
LIGO Installation
Planning, Budgeting, Costs, Staffing

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Overview

- A lot of time has been spent working the Installation Schedule
- A lot of time has been spent working the detailed budgets
- A lot of time has been spent working the staffing plan
- LIGO is spending money

LIGO Funding by NSF Task and Fiscal Year

Fiscal Year	Construction	R&D	Operations	Advanced R&D	Total
Through 1994	35.9	11.2			47.1
1995	85	4			89
1996	70	2.4			72.4
1997	55	1.6	0.3	0.8	57.7
1998	26.2	0.9	7.3	2.7	37
1999			20.9	2.8	23.7
2000			21.1	2.9	24
2001			19.1 (10 months)	2.9	22
Total	272.1	20	68.7	12.1	372.9

(All values in \$ Millions)

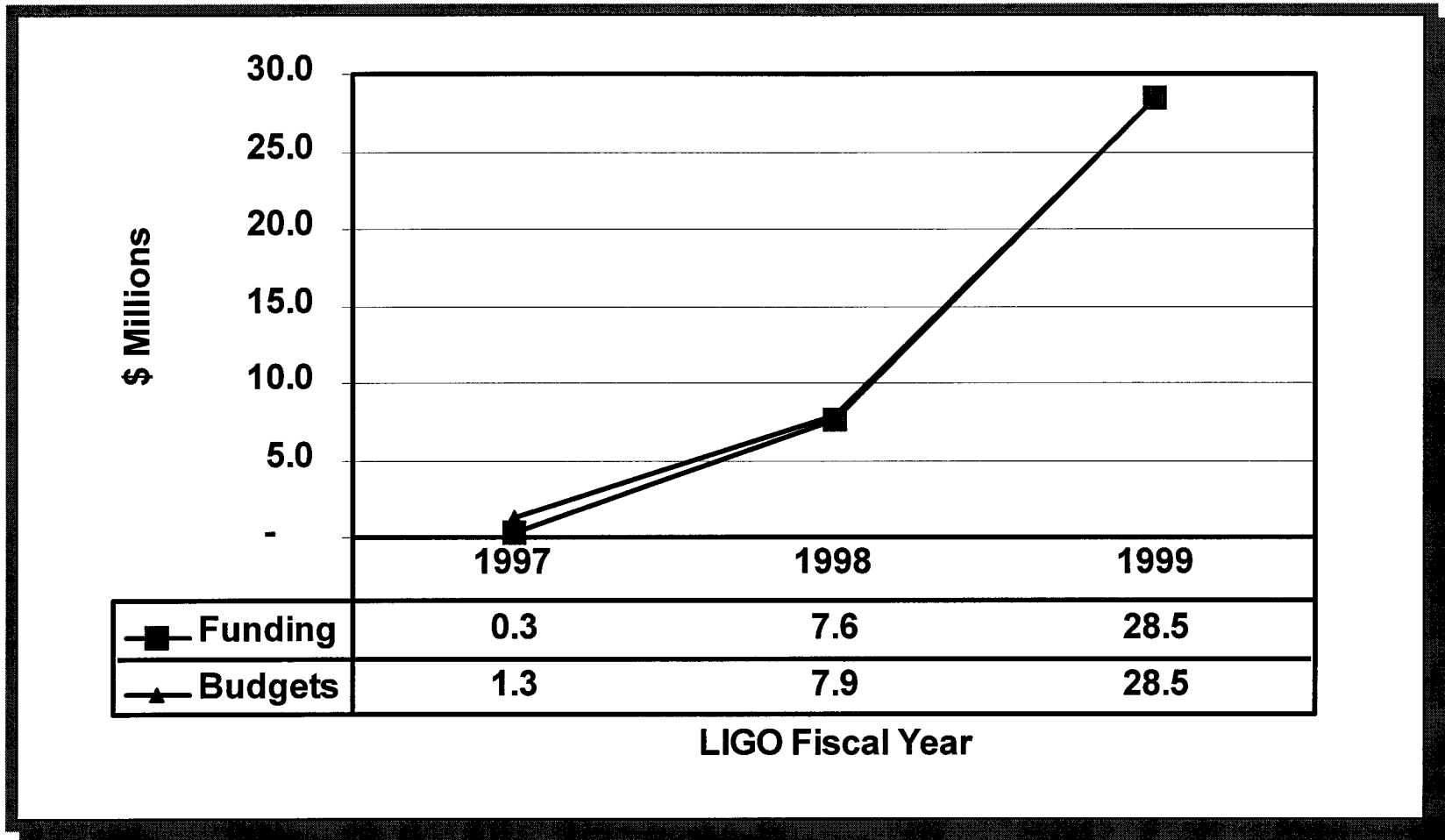
Work Breakdown Structure

WBS	Acnts	Description
2.0		LIGO Operations
	5P501	
	5N551	
2.1	5N555	Director's Office
2.2	5P520	Hanford Observatory
2.2.1	5P521	Hanford Site Office
2.2.2	5P522	Hanford Facilities
2.2.3	5P523	Hanford Vacuum Equipment
2.2.4	5P524	Hanford Optics
2.2.5	5P525	Hanford Electronics
2.2.6	5P526	Hanford Data/Computing
2.2.7	5P527	Hanford Administrative
2.2.8	5P528	Hanford Interferometer
2.3	5P530	Livingston Observatory
2.3.1	5P531	Livingston Site Office
2.3.2	5P532	Livingston Facilities
2.3.3	5P533	Livingston Vacuum Equipment
2.3.4	5P534	Livingston Optics
2.3.5	5P535	Livingston Electronics
2.3.6	5P536	Livingston Data/Computing
2.3.7	5P537	Livingston Administrative
2.3.8	5P538	Livingston Interferometer
	5P504	
2.4	5N554	Laboratory Administration
2.5	5P505	Technical and Engineering Support
2.6	5P506	Detector Engineering and Support
	5P507	
2.7	5N552	Data Analysis and Computing Support
	5P508	
2.8	5N553	Campus Research Facilities

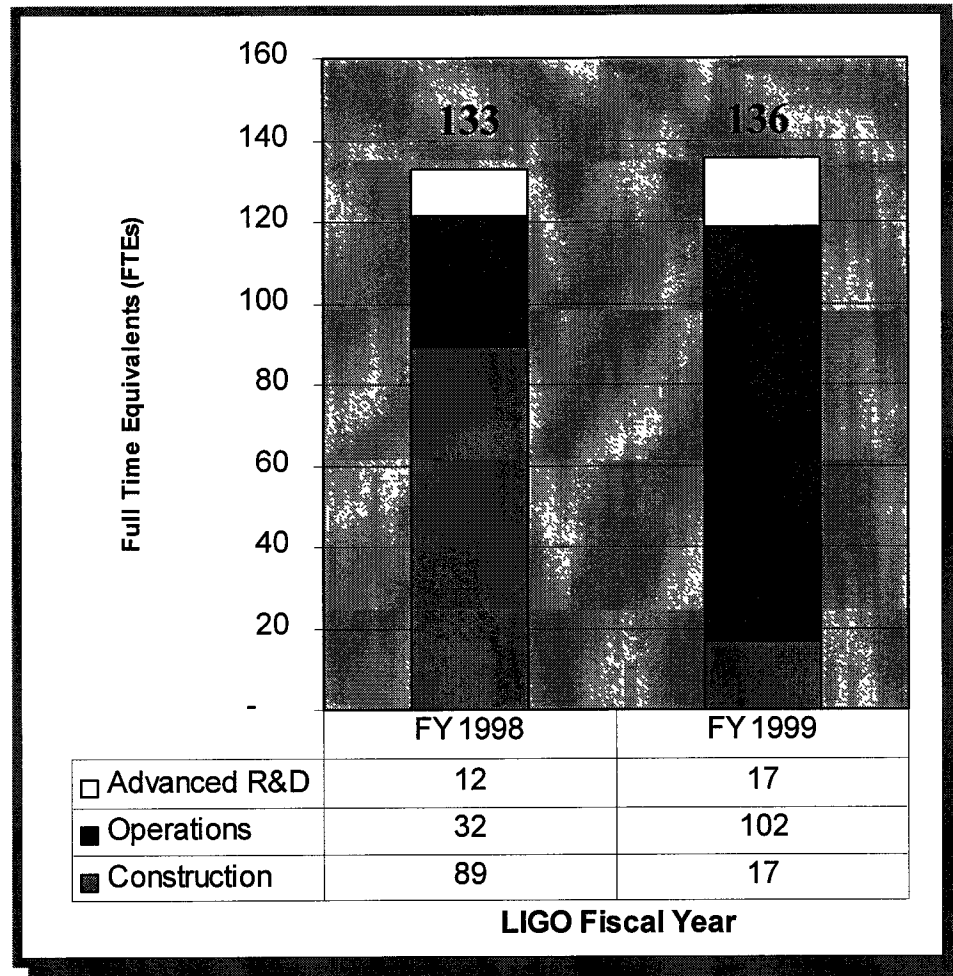
LIGO Operations Plan

WBS Acnts	Description	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	Total
2.0	LIGO Operations	\$ 1,305,047	\$ 6,590,622	\$ 20,600,244	\$ 28,495,913
	5P501				
	5N551				
2.1	5N555 Director's Office	\$ 407,500	\$ 1,412,410	\$ 2,890,460	\$ 4,710,370
2.2	5P520 Hanford Observatory	\$ 257,317	\$ 2,155,372	\$ 3,694,105	\$ 6,106,794
2.3	5P530 Livingston Observatory		\$ 341,280	\$ 2,190,085	\$ 2,531,365
	5P504				
2.4	5N554 Laboratory Administration	\$ 92,405	\$ 425,943	\$ 1,520,570	\$ 2,038,918
2.5	5P505 Technical and Engineering Support			\$ 2,719,869	\$ 2,719,869
2.6	5P506 Detector Engineering and Support			\$ 3,171,389	\$ 3,171,389
	5P507				
2.7	5N552 Data Analysis and Computing Support	\$ 305,994	\$ 1,849,296	\$ 3,407,349	\$ 5,562,639
	5P508				
2.8	5N553 Campus Research Facilities	\$ 241,831	\$ 406,321	\$ 1,006,417	\$ 1,654,569
	Funding	\$ 300,000	\$ 7,300,000	\$ 20,900,000	\$ 28,500,000

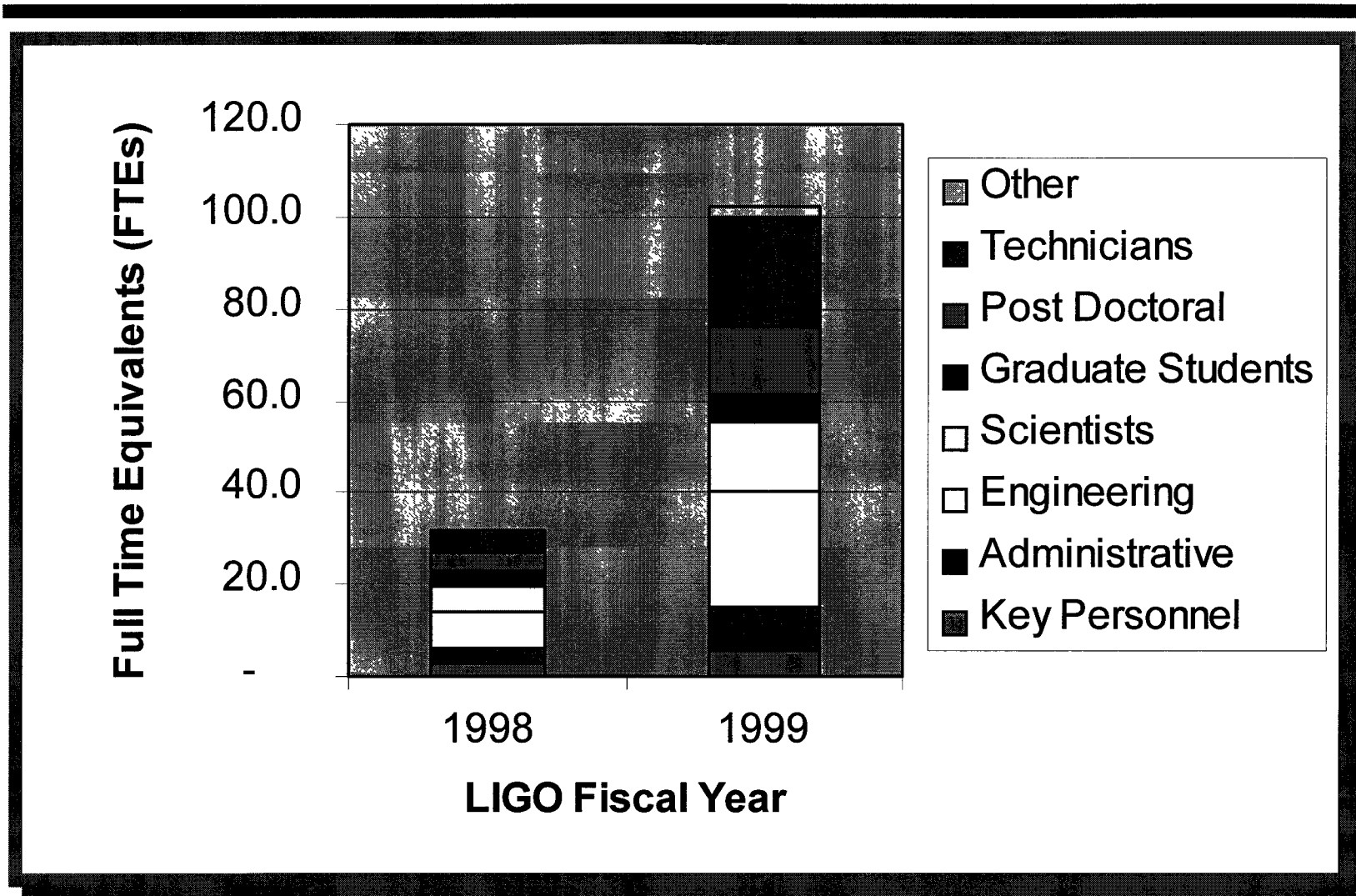
LIGO Operations Plan vs. Funding (Cumulative)



Total Staffing in FY 1998 and FY 1999

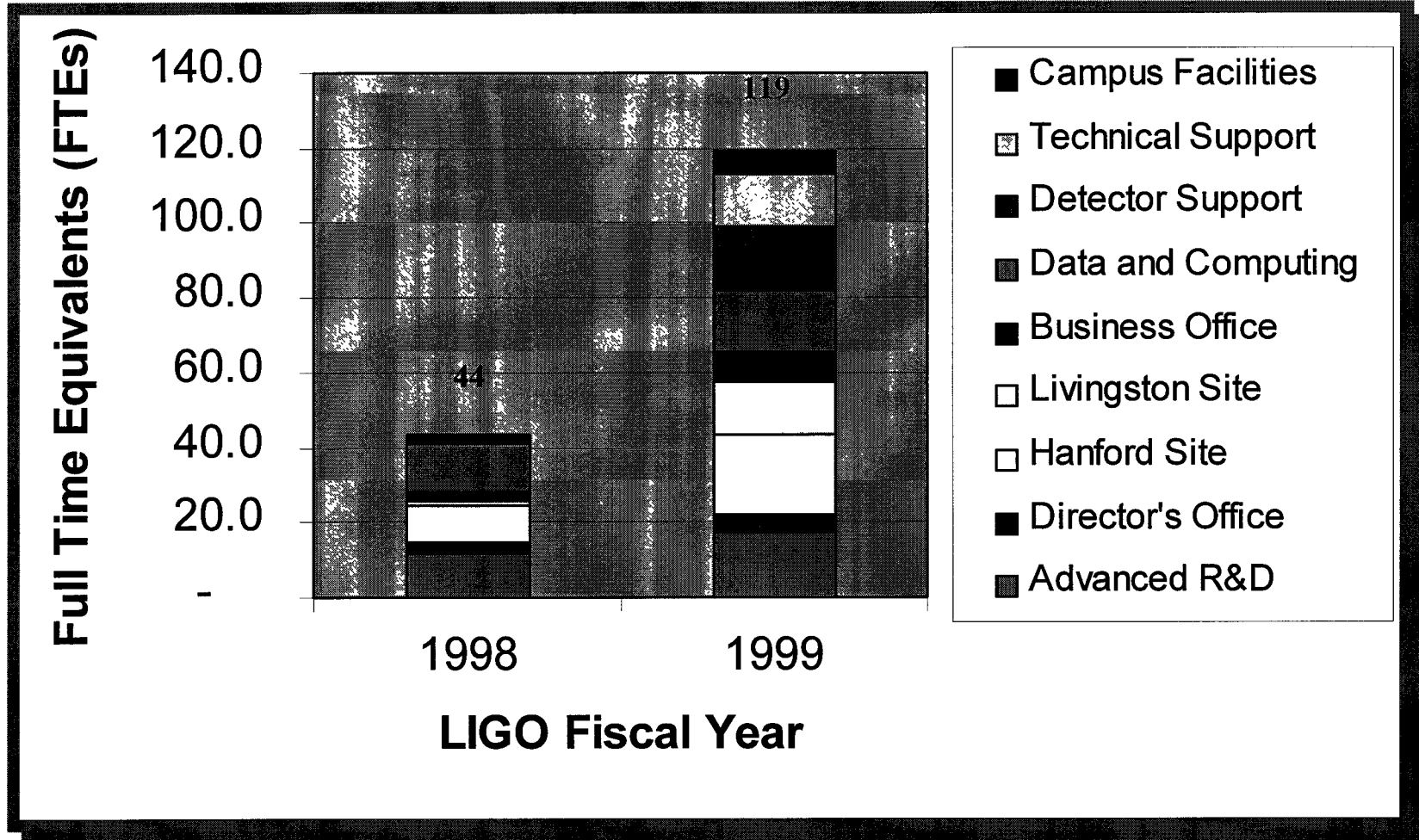


Operations Staffing by Type



Operations Staffing by Organization

(Includes Advanced R&D)



Actual Costs and Commitments

WBS	Acnts	Description	Total Budget	Actual Costs	Commitments	Cost Plus Commitments
2.0		LIGO Operations	\$ 7,895,669	\$ 1,564,345	\$ 232,908	\$ 1,797,253
	5P501					
	5N551					
2.1	5N555	Director's Office	\$ 1,819,910	\$ 743,788	\$ 27,765	\$ 771,553
2.2	5P52X	Hanford Observatory	\$ 2,412,689	\$ 226,059	\$ 102,643	\$ 328,702
2.3	5P53X	Livingston Observatory	\$ 341,280	\$ 4,197		\$ 4,197
	5P504					
2.4	5N554	Laboratory Administration	\$ 518,348	\$ 131,918		\$ 131,918
2.5	5P505	Technical and Engineering Support	\$ -			\$ -
2.6	5P506	Detector Engineering and Support	\$ -		\$ 42,500	\$ 42,500
	5P507					
2.7	5N552	Data Analysis and Computing Support	\$ 2,155,290	\$ 296,991	\$ 60,000	\$ 356,991
	5P508					
2.8	5N553	Campus Research Facilities	\$ 648,152	\$ 161,392		\$ 161,392
Funding			\$ 7,600,000			

Summary

- We have an Installation Schedule
- We have detailed budgets through FY 1999
- We have a Staffing plan
- We have established Operating accounts
- Operations tasks are proceeding and costs are being incurred.