



# Physics Research University Program

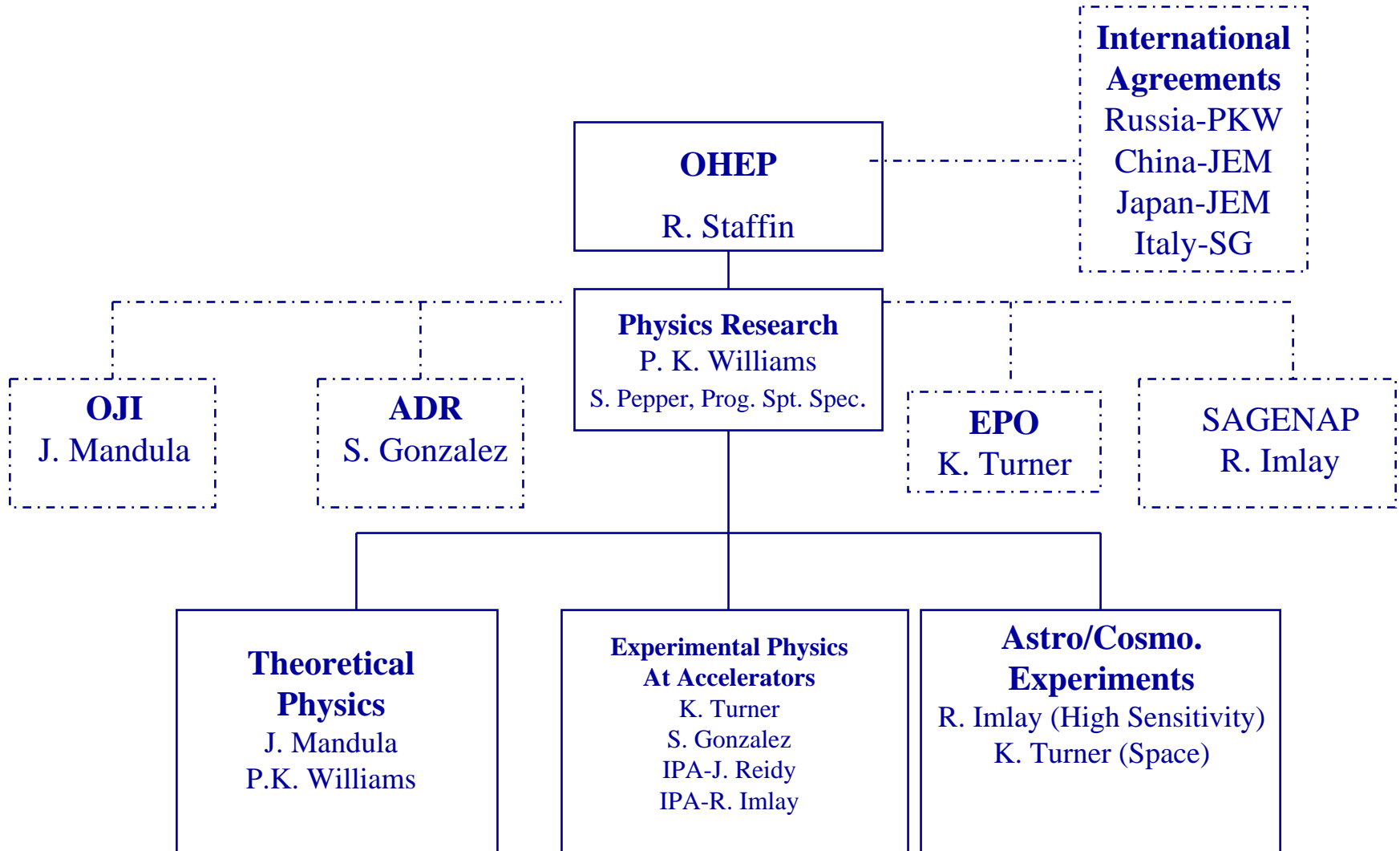
## HEPAP

April 18-19, 2004

Dr. P. K. Williams  
Senior Program Officer  
for Physics Research  
Office of High Energy Physics



# Organization and Assignments





# Physics Research University Program -- General Features

## Office of Science

102 Universities: 236 Groups

75 Universities: Accelerator-based Experiments

32 Universities: Not-accelerator Experiments

68 Universities: Theoretical Physics

*FY 2003 DOE-funded FTE's  
(% change from FY 2001)*

Program	# faculty	# postdocs/research scientists	# graduate students	<b>TOTAL</b>
Theory	215 (-5%)	116 (+6%)	114 (-2%)	445
Experiment	322 (0%)	350 (-2%)	359 (+3%)	1031
<b>TOTAL</b>	537	466	473	1476



# HEP Physics Research University Program--Funding

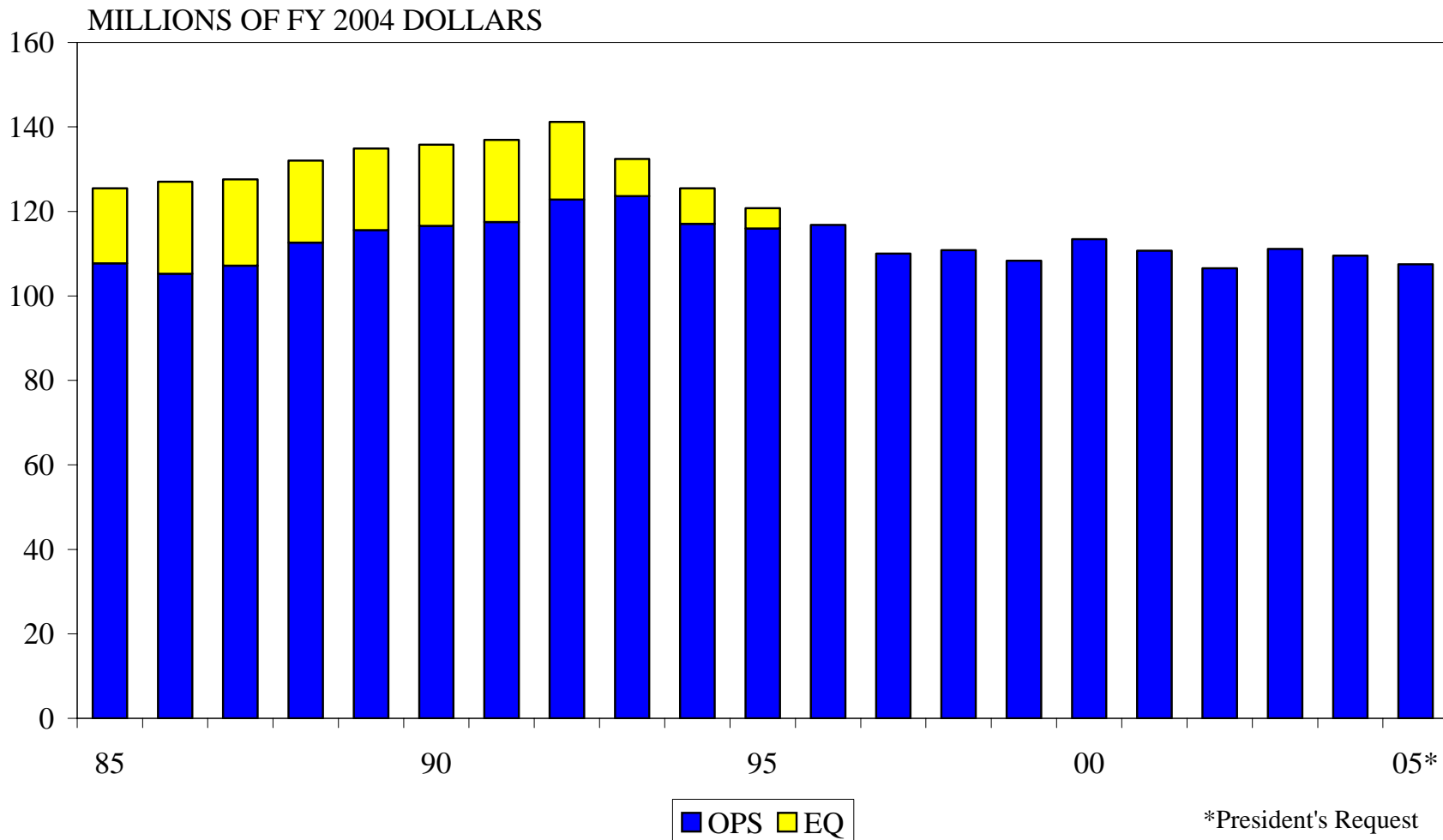
Office of Science

<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>
▪ \$107.549	\$102.426 (PRB)	\$105.0 (IFP)	\$105.01 (IFP)
▪ <u>-.240 (GR)</u>	-0.080 (GR)		1.325(Base Adj.)
\$107.300	+1.560 (HEPAP)		2.436(Supp's)
	<u>-1.005 (Final GR)</u>		
	_____	_____	_____
	\$102.901(Final)	\$105.0(Final)	\$108.771(Current)
▪ FY 2005			
106.335 (PRB)			



# Physics Research University Program—Budget History

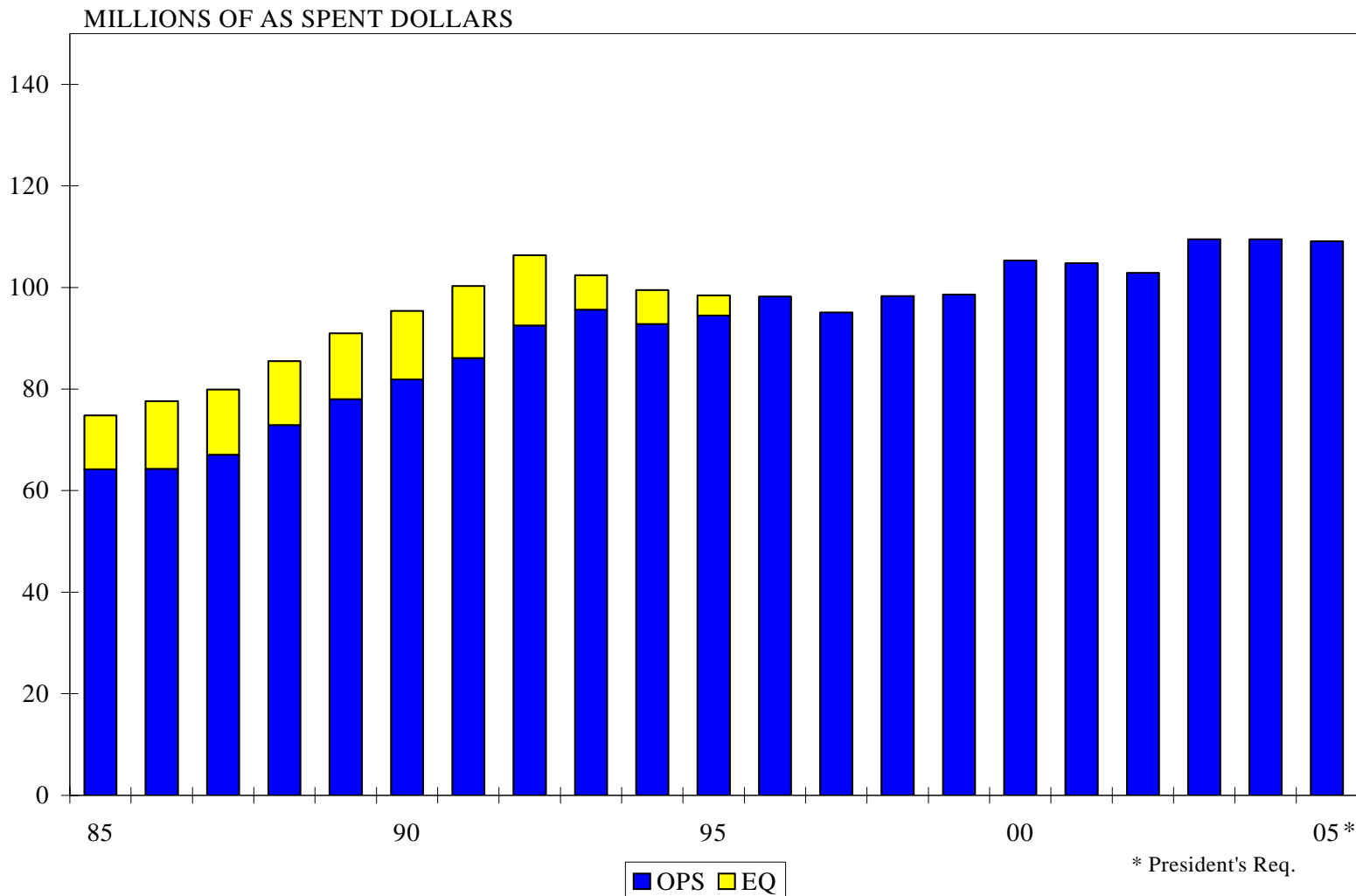
## HEP University Program Funding





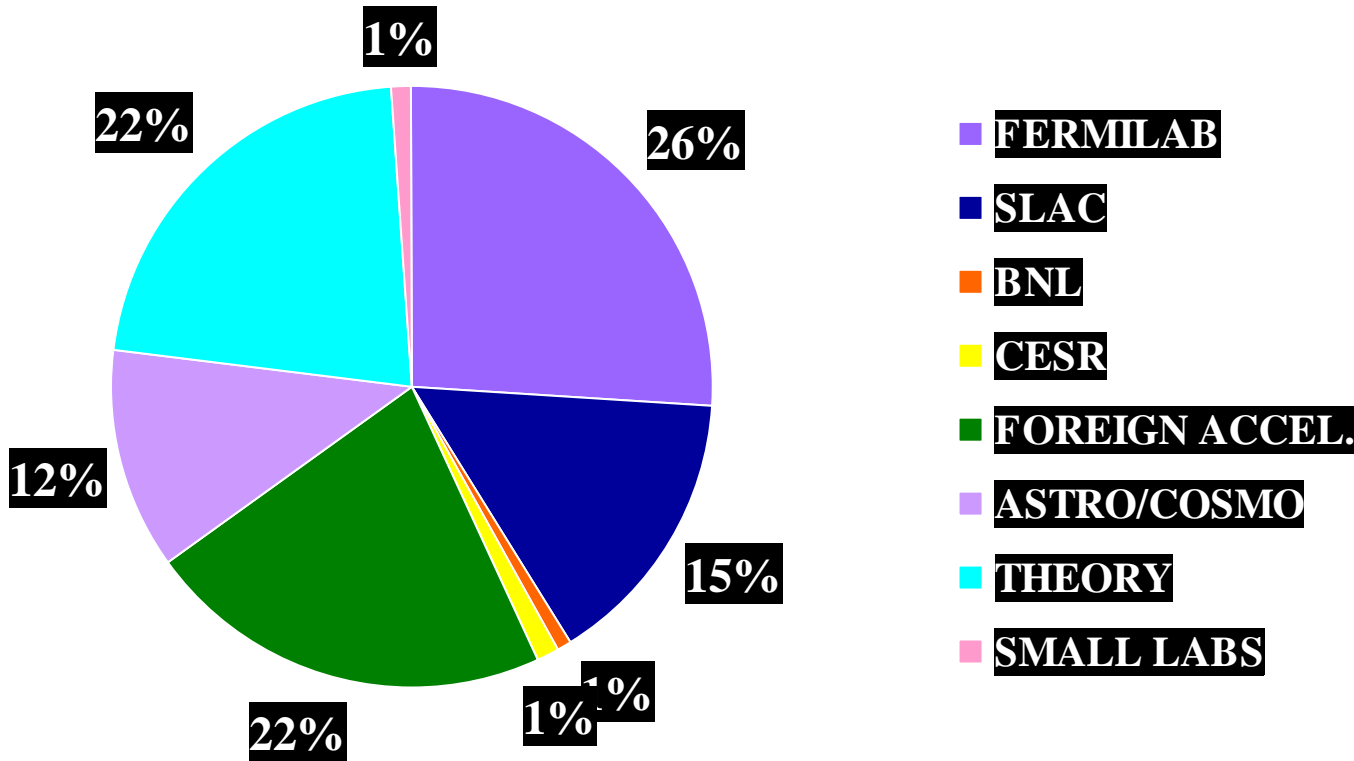
# Physics Research University Program—Budget History

## HEP University Program Funding





# Physics Research University Program Distribution (FY 2003)





# Physics Research University Program Funding Distribution

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	FY 2003 (\$M)
Electron Accelerator-based	\$16.9
Proton accelerator-based	46.1
Non-accelerator-based	12.2
Theory	23.3
Advanced Detector Research	0.7
LC Detector R&D	0.4
Tech R&D	0.1
Small Labs	1.5
Big Labs	2.2
User Accounts	1.6
Total	<hr/> \$105.0





# Distribution by Activity-FY 2003 (% Change from FY2001)

- FY 2003 Distribution to Universities (\$M)
- --Includes University Service Accounts to Fermilab and SLAC
  
- Theory        \$23,600    (+4%)
- CDF/D0        22,300    (+10%)
- Electrons      16,300    (-22%)
- LHC            14,300    (0%)
- Neutrinos      9,300     (0%)
- Fixed Tgt.     4,800     (-29%)
- Other/NAP     10,800    (+20%)
  
- Total to U's \$101,400    (-2%)



# University Program- FY 2003 Distribution to Labs

- FY 2003 Distribution from University Program to Labs(\$M)
- (% Change from FY 2001)
  
- Small Lab Programs    \$1.5 (+20%)    Axion-I at LLNL
- Big Labs                    2.2 (+63%)    Auger at Fermilab
  
- Total from UP to Labs    \$3.7 (42%)



# Physics Research University Program Funding Pattern—FY 2003

	<u>FY 2003 (\$M)</u>
University Base	\$ 92.7
1-Shot	2.2
Eq/App	4.7
LHC Help	0.6
Small Lab Programs	\$ 1.5
ANL(ZEUS)	0.2
USA's	1.6
ADR	0.5
OJI	0.5
LCDRD	<u>0.5</u>
	\$105.0



# Physics Research University Program Apparatus Funding

FY 2003 (\$M)

Auger	\$1.23
CDMS	0.79
AMS	0.50*
Super-K	0.50
EXO R&D	0.10
Icarus	0.05
VERITAS R&D	0.45
Comp./Misc.	<u>1.08</u>
<b>TOTAL</b>	<b>\$4.70</b>

\* Plus additional from DHEP reserve



# University Program Non-Accelerator Physics Efforts

## On-going:

Milagro (w/NSF)  
GRANITE/Whipple  
SNO (Mostly NP)  
SuperK/K2K  
Axion-I (@LLNL)  
KamLAND (w/NP)

## Underway:

VERITAS (w/NSF)  
Pierre Auger (w/NSF)  
CDMS-II (w/NSF)  
AMS (w/NASA)

## Pending Starts:

AXION-II (@LLNL)

## R&D

EXO