLE
COMPLETED	19 APR 77	900 HOURS

---

199 MASSIVE PARTICLE SEARCH #199 — FRANKEL, SHERMAN — FERMI NATIONAL ACCELERATOR LABORATORY; PENNSYLVANIA, UNIVERSITY OF

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: S6

SEARCH FOR WEAKLY PRODUCED MASSIVE LONG LIVED PARTICLES AT NAL.
(USING A THRESHOLD CERENKOV COUNTER)

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

REQUEST 21 DEC 72 TARGET EXPOSURE
APPROVED 15 JAN 73 TARGET EXPOSURE
COMPLETED 22 AUG 73 2 TARGETS EXPOSED

---

202 TACHYON MONOPOLE #202 BARTLETT, DAVID F. COLORADO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS PRINCETON UNIVERSITY
PHYSICS CATEGORIES: S1, S8
SEARCH FOR TACHYON MONOPOLES IN COSMIC RAYS ABOVE 15-FOOT BUBBLE CHAMBER.
(USING MAGNET FRINGE FIELD)
REQUEST 1 FEB 73 800 HOURS OF WHICH HALF WOULD BE AT ZERO FIELD
APPROVED 22 AUG 73 PARASITIC RUNNING
COMPLETED 19 MAY 76 COSMIC RAY RUNNING

203A MUON #203A KERTH, LEROY J. CALIFORNIA, UNIVERSITY OF, BERKELEY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: EM4, S4(D) LAWRENCE BERKELEY LABORATORY
PRINCETON UNIVERSITY
FEASIBLE SEARCH FOR HEAVY NEUTRAL MUONS PREDICTED BY GAUGE THEORIES AND CONCURRENT MEASUREMENT OF DEEP-INELASTIC VIRTUAL COMPTON SCATTERING.
REQUEST 9 MAR 73 600 HOURS WITH MUON BEAM INTENSITY OF 5 X 10 TO THE 6TH PER PULSE
APPROVED 26 MAR 75 500 HOURS WITH FORMAL APPROVAL OF 1 X 10 TO THE 18TH PROTONS
23 MAR 78 1,200 HOURS WITH THE EXPECTATION TO RUN THE EXPERIMENT UNTIL ABOUT APRIL 27, 1978
COMPLETED 18 MAY 78 1,200 HOURS

205A EMULSION/MUONS @ 150 #205A KUSUMOTO, OSAMU KINKI UNIVERSITY (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS KOBE UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E2 OKAYAMA UNIVERSITY, OKAYAMA (JAPAN)
OSAKA UNIVERSITY (JAPAN)
SCIENCE EDUCATION INSTITUTE OF OSAKA PREFECTURE(JAPAN)
TOKYO, UNIVERSITY OF, INS (JAPAN)
PHENOMENOLOGICAL STUDY OF MUON-NUCLEON COLLISION AT ENERGY MORE THAN 100 GEV IN EMULSION.
REQUEST 4 APR 73 EMULSION EXPOSURE
APPROVED 15 JUN 73 EMULSION EXPOSURE
COMPLETED 16 OCT 73 2 STACKS

---

209 30-INCH P - D @ 300 #209 DAO, FU TAK CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM IOWA STATE UNIVERSITY
PHYSICS CATEGORY: HBC1 TUFTS UNIVERSITY
VANDERBILT UNIVERSITY
A STUDY OF 300 GEV/C P D INTERACTIONS IN THE THIRTY-INCH BUBBLE CHAMBER.
REQUEST 1 MAY 73 50K PIX
APPROVED 21 MAR 74 100K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED
COMPLETED 7 OCT 76 106K PIX

---

211 BEAM DUMP #211 GOEBEL, KLAUS CERN
BEAM: NEUTRINO AREA-MISCELLANEOUS FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: M4
PROPOSAL FOR RADIATION MEASUREMENTS AROUND A PROTON BEAM DUMP AT 300 GEV.
(EARLY MEASUREMENTS TO CONFIRM CALCULATIONS FOR CERN; VERY REDUCED VERSION OF EXP 108)
REQUEST 18 APR 73 10 HOURS WITH A TOTAL OF 10 TO THE 15TH PROTONS
APPROVED 20 APR 73 10 HOURS
COMPLETED 14 NOV 73 2 HOURS

---

216 PION FACTOR #216 STORK, DONALD H. CALIFORNIA, UNIVERSITY OF, LOS ANGELES
BEAM: MESON AREA-M1 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: EM5 JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
NOTRE DAME, UNIVERSITY OF
PITTSBURGH, UNIVERSITY OF
A MEASUREMENT OF THE PION FORM FACTOR BY DIRECT PION-ELECTRON SCATTERING.
REQUEST 25 MAY 73 630 HOURS
APPROVED 6 AUG 73 100 HOURS FOR TESTING AND RUNNING AT 100 GEV TO ASSESS BACKGROUND EFFECTS
7 JUL 75 600 HOURS WITH ADDITIONAL 500 HOURS OF RUNNING IN M-1 BEAM LINE AND ENCOURAGEMENT TO SELECT A SINGLE HIGH ENERGY FOR MEASUREMENT
COMPLETED 1 OCT 75 900 HOURS

---

217 30-INCH PI+ & P - P @ 200 #217 LANDER, RICHARD L. CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: NEUTRINO AREA-30-IN HADRON BEAM LAWRENCE BERKELEY LABORATORY
PHYSICS CATEGORY: HBC1 STANFORD LINEAR ACCELERATOR CENTER
A COMPARISON OF 100 GEV AND 200 GEV PI+ - P INTERACTIONS.
REQUEST 29 MAY 73 50K PIX
APPROVED 6 AUG 73 50K PIX
COMPLETED 15 MAY 74 85K PIX

---

218 30-INCH PI- - D @ 200 #218 YAGER, PHILIP M. CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: NEUTRINO AREA-30-IN HADRON BEAM INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
PHYSICS CATEGORY: HBC2 WARSAW UNIVERSITY, INS (POLAND)
WASHINGTON, UNIVERSITY OF
PION-DEUTERON INTERACTIONS AT 200 GEV/C.
REQUEST 29 MAY 73 50K PIX
APPROVED 21 MAR 74 50K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED
COMPLETED 18 SEP 74 72K PIX

---

221 PROTON-PROTON INELASTIC #221 FRANZINI, PAOLO COLUMBIA UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0) NEW YORK, STATE UNIVERSITY OF, STONY BROOK
PHYSICS CATEGORIES: HED6(D), HED7
P - P INELASTIC SCATTERING IN THE DIFFRACTIVE REGION.
(CONTINUATION OF EXPERIMENT 14A)
REQUEST 8 JUN 73 400 HOURS INCLUDING 200 HOURS OF SETUP AND TUNING
APPROVED 6 AUG 73 400 HOURS
COMPLETED 5 SEP 74 950 HOURS

---

226 K ZERO CHARGE RADIUS #226 TELEGDI, VALENTINE L. CHICAGO, UNIVERSITY OF
BEAM: MESON AREA-M4 BEAM LHE, ETH HONGGERBERG, ZURICH (SWITZERLAND)
PHYSICS CATEGORIES: HED9, EM5 WISCONSIN, UNIVERSITY OF
COHERENT K-SHORT REGENERATION BY ELECTRONS.
REQUEST 12 JUN 73 720 HOURS
15 NOV 74 2,100 HOURS TOTAL FOR PHASE I, 500 HOURS IN M4 LINE; AND PHASE 2, 1600 HOURS IN M3 LINE
APPROVED 22 NOV 74 500 HOURS
30 JUN 76 600 HOURS WITH A TOTAL OF 800 HOURS APPROVED FOR THE COMBINATION OF E-486 AND E-226
COMPLETED 17 MAR 77 1,200 HOURS

---

228 30-INCH PI+ & P - P @ 60 #228 FERBEL, THOMAS MICHIGAN, UNIVERSITY OF
BEAM: NEUTRINO AREA-30-IN HADRON BEAM ROCHESTER, UNIVERSITY OF
PHYSICS CATEGORY: HBC1
PROPOSAL TO EXTEND THE ENERGY RANGE OF A STUDY OF MULTIPARTICLE PRODUCTION IN P - P COLLISIONS.
(REQUEST FOR THE REMAINING PICTURES FOR EXP 252 TO BE WITH A MOMENTUM OF 60 GEV/C)
REQUEST 16 JUN 73 25K PIX
20 FEB 74 35K PIX TOTAL WITH A PI/P RATIO OF 5/3
APPROVED 6 AUG 73 25K PIX IN BARE CHAMBER WITH TAGGED BEAM
14 MAR 74 35K PIX INCLUDING ADDITIONAL 10K PIX AND A PI/P RATIO OF ABOUT 5/3
COMPLETED 15 APR 74 37K PIX

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

229 DETECTOR DEVELOPMENT #229 YUAN, LUKE C. L. BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M1 BEAM
PHYSICS CATEGORY: M1
A PROPOSAL FOR TESTING A TRANSITION RADIATION DETECTOR AT NAL.
REQUEST 19 JUN 73 100 HOURS
APPROVED 23 AUG 73 PARASITIC RUNNING FOR ABOUT 200 HOURS
COMPLETED 16 NOV 74 300 HOURS

---

230 MULTIGAMMA #230 LONGO, MICHAEL J. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM
PHYSICS CATEGORIES: HED8(B), S1
A SEARCH FOR "SCHEIN EVENTS" AND EVENTS WITH A HIGH MULTIPLICITY OF GAMMAS.
REQUEST 25 JUN 73 40 HOURS
APPROVED 6 AUG 73 40 HOURS WITH RESTRICTION THAT WIDE GAP CHAMBERS WILL NOT CAUSE ANY INTERFERENCE WITH OTHER EXPERIMENTS IN THE AREA
COMPLETED 24 APR 74 50 HOURS

---

232 EMULSION/PROTONS @ 300 #232 KING, DAVID T. TENNESSEE, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
400-GEV PROTONS ON COMPLEX NUCLEI.
REQUEST 6 JUL 73 EMULSION EXPOSURE
APPROVED 16 AUG 73 EMULSION EXPOSURE
COMPLETED 20 OCT 73 2 STACKS

---

233 EMULSION/PROTONS @ 300 #233 HEBERT, JACQUES D. BARCELONA, UNIVERSIDAD AUTONOMA DE (SPAIN)
BEAM: NEUTRINO AREA-MISCELLANEOUS BELGRADE, UNIVERSITY OF, BELGRADE (YUGOSLAVIA)
PHYSICS CATEGORY: E1 CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
FERMI NATIONAL ACCELERATOR LABORATORY
INSTITUTE OF ATOMIC PHYSICS, BUCHAREST (ROUMANIA)
INSTITUTO DE FISICA CORPUSCULAR, VALENCIA (SPAIN)
LAB. DU RAYONNEMENT COSMIQUE, LYON (FRANCE)
LUND, UNIVERSITY OF, LUND (SWEDEN)
MCGILL UNIVERSITY (CANADA)
NANCY, UNIVERSITE DE, NANCY (FRANCE)
OTTAWA, UNIVERSITE D', (CANADA)
PARIS VI, U. DE, LAB. PHYSIQUE GENERALE, (FRANCE)
QUEBEC, UNIVERSITE DU, CRESALA, MONTREAL (CANADA)
ROME, UNIVERSITY OF, (ITALY)
300 GEV (AND 400 GEV) PROTON INTERACTIONS IN NUCLEAR EMULSION.
REQUEST 16 JUL 73 EMULSION EXPOSURE
APPROVED 16 AUG 73 EMULSION EXPOSURE
COMPLETED 20 OCT 73 8 STACKS

---

234 15-FOOT ENGINEERING RUN #234 HUSON, FRED RUSS FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM FLORIDA STATE UNIVERSITY
PHYSICS CATEGORIES: HBC2, S5(B)1
AN ENGINEERING RUN FOR THE NAL 15-FOOT CRYOGENIC BUBBLE CHAMBER.
REQUEST 1 AUG 73 50K PIX
APPROVED 6 AUG 73 50K PIX
COMPLETED 5 NOV 74 57K PIX OF PI- - P INTERACTIONS AT 250 GEV

236A HADRON JETS #236A MOCKETT, PAUL M. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M1 BEAM TUFTS UNIVERSITY
PHYSICS CATEGORY: HED8(C) WASHINGTON, UNIVERSITY OF
A PROPOSAL TO EXPLORE THE LARGE-PT DOMAIN: INCLUSIVE CROSS SECTIONS AND POSSIBLE JET STRUCTURE.
REQUEST 13 AUG 73 550 HOURS FOR TESTS AND DATA
16 DEC 76 1,150 HOURS INCLUDING AN ADDITIONAL 400 HOURS FOR DATA AND 200 HOURS FOR TESTS
APPROVED 22 JAN 74 550 HOURS
1 APR 77 1,150 HOURS INCLUDING ADDITIONAL 600 HOURS TO COMPLETE EXPERIMENT DURING A SIX WEEK RUNNING PERIOD
COMPLETED 20 JUL 77 1,700 HOURS

---

237 EMULSION/PROTONS @ 300 #237 LORD, JERE J. WASHINGTON, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
EMULSION EXPOSURE TO 300 GEV PROTONS.
REQUEST 14 AUG 73 EMULSION EXPOSURE
APPROVED 11 SEP 73 EMULSION EXPOSURE
COMPLETED 10 JUN 75 5 STACKS

---

238 EMULSION/PROTONS @ 400 #238 LORD, JERE J. WASHINGTON, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
EMULSION EXPOSURE TO 400 GEV PROTONS.
REQUEST 14 AUG 73 EMULSION EXPOSURE
APPROVED 12 MAR 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 9 STACKS

---

239 LONG-LIVED PARTICLES #239 FRATI, WILLIAM FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-MISCELLANEOUS PENNSYLVANIA, UNIVERSITY OF
PHYSICS CATEGORY: S6
PROPOSAL FOR A FURTHER SEARCH FOR LONG LIVED PARTICLES AT NAL.
(WITH A CERENKOV COUNTER LOOKING AT THE NEUTRINO TARGET FROM THE 90-DEGREE MONITOR PIPE)
REQUEST 15 JUL 73 PARASITIC RUNNING
APPROVED 6 DEC 73 PARASITIC RUNNING
COMPLETED 3 FEB 74 350 HOURS

---

242 EMULSION/PROTONS @ 300 #242 NIU, KIYOSHI AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS NAGOYA UNIVERSITY, NAGOYA (JAPAN)
PHYSICS CATEGORY: E1 YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)
STUDY OF SECONDARY PARTICLES PRODUCED BY 300 GEV PROTONS IN EMULSION CHAMBERS.
REQUEST 28 SEP 73 EMULSION EXPOSURE
APPROVED 22 NOV 73 EMULSION EXPOSURE
COMPLETED 20 OCT 73 2 STACKS

---

243 EMULSION/PROTONS @ 400 #243 NIU, KIYOSHI AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS KONAN UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 NAGOYA UNIVERSITY, NAGOYA (JAPAN)
YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)
STUDY OF SECONDARY PARTICLES PRODUCED BY 400 GEV PROTONS IN EMULSION CHAMBERS.
REQUEST 28 SEP 73 EMULSION EXPOSURE
APPROVED 12 MAR 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 7 STACKS

---

244 EMULSION/PROTONS @ 300 #244 JAIN, PIYARE L. NEW YORK, STATE UNIVERSITY OF, BUFFALO
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
INTERACTION OF 300 GEV PROTONS IN NUCLEAR EMULSION.
REQUEST 1 OCT 73 EMULSION EXPOSURE
APPROVED 22 NOV 73 EMULSION EXPOSURE
COMPLETED 20 OCT 73 1 STACK

---

245 EMULSION/PROTONS @ 400 #245 JAIN, PIYARE L. NEW YORK, STATE UNIVERSITY OF, BUFFALO

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
INTERACTION OF 400 GEV PROTONS IN NUCLEAR EMULSION.
REQUEST 1 OCT 73 EMULSION EXPOSURE
APPROVED 3 MAR 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 1 STACK

---

247 PARTICLE SEARCH #247 BURHOP, ERIC H. S. BRUSSELS, UNIVERSITY OF (BELGIUM)
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S5(A)3, S4(A)3, E2 ROME, UNIVERSITY OF, (ITALY)
STRASBOURG, UNIVERSITY OF (FRANCE)
UNIVERSITY COLLEGE DUBLIN (IRELAND)
UNIVERSITY COLLEGE LONDON (GREAT BRITAIN)

A PROPOSED EXPERIMENT TO SEARCH FOR HEAVY LEPTONS.
(USING A HYBRID EMULSION-SPARK CHAMBER ARRANGEMENT)
REQUEST 21 SEP 73 1,000 HOURS WITH REQUEST FOR A BOMBARDMENT OF 2 X 10 TO THE 18TH PROTONS
APPROVED 2 OCT 73 UNSPECIFIED BUT WITH EXPECTATION OF TEST RUNNING FOR FEASIBILITY STUDIES
26 MAR 75 1,000 HOURS WITH FORMAL APPROVAL FOR 2 X 10 TO THE 18TH PROTONS SUBJECT TO THE CONDITION THAT RUNNING IS COMPATIBLE WITH EXP# 310 AND THE 15-FT BUBBLE CHAMBER PROGRAM
11 MAR 76 1,000 HOURS WITH FORMAL APPROVAL FOR 2 X 10 TO THE 18TH PROTONS AND HIGH PRIORITY
COMPLETED 18 MAY 76 350 HOURS

---

248 NEUTRON ELASTIC SCATTERING #248 LONGO, MICHAEL J. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM
PHYSICS CATEGORY: HED2
NEUTRON-PROTON DIFFRACTION SCATTERING UP TO 300 GEV.
(DIFFERENTIAL CROSS SECTIONS WITH T FROM 0.1 TO 3.5; FORMERLY REFERRED TO AS EXP #4II)
REQUEST 15 MAY 70 700 HOURS AS AN ESTIMATE
APPROVED 1 AUG 70 400 HOURS
COMPLETED 10 DEC 76 2,400 HOURS

---

249 EMULSION/PROTONS @ 400 #249 WOLTER, WLADYSLAW INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
CRACOW EMULSION EXPOSURE TO 400 GEV PROTONS.
REQUEST 8 OCT 73 EMULSION EXPOSURE
APPROVED 12 MAR 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 3 STACKS

---

250 EMULSION/PROTONS @ 300 #250 KUSUMOTO, OSAMU KINKI UNIVERSITY (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS KOBE UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 OSAKA UNIVERSITY (JAPAN)
SCIENCE EDUCATION INSTITUTE OF OSAKA PREFECTURE(JAPAN)
WAKAYAMA MEDICAL COLLEGE (JAPAN)

PHENOMENOLOGICAL STUDY OF PROTON-NUCLEUS COLLISION AT NAL ENERGIES IN EMULSION (300 GEV).
REQUEST 10 OCT 73 EMULSION EXPOSURE
APPROVED 22 NOV 73 EMULSION EXPOSURE
COMPLETED 20 OCT 73 1 STACK

---

251 EMULSION/PROTONS @ 400 #251 KUSUMOTO, OSAMU KINKI UNIVERSITY (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS KOBE UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 OSAKA UNIVERSITY (JAPAN)
SCIENCE EDUCATION INSTITUTE OF OSAKA PREFECTURE(JAPAN)
WAKAYAMA MEDICAL COLLEGE (JAPAN)

PHENOMENOLOGICAL STUDY OF PROTON-NUCLEUS COLLISION AT NAL ENERGIES IN EMULSION (400 GEV).
REQUEST 10 OCT 73 EMULSION EXPOSURE
APPROVED 22 OCT 73 EMULSION EXPOSURE
COMPLETED 9 DEC 75 3 STACKS

---

252 30-INCH P-P @ 100 #252 FERBEL, THOMAS MICHIGAN, UNIVERSITY OF
BEAM: NEUTRINO AREA-30-IN HADRON BEAM ROCHESTER, UNIVERSITY OF
PHYSICS CATEGORY: HBC1
STUDY OF MULTIPARTICLE PRODUCTION IN A 30-INCH BUBBLE CHAMBER.
(FORMERLY KNOWN AS EXPERIMENT 138I)
REQUEST 10 MAY 71 240K PIX
APPROVED 26 AUG 71 50K PIX IN BARE CHAMBER WITH EVENTS WHERE THERE IS DOWNSTREAM SPARK CHAMBER DATA TO BE SHARED WITH EXP #2B
COMPLETED 6 DEC 72 33K PIX

---

253 NEUTRINO #253 MO, LUKE W. MARYLAND, UNIVERSITY OF
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM NATIONAL SCIENCE FOUNDATION
PHYSICS CATEGORY: W1 OXFORD, UNIVERSITY OF (GREAT BRITAIN)
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY

NEUTRINO-ELECTRON SCATTERING AT NAL.
REQUEST 15 OCT 73 PARASITIC RUNNING EXPECTED TO TOTAL 1,000 HOURS
APPROVED 7 JUL 75 PARASITIC RUNNING
COMPLETED 7 MAR 79 2,050 HOURS

---

254 NEUTRINO #254 KALEFLEISCH, GEORGE R. BROOKHAVEN NATIONAL LABORATORY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM CALIFORNIA INSTITUTE OF TECHNOLOGY
PHYSICS CATEGORY: W1 FERMI NATIONAL ACCELERATOR LABORATORY
PURDUE UNIVERSITY

PROPOSAL TO SEARCH FOR A SECOND MUON NEUTRINO.
(DICHROMATIC BEAM INCIDENT ON TARGET CALORIMETER WITH MUON SPECTROMETER OF EXP 21A; MUON MONITORING INSTRUMENTATION WILL BE ADDED)
REQUEST 17 OCT 73 300 HOURS WITH TOTAL FLUX OF 3 X 10 TO THE 17TH PROTONS
APPROVED 22 NOV 74 300 HOURS WITH A FORMAL APPROVAL FOR 3 X 10 TO THE 17TH PROTONS AND THE HOPE THAT RUNNING CAN BE COORDINATED WITH EXP# 21
COMPLETED 15 OCT 75 550 HOURS

---

255 EMULSION/MUONS @ 150 #255 JAIN, PIYARE L. NEW YORK, STATE UNIVERSITY OF, BUFFALO
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E2
EXPOSURE OF NUCLEAR EMULSIONS TO A BEAM OF 150 GEV MUONS AT THE NATIONAL ACCELERATOR LABORATORY.
REQUEST 15 OCT 73 EMULSION EXPOSURE
APPROVED 22 OCT 73 EMULSION EXPOSURE
COMPLETED 16 OCT 73 1 STACK

---

258 PION INCLUSIVE #258 SHOCHET, MELVYN J. CHICAGO, UNIVERSITY OF
BEAM: PROTON AREA-(WEST) PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED6(A), HED6(C)
A PROPOSAL TO MEASURE PARTICLES PRODUCED AT HIGH TRANSVERSE MOMENTUM BY PIONS.
REQUEST 22 OCT 73 UNSPECIFIED
APPROVED 26 JUN 74 800 HOURS CONTINGENT UPON DEVELOPMENT OF A SUITABLE BEAM
IN PROGRESS 1 APR 79 850 HOURS

---

260 HADRON JETS #260 MCLEOD, DONALD W. CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: MESON AREA-M6 BEAM CALIFORNIA, UNIVERSITY OF, LOS ANGELES
PHYSICS CATEGORY: HED8(C) FERMI NATIONAL ACCELERATOR LABORATORY
ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE
INDIANA UNIVERSITY
MAX PLANCK INSTITUTE, MUNICH (GERMANY)

A PROPOSAL TO STUDY HIGH PT PHISICS WITH A MULTIPARTICLE SPECTROMETER.

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

REQUEST 26 OCT 73 650 HOURS
9 AUG 76 1,150 HOURS INCLUDING AN EXTENSION OF 500 HOURS TO COMPLETE THE EXPERIMENT
APPROVED 16 NOV 73 200 HOURS TO COME OUT OF THE 800 HOURS PREVIOUSLY APPROVED FOR EXP# 110A
13 AUG 76 950 HOURS FOR DATA INCLUDING AN ADDITIONAL 750 HOURS WITH THE UNDERSTANDING THAT THE COMMITMENT TO THE EXPERIMENT IS TO BE COMPLETE BEFORE A SHUTDOWN IN SEPTEMBER 1976
COMPLETED 20 SEP 76 2,300 HOURS

---

261 DETECTOR DEVELOPMENT #261 WANG, CHING LIN BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M1 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: M1
PROPOSAL TO TEST TRANSITION COUNTERS AT NAL.
REQUEST 26 OCT 73 PARASITIC RUNNING EXPECTED TO TOTAL 200 HOURS
APPROVED 17 JAN 74 PARASITIC RUNNING FOR ABOUT 200 HOURS
COMPLETED 20 NOV 74 600 HOURS

---

262 NEUTRINO #262 BARISH, BARRY CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: W1
NEUTRAL CURRENT INVESTIGATION AT NAL.
(USING THE DICHROMATIC BEAM, TARGET CALORIMETER, AND SPECTROMETER OF EXP. 21A)
REQUEST 28 OCT 73 300 HOURS TO INCLUDE 3 X 10 TO THE 17TH PROTONS
APPROVED 16 NOV 73 300 HOURS WITH UNDERSTANDING THAT THIS WILL INCLUDE 3 X 10 TO THE 17TH PROTONS
COMPLETED 20 MAR 74 400 HOURS

---

264 EMULSION/PI- @ 200 #264 YOUNG, POH SHIEN MISSISSIPPI STATE UNIVERSITY
BEAM: NEUTRINO AREA-MISCELLANEOUS TENNESSEE, UNIVERSITY OF
PHYSICS CATEGORY: E1
EXPOSURE OF EMULSIONS TO 200-300 GEV PI- FOR NEW DETERMINATION OF MEAN LIFE OF PI ZERO.
REQUEST 31 OCT 73 EMULSION EXPOSURE
APPROVED 12 MAR 74 EMULSION EXPOSURE
COMPLETED 7 OCT 74 2 STACKS

---

265 EMULSION/PROTONS @ 400 #265 YOUNG, POH SHIEN AP CAMBRIDGE RESEARCH LABORATORY (CRFC)
BEAM: NEUTRINO AREA-MISCELLANEOUS MISSISSIPPI STATE UNIVERSITY
PHYSICS CATEGORY: E1
EXPOSURE OF EMULSIONS TO 400 GEV PROTONS FOR NEW DETERMINATION OF MEAN LIFE OF PI ZERO.
REQUEST 31 OCT 73 EMULSION EXPOSURE
APPROVED 12 MAR 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 3 STACKS

---

268 INCLUSIVE PHOTON #268 HELLEMA, JOEL BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM CALIFORNIA INSTITUTE OF TECHNOLOGY
PHYSICS CATEGORY: HED6(B) LAWRENCE BERKELEY LABORATORY
A PROPOSAL TO STUDY MESON PRODUCTION AT LARGE P- TRANSVERSE WITH A GAMMA RAY DETECTOR.
(INDUCED BY PROTONS @ 300 GEV AND BY PI+- @ 100 AND 200 GEV; USING PHOTON DETECTOR OF EXP #111)
REQUEST 5 NOV 73 900 HOURS TOTAL WITH AN INITIAL RUN OF 500 HOURS
3 NOV 75 1,200 HOURS INCLUDING A THREE-WEEK EXTENSION
APPROVED 21 MAR 74 100 HOURS OF RUNNING IN DIFFRACTED PROTON BEAM TO DEMONSTRATE FEASIBILITY
26 JUN 74 100 HOURS WITH FORMAL APPROVAL FOR PARASITIC RUNNING USING A PION BEAM IN FRONT OF EXP# 51
22 NOV 74 600 HOURS INCLUDING AN ADDITIONAL 500 HOURS OF RUNNING IN A PION BEAM
10 NOV 75 900 HOURS INCLUDING AN ADDITIONAL THREE WEEK RUN TO OBTAIN DATA AT A FORWARD ANGLE WITH A 200 GEV BEAM
COMPLETED 11 FEB 76 1,850 HOURS

---

271 EMULSION/PROTONS @ 200 #271 GOTTFRIED, KURT CERN
BEAM: NEUTRINO AREA-MISCELLANEOUS CORNELL UNIVERSITY
PHYSICS CATEGORY: E1 INSTITUTE OF ATOMIC PHYSICS, BUCHAREST (ROUMANIA)
LUND, UNIVERSITY OF, LUND (SWEDEN)
MULTIPARTICLE PRODUCTION IN NUCLEI BY PROTONS OF SEVERAL HUNDRED GEV.
(USING TARGET MATERIALS CONSISTING OF FINE WIRES IMBEDDED IN EMULSION OR FOILS COVERING THE EMULSION; 200 GEV EXPOSURE)
REQUEST 30 NOV 73 EMULSION EXPOSURE
APPROVED 16 JAN 74 EMULSION EXPOSURE
COMPLETED 10 JUN 75 10 STACKS

---

272 HADRON DISSOCIATION #272 FERBEL, THOMAS FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M1 BEAM MINNESOTA, UNIVERSITY OF
PHYSICS CATEGORY: HED7 ROCHESTER, UNIVERSITY OF
PROPOSAL TO MEASURE COHERENT DISSOCIATION OF PI-, K-, AND PBAR INTO TWO-BODY SYSTEMS AT FERMILAB ENERGIES.
REQUEST 3 DEC 73 600 HOURS
9 JUN 75 900 HOURS TOTAL WITH THE ADDITIONAL 300 HOURS OF DATA TAKING AT 150 AND AND 300 GEV/C INCIDENT MOMENTUM
APPROVED 7 JUL 75 600 HOURS
IN PROGRESS 1 OCT 78 950 HOURS

---

275 PLASTIC DETECTORS #275 ENGE, WOLFGANG CHRISTIAN-ALBRECHTS-UNIVERSITAT, KIEL (WEST GERMANY)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: M5
EXPOSURE OF PLASTIC-DETECTOR STACKS TO A 300 GEV PROTON BEAM AT NAL.
REQUEST 17 DEC 73 DETECTOR EXPOSURE
APPROVED 20 OCT 73 DETECTOR EXPOSURE
COMPLETED 20 OCT 73 4 STACKS

---

276 QUARK #276 VAN GINNEKEN, ANDREAS ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-MISCELLANEOUS CHICAGO, UNIVERSITY OF
PHYSICS CATEGORY: S2 FERMI NATIONAL ACCELERATOR LABORATORY
A SEARCH FOR STABLE INTEGRALLY CHARGED MASSIVE PARTICLES (HAN-NAMBU QUARKS).
(MASS SPECTROSCOPIC ANALYSIS OF IRRADIATED TARGET)
REQUEST 25 JAN 74 TARGET EXPOSURE
APPROVED 8 JUL 74 TARGET EXPOSURE
30 AUG 76 TARGET EXPOSURE WITH DIFFERENT CHEMICALS AND RE-EXPOSURE OF TWO PREVIOUS SAMPLES
COMPLETED 2 NOV 75 3 TARGETS EXPOSED

---

279 EMULSION/PROTONS @ 400 #279 KING, DAVID T. TENNESSEE, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
THE INTERACTION OF PA=PAE+E- AT 400 GEV.
REQUEST 28 JAN 74 EMULSION EXPOSURE
APPROVED 12 MAR 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 3 STACKS

---

280 30-INCH P - D @ 200 #280 FIELDS, THOMAS ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM CANADIAN INST. OF PARTICLE PHYSICS, MONTREAL (CANADA)
PHYSICS CATEGORY: HBC1 JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
MOSCOW UNIVERSITY, MOSCOW (USSR)
PROPOSAL TO STUDY P - D INTERACTIONS AT 205 GEV/C IN THE 30-INCH BUBBLE CHAMBER.
REQUEST 1 FEB 74 100K PIX
APPROVED 21 MAR 74 100K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED
COMPLETED 11 OCT 75 103K PIX

---

281 30-INCH HYBRID #281 SMITH, GERALD A. IOWA STATE UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM MARYLAND, UNIVERSITY OF
PHYSICS CATEGORY: HBC2 MICHIGAN STATE UNIVERSITY

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

NOTRE DAME, UNIVERSITY OF

PROPOSAL TO STUDY HIGH ENERGY PROTON-PROTON AND PI-MINUS PROTON INTERACTIONS WITH THE NAL 30-INCH BUBBLE CHAMBER-WIDE GAP SPARK CHAMBER HYBRID SYSTEM.

REQUEST	1 FEB 74	400K PIX INCLUDING 200K PIX OF P - P 300 GEV AND 200K PIX OF PI- - P AT HIGHEST MOMENTUM
	25 SEP 74	700K PIX TOTAL INCLUDING 300K PIX OF P - P @ 300 GEV, 100K PIX OF PI- - P @ 100 GEV, AND 300K PIX OF PI- - P @ 375 GEV
APPROVED	22 NOV 74	300K PIX IN A COMBINATION OF PI- AND P BOMBARDMENTS AT AN ENERGY GREATER THAN OR EQUAL TO 300 GEV AND WITH THE UNDERSTANDING THAT FOLLOWING THIS RUN WORK WITH THE WIDE GAP CHAMBER SYSTEM WILL BE TERMINATED
COMPLETED	28 SEP 75	301K PIX OF PI- - P INTERACTIONS AT 360 GEV/C

---

284 PARTICLE PRODUCTION #284 — WALKER, JAMES K. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(WEST) — NORTHEASTERN UNIVERSITY
PHYSICS CATEGORY: HED6(A) — NORTHERN ILLINOIS UNIVERSITY

SURVEY OF PARTICLE PRODUCTION IN PROTON COLLISIONS AT NAL.
(CONTINUATION OF WORK BEGUN IN EXP #63A)

REQUEST	19 FEB 74	UNSPECIFIED
APPROVED	26 JUN 74	750 HOURS DIVIDED ROUGHLY AS 150 HOURS FOR SETUP AND TESTING AND 150 HOURS EACH AT THE FOUR ENERGIES OF 100, 200, 300, AND 400 GEV
COMPLETED	3 OCT 76	1,150 HOURS

---

285 SUPER-HEAVY ELEMENTS #285 — LEDERMAN, LEON M. — COLUMBIA UNIVERSITY
BEAM: NEUTRINO AREA-MISCELLANEOUS — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: S7

A SEARCH FOR A NEW STATE OF MATTER IN THE ANALYSIS OF AN NAL BEAM DUMP.

REQUEST	21 FEB 74	TARGET EXPOSURE
APPROVED	27 FEB 74	TARGET EXPOSURE
COMPLETED	2 AUG 76	3 TARGETS EXPOSED

---

288 DI-LEPTON #288 — LEDERMAN, LEON M. — COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(CENTER) — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED8(D), S5(B)3 — NEW YORK, STATE UNIVERSITY OF, STONY BROOK

A STUDY OF DI-LEPTON PRODUCTION IN PROTON COLLISIONS AT NAL.
(FORMERLY KNOWN AS EXP #70 III)

REQUEST	21 FEB 74	UNSPECIFIED
	10 MAY 76	1,500 HOURS ADDITIONAL FOR MU-MU II
	10 NOV 77	4,500 HOURS WITH A REQUEST FOR AN ADDITIONAL 3,000 HOURS FOR HIGH INTENSITY AND HIGH RESOLUTION STUDIES
APPROVED	18 JAN 74	1,000 HOURS
	17 NOV 76	2,500 HOURS WITH ADDITIONAL 1,500 HOURS NOT TO EXTEND BEYOND 1 SEP 1977
	16 NOV 77	5,500 HOURS WITH AN EXTENSION OF ABOUT 3,000 HOURS UNTIL AUGUST 1978, AND WITH A REQUEST FOR A PROGRESS REPORT IN MAY 1978
COMPLETED	23 JUL 78	6,850 HOURS

---

289 PROTON-HELIUM SCATTERING #289 — MALAMUD, ERNEST — ARIZONA, UNIVERSITY OF
BEAM: INTERNAL TARGET AREA-(C-0) — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED2, HED6(D), HED7 — JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)

SMALL ANGLE PROTON-HELIUM ELASTIC AND INELASTIC SCATTERING FROM 8 TO 500 GEV.
(USING AN INTERNAL PROTON BEAM WITH A GAS JET TARGET)

REQUEST	1 MAR 74	700 HOURS
APPROVED	22 MAR 74	700 HOURS CONDITIONAL UPON SUCCESSFUL DEVELOPMENT OF THE HELIUM JET TECHNIQUE
COMPLETED	8 NOV 77	1,050 HOURS

---

290 BACKWARD SCATTERING #290 — BAKER, WINSLOW F. — ARIZONA, UNIVERSITY OF
BEAM: MESON AREA-M6 BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED4, HED2

BACKWARD PION-PROTON ELASTIC SCATTERING.
(FOR U FROM 0 - 0.8)

REQUEST	6 MAR 74	1,100 HOURS INCLUDING 200 HOURS FOR TESTING
APPROVED	22 NOV 74	900 HOURS
COMPLETED	31 JUL 78	1,500 HOURS

---

291 15-FOOT P - P & NE @ 400 #291 — HANN, WILLIAM A. — KANSAS, UNIVERSITY OF
BEAM: NEUTRINO AREA-15-FT HADRON BEAM — MICHIGAN STATE UNIVERSITY
PHYSICS CATEGORY: HBC1 — TUFTS UNIVERSITY

PROPOSAL TO STUDY MULTIPARTICLE PRODUCTION USING AN ENRICHED NEON EXPOSURE IN THE 15-FOOT BUBBLE CHAMBER.

REQUEST	6 MAR 74	50K PIX IN THE 30-INCH BUBBLE CHAMBER
	15 OCT 74	30K PIX IN THE 15-FOOT BUBBLE CHAMBER
APPROVED	12 MAR 76	25K PIX WITH 400 GEV PROTONS IN THE 15-FT BUBBLE CHAMBER FILLED WITH A LIGHT NEON MIXTURE
UNSCHEDULED		

---

292 EMULSION/PROTONS @ 400 #292 — GOTTFRIED, KURT — CERN
BEAM: NEUTRINO AREA-MISCELLANEOUS — CORNELL UNIVERSITY
PHYSICS CATEGORY: E1 — INSTITUTE OF ATOMIC PHYSICS, BUCHAREST (ROUMANIA)
LUND, UNIVERSITY OF, LUND (SWEDEN)

MULTIPARTICLE PRODUCTION IN NUCLEI BY PROTONS OF SEVERAL HUNDRED GEV.
(USING TARGET MATERIALS CONSISTING OF FINE WIRES IMBEDDED IN EMULSION OR FOILS COVERING THE EMULSION; 400 GEV EXPOSURE)

REQUEST	30 NOV 73	EMULSION EXPOSURE
APPROVED	16 JAN 74	EMULSION EXPOSURE
COMPLETED	9 DEC 75	12 STACKS

---

295 30-INCH PI+ & P - D @ 200 #295 — YEKUTIELI, GIDEON — CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HBC1 — WEIZMANN INSTITUTE OF SCIENCE, REHOVOT (ISRAEL)

A STUDY OF PI+ - D INTERACTIONS AT 200 GEV/C IN THE 30-INCH BUBBLE CHAMBER AT NAL.

REQUEST	15 MAR 74	50K PIX OF P - D @ 205 GEV
	14 AUG 74	150K PIX TOTAL INCLUDING AN ADDITIONAL 50K PIX DUE TO DECREASED YIELD OF PI+ - D EVENTS
APPROVED	21 MAR 74	100K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED; AND WITH REQUEST THAT INTEREST BE SWITCHED FROM P - D TO PI+ - D BOMBARDMENT
	27 AUG 74	150K PIX WITH ADDITIONAL 50K PIX TO YIELD THE REQUESTED NUMBER OF PI+ - D
COMPLETED	2 NOV 75	156K PIX

---

297 QUARK #297 — LEIPUNER, LAWRENCE B. — BROOKHAVEN NATIONAL LABORATORY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: S2

QUARK SEARCH USING 400-500 GEV PROTONS.
(BY MEASURING IONIZATION ENERGY LOSS)

REQUEST	15 APR 74	24 HOURS WITH BEAM OF 5 X 10 TO THE 4TH PARTICLES/PULSE AND A 200 MSEC SPILL
APPROVED	15 MAY 74	24 HOURS
COMPLETED	10 JUL 74	50 HOURS

---

299 30-INCH HYBRID #299 — PLESS, IRWIN A. — BROWN UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM — CAVENDISH LABORATORY, CAMBRIDGE (GREAT BRITAIN)
PHYSICS CATEGORY: HBC1 — FERMI NATIONAL ACCELERATOR LABORATORY
ILLINOIS INSTITUTE OF TECHNOLOGY
ILLINOIS, UNIVERSITY OF
INDIANA UNIVERSITY
JOHNS HOPKINS UNIVERSITY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
NEW YORK, STATE UNIVERSITY OF, ALBANY

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

---

300 PARTICLE SEARCH #300 PIROUE, PIERRE A. CHICAGO, UNIVERSITY OF
BEAM: PROTON AREA-(EAST) PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED6(A), HED6(C)

STUDY OF PARTICLE PRODUCTION AT HIGH TRANSVERSE MOMENTA USING HYDROGEN AND DEUTERIUM TARGETS.

REQUEST	16 MAY 74	1,200 HOURS	WITH A LIQUID HYDROGEN/DEUTERIUM TARGET AND AT BEAM ENERGIES OF 200, 300, 400, AND 500 GEV
APPROVED	26 JUN 74	600 HOURS	WITH HYDROGEN TARGET
COMPLETED	24 APR 76	750 HOURS	

---

302 C-TEST #302 WITHERELL, MICHAEL BROOKHAVEN NATIONAL LABORATORY
BEAM: PROTON AREA-(WEST) CENTRE DE RECHERCHES NUCLEAIRES DE SACLAY (FRANCE)
PHYSICS CATEGORY: HED6(A) FERMI NATIONAL ACCELERATOR LABORATORY
PRINCETON UNIVERSITY
TORINO, UNIVERSITA DI, TORINO (ITALY)

TEST OF C AT SMALL DISTANCES.
(BY COMPARING THE SPECTRA OF PI+- AND K+- AT 90 DEGREES IN C.M. FROM PBAR - P INTERACTIONS)

REQUEST	14 MAY 74	400 HOURS	FOR DATA TAKING
APPROVED	25 JUN 74	400 HOURS	CONTINGENT UPON DEVELOPMENT OF SUITABLE PBAR BEAM BEING INSTALLED

---

305 NEUTRON DISSOCIATION #305 GOBBI, BRUNO FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M3 BEAM NORTHWESTERN UNIVERSITY
PHYSICS CATEGORIES: HED7, HED1, S5(B)1 ROCHESTER, UNIVERSITY OF
STANFORD LINEAR ACCELERATOR CENTER

PROPOSAL TO STUDY THE COHERENT DISSOCIATION OF NEUTRONS.
(A CONTINUATION OF WORK BEGUN IN EXP #27A)

REQUEST	22 MAY 74	1,200 HOURS	TOTAL TO INCLUDE ONE MONTH OF RUNNING EVERY FOUR MONTHS THROUGH CALENDAR 1975
APPROVED	26 JUN 74	900 HOURS	WITHOUT APPROVAL FOR THE INSTALLATION OF THE TRANSMISSION TARGET FOR H2 AND D2 CROSS SECTION MEASUREMENTS
	16 DEC 74	1,200 HOURS	WITH ADDITIONAL 300 HOURS FOR PARTICLE SEARCH
COMPLETED	14 APR 75	1,400 HOURS	

---

310 NEUTRINO #310 CLINE, DAVID B. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM HARVARD UNIVERSITY
PHYSICS CATEGORIES: W1, S3(A)2, S4(A)2, S5(A)2 PENNSYLVANIA, UNIVERSITY OF
RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

FURTHER STUDY OF HIGH ENERGY NEUTRINO INTERACTIONS AT FERMILAB.

REQUEST	4 JUN 74	UNSPECIFIED	
	1 FEB 78	1,200 HOURS	TO INCLUDE 2 X 10 TO THE 18TH PROTONS ON TARGET WITH THE WIDE-BAND HORN SYSTEM FOCUSED FOR NEGATIVES WITHOUT A PLUG AND 2 X 10 TO THE 18TH FOR POSITIVES
APPROVED	22 NOV 74	1,000 HOURS	WITH A FORMAL APPROVAL FOR 2 X 10 TO THE 18TH PROTONS AND THE UNDERSTANDING THAT USE WILL BE MADE OF A HORN FOCUSING SYSTEM
	17 NOV 76	1,000 HOURS	TO ALSO INCLUDE RUNNING WITH THE QUADRUPOLE TRIPLET TRAIN FOR AN EXPOSURE OF 1 X 10 TO THE 18TH PROTONS DURING DECEMBER 1976
	15 MAR 77	2,500 HOURS	WITH FORMAL ADDITIONAL APPROVAL AS FOLLOWS--1 - 2 X 10 TO THE 18TH PROTONS USING THE SIGN-SELECTED-BARE-TARGET TRAIN UNDERSTOOD TO FOCUS ANTINEUTRINOS, AND 2 X 10 TO THE 18TH PROTONS USING THE QUADRUPOLE TRIPLET TRAIN LOAD
	21 MAR 78	3,500 HOURS	WITH ADDITIONAL APPROVAL FOR A FINAL RUN TO COMPLETE THE EXPERIMENT DURING WIDE-BAND HORN RUNNING FOR THE 15-FT BUBBLE CHAMBER
COMPLETED	31 AUG 78	3,800 HOURS	AT THE REQUEST OF THE EXPERIMENTERS BECAUSE IT WAS FELT THAT THE CONDITIONS REQUIRED TO PROPERLY CONTINUE THE EXPERIMENT COULD NOT BE MET

---

311 30-INCH PBAR - P @ 100 #311 NEALE, WILLIAM W. CAVENDISH LABORATORY, CAMBRIDGE (GREAT BRITAIN)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHISICS CATEGORY: HBC2 MICHIGAN STATE UNIVERSITY

PROPOSAL TO STUDY MULTIPARTICLE PRODUCTION IN HIGH ENERGY ANTIPROTON-PROTON INTERACTIONS WITH THE FERMILAB 30-INCH BUBBLE CHAMBER.

REQUEST	6 JUN 74	100K PIX	WITH EQUAL NUMBERS OF PBAR AND PI-
APPROVED	26 JUN 74	100K PIX	TO BE OBTAINED WITH NOT MORE THAN 200K PULSES OF THE CHAMBER
COMPLETED	27 JAN 75	98K PIX	

---

313 PROTON-PROTON POLARIZATION #313 NEAL, HOMER A. INDIANA UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORIES: HED2, HED5, HED6(D)

POLARIZATION IN P - P ELASTIC, INELASTIC AND INCLUSIVE REACTIONS AT FERMILAB ENERGIES.
(USING A GAS JET TARGET WITH HYDROGEN, THE INTERNAL PROTON BEAM, THE SPECTROMETER OF EXP #198A, AND A NEW CARBON POLARIMETER)

REQUEST	5 JUN 74	1,500 HOURS	TOTAL WITH TWO JET PULSES PER CYCLE
APPROVED	26 JUN 74	1,000 HOURS	WITH ABOUT 800 HOURS OF RUNNING ON POLARIZATION IN ELASTIC SCATTERING AND ABOUT 200 HOURS OF RUNNING TO OBSERVE POLARIZATION IN INELASTIC CHANNELS
	15 MAR 77	1,000 HOURS	WITH ENCOURAGEMENT TO USE SOME OF THE REMAINING RUNNING TO ACCUMULATE FURTHER DATA ON POLARIZATION IN INELASTIC PROCESSES; SEE PROPOSAL #522
COMPLETED	30 MAR 77	850 HOURS	WITH SOME APPROVED RUNNING REMAINING; SEE EXP #522

---

317 PROTON-NUCLEON INELASTIC #317 COOL, RODNEY L. ARIZONA, UNIVERSITY OF
BEAM: INTERNAL TARGET AREA-(C-0) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED6(D), HED7 JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
ROCHESTER, UNIVERSITY OF
ROCKEFELLER UNIVERSITY

PROTON DIFFRACTION DISSOCIATION ON HYDROGEN AND DEUTERIUM.
(USING THE GAS JET TARGET AND INTERNAL PROTON BEAM)

REQUEST	7 JUN 74	800 HOURS	FOR TESTS AND DATA TAKING
APPROVED	3 JUL 74	800 HOURS	USING GAS JET WITH RUNNING TO BE INTERLEAVED WITH EXP# 321
COMPLETED	1 NOV 75	1,400 HOURS	

---

319 MUON #319 CHEN, K. WENDELL FERMI NATIONAL ACCELERATOR LABORATORY

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

BEAM: NEUTRINO AREA-MUON/HADRON BEAM MICHIGAN STATE UNIVERSITY
PHYSICS CATEGORY: E#4
FURTHER TEST OF SCALING AT HIGH MOMENTUM TRANSFERS IN DEEP INELASTIC MUON SCATTERING.
(A CONTINUED EXPLORATION OF THE STUDIES BEGUN IN EXP #26)
REQUEST 10 JUN 74 1,100 HOURS
APPROVED 26 MAR 75 500 HOURS FOR A SCALING TEST AT HIGH ENERGIES
COMPLETED 20 SEP 76 900 HOURS

---

320 NEUTRINO #320 SCIULLI, FRANK CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: N1
PROPOSAL TO MEASURE NEUTRAL CURRENT CROSS-SECTIONS AND ASSOCIATED INELASTIC DISTRIBUTIONS IN THE NARROW-BAND BEAM.
REQUEST 10 JUN 74 1,200 HOURS WITH REQUEST OF 3 X 10 TO THE 18TH PROTONS TOTAL AND INITIAL RUN OF 1 X 10 TO THE 18TH PROTONS FOR INVESTIGATION
APPROVED 26 JUN 74 500 HOURS WITH A FORMAL APPROVAL FOR 1 X 10 TO THE 18TH PROTONS PENDING A POSITIVE FINDING OF NEUTRAL CURRENTS AND WITH THE INCLINATION TO ASSIGN HIGHER PRIORITY FOR RUNNING TO EXP# 320 THAN TO COMPLETION OF EXP# 21
COMPLETED 1 OCT 74 500 HOURS

---

321 PROTON-PROTON INELASTIC #321 LEE-FRANZINI, JULIET COLUMBIA UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0) NEW YORK, STATE UNIVERSITY OF, STONY BROOK
PHYSICS CATEGORIES: HED6(D), HED7
A HIGH PRECISION EXPERIMENT TO MEASURE THE INELASTIC P - P CROSS SECTION AND ITS ASSOCIATED FORWARD MULTIPLICITIES AT SMALL MOMENTUM TRANSFER.
(USING A NEW HYDROGEN GAS JET TARGET AND THE INTERNAL PROTON BEAM)
REQUEST 11 JUN 74 2,000 HOURS TOTAL INCLUDING 800 HOURS FOR TESTING
APPROVED 3 JUL 74 800 HOURS WITH RUNNING TO BE INTERLEAVED WITH EXP# 317 AND USING THE EXISTING CRYOGENIC HYDROGEN JET
26 MAR 75 800 HOURS WITH APPROVAL TO USE A ROOM TEMPERATURE GAS JET OF THEIR OWN DESIGN
COMPLETED 20 SEP 76 1,900 HOURS

---

324 INCLUSIVE SCATTERING #324 WEISBERG, HOWARD L. PENNSYLVANIA, UNIVERSITY OF
BEAM: MESON AREA-M1 BEAM
PHYSICS CATEGORY: HED6(A)
A PROPOSAL TO STUDY SINGLE PARTICLE INCLUSIVE SPECTRA IN HIGH ENERGY HADRON-HADRON COLLISIONS
REQUEST 11 APR 74 1,000 HOURS
APPROVED 24 JUN 74 500 HOURS
COMPLETED 13 AUG 77 1,200 HOURS

---

325 PARTICLE SEARCH #325 PIROUE, PIERRE A. CHICAGO, UNIVERSITY OF
BEAM: PROTON AREA-(EAST) PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED8(D), S2, S5(B)3
STUDY OF DI-MUON PRODUCTION AT HIGH TRANSVERSE MOMENTA.
REQUEST 12 JUN 74 PARASITIC RUNNING
APPROVED 25 NOV 74 PARASITIC RUNNING WITH THE STIPULATION THAT THIS RUNNING TIME WILL BE CONCURRENT WITH THE PREVIOUSLY APPROVED 600 HOURS FOR EXP# 300
6 MAY 76 600 HOURS FOR A PORTION OF THE PROGRAM ESTIMATED TO REQUIRE 13 WEEKS AND WITH THE EXPECTATION TO CONTINUE THE EXPERIMENT DURING ANOTEER RUNNING PERIOD
26 OCT 76 1,200 HOURS DURING A SIX-WEEK RUNNING PERIOD TO BEGIN IN JANUARY 1977
COMPLETED 28 FEB 77 1,500 HOURS

---

326 DI-MUON #326 SHOCHET, MELVYN J. CHICAGO, UNIVERSITY OF
BEAM: PROTON AREA-(WEST) PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED8(D), S5(B)3
PROPOSAL TO MEASURE MUON PAIRS PRODUCED AT HIGH TRANSVERSE MOMENTUM BY PIONS.
REQUEST 29 MAY 74 UNSPECIFIED
7 JUL 75 400 HOURS
2 FEB 77 800 HOURS TO BE RUN IN CONJUNCTION WITH EXP #258 IN THE P-WEST PION BEAM BY ADDING A SECOND ARM TO THE EXP #258 SPECTROMETER
APPROVED 15 MAR 77 800 HOURS
BEING INSTALLED

---

327 DETECTOR DEVELOPMENT #327 ALLISON, WADE W. M. MASSACHUSETTS INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-MISCELLANEOUS OXFORD, UNIVERSITY OF (GREAT BRITAIN)
PHYSICS CATEGORY: N2
PROPOSAL TO TEST PARTICLE IDENTIFICATION BY IONIZATION LOSS (ISIS).
REQUEST 15 JUL 74 400 HOURS
APPROVED 31 JUL 74 50 HOURS
COMPLETED 7 FEB 75 50 HOURS

---

328 EMULSION/PI- @ 200 #328 TRETJAKOVA, M. I. LEBEDEV PHYSICAL INSTITUTE, MOSCOW (USSR)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
PROPOSAL TO STUDY THE INTERACTIONS OF PI- MESONS IN NUCLEAR EMULSION AT THE FERMILAB ACCELERATOR.
REQUEST 5 AUG 74 EMULSION EXPOSURE
APPROVED 5 AUG 74 EMULSION EXPOSURE
COMPLETED 7 OCT 74 5 STACKS

---

329 EMULSION/PROTONS @ 300 #329 TRETJAKOVA, M. I. LEBEDEV PHYSICAL INSTITUTE, MOSCOW (USSR)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
PROPOSAL TO STUDY THE INTERACTIONS OF PROTONS IN NUCLEAR EMULSION AT THE FERMILAB ACCELERATOR.
REQUEST 5 AUG 74 EMULSION EXPOSURE
APPROVED 3 JUN 75 EMULSION EXPOSURE
COMPLETED 10 JUN 75 2 STACKS

---

330 PARTICLE SEARCH #330 GUSTAFSON, RICHARD MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M4 BEAM
PHYSICS CATEGORY: S6
SEARCH FOR MASSIVE NEUTRAL PARTICLES.
(USING TIME-OF-FLIGHT AND A TOTAL ABSORPTION CALORIMETER)
REQUEST 6 AUG 74 1,300 HOURS TO INCLUDE 800 HOURS FOR TUNEUP PARASITIC TO EXP #305 AND 500 HOURS FOR DATA
APPROVED 22 JAN 75 100 HOURS
COMPLETED 7 JUL 75 150 HOURS

---

331 DI-MUON #331 PILCHER, JAMES E. CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MUON/HADRON BEAM PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED8(D), S5(B)4
PROPOSAL FOR A DETAILED STUDY OF DI-MUON PRODUCTION.
(ALTERNATIVE VERSION OF EXPS 308/323 DESIGNED FOR MUON LABORATORY CYCLOTRON SPECTROMETER)
REQUEST 10 AUG 74 UNSPECIFIED
APPROVED 25 NOV 74 400 HOURS FOR AN INITIAL RUN AT AN INCIDENT BEAM INTENSITY OF ABOUT 10 TO THE 6TH PARTICLES/PULSE
COMPLETED 22 MAR 76 1,400 HOURS

---

335 MUON SEARCH #335 FACKLER, ORRIN D. CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: MESON AREA-M1 BEAM CHICAGO, UNIVERSITY OF
PHYSICS CATEGORY: HED6(C) FERMI NATIONAL ACCELERATOR LABORATORY
PRINCETON UNIVERSITY
ROCKEFELLER UNIVERSITY
A SEARCH FOR DIRECT MUON PRODUCTION IN THE FORWARD DIRECTION.

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

REQUEST 18 AUG 74 200 HOURS TOTAL INCLUDING TIME FOR TESTS AND DATA
APPROVED 22 NOV 74 200 HOURS PROVIDED THAT THIS RUNNING TIME CAN BE ARRANGED IN SUCH A WAY AS NOT TO INTERFERE SUBSTANTIALLY WITH THE ONGOING PHYSICS PROGRAM IN THE M1 BEAM LINE
COMPLETED 6 JUN 75 300 HOURS

---

336 EMULSION/PROTONS @ 400 #336 OGATA, TAKESHI KWANSEI GAKUIN UNIVERSITY, NISHINOMIYA (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
MULTIPARTICLE PRODUCTION IN NUCLEON-NUCLEUS COLLISIONS AT 400 GEV.
REQUEST 9 SEP 74 EMULSION EXPOSURE
APPROVED 19 OCT 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 2 STACKS

---

337 DI-MUON #337 EARTLY, DAVID P. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-MISCELLANEOUS MAX PLANCK INSTITUTE, MUNICH (GERMANY)
PHYSICS CATEGORY: MED8(D)
MEASUREMENT OF DI-MUON EVENTS IN THE MESON AREA.
REQUEST 20 SEP 74 3 HOURS
APPROVED 27 SEP 74 3 HOURS
COMPLETED 7 FEB 75 5 HOURS

---

338 30-INCH PI- - D @ 360 #338 MORIYASU, KEIHACHIRO CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: NEUTRINO AREA-30-IN HADRON BEAM INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
PHYSICS CATEGORY: HBC2 WARSAW UNIVERSITY, INS (POLAND)
WASHINGTON, UNIVERSITY OF
PION-DEUTERON INTERACTIONS AT 400 GEV/C.
REQUEST 21 SEP 74 100K PIX
APPROVED 24 SEP 74 50K PIX IN BARE CHAMBER WITH DOWNSTREAM CHAMBER DATA IF IT CAN BE ARRANGED
COMPLETED 28 AUG 76 53K PIX

---

339 EMULSION/PI- @ 200 #339 WOLTER, WLADYSLAW INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
CRACOW EMULSION EXPOSURE TO 200 GEV PIONS.
REQUEST 12 SEP 74 EMULSION EXPOSURE
APPROVED 1 OCT 74 EMULSION EXPOSURE
COMPLETED 9 JUN 75 4 STACKS

---

340 EMULSION/ELECTRONS @ HI E #340 DAKE, SHOJI KOBE UNIVERSITY, KOBE (JAPAN)
BEAM: PROTON AREA-MISCELLANEOUS KONAN UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E2 SAITAMA UNIVERSITY, URAWA (JAPAN)
TOKYO, UNIVERSITY OF, INS (JAPAN)
UTSUNOMIYA UNIVERSITY, UTSUNOMIYA (JAPAN)
WASEDA UNIVERSITY, TOKYO (JAPAN)
STUDY OF THE ELECTRON-PHOTON CASCADE SHOWER IN LEAD ABSORBER.
REQUEST 25 SEP 74 EMULSION EXPOSURE
APPROVED 10 OCT 74 EMULSION EXPOSURE
COMPLETED 5 OCT 76 10 STACKS

---

341 15-FOOT P - P @ 400 #341 KO, WINSTON CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: NEUTRINO AREA-15-FT HADRON BEAM LAWRENCE BERKELEY LABORATORY
PHYSICS CATEGORY: HBC1
INTERACTIONS OF PI+ MESONS AND PROTONS IN A HYDROGEN-NEON MIXTURE.
REQUEST 1 OCT 74 100K PIX
APPROVED 4 DEC 74 25K PIX OF TAGGED PI+ AND P AT 150 GEV IN H2 TO DEVELOP ANALYSIS TECHNIQUES FOR 15-FOOT BUBBLE CHAMBER FILM
8 DEC 75 25K PIX OF P - P INTERACTIONS AT 400 GEV
COMPLETED 21 DEC 75 34K PIX

---

343 15-FOOT P - P @ 300 #343 ENGELMANN, RODERICH J. ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM KANSAS, UNIVERSITY OF
PHYSICS CATEGORY: HBC1 NEW YORK, STATE UNIVERSITY OF, STONY BROOK
TUFTS UNIVERSITY
PROPOSAL TO STUDY NEUTRAL PARTICLE PRODUCTION IN 250 GEV P - P INTERACTIONS IN THE FERMILAB 15-FOOT BUBBLE CHAMBER.
REQUEST 3 OCT 74 25K PIX
APPROVED 4 DEC 74 25K PIX
COMPLETED 13 JAN 76 27K PIX

---

344 30-INCH PBAR - P @ 50 #344 GUTAY, LASZLO J. CENTRAL RESEARCH INSTITUTE, BUDAPEST (HUNGARY)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HBC2 PURDUE UNIVERSITY
PROPOSAL TO SURVEY CENTRAL COLLISIONS IN PBAR - P TO MESONS BETWEEN 30 AND 60 GEV/C IN THE 30-INCH BUBBLE CHAMBER AT FERMILAB.
REQUEST 4 OCT 74 100K PIX TO BE TAKEN IN < 200K CHAMBER EXPANSIONS
APPROVED 27 NOV 74 100K PIX WITH THE QUALIFICATION THAT IT MUST BE POSSIBLE TO OBTAIN THESE PICTURES IN NO MORE THAN ONE CALENDER MONTH OF RUNNING TIME
COMPLETED 1 NOV 76 145K PIX

---

345 30-INCH PBAR - D @ 100 #345 EKSPONG, GOSTA LIVERPOOL, UNIVERSITY OF, LIVERPOOL (GREAT BRITAIN)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM STOCKHOLM, UNIVERSITY OF, STOCKHOLM (SWEDEN)
PHYSICS CATEGORY: HBC2 VANDERBILT UNIVERSITY
PROPOSAL TO STUDY MULTIPARTICLE PRODUCTION IN 100 GEV/C ANTI-PROTON-DEUTERIUM INTERACTIONS WITH THE FERMILAB 30-INCH BUBBLE CHAMBER.
REQUEST 5 OCT 74 100K PIX WITH A CERENKOV TAGGED INCOMING BEAM
APPROVED 4 DEC 74 100K PIX WITH THE QUALIFICATION THAT SERIOUS CONSIDERATION BE GIVEN TO THE USE OF THE PWC DOWNSTREAM SYSTEM
COMPLETED 7 SEP 76 61K PIX WITH 39K PIX REMAING TO BE TAKEN UNDER EARLIER APPROVAL WHEN DECLARED COMPLETE ON 29 JUN 77

---

346 EMULSION/PROTONS @ 400 #346 EKSPONG, GOSTA STOCKHOLM, UNIVERSITY OF, STOCKHOLM (SWEDEN)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
SEARCH FOR HEAVY, SHORTLIVED PARTICLES.
REQUEST 6 OCT 74 EMULSION EXPOSURE
APPROVED 21 OCT 74 EMULSION EXPOSURE
COMPLETED 9 DEC 75 1 STACK

---

350 INCLUSIVE NEUTRAL MESON #350 KENNEY, ROBERT W. BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM CALIFORNIA INSTITUTE OF TECHNOLOGY
PHYSICS CATEGORIES: HED6(B), HED3 LAWRENCE BERKELEY LABORATORY
A PROPOSAL TO STUDY NEUTRAL PIONS AND MESON INCLUSIVE PRODUCTION WITH INCIDENT NEGATIVE PIONS IN THE TRIPLE REGGE REGION.
(USING THE PHOTON DETECTOR OF EXP #111)
REQUEST 11 OCT 74 500 HOURS
APPROVED 21 NOV 74 400 HOURS
16 DEC 74 400 HOURS WITH UP TO 150 HOURS APPROVED FOR A PARTICLE SEARCH WITH THE CONDITION THAT THIS TIME BE INCLUDED WITHIN THE 900 HOURS ALREADY APPROVED FOR FOR EXPS# 268 AND 350
COMPLETED 24 FEB 77 900 HOURS

---

356 NEUTRINO #356 SCIULLI, FRANK CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: W1, S4(A)2, S5(A)2 ROCHESTER, UNIVERSITY OF

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

ROCKEFELLER UNIVERSITY

STUDIES OF DEEP INELASTIC DIFFERENTIAL DISTRIBUTIONS AT HIGH ENERGIES FOR NEUTRINO AND ANTI-NEUTRINO BEAMS.
(A CONTINUATION OF THE WORK BEGUN IN EXP #21A WITH A NEW NARROW BAND BEAM AND CHANGED APPARATUS)

REQUEST	18 OCT 74	1,000 HOURS
APPROVED	22 NOV 74	1,000 HOURS WITH A FORMAL COMMITMENT OF 2 X 10 TO THE 18TH PROTONS CONTINGENT ON THE FEASIBILITY OF DEVELOPING THE IMPROVED DICHROMATIC BEAM
COMPLETED	17 JAN 79	1,350 HOURS

---

357 PARTICLE SEARCH #357 — MEYER, DONALD I. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M2 BEAM — MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORY: S5(B)1 — PURDUE UNIVERSITY

A PROPOSAL TO SEARCH FOR CHARMED PARTICLES AND MEASUREMENTS OF TWO-PARTICLE INCLUSIVE CROSS SECTIONS AT LARGE P-TRANSVERSE.
(EMPLOYING A TWO-ARM MAGNETIC SPECTROMETER)

REQUEST	19 OCT 74	2,400 HOURS
APPROVED	16 DEC 74	600 HOURS
COMPLETED	7 JUN 76	1,700 HOURS

---

358 DI-MUON #358 — LEE, WONYONG — COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(EAST) — CORNELL UNIVERSITY
PHYSICS CATEGORIES: S5(B)4, HED8(D) — FERMI NATIONAL ACCELERATOR LABORATORY
HAWAII, UNIVERSITY OF
ILLINOIS, UNIVERSITY OF

DI-MUON PRODUCTION BY NEUTRONS.

REQUEST	20 OCT 74	UNSPECIFIED
APPROVED	27 NOV 74	300 HOURS OF NEUTRON RUNNING TO BE INTERLEAVED WITHIN THE 600 HOURS ALREADY APPROVED FOR EXP# 87A
COMPLETED	1 OCT 75	400 HOURS

---

361 LAMBDA BETA-DECAY #361 — PONDROM, LEE G. — MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM — RUTGERS UNIVERSITY
PHYSICS CATEGORIES: HED9, W3 — WISCONSIN, UNIVERSITY OF

PRECISION MEASUREMENT OF LAMBDA BETA DECAY PARAMETERS.
(WILL RUN WITH EXPERIMENTAL SET-UP FOR NEUTRAL HYPERON #8)

REQUEST	14 NOV 74	300 HOURS
	23 JAN 76	350 HOURS TOTAL INCLUDING 150 HOURS IN UNPOLARIZED LAMBDA-ZERO BEAM AND 200 HOURS IN POLARIZED LAMBDA-ZERO BEAM
APPROVED	15 NOV 77	300 HOURS
IN TEST STAGE	1 OCT 78	100 HOURS

---

362 EMULSION/PI- @ 200 #362 — JAIN, PIYARE L. — NEW YORK, STATE UNIVERSITY OF, BUFFALO
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

INTERACTION OF 200 - 400 GEV PIONS WITH EMULSION NUCLEI.

REQUEST	15 NOV 74	EMULSION EXPOSURE
APPROVED	25 NOV 74	EMULSION EXPOSURE
COMPLETED	9 JUN 75	1 STACK

---

363 PARTICLE SEARCH #363 — OLSEN, STEPHEN L. — FLORIDA STATE UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0) — IMPERIAL COLLEGE, LONDON (GREAT BRITAIN)
PHYSICS CATEGORY: S5(B)6 — ROCHESTER, UNIVERSITY OF
RUTGERS UNIVERSITY

A PROPOSAL TO SEARCH FOR CHARMED PARTICLE PRODUCTION NEAR THRESHOLD.

REQUEST	24 NOV 74	UNSPECIFIED
APPROVED	16 DEC 74	500 HOURS OF RUNNING WITH THE ROTATING CARBON FILAMENT TARGET
COMPLETED	9 APR 75	650 HOURS

---

365 PARTICLE SEARCH #365 — GARFLICK, DAVID A. — NORTHEASTERN UNIVERSITY
BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORIES: S5(B)6, HED8(D)

A PROPOSAL TO SEARCH FOR THE PRODUCTION OF CHARMED MESONS IN PI - P INTERACTIONS.

REQUEST	27 NOV 74	200 HOURS INCLUDING 40 HOURS FOR TESTING
APPROVED	31 DEC 74	200 HOURS DURING A TWO WEEK RUN WITH A PASSIVE, NONMAGNETIZED STEEL ABSORBER TO BE USED IN CONJUNCTION WITH A MUON TRIGGER
COMPLETED	5 FEB 75	200 HOURS

---

366 PARTICLE SEARCH #366 — ABOLINS, MARIS A. — CARLETON UNIVERSITY (CANADA)
BEAM: MESON AREA-M3 BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: S5(B)1 — MICHIGAN STATE UNIVERSITY
OHIO STATE UNIVERSITY

STUDY OF HEAVY, NARROW MESONS USING A MASS-FOCUSING SPECTROMETER.
(EXPERIMENT CONSISTS MAINLY OF REARRANGED COMPONENTS FROM EXP #12)

REQUEST	27 NOV 74	UNSPECIFIED
APPROVED	16 DEC 74	600 HOURS FOR A PARTICLE SEARCH TO BE SLANTED PARTICULARLY TOWARD AN IDENTIFICATION OF CHARMED MESONS
	24 NOV 75	1,200 HOURS WITH AN ADDITIONAL 600 HOURS TO EXPLORE THE POSSIBILITY OF A MASS PEAK IN THE K- PI+ MASS SPECTRUM
COMPLETED	2 JUL 76	2,500 HOURS

---

369 PARTICLE SEARCH #369 — KIRK, THOMAS B. W. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM — HARVARD UNIVERSITY
PHYSICS CATEGORIES: S5(B)2, HED7 — ILLINOIS, UNIVERSITY OF
MAX PLANCK INSTITUTE, MUNICH (GERMANY)
TUFTS UNIVERSITY

A SEARCH FOR CHARMED PARTICLES.
(USING THE SPECTROMETER ORIGINALLY DEVELOPED FOR EXP #98)

REQUEST	9 DEC 74	700 HOURS FOR DATA WITH 300 PULSES/HOUR AND 1 X 10 TO THE 6TH PI-/PULSE
APPROVED	17 MAR 76	600 HOURS
COMPLETED	13 AUG 77	1,000 HOURS

---

370 NEUTRINO #370 — CLINE, DAVID B. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-TRIPLET NEUTRINO BEAM — HARVARD UNIVERSITY
PHYSICS CATEGORIES: S5(A)2, W1 — PENNSYLVANIA, UNIVERSITY OF
WISCONSIN, UNIVERSITY OF

CONTINUED SEARCH FOR NEW PARTICLE PRODUCTION USING THE EXP #1A DETECTOR.

REQUEST	9 DEC 74	500 HOURS WITH A TOTAL OF 1 X 10 TO THE 18TH PROTONS AND A 1 MSEC SPILL
APPROVED	7 JUL 75	500 HOURS WITH THE HOPE OF PROVIDING 1 X 10 TO THE 18TH PROTONS
COMPLETED	19 MAR 75	400 HOURS

---

371 SUPER-HEAVY ELEMENTS #371 — JURIC, MIRA — BELGRADE, UNIVERSITY OF, BELGRADE (YUGOSLAVIA)
BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: S7

INVESTIGATION OF THE PRODUCTION OF HEAVY FRAGMENTS INDUCED BY PARTICLES OF HIGH ENERGIES.

REQUEST	2 DEC 74	TARGET EXPOSURE
APPROVED	12 MAR 75	TARGET EXPOSURE
COMPLETED	20 DEC 75	2 STACKS

---

373 EMULSION/MUONS @ 200 #373 — JAIN, PIYARE L. — NEW YORK, STATE UNIVERSITY OF, BUFFALO
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E2

INTERACTION OF 50 - 100 GEV MUONS WITH EMULSION NUCLEI.

REQUEST	8 JUL 75	EMULSION EXPOSURE
APPROVED	24 SEP 76	EMULSION EXPOSURE TO MUONS @ 225 GEV/C AND WITH AN INTENSITY NOT TO EXCEED 50K PARTICLES/SQ CM

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

COMPLETED 22 NOV 76 2 STACKS

---

374 EMULSION/PROTONS @ 300 #374 DAVIS, D. H. BELGRADE, UNIVERSITY OF, BELGRADE (YUGOSLAVIA)
BEAM: NEUTRINO AREA-MISCELLANEOUS BRUSSELS, UNIVERSITY OF (BELGIUM)
PHYSICS CATEGORY: E1 INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
OPEN UNIVERSITY, THE, BLETCHLEY (GREAT BRITAIN)
ROME, UNIVERSITY OF, (ITALY)
STRASBOURG, UNIVERSITY OF (FRANCE)
UNIVERSITY COLLEGE DUBLIN (IRELAND)
UNIVERSITY COLLEGE LONDON (GREAT BRITAIN)
WARSAW UNIVERSITY, INS (POLAND)

A PROPOSAL TO SEARCH FOR CHARMED PARTICLES ORIGINATING FROM INTERACTIONS OF 300 GEV/C PROTONS IN EMULSION NUCLEI.

REQUEST 25 JAN 74 EMULSION EXPOSURE
APPROVED 12 MAR 75 EMULSION EXPOSURE WITH THE UNDERSTANDING THAT EXP# 374 WILL REPLACE EXP# 364
COMPLETED 10 JUN 75 1 STACK

---

379 PARTICLE SEARCH #379 WOJCICKI, STANLEY G. CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM ROCHESTER, UNIVERSITY OF
PHYSICS CATEGORIES: S3(B)2, S4(B)2, S5(B)6 STANFORD UNIVERSITY

SEARCH FOR SHORT LIVED STATES DECAYING WEAKLY VIA LEPTONIC MODES.

REQUEST 5 FEB 75 1,000 HOURS
APPROVED 26 MAR 75 200 HOURS FOR TESTING AND INITIAL DATA TAKING
17 NOV 76 600 HOURS WITH 400 HOURS FOR HIGH PRIORITY RUNNING AND WITH THE EXPECTATION THAT A SECOND 400 HOUR RUN WILL BE APPROVED IF PRELIMINARY ANALYSIS OF INITIAL RESULTS ARE SATISFACTORY
15 MAR 77 600 HOURS WITH A HOPE OF COMBINING THE TWO REQUESTED RUNNING PERIODS INTO A SINGLE BLOCK OF RUNNING BUT WITH THE UNDERSTANDING THAT THE TOTAL NUMBER OF HOURS WOULD BE SOMEWHAT LESS THAN REQUESTED
COMPLETED 8 JUN 77 1,250 HOURS

---

380 15-FOOT NEUTRINO/H2GNE #380 BALTAY, CHARLES BROOKHAVEN NATIONAL LABORATORY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM COLUMBIA UNIVERSITY
PHYSICS CATEGORY: W2

STUDY OF THE PROPERTIES OF WEAK NEUTRAL CURRENTS IN THE INTERACTIONS OF A NARROW BAND NEUTRINO BEAM IN LIQUID NEON.

REQUEST 6 FEB 75 200K PIX
APPROVED 7 JUL 75 200K PIX IN A HEAVY NEON-HYDROGEN MIXTURE CONTINGENT UPON THE CONSTRUCTION AND ADEQUATE PERFORMANCE OF AN IMPROVED NARROW-BAND BEAM
24 JUN 77 200K PIX AT HIGHER ENERGIES USING THE D C DICHROMATIC TRAIN; NEW REQUESTS FOR USE OF THE DICHROMATIC HORN TO BE CONSIDERED LATER
IN PROGRESS 1 OCT 78 96K PIX

---

381 PROTON-NUCLEON SCATTERING #381 MALAMUD, ERNEST ARIZONA, UNIVERSITY OF
BEAM: INTERNAL TARGET AREA-(C-0) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED2, HED1, HED6(D), HED7 JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
ROCHESTER, UNIVERSITY OF

MEASUREMENT OF THE REAL PART OF THE P - N AND P - P FORWARD SCATTERING AMPLITUDES; PRODUCTION OF LOW MASS ISOBARS IN THE VERY SMALL MOMENTUM TRANSFER REGION.
(USES GAS JET TARGET)

REQUEST 20 FEB 75 300 HOURS
APPROVED 26 MAR 75 300 HOURS
COMPLETED 30 MAR 77 600 HOURS

---

382 PARTICLE SEARCH #382 HAND, LOUIS N. CORNELL UNIVERSITY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S5(D)2, E2 INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
MICHIGAN STATE UNIVERSITY
WASHINGTON, UNIVERSITY OF

A SEARCH FOR CHARMED HADRONS PRODUCED BY MUON DEEP INELASTIC SCATTERING IN TAGGED NUCLEAR EMULSIONS.
(USING DRIFT CHAMBERS TO LOCATE EVENTS AND REDUCE SCANNING TIME)

REQUEST 21 FEB 75 EMULSION EXPOSURE
APPROVED 26 MAR 75 EMULSION EXPOSURE WITH A PROVISION THAT IT DOES NOT SERIOUSLY INTERFERE WITH THE REST OF THE MUON AND NEUTRINO PROGRAM
24 NOV 75 EMULSION EXPOSURE WITH A BOMBARDMENT OF FIVE DAYS DURATION DURING DECEMBER 1975
COMPLETED 19 DEC 75 200 HOURS

---

383 INCLUSIVE K-SHORT #383 KOBRAK, HANS G. E. CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: MESON AREA-M4 BEAM CALIFORNIA, UNIVERSITY OF, SAN DIEGO
PHYSICS CATEGORY: HED6(B) CARLETON UNIVERSITY (CANADA)
MICHIGAN STATE UNIVERSITY

A PROPOSAL TO STUDY THE INCLUSIVE PRODUCTION OF K ZERO SHORT BY K MINUS ON HYDROGEN.
(TO USE THE M4 LINE AS A CHARGED BEAM AT MOMENTA OF 20 - 150 GEV/C)

REQUEST 24 FEB 75 500 HOURS
APPROVED 29 JUN 76 500 HOURS WITH 200 HOURS FOR SETUP AND ORIGINAL RUN AND 300 HOURS FOR FINAL RUN
COMPLETED 7 MAY 78 2,200 HOURS

---

384 15-FOOT PI- - P @ 360 #384 LANNUTTI, JOSEPH E. CALIFORNIA, UNIVERSITY OF, RIVERSIDE
BEAM: NEUTRINO AREA-15-FT HADRON BEAM FLORIDA STATE UNIVERSITY
PHYSICS CATEGORY: HBC2 MARYLAND, UNIVERSITY OF
NOTRE DAME, UNIVERSITY OF

PROPOSAL TO STUDY PI- - P INTERACTIONS AT HIGHEST ENERGY IN THE FERMILAB 15-FOOT BUBBLE CHAMBER.

REQUEST 25 FEB 75 300K PIX
APPROVED 25 NOV 75 50K PIX OF 350 GEV PI- IN H2
10 MAR 76 250K PIX INCLUDING AN ADDITIONAL 200K PIX
IN PROGRESS 1 APR 76 20K PIX

---

385 EMULSION/PROTONS @ 400 #385 PRAKASH, Y. DELHI UNIVERSITY, DELHI (INDIA)
BEAM: NEUTRINO AREA-MISCELLANEOUS JAMMU UNIVERSITY, JAMMU-TAWI (INDIA)
PHYSICS CATEGORY: E1 PUNJAB UNIVERSITY, CHANDIGARH (INDIA)
RAJASTHAN UNIVERSITY, JAIPUR (INDIA)

PROPOSAL FOR EXPOSURE OF A STACK OF NUCLEAR EMULSIONS TO PROTONS OF 400 GEV/C.

REQUEST 5 MAR 75 EMULSION EXPOSURE
APPROVED 11 MAR 75 EMULSION EXPOSURE
COMPLETED 9 DEC 75 1 STACK

---

386 EMULSION/NEW PARTICLES #386 LORD, JERE J. WASHINGTON, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E2

A SEARCH FOR LOW ENERGY NEUTRAL PARTICLES AND PARTICLE INTERACTIONS INVOLVING SMALL ENERGY EXCHANGES IN THE NEUTRINO BEAM.

REQUEST 7 MAR 75 EMULSION EXPOSURE
APPROVED 27 MAR 75 EMULSION EXPOSURE
COMPLETED 29 DEC 76 1 STACK

---

387 EMULSION/PI- @ 200 #387 WILKES, RICHARD J. WASHINGTON, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

100 TO 300 GEV PION INTERACTIONS IN EMULSION AND HEAVY ELEMENT TARGETS.

REQUEST 7 MAR 75 EMULSION EXPOSURE
APPROVED 13 MAY 75 EMULSION EXPOSURE
COMPLETED 9 JUN 75 4 STACKS

---

388 15-FOOT ANTI-NEUTRINO/H2GNE#388 PETERSON, VINCENT Z. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM HAWAII, UNIVERSITY OF

NOTE: FCR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

PHYSICS CATEGORY: W2 LAWRENCE BERKELEY LABORATORY

PROPOSAL TO STUDY NEUTRAL CURRENT NEUTRINO AND ANTI-NEUTRINO INTERACTIONS IN THE 15-FOOT BUBBLE CHAMBER USING THE EXTERNAL MUON IDENTIFIER AND A DICHROMATIC BEAM.

REQUEST	24 APR 75	200K PIX	
	7 JUN 78	500K PIX OR 5 X 10 TO THE 18TH PROTONS	
APPROVED	7 JUL 75	200K PIX	OF ANTINEUTRINO BOMBARDMENT WITH A HEAVY NEON-HYDROGEN MIXTURE CONTINGENT UPON THE CONSTRUCTION AND ADEQUATE PERFORMANCE OF AN IMPROVED NARROW-BAND BEAM; SEE PROPOSAL #455
	24 JUN 77	200K PIX	AT HIGHER ENERGIES USING THE D C DICHROMATIC TRAIN; NEW REQUESTS FOR USE OF THE DICHROMATIC HORN TO BE CONSIDERED LATER
	28 JUN 78	200K PIX	WITH A DECISION TO MAINTAIN THE APPROVAL AS IT STANDS
SET UP IN A YEAR			

---

390 15-FOOT ANTI-NEUTRINO/D2 #390 GARFINKEL, ARTHUR F. ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM CARNEGIE-MELLON UNIVERSITY
PHYSICS CATEGORIES: W2, S5(A)1 PURDUE UNIVERSITY

ANTI-NEUTRINO INTERACTIONS IN THE DEUTERIUM-FILLED 15-FOOT BUBBLE CHAMBER.

REQUEST	29 APR 75	300K PIX	
APPROVED	7 JUL 75	300K PIX	
	28 JUN 78	300K PIX	WITH A TOTAL OF 150K PIX PRESENTLY SCHEDULED FOR THE EXPERIMENT DURING THE FALL 1978 RUN
	19 MAR 79	250K PIX	
IN PROGRESS	1 APR 79	10K PIX	

---

391 MUON #391 KERTH, LEROY J. CALIFORNIA, UNIVERSITY OF, BERKELEY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: EM4 LAWRENCE BERKELEY LABORATORY
PRINCETON UNIVERSITY

EXPLORATION OF RARE MUON-INDUCED PROCESSES.

REQUEST	15 FEB 75	UNSPECIFIED
APPROVED	7 JUL 75	PARASITIC RUNNING CONCURRENT WITH EXP# 203
COMPLETED	18 MAY 78	UNSPECIFIED BUT FOR INFORMATION ON THE TOTAL EXTENT OF RUN, SEE EXP #203A

---

395 HADRON JETS #395 SELOVE, WALTER LEHIGH UNIVERSITY
BEAM: MESON AREA-M2 BEAM PENNSYLVANIA, UNIVERSITY OF
PHYSICS CATEGORY: HED8(C) WISCONSIN, UNIVERSITY OF

CALORIMETER-ARRAY STUDY OF HIGH P-TRANSVERSE EVENTS.

REQUEST	21 MAY 75	450 HOURS	TOTAL INCLUDING 150 HOURS OF TESTS
APPROVED	7 JUL 75	450 HOURS	CONTINGENT UPON THE SUCCESSFUL COMPLETION OF THE CALORIMETER TESTS PLANNED FOR THE M5 BEAM LINE
COMPLETED	16 NOV 77	1,150 HOURS	

---

396 HADRON DISSOCIATION #396 GOULIANOS, KONSTANTIN ROCKEFELLER UNIVERSITY
BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORIES: HED6(D), HED2, HED7

ELASTIC SCATTERING AND DIFFRACTION DISSOCIATION AT SMALL MOMENTUM TRANSFER FOR PI+-, K+-, P, PBAR AND N.

REQUEST	21 MAY 75	1,000 HOURS
APPROVED	7 JUL 75	600 HOURS FOR PHASE I
COMPLETED	23 NOV 77	1,200 HOURS

---

397 PARTICLE SEARCH #397 ROSEN, JEROME L. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M3 BEAM NORTHWESTERN UNIVERSITY
PHYSICS CATEGORY: S5(B)2 ROCHESTER, UNIVERSITY OF
STANFORD LINEAR ACCELERATOR CENTER

PROPOSAL TO SEARCH FOR HIGH MASS PARTICLES PRODUCED IN ASSOCIATION WITH PROMPT MUONS.
(USING THE SPECTROMETER FROM EXPS #27A AND #305 WITH ADDITIONS)

REQUEST	21 MAY 75	1,000 HOURS	
APPROVED	9 JUL 75	500 HOURS	
	18 MAY 76	1,000 HOURS	INCLUDING AN ADDITIONAL RUNNING PERIOD OF APPROXIMATELY 5 WEEKS DURATION DURING THE SUMMER OF 1976
COMPLETED	18 AUG 76	1,150 HOURS	

---

398 MUON #398 WILSON, RICHARD CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MUON/HADRON BEAM HARVARD UNIVERSITY
PHYSICS CATEGORY: EM4 ILLINOIS, UNIVERSITY OF
OXFORD, UNIVERSITY OF (GREAT BRITAIN)
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY

A PROPOSAL FOR A FURTHER STUDY OF MUON NUCLEON INELASTIC SCATTERING AT FERMILAB.
(USING THE SPECTROMETER OF EXP #98)

REQUEST	21 MAY 75	800 HOURS	
APPROVED	7 JUL 75	800 HOURS	OF H2 AND D2 RUNNING WITH THE EXPECTATION THAT SOME OF THIS RUNNING CAN OCCUR CONCURRENTLY WITH EXP #319, AT WHICH TIME PRIORITY WILL BE GIVEN TO EXP# 319
COMPLETED	1 DEC 76	1,100 HOURS	

---

399 EMULSION/ELECTRONS @ >100 #399 GOLDEN, ROBERT L. ISAS, TOKYO UNIVERSITY (JAPAN)
BEAM: PROTON AREA-MISCELLANEOUS JOHNSON SPACE CENTER, NASA
PHYSICS CATEGORY: E2 KANAGAWA UNIVERSITY, YOKOHAMA (JAPAN)
WASHINGTON, UNIVERSITY OF

PRODUCTION OF ELECTROMAGNETIC CASCADE SHOWERS BY SEVERAL HUNDRED GEV ELECTRONS IN EMULSION CHAMBERS.

REQUEST	5 MAY 75	1,000	EMULSION EXPOSURE
APPROVED	19 JUN 75	EMULSION EXPOSURE TO ELECTRONS WITH FLUXES OF 10, 1,000, AND 200K/SQ CM	
COMPLETED	5 OCT 76	6 STACKS	

---

400 PARTICLE SEARCH #400 PEOPLES, JOHN FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(EAST) ILLINOIS, UNIVERSITY OF
PHYSICS CATEGORY: S5(B)2

A SEARCH FOR NEW PARTICLES PRODUCED IN ASSOCIATION WITH THE HADRONIC PRODUCTION OF PSI (3.1) MESONS.
(USING A PROTON BEAM OF ABOUT 10 TO THE 7TH INTO THE ZERO DEGREE NEUTRAL BEAM LINE AND THE SPECTROMETER OF EXP #401/458 WITH ADDITIONS)

REQUEST	22 MAY 75	870 HOURS	
APPROVED	7 JUL 75	400 HOURS	
	2 JUL 76	400 HOURS	WITH A TOTAL OF 1,000 HOURS APPROVED FOR THE COMBINATION OF EXPS #400, #401, AND #458
	14 MAR 77	400 HOURS	WITH A TOTAL OF 2,000 HOURS FOR THE COMBINATION OF EXPTS #400,401,&458
	1 APR 78	UNSPECIFIED	SINCE APPROVED RUNNING TIME HAS BEEN USED BY EXP #87A
UNSCHEDULED			

---

401 PHOTOPRODUCTION #401 GORMLEY, MICHAEL F. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(EAST) ILLINOIS, UNIVERSITY OF
PHYSICS CATEGORIES: EM2, S5(C)

PHOTOPRODUCTION OF HIGH MASS TWO-BODY FINAL STATES.
(USING AN IMPROVED EXP #87A APPARATUS AND AN ADDITIONAL SWEEPING MAGNET IN THE PHOTON BEAM)

REQUEST	22 MAY 75	300 HOURS	
	1 JUN 78	1,100 HOURS	
APPROVED	7 JUL 75	300 HOURS	
	2 JUL 76	300 HOURS	WITH A TOTAL OF 1,000 HOURS APPROVED FOR THE COMBINATION OF EXPS #400, #401, AND #458
	14 MAR 77	600 HOURS	WITH A TOTAL OF 2,000 HOURS FOR THE COMBINATION EXPS #400,401,&458
	1 APR 78	UNSPECIFIED	SINCE APPROVED RUNNING TIME HAS BEEN USED BY EXP #87A
	29 JUN 78	600 HOURS	
IN PROGRESS	1 APR 79	800 HOURS	

---

404 INCLUSIVE NEUTRON #404 GUSTAFSON, RICHARD MICHIGAN, UNIVERSITY OF

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

BEAM: MESON AREA-M2 BEAM — RUTGERS UNIVERSITY
PHYSICS CATEGORY: HED6(B) — WISCONSIN, UNIVERSITY OF

INCLUSIVE NEUTRON PRODUCTION BY PROTONS ON PROTONS AND NUCLEI.

REQUEST	22 MAY 75	500 HOURS
APPROVED	11 MAR 76	PARASITIC RUNNING WITH THE CONDITION THAT THERE WILL BE NO SIGNIFICANT INTERFERENCE WITH OTHER WORK IN THE MESON LABORATORY
COMPLETED	5 JUL 77	350 HOURS

---

415 PARTICLE PRODUCTION #415 — PONDROM, LEE G. — BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM — MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORY: HED6(B) — RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

MEASUREMENTS OF PI- CU TO K-SHORT, LAMBDA AND NEUTRON INCLUSIVE CROSS SECTIONS.
(FOR PROPOSAL #360 WITH THE APPARATUS OF EXP #8 IN THE M2 BEAM LINE)

REQUEST	24 MAY 75	100 HOURS
APPROVED	28 JUN 75	100 HOURS
COMPLETED	18 OCT 76	100 HOURS

---

416 PARTICLE SEARCH #416 — LUBATTI, HENRY J. — CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: MESON AREA-M1 BEAM — LABORATOIRE DE L'ACCELERATEUR LINEAIRE, ORSAY (FRANCE)
PHYSICS CATEGORY: S5(B)6 — WASHINGTON, UNIVERSITY OF

STREAMER CHAMBER SEARCH FOR NEW STATES WHICH DECAY SEMI-LEPTONICALLY.
(USING THE STREAMER CHAMBER ORIGINALLY PROPOSED FOR EXP #86A WITH ADDITIONAL MUON COUNTERS)

REQUEST	27 MAY 75	300 HOURS
APPROVED	29 MAY 75	300 HOURS WITH THE UNDERSTANDING THAT THE TOTAL RUNNING TIME FOR EXP# 416 AND EXP# 86A IS TO REMAIN WITHIN 800 HOURS
COMPLETED	1 JUL 75	400 HOURS

---

418 PARTICLE PRODUCTION #418 — SANNES, FELIX — IMPERIAL COLLEGE, LONDON (GREAT BRITAIN)
BEAM: INTERNAL TARGET AREA-(C-0) — ROCHESTER, UNIVERSITY OF
PHYSICS CATEGORY: HED6(A) — RUTGERS UNIVERSITY

NUCLEAR SIZE DEPENDENCE FOR PARTICLE PRODUCTION AT INTERMEDIATE TRANSVERSE MOMENTUM.
(WITH THE SPECTROMETER USED FOR EXP #363)

REQUEST	2 JUN 75	UNSPECIFIED
APPROVED	7 JUL 75	500 HOURS CONTINGENT UPON THE FACT THAT SUCH RUNNING DOES NOT CONSTITUTE AN INTERFERENCE WITH THE REQUIREMENTS OF OTHER EXPERIMENTS TO BE RUN IN THAT AREA
COMPLETED	22 OCT 75	900 HOURS

---

419 EMULSION/PROTONS @ 300 #419 — GIACOMELLI, GIORGIO — BOLOGNA, UNIVERSITA DI (ITALY)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

SEARCH FOR SHORT LIVED PARTICLES PRODUCED BY 300 GEV PROTONS IN EMULSIONS.

REQUEST	2 JUN 75	EMULSION EXPOSURE
APPROVED	10 JUN 75	EMULSION EXPOSURE
COMPLETED	10 JUN 75	1 STACK

---

421 EMULSION/PROTONS @ 300 #421 — DZHELEPOV, V. P. — JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

EXPOSURE OF AN EMULSION CHAMBER TO A 300 GEV/C PROTON BEAM.

REQUEST	18 JUN 75	EMULSION EXPOSURE
APPROVED	18 JUN 75	EMULSION EXPOSURE
COMPLETED	24 JUN 75	1 STACK

---

423 EMULSION/PROTONS @ 400 #423 — SUGIMOTO, HISAHIKO — HIROSAKI UNIVERSITY, HIROSAKI (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS — TOKYO, UNIVERSITY OF, COSMIC RAY LABORATORY (JAPAN)
PHYSICS CATEGORY: E1 — TOKYO, UNIVERSITY OF, INS (JAPAN)
WASEDA UNIVERSITY, TOKYO (JAPAN)

SEARCH FOR NEW PARTICLES IN EMULSION CHAMBERS.

REQUEST	7 JUL 75	EMULSION EXPOSURE
APPROVED	21 JUL 75	EMULSION EXPOSURE
COMPLETED	9 DEC 75	4 STACKS

---

424 EMULSION/MUONS @ 200 #424 — WADA, TOMONORI — ASHIKAGA INSTITUTE OF TECHNOLOGY, ASHIKAGA (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS — OKAYAMA UNIVERSITY, OKAYAMA (JAPAN)
PHYSICS CATEGORY: E2 — SAITAMA UNIVERSITY, URAWA (JAPAN)
TOKYO, UNIVERSITY OF, COSMIC RAY LABORATORY (JAPAN)

MULTIPLE PION PRODUCTION BY 200 GEV/C MUONS.

REQUEST	23 JUN 75	EMULSION EXPOSURE
APPROVED	9 FEB 76	EMULSION EXPOSURE IN THE MUON BEAM WHILE IT IS OPERATING FOR EXP# 319 AT A MOMENTUM IN THE VICINITY OF 300 GEV/C
COMPLETED	8 OCT 76	1 STACK

---

425 K ZERO REGENERATION #425 — TELEGDI, VALENTINE L. — CALIFORNIA, UNIVERSITY OF, SAN DIEGO
BEAM: MESON AREA-M4 BEAM — CHICAGO, UNIVERSITY OF
PHYSICS CATEGORIES: HED9, HED4 — LHE, ETH HONGGERBERG, ZURICH (SWITZERLAND)
STANFORD LINEAR ACCELERATOR CENTER
WISCONSIN, UNIVERSITY OF

PROPOSAL TO INVESTIGATE REGENERATION OF NEUTRAL K-MESONS AT VERY HIGH ENERGIES.
(USING A LIQUID HYDROGEN TARGET; SEE EXP #82)

REQUEST	24 JUN 75	600 HOURS
APPROVED	18 MAR 75	600 HOURS CONTINGENT UPON EXP# 425 PROVIDING A HYDROGEN TARGET (SEE EXP# 82)
COMPLETED	17 MAY 76	1,400 HOURS

---

426 FRAGMENTATION PARTICLES #426 — FUKUI, MATSUMA — KIEL UNIVERSITAET,INST. REINE ANGE. KERNPHYSIK(GERMANY)
BEAM: MESON AREA-MISCELLANEOUS — SPACE PHYSICS DIV., AF GEOPHYSIC LAB., HANSCOM AIR BASE
PHYSICS CATEGORY: M2

PROPOSAL ON THE STUDY OF FRAGMENTATION PARTICLES CREATED IN A PLASTIC DETECTOR BY 300 GEV PROTONS.

REQUEST	27 MAY 75	DETECTOR EXPOSURE
APPROVED	28 JUL 75	DETECTOR EXPOSURE
COMPLETED	20 MAR 76	16 STACKS

---

427 DETECTOR DEVELOPMENT #427 — YUAN, LUKE C. L. — BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M1 BEAM
PHYSICS CATEGORY: M1

A PROPOSAL FOR TESTING A TRANSITION RADIATION DETECTOR AND A HIGH ENERGY SHOWER DETECTOR FOR COSMIC RAY EXPERIMENTS.

REQUEST	27 JUN 75	50 HOURS
	27 JUN 75	200 HOURS
APPROVED	4 JAN 78	100 HOURS DURING AN OPPORTUNITY FOR RUNNING IN THE M1-BEAM IN JANUARY 1978
COMPLETED	10 JAN 78	40 HOURS WITH ONLY A PORTION OF THE OBJECTIVES OF THE EXPERIMENT FINISHED DUE TO PROBLEMS WITH THE M1-BEAM AND THE ACCELERATOR

---

428 EMULSION/PROTONS @ 400 #428 — HEBERT, JACQUES D. — BELGRADE, UNIVERSITY OF, BELGRADE (YUGOSLAVIA)
BEAM: NEUTRINO AREA-MISCELLANEOUS — CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
PHYSICS CATEGORY: E1 — FERMI NATIONAL ACCELERATOR LABORATORY
LUND, UNIVERSITY OF, LUND (SWEDEN)
LYON, UNIVERSITE DE (FRANCE)
NANCY, UNIVERSITE DE, NANCY (FRANCE)
OTTAWA, UNIVERSITE D', (CANADA)
PARIS VI, U. DE, LAB. PHYSIQUE GENERALE, (FRANCE)
QUEBEC, UNIVERSITE DU, CRESALA, MONTREAL (CANADA)
SANTANDER, UNIVERSIDAD DE, SANTANDER (SPAIN)
VALENCIA, UNIVERSIDAD DE (SPAIN)

NOTE: FCB PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

WESTERN UNIVERSITY, LONDON (CANADA)

400 GEV PROTON INTERACTIONS IN NUCLEAR EMULSION.
BEQUEST 4 AUG 75 EMULSION EXPOSURE
APPROVED 25 AUG 75 EMULSION EXPOSURE
COMPLETED 9 DEC 75 14 STACKS

---

434 EMULSION/PROTONS @ 400 #434 DAKE, SHOJI KOBE UNIVERSITY, KOBE (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS KONAN UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 SAITAMA UNIVERSITY, URAWA (JAPAN)
TOKYO, UNIVERSITY OF, INS (JAPAN)
UTSUNOMIYA UNIVERSITY, UTSUNOMIYA (JAPAN)

CASCADE SHOWERS ORIGINATED IN JET SHOWERS.
REQUEST 16 SEP 75 EMULSION EXPOSURE
APPROVED 20 SEP 75 EMULSION EXPOSURE
COMPLETED 9 DEC 75 3 STACKS

---

435 MUON SEARCH #435 ADAIR, ROBERT K. BROOKHAVEN NATIONAL LABORATORY
BEAM: PROTON AREA-(CENTER) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S3(B)1, HED6(C), S4(B)1 YALE UNIVERSITY
MEASUREMENT OF THE POLARIZATION OF PROMPT MUONS AT X = 0.14 AT P-TRANSVERSE = 0 AND P-TRANSVERSE = 1.5 GEV/C.
(EXTENSION OF MEASUREMENTS BEGUN IN EXPERIMENT #48)
REQUEST 18 SEP 75 250 HOURS TOTAL INCLUDING 50 HOURS OF TESTS
APPROVED 25 NOV 75 250 HOURS OF SETUP AND RUNNING TIME
COMPLETED 2 JUL 76 250 HOURS

---

436 DI-MUON #436 ADAIR, ROBERT K. BROOKHAVEN NATIONAL LABORATORY
BEAM: PROTON AREA-(CENTER) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED8(D), S5(B)4 YALE UNIVERSITY
DETERMINATION OF THE POSSIBLE DI-MUON CHARACTER OF THE PROMPT MUON FLUX.
REQUEST 18 SEP 75 75 HOURS INCLUDING 40 HOURS OF TESTS
APPROVED 7 OCT 75 100 HOURS TO BE COMPLETED DURING THE OPERATING PERIOD DUE TO END IN NOV. 1975
COMPLETED 29 OCT 75 200 HOURS

---

438 NEUTRON-NUCLEUS INELASTIC #438 JONES, LAWRENCE W. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM
PHYSICS CATEGORY: HED8(E)
INELASTIC CROSS SECTIONS OF NEUTRONS ON NUCLEI.
REQUEST 26 SEP 75 500 HOURS
APPROVED 25 NOV 75 200 HOURS
COMPLETED 18 APR 77 350 HOURS

---

439 MULTI-MUON #439 GARELICK, DAVID A. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM NORTHEASTERN UNIVERSITY
PHYSICS CATEGORIES: S5(B)6, HED8(D), S5(B)4 TUFTS UNIVERSITY
WASHINGTON, UNIVERSITY OF

HIGH SENSITIVITY SEARCH FOR NEW STATES WHICH DECAY INTO MUONS.
REQUEST 26 SEP 75 500 HOURS WITH 200 HOURS FOR TESTS AND 300 HOURS FOR DATA
31 MAY 77 1,600 HOURS TO INCLUDE 3 ADDITIONAL ONE-MONTH PERIODS OF RUNNING
APPROVED 25 NOV 75 400 HOURS
24 JUN 77 800 HOURS WITH THE UNDERSTANDING THAT THE 400-HOUR EXTENSION AND TIME REMAINING UNDER PREVIOUS APPROVAL BE USED FOR INVESTIGATION OF MULTI-MUON EVENTS
27 JUL 77 800 HOURS WITH THE PREVIOUS CONSTRAINTS ON THE FURTHER RUNNING REMOVED
24 MAR 78 1,600 HOURS WITH AN EXTENSION UNTIL THE SPRING 1978 SHUTDOWN, BUT WITHOUT OVERRIDING PRIORITY
COMPLETED 19 MAY 78 1,700 HOURS

---

440 LAMBDA MAGNETIC MOMENT #440 BUNCE, GERRY MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM RUTGERS UNIVERSITY
PHYSICS CATEGORY: HED9 WISCONSIN, UNIVERSITY OF
PROPOSAL FOR A NEW MEASUREMENT OF THE MAGNETIC MOMENT OF THE LAMBDA HYPERON.
REQUEST 26 SEP 75 160 HOURS
APPROVED 25 NOV 75 160 HOURS
COMPLETED 22 MAR 77 250 HOURS

---

441 LAMBDA POLARIZATION #441 PONDROM, LEE G. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM RUTGERS UNIVERSITY
PHYSICS CATEGORIES: HED9, HED6(B) WISCONSIN, UNIVERSITY OF
A PROPOSAL TO STUDY LAMBDA POLARIZATION IN THE INCLUSIVE REACTION PROTON - PROTON TO LAMBDA PLUS ANYTHING WITH A LIQUID HYDROGEN TARGET.
(EXTENSION OF PREVIOUS MEASUREMENTS OF 300 GEV PROTONS ON BERYLLIUM TO 400 GEV PROTONS ON HYDROGEN)
REQUEST 29 SEP 75 150 HOURS
APPROVED 25 NOV 75 150 HOURS
COMPLETED 2 JUL 77 400 HOURS

---

442 NUCLEAR FRAGMENTS #442 TURKOT, FRANK FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: INTERNAL TARGET AREA-(C-0) PURDUE UNIVERSITY
PHYSICS CATEGORY: H5
STUDY OF NUCLEAR FRAGMENT EMISSION IN PROTON HEAVY NUCLEUS COLLISIONS FROM 10 TO 500 GEV.
(WILL USE ROOM TEMPERATURE GAS JET TARGET WITH HEAVY GASES)
REQUEST 26 SEP 75 400 HOURS FOR DATA TAKING
11 MAY 77 800 HOURS TO INCLUDE ADDITIONAL TIME TO SEARCH FOR QUARKS BOUND IN NUCLEAR FRAGMENTS
APPROVED 25 NOV 75 400 HOURS
25 JUN 77 400 HOURS WITHOUT TIME FOR THE QUARK SEARCH
COMPLETED 13 AUG 77 1,200 HOURS

---

444 DI-MUON #444 SMITH, A. J. STEWART CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MUON/HADRON BEAM PRINCETON UNIVERSITY
PHYSICS CATEGORIES: HED8(D), S5(B)4
A SPECIAL REQUEST FOR HIGH-PRIORITY RUNNING TO MEASURE HIGH-MASS MUON PAIRS.
(USING THE QUADRUPOLE TRIPLET FOCUSING SYSTEM FOR PRODUCING A HIGH INTENSITY HADRON BEAM)
REQUEST 25 SEP 75 400 HOURS
31 MAY 77 800 HOURS WITH A REQUEST FOR A 400 HOUR EXTENSION FOR A SCALING TEST AND TO INCREASE THE SENSITIVITY AT HIGH MASSES
APPROVED 24 NOV 75 400 HOURS
24 JUN 77 400 HOURS WITH A DECISION NOT TO GRANT AN EXTENSION
COMPLETED 3 JAN 78 1,100 HOURS

---

448 MUON #448 LOOMIS, WILLIAM A. CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MUON/HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: E44 HARVARD UNIVERSITY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
MICHIGAN STATE UNIVERSITY
TUFTS UNIVERSITY

PROPOSAL FOR THE INVESTIGATION OF VIRTUAL PHOTOABSORPTION BY NUCLEAR MATTER.
(USING THE CYCLOTRON SPECTROMETER AND HEAVY TARGETS; SEE PROPOSAL #257)
REQUEST 17 OCT 75 300 HOURS
9 JUN 77 300 HOURS TO STUDY BOTH PHOTOABSORPTION BY NUCLEAR MATTER AND PRODUCTION OF CHARMED PARTICLES (THE LATTER TO EMPLOY A CERENKOV COUNTER)
APPROVED 15 MAR 77 PARASITIC RUNNING FOR ABOUT 300 HOURS CONCURRENT WITH EXP #203
29 JUN 77 PARASITIC RUNNING FOR ABOUT 300 HOURS FOR STUDY OF PHOTOABSORPTION OF NUCLEAR MATTER; WITHOUT THE DISRUPTION REQUIRED TO INSTALL THE CERENKOV COUNTER
COMPLETED 7 MAY 78 900 HOURS

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

451 INCLUSIVE SCATTERING #451 — BARTON, DONALD S.
BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORY: HED6(A)
BARI, UNIVERSITY OF (ITALY)
BROWN UNIVERSITY
FERMI NATIONAL ACCELERATOR LABORATORY
HIGH ENERGY PHYSICS LAB., WARSAW (POLAND)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

STUDY OF THE A-DEPENDENCE OF INCLUSIVE PROCESSES AND ASSOCIATED MULTIPLICITY.
(USING THE SINGLE ARM SPECTROMETER FACILITY)

REQUEST	17 OCT 75	600 HOURS	INCLUDING 100 HOURS OF TESTS
APPROVED	30 JUN 76	400 HOURS	
COMPLETED	6 SEP 78	500 HOURS	

---

456 FORM FACTOR #456 — STORK, DONALD H.
BEAM: MESON AREA-M1 BEAM
PHYSICS CATEGORY: EM5
CALIFORNIA, UNIVERSITY OF, LOS ANGELES
FERMI NATIONAL ACCELERATOR LABORATORY
JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
NOTRE DAME, UNIVERSITY OF
PITTSBURGH, UNIVERSITY OF

MEASUREMENT OF THE KAON FORM FACTOR.
(CONTINUATION OF WORK BEGUN IN EXP #216)

REQUEST	17 OCT 75	800 HOURS	INCLUDING 200 HOURS OF TESTS
APPROVED	25 NOV 75	500 HOURS	
	7 DEC 76	950 HOURS	INCLUDING AN ADDITIONAL 450 HOURS FOR DATA TAKING WITH A REQUEST FOR A REPORT ON PRELIMINARY RESULTS FROM EXISTING DATA BEFORE THE START OF THE NEXT RUNNING PERIOD
COMPLETED	13 APR 77	1,450 HOURS	

---

458 PHOTOPRODUCTION #458 — LEE, WONYONG
BEAM: PROTON AREA-(EAST)
PHYSICS CATEGORIES: EM2, S4(C), S5(C)
COLUMBIA UNIVERSITY
FERMI NATIONAL ACCELERATOR LABORATORY
ILLINOIS, UNIVERSITY OF

PHOTOPRODUCTION EXPERIMENT AT FERMILAB.
(USING THE BROAD BAND PHOTON BEAM; A CONTINUATION OF WORK BEGUN IN EXP #87A AND #401)

REQUEST	17 OCT 75	700 HOURS	
	7 MAY 76	900 HOURS	WITH 300 HOURS FOR TESTING, 600 HOURS FOR DATA
APPROVED	2 JUL 76	300 HOURS	WITH A TOTAL OF 1,000 HOURS APPROVED FOR THE COMINATION OF EXPS #400, #401, AND #458
	14 MAR 77	1,000 HOURS	WITH A TOTAL OF 2,000 HOURS FOR THE COMBINATION OF EXPTS #400,401,&458
	1 APR 78	UNSPECIFIED	SINCE APPROVED RUNNING TIME HAS BEEN USED BY EXP #87A
UNSCHEDULED			

---

461 EMULSION/PROTONS @ 400 #461 — LORD, JERE J.
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
AUCKLAND, UNIVERSITY OF, AUCKLAND (NEW ZEALAND)
AUSTRALIAN NATIONAL UNIVERSITY, CANBERRA (AUSTRALIA)
MELBOURNE, UNIVERSITY OF, PARKVILLE (AUSTRALIA)
SYDNEY, UNIVERSITY OF, SYDNEY (AUSTRALIA)
TASMANIA, UNIVERSITY OF, HOBART (AUSTRALIA)
WASHINGTON, UNIVERSITY OF

SEARCH FOR NEW PARTICLES FROM 400 GEV PROTON COLLISIONS IN EMULSIONS.

REQUEST	10 NOV 75	EMULSION EXPOSURE
APPROVED	26 NOV 75	6 STACKS
COMPLETED	9 DEC 75	6 STACKS

---

462 EMULSION/PROTONS @ 400 #462 — GIACOMELLI, GIORGIO
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
BOLOGNA, UNIVERSITA DI (ITALY)
FIRENZE, UNIVERSITA DI, FIRENZE (ITALY)

SEARCH FOR SHORT LIVED PARTICLES PRODUCED BY 400 GEV PROTONS IN EMULSIONS.

REQUEST	18 NOV 75	EMULSION EXPOSURE
APPROVED	26 NOV 75	EMULSION EXPOSURE
COMPLETED	9 DEC 75	1 STACK

---

463 EMULSION/PROTONS @ 400 #463 — TRETJAKOVA, M. I.
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
IHEP, ACADEMY OF SCIENCES OF THE KAZAKH, ALMA-ATA (USSR)
INST. OF THEORETICAL&EXPERIMENTAL PHYSICS, MOSCOW (USSR)
LEBEDEV PHYSICAL INSTITUTE, MOSCOW (USSR)
LENINGRAD INSTITUTE OF NUCLEAR PHYSICS (USSR)
PHYSICAL-TECHNICAL INSTITUTE, TASHKENT (USSR)

THE INTERACTIONS OF PROTONS IN NUCLEAR EMULSION AT 400 GEV/C (OR 500 GEV/C).

REQUEST	17 NOV 75	EMULSION EXPOSURE
APPROVED	26 NOV 75	EMULSION EXPOSURE
COMPLETED	9 DEC 75	2 STACKS

---

466 NUCLEAR FRAGMENTS #466 — KAUFMAN, SHELDON
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: M3
ARGONNE NATIONAL LABORATORY
CHICAGO, UNIVERSITY OF
ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE
PURDUE UNIVERSITY

A PROPOSAL FOR THE STUDY OF HIGH-ENERGY REACTION MECHANISMS BY THE MEASUREMENT OF THE ANGULAR AND ENERGY DISTRIBUTIONS OF NUCLEAR RECOILING FROM TARGETS BOMBARDED WITH 200-300 GEV PROTONS.

REQUEST	9 JAN 76	500 HOURS	
APPROVED	30 MAR 76	500 HOURS	TO BE MET ON AN ESSENTIALLY PARASITIC BASIS WITH THE UNDERSTANDING THAT THIS WORK WILL NOT CONSTITUTE AN INTERFERENCE WITH THE REST OF THE PROTON AREA PROGRAM
IN PROGRESS	1 APR 79	26 TARGETS EXPOSED	

---

467 TEST MUON IRRADIATION #467 — FREEDMAN, MELVIN
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: M3
ARGONNE NATIONAL LABORATORY

PROPOSAL FOR PARASITIC DUAL TARGET IRRADIATION WITH MUON SPILL BEAM BEHIND EXP #319.

REQUEST	13 JAN 76	TARGET EXPOSURE	
APPROVED	28 APR 76	PARASITIC RUNNING FOR A BOMBARDMENT OF CHLORINE AND THALLIUM TARGETS DOWNSTREAM OF EXP #319 OR EXP #398	
COMPLETED	1 DEC 76	4 TARGETS EXPOSED	

---

468 PARTICLE SEARCH #468 — STEINBERG, PHILLIP H.
BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORY: S4(B)3
MARYLAND, UNIVERSITY OF

SEARCH FOR PENETRATING MASSIVE NEUTRAL PARTICLES PRODUCED IN HIGH ENERGY PROTON COLLISIONS.

REQUEST	21 JAN 76	1,200 HOURS	
	4 OCT 76	300 HOURS	IN A 400 GEV PROTON BEAM AT AN INTENSITY OF 10 TO THE 9TH PROTONS/PULSE
	4 NOV 77	450 HOURS	INCLUDING AN ADDITIONAL 150 HOURS TO IMPROVE THE SENSITIVITY DURING ANOTHER RUN OF THE EXPERIMENT
APPROVED	18 NOV 76	300 HOURS	
COMPLETED	14 AUG 77	300 HOURS	

---

469 PARTICLE SEARCH #469 — CUTTS, DAVID
BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORY: S6
BARI, UNIVERSITY OF (ITALY)
BROWN UNIVERSITY
CERN
FERMI NATIONAL ACCELERATOR LABORATORY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEARCH FOR HEAVY LONG-LIVED PARTICLES.
(USING THE SINGLE ARM SPECTROMETER FACILITY)

REQUEST	23 JAN 76	150 HOURS	
APPROVED	3 FEB 78	150 HOURS	WITH THE UNDERSTANDING THAT THE SCHEDULE FOR THIS RUN MAY PLACE THE DESIRED RUNNING FOR EXP #451 IN SOME JEOPARDY
COMPLETED	15 MAY 78	400 HOURS	

---

472 PARTICLE SEARCH #472 — STANFIELD, KENNETH C.
BEAM: MESON AREA-M2 BEAM
FERMI NATIONAL ACCELERATOR LABORATORY
MICHIGAN, UNIVERSITY OF

NOTE: FOR PROPOSALS WITH NUMBERS BELOW 500, ONLY THOSE APPROVED, UNCONSIDERED, OR DEFERRED ARE LISTED HERE.

PHYSICS CATEGORY: S5(B)2 PURDUE UNIVERSITY
SEARCH FOR HEAVY PARTICLES PRODUCED IN ASSOCIATION WITH PROMPT MUONS.
(EXPERIMENT WOULD USE MODIFIED EXP #357 SPECTROMETER)
REQUEST 23 JAN 76 600 HOURS INCLUDING 100 HOURS OF TESTS
APPROVED 10 MAR 76 600 HOURS
COMPLETED 29 NOV 76 1,100 HOURS

---

481 EMULSION/PI- @ 300 #481 TAKAHASHI, YOSHIYUKI OSAKA UNIVERSITY (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS SHINSHU UNIVERSITY (JAPAN)
PHYSICS CATEGORY: E1
INVESTIGATION OF MULTIPLE PRODUCTION BY PI - MESONS WITH EMULSION CHAMBER.
REQUEST 28 APR 76 EMULSION EXPOSURE 10K PARTICLES PER CM. SQ. OVER A SQUARE OF 10 CM X 10 CM
APPROVED 12 MAY 76 EMULSION EXPOSURE
COMPLETED 18 JAN 78 7 STACKS

---

482 NEUTRINO #482 BARISH, BARRY CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-TRIPLET NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: W1, S4(A)2, S5(A)2 NORTHWESTERN UNIVERSITY
ROCHESTER, UNIVERSITY OF
ROCKEFELLER UNIVERSITY
STUDY OF DI-MUON EVENTS PRODUCED IN NEUTRINO INTERACTIONS.
REQUEST 11 MAY 76 500 HOURS TO BE RUN WITH THE QUADRUPOLE TRIPLET TRAIN LOAD WITH FOCUS SET AT 200 GEV AT 10 TO THE 13TH PROTONS PER PULSE
APPROVED 30 JUN 76 PARASITIC RUNNING WITH OTHER EXPERIMENTS USING THE NEUTRINO BEAM
COMPLETED 3 JAN 78 1,600 HOURS

---

486 K ZERO CROSS SECTION #486 WINSTEIN, BRUCE D. CHICAGO, UNIVERSITY OF
BEAM: MESON AREA-M4 BEAM LBL, ETH HONGGERBERG, ZURICH (SWITZERLAND)
PHYSICS CATEGORIES: HED1, HED9 WISCONSIN, UNIVERSITY OF
PROPOSAL TO STUDY THE ATOMIC NUMBER DEPENDENCE OF THE DIFFERENCE BETWEEN PARTICLE AND ANTI-PARTICLE TOTAL CROSS SECTIONS.
(USING THE APPARATUS OF EXPS #82 AND #425 WITH MODIFICATIONS)
REQUEST 7 MAY 76 200 HOURS TO BE RUN IN A MODIFIED VERSION OF THE M-4 NEUTRAL BEAM; DATA TAKING TO REQUIRE 1.4 X 10 TO THE 17TH PROTONS INTO THE MESON PRODUCTION TARGET
APPROVED 30 JUN 76 200 HOURS WITH A TOTAL OF 800 HOURS APPROVED FOR THE COMBINATION OF E-486 AND E-226
COMPLETED 17 MAR 77 950 HOURS

---

490 PARTICLE SEARCH #490 SANDWEISS, JACK FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M1 BEAM LAWRENCE BERKELEY LABORATORY
PHYSICS CATEGORY: S5(B)5 YALE UNIVERSITY
SEARCH FOR SHORT LIVED PARTICLES USING A HIGH RESOLUTION STREAMER CHAMBER.
REQUEST 7 MAY 76 800 HOURS TO BE RUN IN A 200 GEV PI- BEAM OF INTENSITY 8 X 10 TO THE 5TH PARTICLES PER PULSE FOCUSED TO A 1 MM X 5 MM SPOT
APPROVED 30 JUN 76 TEST RUNNING TO STUDY THE PERFORMANCE OF THE HIGH RESOLUTION STREAMER CHAMBER
IN PROGRESS 1 OCT 78 850 HOURS

---

494 DI-HADRON #494 GOOD, MYRON L. COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(CENTER) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S5(B)1, S5(B)2 NEW YORK, STATE UNIVERSITY OF, STONY BROOK
A STUDY OF DI-HADRON PRODUCTION IN PROTON COLLISIONS AT FERMILAB.
(THIS EXPERIMENT IS AN OFF-SHOOT OF DI-LEPTON #288)
REQUEST 10 MAY 76 800 HOURS
APPROVED 17 MAY 76 800 HOURS
17 NOV 76 1,400 HOURS INCLUDING AN ADDITIONAL SIX WEEKS OF RUNNING WITH THE EXPERIMENT EXPECTED TO TERMINATE IN FEBRUARY 1977
COMPLETED 21 FEB 77 1,950 HOURS

---

495 XI-ZERO PRODUCTION #495 HELLER, KENNETH BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORIES: HED9, HED6(B) RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF
PROPOSAL TO STUDY CASCADE ZERO AND ANTILAMBDA PRODUCTION AND POLARIZATION.
(EXPERIMENT WOULD USE THE SPECTROMETER OF E-8)
REQUEST 17 MAY 76 400 HOURS
APPROVED 17 NOV 76 400 HOURS
COMPLETED 28 AUG 78 700 HOURS

---

497 CHARGED HYPERON #497 LACH, JOSEPH FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(CENTER) ILLINOIS, UNIVERSITY OF
PHYSICS CATEGORIES: HED9, HED1, HED2, HED6(A), S8 IOWA STATE UNIVERSITY
YALE UNIVERSITY
ELASTIC SCATTERING OF THE HYPERONS.
(MEASUREMENTS OF CHARGED HYPERON FLUXES AND DIFFERENTIAL ELASTIC CROSS SECTIONS, AND A PARTICLE SEARCH)
REQUEST 13 MAY 76 1,200 HOURS WITH 600 HOURS FOR FLUX MEASUREMENTS AND NEW PARTICLE SEARCH AND 600 HOURS TO MEASURE DIFFERENTIAL CROSS SECTIONS
26 JAN 79 800 HOURS INCLUDING AN ADDITIONAL 400 HOURS TO SEARCH FOR THE B-PARTICLE AFTER THE BEAM IS COMMISSIONED
APPROVED 29 JUN 76 400 HOURS INITIAL APPROVAL
BEING INSTALLED

---

498 DETECTOR DEVELOPMENT #498 GRUHN, CHARLES R. LOS ALAMOS SCIENTIFIC LABORATORY
BEAM: PROTON AREA-(EAST)
PHYSICS CATEGORY: M5
A MEASUREMENT OF THE RELATIVISTIC RISE IN THE MOST PROBABLE ENERGY LOSS IN THIN SOLID FILMS.
REQUEST 26 MAY 76 50 HOURS IN AN ELECTRON BEAM AT THE HIGHEST ENERGIES AVAILABLE
APPROVED 14 JUN 76 PARASITIC RUNNING THAT WILL NOT DISTURB THE NORMAL PROTON AREA PROGRAM
COMPLETED 18 AUG 76 50 HOURS

---

499 EMULSION/PROTONS @ 400 #499 IWAI, JUNSUKE WASEDA UNIVERSITY, TOKYO (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
A STUDY OF ANGULAR DISTRIBUTIONS IN PROTON-NUCLEUS COLLISIONS USING NUCLEAR EMULSIONS.
REQUEST 1 JUN 76 2 EXPOSURES
APPROVED 16 AUG 76 EMULSION EXPOSURE WITH ONE STACK EXPOSED TO AN INTENSITY OF 600K PROTONS/SQ CM AND A SECOND TO AN INTENSITY OF 10K PROTONS/SQ CM
COMPLETED 15 JAN 78 5 STACKS

FULL SEQUENTIAL LISTING OF ALL PROPOSALS IS RESUMED HERE

500D PROTON-PROTON SCATTERING #500D FRANZINI, PAOLO COLUMBIA UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0) NEW YORK, STATE UNIVERSITY OF, STONY BROOK
PHYSICS CATEGORIES: HED6(D), HED2
A HIGH PRECISION EXPERIMENT TO MEASURE P-P ELASTIC SCATTERING AND THE INELASTIC INCLUSIVE REACTION P + P TO P + X UP TO 1 TEV LABORATORY ENERGY AT THE ENERGY DOUBLER/SAVER.
REQUEST 24 MAY 76 1,000 HOURS TO BE RUN WHEN THE ENERGY DOUBLER/SAVER BECOMES AVAILABLE FOR INTERNAL TARGET EXPERIMENTS WITH ESTIMATE OF 3 MONTHS REQUIRED TO LEARN HOW TO USE THE BEAM AND 3-6 MONTHS TO COLLECT DATA

UNCONSIDERED 19 JUL 76

---

501 TEST MUON IRRADIATION #501 LANDE, KENNETH — BROOKHAVEN NATIONAL LABORATORY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM — PENNSYLVANIA, UNIVERSITY OF
PHYSICS CATEGORY: M3

PROPOSAL FOR A MEASUREMENT OF THE TRANSITION RATE FOR CL(37) AND AR(37) INDUCED BY MUONS AT FERMILAB ENERGIES.
REQUEST 11 AUG 76 25 HOURS AN INTEGRATED FLUX OF - ABOUT 5 X 10 TO THE 9TH TIMES (E/300) TO THE 0.7TH - MUONS @ 75, 150, AND 250 GEV
APPROVED 28 OCT 76 TARGET EXPOSURE PARASITIC TO RUNNING OF UPSTREAM MUON EXPERIMENTS
COMPLETED 1 DEC 76 2 TARGETS EXPOSED

---

502 MONOPOLE #502 BARTLETT, DAVID F. — COLORADO, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS — GENERAL ELECTRIC COMPANY RESEARCH & DEVELOPMENT CENTER
PHYSICS CATEGORY: S1

SEARCH FOR MONOPOLES ABOVE THE 15-FOOT BUBBLE CHAMBER.
(WOULD REQUIRE A SCUTTLE IN THE ROOF OF THE 15-FOOT BUBBLE CHAMBER BUILDING)
REQUEST 30 JUL 76 COSMIC RAY RUNNING TO INCLUDE USE OF THE FRINGE FIELD OF THE 15-FOOT BUBBLE CHAMBER MAGNET DURING TWO LONG RUNS; APPROXIMATELY 7 MONTHS OF DATA-TAKING REQUESTED WITH LEXAN AND LATER WITH EMULSION DETECTORS
APPROVED 2 SEP 76 COSMIC RAY RUNNING DURING PARASITIC OPERATION IN THE FRINGE FIELD OF THE 15-FOOT BUBBLE CHAMBER MAGNET
IN PROGRESS 1 APR 79 COSMIC RAY RUNNING

---

503 EMULSION/PI- @ 300 #503 OGATA, TAKESHI — HIROSAKI UNIVERSITY, HIROSAKI (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS — KONAN UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 — KWANSEI GAKUIN UNIVERSITY, NISHINOMIYA (JAPAN)
TOKYO, UNIVERSITY OF, COSMIC RAY LABORATORY (JAPAN)

MULTIPARTICLE PRODUCTION IN HIGH ENERGY PION-NUCLEUS INTERACTIONS.
REQUEST 12 AUG 76 EMULSION EXPOSURE CONSISTING OF EIGHT BLOCKS OF NULSION EXPOSED TO 50K PARTICLES/SQ CM IN A PI- BEAM OF 200 GEV/C OR GREATER
APPROVED 19 AUG 76 EMULSION EXPOSURE
COMPLETED 18 JAN 78 4 STACKS

---

504 30-INCH PI&P - PBNE @100 #504 GULJAMOV, U. G. — INP, UZBEK ACADEMY OF SCIENCES, TASHKENT (USSR)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM — JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
PHYSICS CATEGORIES: HBC1, HBC2

A STUDY OF INELASTIC INTERACTIONS OF PI+ MESONS AND PROTONS WITH NEON NUCLEI AT 100 GEV/C.
REQUEST 11 AUG 76 30K PIX
6 JAN 78 20K PIX THE EXPOSURE TO BE MADE IN A 100 GEV/C BEAM WITH AN 18.1% ATOMIC NEON-HYDROGEN MIXTURE IN THE 30-INCH CHAMBER. THE EXPOSURE IS TO BE DIVIDED AS FOLLOWS: PI+ @ 100 GEV/C 10K PIX
PROTONS @ 100 GEV/C 10K PIX
A PI- EXPOSURE @ 100 GEV/C WAS MADE FOR THIS GROUP USING THE 15-FT CHAMBER IN JANUARY 1978 AS PART OF EXPERIMENT 546
INACTIVE 1 MAY 79

---

505 PROTON POLARIZATION #505 YAMIN, SAMUEL PETER — BROOKHAVEN NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM — MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORY: HED6(B) — RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

A SEARCH FOR PROTON POLARIZATION IN INCLUSIVE PRODUCTION AT 300 GEV/C.
REQUEST 16 AUG 76 100 HOURS WITH A CHANGE IN THE TARGETTING ANGLE OF THE PRIMARY PROTON BEAM FOR THE MESON AREA
APPROVED 29 JUN 78 100 HOURS WITH LOW PRIORITY DURING THE TIME AVAILABLE FOR EXP #495
COMPLETED 27 AUG 78 50 HOURS

---

506 EMULSION/PI- @ 300 #506 DAKE, SHOJI — KOBE UNIVERSITY, KOBE (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS — KONAN UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E1 — SAITAMA UNIVERSITY, URAWA (JAPAN)
TOKYO, UNIVERSITY OF, INS (JAPAN)

CASCADE SHOWERS ORIGINATED IN JET SHOWERS DUE TO NEGATIVE PIONS.
REQUEST 17 AUG 76 EMULSION EXPOSURE USING TWO - THREE EMULSION CHAMBERS 10 CM X 10 CM X 8 IN EXPOSED TO 10-100 PARTICLES/SQ CM IN A PI- BEAM OF 200 GEV/C OR GREATER
APPROVED 23 AUG 76 EMULSION EXPOSURE
COMPLETED 15 JAN 78 2 STACKS

---

507 HIGH ENERGY CHANNELING #507 TSYGANOV, EDOUARD N. — CALIFORNIA, UNIVERSITY OF, LOS ANGELES
BEAM: MESON AREA-M1 BEAM — FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: M5 — INST. OF THEORETICAL&EXPERIMENTAL PHYSICS,MOSCOW (USSR)
INSTITUTE OF NUCLEAR RESEARCH, WARSAW (POLAND)
JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
KHARKOV PHYSICAL-TECHNICAL INSTITUTE (USSR)
LEHIGH UNIVERSITY
NEW YORK, STATE UNIVERSITY OF, ALBANY
TOMSK POLYTECHNIC INSTITUTE (U.S.S.R.)

PROPOSAL TO STUDY CHANNELING AT FERMILAB.
(USING THE SPECTROMETER OF EXP #456)
REQUEST 8 SEP 76 250 HOURS USE OF THE M-1 BEAM IS REQUESTED IN CONJUNCTION WITH OPERATION OF FORM FACTOR #456
APPROVED 1 JUN 77 250 HOURS WITH THE UNDERSTANDING THAT THIS ACTIVITY WILL NOT DELAY SIGNIFICANTLY THE PROGRAM IN THE M1 BEAM
COMPLETED 30 MAY 77 350 HOURS

---

508 EMULSION/PROTONS @ 500 #508 WOLTER, WLADISLAW — INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

STUDY OF THE MECHANISM FOR MULTIPLE PRODUCTION OF PARTICLES AT HIGH ENERGIES.
REQUEST 15 SEP 76 EMULSION EXPOSURE CONSISTING OF 3 EMULSION STACKS
APPROVED 24 SEP 76 EMULSION EXPOSURE
UNSCHEDULED

---

509 EMULSION/MUONS @ 200 #509 SHIRAI, T. — KANAGAWA UNIVERSITY, YOKOHAMA (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS — KOBE UNIVERSITY, KOBE (JAPAN)
PHYSICS CATEGORY: E2 — TOKYO, UNIVERSITY OF, INS (JAPAN)

SEARCH FOR THE LARGE ANGLE SCATTERING OF MUONS.
REQUEST 13 SEP 76 EMULSION EXPOSURE OF 10 TO THE 6TH PARTICLES/SQ CM
APPROVED 24 SEP 76 EMULSION EXPOSURE
COMPLETED 8 OCT 76 1 STACK

---

510 EMULSION/ELECTRONS @ HI E #510 NIU, KIYOSHI — AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
BEAM: PROTON AREA-MISCELLANEOUS — NAGOYA UNIVERSITY, NAGOYA (JAPAN)
PHYSICS CATEGORY: E2 — YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)

STUDY OF CASCADE SHOWERS INITIATED BY ELECTRONS.
REQUEST 9 SEP 76 EMULSION EXPOSURE
APPROVED 24 SEP 76 EMULSION EXPOSURE
COMPLETED 5 OCT 76 6 STACKS

---

511 30-INCH PBAR - D @ 200 #511 FRIDMAN, ALFRED — CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: HBC2

PROPOSAL TO STUDY PBAR - D INTERACTIONS AT 200 GEV/C WITH THE 30-INCH HYBRID BUBBLE CHAMBER.
REQUEST 22 SEP 76 150K PIX A FLUX OF 2 PBAR'S PER PICTURE IS ASSUMED
REJECTED 16 MAR 78

---

512 CHARGED HYPERON #512 SHEPARD, PAUL F. — PITTSBURGH, UNIVERSITY OF
BEAM: MESON AREA-M1 BEAM

PHYSICS CATEGORIES: HED6(A), HED9
THE INCLUSIVE PRODUCTION OF CHARGED HYPERONS BY PIONS.
REQUEST 1 OCT 76 800 HOURS IN A PION BEAM AT AN INCIDENT INTENSITY OF 5 X 10 TO THE 6TH PIONS/PULSE
REJECTED 19 NOV 76

---

513 INCLUSIVE SCATTERING #513 BRANDENBURG, GEORGE W. BARI, UNIVERSITY OF (ITALY)
BEAM: MESON AREA-M6 BEAM BROWN UNIVERSITY
PHYSICS CATEGORIES: HED6(A), HED8(E) CERN
FERMI NATIONAL ACCELERATOR LABORATORY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEMI-INCLUSIVE HADRONIC INTERACTIONS AT HIGH ENERGIES.
(USING THE SINGLE ARM SPECTROMETER FACILITY)
REQUEST 1 OCT 76 350 HOURS ASSUMING 2 X 10 TO THE 6TH PARTICLES/PULSE AND 1 PULSE/10 SEC
INACTIVE 19 NOV 76 SEE EXP #118A

---

514 PROTON-PROTON ELASTIC #514 WALKER, JAMES K. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(WEST) NORTHERN ILLINOIS UNIVERSITY
PHYSICS CATEGORY: HED2
PROTON-PROTON DEEP ELASTIC SCATTERING.
REQUEST 1 OCT 76 600 HOURS IN THE P-WEST BEAM @ 2 X 10 TO THE 12TH PROTONS/PULSE. DATA TO BE TAKEN AT ENERGIES BETWEEN 30 AND 200 GEV, WITH LOW ENERGY RUNNING CONTINGENT UPON SUCCESSFUL TESTS
WITHDRAWN 5 NOV 76

---

515 PARTICLE SEARCH #515 ROSEN, JEROME L. CARNEGIE-MELLON UNIVERSITY
BEAM: MESON AREA-M1 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: S5(B)2 NORTHWESTERN UNIVERSITY
NOTRE DAME, UNIVERSITY OF

PROPOSAL TO STUDY CHARGED PARTICLES PRODUCED IN HADRONIC INTERACTIONS.
REQUEST 5 OCT 76 1,000 HOURS IN A HIGH INTENSITY PI- BEAM @ 200 GEV/C
APPROVED 14 MAR 77 800 HOURS
BEING INSTALLED

---

516 PHOTOPRODUCTION #516 NASH, THOMAS CALIFORNIA, UNIVERSITY OF, SANTA BARBARA
BEAM: PROTON AREA-(EAST) COLORADO, UNIVERSITY OF
PHYSICS CATEGORY: EM2 FERMI NATIONAL ACCELERATOR LABORATORY
TORONTO, UNIVERSITY OF (CANADA)

A STUDY OF PHOTOPRODUCTION USING A MAGNETIC SPECTROMETER AT THE TAGGED PHOTON LAB.
REQUEST 5 OCT 76 1,000 HOURS IN THE TAGGED PHOTON BEAM ASSUMING A PRIMARY BEAM OF 450 GEV PROTONS WITH 2.9 X 10 TO THE 15TH PROTONS/HOUR
3 OCT 77 1,000 HOURS WITH 6 X 10 TO THE 12TH PROTONS PER PULSE, A 1 SEC. FLATTOP AND A 10 SEC. CYCLE
APPROVED 15 NOV 77 1,000 HOURS TO INCLUDE 400 HOURS FOR TESTING AND 600 HOURS FOR DATA
BEING INSTALLED

---

517 NEUTRINO #517 READ, A. LINCOLN CORNELL UNIVERSITY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S5(A)3, S4(A)3, E2 INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
KOBE UNIVERSITY, KOBE (JAPAN)
LUND, UNIVERSITY OF, LUND (SWEDEN)
NAGOYA UNIVERSITY, NAGOYA (JAPAN)
OHIO STATE UNIVERSITY
OSAKA UNIVERSITY (JAPAN)
OTTAWA, UNIVERSITE D', (CANADA)
TORONTO, UNIVERSITY OF (CANADA)
WASHINGTON, UNIVERSITY OF
YORK UNIVERSITY, DOWNSVIEW (CANADA)

A PROPOSAL TO STUDY NEUTRINO-INDUCED DI-LEPTON EVENTS USING A HYBRID EMULSION ELECTRONIC DETECTOR.
REQUEST 4 OCT 76 2,000 HOURS IN A NEUTRINO BEAM WITH EITHER THE QUADRUPOLE TRIPLET OR THE DOUBLE HORN (POSITIVE) FOCUSING SYSTEMS
REJECTED 17 NOV 76

---

518 ELECTRON PRODUCTION #518 TAYLOR, FRANK FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(WEST) NORTHERN ILLINOIS UNIVERSITY
PHYSICS CATEGORY: HED6(C)
A PROPOSAL TO MEASURE DIRECT ELECTRON PRODUCTION IN P - P COLLISIONS FROM 100 TO 400 GEV/C.
REQUEST 1 OCT 76 500 HOURS IN THE P-WEST PROTON BEAM USING THE PRESENT EXP #284 SPECTROMETER; MEASUREMENTS WOULD BE MADE OVER THE INTERVAL 100 TO 400 GEV/C
WITHDRAWN 26 JAN 77

---

519 HADRON JETS #519 SCHLEIN, PETER E. CALIFORNIA, UNIVERSITY OF, LOS ANGELES
BEAM: PROTON AREA-(WEST)
PHYSICS CATEGORY: HED8(C)
PROPOSAL TO STUDY HIGH MOMENTUM TRANSFER PHENOMENA AND SEARCH FOR NEW STATES.
REQUEST 6 OCT 76 900 HOURS TO BE RUN WITH A THIN TUNGSTEN FOIL TARGET IN A 400 GEV PROTON BEAM AT 10 TO THE 10TH PARTICLES/PULSE
REJECTED 16 MAR 77 ABOUT 700 HOURS OF BEAM TIME USED IN A TEST RUN DURING 1978; SEE PROPOSAL #587

---

520 15-FOOT NEUTRINO/H2&NE #520 FRY, WILLIAM F. WISCONSIN, UNIVERSITY OF
BEAM: NEUTRINO AREA-TRIPLET NEUTRINO BEAM
PHYSICS CATEGORY: W2
SEARCH FOR NEW PHENOMENA ASSOCIATED WITH HIGH ENERGY NEUTRINOS USING THE QUADRUPOLE TRIPLET BEAM.
REQUEST 6 OCT 76 100K PIX AN EXPOSURE OF THE 15-FT CHAMBER FILLED WITH A LIGHT (APPROXIMATELY 20%) NEON-HYDROGEN MIXTURE TO THE QUADRUPOLE TRIPLET FOCUSSED NEUTRINO BEAM.
REJECTED 19 NOV 76

---

521 15-FOOT NEUTRINO/D2&HIZ #521 VANDER VELDE, JACK C. FLORIDA STATE UNIVERSITY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORY: W2
DILEPTON PRODUCTION BY NEUTRINOS IN DEUTERIUM.
(AN INTERNAL TARGET AND CONVERTER SYSTEM WOULD BE USED IN THE CHAMBER)
REQUEST 18 OCT 76 200K PIX THE EXPOSURE WOULD BE IN THE BROAD BAND BEAM WITH 1.3 TIMES 10 TO THE 13TH PROTONS/PULSE INCIDENT ON THE TARGET AT 400 GEV
29 DEC 77 200K PIX
REJECTED 16 MAR 78

---

522 PROTON POLARIZATION #522 OGREN, HAROLD O. INDIANA UNIVERSITY
BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORY: HED6(A)
A STUDY OF INCLUSIVE PROTON POLARIZATION.
REQUEST 28 OCT 76 840 HOURS THE EXPERIMENT WOULD RUN WITH THE EXISTING EXP #313 SET-UP IN THE INTERNAL TARGET AREA
APPROVED 25 JUN 77 800 HOURS CONDITIONAL ON CRYOGENIC OPERATION OF THE INTERNAL TARGET AREA
COMPLETED 21 MAR 78 700 HOURS

---

523 MULTIPARTICLE #523 DZIERBA, ALEXANDER E. INDIANA UNIVERSITY
BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORIES: HED5, HED8(A)
A PROPOSAL TO STUDY MULTIPARTICLE PERIPHERAL HADRON REACTIONS YIELDING FORWARD PI-ZERO AND ETA-ZERO MESONS.
(USING THE MULTIPARTICLE SPECTROMETER FACILITY)
REQUEST 17 NOV 76 UNSPECIFIED
17 NOV 76 1,000 HOURS WITH 200 HOURS FOR CHECKOUT FOLLOWED BY 800 HOURS DATA TAKING WITH THE M6 BEAM TUNED FOR A NEGATIVELY CHARGED BEAM @ 40, 100, AND 200 GEV/C

6 MAY 77 800 HOURS WITH 400 HOURS OF 200 GEV/C BEAM AND INTENSITY OF 3 X 10 TO THE 6TH PARTICLES/2 SEC. REQUESTED IMMEDIATELY AFTER THE EXP #110A RUN IN THE FALL OF 1977; ANOTHER 400 HOURS @ 300 OR 100 GEV/C AFTER THE MESON LAB SHUTDOWN

DEFERRED 24 JUN 77 PENDING RESULTS FROM EXP #110A AND COMPARISON WITH SIMILAR LOW ENERGY DATA

---

524 EMULSION/PRONGS @ 500 #524 WILKES, RICHARD J. WASHINGTON, UNIVERSITY OF

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

PROPOSAL TO STUDY PROTON-NUCLEUS INTERACTIONS IN EMULSION PLATES WITH EMBEDDED METAL POWDER GRANULES AT HIGHEST AVAILABLE ENERGY (>400 GEV).

REQUEST 18 JAN 77 EMULSION EXPOSURE OF 10 PLATES WOULD BE EXPOSED TO FLUXES RANGING FROM 75,000 TO 200,000 PARTICLES/SQ.CM.
APPROVED 3 MAR 77 EMULSION EXPOSURE WITH A MOMENTUM OF APPROXIMATELY 500 GEV/C
UNSCHEDULED

---

525 EMULSION/PI- @ 300 #525 WILKES, RICHARD J. WASHINGTON, UNIVERSITY OF

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

PROPOSAL TO STUDY PROTON-NUCLEUS INTERACTIONS IN EMULSION PLATES WITH EMBEDDED METAL POWDER GRANULES AT 300 GEV.

REQUEST 18 JAN 77 EMULSION EXPOSURE OF 10 PLATES WOULD BE EXPOSED IN A NEGATIVE BEAM TO FLUXES RANGING FROM 75,000 - 200,000 PARTICLES/SQ.CM.
13 DEC 77 EMULSION EXPOSURE WITH A REQUEST FOR THE BEAM ENERGY TO BE CHANGED TO 300 GEV
APPROVED 3 MAR 77 EMULSION EXPOSURE
COMPLETED 15 JAN 78 2 STACKS

---

526 15-FOOT PBAR - P @ 100 #526 LANDER, RICHARD L. CALIFORNIA, UNIVERSITY OF, DAVIS

BEAM: NEUTRINO AREA-15-FT HADRON BEAM
PHYSICS CATEGORY: HBC2

PROPOSAL FOR ANTI-PROTON PROTON STUDIES IN THE FERMILAB 15-FOOT HYDROGEN BUBBLE CHAMBER AT 100 GEV.

REQUEST 31 JAN 77 150K PIX WITH THE INCIDENT NEGATIVE BEAM TO HAVE A PBAR CONTENT OF AT LEAST 30% AND AN ENERGY OF 100 GEV
WITHDRAWN 19 APR 78

---

527 15-FOOT PBAR - D @ 100 #527 LANDER, RICHARD L. CALIFORNIA, UNIVERSITY OF, DAVIS

BEAM: NEUTRINO AREA-15-FT HADRON BEAM
PHYSICS CATEGORY: HBC2

PROPOSAL TO STUDY ANNIHILATION AND NON-ANNIHILATION PROCESSES IN PBAR-D COLLISIONS IN THE 15-FOOT BUBBLE CHAMBER.

REQUEST 31 JAN 77 150K PIX WITH THE INCIDENT NEGATIVE BEAM TO HAVE A PBAR CONTENT OF AT LEAST 30% AND AN ENERGY OF 100 GEV
WITHDRAWN 19 APR 78

---

528 DETECTOR DEVELOPMENT #528 ROBERTS, ARTHUR ARIZONA, UNIVERSITY OF
BROWN UNIVERSITY
CALIFORNIA, UNIVERSITY OF, IRVINE
DUDLEY OBSERVATORY
FERMI NATIONAL ACCELERATOR LABORATORY
HARVARD UNIVERSITY
HAWAII, UNIVERSITY OF
LOUISIANA STATE UNIVERSITY
MOSCOW PHYSICAL ENGINEERING INSTITUTE (USSR)
NAVAL OCEAN SYSTEMS CENTER
NAVAL RESEARCH LABORATORY (FLORIDA)
NAVAL RESEARCH LABORATORY, WASHINGTON
SCRIPPS INSTITUTE OF OCEANOGRAPHY/UCSD
WISCONSIN, UNIVERSITY OF

BEAM: NEUTRINO AREA-15-FT HADRON BEAM
PHYSICS CATEGORY: M2

PROPOSAL FOR A DETECTOR DEVELOPMENT STUDY OF ACOUSTIC CALORIMETRY AT FERMILAB ENERGIES.

REQUEST 31 JAN 77 100 HOURS IN A PROTON BEAM OF 100 GEV OR MORE AND WITH AN INTENSITY VARIABLE FROM 1 TO 1 X 10 TO THE 5TH PER PULSE IN A FAST SPILL
DEFERRED 29 JUN 78 PENDING A REVIEW OF DEMANDS ON RESOURCES AND RUNNING TIME

---

529 NUCLEAR CHEMISTRY #529 TURKEVICH, ANTHONY L. ARGONNE NATIONAL LABORATORY
CHICAGO, UNIVERSITY OF

BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORY: M3

REACTIONS OF COMPLEX NUCLEI WITH PIONS IN THE HUNDRED GEV RANGE.

REQUEST 31 JAN 77 100 HOURS IN A PION BEAM AT AN ENERGY OF 200 GEV OR GREATER
REJECTED 29 JUN 78

---

530 PARTICLE SEARCH #530 FITCH, VAL L. PRINCETON UNIVERSITY

BEAM: PROTON AREA-(WEST)
PHYSICS CATEGORY: S5(B)2

SEARCH FOR CHARM PRODUCTION IN 400 GEV/C PROTON INTERACTIONS.

REQUEST 31 JAN 77 500 HOURS WITH 100 HOURS FOR TUNEUP AND 400 HOURS FOR DATA
REJECTED 16 MAR 77 SEE EXP #567

---

531 NEUTRINO #531 REAY, NEVILLE W. AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
FERMI NATIONAL ACCELERATOR LABORATORY
KOBE UNIVERSITY, KOBE (JAPAN)
KOREA UNIVERSITY, SEOUL (S. KOREA)
MCGILL UNIVERSITY (CANADA)
NAGOYA UNIVERSITY, NAGOYA (JAPAN)
OHIO STATE UNIVERSITY
OKAYAMA UNIVERSITY, OKAYAMA (JAPAN)
OSAKA UNIVERSITY (JAPAN)
OTTAWA, UNIVERSITE D', (CANADA)
SCIENCE EDUCATION INSTITUTE OF OSAKA PREFECTURE(JAPAN)
TOKYO, UNIVERSITY OF, COSMIC RAY LABORATORY (JAPAN)
TORONTO, UNIVERSITY OF (CANADA)
YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)

BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM
PHYSICS CATEGORIES: S5(A)3, E2

A PROPOSAL TO STUDY WEAK DECAY LIFETIMES OF NEUTRINO PRODUCED PARTICLES IN A TAGGED EMULSION SPECTROMETER.

REQUEST 31 JAN 77 1,500 HOURS OR A TOTAL PROTON FLUX OF 3 X 10 TO THE 18TH
19 MAY 78 3,000 HOURS INCLUDING A SECOND PARASITIC RUN
8 MAY 79 2,250 HOURS TOTAL WITH AN ADDITIONAL 1,100 HOURS REQUESTED FOR TWO RUNS OF 6 X 10 TO THE 18TH PROTONS EACH, THE FIRST TO BE NEUTRINOS (350 GEV PI+), THE SECOND TO BE ANTINEUTRINOS (350 GEV PI- WITH THE PLUG OUT)
APPROVED 15 MAR 77 PARASITIC RUNNING CONCURRENT WITH OTHER NEUTRINO EXPERIMENTS
COMPLETED 14 FEB 79 1,150 HOURS

---

532 QUARK #532 BROWN, CHARLES N. FERMI NATIONAL ACCELERATOR LABORATORY

BEAM: PROTON AREA-(WEST)
PHYSICS CATEGORY: S2

A CRITICAL TEST OF THE QUARK CONFINEMENT MODEL.

REQUEST 31 JAN 77 600 HOURS WITH 300 HOURS AT A PRIMARY BEAM ENERGY OF 500 GEV AND 300 HOURS AT 1000 GEV
REJECTED 24 JUN 77

---

533 PI-MU ATOMS #533 SCHWARTZ, MEL CHICAGO, UNIVERSITY OF
STANFORD UNIVERSITY
WISCONSIN, UNIVERSITY OF

BEAM: MESON AREA-M3 BEAM
PHYSICS CATEGORY: S8

PROPOSAL TO MEASURE THE RATE OF FORMATION OF PI-MU ATOMS IN K-LONG M 3 DECAY.

REQUEST 1 FEB 77 500 HOURS BASED ON 3 X 10 TO THE 6TH K-LONGS/PULSE IN THE M3 BEAM
APPROVED 18 MAR 77 500 HOURS WITH THE REQUIREMENT THAT PRELIMINARY STUDIES AND TESTS SHOW THAT COSTS FOR THE EXPERIMENT ARE REASONABLE
19 MAR 79 2,100 HOURS FOR THE ADDITIONAL 1,500 HOURS REQUESTED FOR TUNEUP AND DATA

TO COMPLETE THE EXPERIMENT

IN PROGRESS 1 OCT 78 600 HOURS

---

534 NEUTRINO #534 LUBATTI, HENRY J. INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM WASHINGTON, UNIVERSITY OF
PHYSICS CATEGORIES: S5(A)3, E2
HYBRID NUCLEAR EMULSION - 15-FT BUBBLE CHAMBER EXPERIMENT TO STUDY NEUTRINO PRODUCED SHORT LIVED PARTICLES.
REQUEST 1 FEB 77 2,500 HOURS OR 5 X 10 TO THE 18TH PROTONS PARASITIC TO THE 15-FOOT BUBBLE CHAMBER PROGRAM
REJECTED 15 MAR 77

---

535 K-LONG SCATTERING #535 NAUENBERG, URIEL COLORADO, UNIVERSITY OF
BEAM: MESON AREA-M1 BEAM MASSACHUSETTS, UNIVERSITY OF
PHYSICS CATEGORIES: HED6(B), HED1, HED2
PROPOSAL TO STUDY THE INTERACTIONS OF K-LONG MESONS IN THE MOMENTUM REGION ABOVE 50 GEV/C USING A PION INDUCED K-LONG BEAM.
REQUEST 1 FEB 77 400 HOURS TO BE RUN IN A NEW TERTIARY K-LONG BEAM DERIVED FROM THE PION BEAM IN P-WEST
18 MAY 78 400 HOURS TO USE A K-LONG BEAM PRODUCED BY THE UPGRADED M1-BEAM IN THE MESON ARE
REJECTED 29 JUN 78

---

536 EMULSION/NEUTRINO #536 NIU, KIYOSHI AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM NAGOYA UNIVERSITY, NAGOYA (JAPAN)
PHYSICS CATEGORIES: E2, S5(A)3 YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)
STUDY OF NEUTRINO INTERACTIONS IN NUCLEAR EMULSIONS.
REQUEST 2 FEB 77 500 HOURS OR 1 X 10 TO THE 18TH PROTONS TO BE RUN IN THE BROAD BAND NEUTRINO BEAM ON A PARASITIC BASIS WITH THE REGULAR NEUTRINO PROGRAM
APPROVED 10 FEB 77 PARASITIC RUNNING
COMPLETED 13 AUG 77 2 STACKS

---

537 DI-MUON #537 COX, BRADLEY FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: PROTON AREA-(WEST) MCGILL UNIVERSITY (CANADA)
PHYSICS CATEGORIES: S5(B)2, HED8(D), S5(B)4 MICHIGAN, UNIVERSITY OF
UNIVERSITY OF ATHENS (GREECE)
PROPOSAL TO STUDY PBAR-N INTERACTIONS IN THE P-WEST HIGH INTENSITY LABORATORY
REQUEST 14 FEB 77 1,700 HOURS WITH 300 HOURS OF TUNING AND 600 HOURS INITIAL DATA RUN TO BE FOLLOWED BY 800 HOURS FOR FINAL DATA RUN, ALL IN HIGH INTENSITY SECONDARY BEAM
31 OCT 77 1,400 HOURS TO INCLUDE 100 HOURS OF TUNEUP, 300 HOURS OF PI- @ 200 OR 300 GEV, 700 HOURS OF PI+ @ 200 OR 300 GEV AND 300 HOURS OF PBAR @ 100 GEV
31 JAN 78 2,000 HOURS IN HIGH INTENSITY SECONDARY BEAM. PHASE 1 WOULD CONSIST OF 250 HOURS FOR TUNE UP AND 750 HOURS FOR DATA TAKING ON DI-MUON PRODUCTION BY P BARS. PHASE 2 WOULD CONSIST OF 250 HOURS FOR TUNE UP AND 750 HOURS FOR DATA TAKING ON DI-ELECTRON PRODUCTION BY P BARS
APPROVED 16 MAR 78 1,000 HOURS FOR STUDY OF DI-MUON PRODUCTION BY P-BARS
BEING INSTALLED

---

538 15-FOOT PI- - D @ 100&360 #538 PRETTER, WILLIAM B. CALIFORNIA, UNIVERSITY OF, BERKELEY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM
PHYSICS CATEGORY: HEC2
TO STUDY 100 GEV PI- DEUTERON INTERACTIONS IN CONJUNCTION WITH A CORRESPONDING PBAR - DEUTERIUM EXPOSURE; ALSO TO STUDY 360 GEV PI- DEUTERON INTERACTIONS.
REQUEST 31 JAN 77 150K PIX WITH PART OF THE REQUESTED EXPOSURE TO BE DONE IN PARALLEL WITH PROPOSAL #527
WITHDRAWN 15 MAY 78

---

539 15-FOOT ANTINEUTRINO/D2&HIZ#539 PRETTER, WILLIAM B. CALIFORNIA, UNIVERSITY OF, BERKELEY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM CALIFORNIA, UNIVERSITY OF, DAVIS
PHYSICS CATEGORY: W2
TO STUDY ANTINEUTRINO INTERACTIONS IN DEUTERIUM AND NUCLEI WITH AN INTERNAL TARGET AND CONVERTER SYSTEM IN THE FERMILAB 15-FOOT BUBBLE CHAMBER.
REQUEST 14 FEB 77 300K PIX IN TWO-HORN, BROAD BAND BEAM AND 1.3 X 10 TO THE 13TH PROTONS/PULSE ON THE TARGET AT 400 GEV
29 DEC 77 400K PIX
REJECTED 16 MAR 78

---

540 PARTICLE SEARCH #540 LONGO, MICHAEL J. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM
PHYSICS CATEGORIES: S2, S6
A SEARCH FOR NEW METASTABLE PARTICLES TRAPPED IN MATTER.
REQUEST 22 MAR 77 1,900 HOURS WITH A RUNNING PERIOD OF SIX MONTHS IN THE M3 BEAM. THE BEAM WOULD BE USED 50 - 75% OF THE TIME AVAILABLE.
APPROVED 23 MAY 77 PARASITIC RUNNING CONDITIONAL ON NEGOTIATION OF AN AGREEMENT AND THAT THE EXPERIMENT WILL BE MOUNTED AND RUN UNDER LOW PRIORITY CONDITIONS
COMPLETED 21 FEB 78 600 HOURS

---

541 NEUTRINO #541 SESSOMS, ALLEN LEE CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM HARVARD UNIVERSITY
PHYSICS CATEGORY: W1 ILLINOIS, UNIVERSITY OF
A PROPOSAL TO STUDY NEUTRAL CURRENT NEUTRINO AND ANTINEUTRINO INTERACTIONS.
(EXPERIMENT WOULD USE MODIFIED NEUTRINO SPECTROMETER IN LAB C SUPPLEMENTED BY A LIQUID ARGON-IRON CALORIMETER)
REQUEST 29 MAR 77 UNSPECIFIED
REJECTED 24 JUN 77 BUT WITH ENCOURAGEMENT FOR FURTHER DETECTOR DEVELOPMENT WORK

---

542 15-FOOT ANTINEUTRINO/D2&HIZ#542 GARFINKEL, ARTHUR F. ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM CARNEGIE-MELLON UNIVERSITY
PHYSICS CATEGORY: W2 PURDUE UNIVERSITY
PROPOSAL FOR AN EXTENSION OF E-31/E-390 TO STUDY THE INTERACTIONS OF ANTINEUTRINOS WITH PROTONS AND NEUTRONS IN THE 15-FOOT BUBBLE CHAMBER WITH PHOTON CONVERTING PLATES.
REQUEST 29 MAR 77 500K PIX IN THE 15-FOOT CHAMBER WITH D2 FILL, INTERNAL PHOTON CONVERTING PLATES AND A PRIMARY BEAM ENERGY OF 400 GEV
29 DEC 77 500K PIX
INACTIVE 28 JUN 78 SEE EXP #390

---

543 15-FOOT ANTINEUTRINO/D2&HIZ#543 KITAGAKI, TOSHIO TOHOKU UNIVERSITY (JAPAN)
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM
PHYSICS CATEGORY: W2
PROPOSAL TO STUDY ANTINEUTRINO INTERACTIONS IN THE LIQUID DEUTERIUM 15-FOOT BUBBLE CHAMBER WITH A CONVERTER PLATE SYSTEM
REQUEST 29 MAR 77 400K PIX IN THE 15-FOOT CHAMBER WITH D2 FILL, INTERNAL CONVERTER PLATES, AND A PRIMARY BEAM ENERGY OF 400 GEV
29 DEC 77 400K PIX USING A TWO-HORN BEAM WITHOUT PLUG
WITHDRAWN 9 JAN 78

---

544 15-FOOT ANTINEUTRINO/H2&HIZ#544 KAFTANOV, VITALI S. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM INST. OF THEORETICAL&EXPERIMENTAL PHYSICS,MOSCOW (USSR)
PHYSICS CATEGORY: W2
PROPOSAL TO STUDY ANTINEUTRINO INTERACTIONS IN HYDROGEN AND NUCLEI WITH AN INTERNAL TARGET AND CONVERTER SYSTEM IN THE 15-FOOT BUBBLE CHAMBER.
REQUEST 29 MAR 77 500K PIX IN THE 15-FOOT CHAMBER WITH H2 FILL, INTERNAL TARGET AND CONVERTER SYSTEM, AND A PRIMARY BEAM ENERGY OF 400 GEV
4 JAN 78 500K PIX IN THE 15-FOOT CHAMBER WITH H2 FILL AND PLATES AT A PRIMARY BEAM ENERGY OF 400 GEV AND AN INTENSITY OF MORE THAN 1.3 X 10 TO THE 13TH PROTONS PER PULSE
INACTIVE 1 MAY 79

---

545 15-FOOT NEUTRINO/D2&HIZ #545 SNOW, GEORGE A. ILLINOIS INSTITUTE OF TECHNOLOGY

BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM
PHYSICS CATEGORY: W2

MARYLAND, UNIVERSITY OF
NEW YORK, STATE UNIVERSITY OF, STONY BROOK
TOHOKU UNIVERSITY (JAPAN)
TUFTS UNIVERSITY

PROPOSAL FOR AN EXTENSION OF E-151/E-227 TO STUDY NEUTRINO INTERACTIONS IN DEUTERIUM IN THE 15-FOOT BUBBLE CHAMBER WITH PLATES.
(AN INITIAL RUN WILL BE WITHOUT PLATES)

REQUEST	18 APR 77	300K PIX
	21 DEC 77	500K PIX TO BE RUN IN THE WIDE BAND BEAM WITH 1.3 X 10 TO THE 13TH PROTONS PER PULSE INCIDENT ON THE TARGET AT 400 GEV
APPROVED	16 MAR 78	350K PIX OR EQUIVALENTLY 3.5 X 10 TO THE 18TH PROTONS; WITH THE ASSUMPTION THAT THE TEST OF THE PLATE SYSTEM WILL BE SUCCESSFUL
	28 JUN 78	350K PIX TO BE RUN IN THE 15-FT CHAMBER WITHOUT PLATES
IN PROGRESS	1 APR 79	317K PIX

---

546 15-FOOT NEUTRINO/H2ONE #546 HUSON, FRED RUSS

BEAM: NEUTRINO AREA-TRIPLET NEUTRINO BEAM
PHYSICS CATEGORY: W2

CALIFORNIA, UNIVERSITY OF, BERKELEY
FERMI NATIONAL ACCELERATOR LABORATORY
HAWAII, UNIVERSITY OF
LAWRENCE BERKELEY LABORATORY
WASHINGTON, UNIVERSITY OF
WISCONSIN, UNIVERSITY OF

HIGH ENERGY NEUTRINO AND ANTINEUTRINO INTERACTIONS IN THE 15-FOOT BUBBLE CHAMBER USING THE QUADRUPOLE TRIPLET TRAIN LOAD AND THE TWO-PLANE EMI.

REQUEST	27 APR 77	250K PIX WITH SPECIFIC INTEREST IN AN EXPOSURE OF 5 X 10 TO THE 18TH PROTONS
APPROVED	29 JUN 77	PARASITIC RUNNING CONCURRENT WITH OTHER NEUTRINO RUNNING WITH THE QUAD TRIPLET TRAIN
COMPLETED	26 JAN 78	375K PIX

---

547 EMULSION/PROTONS @ 400 #547 JACQUOT, C. J.

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1

CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
LYON, UNIVERSITE DE (FRANCE)
SANTANDER, UNIVERSIDAD DE, SANTANDER (SPAIN)

ANGULAR CORRELATIONS STUDY IN PROTON-NUCLEI JETS AT 400-500 GEV USING EMULSION TELESCOPE TECHNIQUES.

REQUEST	27 APR 77	EMULSION EXPOSURE IN A 400-500 GEV PROTON BEAM WITH INCOMING FLUX OF 5 X 10 TO THE 4TH PARTICLES OVER A SURFACE 5 X 5 CM SQ.
APPROVED	14 JUN 77	EMULSION EXPOSURE
COMPLETED	15 JAN 78	24 STACKS

---

548 PARTICLE SEARCH #548 LAI, KWAN-WU

BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORY: S5(B)2

BROOKHAVEN NATIONAL LABORATORY
FLORIDA STATE UNIVERSITY
TUFTS UNIVERSITY
VANDERBILT UNIVERSITY

A SEARCH FOR NARROW AND BROAD RESONANCES DECAYING INTO K-SHORT PAIRS AND LAMBDA-ANTILAMBDA FROM PI- - INTERACTIONS AT 200 GEV USING THE FERMILAB MPS.

REQUEST	29 APR 77	600 HOURS FOR DATA WITH THE INCIDENT BEAM AT 200 GEV AND WITH AN INTENSITY OF 2 X 10 TO THE 6TH PER PULSE
REJECTED	24 JUN 77	SEE PROPOSAL #580

---

549 QUARK #549 LONGO, MICHAEL J.

BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: S2

MICHIGAN, UNIVERSITY OF
STANFORD UNIVERSITY

A SEARCH FOR FRACTIONAL CHARGES USING ACCELERATOR AND LOW TEMPERATURE TECHNIQUES.

REQUEST	2 MAY 77	PARASITIC RUNNING TO EXPOSE AT LEAST 12 NIOBIUM SPHERES IN THE VICINITY OF A PROTON BEAM WITH INTENSITIES OF > 1 X 10 TO THE 13TH PER PULSE
APPROVED	16 MAY 77	PARASITIC RUNNING CONTINGENT ON THE TARGET BEING PREPARED AND PROVIDED BY THE EXPERIMENTERS
IN TEST STAGE	1 OCT 78	1 TARGET EXPOSED

---

550 DETECTOR DEVELOPMENT #550 ATAC, MUZAFFER

BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: M1

FERMI NATIONAL ACCELERATOR LABORATORY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
YEREVAN PHYSICS INSTITUTE, ARMENIA (USSR)

A NEW EXTERNAL HADRON IDENTIFIER DETECTOR
(USING DE/DX AND TRANSITION RADIATION)

REQUEST	5 MAY 77	TEST RUNNING BEHIND THE 30-INCH BUBBLE CHAMBER TOGETHER WITH OTHER DETECTORS FOR THE DOWNSTREAM PARTICLE IDENTIFIER; THIS RUNNING TO FOLLOW TESTS IN THE M5 TEST BEAM IN THE MESON AREA
DEFERRED	16 MAY 77	PENDING THE RESULTS OF TESTS IN THE M5 BEAM

---

551 DIRECT PHOTONS #551 LONGO, MICHAEL J.

BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORY: HED6(B)

MICHIGAN, UNIVERSITY OF

MEASUREMENT OF DIRECT PHOTON PRODUCTION FROM P - P COLLISIONS AT LARGE TRANSVERSE MOMENTUM.

REQUEST	6 MAY 77	1,000 HOURS INCLUDING 300 HOURS FOR TUNING AND 500 HOURS FOR DATA AT 400 GEV AND ABOUT 200 HOURS AT 100 GEV; TESTING TIME IN THE M3-BEAM IS ALSO REQUESTED
REJECTED	24 JUN 77	

---

552 P-N SCATTERING #552 SANNES, FELIX

BEAM: INTERNAL TARGET AREA-(C-0)
PHYSICS CATEGORIES: HED2, HED6(A), HED6(D)

IMPERIAL COLLEGE, LONDON (GREAT BRITAIN)
ROCHESTER, UNIVERSITY OF
RUTGERS UNIVERSITY

A PROPOSAL TO STUDY P - P ELASTIC AND P - D COHERENT SCATTERING.

REQUEST	6 MAY 77	900 HOURS
APPROVED	25 JUN 77	800 HOURS CONDITIONAL ON CRYOGENIC OPERATION OF THE INTERNAL TARGET AREA
COMPLETED	9 APR 78	950 HOURS

---

553 NEUTRINO #553 HAND, LOUIS N.

BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM
PHYSICS CATEGORIES: S5(A)3, E2

CORNELL UNIVERSITY
FERMI NATIONAL ACCELERATOR LABORATORY
HOUSTON, UNIVERSITY OF
LUND, UNIVERSITY OF, LUND (SWEDEN)
PITTSBURGH, UNIVERSITY OF
SYDNEY, UNIVERSITY OF, SYDNEY (AUSTRALIA)
YORK UNIVERSITY, DOWNSVIEW (CANADA)

A PROPOSAL TO SEARCH FOR SHORT-LIVED PARTICLES PRODUCED BY ANTINEUTRINOS AND NEUTRINOS
(USING A HYBRID EMULSION-VISUAL DETECTER)

REQUEST	6 MAY 77	2,000 HOURS WITH A SPECIFIC REQUEST FOR 4 X 10 TO THE 18TH PROTONS
	5 MAR 79	2,500 HOURS TOTAL WITH AN ADDITIONAL 1,000 HOURS FOR A RUN OF AT LEAST 7 X 10 TO THE 18TH PROTONS WITH THE BROAD BAND BEAM TUNED FOR NEUTRINOS
APPROVED	24 JUN 77	PARASITIC RUNNING CONDITIONAL ON REVIEW OF DETECTOR TESTS
	16 NOV 77	PARASITIC RUNNING CONDITIONAL ON REVIEW OF DETECTOR TESTS IN JANUARY 1978
IN PROGRESS	1 APR 79	1,500 HOURS

---

554 PI - P ELASTIC SCATTERING #554 RUBINSTEIN, ROY

BEAM: MESON AREA-M6 BEAM
PHYSICS CATEGORY: HED2

ARIZONA, UNIVERSITY OF
FERMI NATIONAL ACCELERATOR LABORATORY

PROPOSAL TO MEASURE LARGE ANGLE PI - P ELASTIC SCATTERING.
(USING THE SPECTROMETER ORIGINALLY CONSTRUCTED FOR EXP #290)

REQUEST	6 MAY 77	800 HOURS INCLUDING 100 HOURS FOR SETUP AND 700 HOURS FOR DATA AT 200 GEV
REJECTED	30 JUN 77	SEE PROPOSAL #577

---

555 NEUTRAL HYPERON #555 DEVLIN, THOMAS J.

BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORIES: HED9, HED6(B)

MICHIGAN, UNIVERSITY OF
MINNESOTA, UNIVERSITY OF
RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

A PROPOSAL TO STUDY CROSS SECTIONS AND POLARIZATION IN NEUTRAL STRANGE PARTICLE PRODUCTION AT HIGH TRANSVERSE MOMENTUM.
(USING THE NEUTRAL HYPERON BEAM AND ASSOCIATED EXPERIMENTAL APPARATUS)

REQUEST	6 MAY 77	250 HOURS FOR TUNEUP AND DATA
	19 MAY 78	530 HOURS FOR TUNING AND DATA AT INTENSITIES OF 1 X 10 TO THE 11TH PER PULSE
APPROVED	15 NOV 78	450 HOURS

SET UP IN A YEAR

---

556 MUON #556 CHEN, K. WENDELL MICHIGAN STATE UNIVERSITY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM PENNSYLVANIA, UNIVERSITY OF
PHYSICS CATEGORY: EH4 WISCONSIN, UNIVERSITY OF
SEARCH FOR HIGH P-TRANSVERSE JETS IN DEEP INELASTIC MUON SCATTERING.
(USING THE FERMI CYCLOTRON SPECTROMETER FACILITY WITH MODIFICATIONS)
REQUEST 6 MAY 77 500 HOURS FOR DATA WITH A MUON INTENSITY OF 5 X 10 TO THE 6TH/PULSE WITH POSSIBLE USE OF THE M1 BEAM IN THE MESON AREA AS A MUON BEAM
REJECTED 24 JUN 77

---

557 HADRON JETS #557 MALAMUD, ERNEST CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: MESON AREA-M6 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED8(C) ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE
INDIANA UNIVERSITY
MARILAND, UNIVERSITY OF
PROPOSAL TO STUDY HADRON JETS WITH THE CALORIMETER TRIGGERED MULTIPARTICLE SPECTROMETER.
(CONTINUATION OF WORK BEGUN IN EXP #260)
REQUEST 9 MAY 77 1,600 HOURS FOR DATA WITH A SUGGESTED RUN PLAN AS FOLLOWS - 400 HOURS AT 200 GEV, 800 HOURS WITH UPGRADED M6-BEAM AT 300 GEV, AND 400 HOURS AT 400 GEV
APPROVED 24 JUN 77 1,600 HOURS CONDITIONAL ON A BETTER UNDERSTANDING OF BEAM REQUIREMENTS FOR THE EXPERIMENT AFTER AN UPGRADING OF THE M6 BEAM
BEING INSTALLED

---

558 30-INCH PI&K - P @ 100 #558 SHEPHARD, WILLIAM D. DUKE UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM NOTRE DAME, UNIVERSITY OF
PHYSICS CATEGORIES: HBC1, HBC2
PROPOSAL FOR A HIGH-STATISTICS STUDY OF PI PLUS/MINUS P AND K PLUS P INTERACTIONS AT 100 GEV UTILIZING THE FERMILAB 30-INCH HYDROGEN BUBBLE CHAMBER HYBRID SYSTEM WITH EXTENDED DOWNSTREAM PARTICLE IDENTIFICATION.
REQUEST 10 MAY 77 2,250K PIX TO BE RUN SIMULTANEOUSLY WITH THE EXPOSURE FOR 30-INCH HYBRID EXP #394
INACTIVE 3 FEB 78

---

559 DI-HADRON #559 MCCARTHY, ROBERT L. COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(WEST) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED8(C) NEW YORK, STATE UNIVERSITY OF, STONY BROOK
STUDY OF CONSTITUENT SCATTERING IN HADRONIC COLLISIONS.
(THROUGH STUDY OF HIGH-PT HADRON PRODUCTION INTO A TWO-ARM MAGNETIC SPECTROMETER)
REQUEST 10 MAY 77 1,400 HOURS TO BE RUN IN THE HIGH INTENSITY BEAM AT 130 GEV WITH APPROXIMATELY 3 X 10 TO THE 13TH PROTONS PER PULSE ON THE PRODUCTION TARGET
REJECTED 25 JUN 77 SEE PROPOSAL #586

---

560 NEUTRINO #560 TOOHIG, TIMOTHY FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-MISCELLANEOUS
PHYSICS CATEGORY: W1
A TEST OF MUON-ELECTRON UNIVERSALITY.
(USING AN ELECTRON-NEUTRINO BEAM TO FIT INTO THE EXISTING MESON TARGET BOX WITH AN ELECTRONIC DETECTOR IN THE VICINITY OF THE M3-BEAM OF THE MESON AREA)
REQUEST 10 MAY 77 UNSPECIFIED
REJECTED 25 JUN 77

---

561 NEUTRINO #561 KOTZER, PETER WASHINGTON, UNIVERSITY OF
BEAM: MISCELLANEOUS AREA 1 WESTERN WASHINGTON UNIVERSITY
PHYSICS CATEGORY: W1
A STUDY OF NEUTRINO INTERACTIONS IN A WATER TARGET AT GREAT DISTANCES FROM THEIR SOURCE.
(USING A NEW NEUTRINO BEAM LINE DIRECTED TOWARD PUGET SOUND)
REQUEST 10 MAY 77 UNSPECIFIED
REJECTED 30 JUN 78

---

562 NEUTRINO #562 HYMAN, LLOYD G. ARGONNE NATIONAL LABORATORY
BEAM: NEUTRINO AREA-NEUTRINO BEAM CARNEGIE-MELLON UNIVERSITY
PHYSICS CATEGORY: W2 KANSAS, UNIVERSITY OF
MICHIGAN STATE UNIVERSITY
NOTRE DAME, UNIVERSITY OF
PURDUE UNIVERSITY
A NEW NEUTRINO CHARM FACILITY.
(WITH A NEW NEUTRINO BEAM PRODUCED BY PROTONS OF 125 GEV DIRECTED AT THE 15-FOOT OR ANL 12-FOOT CHAMBER MOVED TO FERMILAB)
REQUEST 10 MAY 77 2,000K PIX TO INCLUDE AN EXPOSURE OF 1 X 10 TO THE 19TH PROTONS FOR PRODUCTION OF NEUTRINOS WITH A DEUTERIUM FILL AND AN EQUAL EXPOSURE WITH A LIGHT HYDROGEN/NEON FILL
REJECTED 24 JUN 77

---

563 NEUTRINO #563 WALKER, JAMES K. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-NEUTRINO BEAM NORTHERN ILLINOIS UNIVERSITY
PHYSICS CATEGORIES: W1, S3(A)2, S4(A)2 NORTHWESTERN UNIVERSITY
PROPOSAL FOR A NEW NEUTRINO DETECTOR AT FERMILAB.
(WITH MODIFICATIONS PROPOSED FOR THE EXISTING NEUTRINO DETECTOR IN LAB C)
REQUEST 10 MAY 77 3,000 HOURS WITH NUMBERS OF EVENTS CALCULATED ASSUMING A TOTAL PROTON FLUX OF 6 X 10 TO THE 18TH
REJECTED 24 JUN 77 BUT WITH ENCOURAGEMENT FOR FURTHER DETECTOR DEVELOPMENT WORK

---

564 15-FOOT & EMULSION/NEUTRINO#564 VOYVODIC, LOUIS FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM INST. OF THEORETICAL&EXPERIMENTAL PHYSICS,MOSCOW (USSR)
PHYSICS CATEGORIES: S5(A)3, E2 INSTITUTE OF HIGH ENERGY PHYSICS, SERPUKHOV (USSR)
INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA (USSR)
KANSAS, UNIVERSITY OF
WASHINGTON, UNIVERSITY OF
DIRECT DETECTION OF SHORT-LIVED PARTICLES FROM NEUTRINO INTERACTIONS IN NUCLEAR EMULSIONS INSIDE THE 15-FOOT BUBBLE CHAMBER.
REQUEST 11 MAY 77 1,500 HOURS WITH A SPECIFIC REQUEST FOR NEUTRINOS FROM A TOTAL PROTON FLUX OF 3 X 10 TO THE 18TH; RUNNING IS PROPOSED DURING THE 15-FOOT RUNNING PERIOD WITH A DEUTERIUM FILL PLANNED FOR THE SPRING OF 1978
8 MAY 79 1,100 HOURS ADDITIONAL TO BE RUN PARASITICALLY IN THE 15-FT CHAMBER. FILM FROM TWO AUXILIARY CAMERAS IS REQUESTED FOR THE NEUTRINO PORTION OF THE RUNNING
APPROVED 24 JUN 77 PARASITIC RUNNING WITH THE UNDERSTANDING THAT THE EXPERIMENT IMPOSE ONLY A SMALL IMPACT ON THE 15-FT CHAMBER OPERATIONS
COMPLETED 21 JAN 79 EMULSION EXPOSURE

---

565 30-INCH HYBRID #565 YAMAMOTO, RICHARD K. BROWN UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM CERN
PHYSICS CATEGORY: HBC1 INDIANA UNIVERSITY
ISRAEL INST OF TECHNOLOGY, TECHNION CITY, HAIFA(ISRAEL)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
NIJMEGEN UNIVERSITY, NIJMEGEN (NETHERLANDS)
OAK RIDGE NATIONAL LABORATORY
PADOVA, UNIVERSITY OF (ITALY)
PAVIA, UNIVERSITY OF (ITALY)
ROME, UNIVERSITY OF, (ITALY)
RUTGERS UNIVERSITY
STEVENS INSTITUTE OF TECHNOLOGY
TEL-AVIV, UNIVERSITY OF, TEL-AVIV (ISRAEL)
TENNESSEE, UNIVERSITY OF
TOHOKU UNIVERSITY (JAPAN)
TRIESTE, UNIVERSITAT DEGLI STUDI DI (ITALY)

UNIVERSITE DE L'ETAT, MONS (BELGIUM)
WEIZMANN INSTITUTE OF SCIENCE, REHOVOT (ISRAEL)
YALE UNIVERSITY

A STUDY OF THE DETAILED CHARACTERISTICS OF HADRON-NUCLEUS COLLISIONS USING THE FERMILAB HYBRID SPECTROMETER.
(THE EXPERIMENT WOULD BE RUN WITH ALUMINUM, SILVER, AND GOLD FOIL TARGETS MOUNTED INSIDE THE 30-INCH HYDROGEN-FILLED BUBBLE CHAMBER)

REQUEST 2 JUN 77 3,000K PIX IN A 400 GEV PROTON BEAM (400 HOURS, 1,000K PIX) AND A 200 GEV PROTON PLUS PION BEAM (800 HOURS, 2,000K PIX)
7 FEB 78 2,000K PIX TO BE TAKEN AS FOLLOWS- 500K PIX WITH 200 GEV INCIDENT PROTONS
500K PIX WITH 200 GEV INCIDENT PI+
800K PIX WITH 200 GEV INCIDENT PI-
200K PIX WITH 400 GEV INCIDENT PROTONS

APPROVED 16 MAR 78 PARASITIC RUNNING WITH EXP #570
UNSCHEDULED

---

566 15-FOOT NEUTRINO/H2 & NE #566 BALTAY, CHARLES — COLUMBIA UNIVERSITY
BEAM: NEUTRINO AREA-SSBT NEUTRINO BEAM — MICHIGAN, UNIVERSITY OF
PHYSICS CATEGORY: W2

PROPOSAL TO MEASURE THE NEUTRAL TO CHARGED CURRENT RATIO FOR ELECTRON NEUTRINOS.
(THE EXPERIMENT WOULD USE THE SIGN SELECTED BARE TARGET BEAM WITH THE DIPOLES OPERATED TO SUPPRESS TWO-BODY CHARGED PION AND KAON DECAYS)

REQUEST 2 JUN 77 250K PIX IN THE 15-FOOT CHAMBER FILLED WITH A HEAVY NEON-HYDROGEN MIXTURE AND EXPOSED TO AN ELECTRON-NEUTRINO BEAM FOR 5 X 10 TO THE 18TH PROTONS

REJECTED 24 JUN 77

---

567 PARTICLE SEARCH #567 WITHERELL, MICHAEL — BROOKHAVEN NATIONAL LABORATORY
BEAM: PROTON AREA-(WEST) — CENTRE DE RECHERCHES NUCLEAIRES DE SACLAY (FRANCE)
PHYSICS CATEGORY: S5(B)2 — FERMI NATIONAL ACCELERATOR LABORATORY
PRINCETON UNIVERSITY
TORINO, UNIVERSITA DI, TORINO (ITALY)

SEARCH FOR CHARM PRODUCTION IN 200 GEV/C HADRON INTERACTIONS.
(USING THE SPECTROMETER FOR EXP #302 WITH ADDITIONS)

REQUEST 13 JUN 77 500 HOURS
APPROVED 24 JUN 77 500 HOURS WITH 100 HOURS FOR CHECKOUT AND 400 HOURS FOR DATA-TAKING
IN PROGRESS 1 APR 79 600 HOURS

---

568 EMULSION/PI- @ 300 #568 HEBERT, JACQUES D. — BELGRADE, UNIVERSITY OF, BELGRADE (YUGOSLAVIA)
BEAM: NEUTRINO AREA-MISCELLANEOUS — CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
PHYSICS CATEGORY: E1 — FERMI NATIONAL ACCELERATOR LABORATORY
LAB. DU RAYONNEMENT COSMIQUE, LYON (FRANCE)
LUND, UNIVERSITY OF, LUND (SWEDEN)
NANCY, UNIVERSITE DE, NANCY (FRANCE)
OTTAWA, UNIVERSITE D', (CANADA)
PARIS VI, U. DE, LAB. PHYSIQUE GENERALE, (FRANCE)
SANTANDER, UNIVERSIDAD DE, SANTANDER (SPAIN)
VALENCIA, UNIVERSIDAD DE (SPAIN)

300 GEV PION INTERACTIONS IN NUCLEAR EMULSION.

REQUEST 8 AUG 77 EMULSION EXPOSURE OF 3 STACKS IN A NEGATIVE BEAM OF ABOUT 30K PARTICLES PER CM SQ.
APPROVED 16 SEP 77 EMULSION EXPOSURE OF 3 STACKS IN A 300 GEV NEGATIVE BEAM WITH A FLUX OF 30K PARTICLES PER CM SQ OVER AN AREA OF 3 X 3 CM SQ
COMPLETED 15 JAN 78 3 STACKS

---

569 NUCLEAR SCALING #569 LEKSIN, GEORGI A. — INST. OF THEORETICAL&EXPERIMENTAL PHYSICS,MOSCOW (USSR)
BEAM: PROTON AREA-(WEST)
PHYSICS CATEGORY: HED6(A)

A STUDY OF THE NUCLEAR SCALING PHENOMENON AT HIGH ENERGIES.
(USING THE APPARATUS OF EXP #284)

REQUEST 30 AUG 77 250 HOURS TO INCLUDE 100 HOURS FOR TESTING. THE EXPERIMENT WOULD BE RUN IN A PROTON BEAM AT ABOUT 2 X 10 TO THE 11TH PROTONS PER PULSE

REJECTED 15 NOV 77 SEE PROPOSAL #592

---

570 30-INCH HYBRID #570 PLESS, IRWIN A. — BROWN UNIVERSITY
BEAM: NEUTRINO AREA-30-IN HADRON BEAM — CERN
PHYSICS CATEGORIES: HBC1, HBC2 — INDIANA UNIVERSITY
ISRAEL INST OF TECHNOLOGY, TECHNION CITY, HAIFA(ISRAEL)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
NIJMEGEN UNIVERSITY, NIJMEGEN (NETHERLANDS)
OAK RIDGE NATIONAL LABORATORY
PADOVA, UNIVERSITY OF (ITALY)
PAVIA, UNIVERSITY OF (ITALY)
ROME, UNIVERSITY OF, (ITALY)
RUTGERS UNIVERSITY
STEVENS INSTITUTE OF TECHNOLOGY
TEL-AVIV, UNIVERSITY OF, TEL-AVIV (ISRAEL)
TENNESSEE, UNIVERSITY OF
TOHOKU UNIVERSITY (JAPAN)
TRIESTE, UNIVERSITAT DEGLI STUDI DI (ITALY)
UNIVERSITE DE L'ETAT, MONS (BELGIUM)
WEIZMANN INSTITUTE OF SCIENCE, REHOVOT (ISRAEL)
YALE UNIVERSITY

PROPOSAL FOR A STUDY OF PARTICLE PRODUCTION AND DYNAMICS FROM X = 0 TO X = 1 AND THE DEPENDENCE ON INCIDENT QUANTUM NUMBERS.
(SUPERCEDES PROPOSAL #488. WILL USE THE FORWARD GAMMA DETECTOR AND THE DOWNSTREAM ISIS SYSTEM WITH THE 30-INCH HYBRID SPECTROMETER)

REQUEST 16 SEP 77 2,000K PIX TO BE TAKEN WITH THE 30-INCH HYBRID SPECTROMETER EXPOSED TO TWO BEAMS, 1,000K PIX IN A POSITIVE BEAM WITH 10% K+ AND EQUAL FRACTIONS OF PROTONS AND PI+, AND 1,000K PIX IN A NEGATIVE BEAM WITH 20% PBARS

APPROVED 16 MAR 78 1,500 HOURS FOR A RUN OF 15 WEEKS DURATION; COMBINED WITH EXP #565
UNSCHEDULED

---

571 QUARK SEARCH #571 OLSEN, STEPHEN L. — ROCHESTER, UNIVERSITY OF
BEAM: INTERNAL TARGET AREA-(C-0) — RUTGERS UNIVERSITY
PHYSICS CATEGORY: S2

A PROPOSAL TO SEARCH FOR INTEGER CHARGED QUARKS.
(USING THE SUPERCONDUCTING SPECTROMETER AND WARM JET TARGET IN THE INTERNAL TARGET AREA)

REQUEST 3 OCT 77 300 HOURS
INACTIVE 21 MAR 78

---

572 NEUTRINO #572 REEDER, DON D. — FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-NEUTRINO BEAM — NORTHWESTERN UNIVERSITY
PHYSICS CATEGORY: W1 — OHIO STATE UNIVERSITY
PENNSYLVANIA, UNIVERSITY OF
RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

PROPOSAL TO ASSEMBLE A HIGH RESOLUTION, ELECTRON SENSITIVE, ENERGY FLOW CALORIMETER IN THE NEULAND SPECTROMETER.
(WITH MODIFICATION OF DETECTORS IN LAB C)

REQUEST 3 OCT 77 6,500 HOURS TO INCLUDE GREATER THAN 6 X 10 TO THE 18TH PROTONS ON THE DICHROMATIC TRAIN FOR NEUTRINOS AND ANTINEUTRINOS, AND 2 X 10 TO THE 19TH PROTONS ON THE LONG SPILL DOUBLE HORN TRAIN FOR NEUTRINOS AND ANTINEUTRINOS

WITHDRAWN 6 FEB 78

---

573 EMULSION/PI- @ 300 #573 USHIDA, NORIYUKI — AICHI UNIVERSITY OF EDUCATION, KARIYA (JAPAN)
BEAM: NEUTRINO AREA-MISCELLANEOUS — NAGOYA UNIVERSITY, NAGOYA (JAPAN)
PHYSICS CATEGORY: E1 — YOKOHAMA NATIONAL UNIVERSITY, YOKOHAMA (JAPAN)

A SEARCH FOR CHARMED PARTICLES PRODUCED BY 300 GEV/C NEGATIVE PIONS IN NUCLEAR EMULSION.

REQUEST 29 NOV 77 3 STACKS EXPOSED IN A NEGATIVE PION BEAM TO AN INTEGRATED FLUX OF 7.5 X 10 TO THE 3RD PARTICLES PER CM SQ
APPROVED 29 NOV 77 3 STACKS
COMPLETED 15 JAN 78 3 STACKS

---

574 EMULSION/PI- @ 300 #574 WOLTER, WLADYSLAW INSTITUTE OF NUCLEAR PHYSICS, CRACOW (POLAND)
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
A STUDY OF THE MECHANISM FOR MULTIPLE PRODUCTION OF PARTICLES AT OR ABOVE 300 GEV PION INTERACTIONS IN NUCLEAR EMULSION.
REQUEST 1 DEC 77 3 STACKS EXPOSED IN A 300 GEV NEGATIVE PION BEAM TO AN INTEGRATED INTENSITY OF 5 X 10 TO THE 4TH PARTICLES PER CM SQ
APPROVED 1 DEC 77 3 STACKS
COMPLETED 18 JAN 78 4 STACKS

---

575 EMULSION/PROTONS @ 400 #575 LORD, JERE J. WASHINGTON, UNIVERSITY OF
BEAM: NEUTRINO AREA-MISCELLANEOUS
PHYSICS CATEGORY: E1
PROPOSAL TO STUDY 400 GEV PROTON INTERACTIONS IN NUCLEAR EMULSION.
REQUEST 13 DEC 77 2 STACKS TO BE EXPOSED IN A 400 GEV PROTON BEAM FOCUSED TO A DIAMETER OF LESS THAN 5-10 MM. ONE STACK TO RECEIVE A TOTAL DOSE OF 100K P/CM SQ AND THE OTHER 200K P/CM SQ
APPROVED 13 DEC 77 2 STACKS
COMPLETED 15 JAN 78 2 STACKS

---

576 EMULSION/PROTONS @ 500 #576 HEBERT, JACQUES D. BELGRADE, UNIVERSITY OF, BELGRADE (YUGOSLAVIA)
BEAM: NEUTRINO AREA-MISCELLANEOUS CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
PHYSICS CATEGORY: E1 FERMI NATIONAL ACCELERATOR LABORATORY
LUND, UNIVERSITY OF, LUND (SWEDEN)
LYON, UNIVERSITE DE (FRANCE)
NANCY, UNIVERSITE DE, NANCY (FRANCE)
OTTAWA, UNIVERSITE D', (CANADA)
PARIS VI, U. DE, LAB. PHYSIQUE GENERALE, (FRANCE)
SANTANDER, UNIVERSIDAD DE, SANTANDER (SPAIN)
VALENCIA, UNIVERSIDAD DE (SPAIN)
500 GEV PROTON INTERACTIONS IN NUCLEAR EMULSION
REQUEST 21 DEC 77 3 STACKS EXPOSED IN A 500 GEV PROTON BEAM TO A TOTAL INTEGRATED FLUX OF 3 X 10 TO THE 4TH PARTICLES PER CM SQ
APPROVED 20 FEB 78 3 STACKS
UNSCHEDULED

---

577 ELASTIC SCATTERING #577 RUBINSTEIN, ROY ARIZONA, UNIVERSITY OF
BEAM: MESON AREA-M6 BEAM CALIFORNIA, UNIVERSITY OF, SAN DIEGO
PHYSICS CATEGORY: HED2 CORNELL UNIVERSITY
FERMI NATIONAL ACCELERATOR LABORATORY
NORTH CENTRAL COLLEGE
NORTHEASTERN UNIVERSITY
PROPOSAL TO MEASURE PI P ELASTIC SCATTERING AT LARGE ANGLES.
REQUEST 30 JAN 78 1,000 HOURS TO BE RUN IN A 200 GEV INCIDENT BEAM WITH A BEAM FLUX BETWEEN 5 X 10 TO THE 7TH AND 5 X 10 TO THE 8TH PIONS PER PULSE
APPROVED 29 JUN 78 1,000 HOURS
BEING INSTALLED

---

578 PARTICLE SEARCH #578 LONGO, MICHAEL J. MICHIGAN, UNIVERSITY OF
BEAM: PROTON AREA-(WEST)
PHYSICS CATEGORY: S6
A SENSITIVE SEARCH FOR MASSIVE LONG-LIVED PARTICLES.
REQUEST 30 JAN 78 700 HOURS TO BE RUN IN A 50-GEV PION BEAM WITH AN INCIDENT FLUX OF 10 TO THE 9TH PIONS PER PULSE
REJECTED 16 MAR 78

---

579 INCLUSIVE NEUTRON #579 JONES, LAWRENCE W. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM
PHYSICS CATEGORY: HED6(B)
STUDY OF POLARIZATION OF INCLUSIVELY PRODUCED NEUTRONS.
REQUEST 31 JAN 78 800 HOURS TO BE RUN IN A NEUTRAL BEAM WITH AN INCIDENT FLUX OF 5 X 10 TO THE 5TH NEUTRONS PER PULSE
2 OCT 78 800 HOURS WITH A REDUCTION OF THE REQUIREMENTS OF EQUIPMENT FROM FERMILAB
REJECTED 15 NOV 78

---

580 PARTICLE SEARCH #580 JENKINS, EDGAR W. ARIZONA, UNIVERSITY OF
BEAM: MESON AREA-M6 BEAM BROOKHAVEN NATIONAL LABORATORY
PHYSICS CATEGORY: S5(B)2 FERMI NATIONAL ACCELERATOR LABORATORY
FLORIDA STATE UNIVERSITY
GEORGIA INSTITUTE OF TECHNOLOGY
MICHIGAN STATE UNIVERSITY
NOTRE DAME, UNIVERSITY OF
TUFTS UNIVERSITY
VANDERBILT UNIVERSITY
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY
A SEARCH FOR NARROW AND BROAD RESONANCES DECAYING INTO LAMBDA-LAMBDA BAR, LAMBDA-LAMBDA BAR-PI, K SHORT K SHORT AND K SHORT-K SHORT-PI FROM PI- P INTERACTIONS AT 300 GEV USING THE FERMILAB MPS.
REQUEST 31 JAN 78 800 HOURS TO BE RUN IN A PION BEAM WITH AN INCIDENT FLUX OF 1.5 X 10 TO THE 6TH PIONS PER PULSE AT 300 GEV
APPROVED 29 JUN 78 800 HOURS
SET UP IN A YEAR

---

581 POLARIZED SCATTERING #581 YOKOSAWA, AKIHIKO ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M2 BEAM KYOTO UNIVERSITY (JAPAN)
PHYSICS CATEGORIES: HED1, HED6(A) LAB. A PHYSIQUE DES PARTICULES, ANNECY-LE-VIEUX(FRANCE)
LAWRENCE BERKELEY LABORATORY
RICE UNIVERSITY
TRIESTE, UNIVERSITAT DEGLI STUDI DI (ITALY)
CONSTRUCTION OF A POLARIZED BEAM FACILITY IN THE MESON LABORATORY AND EXPERIMENTS USING SUCH A FACILITY.
(USING THE M2-BEAM CONVERTED TO A POLARIZED PROTON/ANTIPROTON BEAM)
REQUEST 31 JAN 78 1,200 HOURS TO INCLUDE- 600 HOURS FOR TOTAL CROSS SECTION DIFFERENCE MEASUREMENTS
600 HOURS FOR ASYMMETRY MEASUREMENTS IN INCLUSIVE PION PRODUCTION
30 JAN 79 1,670 HOURS TO INCLUDE- 200 HOURS FOR BEAM MEASUREMENTS
1,000 HOURS FOR HIGH P-TRANSVERSE PHYSICS
220 HOURS FOR CROSS SECTION MEASUREMENTS
250 HOURS FOR HADRON PRODUCTION AT LARGE-X
REJECTED 22 MAR 79

---

582 POLARIZED SCATTERING #582 YOKOSAWA, AKIHIKO ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M3 BEAM KYOTO UNIVERSITY (JAPAN)
PHYSICS CATEGORIES: HED8(C), HED6(A) LAB. A PHYSIQUE DES PARTICULES, ANNECY-LE-VIEUX(FRANCE)
LAWRENCE BERKELEY LABORATORY
LEHIGH UNIVERSITY
PENNSYLVANIA, UNIVERSITY OF
RICE UNIVERSITY
TRIESTE, UNIVERSITAT DEGLI STUDI DI (ITALY)
WISCONSIN, UNIVERSITY OF
MEASUREMENT OF THE ASYMMETRY IN HIGH-P TRANSVERSE EVENTS USING A POLARIZED PROTON BEAM AND TARGET.
(USING THE M3-BEAM CONVERTED TO A POLARIZED-PROTON BEAM)
REQUEST 31 JAN 78 750 HOURS TO INCLUDE- 150 HOURS FOR CHECKOUT AND CALIBRATION

50 HOURS FOR POLARIZATION MEASUREMENTS AT 200 GEV
50 HOURS FOR POLARIZATION MEASUREMENTS AT 300 GEV
250 HOURS FOR SPIN-SPIN ASYMMETRY MEASUREMENTS AT 200 GEV
250 HOURS FOR SPIN-SPIN ASYMMETRY MEASUREMENTS AT 300 GEV

REJECTED 29 JUN 78

---

583 DI-MUON #583 RUTHERFOORD, JOHN P. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM NORTHEASTERN UNIVERSITY
PHYSICS CATEGORY: HED8(D) WASHINGTON, UNIVERSITY OF

PROPOSAL TO MEASURE ASYMMETRIES IN MU-PAIR PRODUCTION
REQUEST 31 JAN 78 2,500 HOURS TO BE RUN IN AN UPGRADED VERSION OF THE M2 BEAM AT AN INCIDENT INTENSITY OF MORE THAN 10 TO THE 12TH PROTONS PER PULSE
REJECTED 15 NOV 78

---

584 PARTICLE SEARCH #584 WINSTEIN, BRUCE D. CHICAGO, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM STANFORD UNIVERSITY
PHYSICS CATEGORY: S6 WISCONSIN, UNIVERSITY OF

PROPOSAL TO SEARCH FOR THE DECAY OF NEW LONG-LIVED NEUTRAL PARTICLES WITH A MASS AND LIFETIME EXCEEDING THAT OF THE K LONG
REQUEST 31 JAN 78 300 HOURS TO BE RUN IN THE M3 BEAM AS MODIFIED FOR EXPERIMENT #533
APPROVED 29 JUN 78 300 HOURS WITH LOW PRIORITY
SET UP IN A YEAR

---

585 KAON CHARGE EXCHANGE #585 FRANCIS, WILLIAM R. CALIFORNIA, UNIVERSITY OF, DAVIS
BEAM: MESON AREA-M4 BEAM CALIFORNIA, UNIVERSITY OF, SAN DIEGO
PHYSICS CATEGORY: HED3 CARLETON UNIVERSITY (CANADA)
MICHIGAN STATE UNIVERSITY

A PROPOSAL TO STUDY EXCLUSIVE KN CHARGE EXCHANGE AT FERMILAB.
(THE SPECTROMETER FROM EXPERIMENT #383 WOULD BE USED)
REQUEST 31 JAN 78 600 HOURS TO BE RUN IMMEDIATELY FOLLOWING THE CONCLUSION OF EXP #383
13 NOV 78 2,700 HOURS FOR 7 WEEKS OF DATA TO FINISH K- RUNNING AND 9 WEEKS TO REPEAT THE EXPERIMENT WITH A K+ BEAM AND A DEUTERIUM TARGET
APPROVED 16 MAR 78 600 HOURS WITH CONDITIONS BEFORE THE MESON LABORATORY PAUSE
21 DEC 78 1,800 HOURS WITH THE APPROVAL OF AN ADDITIONAL 7 WEEKS OF RUNNING TO FINISH K- DATA; NO COMMITMENT IS MADE TO K+ RUNNING
IN PROGRESS 1 OCT 78 1,100 HOURS

---

586 DI-HADRON #586 MCCARTHY, ROBERT L. COLUMBIA UNIVERSITY
BEAM: MESON AREA-M1 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED8(C) NEW YORK, STATE UNIVERSITY OF, STONY BROOK

STUDY OF CONSTITUENT SCATTERING IN HADRONIC COLLISIONS.
REQUEST 31 JAN 78 1,400 HOURS TO BE RUN IN AN UPGRADED VERSION OF THE M1 BEAM. AN INCIDENT INTENSITY OF 10 TO THE 10TH PIONS PER PULSE IS ASSUMED
REJECTED 29 JUN 78

---

587 HADRON JETS #587 SCHLEIN, PETER E. CALIFORNIA, UNIVERSITY OF, LOS ANGELES
BEAM: PROTON AREA-(WEST)
PHYSICS CATEGORIES: HED6(B), HED8(C)

PROPOSAL TO STUDY HIGH MOMENTUM TRANSFER LAMBDA, LAMBDA BAR AND HADRON JETS
REQUEST 31 JAN 78 1,000 HOURS TO BE RUN IN A 400 GEV PROTON BEAM WITH A TUNGSTEN WIRE TARGET PRODUCING 5 X 10 TO THE 6TH INTERACTIONS PER PULSE
REJECTED 29 JUN 78

---

588 INCLUSIVE SCATTERING #588 ELIAS, JOHN E. BARI, UNIVERSITY OF (ITALY)
BEAM: MESON AREA-M6 BEAM BROWN UNIVERSITY
PHYSICS CATEGORY: HED6(A) FERMI NATIONAL ACCELERATOR LABORATORY

INCLUSIVE POWER LAW DISTRIBUTIONS FOR NON-LEADING PARTICLES PRODUCED IN HADRON COLLISIONS.
REQUEST 31 JAN 78 600 HOURS TO BE RUN IN A 100 GEV BEAM WITH AN INCIDENT INTENSITY OF 10 TO THE 7TH PARTICLES PER PULSE
REJECTED 29 JUN 78

---

589 DI-MUON #589 MOCKETT, PAUL H. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM NORTHEASTERN UNIVERSITY
PHYSICS CATEGORY: HED8(D) TUFTS UNIVERSITY
WASHINGTON, UNIVERSITY OF

DI-MUON PRODUCTION WITH PI+ AND PI-
REQUEST 31 JAN 78 750 HOURS TO BE RUN IN A PION BEAM WITH INCIDENT INTENSITY OF ABOUT 10 TO THE 7TH PARTICLES PER PULSE AT 150 AND 280 GEV
UNCONSIDERED 31 JAN 78

---

590 HADRON JETS #590 YOUNG, KENNETH K. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M1 BEAM TUFTS UNIVERSITY
PHYSICS CATEGORY: HED8(C) WASHINGTON, UNIVERSITY OF

HADRON DISTRIBUTIONS IN HIGH P-TRANSVERSE COLLISIONS IN A VERY LARGE ACCEPTANCE CALORIMETER.
REQUEST 31 JAN 78 1,200 HOURS TO BE RUN IN AN UPGRADED MESON LABORATORY BEAM (M1 OR M2) AT AN INCIDENT INTENSITY OF 3 X 10 TO THE 6TH PARTICLES PER PULSE
REJECTED 29 JUN 78

---

591 PARTICLE SEARCH #591 GUTAY, LASZLO J. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: INTERNAL TARGET AREA-(C-0) PURDUE UNIVERSITY
PHYSICS CATEGORIES: S7, S8

BROAD SEARCH FOR NEW HADRONIC STATES VIA HIGH RESOLUTION CHARGE AND MASS DETERMINATION OF NUCLEAR FRAGMENTS
REQUEST 31 JAN 78 800 HOURS TO INCLUDE 200 HOURS FOR SETUP AND 600 HOURS FOR DATA
APPROVED 21 APR 78 800 HOURS
BEING INSTALLED

---

592 NUCLEAR SCALING #592 FRANKEL, SHERMAN INST. OF THEORETICAL&EXPERIMENTAL PHYSICS,MOSCOW (USSR)
BEAM: PROTON AREA-(WEST) PENNSYLVANIA, UNIVERSITY OF
PHYSICS CATEGORY: HED6(A) WILLIAM AND MARY, COLLEGE OF

PROPOSAL FOR EXPERIMENTAL STUDY OF THE RELATIONSHIP BETWEEN HADRONIC AND NUCLEAR SCALING AT VERY HIGH ENERGIES
REQUEST 31 JAN 78 300 HOURS TO BE RUN IN A 400 GEV PROTON BEAM AT AN UPSTREAM LOCATION IN P-WEST
APPROVED 17 MAR 78 300 HOURS TO BE RUN IN SUCH A MANNER AS NOT TO INTERFERE WITH THE INSTALLATION OF THE P-WEST PION BEAM
COMPLETED 17 JUL 78 500 HOURS

---

593 BEAM DUMP #593 FRY, WILLIAM F. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-NEUTRINO BEAM OHIO STATE UNIVERSITY
PHYSICS CATEGORIES: W1, W2 PENNSYLVANIA, UNIVERSITY OF
RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

A COORDINATED APPROACH TO A BEAM DUMP EXPERIMENT AT FERMILAB USING THE 15-FT BUBBLE CHAMBER AND THE EXPERIMENT #310 DETECTOR.
REQUEST 31 JAN 78 300 HOURS OR 1 X 10 TO THE 18TH PROTONS
REJECTED 16 MAR 78 SEE PROPOSAL #603

---

594 NEUTRINO #594 TAYLOR, FRANK FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM MASSACHUSETTS INSTITUTE OF TECHNOLOGY
PHYSICS CATEGORY: W1 MICHIGAN STATE UNIVERSITY
NORTHERN ILLINOIS UNIVERSITY

PROPOSAL FOR A NEW NEUTRINO DETECTOR AT FERMILAB.
REQUEST 1 FEB 78 2,500 HOURS FOR DATA TO INCLUDE- EXPERIMENT A-(A STUDY OF SEMI-LEPTONIC NEUTRAL CURRENT REACTIONS) TO REQUIRE 6 X 10 TO THE 18TH PROTONS UTILIZING THE NARROW BAND BEAM SET AT 250 GEV
EXPERIMENT B-(NEUTRINO ELECTRON ELASTIC SCATTER-

ING) TO REQUIRE 6 X 10 TO THE 18TH PROTONS UTILIZING THE TWO-HORN BEAM

APPROVED 16 MAR 78 PARASITIC RUNNING USING BEAMS THAT WILL BE MADE AVAILABLE FOR RUNS OF OTHER NEUTRINO EXPERIMENTS DURING 1979

BEING INSTALLED

---

595 PARTICLE SEARCH #595 BODEK, ARIE CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-15-FT HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: S5(B)6, S8 ROCHESTER, UNIVERSITY OF
STANFORD UNIVERSITY

A STUDY OF CHARM AND OTHER NEW FLAVORS PRODUCED IN PION-NUCLEON COLLISIONS.
(CONTINUATION OF WORK BEGUN IN EXP #379)
REQUEST 1 FEB 78 1,000 HOURS TO INCLUDE 400 HOURS AT 300 GEV WITH AN INCIDENT INTENSITY OF 10 TO THE 5TH PI- PER PULSE AND 400 HOURS AT 250-300 GEV WITH INCIDENT INTENSITY OF 10 TO THE 6TH PI- PER PULSE
APPROVED 29 JUN 78 600 HOURS FOR THE LOW-PT PART OF THE EXPERIMENT
IN TEST STAGE 1 APR 79 500 HOURS

---

596 PARTICLE SEARCH #596 LEDERMAN, LEON M. COLUMBIA UNIVERSITY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: S6 NEW YORK, STATE UNIVERSITY OF, STONY BROOK

ON SEARCHING FOR HEAVY STABLE PARTICLES
(A CONTINUATION OF WORK BEGUN WITH EXP #187)
REQUEST 3 FEB 78 150 HOURS TO BE RUN WITH THE BEAM TUNED TO 75 GEV AND ASSUMING 10 TO THE 13TH PRIMARY PROTONS INCIDENT PER PULSE
APPROVED 1 MAY 78 150 HOURS
COMPLETED 21 MAY 78 200 HOURS

---

597 30-INCH HYBRID #597 WHITMORE, J. JAMES CAVENDISH LABORATORY, CAMBRIDGE (GREAT BRITAIN)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM DUKE UNIVERSITY
PHYSICS CATEGORIES: HBC2, HBC1 FERMI NATIONAL ACCELERATOR LABORATORY
MICHIGAN STATE UNIVERSITY
NOTRE DAME, UNIVERSITY OF
STOCKHOLM, UNIVERSITY OF, STOCKHOLM (SWEDEN)

PROPOSAL FOR A HIGH STATISTICS STUDY OF PBAR-P ANNIHILATIONS AND A COMPARISON OF PBAR, P, PI+-, AND K+ INTERACTIONS ON HYDROGEN, MAGNESIUM, AND GOLD AT 100 GEV/C UTILIZING THE FERMILAB 30-INCH HYDROGEN BUBBLE CHAMBER AND DOWNSTREAM PARTICLE IDENTIFIER.
(THE USE OF THIN METALLIC FOIL TARGETS IN THE HYDROGEN IS REQUESTED)
REQUEST 3 FEB 78 1,450K PIX TO BE TAKEN AS FOLLOWS- 1,000K PIX IN NEGATIVE BEAM @ 100 GEV
400K PIX IN POSITIVE BEAM @ 100 GEV
50K PIX IN NEGATIVE BEAM @ 360 GEV
APPROVED 16 MAR 78 1,000 HOURS FOR A RUN OF 10 WEEKS DURATION
UNSCHEDULED

---

598 30-INCH HYBRID #598 BARNES, VIRGIL E. CENTRE DE RECHERCHES NUCLEAIRES, STRASBOURG (FRANCE)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM FLORIDA STATE UNIVERSITY
PHYSICS CATEGORIES: HBC2, HBC1 PURDUE UNIVERSITY

PROPOSAL FOR A HIGH-STATISTICS STUDY OF PBAR-P AND PI-P INTERACTIONS AT 50 GEV WITH THE FERMILAB 30-INCH HYDROGEN BUBBLE CHAMBER HYBRID SPECTROMETER WITH DOWNSTREAM PARTICLE IDENTIFIERS.
REQUEST 3 FEB 78 1,100K PIX TO BE TAKEN AS FOLLOWS- 1,000K PIX IN A NEGATIVE BEAM @ 50 GEV
100K PIX IN A POSITIVE BEAM @ 50 GEV
REJECTED 16 MAR 78

---

599 BEAM DUMP #599 MO, LUKE W. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M2 BEAM MARYLAND, UNIVERSITY OF
PHYSICS CATEGORY: W1 NATIONAL SCIENCE FOUNDATION
OXFORD, UNIVERSITY OF (GREAT BRITAIN)
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY

A PROMPT NEUTRINO EXPERIMENT IN THE MESON LABORATORY OF FERMILAB
(USING THE APPARATUS FROM EXPERIMENT #253 MOVED TO THE MESON AREA AND SUPPLEMENTED BY AN ANALYSIS MAGNET)
REQUEST 27 FEB 78 1,000 HOURS WITH AN INTENSITY OF 1 X 10 TO THE 13TH PROTONS/PULSE
9 MAY 78 1,000 HOURS WITH A PROTON INTENSITY OF 2 - 5 X 10 TO THE 12TH PER PULSE
11 OCT 78 1,000 HOURS WITH A PROTON INTENSITY OF 10 TO THE 12TH PER PULSE AT 400 GEV AND AT A BEAM DUMP ANGLE GREATER THAN 18 MR.
REJECTED 15 NOV 78

---

600 NEUTRINO #600 CRONIN, JAMES W. CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-W B HORN NEUTRINO BEAM
PHYSICS CATEGORY: W1

PROPOSAL TO STUDY NEUTRINO-ELECTRON AND ANTINEUTRINO-ELECTRON SCATTERING.
(USING A DETECTOR TANK OF DISTILLED WATER)
REQUEST 8 MAY 78 2,000 HOURS OR A TOTAL OF 1 X 10 TO THE 19TH PROTONS TO BE OBTAINED IN SEVERAL RUNS OVER A TWO-YEAR PERIOD IN THE WIDE BAND HORN-FOCUSED BEAM
REJECTED 29 JUN 78

601D NEUTRINO #601D MCINTYRE, PETER M. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM
PHYSICS CATEGORY: W2

ARGONAUT - A NOVEL DETECTOR FOR VERY HIGH ENERGY NEUTRINO INTERACTIONS.
(CONSISTING OF CYLINDRICAL LIQUID ARGON BUBBLE CHAMBER MODULES AND A MAGNETIZED IRON SPECTROMETER)
REQUEST 8 MAY 78 UNSPECIFIED
REJECTED 29 JUN 78

602D NEUTRINO #602D SESSOMS, ALLEN LEE CHICAGO, UNIVERSITY OF
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM HARVARD UNIVERSITY
PHYSICS CATEGORY: W1 ILLINOIS, UNIVERSITY OF

A PROPOSAL TO STUDY THE INTERACTIONS OF NEUTRINOS AND ANTINEUTRINOS AT THE ENERGY DOUBLER/SAVER.
(BASED ON USE OF LIQUID ARGON-IRON CALORIMETERS)
REQUEST 9 MAY 78 UNSPECIFIED BUT EVENT RATES BASED ON AN EXPOSURE TO A COULOMB OF PROTONS (6.25 X 10 TO THE 18TH)
REJECTED 29 JUN 78

---

603 BEAM DUMP #603 REEDER, DON D. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-NEUTRINO BEAM OHIO STATE UNIVERSITY
PHYSICS CATEGORIES: W1, W2 PENNSYLVANIA, UNIVERSITY OF
RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

A SEARCH FOR THE PRODUCTION OF PROMPT NEUTRINOS IN HIGH ENERGY PROTON NUCLEUS COLLISIONS.
(USING THE NEUTRINO DETECTOR IN LAB C SUPPLEMENTED BY LEAD-SCINTILLATOR SHOWER DETECTORS)
REQUEST 9 MAY 78 500 HOURS OR 2 X 10 TO THE 18TH PROTONS TO BE RUN AT 400 GEV WITH HALF THE RUN AT A PRODUCTION ANGLE OF ZERO DEGREES AND THE OTHER HALF AT 10 MR
REJECTED 29 JUN 78

---

604 PARTICLE SEARCH #604 JONES, LAWRENCE W. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M4 BEAM
PHYSICS CATEGORY: S6

A SENSITIVE SEARCH FOR MASSIVE NEUTRAL LONG-LIVED PARTICLES.
(AN EXTENSION OF WORK BEGUN IN EXPERIMENT #330)
REQUEST 9 MAY 78 600 HOURS
REJECTED 29 JUN 78

---

605 HIGH MASS PAIRS #605 BROWN, CHARLES N. CERN
BEAM: MESON AREA-M1 BEAM COLUMBIA UNIVERSITY
PHYSICS CATEGORIES: HED8(D), HED8(A), S8 FERMI NATIONAL ACCELERATOR LABORATORY
NEW YORK, STATE UNIVERSITY OF, STONY BROOK

WASHINGTON, UNIVERSITY OF

A STUDY OF LEPTONS AND HADRONS NEAR THE KINEMATIC LIMITS.
(USING AN APPARATUS WITH HIGHER LUMINOSITY AND ACCEPTANCE THAN EXPERIMENT #288)
REQUEST 9 MAY 78 4,000 HOURS TO BE RUN WITH AN INCIDENT INTENSITY GREATER THAN 10 TO THE 13TH PROTONS/PULSE AT AN ENERGY OF AT LEAST 400 GEV
28 NOV 78 4,000 HOURS IN THE PHASE 1 CONFIGURATION. AN INCIDENT BEAM OF 400 GEV PROTONS WOULD BE NEEDED WITH AN INTENSITY OF 3 X 10 TO THE 12TH PER PULSE
APPROVED 19 MAR 79 1,000 HOURS WITH THE PHASE I DETECTOR
UNSCHEDULED

---

606 PARTICLE SEARCH #606 HUGENTOBLER, E. BERN, UNIVERSITY OF (SWITZERLAND)
BEAM: NEUTRINO AREA-30-IN HADRON BEAM
PHYSICS CATEGORY: S5(B)5
SEARCH FOR SHORT LIVED PARTICLES USING A HIGH PRECISION MINI BUBBLE CHAMBER
REQUEST 31 MAY 78 750 HOURS IN A 400 GEV PROTON BEAM WITH 200 MICRO-SEC FAST EXTRACTION OF 50 PARTICLES PER BURST
INACTIVE 1 MAY 79

---

607 PARTICLE SEARCH #607 GARELICK, DAVID A. MICHIGAN, UNIVERSITY OF
BEAM: INTERNAL TARGET AREA-(C-0) NORTHEASTERN UNIVERSITY
PHYSICS CATEGORY: S2 WASHINGTON, UNIVERSITY OF
PROPOSAL TO SEARCH FOR PARTICLES WHICH HAVE AN ANAMOLOUS INTERACTION WITH NORMAL MATTER.
(TO USE THE RECOIL SPECTROMETER AND WARM JET TARGET IN THE INTERNAL TARGET AREA)
REQUEST 30 JUN 78 100 HOURS
2 OCT 78 400 HOURS FOR DATA AND APPROXIMATELY 3 MONTHS TO BUILD AND DEBUG THE APPARATUS
REJECTED 15 NOV 78

---

608 PARTICLE SEARCH #608 BROWN, CHARLES N. COLUMBIA UNIVERSITY
BEAM: PROTON AREA-(CENTER) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: S5(B)1 NEW YORK, STATE UNIVERSITY OF, STONY BROOK
A SEARCH FOR THE ETA SUB C IN HADRONIC INTERACTIONS.
(USING THE SPECTROMETER FROM EXP #288/494)
REQUEST 28 SEP 78 100 HOURS IN THE P-CENTER PROTON BEAM AT AN INCIDENT INTENSITY OF 3 X 10 TO THE 9TH PROTONS PER PULSE
APPROVED 25 JAN 79 PARASITIC RUNNING
COMPLETED 7 MAR 79 600 HOURS

---

609 HADRON JETS #609 SELOVE, WALTER ARGONNE NATIONAL LABORATORY
BEAM: MESON AREA-M6 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORY: HED8(C) LEHIGH UNIVERSITY
PENNSYLVANIA, UNIVERSITY OF
WISCONSIN, UNIVERSITY OF
A STUDY OF THE STRUCTURE OF HIGH P TRANSVERSE HADRONIC INTERACTIONS.
(THIS PROPOSAL SUPERSEDES P-246)
REQUEST 2 OCT 78 1,500 HOURS FOR PHASE 1 TO BE RUN IN A BEAM WITH 400 GEV CAPABILITY WITH AT LEAST 10 TO THE 8TH PROTONS PER SEC INCIDENT
PHASE 2 WOULD INCLUDE ADDITION OF A LARGE APERTURE MAGNET, CERENKOV IMAGING DEVICE AND PWC'S; PHASE 3 WOULD INCLUDE A REQUEST FOR A HIGHER ENERGY BEAM
APPROVED 16 NOV 78 UNSPECIFIED WITH CONDITIONS
UNSCHEDULED

---

610 PARTICLE SEARCH #610 KIRK, THOMAS B. W. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: NEUTRINO AREA-MUON/HADRON BEAM ILLINOIS, UNIVERSITY OF
PHYSICS CATEGORY: S5(B)2 TUFTS UNIVERSITY
PION PRODUCTION OF HEAVY QUARK MESON STATES DECAYING INTO THE PSI/J (3097)
(CONTINUATION OF WORK BEGUN IN EXP #369 BUT WITH UPGRADED CYCLOTRON SPECTROMETER)
REQUEST 2 OCT 78 1,000 HOURS TO BE RUN WITH AN INCIDENT INTENSITY OF 10 TO THE 13TH PROTONS PER PULSE ON THE PRODUCTION TARGET
APPROVED 21 DEC 78 1,000 HOURS WITH A SCHEDULE YET TO BE FORMALLY DETERMINED
SET UP IN A YEAR

---

611 PARTICLE SEARCH #611 GARBINCIUS, PETER H. FERMI NATIONAL ACCELERATOR LABORATORY
BEAM: MESON AREA-M6 BEAM ILLINOIS, UNIVERSITY OF
PHYSICS CATEGORY: S6
SEARCH FOR MASSIVE LONG-LIVED CHARGED PARTICLES.
(CONTINUATION OF WORK BEGUN IN EXP #469)
REQUEST 2 OCT 78 450 HOURS TO BE RUN USING THE SINGLE ARM SPECTROMETER WITH 6 X 10 TO THE 12TH PROTONS INCIDENT PER PULSE ON THE M-6 PRODUCTION TARGET
REJECTED 15 NOV 78

---

612 PHOTON DISSOCIATION #612 GOULIANOS, KONSTANTIN ROCKEFELLER UNIVERSITY
BEAM: PROTON AREA-(EAST)
PHYSICS CATEGORY: EH2
A PROPOSAL TO MEASURE THE DIFFRACTIVE PHOTON DISSOCIATION ON HYDROGEN.
REQUEST 2 OCT 78 1,150 HOURS TO BE RUN IN THE TAGGED PHOTON BEAM WITH 10 TO THE 6TH INCIDENT PHOTONS PER PULSE
APPROVED 15 NOV 78 1,150 HOURS
UNSCHEDULED

---

613 BEAM DUMP #613 ROE, BYRON P. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM OHIO STATE UNIVERSITY
PHYSICS CATEGORY: W1 WISCONSIN, UNIVERSITY OF
PROPOSAL FOR A PROMPT NEUTRINO EXPERIMENT AT FERMILAB.
REQUEST 2 OCT 78 1,000 HOURS TO OBTAIN AN EXPOSURE OF 1 - 2 X 10 TO THE 17TH PROTONS WITH AN INCIDENT INTENSITY OF 1 X 10 TO THE 12TH PROTONS/PULSE
APPROVED 15 NOV 78 1,000 HOURS WITH AN EXPECTED REASSESSMENT OF PHYSICS PRIORITIES AND POSSIBLE IMPLICATIONS FOR THIS EXPERIMENT IN THE FALL OF 1979
SET UP IN A YEAR

---

614 PHOTON SEARCH #614 ROSEN, JEROME L. CARNEGIE-MELLON UNIVERSITY
BEAM: MESON AREA-M1 BEAM FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED6(B), S5(C) NORTHWESTERN UNIVERSITY
NOTRE DAME, UNIVERSITY OF
STUDY OF HIGH MASS MULTIPHOTON STATES AND DIRECT PHOTON PRODUCTION.
(USING A LIQUID ARGON CALORIMETER BEING PREPARED FOR EXP #515)
REQUEST 3 OCT 78 300 HOURS
DEFERRED 15 NOV 78 PENDING SUBMISSION OF A REVISED PROPOSAL WHICH INCLUDES AN EVALUATION OF RESULTS FROM A CHECK-OUT OF THE LIQUID ARGON CALORIMETER DURING PREPARATIONS FOR EXP# 515

---

615 FORWARD SEARCH #615 PILCHER, JAMES E. CHICAGO, UNIVERSITY OF
BEAM: PROTON AREA-(WEST) FERMI NATIONAL ACCELERATOR LABORATORY
PHYSICS CATEGORIES: HED8(D), S5(B)4 PRINCETON UNIVERSITY
A STUDY OF THE FORWARD PRODUCTION OF MASSIVE PARTICLES.
IN PHASE ONE THE FORWARD PRODUCTION OF MUON PAIRS WOULD BE STUDIED.
(USING A FORWARD SPECTROMETER WITH MASS SELECTION)
REQUEST 28 NOV 78 1,000 HOURS TO BE RUN IN A 50-GEV PION BEAM AT AN INCIDENT INTENSITY OF 10 TO THE 10TH PIONS PER PULSE
7 MAY 79 1,000 HOURS TO INCLUDE 600 HOURS OF RUNNING WITH 250 GEV PIONS AND 200 HOURS WITH 75 GEV PIONS. A PRIMARY PROTON INTENSITY OF 10 TO THE 13TH PER PULSE ON THE P-WEST PRODUCTION TARGET AND 300 PULSES PER HOUR ARE ASSUMED
REJECTED 22 MAR 79

---

616 NEUTRINO #616 SCIULLI, FRANK CALIFORNIA INSTITUTE OF TECHNOLOGY
BEAM: NEUTRINO AREA-DICHROMATIC NEUTRINO BEAM FERMI NATIONAL ACCELERATOR LABORATORY

PHYSICS CATEGORY: W2 ROCHESTER, UNIVERSITY OF
ROCKEFELLER UNIVERSITY

PROPOSAL TO MEASURE NEUTRINO STRUCTURE FUNCTIONS.
(USE OF THE LAB E NEUTRINO DETECTOR TO CONTINUE WORK BEGUN IN EXP #356)
REQUEST 29 JAN 79 3,200 HOURS TO INCLUDE SPECIFICALLY 600 HOURS FOR CHECKOUT, CALIBRATION AND BACKGROUND STUDIES, AND 2 X 10 TO THE 19TH PROTONS AT 400 GEV FOR DATA
APPROVED 19 MAR 79 4,000 HOURS APPROXIMATELY OR 2 X 10 TO THE 19TH PROTONS TO BE COMBINED WITH RUNNING FOR EXP #356
BEING INSTALLED

---

617 CP VIOLATION #617 WINSTEIN, BRUCE D. CHICAGO, UNIVERSITY OF
BEAM: MESON AREA-M3 BEAM STANFORD UNIVERSITY
PHYSICS CATEGORIES: HED9, W3 WISCONSIN, UNIVERSITY OF

A STUDY OF DIRECT CP VIOLATION IN THE DECAY OF THE NEUTRAL KAON VIA A PRECISION MEASUREMENT OF THE RATIO OF ETA 00 TO ETA +-.
REQUEST 30 JAN 79 1,000 HOURS FOR DATA
APPROVED 19 MAR 79 1,000 HOURS
UNSCHEDULED

---

618 MUON-NEUTRINO COINCIDENCE #618 GABELICK, DAVID A. NORTHEASTERN UNIVERSITY
BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORIES: S3(B)2, S8

MUON AND NEUTRINO CORRELATIONS AND PRODUCTION IN 400 GEV PROTON-NUCLEUS COLLISIONS.
REQUEST 4 APR 79 200 HOURS TO BE RUN IN A 400 GEV PROTON BEAM WITH AN INTENSITY IN THE RANGE 10 TO THE 11TH TO 10 TO THE 13TH PROTONS PER TWO SECOND SPILL
7 MAY 79 400 HOURS TO BE RUN FOR THE MOST PART IN A MODE PARASITIC WITH EXPERIMENT #613. 400 HOURS OF BEAM TIME AS PRIME USER ARE REQUESTED IN ADDITION TO THE PARASITIC RUNNING
UNCONSIDERED 4 APR 79

---

619 TRANSITION MAGNETIC MOMENT #619 DEVLIN, THOMAS J. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM MINNESOTA, UNIVERSITY OF
PHYSICS CATEGORY: HED9 RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

A MEASUREMENT OF THE SIGMA-ZERO TO LAMBDA TRANSITION MAGNETIC MOMENT.
REQUEST 7 MAY 79 250 HOURS TO BE RUN IN THE DIFFRACTED PROTON BEAM (NORMALLY 400 GEV) AT AN INTENSITY BETWEEN 10 TO THE 8TH AND 10 TO THE 9TH PROTONS PER PULSE WITH A 1-SEC SPILL
UNCONSIDERED 7 MAY 79

---

620 CHARGED HYPERON MAG MOMENT #620 PONDROM, LEE G. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM MINNESOTA, UNIVERSITY OF
PHYSICS CATEGORY: HED9 RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

PROPOSAL TO MEASURE THE MAGNETIC MOMENTS OF THE SIGMA +, SIGMA -, XI -, AND OMEGA - HYPERONS USING THE FERMILAB NEUTRAL HYPERON BEAM.
REQUEST 7 MAY 79 300 HOURS TO BE RUN IN THE DIFFRACTED PROTON BEAM (350 TO 400 GEV) AT AN INTENSITY OF 10 TO THE 9TH PROTONS PER PULSE AND A 1-SEC SPILL
UNCONSIDERED 7 MAY 79

---

621 CP VIOLATION #621 THOMSON, GORDON B. MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM MINNESOTA, UNIVERSITY OF
PHYSICS CATEGORIES: HED9, W3 RUTGERS UNIVERSITY
WISCONSIN, UNIVERSITY OF

A MEASUREMENT OF THE CP VIOLATION PARAMETER ETA +-0.
(USE OF THE NEUTRAL HYPERON SPECTROMETER IS ASSUMED)
REQUEST 7 MAY 79 1,200 HOURS TO BE RUN IN 2 PHASES CONSISTING OF 200 HOURS FOR PHASE 1 WITH SOME MODIFICATIONS TO THE PRESENT APPARATUS 1000 HOURS FOR PHASE 2 AT A LATER DATE AFTER RESULTS FROM PHASE 1 HAVE BEEN ANALYZED
UNCONSIDERED 7 MAY 79

---

622 QUARK #622 GUSTAFSON, RICHARD MICHIGAN, UNIVERSITY OF
BEAM: MESON AREA-M2 BEAM
PHYSICS CATEGORIES: S2, S6

PROPOSAL TO SEARCH FOR FRACTIONAL CHARGE PARTICLES FROM A MAGNETIZED BEAM DUMP.
REQUEST 7 MAY 79 100 HOURS TO BE RUN PARTIALLY IN CONJUNCTION WITH EXP #361 USING THE BEAM DUMP FROM THAT EXPERIMENT
UNCONSIDERED 7 MAY 79

---

623 PARTICLE SEARCH #623 LAI, KWAN-WU ARIZONA, UNIVERSITY OF
BEAM: MESON AREA-M6 BEAM BROOKHAVEN NATIONAL LABORATORY
PHYSICS CATEGORY: S5(B)2 FERMI NATIONAL ACCELERATOR LABORATORY
FLORIDA STATE UNIVERSITY
GEORGIA INSTITUTE OF TECHNOLOGY
ILLINOIS, UNIVERSITY OF, CHICAGO CIRCLE
MICHIGAN STATE UNIVERSITY
NOTRE DAME, UNIVERSITY OF
TUFTS UNIVERSITY
VANDERBILT UNIVERSITY
VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY
WILLIAM AND MARY, COLLEGE OF

PROPOSAL TO STUDY HIGH MASS STATES DECAYING INTO PHI-PI AND PHI-PHI PAIRS PRODUCED CENTRALLY IN 300 GEV/C PI MINUS PROTON INTERACTIONS.
(USE OF THE FERMILAB MULTIPARTICLE SPECTROMETER FACILITY IS ASSUMED)
REQUEST 7 MAY 79 1,000 HOURS TO BE RUN IN A 300 GEV/C BEAM OF NEGATIVE PIONS AT AN INTENSITY OF A FEW TIMES 10 TO THE 6TH PIONS PER PULSE
UNCONSIDERED 7 MAY 79

---

624 PARTICLE SEARCH #624 PLESS, IRWIN A. BROWN UNIVERSITY
BEAM: MESON AREA-M6 BEAM INDIANA UNIVERSITY
PHYSICS CATEGORIES: S5(B)5, HED8(C), HBC2 MASSACHUSETTS INSTITUTE OF TECHNOLOGY
OAK RIDGE NATIONAL LABORATORY
RUTGERS UNIVERSITY
STEVENS INSTITUTE OF TECHNOLOGY
TENNESSEE, UNIVERSITY OF
TOHOKU UNIVERSITY (JAPAN)
YALE UNIVERSITY

SEARCH FOR SHORT-LIVED PARTICLES AND STUDY OF HADRONIC JETS USING A MULTIPARTICLE SPECTROMETER WITH A VISIBLE TARGET.
(EXISTENCE OF THE FERMILAB TEVATRON FACILITY IS ASSUMED)
REQUEST 7 MAY 79 2,000 HOURS TO BE RUN IN AN 800 BEV/C BEAM OF NEGATIVE PIONS USING A RAPID CYCLING BUBBLE CHAMBER AS THE VISIBLE TARGET
UNCONSIDERED 7 MAY 79

---

625 NEUTRINO #625 LEE, WONYONG COLUMBIA UNIVERSITY
BEAM: NEUTRINO AREA-MISCELLANEOUS ILLINOIS, UNIVERSITY OF
PHYSICS CATEGORY: W1 NIKHEF-H (NETHERLANDS)

NEUTRINO PHYSICS.
REQUEST 7 MAY 79 2,000 HOURS TO BE RUN WITH A NEW BEAM IN THE NEUTRINO AREA
UNCONSIDERED 7 MAY 79

SECTION VIII. INDEX OF PROPOSALS

A cross-reference for all the proposals by their current approval status is presented on the following pages. The obsolete proposals are listed first; these are proposals which are rejected or withdrawn/inactive. Since this is the only place where obsolete proposals are listed separately, this can serve as a convenient place to look for an older proposal which is known to be active no longer. The approved proposals are then listed in numerical order. Each of these lists contains the short title, proposal number, and the name of the spokesperson.

The pending proposals are shown in a special checklist for use by the Fermilab staff and Physics Advisory Committee members during discussions at the summer meeting. These proposals are classified as unconsidered or deferred.

OBSOLETE PROPOSALS

SUMMARY OF PROPOSAL STATUS

TOTAL NUMBER OF PROPOSALS - 625

REJECTED PROPOSALS - 188

6 PROTON-PROTON ELASTIC #6(KRISCH, ALAN D.)
11A QUARK #11A(KIM, YOUNG S.)
15A K ZERO REGENERATION # 15A(STEINBERGER, JACK)
16A PROTON-PROTON SCATTERING #16A(KERTH, LEROY J.)
18A PROTON EXCITATION #18A(ONEILL, GERARD K.)
19A MONOPOLE #19A(TOMPKINS, DONALD JR.)
20 15-FOOT NEUTRINO/D2 #20(BLOCK, MARTIN M.)
30 K ZERO REGENERATION #30(KIRK, THOMAS B. W.)
38 NEUTRINO #38(WALKER, JAMES K.)
40 15-FOOT PI- - P @ 100 #40(WILLMANN, ROBERT B.)
42A 15-FOOT NEUTRINO/D2-NE #42A(GARFINKEL, ARTHUR F.)
44A 15-FOOT NEUTRINO/D2-NE #44A(ROE, BYRON P.)
50A ELASTIC SCATTERING #50A(OREAR, JAY)
52B INCLUSIVE SCATTERING #52B(WEISBERG, HOWARD L.)
57 TOTAL CROSS SECTION #57(LINDENBAUM, SEYMOUR J.)
59A RHO PRODUCTION #59A(HOLLOWAY, LELAND E.)
60 K ZERO REGENERATION #60(WATTENBERG, ALBERT)
65 15-FOOT K0-P @ 20-60 #65(ALBRIGHT, JOHN R.)
79 K ZERO REGENERATION #79(TICHO, HAROLD K.)
85 15-FOOT PI+ - D @ 40 #85(GUTAY, LASZLO J.)
88 30-INCH QUARK #88(HAGOPIAN, VASKEN)
92A 15-FOOT ANTI- & NEUTRINO #92A(SCIULLI, FRANK)
101 FORM FACTOR #101(GITTELMAN, BERNIE)
106 MULTIPARTICLE #106(MILLER, DONALD H.)
107A ELASTIC SCATTERING #107A(LAI, KWAN-WU)
112 NEUTRON DISSOCIATION #112(KREISLER, MICHAEL N.)
128 30-INCH P - HI Z @ 400 #128(BENVENUTI, ALBERTO C.)
129B 30-INCH NEUTRAL - P @HI E #129B(FRY, WILLIAM F.)
130 30-INCH P - P @120-500 #130(PANVINI, ROBERT S.)
131 30-INCH HYBRID #131(MILLER, DAVID H.)
135 KAON CHARGE EXCHANGE #135(JENKINS, THOMAS L.)
140 MISSING MASS #140(GARELICK, DAVID A.)
148 COULOMB EXCITATION #148(RUDDICK, KEITH)
149A CHARGED HYPERON #149A(WINSTON, ROLAND)
150 DI-PARTICLE PRODUCTION #150(WALKER, JAMES K.)
158 30-INCH P - P @ 100 #158(SOSNOWSKI, RYSZARD)
159 30-INCH P - P @ 100 & 400 #159(MALHOTRA, P. K.)
162 K ZERO DECAY #162(PONDROM, LEE G.)
165 INELASTIC SCATTERING #165(RITSON, DAVID)
166 30-INCH P - P&NE @ 2008500 #166(PICENEC, JOHN R.)
168 SIGMA ZERO LIFETIME #168(DEVLIN, THOMAS J.)
169 EMULSION/PROTONS #169(HOM, DAVID)
170 QUARK #170(PILCHER, JAMES E.)
175 PHOTOPRODUCTION #175(TING, SAMUEL C. C.)
176 DIFFRACTIVE SCATTERING #176(PICCIONI, ORESTE)
179 15-FOOT K+ - P @ HI E #179(ERWIN, ALBERT R.)
182 30-INCH P - P @ 400 #182(GIDAL, GEORGE)
190 15-FOOT P - P @ 200 #190(ENGELMANN, RODERICH J.)
192 MULTIGAMMA #192(GUIRAGOSSIAN, ZAVEN G. T.)
193 ELECTROPRODUCTION #193(GUIRAGOSSIAN, ZAVEN G. T.)
197 15-FOOT P - P @ 100-500 #197(BALAMUD, ERNEST)
200 HADRON JETS #200(RUBBIA, CARLO)
201 ELECTRON BREMSSTRAHLUNG #201(ERBER, THOMAS)
210A PION PRODUCTION #210A(COHEN, KENNETH J.)
214 15-FOOT SIGMA- - P @ 25-250#214(RUSHBROOKE, JOHN G.)
219 NUCLEON DISSOCIATION #219(ODDONE, PIERMARIA J.)
220 30-INCH PBAR/K- - P @100 #220(KITAGAKI, TOSHIO)
222A HADRON JETS #222A(PILCHER, JAMES E.)
223 HADRON JETS #223(SCHLEIN, PETER E.)
224 30-INCH P&PI- - HI Z @ 200 #224(JONES, LAWRENCE W.)
225 MUON #225(CHEN, K. WENDELL)
231 PROTON-NUCLEON SCATTERING #231(YAMADA, RYUJI)
235 NEUTRON ELASTIC SCATTERING #235(JONES, LAWRENCE W.)
240 PROTON TOTAL CROSS SECTION #240(LONGO, MICHAEL J.)
246 HADRON JETS #246(SELOVE, WALTER)
256 NEUTRINO #256(CSERNE, LOUIS S.)
257 MUON #257(KIRK, THOMAS B. W.)
259 BACKWARD SCATTERING #259(DAVID, MARC)
263 PHI PHOTOPRODUCTION #263(CHEN, MIN)
266 MULTIPARTICLE #266(JONES, LAWRENCE W.)
270 15-FOOT ANTI- & NEUTRINO/D2#270(OSBORNE, LOUIS S.)
273 30-INCH P - P&NE @100-500 #273(OREN, YONA)
278 30-INCH PI+/K+ - P @ 400 #278(BARNES, VIRGIL E.)
283 PROTON-PROTON ELASTIC #283(WALKER, JAMES K.)
286 30-INCH PI+ - D @ 100 #286(GARFINKEL, ARTHUR F.)
293 30-INCH PI- - D@200 OR 300 #293(HAGOPIAN, SHARON L.)
294 15-FOOT ANTI-NEUTRINO/D2 #294(ROE, BYRON P.)
296 15-FOOT ANTI- &NEUTRINO/NE #296(BALTAY, CHARLES)
298 30-INCH P&PI- -P&NE@100&400#298(MALHOTRA, P. K.)
301 ELASTIC SCATTERING #301(GETTNER, MARVIN)
303 15-FOOT NEUTRON - P@50-250 #303(SEIDL, ANDREW A.)
306 BEAM DUMP #306(BARISH, BARRY)
307 MUON #307(KERTH, LEROY J.)
309 15-FOOT PI- - P/NE @ 485 #309(ERWIN, ALBERT R.)
314 MUON #314(MELISSINOS, ADRIAN)
315 15-FOOT ANTI- &NEUTRINO/NE #315(NEZRICK, FRANK A.)
332 DI-MUON #332(MOCKETT, PAUL M.)
333 15-FOOT K- - P @ 200 #333(RUSHBROOKE, JOHN G.)
334 15-FOOT K+ - P @ 200 #334(RUSHBROOKE, JOHN G.)
342 15-FOOT PI- -P/NE @ 200 #342(KENNEY, V. PAUL)
347 ELASTIC SCATTERING #347(WALKER, JAMES K.)
349 MUON #349(KIRK, THOMAS B. W.)
351 K-SHORT REGENERATION #351(ARONSON, SAMUEL H.)
359 DI-MUON #359(WEINSTEIN, ROY)
360 K-LONG INCLUSIVE #360(WAUENBERG, URIEL)
367 PARTICLE SEARCH #367(TELEGDI, VALENTINE L.)
368 PARTICLE SEARCH #368(LITT, LAWRENCE)
376 30-INCH K- - P @ 150 #376(LUDLAM, THOMAS W.)
377 30-INCH PI- - P @ 300 #377(HAFEN, ELIZABETH)
378 30-INCH PI- - P @ 75 #378(YAMAMOTO, RICHARD K.)
389 15-FOOT NEUTRINO/H2 & NE #389(TENNER, ARMIN G.)
402 PHOTOPRODUCTION #402(LEE, WONYONG)
403 PARTICLE SEARCH #403(PONDROM, LEE G.)
405 DI-LEPTON #405(MOCKETT, PAUL M.)
406 ELASTIC SCATTERING #406(MARX, JAY N.)
407 30-INCH PI+ - P @ 250 #407(BUGG, WILLIAM M.)
408 30-INCH PBAR - P @ 75 #408(PLANO, RICHARD J.)
409 30-INCH PI+ - P @ 75 #409(WATTS, TERENCE L.)
410 30-INCH K+&K- - P @ 75 #410(PEVSNER, AIHUD)
411 PARTICLE SEARCH #411(VON GOELER, EBERHARD)
412 DI-MUON #412(WEINSTEIN, ROY)

WITHDRAWN/INACTIVE PROPOSALS - 123

5 MUON #5(PERL, MARTIN L.)
9B 15-FOOT ANTI-NEUTRINO/H2 #9B(STEVENSON, M. LYNN)
10 TOTAL CROSS SECTION #10(BAKER, WINSLOW F.)
13 DETECTOR DEVELOPMENT #13(BOWEN, THEODORE)
17 15-FOOT PBAR-D @ 60 #17(REYNOLDS, BRUCE G.)
23A INCLUSIVE SCATTERING #23A(ROTHBERG, JOSEPH E.)
24A PHOTON SCATTERING #24A(CALDWELL, DAVID O.)
29 MUON #29(WILSON, RICHARD)
32 DETECTOR DEVELOPMENT #32(HOFSTADTER, ROBERT)
33 MUON #33(HO, LUKE W.)
35A MULTIPARTICLE #35A(MCLEOD, DONALD W.)
39 RAPID CYCLING CHAMBER #39(WALKER, WILLIAM D.)
41 15-FOOT P - P @ > 200 #41(BARNES, VIRGIL E.)
43 MULTIPARTICLE #43(MILLER, DAVID H.)
46 15-FOOT PI- - P/NE @ >150 #46(HUSON, FRED RUSS)
47 30-INCH HYBRID #47(PLESS, IRWIN A.)
49 FORM FACTOR #49(POIRER, JOHN A.)
54 MULTIPARTICLE #54(PINE, JEROME)
55 PION CHARGE EXCHANGE #55(TOLLESTRUP, ALVIN V.)
56 TOTAL CROSS SECTION #56(COOL, RODNEY L.)
58 15-FOOT HADRON-P @ 200-500 #58(PANVINI, ROBERT S.)
62 30-INCH PI- & P @ 100 & 200 #62(VANDER VELDE, JACK C.)
64 PROTON-PROTON SCATTERING #64(READ, A. LINCOLN)
66 30-INCH HYBRID #66(VANDER VELDE, JACK C.)
68 MULTIPARTICLE #68(ANDERSON, HERBERT L.)
71B FORM FACTOR #71B(DRICKEY, DARRELL J.)
73A ELASTIC SCATTERING # 73A(ANDERSON, ROBERT L.)
74 MONOPOLE #74(FLEISCHER, ROBERT L.)
77 15-FOOT HYPERON - P @ HI E #77(LIBBY, LEONA MARSHALL)
78A 30-INCH PI+/P - P @ 70 #78A(BURNSTEIN, RAY A.)
80A 30-INCH PI- - P @ 70 - 250 #80A(FERBEL, THOMAS)
84 PION CHARGE EXCHANGE #84(JENKINS, THOMAS L.)
91 EMULSION/PROTON/PIONS@100&500#91(CHIEN, CHIH-YUNG)
93 PION CHARGE EXCHANGE #93(WAHLIG, MICHAEL A.)
94 EMULSION/PIONS @ 100 #94(GOZA, EDWARD R.)
97 CHARGED HYPERON #97(LACH, JOSEPH)
102 KAON CHARGE EXCHANGE #102(JENKINS, THOMAS L.)
109 BEAM SURVEY #109(PRETZL, KLAUS)
113 KAON CHARGE EXCHANGE #113(MEYER, STUART)
119 SUPER-HEAVY ELEMENTS #119(BATTY, C. J.)
122A 15-FOOT ANTI- & NEUTRINO/H2#122(VOLKOV, ALEXEI A.)
123 QUARK #123(KIM, YOUNG S.)
124 EMULSION/PROTONS @ 400 #124(ALY, HADI H.)
126 30-INCH HYBRID #126(BARNES, VIRGIL E.)
127 30-INCH PI- & P @ 50-300 #127(EISENSTEIN, BOB I.)
132 30-INCH HYBRID #132(PLESS, IRWIN A.)
133 30-INCH HYBRID #133(SHEPHARD, WILLIAM D.)
134 30-INCH PI- - P @ 50-300 #134(KENNEY, V. PAUL)
136 30-INCH HYBRID #136(WALKER, WILLIAM D.)
139 FORM FACTOR #139(ENGELS, EUGENE JR.)
144A PHOTOPRODUCTION #144A(TING, SAMUEL C. C.)
145 15-FOOT PHOTON - P @20-250 #145(WALKER, JAMES K.)
146 PLASTIC DETECTORS #146(HEBERT, JACQUES D.)
151A 15-FOOT NEUTRINO/D2 #151A(SNOW, GEORGE A.)
153 30-INCH PI- - P @ 200 #153(KITAGAKI, TOSHIO)
157 30-INCH HYBRID #157(DZIERBA, ALEXANDER R.)
160 K ZERO DECAY #160(WAUENBERG, URIEL)
164 MULTIGAMMA #164(GUIRAGOSSIAN, ZAVEN G. T.)
167 ELECTRIC & MAGNETIC #167(BARTLETT, DAVID F.)
173 30-INCH P - D @ 100 & 200 #173(VANDER VELDE, JACK C.)
174A ELECTROPRODUCTION #174A(TING, SAMUEL C. C.)
185 30-INCH P - D @ 200 #185(FRIDMAN, ALFRED)
191 DETECTOR DEVELOPMENT #191(ORTH, CHARLES D.)
204 30-INCH P - D @ 200 #204(YEKUTIELI, GIDEON)
206 DETECTOR DEVELOPMENT #206(YODH, GAURANG B.)
207 30-INCH P - P @ 500 #207(ENGELMANN, RODERICH J.)
208 15-FOOT P - P @ > OR = 300 #208(TAKIBAEV, J. S.)
212 BACKWARD SCATTERING #212(DAVID, MARC)
213 15-FOOT PI&K - P @50-200 #213(RUSHBROOKE, JOHN G.)
215 30-INCH PI- - P @ 400 #215(GOLDHABER, GERSON)
227 15-FOOT NEUTRINO/D2 #227(ENGELMANN, RODERICH J.)
241 BACKWARD SCATTERING #241(HEINZ, RICHARD M.)
267 15-FOOT PI- -P @ 100 #267(MORRISON, DOUGLAS R. O.)
269 15-FOOT HYBRID #269(RIDDIFORD, LEONARD)
274 30-INCH PI- - P @ < 500 #274(BINGHAM, HARRY H.)
277 30-INCH PI+ & P - P @ 300 #277(BARNES, VIRGIL E.)
282A 15-FOOT PBAR - P @ 40 #282A(GUTAY, LASZLO J.)
287 PION INCLUSIVE #287(LUBATTI, HENRY J.)
304 30-INCH PI- - HI Z @ 300 #304(WALKER, WILLIAM D.)
308 DI-MUON #308(PILCHER, JAMES E.)
312 HADRON DISSOCIATION #312(EDELSTEIN, RICHARD M.)
316 NEUTRINO #316(NYGREN, DAVID R.)
318 PION DISSOCIATION #318(ASCOLI, GIULIO)
322 DI-MUON #322(WANDERER, PETER)
323 DI-MUON #323(PILCHER, JAMES E.)
348 MUON #348(WILSON, RICHARD)
352 15-FOOT ANTI-&NEUTRINO/H2NE#352(STEVENSON, M. LYNN)
353 CHARGED HYPERON #353(ECKLUND, STANLEY)
354 PARTICLE SEARCH #354(KYCIA, THADDEUS F.)
355 NEUTRINO #355(BARISH, BARRY)
364 EMULSION/PROTONS @ 400 #364(SACTON, J.)
372 PARTICLE SEARCH #372(BECKER, ULRICH J.)
375 30-INCH K+ - P @ 150 #375(RUBIN, HOWARD A.)
392 30-INCH PBAR - P @200 #392(NEALE, WILLIAM W.)
393 30-INCH PI- - P @ 150 #393(PLESS, IRWIN A.)
394 30-INCH HYBRID #394(WHITMORE, J. JAMES)
420 HADRON-NUCLEON SCATTERING #420(GUIRAGOSSIAN, ZAVEN G. T.)
443 DI-MUON #443(PILCHER, JAMES E.)
446 FORM FACTOR #446(ECKLUND, STANLEY)
449 K STAR PRODUCTION #449(ABOLINS, MARIS A.)
450 PHOTOPRODUCTION #450(CALDWELL, DAVID O.)
453 MUON SEARCH #453(FRISCH, HENRY J.)
455 15-FOOT NEUTRINO/HE & NE #455(PETERSON, VINCENT Z.)
457 TEST PARTICLE SEARCH #457(BRANDENBURG, GEORGE W.)
465 PARTICLE SEARCH #465(BECKER, ULRICH J.)
479 NEUTRON-DEUTERON ELASTIC #479(ROBERTS, THOMAS J.)
487 MUON #487(SESSONS, ALLEN LEE)
488 DPI TEST #488(PLESS, IRWIN A.)
489 15-FOOT NEUTRINO/H2&HIZ #489(NEZRICK, FRANK A.)
504 30-INCH PI&P - P&NE @100 #504(GULJAMOV, U. G.)
513 INCLUSIVE SCATTERING #513(BRANDENBURG, GEORGE W.)

SUMMARY OF PROPOSAL STATUS

REJECTED PROPOSALS(CONT.)

413 PARTICLE SEARCH #413(VON GOELER, EBERHARD)
414 DI-MUON #414(WEINSTEIN, ROY)
417 LAMBDA POLARIZATION #417(NAUENBERG, URIEL)
422 30-INCH PBAR - P&D @ 50&80 #422(FRIDMAN, ALFRED)
429 15-FOOT PI- - P @ 100 #429(MORRISON, DOUGLAS R. O.)
430 15-FOOT PI- - P @ 400 #430(MORRISON, DOUGLAS R. O.)
431 15-FOOT PI- - P @ 350 #431(THOMPSON, MURRAY A.)
432 15-FOOT SIGMA- - D @ 240 #432(FRIDMAN, ALFRED)
433 MULTI-MUON #433(WALKER, JAMES K.)
437 PARTICLE SEARCH #437(FERBEL, THOMAS)
445 MULTIPARTICLE #445(ROSEN, JEROME L.)
447 30-INCH PBAR - P @ 150 #447(HULSIZER, ROBERT I.)
452 PSI PRODUCTION #452(LUBATTI, HENRY J.)
454 ELECTROPRODUCTION #454(GUIRAGOSSIAN, ZAVEN G. T.)
459 15-FOOT NEUTRINO/H2 & NE #459(FRY, WILLIAM F.)
460 15-FOOT NEUTRINO/H2 & NE #460(HUSON, FRED RUSS)
464 30-INCH K+ - P @ 150 #464(GRARD, F.)
470 PARTICLE PRODUCTION #470(TRISCHUK, JOHN M.)
471 PSI PRODUCTION #471(POTTER, DOUGLAS)
473 MONOPOLE #473(BARTLETT, DAVID F.)
474 DI-MUON #474(CHEN, K. WENDELL)
475 MULTI-GAMMA #475(FICENEC, JOHN R.)
476 15-FOOT ANTI-NEUTRINO/H2&NE#476(KERNAN, ANNE)
477 DI-MUON #477(WEINSTEIN, ROY)
478 PARTICLE SEARCH #478(WALKER, JAMES K.)
480 PARTICLE SEARCH #480(MO, LUKE W.)
483 PROTON-PROTON ELASTIC #483(LONGO, MICHAEL J.)
484 PSI PRODUCTION #484(LUBATTI, HENRY J.)
485 CHARGED HYPERON #485(SHEPARD, PAUL F.)
491D PARTICLE SEARCH #491D(JOHNSON, ROLLAND P.)
492 PARTICLE SEARCH #492(CLINE, DAVID B.)
493 PARTICLE SEARCH #493(CLINE, DAVID B.)
496 NEUTRINO #496(SEGLER, SAMUEL L.)
511 30-INCH PBAR - D @ 200 #511(FRIDMAN, ALFRED)
512 CHARGED HYPERON #512(SHEPARD, PAUL F.)
517 NEUTRINO #517(READ, A. LINCOLN)
519 HADRON JETS #519(SCHLEIN, PETER E.)
520 15-FOOT NEUTRINO/H2&NE #520(FRY, WILLIAM F.)
521 15-FOOT NEUTRINO/D2&HIZ #521(VANDER VELDE, JACK C.)
529 NUCLEAR CHEMISTRY #529(TURKEVICH, ANTHONY L.)
530 PARTICLE SEARCH #530(FITCH, VAL L.)
532 QUARK #532(BROWN, CHARLES N.)
534 NEUTRINO #534(LUBATTI, HENRY J.)
535 K-LONG SCATTERING #535(NAUENBERG, URIEL)
539 15-FOOT ANTINEUTRINO/D2&HIZ#539(FRETTER, WILLIAM B.)
541 NEUTRINO #541(SESSOMS, ALLEN LEE)
548 PARTICLE SEARCH #548(LAI, KWAN-WU)
551 DIRECT PHOTONS #551(LONGO, MICHAEL J.)
554 PI - P ELASTIC SCATTERING #554(RUBINSTEIN, ROY)
556 MUON #556(CHEN, K. WENDELL)
559 DI-HADRON #559(MCCARTHY, ROBERT L.)
560 NEUTRINO #560(TOOHIG, TIMOTHY)
561 NEUTRINO #561(KOTZER, PETER)
562 NEUTRINO #562(HYMAN, LLOYD G.)
563 NEUTRINO #563(WALKER, JAMES K.)
566 15-FOOT NEUTRINO/H2 & NE #566(BALTAY, CHARLES)
569 NUCLEAR SCALING #569(LEKSIN, GEORGI A.)
578 PARTICLE SEARCH #578(LONGO, MICHAEL J.)
579 INCLUSIVE NEUTRON #579(JONES, LAWRENCE W.)
581 POLARIZED SCATTERING #581(YOKOSAWA, AKIHIKO)
582 POLARIZED SCATTERING #582(YOKOSAWA, AKIHIKO)
583 DI-MUON #583(RUTHERFOORD, JOHN P.)
586 DI-HADRON #586(MCCARTHY, ROBERT L.)
587 HADRON JETS #587(SCHLEIN, PETER E.)
588 INCLUSIVE SCATTERING #588(ELIAS, JOHN E.)
590 HADRON JETS #590(YOUNG, KENNETH K.)
593 BEAM DUMP #593(FRY, WILLIAM F.)
598 30-INCH HYBRID #598(BARNES, VIRGIL E.)
599 BEAM DUMP #599(MO, LUKE W.)
600 NEUTRINO #600(CRONIN, JAMES W.)
601D NEUTRINO #601D(MCINTYRE, PETER M.)
602D NEUTRINO #602D(SESSOMS, ALLEN LEE)
603 BEAM DUMP #603(REEDER, DON D.)
604 PARTICLE SEARCH #604(JONES, LAWRENCE W.)
607 PARTICLE SEARCH #607(GARFLICK, DAVID A.)
611 PARTICLE SEARCH #611(GARBINCIUS, PETER H.)
615 FORWARD SEARCH #615(PILCHER, JAMES E.)

WITHDRAWN/INACTIVE PROPOSALS(CONT.)

514 PROTON-PROTON ELASTIC #514(WALKER, JAMES K.)
518 ELECTRON PRODUCTION #518(TAYLOR, FRANK)
526 15-FOOT PBAR - P @ 100 #526(LANDER, RICHARD L.)
527 15-FOOT PBAR - D @ 100 #527(LANDER, RICHARD L.)
538 15-FOOT PI- - D @ 100&360 #538(FRETTER, WILLIAM B.)
542 15-FOOT ANTINEUTRINO/D2&HIZ#542(GARFINKEL, ARTHUR F.)
543 15-FOOT ANTINEUTRINO/D2&HIZ#543(KITAGAKI, TOSHIO)
544 15-FOOT ANTINEUTRINO/H2&HIZ#544(KAFTANOV, VITALI S.)
558 30-INCH PI&K - P @ 100 #558(SHEPHARD, WILLIAM D.)
571 QUARK SEARCH #571(OLSEN, STEPHEN L.)
572 NEUTRINO #572(REEDER, DON D.)
606 PARTICLE SEARCH #606(HUGENTOBLER, E.)

APPROVED PROPOSALS

SUMMARY OF PROPOSAL STATUS

APPROVED PROPOSALS - 300

1A NEUTRINO #1A(CLINE, DAVID B.)
3 MONOPOLE #3(EBERHARD, PHILIPPE)
7 ELASTIC SCATTERING #7(MEYER, DONALD I.)
12 NEUTRON BACKWARD SCATTERING #12(READ, NEVILLE W.)
21A NEUTRINO #21A(BARISH, BARRY)
25A PHOTON TOTAL CROSS SECTION #25A(CALDWELL, DAVID O.)
27A NEUTRON DISSOCIATION #27A(ROSEN, JEROME L.)
31A 15-FOOT ANTI-NEUTRINO/H2 #31A(DERRICK, MALCOLM)
36A PROTON-PROTON SCATTERING #36A(COOL, RODNEY L.)
45A 15-FOOT NEUTRINO/H2 #45A(NEZRICK, FRANK A.)
51A MISSING MASS #51A(VON GOELER, EBERHARD)
61 POLARIZED SCATTERING #61(CHAMBERLAIN, OWEN)
67A PROTON-PROTON MISSING MASS #67A(SANNES, FELIX)
70 LEPTON #70(LEDERMAN, LEON M.)
75 QUARK #75(YAMANOUCHI, TAIJI)
81A NUCLEAR CHEMISTRY #81A(KAUFMAN, SHELDON)
83A 15-FOOT PI- - P @ 100 #83A(KITAGAKI, TOSHIO)
87A PHOTOPRODUCTION #87A(OHALLORAN, THOMAS)
90 EMULSION/PROTONS @ 200 #90(WOLTER, WLADYSLAW)
96 ELASTIC SCATTERING #96(RITSON, DAVID)
99 ASSOCIATED PRODUCTION #99(DIEBOLD, ROBERT E.)
103 EMULSION/PROTONS @ 200 #103(KING, DAVID T.)
105 EMULSION/PROTONS @ 200 #105(MALHOTRA, P. K.)
110A MULTIPARTICLE #110A(DZIERBA, ALEXANDER R.)
114 EMULSION/PROTONS @ 200 #114(JAIN, PIYARE L.)
116 EMULSION/PROTONS @ 200 #116(HEBERT, JACQUES D.)
118A INCLUSIVE SCATTERING #118A(BRANDENBURG, GEORGE W.)
121A 30-INCH PI+ & P - P @ 100 #121A(LANDER, RICHARD L.)
137 30-INCH PI- - P @ 200 #137(HUSON, FRED RUSS)
141A 30-INCH P-P @ 200 #141A(FIELDS, THOMAS)
143A 30-INCH PI- - P @ 300 #143A(KALBFLEISCH, GEORGE R.)
152B PHOTOPRODUCTION #152B(HEUSCH, CLEMENS A.)
155 15-FOOT EMI TEST #155(PETERSON, VINCENT Z.)
161 30-INCH P - P&NE @ 300 #161(MAPP, JAMES)
171 EMULSION/PROTONS @ 200 #171(LORD, JERE J.)
177A PROTON-PROTON ELASTIC #177A(OREAR, JAY)
180 15-FOOT ANTI-NEUTRINO/H2&NE#180(ERMOLOV, PAVEL F.)
183 EMULSION/PROTONS @ 200 #183(TRETJAKOVA, M. I.)
186 PROTON-DEUTERON SCATTERING #186(MELISSINOS, ADRIAN)
188 PROTON-NUCLEON INCLUSIVE #188(SANNES, FELIX)
194 30-INCH P - D @ 100 #194(MURPHY, C. THORNTON)
196 30-INCH P - D @ 400 #196(ENGELMANN, RODERICH J.)
199 MASSIVE PARTICLE SEARCH #199(FRANKEL, SHERMAN)
203A MUON #203A(KERTH, LEROY J.)
209 30-INCH P - D @ 300 #209(DAO, FU TAK)
216 FORM FACTOR #216(STORK, DONALD H.)
218 30-INCH PI- - D @ 200 #218(YAGER, PHILIP M.)
226 K ZERO CHARGE RADIUS #226(TELEGDI, VALENTINE L.)
229 DETECTOR DEVELOPMENT #229(YUAN, LUKE C. L.)
232 EMULSION/PROTONS @ 300 #232(KING, DAVID T.)
234 15-FOOT ENGINEERING RUN #234(HUSON, FRED RUSS)
237 EMULSION/PROTONS @ 300 #237(LORD, JERE J.)
239 LONG-LIVED PARTICLES #239(FRATI, WILLIAM)
243 EMULSION/PROTONS @ 400 #243(NIU, KIYOSHI)
245 EMULSION/PROTONS @ 400 #245(JAIN, PIYARE L.)
248 NEUTRON ELASTIC SCATTERING #248(LONGO, MICHAEL J.)
250 EMULSION/PROTONS @ 300 #250(KUSUMOTO, OSAMU)
252 30-INCH P-P @ 100 #252(FERBEL, THOMAS)
254 NEUTRINO #254(KALBFLEISCH, GEORGE R.)
258 PION INCLUSIVE #258(SHOCHET, MELVIN J.)
261 DETECTOR DEVELOPMENT #261(WANG, CHING LIN)
264 EMULSION/PI- @ 200 #264(YOUNG, POH SHIEN)
268 INCLUSIVE PHOTON #268(HELLEMA, JOEL)
272 HADRON DISSOCIATION #272(FERBEL, THOMAS)
276 QUARK #276(VAN GINNEKEN, ANDREAS)
280 30-INCH P - D @ 200 #280(FIELDS, THOMAS)
284 PARTICLE PRODUCTION #284(WALKER, JAMES K.)
288 DI-LEPTON #288(LEDERMAN, LEON M.)
290 BACKWARD SCATTERING #290(BAKER, WINSLOW F.)
292 EMULSION/PROTONS @ 400 #292(GOTTFRIED, KURT)
297 QUARK #297(LEIPUNER, LAWRENCE B.)
300 PARTICLE SEARCH #300(PIROUE, PIERRE A.)
305 NEUTRON DISSOCIATION #305(GOBBI, BRUNO)
311 30-INCH PBAR - P @ 100 #311(NEALE, WILLIAM W.)
317 PROTON-NUCLEON INELASTIC #317(COOL, RODNEY L.)
320 NEUTRINO #320(SCIULLI, FRANK)
324 INCLUSIVE SCATTERING #324(WEISBERG, HOWARD L.)
326 DI-MUON #326(SHOCHET, MELVIN J.)
328 EMULSION/PI- @ 200 #328(TRETJAKOVA, M. I.)
330 PARTICLE SEARCH #330(GUSTAFSON, RICHARD)
335 MUON SEARCH #335(FACKLER, ORRIN D.)
337 DI-MUON #337(EARTLY, DAVID P.)
339 EMULSION/PI- @ 200 #339(WOLTER, WLADYSLAW)
341 15-FOOT P - P @ 400 #341(KO, WINSTON)
344 30-INCH PBAR - P @ 50 #344(GUTAY, LASZLO J.)
346 EMULSION/PROTONS @ 400 #346(EKSPONG, GOSTA)
356 NEUTRINO #356(SCIULLI, FRANK)
358 DI-MUON #358(LEE, WONYONG)
362 EMULSION/PI- @ 200 #362(JAIN, PIYARE L.)
365 PARTICLE SEARCH #365(GARELICK, DAVID A.)
369 PARTICLE SEARCH #369(KIRK, THOMAS B. W.)
371 SUPER-HEAVY ELEMENTS #371(JURIC, MIRA)
374 EMULSION/PROTONS @ 300 #374(DAVIS, D. H.)
380 15-FOOT NEUTRINO/H2&NE #380(BALTAY, CHARLES)
382 PARTICLE SEARCH #382(HAND, LOUIS N.)
384 15-FOOT PI- - P @ 360 #384(LANNUTTI, JOSEPH E.)
386 EMULSION/NEW PARTICLES #386(LORD, JERE J.)
388 15-FOOT ANTI-NEUTRINO/H2&NE#388(PETERSON, VINCENT Z.)
391 MUON #391(KERTH, LEROY J.)
396 HADRON DISSOCIATION #396(GOULIANOS, KONSTANTIN)
398 MUON #398(WILSON, RICHARD)
400 PARTICLE SEARCH #400(PEOPLES, JOHN)
404 INCLUSIVE NEUTRON #404(GUSTAFSON, RICHARD)
416 PARTICLE SEARCH #416(LUBATTI, HENRY J.)
419 EMULSION/PROTONS @ 300 #419(GIACOMELLI, GIORGIO)
423 EMULSION/PROTONS @ 400 #423(SUGIMOTO, HISAHIKO)
425 K ZERO REGENERATION #425(TELEGDI, VALENTINE L.)
427 DETECTOR DEVELOPMENT #427(YUAN, LUKE C. L.)
434 EMULSION/PROTONS @ 400 #434(DAKE, SHOJI)
436 DI-MUON #436(ADAIR, ROBERT K.)
439 MULTI-MUON #439(GARELICK, DAVID A.)
441 LAMBDA POLARIZATION #441(PONDROM, LEE G.)
444 DI-MUON #444(SMITH, A. J. STEWART)
2B 30-INCH HYBRID #2B(SMITH, GERALD A.)
4 NEUTRON CROSS SECTION #4(LONGO, MICHAEL J.)
8 NEUTRAL HYPERON #8(PONDROM, LEE G.)
14A PROTON-PROTON INELASTIC #14A(FRANZINI, PAOLO)
22 MULTIGAMMA #22(COLLINS, GEORGE B.)
26 MUON #26(HAND, LOUIS N.)
28A 15-FOOT NEUTRINO/H2&NE #28A(FRY, WILLIAM F.)
34 DETECTOR DEVELOPMENT #34(HUGGETT, RICHARD W.)
37A 30-INCH P-P @ 300 #37A(MALAMUD, ERNEST)
48 MUON SEARCH #48(ADAIR, ROBERT K.)
53A 15-FOOT NEUTRINO/H2&NE #53A(BALTAY, CHARLES)
63A PHOTON SEARCH #63A(WALKER, JAMES K.)
69A ELASTIC SCATTERING #69A(LACH, JOSEPH)
72 QUARK #72(LEIPUNER, LAWRENCE B.)
76 MONOPOLE #76(CARRIGAN, RICHARD)
82 K ZERO REGENERATION #82(TELEGDI, VALENTINE L.)
86A PION DISSOCIATION #86A(LUBATTI, HENRY J.)
89 15-FOOT PI- - P&NE @ 200 #89(FRETTER, WILLIAM B.)
95A PHOTON SEARCH #95A(COX, BRADLEY)
98 MUON #98(ANDERSON, HERBERT L.)
100A PARTICLE SEARCH #100A(PIROUE, PIERRE A.)
104 TOTAL CROSS SECTION #104(KICIA, THADDEUS F.)
108 BEAM DUMP #108(AWSCHALOM, MIGUEL)
111 PION CHARGE EXCHANGE #111(TOLLESTRUP, ALVIN V.)
115 LONG-LIVED PARTICLES #115(STEVENSON, M. LYNN)
117A EMULSION/PROTONS @ 200 #117A(KUSUMOTO, OSAMU)
120 PHOTON SEARCH #120(CLINE, DAVID B.)
125 30-INCH PI- - P @ 100 #125(MORRISON, DOUGLAS R. O.)
138 30-INCH P-P @ 400 #138(VANDER VELDE, JACK C.)
142 SUPER-HEAVY ELEMENTS #142(STOUGHTON, RAYMOND W.)
147 SUPER-HEAVY ELEMENTS #147(DEBEAUVAIS, MONIQUE)
154 30-INCH HYBRID #154(PLESS, IRWIN A.)
156 EMULSION/PROTONS @ 200 #156(NIU, KIYOSHI)
163A 30-INCH PI- - P&NE @ 200 #163A(WALKER, WILLIAM D.)
172 15-FOOT ANTI-NEUTRINO/H2&NE#172(LUBATTI, HENRY J.)
178 MULTIPLICITIES #178(BUSZA, WIT)
181 EMULSION/PROTONS @ 300 #181(CARY, ARTHUR S.)
184 PARTICLE SEARCH #184(WANDERER, PETER)
187 PARTICLE SEARCH #187(LEDERMAN, LEON M.)
189 EMULSION/PROTONS @ 200 #189(RITSON, DAVID)
195 EMULSION/PROTONS @ 300 #195(LIM, YU K.)
198A PROTON-NUCLEON SCATTERING #198A(OLSEN, STEPHEN L.)
202 TACHYON MONOPOLE #202(BARTLETT, DAVID F.)
205A EMULSION/MUONS @ 150 #205A(KUSUMOTO, OSAMU)
211 BEAM DUMP #211(GOEBEL, KLAUS)
217 30-INCH PI+ & P - P @ 200 #217(LANDER, RICHARD L.)
221 PROTON-PROTON INELASTIC #221(FRANZINI, PAOLO)
228 30-INCH PI+ & P - P @ 50 #228(FERBEL, THOMAS)
230 MULTIGAMMA #230(LONGO, MICHAEL J.)
233 EMULSION/PROTONS @ 300 #233(HEBERT, JACQUES D.)
236A HADRON JETS #236A(NOCKETT, PAUL M.)
238 EMULSION/PROTONS @ 400 #238(LORD, JERE J.)
242 EMULSION/PROTONS @ 300 #242(NIU, KIYOSHI)
244 EMULSION/PROTONS @ 300 #244(JAIN, PIYARE L.)
247 PARTICLE SEARCH #247(BURHOP, ERIC H. S.)
249 EMULSION/PROTONS @ 400 #249(WOLTER, WLADYSLAW)
251 EMULSION/PROTONS @ 400 #251(KUSUMOTO, OSAMU)
253 NEUTRINO #253(NO, LUKE W.)
255 EMULSION/MUONS @ 150 #255(JAIN, PIYARE L.)
260 HADRON JETS #260(MCLEOD, DONALD W.)
262 NEUTRINO #262(BARISH, BARRY)
265 EMULSION/PROTONS @ 400 #265(YOUNG, POH SHIEN)
271 EMULSION/PROTONS @ 200 #271(GOTTFRIED, KURT)
275 PLASTIC DETECTORS #275(ENGE, WOLFGANG)
279 EMULSION/PROTONS @ 400 #279(KING, DAVID T.)
281 30-INCH HYBRID #281(SMITH, GERALD A.)
285 SUPER-HEAVY ELEMENTS #285(LEDERMAN, LEON M.)
289 PROTON-HELIUM SCATTERING #289(MALAMUD, ERNEST)
291 15-FOOT P - P & NE @ 400 #291(HANN, WILLIAM A.)
295 30-INCH PI+ & P - D @ 200 #295(YEKUTIELI, GIDEON)
299 30-INCH HYBRID #299(PLESS, IRWIN A.)
302 C-TEST #302(WITHERELL, MICHAEL)
310 NEUTRINO #310(CLINE, DAVID B.)
313 PROTON-PROTON POLARIZATION #313(NEAL, HOMER A.)
319 MUON #319(CHEN, K. WENDELL)
321 PROTON-PROTON INELASTIC #321(LEE-FRANZINI, JULIET)
325 PARTICLE SEARCH #325(PIROUE, PIERRE A.)
327 DETECTOR DEVELOPMENT #327(ALLISON, WADE W. M.)
329 EMULSION/PROTONS @ 300 #329(TRETJAKOVA, M. I.)
331 DI-MUON #331(PILCHER, JAMES E.)
336 EMULSION/PROTONS @ 400 #336(OGATA, TAKESHI)
338 30-INCH PI- - D @ 360 #338(MORIYASU, KEIHACHIRO)
340 EMULSION/ELECTRONS @ HI E #340(DAKE, SHOJI)
343 15-FOOT P - P @ 300 #343(ENGELMANN, RODERICH J.)
345 30-INCH PBAR - D @ 100 #345(EKSPONG, GOSTA)
350 INCLUSIVE NEUTRAL MESON #350(KENNEY, ROBERT W.)
357 PARTICLE SEARCH #357(MEYER, DONALD I.)
361 LAMBDA BETA-DECAY #361(PONDROM, LEE G.)
363 PARTICLE SEARCH #363(OLSEN, STEPHEN L.)
366 PARTICLE SEARCH #366(ABOLINS, MARIS A.)
370 NEUTRINO #370(CLINE, DAVID B.)
373 EMULSION/MUONS @ 200 #373(JAIN, PIYARE L.)
379 PARTICLE SEARCH #379(WOJCICKI, STANLEY G.)
381 PROTON-NUCLEON SCATTERING #381(MALAMUD, ERNEST)
383 INCLUSIVE K-SHORT #383(KOBRAK, HANS G. E.)
385 EMULSION/PROTONS @ 400 #385(PRAKASH, Y.)
387 EMULSION/PI- @ 200 #387(WILKES, RICHARD J.)
390 15-FOOT ANTI-NEUTRINO/D2 #390(GARFINKEL, ARTHUR F.)
395 HADRON JETS #395(SELOVE, WALTER)
397 PARTICLE SEARCH #397(ROSEN, JEROME L.)
399 EMULSION/ELECTRONS @ >100 #399(GOLDEN, ROBERT L.)
401 PHOTOPRODUCTION #401(GORMLEY, MICHAEL F.)
415 PARTICLE PRODUCTION #415(PONDROM, LEE G.)
418 PARTICLE PRODUCTION #418(SANNES, FELIX)
421 EMULSION/PROTONS @ 300 #421(DZHELEPOV, V. P.)
424 EMULSION/MUONS @ 200 #424(WADA, TOMONORI)
426 FRAGMENTATION PARTICLES #426(FUKUI, KATSURA)
428 EMULSION/PROTONS @ 400 #428(HEBERT, JACQUES D.)
435 MUON SEARCH #435(ADAIR, ROBERT K.)
438 NEUTRON-NUCLEUS INELASTIC #438(JONES, LAWRENCE W.)
440 LAMBDA MAGNETIC MOMENT #440(BUNCE, GERRY)
442 NUCLEAR FRAGMENTS #442(TURKOT, FRANK)
448 MUON #448(LOOMIS, WILLIAM A.)

SUMMARY OF PROPOSAL STATUS

APPROVED PROPOSALS(CONT.)

451 INCLUSIVE SCATTERING #451(BARTON, DONALD S.)
458 PHOTOPRODUCTION #458(LEE, WONYONG)
462 EMULSION/PROTONS @ 400 #462(GIACOMELLI, GIORGIO)
466 NUCLEAR FRAGMENTS #466(KAUFMAN, SHELDON)
468 PARTICLE SEARCH #468(STEINBERG, PHILLIP H.)
472 PARTICLE SEARCH #472(STANFIELD, KENNETH C.)
482 NEUTRINO #482(BARISH, BARRY)
490 PARTICLE SEARCH #490(SANDWEISS, JACK)
495 XI-ZERO PRODUCTION #495(HELLER, KENNETH)
498 DETECTOR DEVELOPMENT #498(GRUHN, CHARLES R.)
501 TEST MUON IRRADIATION #501(LANDE, KENNETH)
503 EMULSION/PI- @ 300 #503(OGATA, TAKESHI)
506 EMULSION/PI- @ 300 #506(DAKE, SHOJI)
508 EMULSION/PROTONS @ 500 #508(WOLTER, WLADYSLAW)
510 EMULSION/ELECTRONS @ HI E #510(NIU, KIYOSHI)
516 PHOTOPRODUCTION #516(NASH, THOMAS)
524 EMULSION/PROTONS @ 500 #524(WILKES, RICHARD J.)
531 NEUTRINO #531(READ, NEVILLE W.)
536 EMULSION/NEUTRINO #536(NIU, KIYOSHI)
540 PARTICLE SEARCH #540(LONGO, MICHAEL J.)
546 15-FOOT NEUTRINO/B2&NE #546(HUSON, FRED RUSS)
549 QUARK #549(LONGO, MICHAEL J.)
553 NEUTRINO #553(BAND, LOUIS N.)
557 HADRON JETS #557(MALAMUD, ERNEST)
565 30-INCH HYBRID #565(YAMAMOTO, RICHARD K.)
568 EMULSION/PI- @ 300 #568(HEBERT, JACQUES D.)
573 EMULSION/PI- @ 300 #573(USHIDA, NORIYUKI)
575 EMULSION/PROTONS @ 400 #575(LORD, JERE J.)
577 ELASTIC SCATTERING #577(RUBINSTEIN, ROY)
584 PARTICLE SEARCH #584(WINSTEIN, BRUCE D.)
591 PARTICLE SEARCH #591(GUTAY, LASZLO J.)
594 NEUTRINO #594(TAYLOR, FRANK)
596 PARTICLE SEARCH #596(LEDERMAN, LEON M.)
605 HIGH MASS PAIRS #605(BROWN, CHARLES N.)
609 HADRON JETS #609(SELOVE, WALTER)
612 PHOTON DISSOCIATION #612(GOULIANOS, KONSTANTIN)
616 NEUTRINO #616(SCIULLI, FRANK)
456 FORM FACTOR #456(STORK, DONALD H.)
461 EMULSION/PROTONS @ 400 #461(LORD, JERE J.)
463 EMULSION/PROTONS @ 400 #463(TRETJAKOVA, M. I.)
467 TEST MUON IRRADIATION #467(FREEDMAN, MELVIN)
469 PARTICLE SEARCH #469(CUTTS, DAVID)
481 EMULSION/PI- @ 300 #481(TAKAHASHI, YOSHIYUKI)
486 K ZERO CROSS SECTION #486(WINSTEIN, BRUCE D.)
494 DI-HADRON #494(GOOD, MYRON L.)
497 CHARGED HYPERON #497(LACH, JOSEPH)
499 EMULSION/PROTONS @ 400 #499(IWAI, JUNSUKE)
502 MONOPOLE #502(BARTLETT, DAVID F.)
505 PROTON POLARIZATION #505(YAMIN, SAMUEL PETER)
507 HIGH ENERGY CHANNELING #507(TSYGANOV, EDOUARD N.)
509 EMULSION/MUONS @ 200 #509(SHIRAI, T.)
515 PARTICLE SEARCH #515(ROSEN, JEROME L.)
522 PROTON POLARIZATION #522(OGREN, HAROLD O.)
525 EMULSION/PI- @ 300 #525(WILKES, RICHARD J.)
533 PI-MU ATOMS #533(SCHWARTZ, MEL)
537 DI-MUON #537(COX, BRADLEY)
545 15-FOOT NEUTRINO/D2&HIZ #545(SNOW, GEORGE A.)
547 EMULSION/PROTONS @ 400 #547(JACQUOT, C. J.)
552 P-N SCATTERING #552(SANNES, FELIX)
555 NEUTRAL HYPERON #555(DEVLIN, THOMAS J.)
564 15-FOOT & EMULSION/NEUTRINO#564(VOYVODIC, LOUIS)
567 PARTICLE SEARCH #567(WITHERELL, MICHAEL)
570 30-INCH HYBRID #570(PLESS, IRWIN A.)
574 EMULSION/PI- @ 300 #574(WOLTER, WLADYSLAW)
576 EMULSION/PROTONS @ 500 #576(HEBERT, JACQUES D.)
580 PARTICLE SEARCH #580(JENKINS, EDGAR W.)
585 KAON CHARGE EXCHANGE #585(FRANCIS, WILLIAM R.)
592 NUCLEAR SCALING #592(FRANKEL, SHERMAN)
595 PARTICLE SEARCH #595(BODEK, ARIE)
597 30-INCH HYBRID #597(WHITMORE, J. JAMES)
608 PARTICLE SEARCH #608(BROWN, CHARLES N.)
610 PARTICLE SEARCH #610(KIRK, THOMAS B. W.)
613 BEAM DUMP #613(ROE, BYRON P.)
617 CP VIOLATION #617(WINSTEIN, BRUCE D.)

CHECKLIST

CHECKLIST FOR PENDING PROPOSALS (WITH NOTATION OF THE PRESENT APPROVAL STATUS)

___ 500D PROTON-PROTON SCATTERING #500D(FRANZINI)-UNCONSIDERED

___ 523 MULTIPARTICLE #523(DZIERBA)-DEFERRED

___ 528 DETECTOR DEVELOPMENT #528(ROBERTS)-DEFERRED

___ 550 DETECTOR DEVELOPMENT #550(ATAC)-DEFERRED

___ 589 DI-MUON #589(MOCKETT)-UNCONSIDERED

___ 614 PHOTON SEARCH #614(ROSEN)-DEFERRED

___ 618 MUON-NEUTRINO COINCIDENCE #618(GARELICK)-UNCONSIDERED

___ 619 TRANSITION MAGNETIC MOMENT #619(DEVLIN)-UNCONSIDERED

___ 620 CHARGED HYPERON MAG MOMENT #620(PONDROM)-UNCONSIDERED

___ 621 CP VIOLATION #621(THOMSON)-UNCONSIDERED

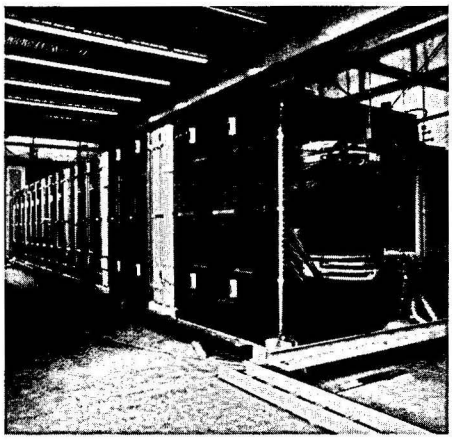
___ 622 QUARK #622(GUSTAFSON)-UNCONSIDERED

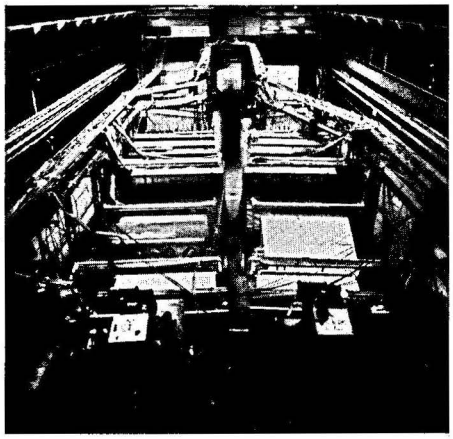
___ 623 PARTICLE SEARCH #623(LAI)-UNCONSIDERED

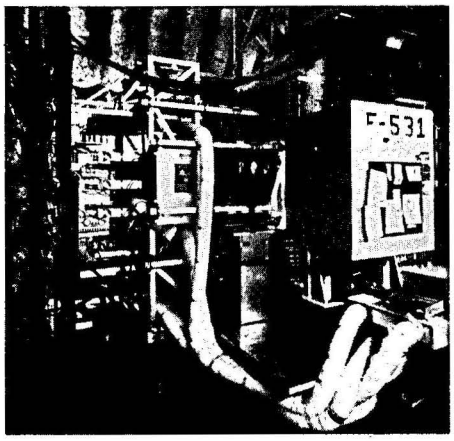
___ 624 PARTICLE SEARCH #624(PLESS)-UNCONSIDERED

___ 625 NEUTRINO #625(LEE)-UNCONSIDERED

☆U.S. GOVERNMENT PRINTING OFFICE: 1979—651-736






F-531