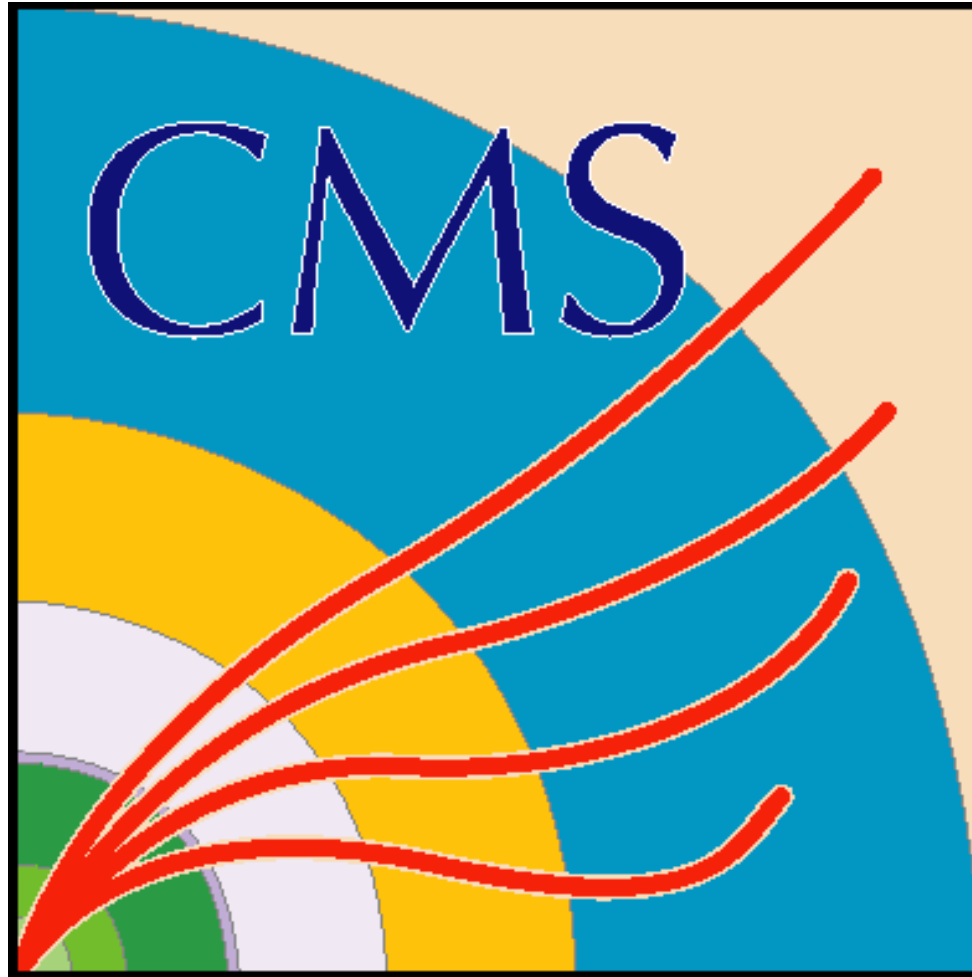
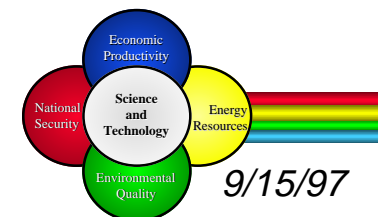


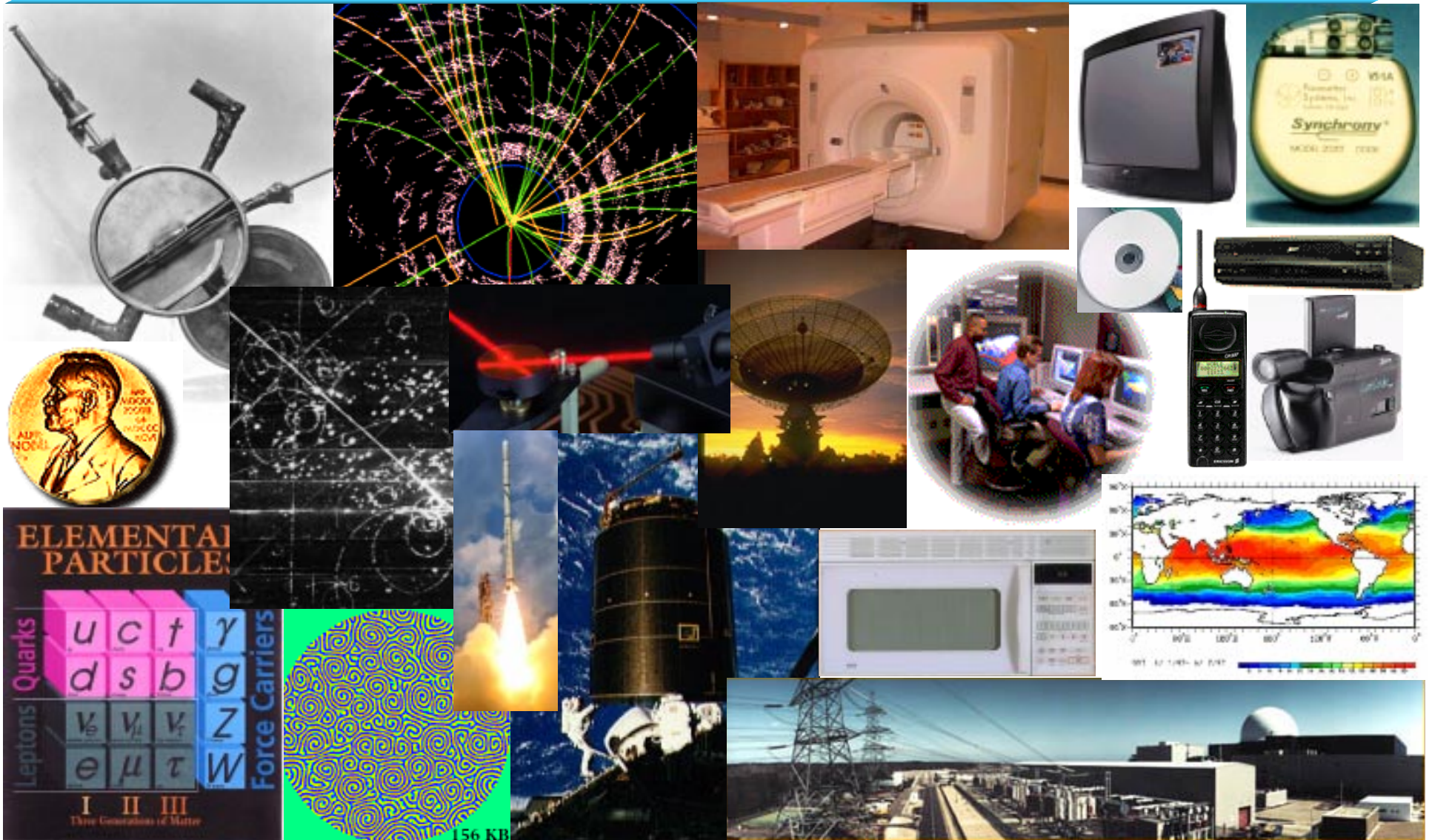
# *International Collaboration Meeting for the Compact Muon Solenoid Experiment*



**Dr. Martha Krebs**  
Director, Office of Energy Research



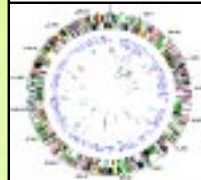
# The Century of Physics *a Record of Success*



# Physics - A Part of DOE's Record of Success



THE NEW YORK TIMES



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## Imminent Domain: Microbe May Redefine Life's Paradigm

By Curt Supplee  
Washington Post Staff Writer

It's hard to imagine anything that could rattle biologists more than the recent reports of possible ancient life in a Martian meteorite. But last month reports by researchers regarding a third form of life here on earth, did just that. The Archaea, a micro-

all] bacteria and one common archaea and eukaryotes. Within a half a billion years, that split into two lines."

Whether or not that genealogy is borne out by further research, many influential scientists believe the new findings firmly establish archaea as a third major domain. "The paradigm is a-changing," said biologist Norman

finished the first eukaryote, a yeast. But *M. jannaschii* was the first archaeon sequenced, and the results astonished the researchers. Fully 56 percent of its 1,738 genes are utterly unlike anything known in eukaryotes or prokaryotes.

Of the 44 Percent with counterparts in other organ-

THE WASHINGTON POST

Monday, September 23, 1996 A3

## SCIENCE BIOLOGY



## 1997 Chemistry Nobel Prize awarded for Buckminsterfullerene

The Seattle Times

October 17, 1996

### New cleanup lab opens at Hanford

Molecular research will be applied at waste site around the world

Times Focus TECHNOLOGY

By NICHOLAS K. GERANIOS  
Associated Press

RICHLAND - A new laboratory the government hopes will sharply reduce the \$1 trillion bill to clean up the nation's nuclear weapons

The 200,000-square-foot lab was first conceived in 1986, but will use the latest high-tech equipment to help scientists manipulate and create molecules to solve problems associated with environmental cleanup, energy efficiency, health and other fields, the Energy Department said.

Its work will be applied at government and civilian hazardous waste sites around

## Darker Clouds Promise Brighter Future for Climate Models

"...Modelers  
Greenhouse  
clouds. ..."

SCIENCE

The New York Times

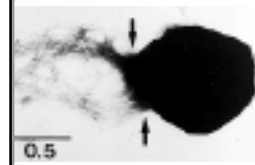
March 3, 1995

## Elusive Atomic Particle Found by Physicists

By MALCOLM W. BROWNE  
Special to the New York Times

BATAVIA, ILL., March 2 - Culminating nearly a decade of intense search

1977. Since the infancy of the universe shortly after the Big Bang -- estimated at 10 billion to 20 billion years ago -- only the up and down quarks have survived in nature, and the protons and neutrons that make



ed Press

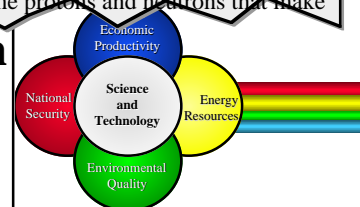
## Advanced Photon Source On-line

Scientists now have access to a brilliant new source of x-rays for research in fields as structural biology, Energy Physics materials research

This new Facility Argonne National most advanced

## Human Genome Research Uncovers Cancer Gene

The battle against cancer enlisted a new ally this week as scientists announce the identification of two genes that





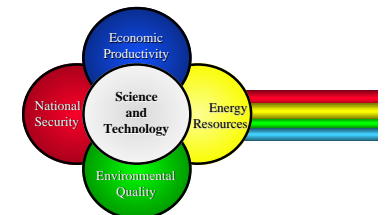
# DOE is a *Science* Agency

## Top Five Government Research Organizations for\*:

Overall Research	Basic Research	Applied Research	Development	Academic Research**	R&D Facilities
1. DOD(36.8)	1. HHS(7.0)	1. HHS(4.5)	1. DOD(32.4)	1. HHS(7.6)	1. Energy(1.4)
2. HHS(13.5)	2. NSF(2.2)	2. DOD(2.8)	2. NASA (5.0)	2. NSF(2.0)	2. HHS(0.5)
3. NASA(9.7)	3. Energy(2.1)	3. NASA(2.4)	3. Energy(1.8)	3. DOD(1.3)	3. NASA(0.2)
4. Energy(7.2)	4. NASA(1.9)	4. Energy(1.7)	4. HHS(1.6)	4. NASA(0.8)	4. USDA(0.1)
5. NSF(2.5)	5. DOD(1.2)	5. DOC(0.8)	5. DOT(0.2)	5. Energy(0.6)	5. DOD(0.1)

\* Numbers are from FY 98 Request in Billions - Source: OMB

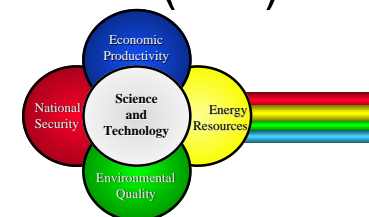
\*\* Academic Research is also included in the other categories



# DOE Science

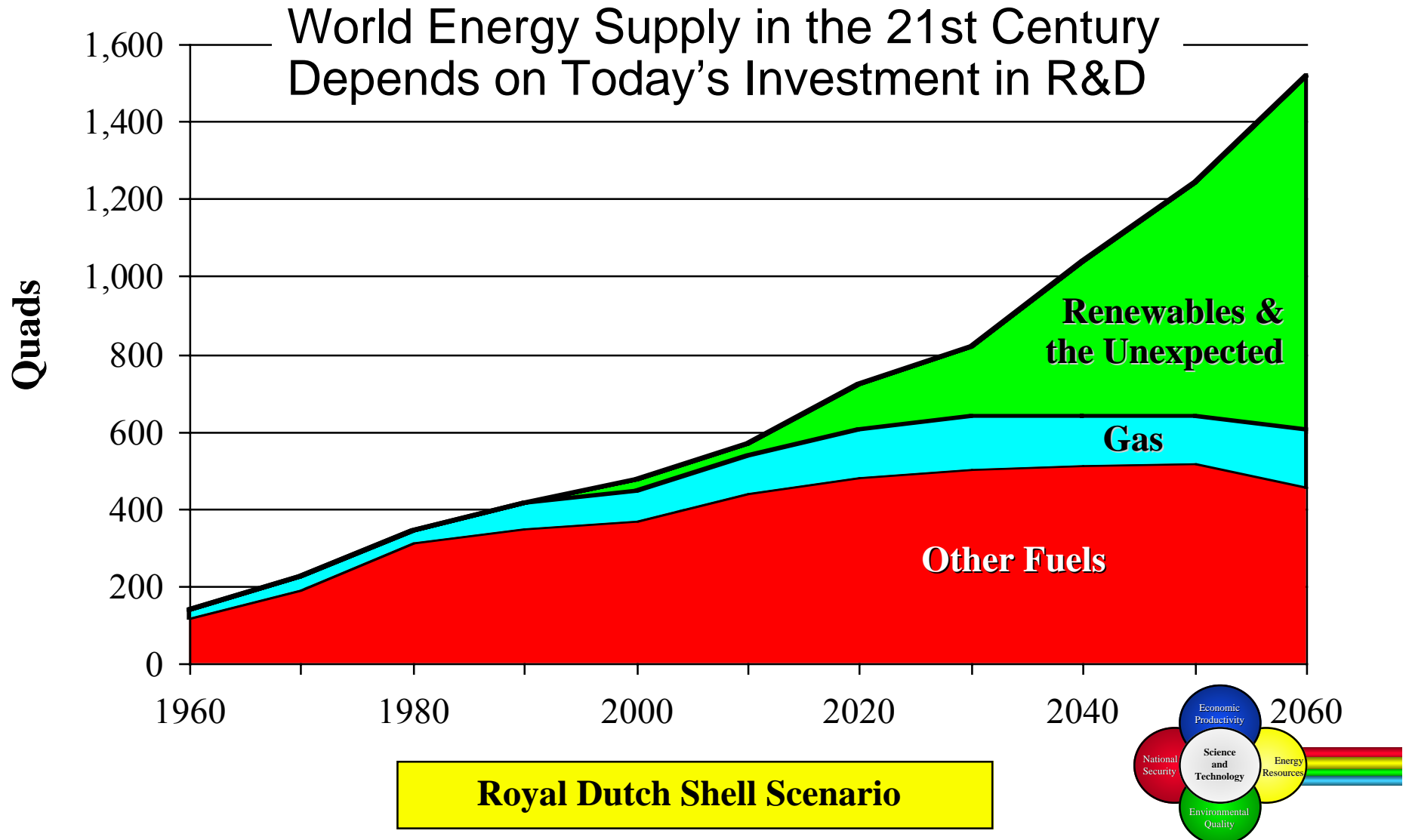
## Top Five Government Research Organizations for\*:

Physical Sciences	Environmental Sciences	Mathematics & Computing	Engineering
1. Energy (1,754)	1. NASA (774)	1. DOD (674)	1. DOD (1,884)
2. NASA (1,665)	2. NSF (432)	2. NASA (229)	2. NASA (960)
3. DOD (563)	3. Energy (427)	3. Energy (220)	3. Energy (627)
4. NSF (492)	4. DOI (312)	4. NSF (216)	4. NSF (427)
5. NIH (165)	5. DOD (263)	5. DOC (112)	5. DOC (204)



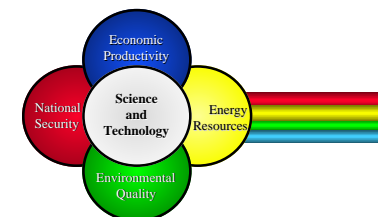
\* Numbers are FY 96 Dollars in Millions - Source: NSF

# Department of Energy Challenges



# Strategic Issues for DOE's Energy and Science R&D Portfolio

- **Energy**
  - Oil Security
  - Utility Restructuring
- **Environment**
  - Climate Change & Air Quality
  - Pollution Remediation, Abatement, Prevention
- **Health Effects**
- **World Class Science**
- **Globalized Organizations**
- **Partnership, Connectivity, and Communications**



# High Energy Physics Challenges

- Beyond the SSC
- Completion of the LHC
- The Next Generation
  - People
  - Machines
  - Research

**Large  
Hadron  
Collider**

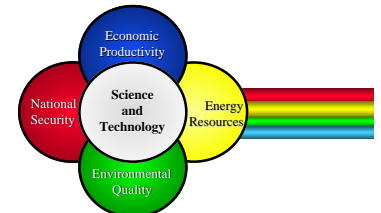
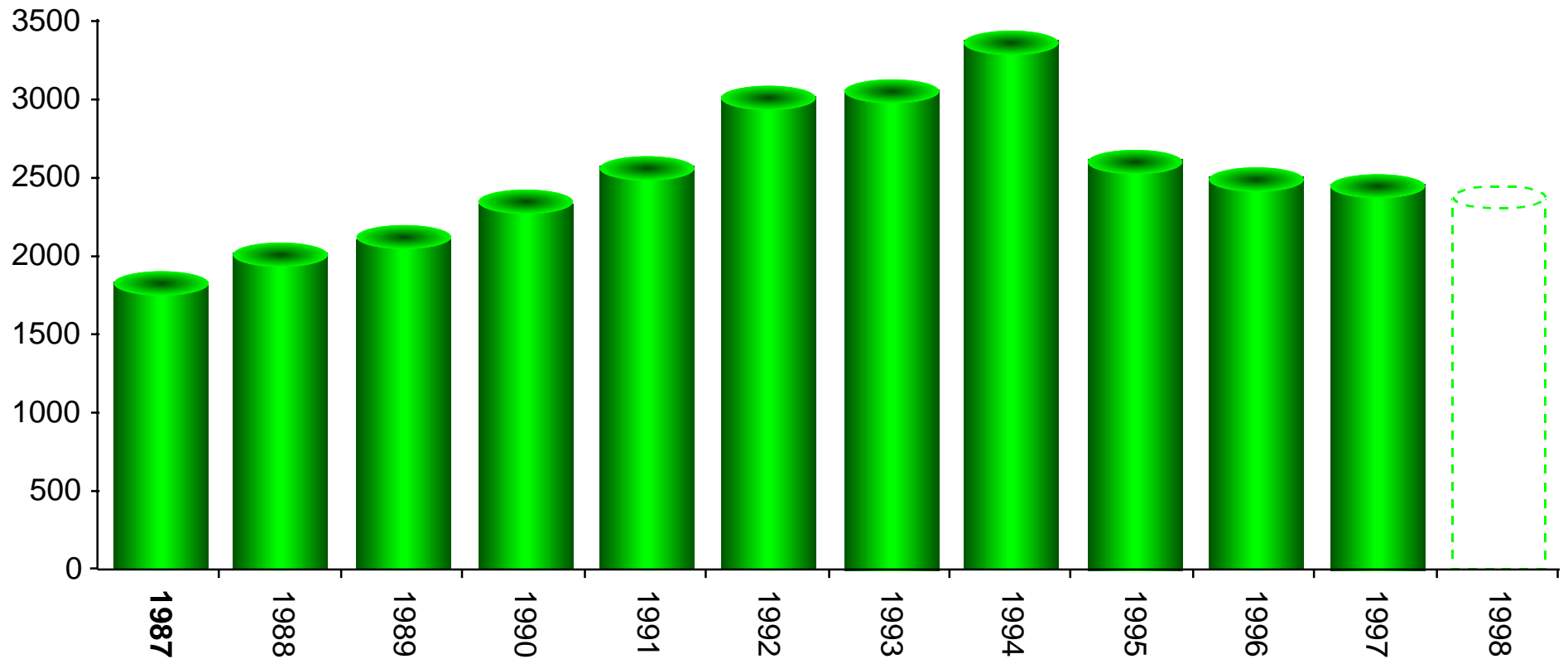
**SSC**





# ER Budget History

\$s (in Millions)



*\*Total Energy Research Budget (in Millions of As Spent Dollars)*

# Pulling Together We Can Make the Difference

The American Chemical Society



Date: March 20, 1996

To: The Honorable John T. Myers  
Chairman  
Subcommittee  
Committee on  
U.S. House of  
Washington, D.C.

The American Physical Society

Association of American Universities

1200 New York Avenue, NW Suite 550  
Washington, DC 20005



NASULGC

National Association of State U

May 7, 1996

Dear Mr. Chairman

As your Subcommittee  
Office of Energy Research  
colleagues to address  
constraints in OER  
for DOE's mission

Fundamental environmental  
knowledge base, and  
impacts of energy  
waste at DOE sites  
management and  
information that research  
could result in ever

Basic environmental  
institutions. Support  
Energy Sciences (the  
pool of scientists and  
environmental con  
facilities, such as the  
contributions. OER  
decreasing the need  
U.S. companies and

...

Sincerely yours,

Ronald Breslow

The Honorable John R. Kasich  
United States House of Representatives  
1037 Longworth Office Building  
Washington, D.C. 20515-35132

Dear Chairman Kasich:

On behalf of the Association of American  
universities which conduct a major share  
education programs, I write regarding the

One of the federal government's most successful  
provide the necessary resources, for continuing  
research and graduate education are conducted  
enriches the other. Federal investments from  
you make your budget recommendations, with  
maximum flexibility for adapting to a future  
cuts. We recommend that these agencies make  
decisions about investments in science and  
congressional committees and leaders.

Sincerely,

Cornelius J. Pings  
President

September 13

The President  
The White House  
Washington, D.C. 20500

Dear Mr. President:

We strongly support and commend your efforts to balance the budget while working to protect federal funding for basic research. Your commitment to science is clearly demonstrated in this year's research and development budget. However, as the Fiscal Year 1998 budget process begins, we are concerned about the long-term budget outlook for basic science, which you have pointed out is the cornerstone of the United States' technological pre-eminence. And we are particularly anxious about the programs in the Office of Energy Research of the Department of Energy. If the Fiscal Year 1997 budget's outyear projections for the Office of Energy Research are realized, some of this country's most fundamental and exciting scientific research could be compromised.

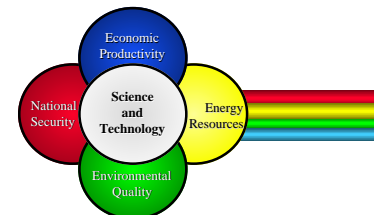
The Office of Energy Research is the largest federal supporter of research in the physical sciences. It builds and operates major research facilities that are essential for work in many fields. These include the particle accelerators used by high-energy and nuclear physicists; the synchrotron light sources and research reactors used by biologists, chemists, materials scientists and condensed-matter physicists; the fusion machines used by plasma physicists and so on. About 15,000 scientists, mostly from universities, rely on these facilities for their research. You have recognized the importance of the facilities, even in tight budget times, with the 'Facilities Initiative.' This added \$100 million to the Office of Energy Research

*Signed by or on behalf of the presidents or chancellors of Stanford University (on whose stationary the letter was sent), University of California, The Johns Hopkins University, University of Colorado, University of Washington, University of New Mexico, Harvard University, Columbia University, University of Southern California, Massachusetts Institute of Technology, University of Wisconsin-Madison, and Washington University in St. Louis.*

# *If we are going to Pull Ahead -- We have to Pull Together*

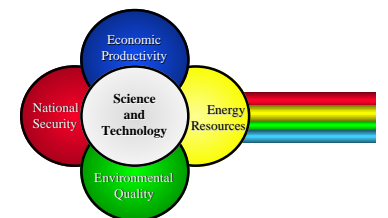


- *Partnership*
- *Communication*
- *Outreach*





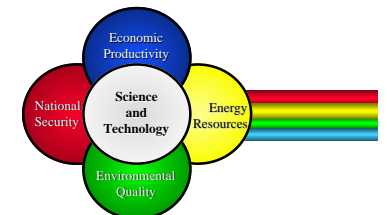
# *Backup*



# Budget History

(dollars in millions)

<b>Program</b>	<b>FY97* Appropriation</b>	<b>FY98 Request w/o Up front</b>	<b>FY98 Request w/ Up front</b>
Basic Energy Sciences	649.7	668.2	672.2
Fusion Energy Science	232.5	225.0	225.0
High Energy Physics	670.1	675.0	675.0
Nuclear Physics	315.9	315.9	332.5
Biological and Environmental Research	389.0	376.7	376.7
Computational & Technology Research	153.5	175.9	175.9
Multiprogram Energy Labs-Facilities Support	21.3	21.3	40.3
Analyses and Program Direction	42.6	42.4	42.4
<i>General Reduction for Use of Prior Year Balances</i>	- 21.0	0	0
<b>Subtotal</b>	<b>2,453.6</b>	<b>2,500.3</b>	<b>2,540.0</b>
Superconducting Supercollider		-15.0	-15.0
<b>Total</b>	<b>\$ 2, 453.6</b>	<b>\$2,485.3</b>	<b>\$2,525.0</b>
Technical Information Management	11.8	12.0	12.0





# Challenges of the 1990's

## *Scientific/Budget Priorities for 1998*

- International Neutron Science Leadership
  - National Spallation Neutron Source (NSNS)
  - Los Alamos Neutron Scattering Center (LANSC)
- Next Generation Internet
- Science Facilities Utilization
- High Energy Physics & the Large Hadron Collider
- Fusion and Plasma Science
  - Princeton Plasma Physics Laboratory (PPPL)
  - International Thermonuclear Experimental Reactor (ITER)
- Genome Science
- Global Climate Research

