

# The View From NSF

- LIGO Laboratory and **LSC** Funding
- **LSC** White Papers
- Conclusions

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# LIGO status at NSF

- **Rita Colwell: New NSF Director**
  - FY2000 NSF priorities: **biocomplexity, IT<sup>2</sup>**
- **Joseph Dehmer: New Physics Division Director**
- Plans for **LIGO I** construction, commissioning and ops. are accepted by NSF and congress
- **No coherent plan exists yet for LIGO II**
  - scientific goals, construction plans, research program, manpower, costs, schedules and milestones are neither defined nor validated
- **LIGO III** construction is off NSF's radar screen

# Deconstructing the FY1999 NSF budget:

	<b>FY1998</b> <b>\$M</b>	<b>FY1999</b> <b>\$M Est.</b>	<b>Change</b> <b>with            without</b> <b>LIGO Ops</b>	
<b>NSF</b>	<b>3,426.0</b>	<b>3,737.4</b>	<b>9%</b>	<b>8.7%</b>
<b>MPS</b>	<b>687.0</b>	<b>734.0</b>	<b>7%</b>	<b>4.9%</b>
<b>Physics</b>	<b>142.7</b>	<b>162.5</b>	<b>14%</b>	<b>4.7%</b>
<b>Lab</b>	<b>7.3</b>	<b>20.8</b>	<b>185%</b>	
<b>LSC</b>	<b>5.1</b>	<b>6.2</b>	<b>22%</b>	

# The president's FY2000 request:

	(\$ Million)		
	FY1999 Est.	FY2000 Req.	Change
<b>NSF</b>	3,737.4	3,954.4	5.8%
<b>RRA</b>	2,809.2	3,004.0	6.9%
<b>MPS</b>	734.4	754.0	2.7%
<b>Physics</b>	162.5	167.4	3.0%
<b>Lab</b>	20.8	21.1	1.4%
<b>LSC</b>	6.2	?	<3.0% ??

# LSC funding summary

- Funding profile would require **20%** annual increase to meet **existing** needs and fund **new** activities

	FY 1997	FY1998	FY1999	FY2000
	\$M	\$M	\$M Est.	\$M Est.
LSC	4.5	5.1 (+15%)	6.2 (+22%)	(<+3% ??)
# Groups	14	16	18	?



# NSF budget events for 1999

**(FY 1999 runs Oct.1, 1998-Sept 30, 1999)**

- **Feb 1, 1999:** President's **FY2000** budget presented to Congress
- **March - April 1999:** Congressional hearings on NSF
- **June 1999:** OMB call for **FY2001** budget
- **Aug. 1999:** NSB decides **FY2001** budget priorities
- **Sept. 30, 1999:** Congress finishes **FY2000** budget
- **Sept. 1999:** NSF submits **FY2001** budget to OMB
- **Nov. 1999:** OMB passback
- **Dec. 1999-Jan. 2000:** Final OMB adjustments to **FY2001** budget

# LSC has a leadership opportunity in shaping the future

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- A **plan** is urgently needed to insure utilization of the national investment in LIGO
- the **LSC** can play a major role if it acts now.
- Otherwise, someone else will do it.

# LSC generated White Papers desirable to:

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- Create a vision for how the future will unfold
- Define a coherent national program
- Construct a rationale for shaping future budget requests to congress
- Provide an intellectual context for proposers and reviewers



# Status of LSC White Papers:

## 1. Development Sub-Group

(isolation, lasers, configuration, ...)

- Draft of Nov. 9, 1998 approved by PAC and submitted by LIGO laboratory to NSF
- **Half-way there:**
  - supplies vision and coherent program
  - **Not yet a plan!**  
Still needs: cost and manpower loaded schedule; milestones; realistic scope and budget envelope; decision points for redeployment of limited resources



# Other comments on LIGO I data analysis

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- Laboratory needs beginning-to-end software validation tests
- Constraints in LIGO I computing model must be well understood by **LSC**
- **LSC** need to provide Laboratory with validated data analysis software

# The Development Sub-Group Draft White Paper is having impacts already

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- Budget planning for LIGO II
- Review of LSC proposals

# Budget planning for LIGO II

- **LSC** Development White Paper defined scope. NSF made preliminary cost and schedule plans
- These plans were the basis for NSF discussions on 2/8/99 about Major Research Equipment (MRE) funds for FY2002-FY2005
- Preliminary data analysis and networking plans made by NSF in the **absence** of any **LSC** input
- Have another chance (next spring) to influence NSF FY2002 budget and refine estimates with best information from White Papers



# REVIEW OF LSC PROPOSALS

- NSF Evaluation
  - peer review using NSB criteria
  - in context of Lab and LSC activities
- NSF requests LIGO Lab to provide a scientific and technical review
- White Paper defines LSC context
  - for proposers and reviewers



# Conclusions

- Funding growth for LSC slowing?
  - strong support inside MPS, but budget there is constrained
  - need convincing rationale to change trend
- Next iteration of the LSC Development White Paper needs to produce a plan
- Substantive LSC Data Analysis White Paper urgently needed to plan future
- Review of LSC proposals linked to LSC plans