

**NATIONAL SCIENCE FOUNDATION
RESEARCH INFRASTRUCTURE (RI) SUMMARY**
National Science Foundation
Research Infrastructure Summary
FY 2018 Budget Request to Congress

(Dollars in Millions)

	FY 2016 Actual	FY 2017 (TBD)	FY 2018 Request	FY 2018 Request Change Over FY 2016 Actual	
				Amount	Percent
Facilities	\$729.33	-	\$683.94	-\$45.39	-6.2%
Academic Research Fleet ¹	82.79	-	77.80	-4.99	-6.0%
Arecibo Observatory	8.90	-	7.72	-1.18	-13.2%
AST Portfolio Review Implementation	2.18	-	7.00	4.82	220.9%
Cornell High Energy Synchrotron Source (CHESS)	20.03	-	16.00	-4.03	-20.1%
Gemini Observatory	19.88	-	21.03	1.15	5.8%
Geodesy Advancing Geosciences and EarthScope (GAGE)	13.18	-	12.22	-0.96	-7.3%
IceCube Neutrino Observatory (IceCube)	8.71	-	7.00	-1.71	-19.6%
International Ocean Discovery Program (IODP)	48.00	-	48.00	-	-
Large Hadron Collider (LHC) ²	20.00	-	22.30	2.30	11.5%
Laser-Interferometer Gravitational-wave Observatory (LIGO)	39.43	-	39.43	-	-
National High Magnetic Field Laboratory (NHMFL)	35.34	-	34.77	-0.57	-1.6%
National Nanotechnology Coordinated Infrastructure (NNCI)	16.33	-	14.78	-1.55	-9.5%
National Superconducting Cyclotron Laboratory (NSCL) (MSU Cyclotron)	24.00	-	23.00	-1.00	-4.2%
Natural Hazards Engineering Research Infrastructure (NHERI)	13.00	-	11.75	-1.25	-9.6%
Ocean Observatories Initiative (OOI)	54.98	-	31.00	-23.98	-43.6%
Other Facilities ³	3.10	-	2.79	-0.31	-10.1%
Polar Facilities and Logistics	293.82	-	283.16	-10.66	-3.6%
Seismological Facilities for Advancement of Geoscience & EarthScope (SAGE)	25.64	-	24.19	-1.45	-5.7%
Major Research Equipment & Facilities Construction Investments	\$305.54	-	\$265.60	-\$39.94	-13.1%
Construction, Acquisition, and Commissioning ⁴	241.48	-	182.80	-58.68	-24.3%
Development and Design ⁵	17.59	-	1.80	-15.79	-89.8%
Initial Operations and Maintenance During Construction ⁶	46.47	-	81.00	34.53	74.3%
Federally Funded R&D Centers	\$223.33	-	\$207.76	-\$15.57	-7.0%
National Center for Atmospheric Research (NCAR)	105.60	-	89.90	-15.70	-14.9%
National Optical Astronomy Observatories (NOAO)	21.99	-	20.67	-1.32	-6.0%
National Radio Astronomy Observatories (NRAO) ⁷	81.50	-	76.34	-5.16	-6.3%
Other Astronomical Facilities ⁸	-	-	11.85	11.85	N/A
National Solar Observatory (NSO) ⁹	9.50	-	5.00	-4.50	-47.4%
Science & Technology Policy Institute (STPI)	4.74	-	4.00	-0.74	-15.6%
Other Research Instrumentation and Infrastructure	\$529.92	-	\$438.67	-\$91.25	-17.2%
Major Research Instrumentation (MRI)	79.78	-	75.00	-4.78	-6.0%
Midscale Research Infrastructure	49.01	-	20.27	-28.74	-58.6%
National Center for Science & Engineering Statistics (NCSES)	45.21	-	42.64	-2.57	-5.7%
NCSES Science of Science and Innovation Policy (SciSIP) Activities	4.95	-	4.95	-	-
Networking and Computational Resources Infrastructure and Services	129.35	-	117.50	-11.85	-9.2%
Polar Environment, Health, and Safety (PEHS)	7.09	-	6.18	-0.91	-12.8%
Research Resources ¹⁰	213.24	-	170.38	-42.86	-20.1%
Research Resources – Public Access Initiative	1.29	-	1.75	0.46	36.1%
Subtotal, Research Infrastructure Support	\$1,788.12	-	\$1,595.97	-\$192.15	-10.7%
Research Infrastructure Stewardship Offset	-\$2.87	-	-\$1.16	\$1.71	-59.5%
RESEARCH INFRASTRUCTURE TOTAL	\$1,785.25	-	\$1,594.81	-\$190.44	-10.7%

¹ Academic Research Fleet funding includes ship operations and upgrades. Regional Class Research Vessels (RCRV) funding is no longer included on this line as it is proposed for an FY 2017 MREFC new construction start.

² Large Hadron Collider (LHC) funding on this line includes \$6.30 million in FY 2018 for planning for the LHC upgrade, a proposed future MREFC project.

³ Other Facilities includes ongoing MPS support for the Center for High Resolution Neutron Scattering (CHRNS).

Summary Tables

⁴ Construction, Acquisition, and Commissioning are for implementation support provided through the MREFC account. MREFC funding is included for NEON, DKIST, and LSST in FY 2016; in FY 2018, DKIST, LSST and RCRV are included.

⁵ Development and Design includes funding for potential next generation multi-user facilities. This line reflects funding for RCRV in FY 2016 and Antarctic Infrastructure Modernization for Science (AIMS) for both years. Not included here is the Large Hadron Collider (LHC) upgrade, captured under the LHC facilities line in the table.

⁶ Initial Operations and Maintenance During Construction are Research and Related Activities (R&RA) funds for these purposes while MREFC construction is ongoing. Funding is included for NEON and DKIST for both years.

⁷ Funding for the National Radio Astronomy Observatory (NRAO) includes operations and maintenance support for the Atacama Large Millimeter Array (ALMA). The substantial drop in support shown is due to the separation of the Green Bank Observatory and the Very Long Baseline Array from NRAO and ALMA; this funding is now included under "Other Astronomical Facilities" in this table.

⁸ Other Astronomical Facilities funding includes the Green Bank Observatory and the Very Long Baseline Array, removed from NRAO and ALMA.

⁹ National Solar Observatory (NSO) totals presented do not include \$11.50 million in FY 2016, and \$14.0 million in FY 2018 for operations and maintenance support for the DKIST facility construction project. DKIST funding is captured within the total presented Initial Operations and Maintenance During Construction line.

¹⁰ Funding for Research Resources includes support for the operation and maintenance of minor facilities, infrastructure and instrumentation, field stations, museum collections, etc.