

R&D in the FY 2017 Budget

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February 29, 2016

For the Government-University-Industry Research Roundtable

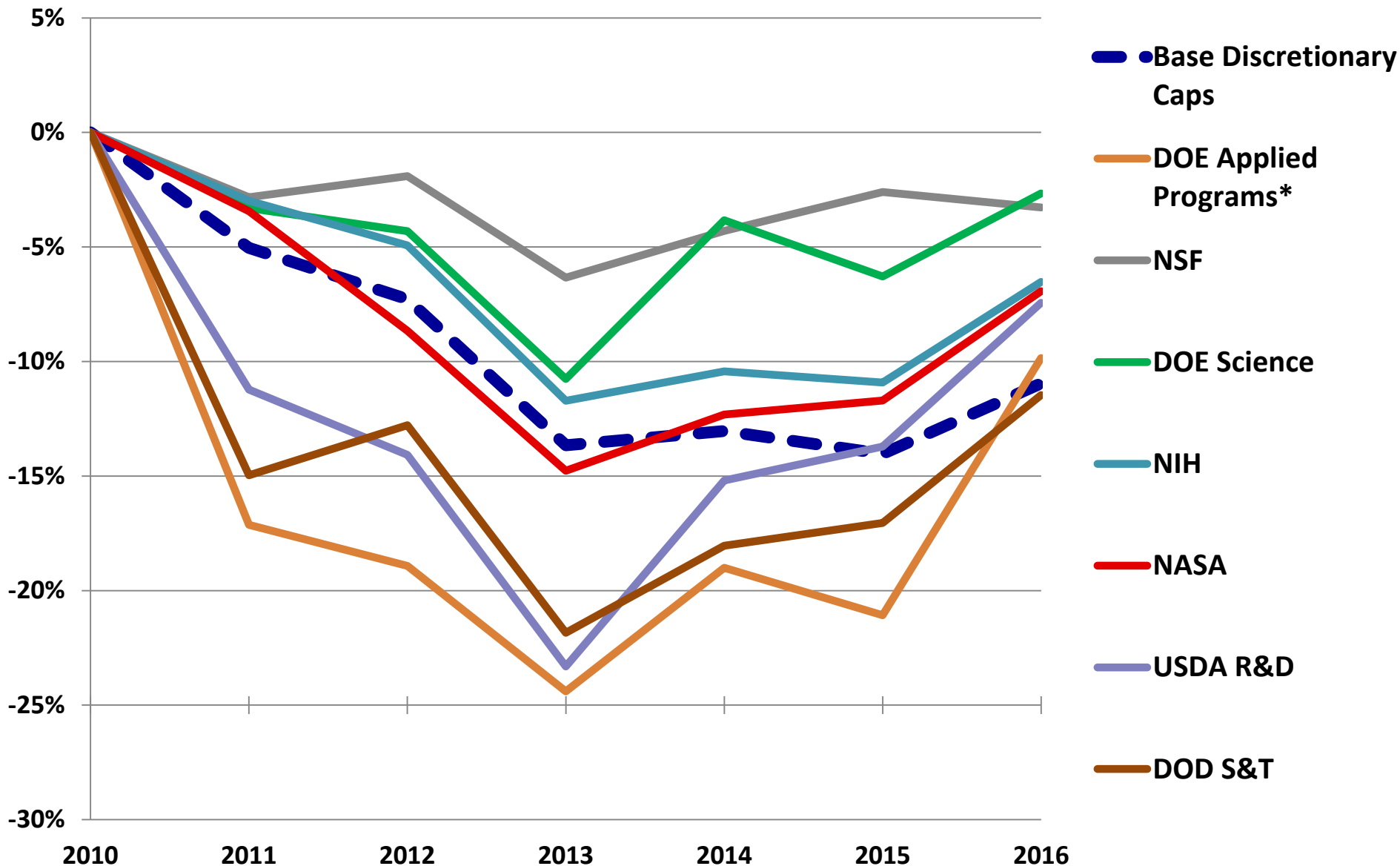
AAAS R&D Budget and Policy Program

<http://www.aaas.org/program/rd-budget-and-policy-program>



Federal Spending Since FY 2010

Percent change from FY10 levels, constant dollars



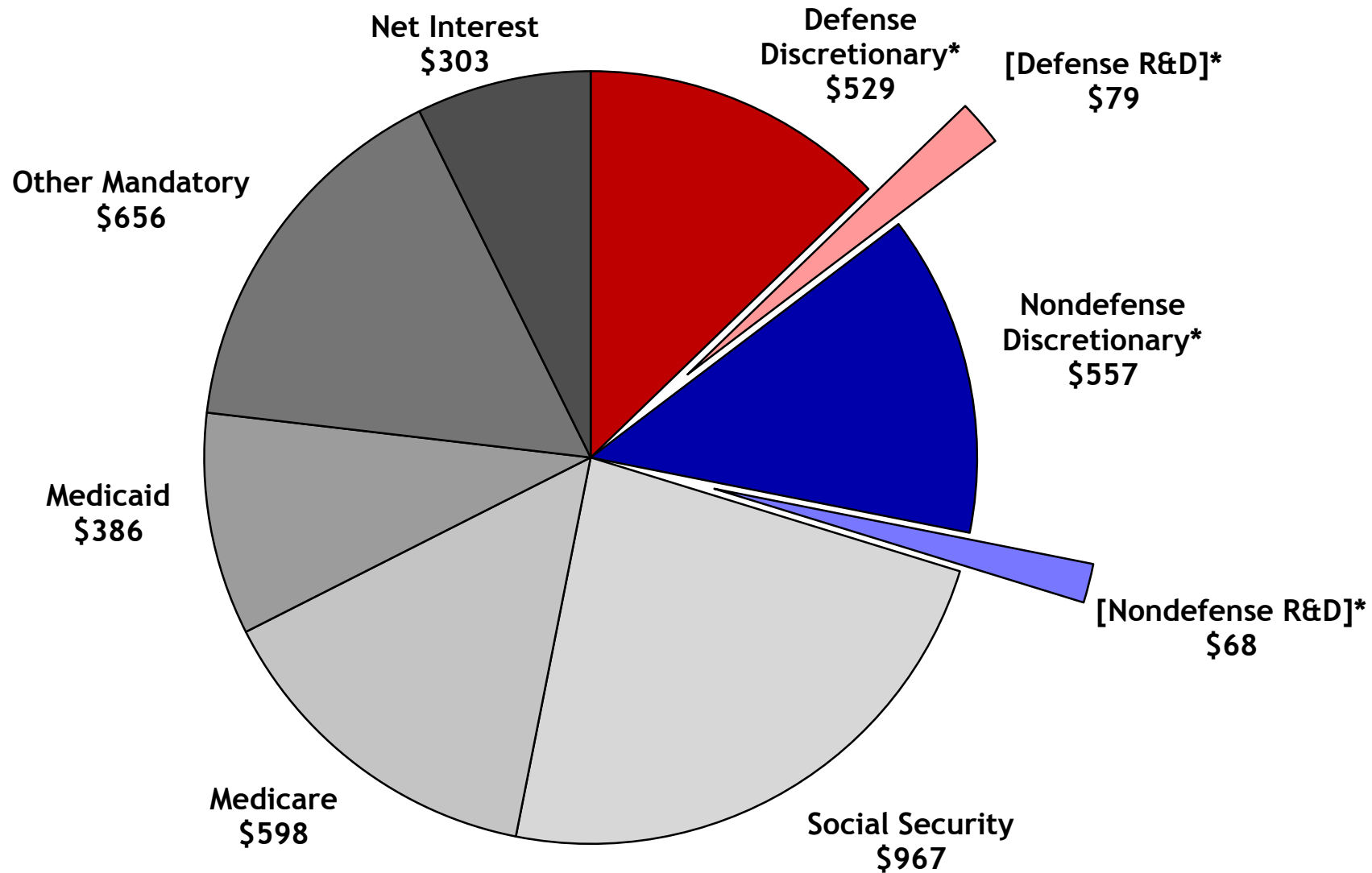
*Includes EERE, OE, Fossil, Nuclear; excludes ARPA-E (regular appropriations began in FY 2011).

Based on AAAS analyses of historical OMB, agency, and appropriations data and the President's FY 2017 request. © 2016 AAAS

Composition of the Proposed FY 2017 Budget

Total Outlays = \$4.1 trillion

outlays in billions of dollars

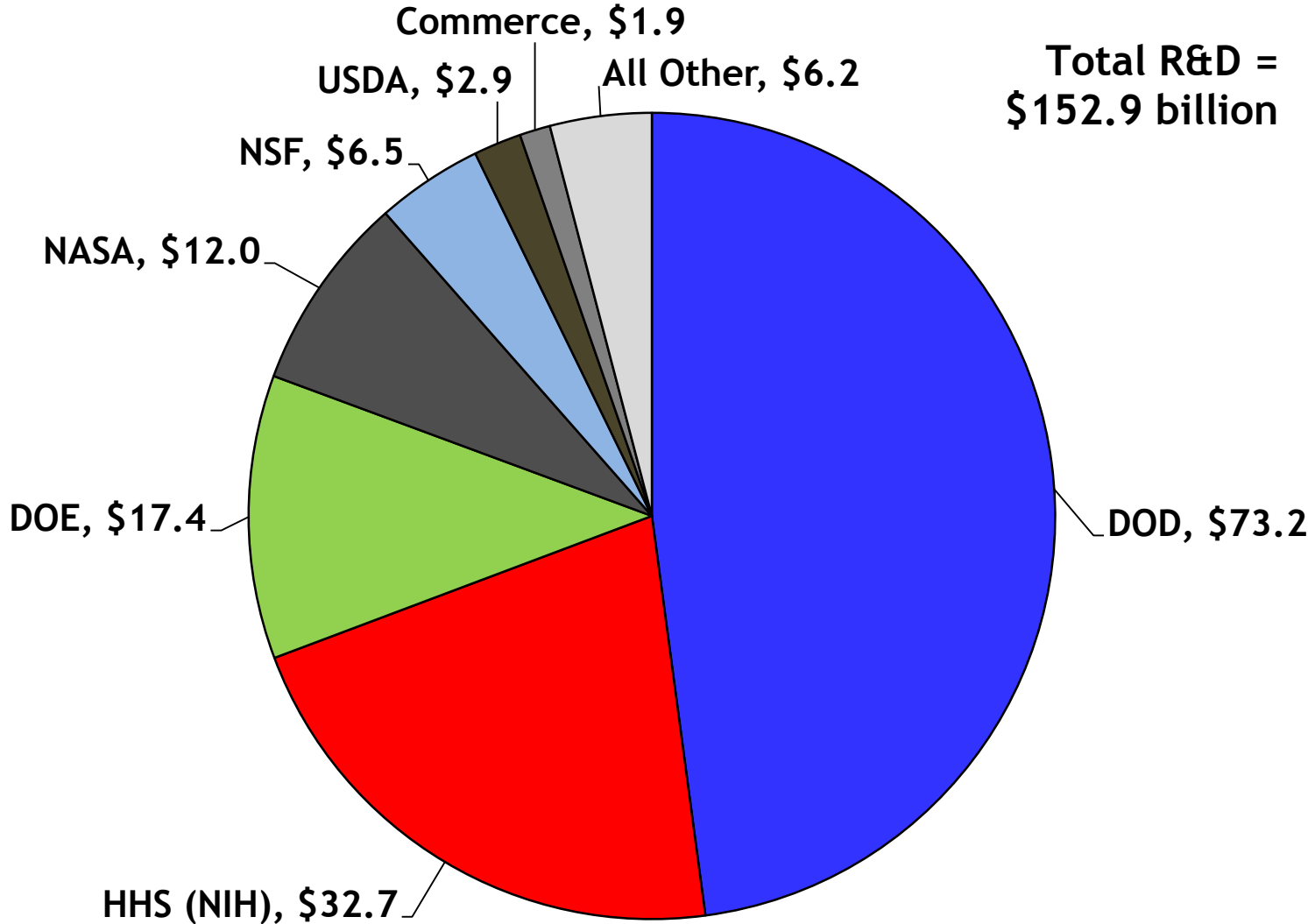


*Approximately \$4 billion for R&D is classified as mandatory spending. Figures are estimates.

Source: *Budget of the United States Government FY 2017*. Projected deficit is \$503 billion. © AAAS | Feb. 2016

Total R&D by Agency, FY 2017

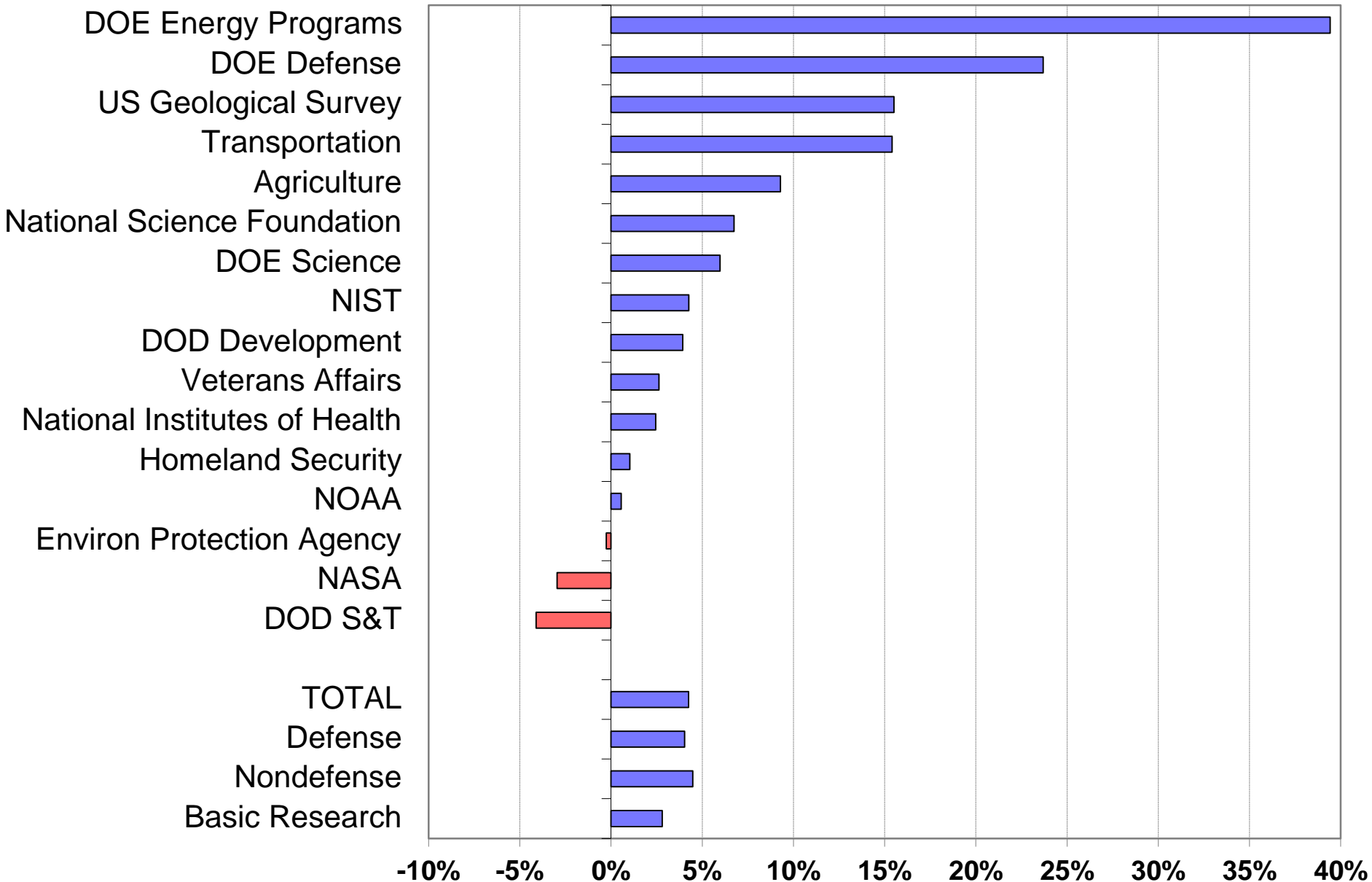
budget authority in billions of dollars, including new mandatory



Source: OMB R&D data, agency budget justifications, and other agency documents and data. R&D includes conduct of R&D and R&D facilities. © 2016 AAAS

Current Estimates of Total R&D in FY17 Budget

percent change from FY16, nominal dollars, including new mandatory proposals



NEW Mandatory Funding in FY 2017

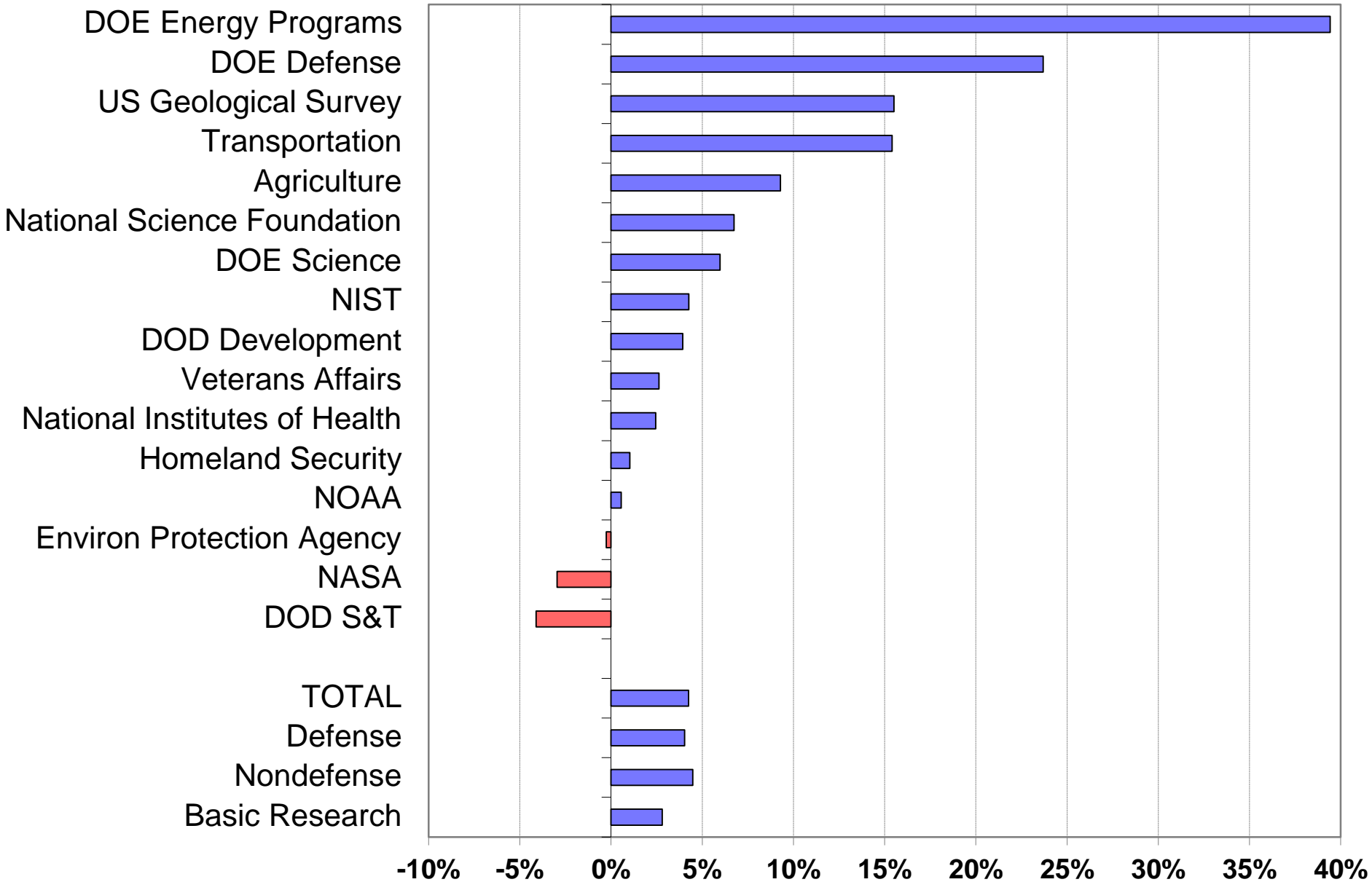


- \$4.2 billion for R&D, all nondefense

- Select agency funding (including non-R&D):
 - \$2.0 billion for NIST
 - \$1.825 billion for NIH
 - \$1.6 million for DOE clean technology and science programs
 - \$763 million for NASA
 - \$400 million for NSF
 - \$325 million for USDA
 - \$300 million for EPA

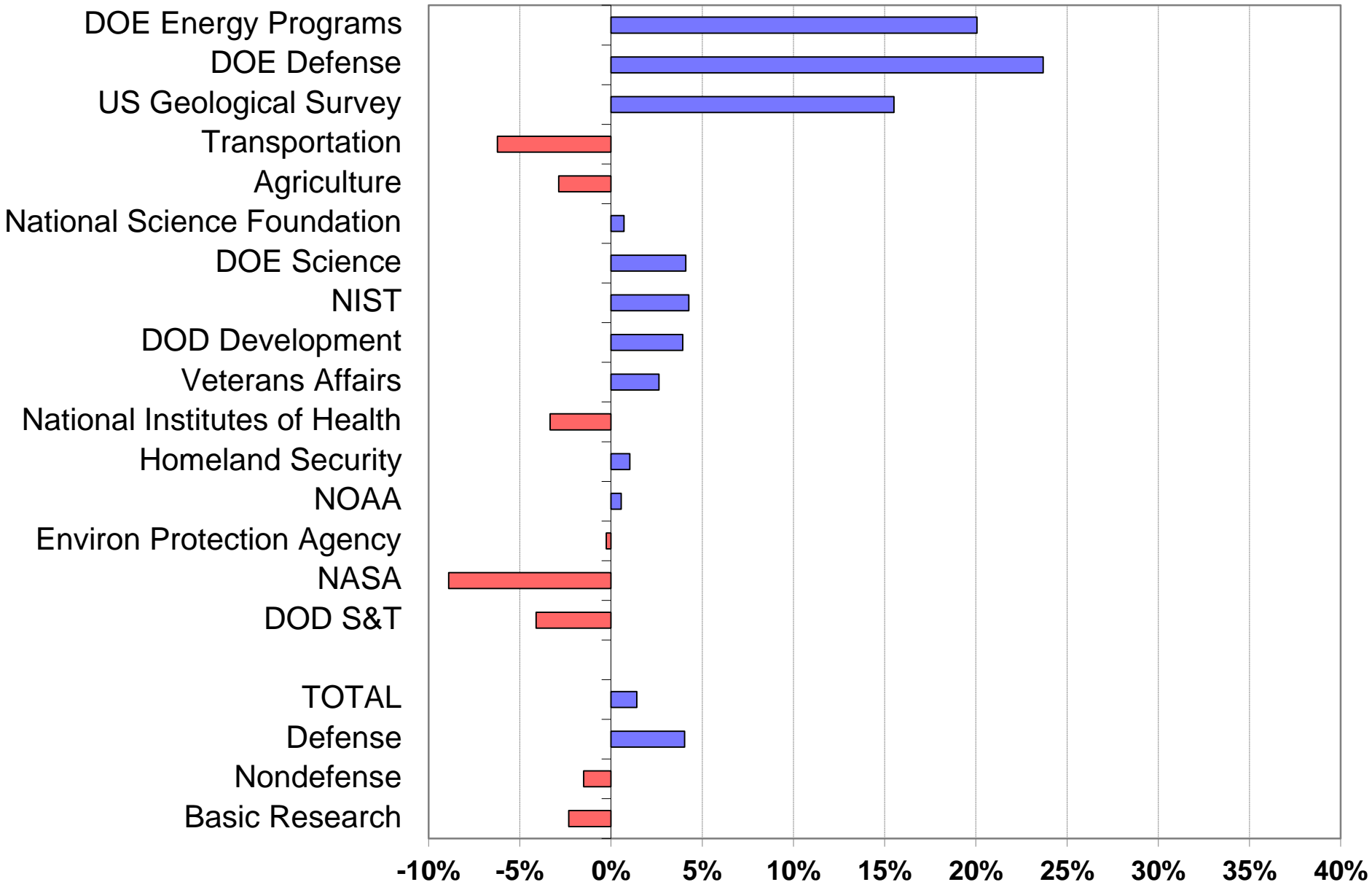
Current Estimates of Total R&D in FY17 Budget

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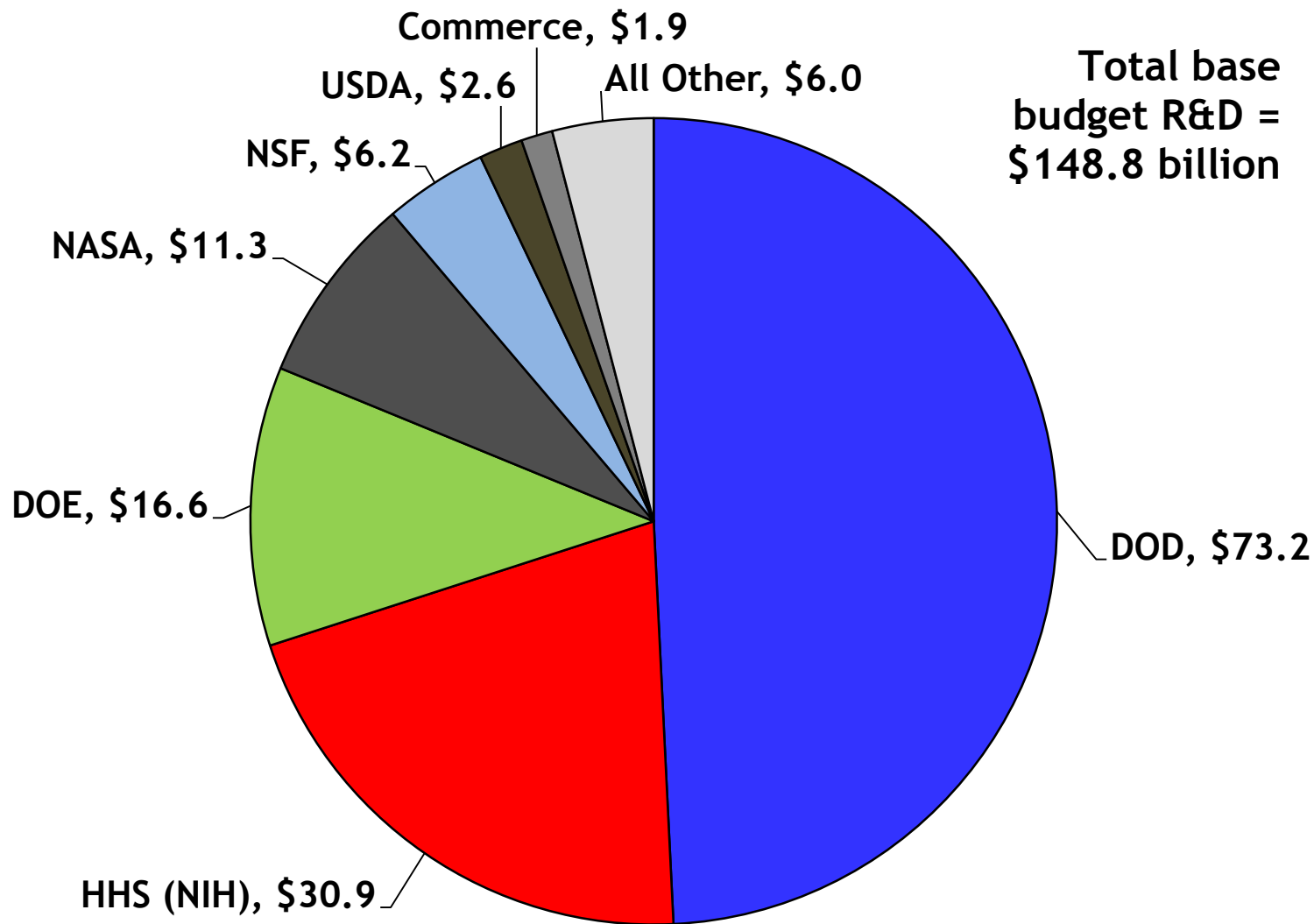
Current Estimates of Total R&D in FY17 Budget

percent change from FY16, nominal dollars, excluding new mandatory proposals



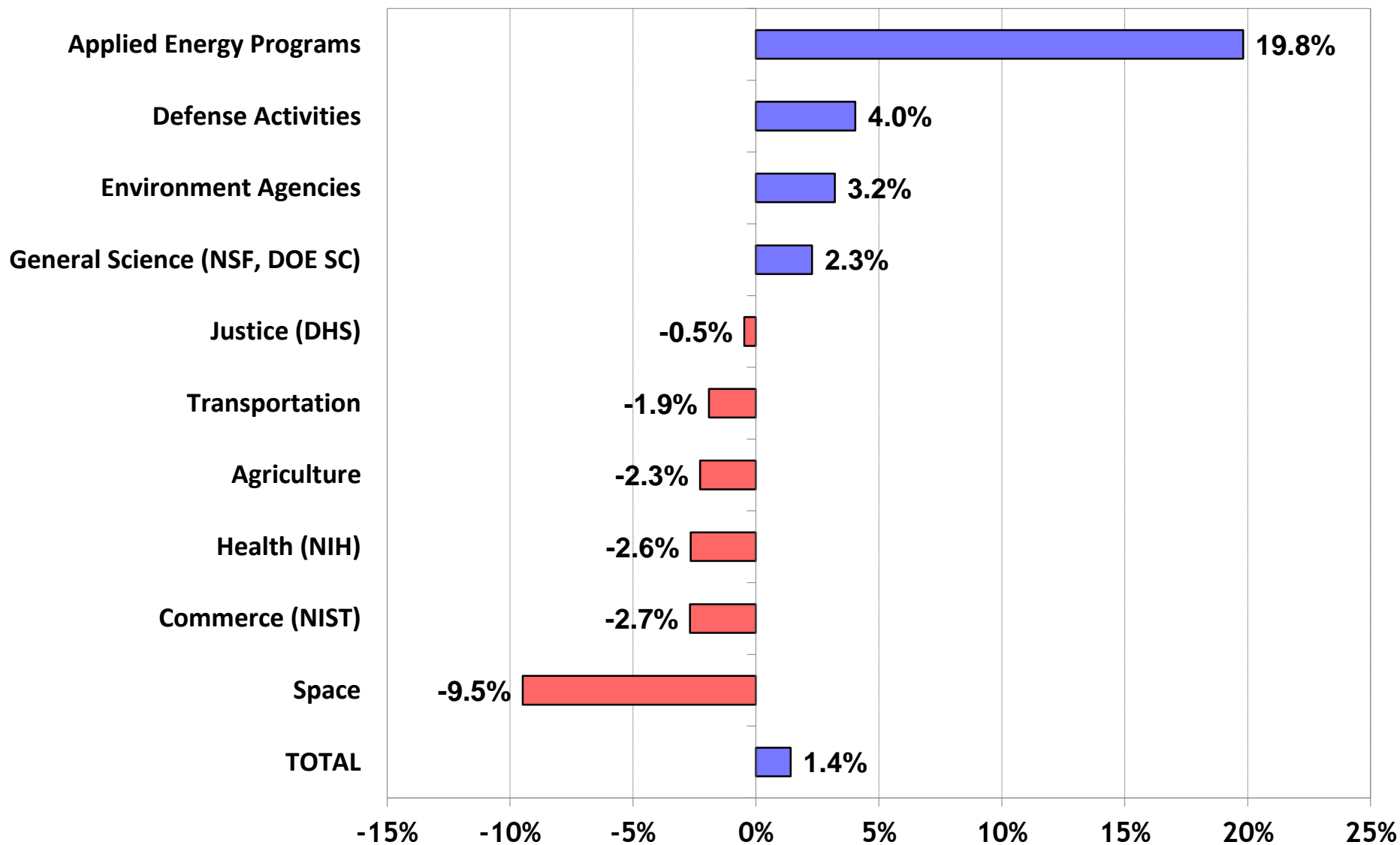
Base Budget R&D by Agency, FY 2017

budget authority in billions of dollars, excluding new mandatory proposals in FY 2017



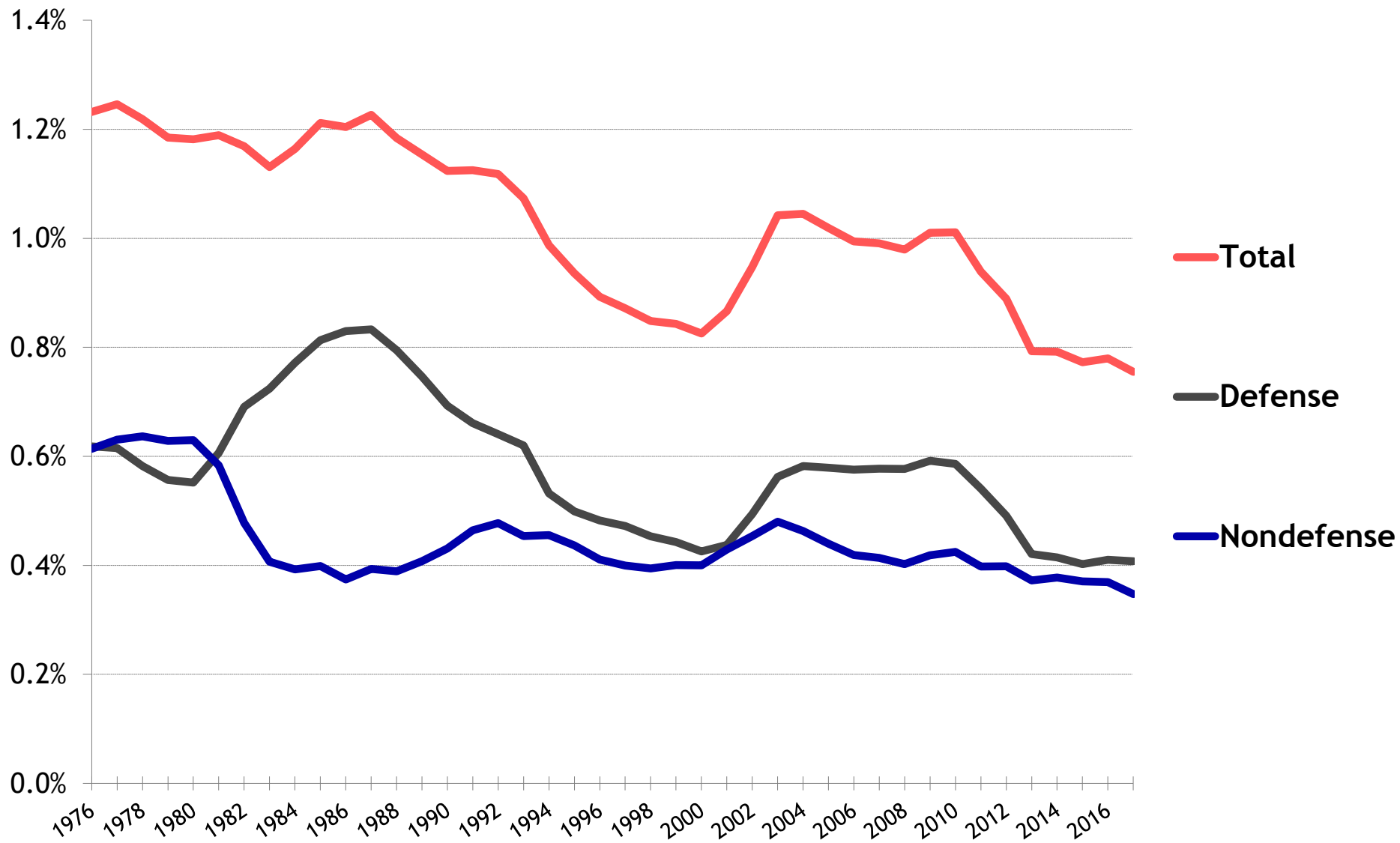
FY17 R&D in the Base Budget by Function

percent change from FY 2016, nominal dollars



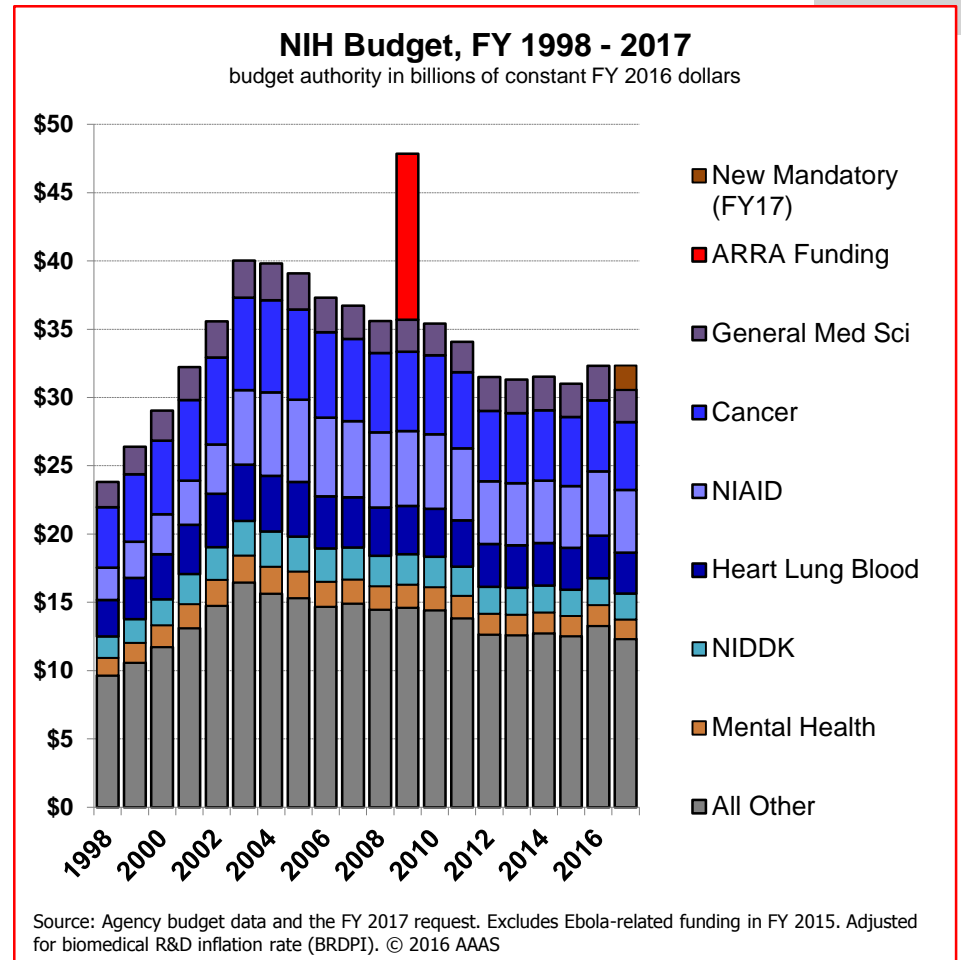
Trends in Federal R&D

As a percent of GDP



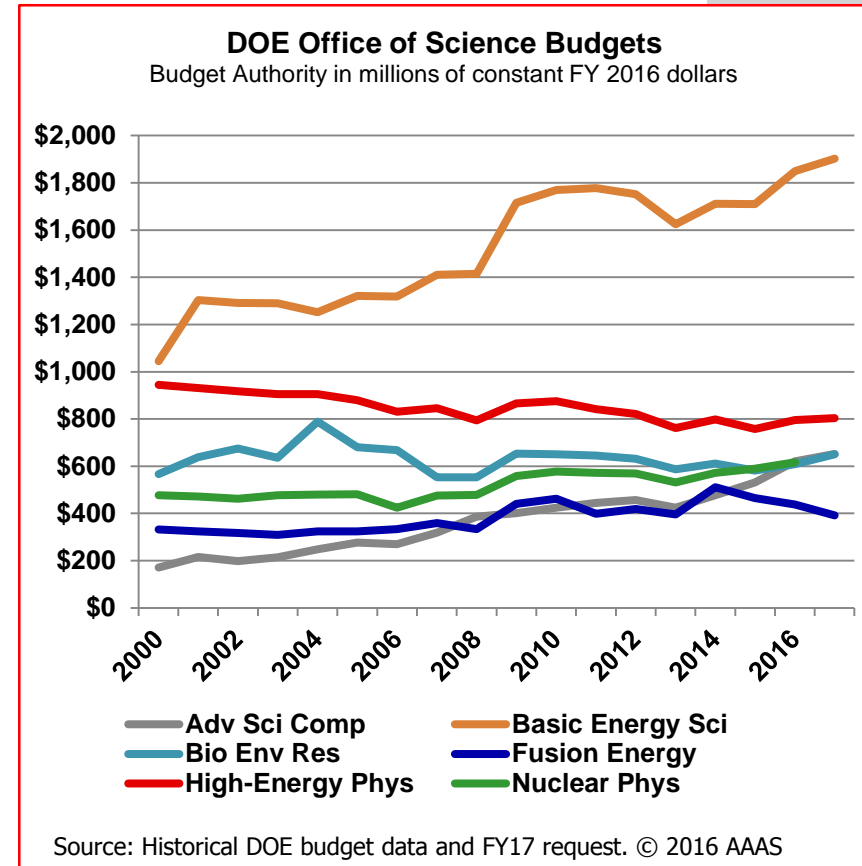
Agency Highlights: NIH

- \$33.1 billion program level (+\$825 million, +2.6%)
 - OR
- \$31.3 billion program level (-\$1 billion, -3.1%)
- Of the \$1.825 billion in mandatory spending:
 - \$825 million for cancer research, BRAIN Initiative, Precision Medicine
 - Remaining \$1 billion to keep all other ICs flat
- 17.5% success rate in FY17



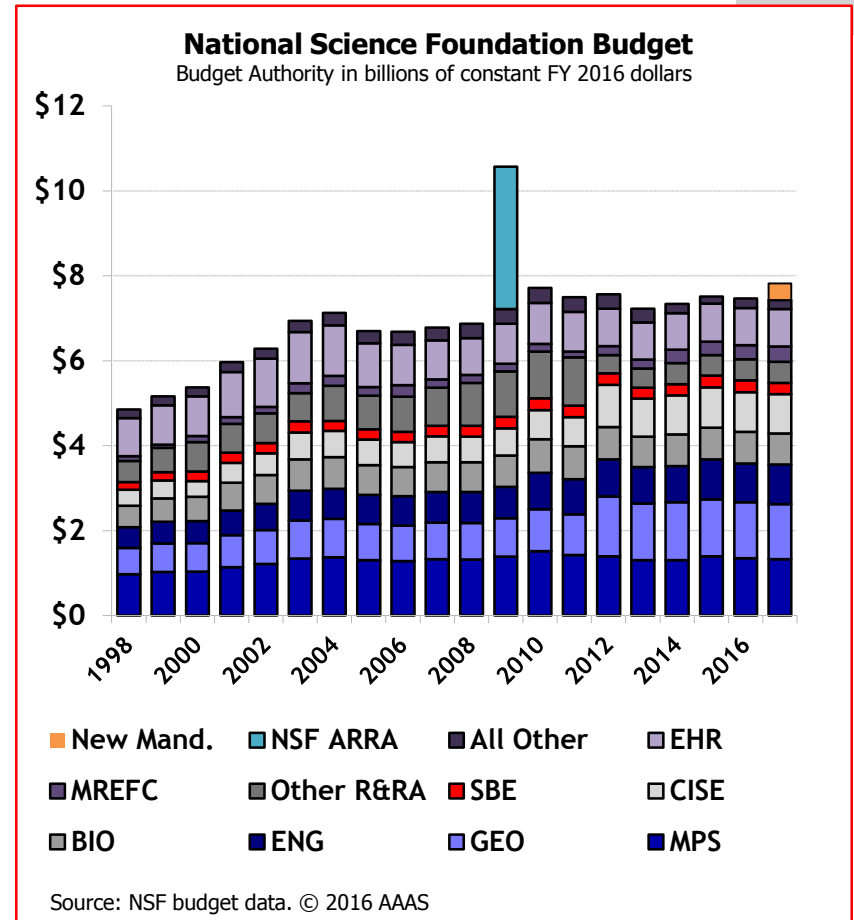
Agency Highlights: DOE

- SC: \$5.7 billion (+6.1%)
 - OR
- \$5.6 billion (+4.2%)
 - Advanced computing; BER; BES all with moderate boosts
 - Domestic fusion energy research cut again (-15.5%)
 - While ITER boosted, again
- Applied programs: gains for EERE, ARPA-E, grid (20% or more for each)
 - 21st Century Clean Transportation Plan
 - Fossil cut, Nuclear flat



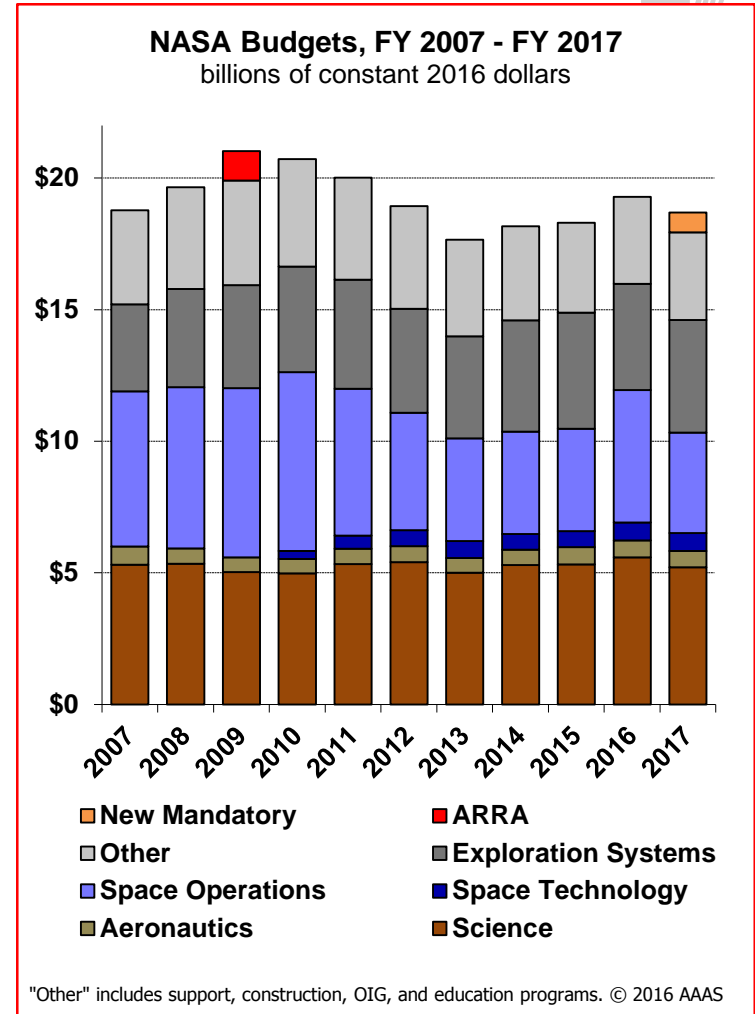
Agency Highlights: NSF

- \$8.0 billion (+6.7%)
 - OR
- \$7.6 billion (+1.3%)
- Base budgets for most directorates roughly flat
 - ENG: boosts for SBIR, ERCs
 - BIO, MPS: infrastructure v. research?
- New research vessels



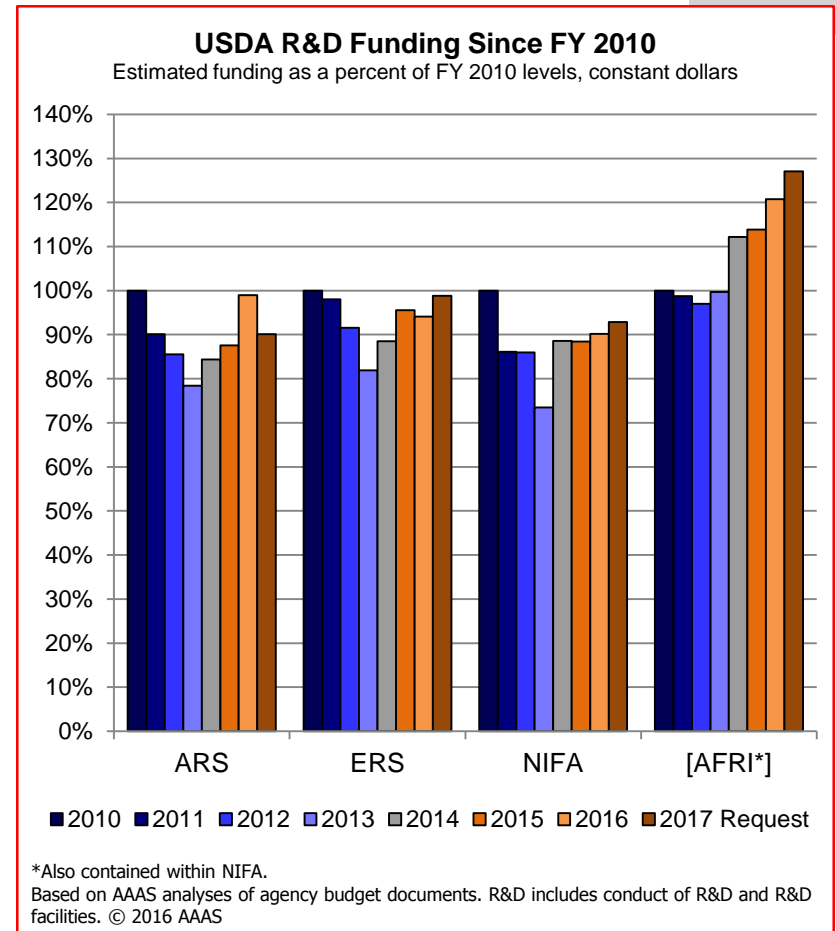
Agency Highlights: NASA

- NASA: \$19 billion (-1.3%)
 - OR
- \$18.3 billion (-5.3%)
- Mandatory spending (\$763 million) directed to Science, Aeronautics, Space Technology, Exploration
- Familiar contours:
 - Priorities include Earth Science, Space Technology; also Heliophysics
 - Asteroid Retrieval Mission
 - Cuts for Planetary Science (Europa Mission), Exploration (SLS and Orion), Astrophysics



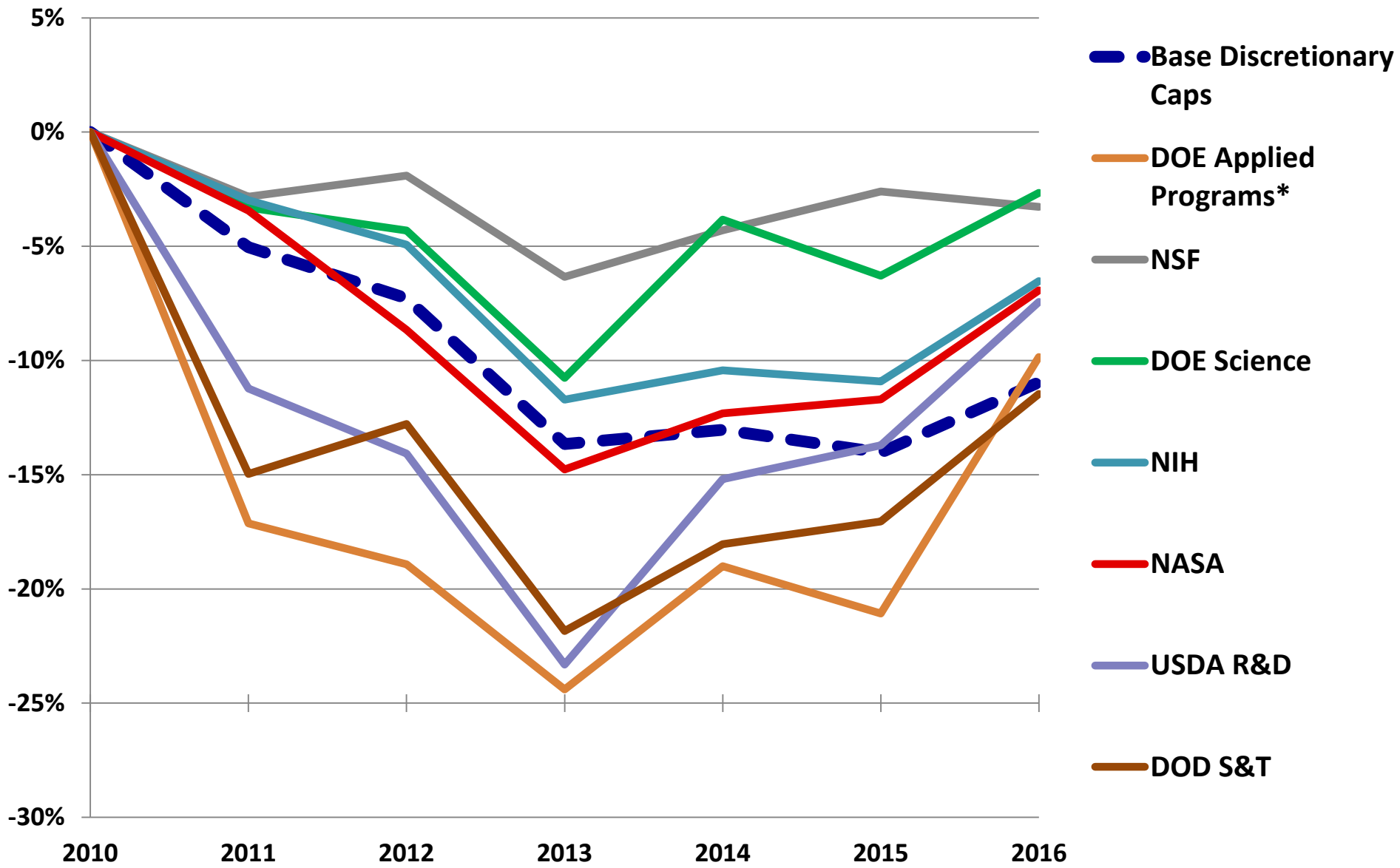
Other Notes

- DOD S&T: Basic research cut by 9.0%; DARPA +3.7%
- USDA: small changes at ARS; AFRI discretionary +7.1%, with an additional \$325 million mandatory
- NIST, NOAA Research Office, USGS all increased to varying degrees
- Zika supplemental: \$1.8 billion for CDC, NIH, others



Federal Spending Since FY 2010

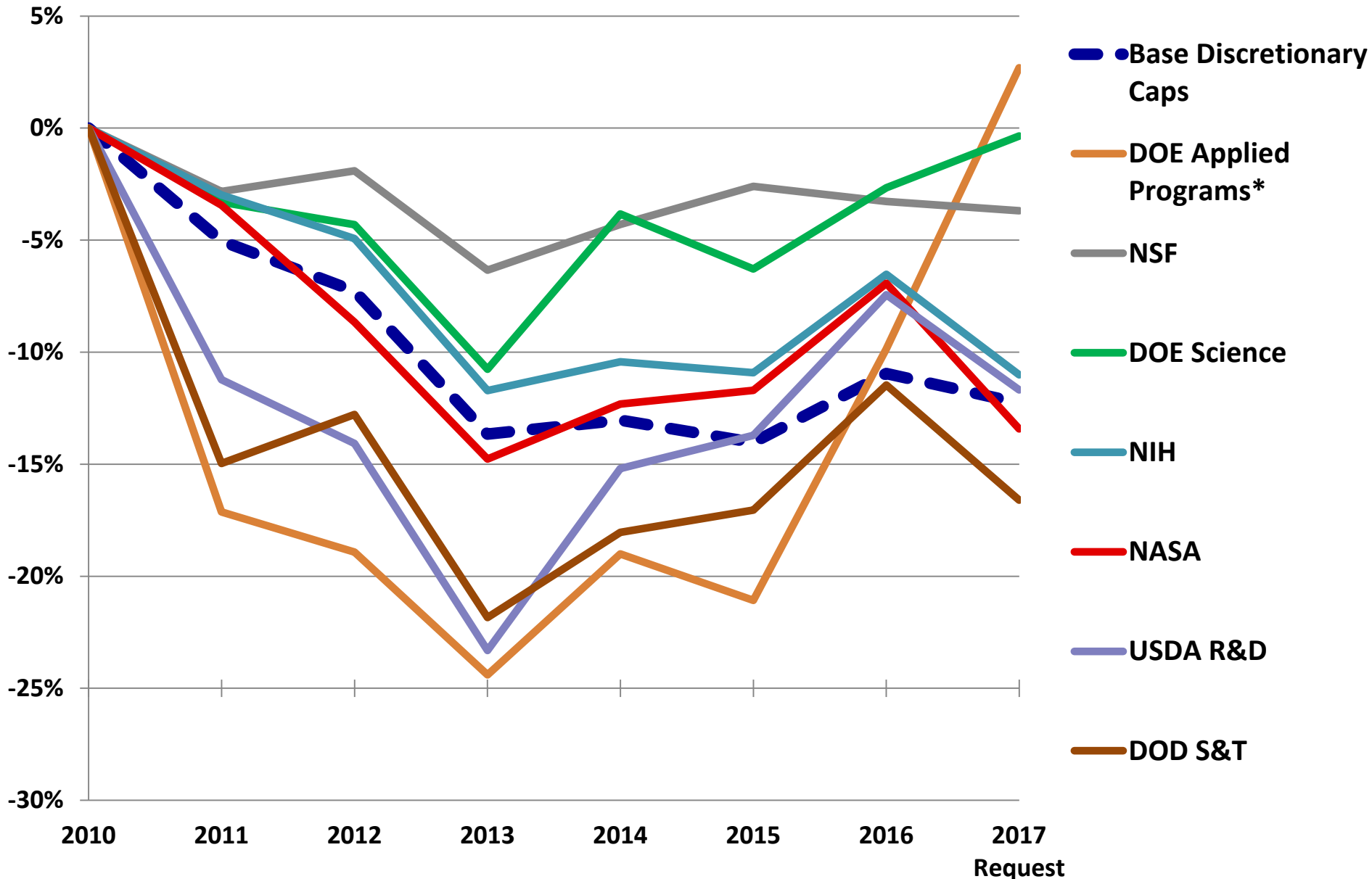
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Federal Spending Since FY 2010

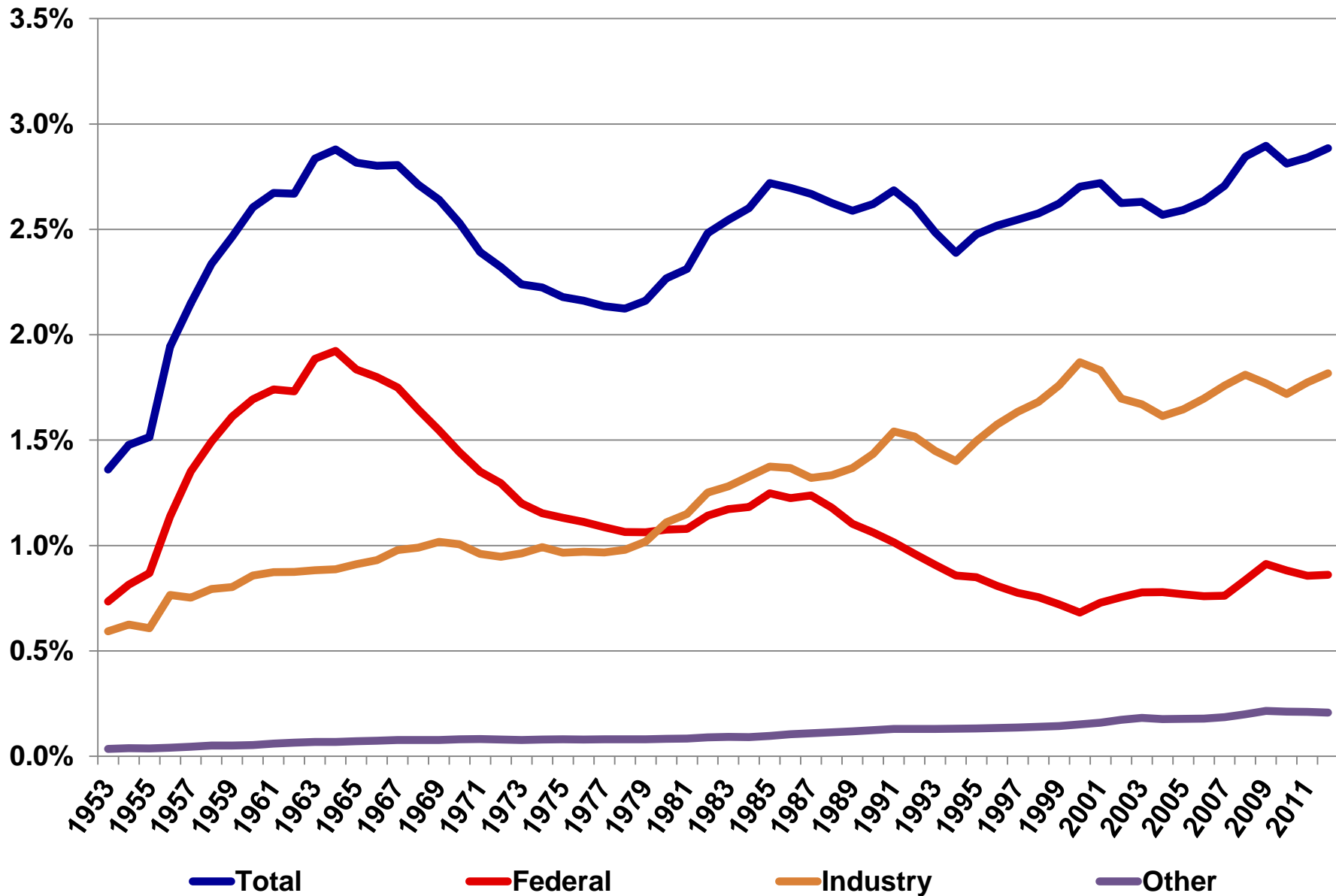
Percent change from FY10 levels, constant dollars, excluding new mandatory proposals in FY 2017



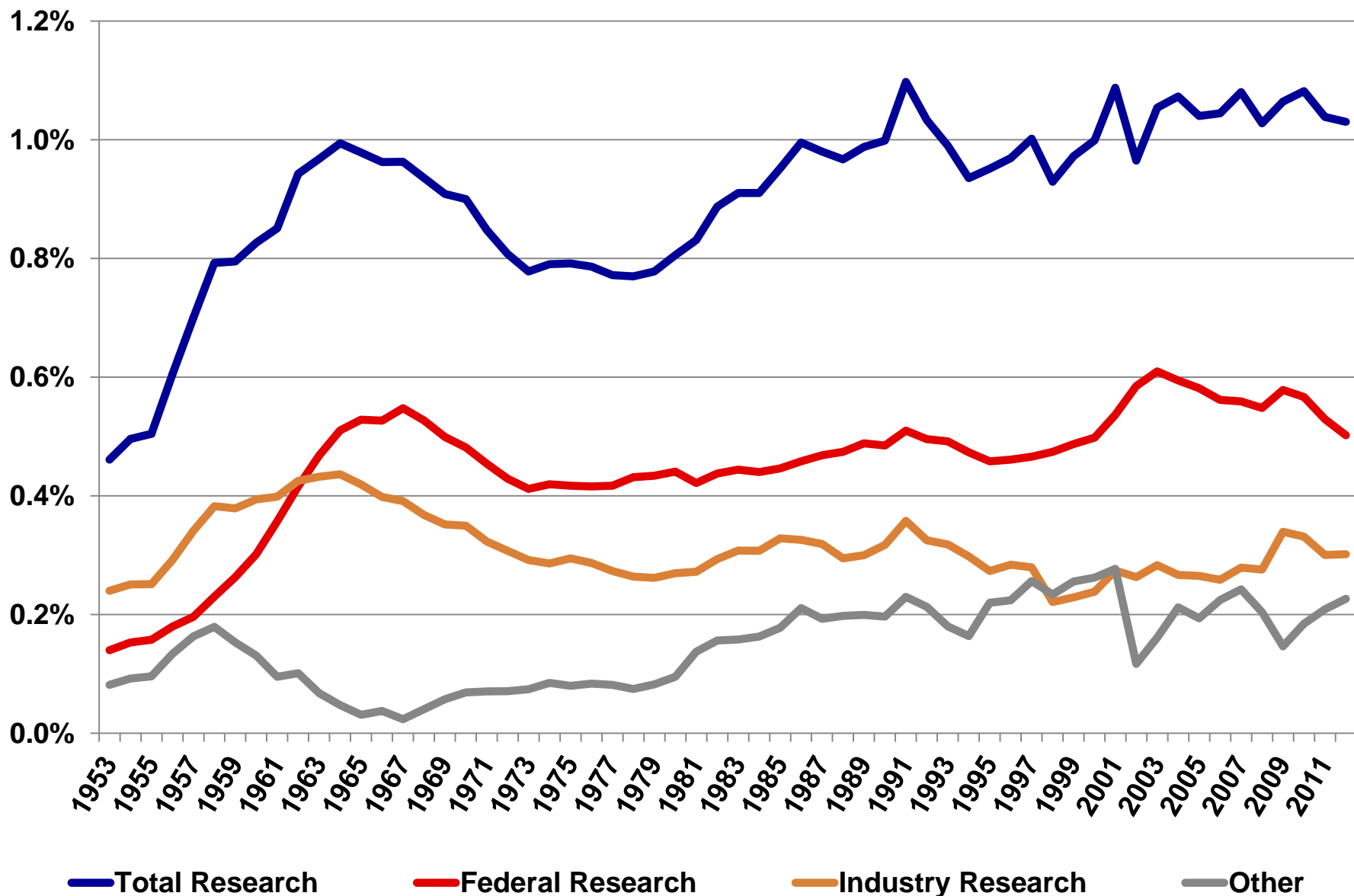
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R&D as a Share of GDP by Funder

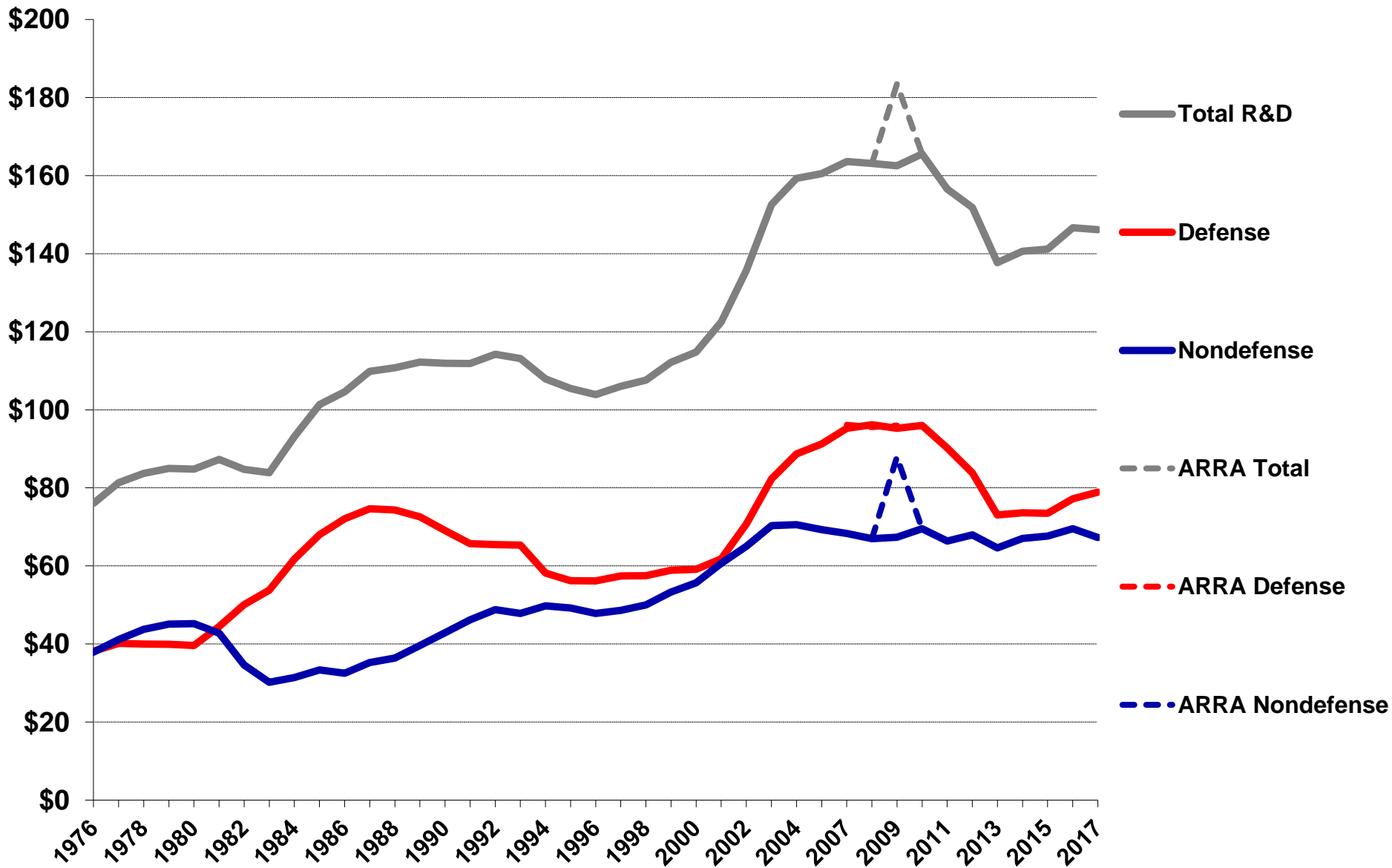


Research as a Share of GDP by Funder



Trends in Federal R&D, FY 1976-2017

in billions of constant FY 2016 dollars, excluding mandatory proposals in FY 2017



For more info...



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[http://www.aaas.org/program/rd-
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