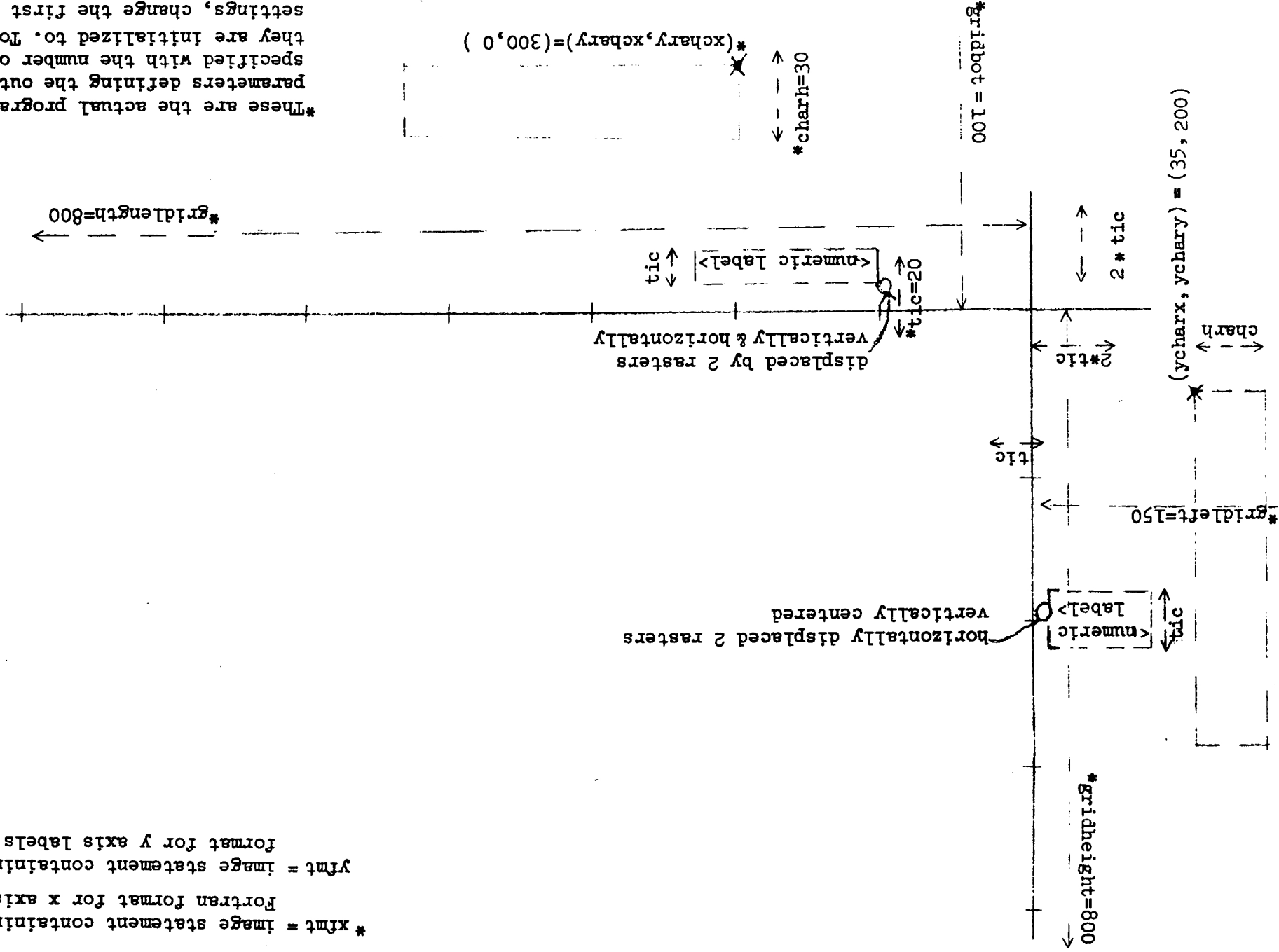


Format for displaying filter  
and spectrum

\*xlimit = image statement containing  
Fortran format for x axis labels  
\*ylimit = image statement containing  
Fortran format for y axis labels

<optional description of spectrum>  
(tcharx, tcharx)=(center, 935)

↑  
charh



\*These are the actual program names of  
parameters defining the output format,  
specified with the number of rasters  
they are initialized to. To modify these  
settings, change the first declaration  
at the beginning of ARSPFC.

Core Research & Development (Continued)

D. Miscellaneous Core Projects

For descriptions of the other projects which had core research status during FY73, see the Summary of Computer Resource Usage, Categories 5 and 6, in Section VII of this report.

VI. BUDGET

The budget section of this annual report is divided into the following topics:

- A. Resource Expenditures
- B. Expenditure Details
- C. Summary of Resource Funding
- D. Resource Equipment List
- E. Income Statement for 12-Month Period Ending April 1973

Fiscal year 1973 direct costs will be \$800,000. This will be offset by approximately \$260,000 in income from service fees. These figures exclude costs associated with providing terminal services to users and the income received through terminal service fees.

Section E indicates that income of \$289,000 was received from users in the 12-month period ending April 1973, compared to prior year income of \$230,000. The terminal service fees accounted for approximately \$100,000 in additional income during each of these two years; roughly one-half of this sum was spent for terminal rentals while the balance has been used to provide services best offered from a central point and to support new communications gear for use of the 370/158 facility.

A. Resource Expenditures  
SUMMARY

	Total Resource Expenditures		
	05 year (8/1/70- 7/31/71) Budget Period	06 year (8/1/71- 7/31/72) Budget Period	06S year* (8/1/72- 7/31/73) Budget Period
1. Personnel:			
a. Salaries & Wages	239,329	244,023	278,422
b. Staff Benefits	32,851	36,814	44,377
Subtotal	272,180	280,837	322,799
2. Consultant Services	912	508	--
3. Equipment			
a. Main Resource-Rented	384,542	385,926	383,862
b. Main Resource-Purchased	40,843	61,218	36,371
c. Supporting Equipment	1,951	1,259	1,260
d. Equipment Maintenance	6,145	14,764	14,500
Subtotal	433,486	463,167	435,993
4. Supplies	15,873	9,251	5,800
5. Travel	3,047	2,138	4,000
6. Engineering Services	11,818	25,236	12,700
7. Publications Costs	3,031	4,608	6,000
8. Other			
a. Computer Services (1)	8,272	3,250	5,900
b. Other	9,531	11,243	12,100
Subtotal	17,803	14,493	18,000
9. Subtotal - Direct Costs	758,150	800,238	805,292
10. Indirect Costs	141,205	103,120	65,196 (2)
11. Total Costs	899,355	903,358	870,488

(1) Includes education courses

(2) Assumes \$403,561 exempt equipment costs  
and user income of \$260,000

\* 06S refers to one year extension

B. Expenditure Details  
DIRECT COSTS ONLY

	06 year August 1, 1971- July 31, 1972	06S year August 1, 1972- July 31, 1973
1. Personnel		
Director's Office	32,928	28,391
Systems Analysis	2,758	7,748
Systems Programmers	91,263	86,907
Applications Programmers	37,631	50,428
Research Assistants	9,094	5,227
Operations	56,588	59,185
Secretarial & Administrative	13,761	14,674
I.R.L. Support Personnel		25,862
Subtotal, Salaries	244,023	278,422
Staff Benefits	36,814	44,377
TOTAL PERSONNEL	280,837	322,799
2. Consultant Services	508	---

B. Expenditure Details

DIRECT COSTS ONLY

August 1, 1971- August 1, 1972-  
 July 31, 1972 July 31, 1973

3. Equipment

Major Equipment

1052	Console Typewriter	635	635
1403	Printer 600 LPM	8,397	8,397
2050	Additional CPU (F)	99,955	101,297
2314 #1	Dir. Access Storage	21,466	---
2314 #2	Dir. Access Storage	19,988	---
2361	Core Storage	27,291	---
2401	Mag. Tape Unit	3,377	3,377
2403	Mag. Tape Unit Control	8,971	8,971
2540	Card Reader Punch	6,947	7,157
2701	Data Adapter Unit	10,561	10,728
2702	Transmission Control	13,162	---
2821	Control Unit	10,937	10,937
	Ampex DC 314	20,058	38,642
1	Ampex DC 314	22,243	36,304
	Ampex ECM-50	77,949	119,922
	Memorex 1270	2,967	16,248
	Subtotal	354,914	362,615
	Disk Pack Rentals (25/25)	2,333	2,484
	Terminals Rentals (10/6)	10,767	7,900
	IBM 1800 add. units		
1442		2,639	2,671
1826		7,691	7,691
1856		1,701	1,701
	Subtotal, 1800	12,030	12,063
	Unit Record 029	1,259	1,260
	Data Set and Line Rentals	5,882	< 1,200 >*
	TOTAL, MAIN RESOURCES AND SUPPORTING EQUIPMENT RENTALS	381,303	386,322

\* Reflects corrections of charges mistakenly placed on Grant account for graphics communication services.

B. Expenditure Details

DIRECT COSTS ONLY

	August 1, 1971- July 31, 1972	August 1, 1972- July 31, 1973
Purchased Equipment		
RPQ's for Beehive Terminals	381	
PDP-11 System	38,237	
DEC Dual Tape Systems	7,450	
Computer Terminals (4)	15,150	
1200 Baud modems (2 + power supply)		438
Sale of Beehive Terminals & Interfacing		< 8,975 >
Printer for Beehive CRT/PDP-11		3,570
Computer Terminals (5)		16,013
Equipment for PL/ACME follow on system*		25,325
Subtotal Purchased	61,218	36,371
Maintenance (Under outside contract)	14,764	14,500
Total Equipment	463,167	435,993

\* Some money has been shifted from other budget categories to permit purchase of equipment needed to provide follow-on PL/ACME services. More detail is presented on separate correspondence to NIH.

B. Expenditure Details  
DIRECT COSTS ONLY

	August 1, 1971- July 31, 1972	August 1, 1972- July 31, 1973
4. Consumable Supplies		
Office	2,220	1,600
Computer	7,031	4,200
Subtotal, Consumable Supplies	9,251	5,800
5. Travel		
BREITBARD	Philadelphia to Stanford for job interviews, 10/3	336
CLASS	FJCC, Anaheim, 10/5-7	68
FREY	SHARE Interim Meeting, San Diego, 12/3-6	135
	SHARE XXXIX Conference, Toronto, 3/7-11	531
	IBM Course, San Francisco 8/28-9/1	24
	SHARE XL, Denver 3/6-9	315
GERMANO	IBM Course, San Francisco, 12/18-19	18
GRANIERI	IBM Course, San Francisco, 11/28-30	29
HEATHMAN	IBM Course, San Francisco, 11/28-30	23
IHU	Visit Computer Transmission Corp, Los Angeles, 3/15	39
JAMTGAARD	ACM SIGBIO and SIGGRAPH and FJCC, Anaheim, 12/3-5	192
	Univac Corp. for "Exec 8" demo., San Francisco, 11/9	9
	Visit NIH/BRB and DRG, Washington, D.C., 1/31-2/2	427
MILLER	IBM Course, San Francisco, 11/13	7
	IBM Courses, San Francisco, 9/26-27, 10/3-5	35
STANTON	FJCC, Anaheim, 12/3-5	153
	IBM Class, Portland, Ore., 10/16-20	208
	Assist in display at International Transplant Conference, San Francisco, 9/25-29	19
	Visit Computer Transmission Corp., Los Angeles, 3/15	33
WHITNER	Sixth Annual Symposium on the Interface Workshop, Berkeley, 10/16-17	25
WIEDERHOLD	SHARE, San Diego, FJCC, Anaheim, 12/3-6	248
	ACM National Conference, Boston, 8/11-16	242
	Visit U.C. Med. Ctr., San Francisco, 8/17	10
	All Other Travel	874
Subtotal, Travel	2,138	4,000

August 1, 1971-  
July 31, 1972

August 1, 1972-  
July 31, 1973

6. Engineering Services	25,236	12,700
7. Publication Costs	4,608	6,000
8. Computer Services		
360/67 & Tymshare Services	2,615	2,000
Staff Training	635	3,900
Subtotal, Computer Services	3,250	5,900
9. Other Expenditures		
Books and Periodicals	407	200
Postage and Freight	1,698	2,000
Telephone	6,673	6,400
Physical Plant	115	300
Technical Services	1,322	3,000
Misc	1,028	200
Subtotal, Other	11,243	12,100
GRAND TOTAL -- DIRECT COSTS	800,238	805,292

C. Summary of Resource Funding

Source of Funds	BUDGET PERIODS	
	05 Budget Period	06 Budget Period
Computer Service Fees	170,596	266,805
Biotech, Resources Branch Support		
Amount of Current Award: Line (5) of Award Statement	675,747	633,379
Adjustment from Prior Periods:		
1. Balance from prior budget periods	76,459	3,174
2. Balance of 270 x/y Proceeds <	27,275	> 5,292
Additional Funding Required*		42,181
Total BR Support	724,931	636,553
TOTAL FUNDING	895,527	903,358
		870,488

\* A request for additional funding support has been forwarded to NIH.

D. Resource Equipment List

RENTAL EQUIPMENT

360/50 Configuration

TYPE-SERIAL	DESCRIPTION	RENTAL START DATE	MONTHLY RATE	E/A%	EDUCATIONAL ALLOWANCE	TAX	NET RENTAL
1052-50618	Console Typewriter	12-13-66	63.00	20	12.60	2.52	52.92
1403-14708	Printer 600 LPM	"	833.00	20	166.60	33.32	699.72
2050-11047	Additional CPU (F)	"	1,660.00	25	415.00	62.25	1,307.25
2050-11047	CPU	"	10,453.00	35	3,658.55	339.72	7,134.17
2401-10877	Mag. Tape Unit	"	335.00	20	67.00	13.40	281.40
2403-70738	Mag. Tape Unit Control	"	890.00	20	178.00	35.60	747.60
2540-12531	Card Reader Punch	"	710.00	20	142.00	28.40	596.40
2701-11144	Data Adapter Unit	"	1,025.00	20	205.00	41.00	861.00
2821-12464	Control Unit	"	1,085.00	20	217.00	43.40	911.40
MEMOREX:							
1270-10378	Control Unit	5-23-72	1,290.00	--	--	64.50	1,354.50
AMPEx:							
DC 314-034	Dir. Access. Stge.	12-20-71	3,127.80	--	--	123.39	3,251.21
DC 314-037	Dir. Access. Stge.	1-13-72	2,907.00	--	--	118.35	3,025.35
ECM 50-1222	Core Storage	12-08-71	9,545.00	--	--	448.50	9,993.50
360/50 Configuration Total							
			33,958.82		5,065.25	1,355.93	30,249.50

D. Resource Equipment List

RENTAL EQUIPMENT (cont.)

Supporting Equipment Rentals

TYPE-SERIAL	DESCRIPTION	RENTAL START DATE	MONTHLY RATE	E/A% ALLOWANCE	TAX	NET RENTAL
25 units 911	Disk Pack (3M)	5-17-71(@ 7.88)	197.00	--	9.85	206.85
3 units	IBM 2741	various	319.50	63.90	12.78	268.38
3 units	G.E. Terminal Communication Terminal	various	354.00	--	17.70	371.70
1800 Rental Equipment						
1826-10152	Data Adapter Unit	9-22-66	763.00	152.60	30.52	640.92
1442-70295	Card Read Punch	"	265.00	53.00	10.60	222.60
1856-10607	Analog Output Terminal	6-24-70	150.00	15.00	6.75	141.75
Other Rented Equipment						
Card Punch	IBM (Model 029/P4202)	9-21-70	111.00	11.10	5.00	104.90

PURCHASED EQUIPMENT  
 Period Covered -- 8/1/67-4/30/73  
 DESCRIPTION/IDENTIFICATION MANUFACTURER MODEL NO. PURCHASE PRICE SOURCE OF FU

DESCRIPTION/IDENTIFICATION	MANUFACTURER	MODEL NO.	PURCHASE PRICE	SOURCE OF FU
1800 System	IBM	1801	2,908.00	Genetics I.R.L
Process Controller	IBM	1816		
Printer keyboard	"	1828		
Enclosure	"	1851		
Analog Input Terminal	ACME			
Digital Display	Hewlett-Packard			
Oscilloscope	E.H. Research Labs	1398	1,500.00	Macy Grant
Pulse Generator	IBM	28	1,275.00	Macy Grant
Conversion 1801	IBM	28	18,753.00	
PDP-11 System	Digital Equipment	PDP-11	17,891.00	
Oscilloscope	Tektronix	547	3,253.00	
Printer	Litton Industries	30	4,053.00	
Module/Packs	Prentice	800/LDA-1	2,972.00	
Oscillator/Generator	Wavetek	130	309.00	
Couplers (2)	Prentice	d22	939.00	
Module	Prentice	LDA 1	383.00	
Cabinet	Prentice		4,182.00	
Disk Drive System	Digital Equipment	RK11 CA/RK03AA	15,332.00	
Sampling Unit	Tektronix	Type 152	1,767.00	
PDP-11 System	Digital Equipment	PDP-11	38,446.00	
DEC Dual Tape System	Digital Equipment		7,450.00	
Computer Terminal (2)	Computer Transceiver Corp.	311	7,645.00	
Computer Terminal (2)	General Electric	Terminet	7,505.00	
Modems (2)	Prentice	LDA-1 with power supply	438.00	

VII. UTILIZATION DATA

A. Interpreting Utilization Charts.

The terms used to discuss ACME utilization involve charging units and categories of users.

1. Charging Units

Last year, the computer service charge units were:

- pageminutes
- terminal connect time
- blocks of disk storage
- terminal service charge

A pageminute is defined as occupancy of 4096 bytes of core for one minute. Terminal connect time is the total number of minutes that a terminal is connected to the system in a logged-on condition. A block of disk storage is a fixed-length block of 2000 bytes of 2314-type disk storage. The terminal service charge covers monthly terminal rent plus other services offered by the ACME staff. This service charge is handled by the University independent of the ACME grant.

2. User Categories

The table below shows the category identifier, definition, and rate of each user category. The rate charged per pageminute varies by user category, and some categories are subsidized 100% by the ACME grant. An asterisk next to the category identifier designates those so subsidized. All other categories are paying. There is a distinction between realtime and non-realtime users. Realtime users use the 1800 processor or 2701 data adapter for data collection or process control functions.

PAGE-MINUTE CHARGE TABLE

Category	cents/pageminute
1. Realtime User - Sponsored Research	1.00
2. Non-Realtime User - Sponsored Research	1.70
3. Non-Stanford Medical	2.50
*4. Medical Students	2.00
*5. Realtime User - Core Research	2.00
*6. Non-Realtime User - Core Research	2.00
*7. ACME Staff - Excluding Operations	2.00
8. Hospital Data Processing	1.70
9. Non-Medical - Stanford and Non-Stanford	2.00

Page-Minute Charge Table (Continued)

*10. Realtime - Pilot and Pending Proposal	2.00
*11. Non-Realtime - Pilot and Pending Proposal	2.00
*12. Realtime - Extended Non-Funded	2.00
*13. Non-Realtime - Extended Non-Funded	2.00
16. Negotiated Rates - Combination of Core Research and Medical Administration	1.20
*17. ACME Operations	2.00

\*No cash charges, i.e., absorbed by the ACME project budget.

B. Patterns of Use.

Approximately 2/3 to 3/4 of the terminals logged-on to the system are in execution at any point in time. This is consistent with a level achieved one year ago. Somewhat fewer terminals are logged-on each day in recent months. This reflects the fact that more people are being charged for their utilization. It also reflects the fact that fewer new users have been recruited this year due to the uncertainty of PL/ACME's future. The number of terminal hours did not decrease significantly despite the increase in the number of 30-character-per-second terminals. Subjectively, it appears to the facility director that much of the utilization today is based upon programs written during the past three or four years. Perhaps as many as 50% of the users rarely write new programs for data entry and data analysis.

During the past year approximately 85% to 90% of the available disk storage for users has been used. Frequently we have run out of space on individual disk packs during the normal operating hours. This has caused considerable inconvenience to all users. One additional disk drive was added to the system this year to alleviate the problem.

The Utilization by Department table indicates considerable usage by the Computer Science Department. The DENDRAL project accounts for essentially all of this usage.

The final table in this section presents a summary of all utilization by all users during the year. On this table, the designation "C" (collaborative) indicates that the project (1) received programming services greater than normal consulting, (2) was accommodated by special changes to the system by the ACME staff, or (3) was involved in a normal research collaboration relationship with ACME.

ACME UTILIZATION BY DEPARTMENT  
 Twelve-Month Period May 1972 - April 1973

\*Distribution is that of April 1973.

Department/Division	# of Terminals*	PACEMINUTES		BLOCKS		TOTAL CHARGE	
		students	non-chargeable	students	non-chargeable	students	non-chargeable
Anesthesia	1.25	-0-	43,149	10	43,272	\$ 1.00	\$ 944.09
Biochemistry	1.00	957			4,308	61.94	\$ 10,178.89
Community and Prev Med	.62	8,031		42	7,105		143.74
Biostatistics		58,718					1,747.89
Dermatology		-0-		60			6.00
Genetics	5.00	129,117	732,695	5,542	45,707	3,208.95	18,770.02
Gyn/OB		162,529		4,892			3,319.74
Medical Microbiology	1.00	88,933		3,613	6,280	2,163.16	2,493.08
Medicine		33,372		10,086			1,601.00
Cardiology	14,126	101,502	293,856	1,337	8,362	420.24	2,163.16
Clinical Pharmacology	1.00	461,448			55,888		11,269.21
Gastroenterology		36,633		587			689.30
Hematology		66,612		6,151			1,785.04
Immunology	1.00	208,632		27,512			6,427.23
Infectious Diseases		3,892		2,778			344.80
Metabolism	4.63	796,740		49,494			17,030.32
Nephrology		38,035		1,380			794.98
Oncology	.50	-0-	59,931	114	4,498	84.00	1,375.53
Respiratory Medicine		2,554					4,375.53
Neurology	1.00	501,650		16,669	889	8,119.55	175.08
Pathology	1.00	304,649		5,872			3,755.28
Pediatrics	2.00	161,296		22,893	3,975.98	54.00	5,201.63
Pharmacology		413,687		24,019			9,742.58
Physiology	25,459						
Psychiatry	2.00	92,722	2,004	1,796	24,743	3,138.59	220.91
Psychiatry		551.01					
Radiology	.50	371,611	12,362	1,796	24,743	3,138.59	220.91
Diagnostic Radiology	1.00	343,890	7,773	10,602			4,476.48
Nuclear Medicine	1.00	186,635		28,819			4,631.99
Radiation Therapy	.50	716,344		40,761			2,880.46
Radiobiology	1.00	117,219		1,846			14,651.02
Surgery		7,385		2,482			2,208.55
Cardiovascular	52,166	143,852	4,188	16,530	1,534.51		377.95
Ophthalmology		47,437		451			3,134.24
Otolaryngology		49,681		451			863.90
Urology		114,387	138	72	3,841	13.80	1,247.87
Admissions Committees		63,375		6,197			1,508.77
Pfeischmann Labs		267,793		7,930			4,911.61
Joint Teaching and Research	.50	174,070		6,937			3,322.80
Regional Medical Program	1.00	29,945		17,500			2,267.34
MEDICAL SCHOOL TOTALS	27.50	591,779	1,980,114	7,567,107	86,690	514,737	\$15,902.96
							\$40,650.06
							\$157,816.17
							\$7,132.73
							\$31,079.60
							\$43,540.57

Department/Division	# of Terminals*	PAGEMINUTES students non-chargable	BLOCKS students non-chargable	TOTAL CHARGE students non-chargable	HOSPITAL	Cardiology	Clin Lab - Immunology	Clin Lab - Infect Diseases	Clin Lab - Pathology	Data Processing	Pharmacy	HOSPITAL TOTAL	CLINICS	OTHER CLINICS AND HOSP	CAMPUS	Aero and Astro	Biosciences	Chemistry	Computer Science**	Law	Math	Physics	Psychology	Statistics	CAMPUS TOTAL	UNKNOWN SCRATCH***	OTHER	USER TOTALS	ACME	GRAND TOTALS
	1.00	6,219	72	\$ 114.16																										
	1.00	6,219	72	\$ 114.16																										
	1.00	1,119,523	88,324	24,323.66																										
	1.00	511,269	7,404	5,787.34																										
	1.00	501,615	32,962	9,046.46																										
		8,006,546	95,581	26,957.57																										
	4.00	10,145,172	224,343	\$66,029.19																										
	1.00	515,400	23,350	\$ 7,828.71																										
	1.00	680,558	18,919	\$15,874.73																										
	-0-		624	\$ 62.40																										
	2.00	286,747	6,343	\$ 76.15																										
	1.00	176,223	14,478	\$ 4,846.90																										
	3.00	4,597,329	62,854	41,210.20																										
	1.00	193,075	15,697	\$ 4,827.51																										
	1.00	176,223	14,478	\$ 4,827.51																										
	3.00	4,597,329	62,854	41,210.20																										
	1.00	5,267	70	98.36																										
	7.23	7,723	2,954	428.00																										
	28,093		978	662.08																										
	5,886		363	148.20																										
	4,773,552	2,139,515	192,170	\$ 98.96																										
	3,902		89,360	\$ 29,939.05																										
	216,629			\$4,450.82																										
	20,736	3,139	53	\$ 69.41																										
	474,706		24,902	\$ 436.24																										
	6,756,805	21,522,568	278,913	\$86,776.57																										
	833,046		895,701	\$20,888.98																										
	833,046		895,701	\$20,888.98																										
	10.00	8,928,799****	198,823	\$105,581.53																										
	51.00	833,046	895,701	\$20,888.98																										

\*Distribution is that of April 1973.  
 \*\*Primarily the DENRAL project, serving medical students.  
 \*\*\*Unknown users, mostly medical students.  
 \*\*\*\*Of this total, 5,927,711 pageminutes were used by Operations to run the system.  
 GRAND TOTAL PAGEMINUTES: 36,041,218  
 GRAND TOTAL BLOCKS: 1,411,809

April 26, 1973

Number of Iner Projects  
By Department and Category at April 16, 1973

Department/Division	Category 1	2	3	4	5	6	7	8	9	10	11	12	13	16	17	Total
ANESTHESIA	2	5	0	0	0	0	0	0	0	0	1	0	0	0	0	8
BIOCHEMISTRY	0	0	5	0	1	0	0	0	0	0	0	0	0	0	0	6
COMMUNITY AND PREV MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BIostatistics	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4
DERMATOLOGY	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
GENETICS	2	6	2	0	4	1	2	0	0	0	0	0	0	0	0	15
GYN/OB	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
MEDICAL MICROBIOLOGY	0	2	0	0	8	0	0	0	0	0	0	0	0	0	0	10
MEDICINE	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CARDIOLOGY	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
CLINICAL PHARMACOLOGY	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
HEMATOLOGY	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
IMMUNOLOGY	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
INFECTIOUS DISEASES	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
METABOLISM	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
NEPHROLOGY	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
ONCOLOGY	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
NEUROLOGY	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PATHOLOGY	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
PEDIATRICS	0	0	2	0	2	0	1	0	0	0	0	0	0	0	0	5
PHARMACOLOGY	0	0	7	0	1	0	0	0	0	0	0	0	0	0	0	8
PHYSIOLOGY	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PSYCHIATRY	2	13	0	4	0	0	0	0	0	0	0	0	0	0	0	19
RADIOLOGY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DIAGNOSTIC RADIOLOGY	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
NUCLEAR MEDICINE	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
RADIATION THERAPY	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
RADIOBIOLOGY	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
SURGERY	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
CARDIOVASCULAR	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
OPHTHALMOLOGY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTOLOGY	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	6
UROLOGY	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
ADMISSIONS COMMITTEE	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
PLETSCHMANN LABS	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
JOINT TEACHING AND RESEARCH	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
REGIONAL MEDICAL PROGRAM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
MEDICAL SCHOOL TOTALS	15	107	0	25	2	3	0	0	0	0	2	0	0	0	0	153

HOSPITAL	Category 1	2	3	4	5	6	7	8	9	10	11	12	13	16	17	Total
Clin Lab - Immunology	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Clin Lab - Inf Dis	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Clin Lab Pathology	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Data Processing	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Pharmacy	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
HOSPITAL TOTAL	0	0	0	0	0	0	0	7	0	0	0	0	0	1	0	8
CLINICS	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
OTHER CLINICS AND HOSP																
PAVAH	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
State Univ. of NY	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Univ of Calif. at SF	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Palo Alto Med Resch.	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
OTHER CLINICS AND HOSP TOTAL	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	9
CAMPUS																
Aero and Astro	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Biosciences	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	6
Chemistry	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Computer Science	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Physics	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Psychology	0	0	0	1	0	0	0	0	6	0	0	0	0	0	0	7
Statistics	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
CAMPUS TOTAL	5	7	0	2	11	0	0	0	9	0	0	0	0	0	0	34
UNKNOWN SCRATCH	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
OTHERS																
Prentice Electronics	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Junip Institute	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Youth Opportunities Program	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
SIAC	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
Carnegie	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
OTHER TOTALS	0	0	2	1	0	0	0	0	6	0	0	0	0	0	0	9
USER TOTALS	21	116	9	29	13	3	0	8	15	0	2	0	0	0	0	217
ACME	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	52
GRAND TOTALS	21	116	9	29	13	3	46	8	15	0	2	0	0	1	6	269

ACME INCOME

April 17, 1972 to April 16, 1973

	May	June	July	August	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	Total
1 - Realtime, sponsored research	\$ 6,739	\$ 7,798	\$ 7,018	\$ 5,362	\$ 4,712	\$ 4,133	\$ 2,996	\$ 2,356	\$ 1,970	\$ 2,582	\$ 2,385	\$ 2,337	\$ 50,368
2 - Non-realtime, sponsored research	14,973	14,574	13,118	13,259	11,663	12,801	14,524	11,430	10,119	12,074	11,596	11,214	151,345
3 - Non-Stanford, medical	2,127	1,413	1,547	2,262	1,719	1,513	500	1,445	398	459	477	391	14,251
8 - Stanford University Hospital and Clinics	1,686	1,769	1,682	2,102	2,079	2,224	2,592	4,436	3,830	4,700	4,304	4,219	35,623
9 - Stanford, non-medical	1,489	1,017	688	1,168	1,161	382	779	759	774	505	988	825	10,535
16 - Combination Core Research and Application	2,390	2,796	2,747	2,544	2,594	2,535	3,075	2,992	2,688	2,524	71	1	26,957
TOTAL	\$29,404	\$29,367	\$26,800	\$23,697	\$23,928	\$24,466	\$23,398	\$19,779	\$22,844	\$19,821	\$18,987	\$289,079	
Income from Terminal and Misc Charges*	\$ 7,790	\$ 8,180	\$ 7,790	\$ 7,695	\$ 8,265	\$ 8,275	\$ 9,055	\$ 8,760	\$ 8,550	\$ 8,265	\$ 8,170	\$ 7,695	\$ 98,490

\*This income is not associated with the ACME Grant. It is an offset to cost incurred by the University for terminal rental, engineering services, and other miscellaneous services provided to the ACME community.

ACME INCOME

FY69 through FY73

	<u>360/50 Income to Grant</u>	<u>Clearing Account Income</u>
FY69 *	\$ 37, 277	\$118, 377
FY70	178, 252	95, 973
FY71	170, 596	100, 809
FY72	267, 558	110, 979
FY73 (est.)	260, 000	100, 000

\*User charges instituted in March of 1969.

ACME UTILIZATION DATA

FY70 - FY73

As measured by number of accounts (staff and operations accounts excluded):

	<u># of accounts</u>	<u>% change</u>
March 1970:	198	
March 1971	210	+6.0%
March 1972	224	+6.6%
March 1973	214	-4.4%

As measured by income:

	<u>FY70<sup>b</sup></u>	<u>FY71</u>	<u>FY72<sup>c</sup></u>	<u>9 mo. Actual</u>	<u>FY73 Total Estimated</u>
360/50 services	\$178,252	\$170,596	\$267,558	\$203,508	\$260,000
% change		-4.3%	+56.8%		-2.9%
terminal rental <sup>a</sup>	98,973	100,809	110,979	74,730	100,000
% change		+1.8%	+10.0%		-9.9%
total	\$277,225	\$271,405	\$378,537	\$278,238	\$360,000
% change		-2.1%	+39.4%		-4.9%

<sup>a</sup>Income provides for terminal rental, services best provided by a central facility, and some recharges for engineering services.

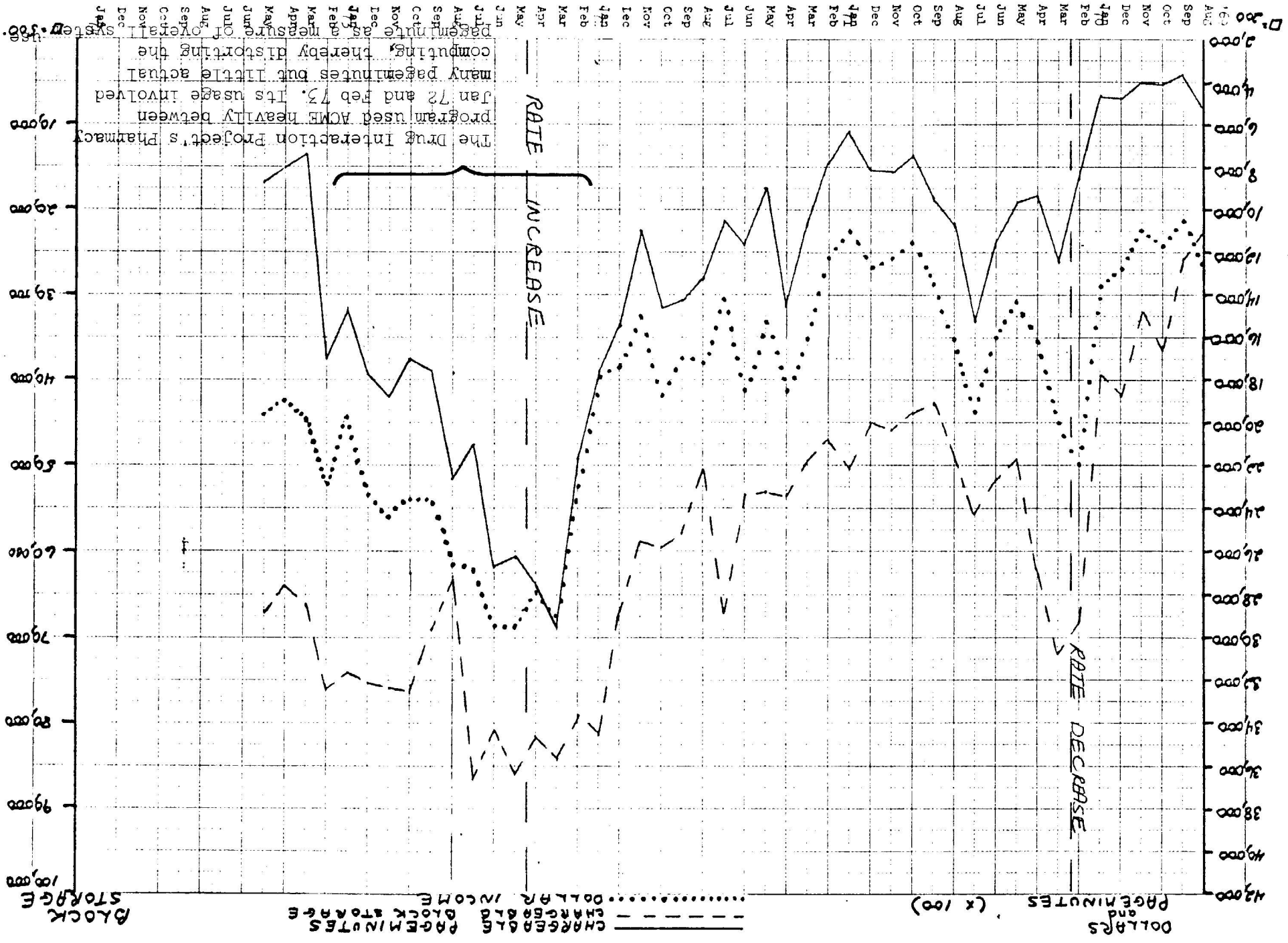
<sup>b</sup>Rate reduction introduced in February 1970.

<sup>c</sup>Rate increase introduced in May 1972.

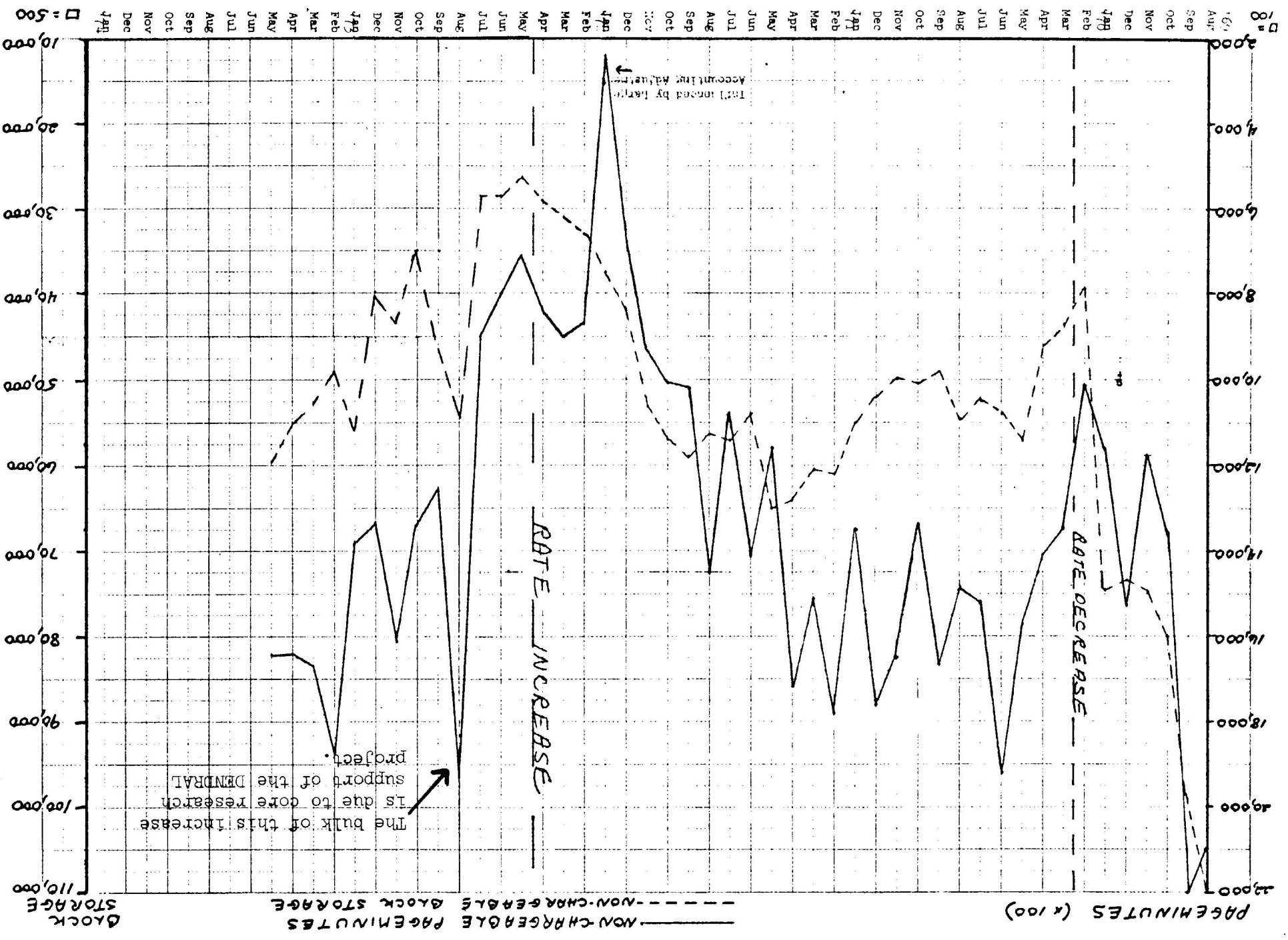
As measured by timesharing units:

<u>Six-Month Period Ending:</u>	<u>Pageminutes x 10<sup>6</sup> Adjusted to Reflect Impact of Faster Memories after Nov. 1971</u>	<u>% Change</u>
January 1971	1.50	
July 1971	1.45	-3.4%
January 1972	1.29	-1.1%
July 1972	1.95	+51.1%
January 1973	1.69	-1.3%

<sup>d</sup>One pageminute represents occupancy of 4k bytes of memory for one minute.



The Drug Interaction Project's Pharmacy program used ACFE heavily between Jan 72 and Feb 73. Its usage involved many page minutes but little actual computing, thereby distorting the program's statistics.



The system has had 365 pages (4,096 bytes) available for service since the last increment of core was added in Jan. 69. As of Jan. 73 the network includes 55 terminals supported at 110 to 1200 baud.

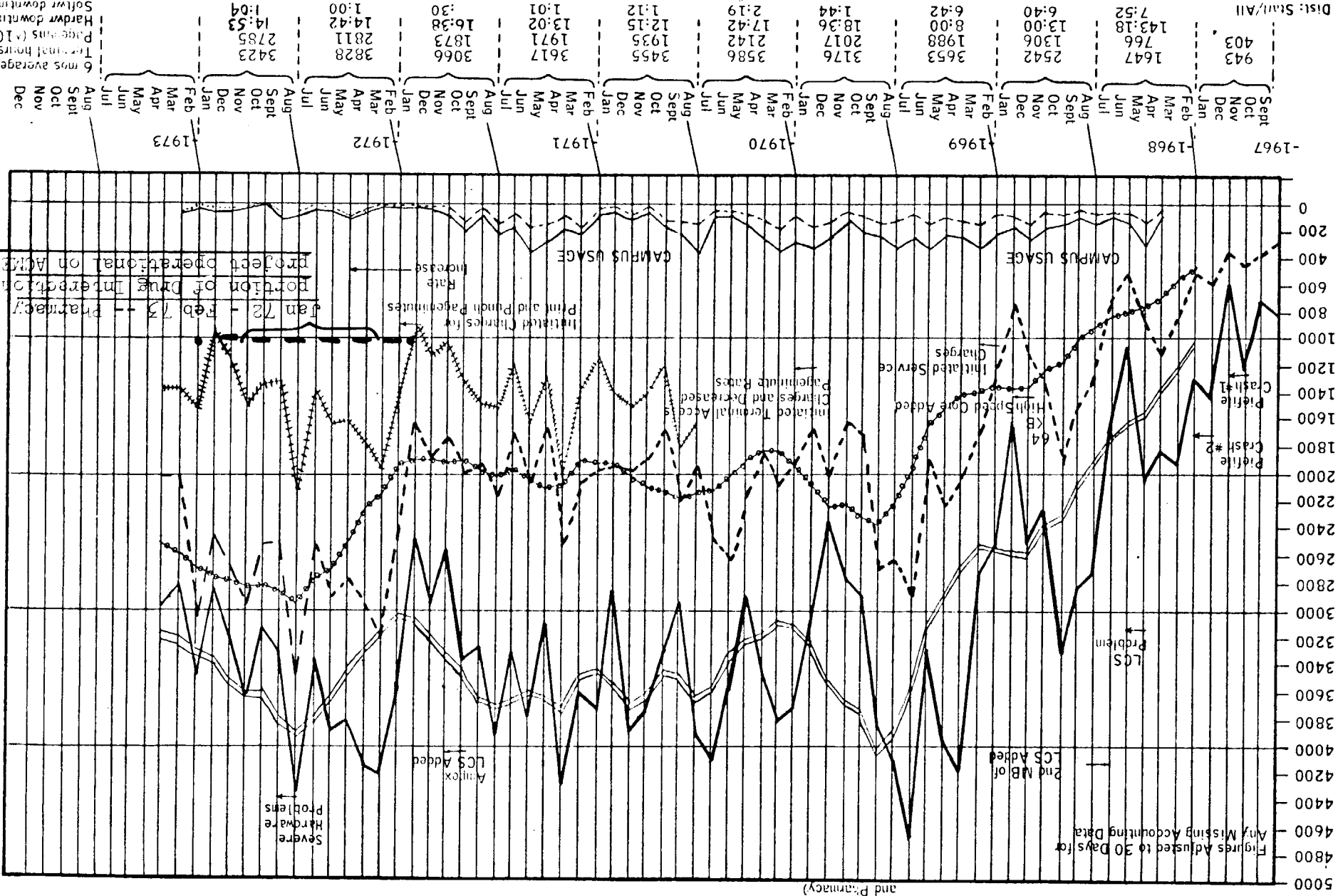
AU-31  
Charles Class/Erica Baxter  
February 22, 1973

6 MONTH MOVING AVERAGE  
Terminal Hours  
Pageminutes

MONTHLY TOTALS  
Terminal Hours  
Pageminutes (excluding staff and Pharmacy)

ACME Note  
Monthly Usage at ACME

Terminal Hours \*  
(Pageminutes \* 1000)



Figures Adjusted to 30 Days for Any Missing Accounting Data

LCS Problem

2nd MB of LCS Added

High Speed Core Added

Initiated Service Charges

Initiated Terminal Accesses and Decreased Page-minute Rates

Initiated Charges for Print and Punch Page-minutes

Severe Hardware Problems

Annex LCS Added

Jan 72 - Feb 73 - Pharmacy portion of Drug Interactions project operational on ACME

CAMPUS USAGE

CAMPUS USAGE

6 mos average/mo  
Terminal hours  
Page-mins (\*1000)  
Hardware downtime  
Software downtime

Dist: Staff/All