

Annual Report on Research
FY 2019

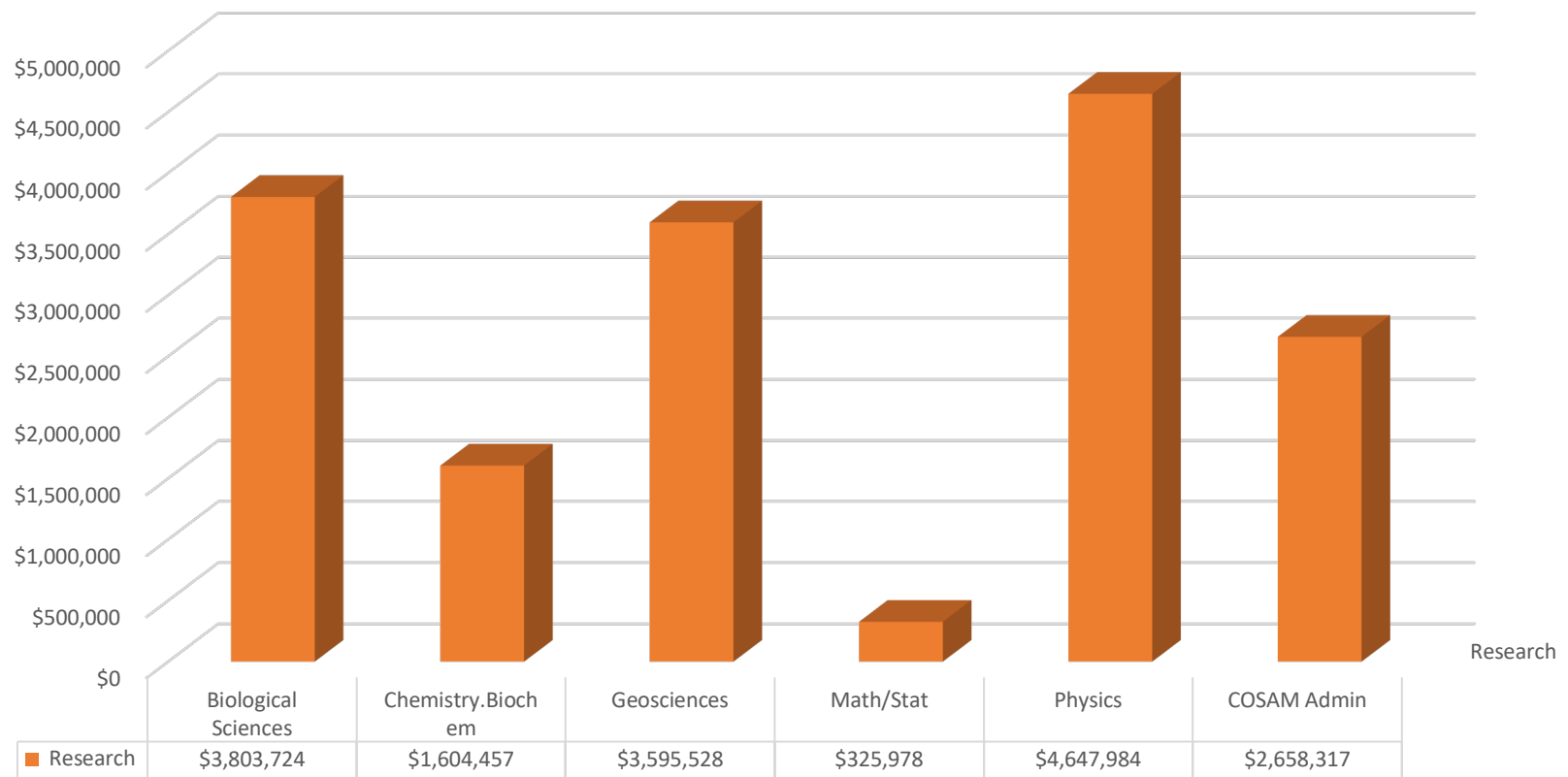


College of Sciences and Mathematics
Office of the Associate Dean for Research

Dr. Edward Thomas, Jr.
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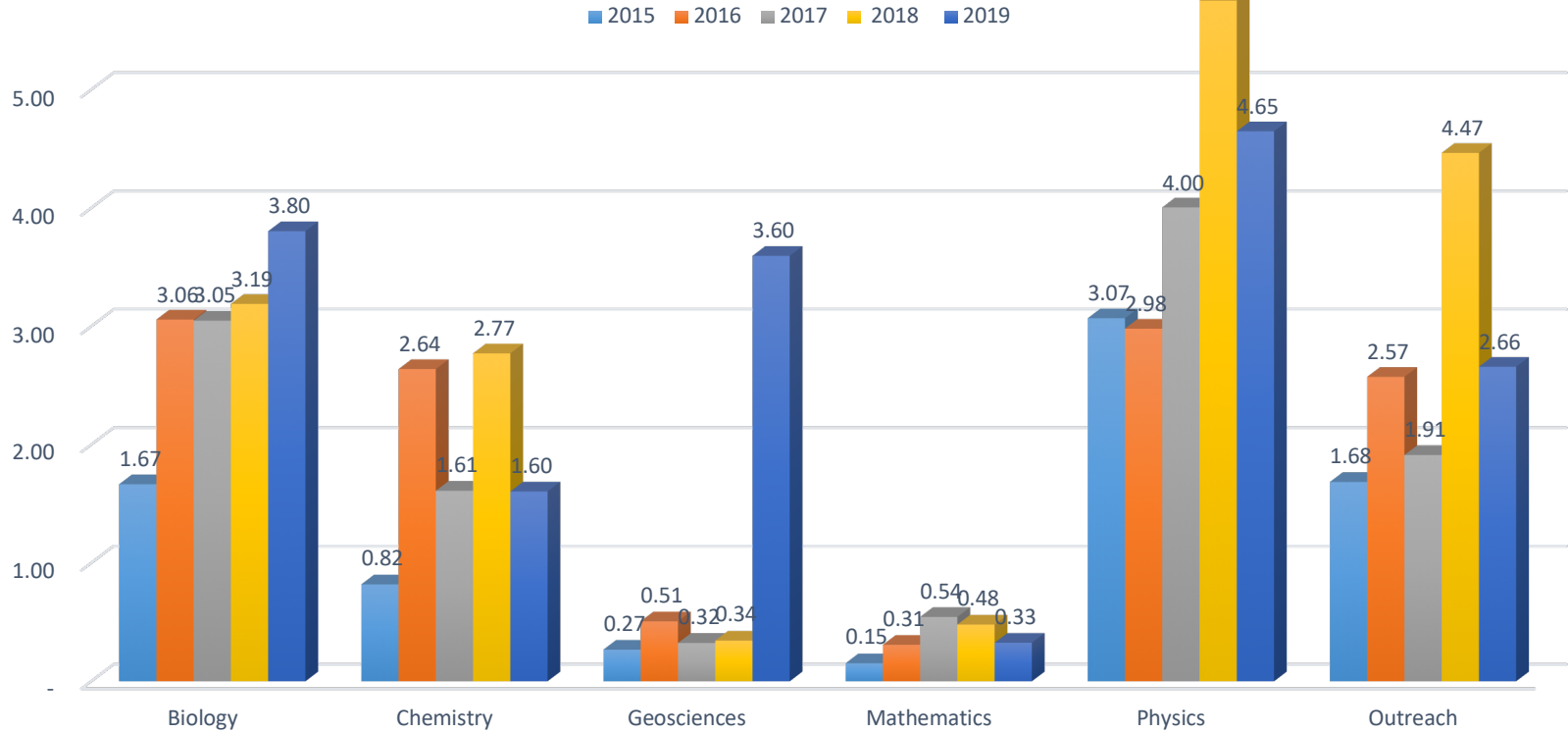
Release date: March 11, 2020

Extramural Funding
 COSAM Departments
 FY 2019



Extramural Budget Loads Per Department FY2015-2019

(in millions of dollars)



	2015	2016	2017	2018	2019
Biology	1.67	3.06	3.05	3.19	3.80
Chemistry	0.82	2.64	1.61	2.77	1.60
Geosciences	0.27	0.51	0.32	0.34	3.60
Mathematics	0.15	0.31	0.54	0.48	0.33
Physics	3.07	2.98	4.00	5.75	4.65
Outreach	1.68	2.57	1.91	4.47	2.66

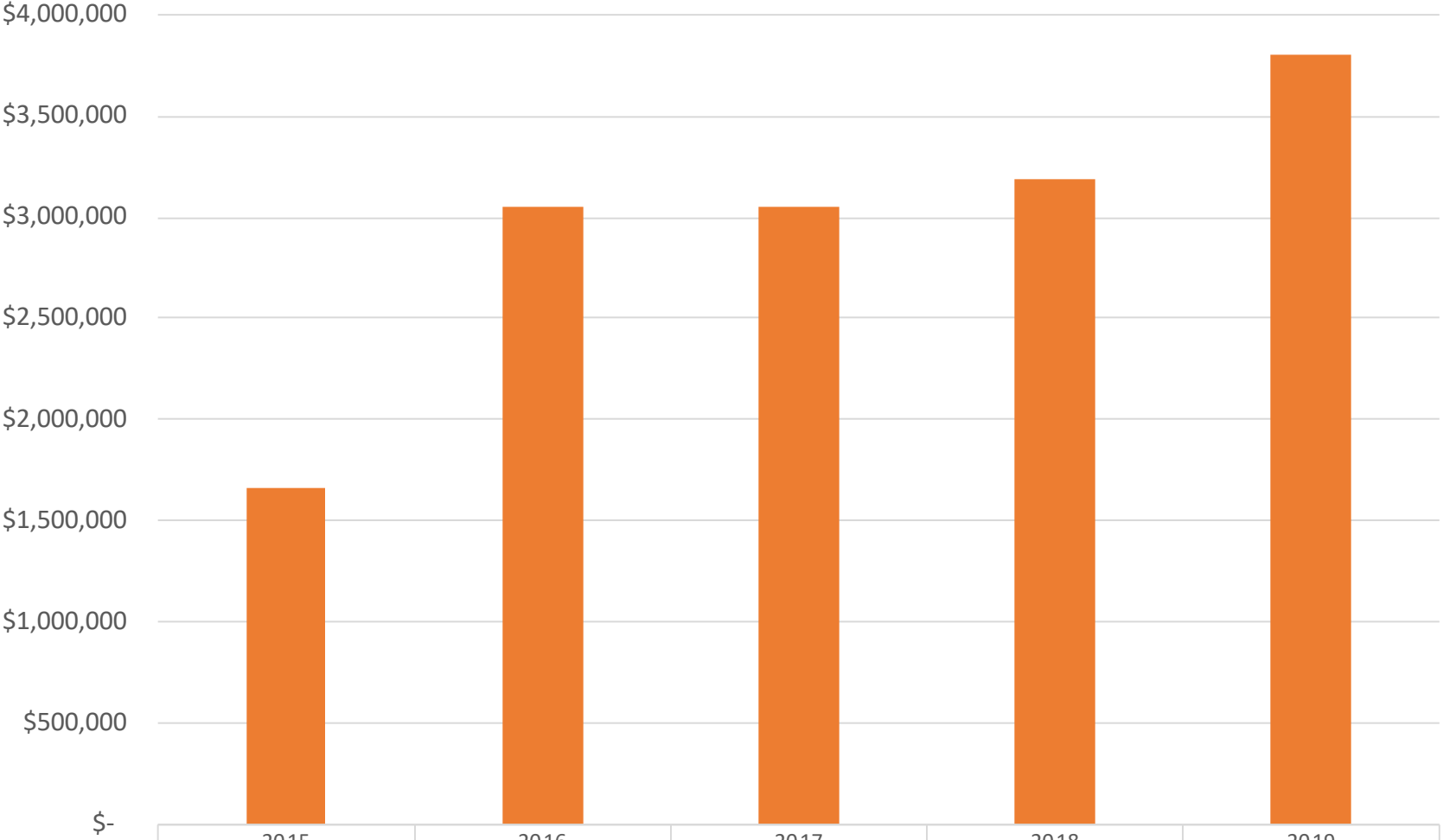
Breakdown of data by academic units:

- Department of Biological Sciences (DBS)
- Department of Chemistry and Biochemistry (DCB)
- Department of Geosciences
- Department of Mathematics and Statistics
- Department of Physics
- COSAM Outreach and Administration

Departmental data will be presented as follows:

- Chart of 5 year funding history
- Table of new funding received for the fiscal year (budget loads)
- Table of active awards for the fiscal year (active accounts)
- Table of proposals submitted during the current fiscal year

Biological Sciences



	2015	2016	2017	2018	2019
Biological Sciences	\$1,665,396	\$3,057,091	\$3,047,769	\$3,189,214	\$3,803,724

Extramural Research Grants with New Dollars Received in FY2019
Biological Sciences

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Armbruster, Jonathan Stone, Margaret	PI COPI	Biological Sciences	Enviromental ED at the Robert G Wehle Nature Center	Alabama Dept of Conservation & Natural Resources	\$ 16,000.00
Beadles, Leslie	PI	Biological Sciences	Utility Vehicle for Davis Arboretum	Stanley Smith Horticultural Trust	\$ 13,100.00
Combine, Paul	PI	Biological Sciences	Cooper Transport by members of the Mitochoncrial Carrier Family	National Institutes of Health	\$ 975.00
Dobson, F. Stephen	PI	Biological Sciences	USIAS Fellowship for Stephen Dobson	University of Strasbourg	\$ 88,017.65
Flores, Adriana Avila	PI	Biological Sciences	Testing and Evaluation Services Agreement	ADAMA Agricultural Solutions Ltd.	\$ 22,500.00
Godwin, James	PI	Biological Sciences	Escambia Map Turtle Status Survey	Alabama Dept of Conservation & Natural Resources	\$ 25,000.00
Godwin, James	PI	Biological Sciences	Mississippi Gopher Frog Survey	Alabama Dept of Conservation & Natural Resources	\$ 25,985.00
Graze, Rita	PI	Biological Sciences	Uncovering Mechanisms that Shape Variation in How Males & Females Differ in the Gene Expression*	National Science Foundation	\$ 699,803.00
Halanych, Kenneth	PI	Biological Sciences	Have Transantarctic Dispersal Corridors Impacted Antarctic Marine Biodiversity	National Science Foundation	\$ 667,605.00
Halanych, Kenneth Witte, Maria	PI COPI	Biological Sciences	Graduate Research Fllwshp Prog for Kyle David	National Science Foundation	\$ 46,000.00
Hermann, Sharon	PI	Biological Sciences	Template for Selecting Tortoise Conservation Areas	Alabama Dept of Conservation & Natural Resources	\$ 64,891.00
Hood, Wendy	PI	Biological Sciences	Effects of Mitohormesis on Reproduction & Longevity *	National Science Foundation	\$ 253,618.00
Hood, Wendy Kavazis, Andreas	PI COPI	Biological Sciences	RII Track-2 Genome to fitness: An Analysis of the Stress Response in Peromyscus	University of South Carolina	\$ 388,897.00
Liles, Mark	PI	Biological Sciences	Transnational Partnership on Functional Metagenomics For Biopharmaceutical Innovation *	SINTEF	\$ 58,220.00
Liles, Mark	PI	Biological Sciences	Eval Combinations of Bacillus Velezensis Strains for Probiotic Effects in Channel Catfish	TechAccel, LLC	\$ 39,650.00
Locy, Robert Sikora/Conner/Rashotte	PI COPI	Biological Sciences	Build Disease-Related Gene Expression Catalog for Disease Diagnosis & Genetic Improvement	Alabama Soybean Producers	\$ 14,000.00
Range, Ryan	PI	Biological Sciences	WNT Signaling Pathway Interaction in Early Anterior- Posterior Neuroectoderm	National Institutes of Health	\$ 204,163.00

Extramural Research Grants with New Dollars Received in FY2019
Biological Sciences

Seibenhener, Michael	PI	Biological Sciences	Role of Sequestosome1	University of South Carolina	\$ 19,993.00
Schotz, Alfred	PI	Biological Sciences	Natureserve-Moual2007(Master File)	NatureServe	\$ 7,000.00
Armbruster, Jonathan	COPI	Biological Sciences	Natureserve-Moual2007AL(Master File)	NatureServe	\$ 2,608.00
Schotz, Alfred	PI	Biological Sciences	Habitat Improvement & Pop Expansion of Green Pitcher Plant at Desoto State Park	Alabama Dept of Conservation & Natural Resources	\$ 23,557.00
Armbruster, Jonathan	COPI	Biological Sciences	Habitat Modeling & Site Verificaiton for White Fringeless Orchid in Alabama	Alabama Dept of Conservation & Natural Resources	\$ 26,370.00
Schotz, Alfred	PI	Biological Sciences	New Vertebrate Model to Study the Role of Growth Factors Igf1&IGF2 in Sex Dimorphism of Longevity &	National Institutes of Health	\$ 448,345.00
Boyd, Robert	COPI	Biological Sciences	Graduate Resch Fellowship for Amanda Clark	National Science Foundation	\$ 46,000.00
Schotz, Alfred	PI	Biological Sciences	Graduate Resch Fellowship Program for Amanda Clark	National Science Foundation	\$ 46,000.00
Boyd, Robert	COPI	Biological Sciences	Role of the Enviroment on the Evolution Recombination Rates	National Science Foundation	\$ 199,876.00
Schwartz, Tonia	PI	Biological Sciences	Studies of Recovery from Bleaching in Acropora Hyacinthus: Epigenetic Shifts, Impacts on Reproductive Biology & Carry-Over Effects	National Science Foundation	\$ 76,075.00
Graze, Rita	COPI	Biological Sciences	Viral Transcription in Herpesvirus-Induced Necroptosis		\$ 187,475.00
Schwartz, Tonia	PI	Biological Sciences	Graduate Resch Fellowship for Jenna Pruett	National Science Foundation	\$ 46,000.00
Witte, Maria	COPI	Biological Sciences	Graduate Resch Fellowship Program for Jenna Pruett	National Science Foundation	\$ 46,000.00
Schwartz, Tonia	PI	Biological Sciences			
Witte, Maria	COPI	Biological Sciences			
Stevison, Laurie	PI	Biological Sciences			
Strader, Marie	PI	Biological Sciences			
Upton, Jason	PI	Biological Sciences			
Warner, Daniel	PI	Biological Sciences			
Witte, Maria	COPI	Biological Sciences			
Warner, Daniel	PI	Biological Sciences			
Witte, Maria	COPI	Biological Sciences			
			Biological Sciences Count	Accounts: 30	
				Individual Awards: 16	
*Denotes Participant Support Costs Included			Biological Sciences Total		\$ 3,803,723.65

Biological Sciences Active Awards

PI	Sponsor	Title	Start Date	End Date
Armbruster, Jonathan	National Science Foundation	NSF-DBI-1756404	4/1/18	3/31/20
Armbruster, Jonathan	Alabama Dept of Conservation & Natural Resources	ADCNR-HELLBENDER-20	2/1/18	5/1/20
Armbruster, Jonathan	Nature Conservancy	TNC-020119 A105227	3/1/19	9/30/20
Armbruster, Jonathan	US Army	US Army-Redstone-20	5/31/18	5/31/20
Ballen, Margaret	University of Minnesota	UN MN-P007692401	9/1/19	8/31/23
Bond, Jason	National Science Foundation	NSF-IOS-1556165	7/1/16	6/30/21
Bond, Jason	U.S. Department of Agriculture	FS-15-CS-11080100-003	8/19/15	7/15/20
Cobine, Paul	National Institutes of Health	NIH-1R01GM120211-01A1	6/1/17	4/30/20
Dobson, F.	University of Strasbourg	UN Strasbourg-Dobson	12/1/18	11/30/20
Godwin, James	US Army	ARMY-W9128F18200008	7/30/18	1/28/21
Graze, Rita	National Science Foundation	NSF-DEB-1751296 *	8/1/18	7/31/23
Halanych, Kenneth	National Science Foundation	NSF-OPP-1916661	9/1/19	8/31/23
Halanych, Kenneth	National Science Foundation	NSF-IOS-1754377	7/15/18	6/30/21
Halanych, Kenneth	National Science Foundation	NSF-DGE-1937964-KD	9/1/19	8/31/20
Hermann, Sharon	Alabama Dept of Conservation & Natural Resources	ADCNR-Gopher Tortoise-20	3/1/19	2/28/20
Hill, Geoffrey	National Science Foundation	NSF-IOS-1754152	5/15/18	7/31/22
Hood, Wendy	National Science Foundation	NSF-DBI-1453784	4/1/15	3/31/20
Liles, Mark	NASA	NASA-Liles	12/1/19	3/31/20
Liles, Mark	SINTEF	SINTEF-Liles-22	4/22/19	4/23/22
Liles, Mark	NASA	NASA-80NSSC17K0668	9/7/17	9/6/20
Locy, Robert	Alabama Soybean Producers	ASP-Disease Diagnosis-16A	3/1/16	2/28/20
Mendonca, Mary	National Science Foundation	NSF-IOS-1456440	5/15/15	4/30/20
Oaks, Jamie	National Science Foundation	NSF-DEB-1656004 *	5/1/17	4/30/21
Range, Ryan	National Institutes of Health	NIH-7R15HD088272-02	8/16/18	6/30/20
Schwartz, Tonia	National Institutes of Health	NIH-1R5AG064655-01	8/1/19	7/31/22
Schwartz, Tonia	National Science Foundation	NSF-DGE-1414475-AC	9/1/17	8/31/20

Biological Sciences Active Awards

Schwartz, Tonia	National Science Foundation	NSF-DGE-1937964-KD	9/1/19	8/31/20
Schotz, Alfred	US Army	ARMY-W9126G-19-2-0064	9/27/19	9/26/20
Schotz, Alfred	Alabama Dept of Conservation & Natural Resources	ADCNR-S619-AUWFO	5/31/19	9/30/20
Steen, David	Environmental Protection Agency	EPA-CD-00D65317-0	10/1/17	9/30/20
Stevison, Laurie	National Science Foundation	NSF-DEB-1939090	8/15/19	7/31/21
Strader, Marie	National Science Foundation	NSF-OCE-1935308	6/15/19	5/31/20
Suh, Sang-Jin	US Department of Agriculture	USDA-2016-67021-25005-COSAM	3/1/16	2/29/20
Upton, Jason	National Institutes of Health	NIH-7R21AI135709-02	1/1/19	12/31/20
Wada, Haruka	National Science Foundation	NSF-IOS-1553657	4/15/16	3/31/21
Warner, Daniel	Alabama Dept of Conservation & Natural Resources	ADDCNR-Indigo Snake-16	10/1/15	9/30/21
Warner, Daniel	National Science Foundation	NSF-DGE-1414475-JP	9/1/17	8/31/20
Warner, Daniel	National Science Foundation	NSF-DGE-1937964-JP	9/1/19	8/31/20
		Total Active: 38		
*Includes Participant Support Costs				

Biological Sciences Proposals Submitted FY2019

Proposal ID	PI/COPI	Title	Department	Amount Requested
0927-19P	Armbruster, Jonathan	PI	Biological Sciences	\$ 21,000.00
0257-19P	Ballen, Cissy	PI	Biological Sciences	\$ 210,923.00
1006-19P	Ballen, Cissy	PI	Biological Sciences	\$ 633,378.00
1056-19P	Ballen, Cissy	PI	Biological Sciences	\$ 772,157.57
0985-19P	Bernal de Leon, Moises Antonio	PI	Biological Sciences	\$ 74,999.00
0677-19P	Boyd, Robert	PI	Biological Sciences	\$ 15,000.00
0197-19P	Callahan, Mellisa	COPI	Biological Sciences	\$ 87,186.00
0618-19P	Cobine, Paul	COPI	Biological Sciences	\$ 1,048,395.00
0548-19P	Finger, John	PI	Biological Sciences	\$ 8,633.00
0065-19P	Flores, Adriana Avila	PI	Biological Sciences	\$ 448,651.00
0406-19P	Godwin, James	PI	Biological Sciences	\$ 158,652.00
0535-19P	Godwin, James	PI	Biological Sciences	\$ 26,100.00
0547-19P	Godwin, James	PI	Biological Sciences	\$ 39,054.00
0659-19P	Godwin, James	PI	Biological Sciences	\$ 37,805.00
0738-19P	Godwin, James	PI	Biological Sciences	\$ 249,838.00
0072-19P	Godwin, James	PI	Biological Sciences	\$ 334,664.00
0051-19P	Halanych, Kenneth	PI	Biological Sciences	\$ 506,323.00
0207-19P	Halanych, Kenneth	PI	Biological Sciences	\$ 667,605.00
0211-19P	Hermann, Sharon	PI	Biological Sciences	\$ 64,891.00
0280-19P	Hill, Geoffrey	PI	Biological Sciences	
0354-19P	Hood, Wendy	PI	Biological Sciences	\$ 412,311.88
0707-19P	Hood, Wendy	PI	Biological Sciences	\$ 50,130.00
0998-19P	Hood, Wendy	COPI	Biological Sciences	\$ 3,103,357.00

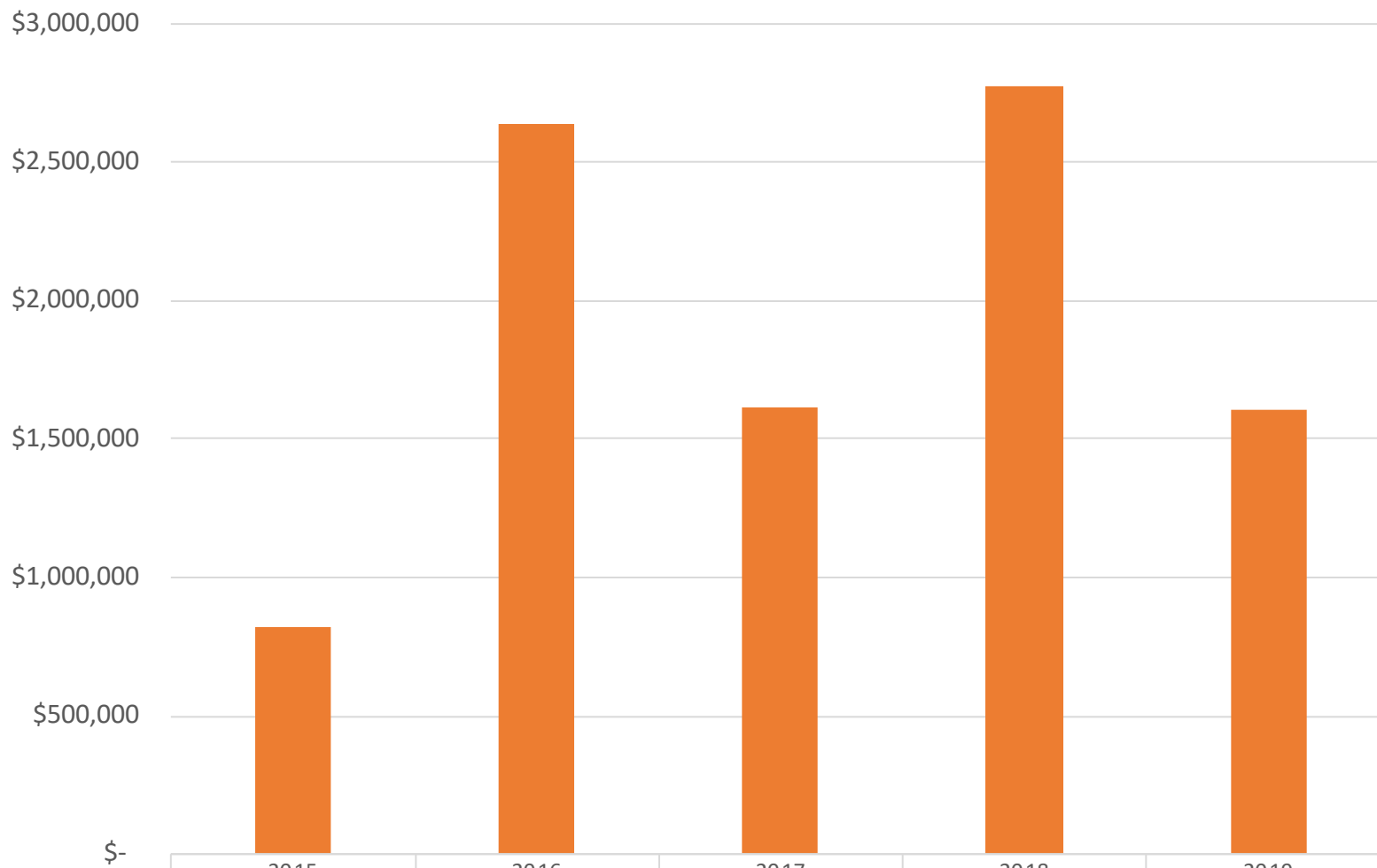
Biological Sciences Proposals Submitted FY2019

0749-19P	Leisner, Courtney	PI	Biological Sciences	\$ 489,578.94
0833-19P	Leisner, Courtney	COPI	Biological Sciences	\$ 4,996,128.00
0158-19P	Liles, Mark	PI	Biological Sciences	\$ 100,000.00
0501-19P	Liles, Mark	PI	Biological Sciences	\$ 431,998.00
0577-19P	Moss, Anthony	PI	Biological Sciences	\$ 299,941.00
0879-19P	Moss, Anthony	PI	Biological Sciences	\$ 29,853.00
0486-19P	Oaks, Jamie	PI	Biological Sciences	\$ 101,418.74
0316-19P	Petrov, Alexey	PI	Biological Sciences	\$ 203,500.00
0209-19P	Range, Ryan	PI	Biological Sciences	\$ 204,163.00
0448-19P	Range, Ryan	PI	Biological Sciences	\$ 18,970.00
0808-19P	Sandoval-Powers, Megan	PI	Biological Sciences	\$ 92,223.00
0275-19P	Schotz, Alfred	PI	Biological Sciences	\$ 2,608.00
0735-19P	Schotz, Alfred	PI	Biological Sciences	\$ 7,980.00
1042-19P	Schotz, Alfred	PI	Biological Sciences	\$ 108,796.00
0037-19P	Schwartz, Elizabeth	PI	Biological Sciences	\$ 450,666.00
0071-19P	Schwartz, Tonia	PI	Biological Sciences	\$ 448,344.00
0702-19P	Schwartz, Tonia	PI	Biological Sciences	\$ 1,399,649.00
0103-19P	Seibenhener, Michael	PI	Biological Sciences	\$ 19,993.00
0635-19P	Stevison, Laurie	PI	Biological Sciences	\$ 199,875.00
1055-19P	Stevison, Laurie	PI	Biological Sciences	\$ 1,000.00
0036-19P	Sztuba-Solinska, Joanna	PI	Biological Sciences	\$ 414,148.00
0309-19P	Sztuba-Solinska, Joanna	PI	Biological Sciences	\$ 827,122.00
0558-19P	Sztuba-Solinska, Joanna	PI	Biological Sciences	\$ 449,842.00
1018-19P	Sztuba-Solinska, Joanna	PI	Biological Sciences	\$ 1,848,631.57

Biological Sciences Proposals Submitted FY2019

1012-19P	Sztuba-Solinska, Joanna & Combine, Paul	COPIs	Biological Sciences	\$ 499,972.70
0278-19P	Wada, Haruka	PI	Biological Sciences	\$ 2,694,934.00
0785-19P	Warner, Daniel	PI	Biological Sciences	\$ 1,258,181.00
1035-19P	Warner, Daniel	PI	Biological Sciences	\$ 20,002.50
	Total Requested:			\$ 26,590,571.90

Chemistry and Biochemistry



■ Chemistry and Biochemistry

2015

2016

2017

2018

2019

\$818,975

\$2,638,468

\$1,610,116

\$2,771,358

\$1,604,457

**Extramural Research Grants with New Dollars Received in FY2019
Chemistry Biochemistry**

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Duin, Eduardus	PI	Chemistry & Biochemistry	Novel Inhibitors for Methyl-Coenzyme M Reductase	DSM Nutritional Products AG	\$ 115,302.00
Duin, Eduardus	PI	Chemistry & Biochemistry	Understanding Nitrogenase Maturation & Activity in Methanogens	University of Arkansas	\$ 84,917.00
Easley, Christopher Judd, Robert	PI COPI	Chemistry & Biochemistry	Interrogating Dynamics of Acute Secretion of Adiponectin Multimers from Adipose T	National Institutes of Health	\$ 365,995.00
Gorden, Anne	PI	Chemistry & Biochemistry	Tailoring Redox Active Ligands for Probing the Reactivity of Actinides	U.S. Department of Energy	\$ 139,856.00
Harshman, Jordan	PI	Chemistry & Biochemistry	Building Assessment Capacity in Chemistry ED	National Science Foundation	\$ 186,657.00
Karimov, Rashad	PI	Chemistry & Biochemistry	Chemical Degradation Studies on Fentanyl Analogues	US Dept of Health & Human Services	\$ 124,882.00
Mansoorabadi, Steven	PI	Chemistry & Biochemistry	Mechanistic Studies of a Primitive Homolog of Nitrogenase Involved in Coenzyme F430 Biosynthesis	U.S. Department of Energy	\$ 136,237.00
Patkowski, Konrad	PI	Chemistry & Biochemistry	The Molecular Sciences Software Institute	Virginia Polytechnic Institute	\$ 22,750.00
Raj, Monika	PI	Chemistry & Biochemistry	Molecular Imaging Agents for Monitoring Lysine Demethylases in Cells	National Institutes of Health	\$ 375,003.00
Shannon, Curtis	PI	Chemistry & Biochemistry	Faculty Workload Rewards Program	University of Maryland	\$ 1,000.00
Worley, Shelby	PI	Chemistry & Biochemistry	Mitigation of Biofilm & Microbial Contamination in Water Systems for Space Travel	NASA	\$ 51,858.00
			Chemistry & Biochemistry Count:	Accounts: 11 Individual Awards: 10	
*Participant Support Cost Included			Chemistry & Biochemistry Total:		\$ 1,604,457.00

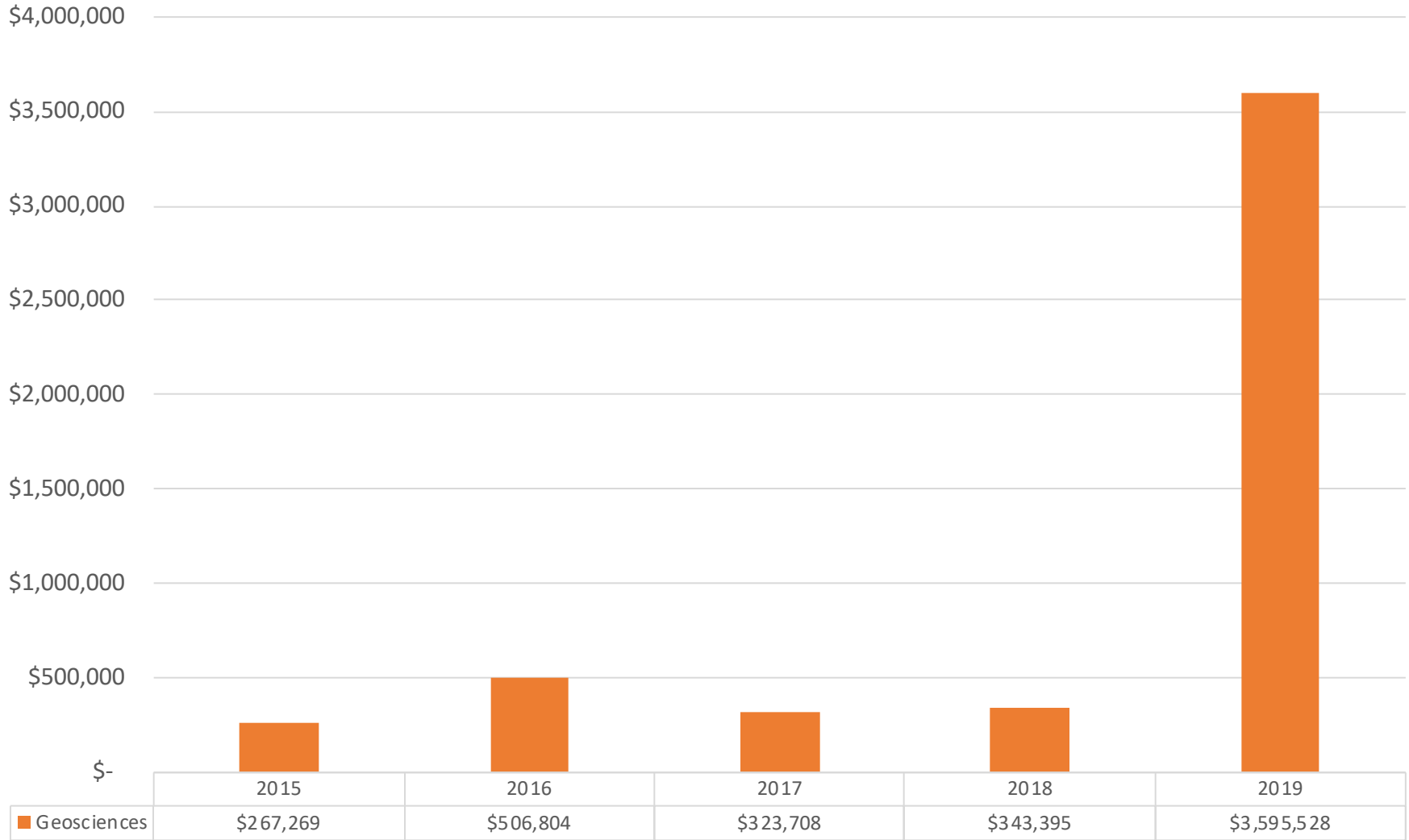
**Chemistry and Biochemistry
Proposals Submitted FY2019**

Proposal ID	PI/COPI	Title	Department	Amount Requested
1038-19P	Chen, Ming	PI	Chemistry & Biochemistry	\$ 1,868,002.00
0695-19P	Chen, Ming	PI	Chemistry & Biochemistry	\$ 754,593.00
0377-19P	Chen, Ming	PI	Chemistry & Biochemistry	\$ 110,000.00
0417-19P	Duin, Eduardus	PI	Chemistry & Biochemistry	\$ 2,655,213.00
0041-19P	Duin, Eduardus	PI	Chemistry & Biochemistry	\$ 939,942.00
1050-19P	Easley, Christopher	PI	Chemistry & Biochemistry	\$ 1,488,757.05
0919-19P	Easley, Christopher	PI	Chemistry & Biochemistry	\$ 46,767.00
0613-19P	Easley, Christopher	PI	Chemistry & Biochemistry	\$ 411,352.00
0062-19P	Easley, Christopher	PI	Chemistry & Biochemistry	\$ 60,000.00
0748-19P	Farnham, Byron	PI	Chemistry & Biochemistry	\$ 682,030.00
0490-19P	Farnham, Byron	PI	Chemistry & Biochemistry	\$ 773,068.00
0986-19P	Goldsmith, Christian	PI	Chemistry & Biochemistry	\$ 521,667.00
0166-19P	Goldsmith, Christian	PI	Chemistry & Biochemistry	\$ 448,252.00
0049-19P	Goodwin, Douglas	PI	Chemistry & Biochemistry	\$ 437,403.00
0491-19P	Gorden, Anne	PI	Chemistry & Biochemistry	\$ 121,961.00
0534-19P	Gorden, Anne	COPI	Chemistry & Biochemistry	\$ 1,000,000.00
1031-19P	Harshman, Jordan	PI	Chemistry & Biochemistry	\$ 176,805.34
0791-19P	Harshman, Jordan	PI	Chemistry & Biochemistry	\$ 750,305.00
0250-19P	Harshman, Jordan	PI	Chemistry & Biochemistry	\$ 180,597.00
0212-19P	Harshman, Jordan	PI	Chemistry & Biochemistry	\$ 284,754.00
0167-19P	Harshman, Jordan	PI	Chemistry & Biochemistry	\$ 211,319.00
1036-19P	Karimov, Rashad	PI	Chemistry & Biochemistry	\$ 1,868,005.51
0165-19P	Karimov, Rashad	PI	Chemistry & Biochemistry	\$ 140,687.00

**Chemistry and Biochemistry
Proposals Submitted FY2019**

0957-19P	Miliordos, Evangelos	PI	Chemistry & Biochemistry	\$ 421,339.00
0593-19P	Miliordos, Evangelos	PI	Chemistry & Biochemistry	\$ 558,375.00
0347-19P	Miliordos, Evangelos	PI	Chemistry & Biochemistry	\$ 110,000.00
0047-19P	Miliordos, Evangelos	PI	Chemistry & Biochemistry	\$ 502,994.00
0414-19P	Mills, German	PI	Chemistry & Biochemistry	\$ 428,615.00
0982-19P	Ortiz, Vincent	PI	Chemistry & Biochemistry	\$ 470,746.21
1001-19P	Patkowski, Konrad	PI	Chemistry & Biochemistry	\$ 432,848.79
0317-19P	Raj, Monika	PI	Chemistry & Biochemistry	\$ 597,298.00
0303-19P	Raj, Monika	PI	Chemistry & Biochemistry	\$ 100,000.00
	Total Requested:			\$ 19,553,695.90

Geosciences



**Extramural Research Grants with New Dollars Received in FY2019
Geosciences**

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Burton, Christopher Lee/Marzen/Mitra	PI COPI	Geosciences	Holistic Assessment of Resilience to Climate Change Hazards Along the MS & AL Gulf Coast	University of Southern Mississippi	\$ 64,951.00
King, David	PI	Geosciences	Review of Geologic Screening Criteria for Deep Well Isolation of Radioactive Materials	Southern Company Services, Inc	\$ 24,500.00
Lee, Ming-Kuo	PI	Geosciences	Investigation of Long-Term Stability of Arsenic Sequestration by Pyrite	Anchor QEA, LLC	\$ 75,597.00
Marzen, Luke	PI	Geosciences	GIS Fellowship Agreement with City of Auburn	City of Auburn, Alabama	\$ 10,000.00
Marzen, Luke Mitra, Chandra	PI COPI	Geosciences	Stateview Program Dvlmt & Operations	AmericaView, Inc.	\$ 16,722.00
McNeal, Karen Pan/Srivastava/Tian/Burton	PI COPI	Geosciences	Addressing Resiliency to Climate-Related Hazards & Disasters thru Data-Informed Decision Making*	National Science Foundation	\$ 2,998,770.00
McNeal, Karen Witte, Maria	PI COPI	Geosciences	Graduate Resch Fellowship for Stephanie Courtney	National Science Foundation	\$ 33,998.00
McNeal, Karen Witte, Maria	PI COPI	Geosciences	Graduate Resch Fellowship for Elijah Johnson	National Science Foundation	\$ 33,998.00
McNeal, Karen Witte, Maria	PI COPI	Geosciences	Graduate Resch Fellowship Prog for Stephanie Courtney	National Science Foundation	\$ 32,502.00
McNeal, Karen Witte, Maria	PI COPI	Geosciences	Graduate Resch Fellowship Prog for Elijah Johnson	National Science Foundation	\$ 32,502.00
Medina-Elizalde, Martin	PI	Geosciences	Paleoclimatology of Cuba Based on Stalagmite Oxygen Isotope Records	National Science Foundation	\$ 271,988.00
			Geosciences Count:	Accounts: 11 Individual Awards: 4	
*Participant Support Costs Included			Geosciences Total:		\$ 3,595,528.00

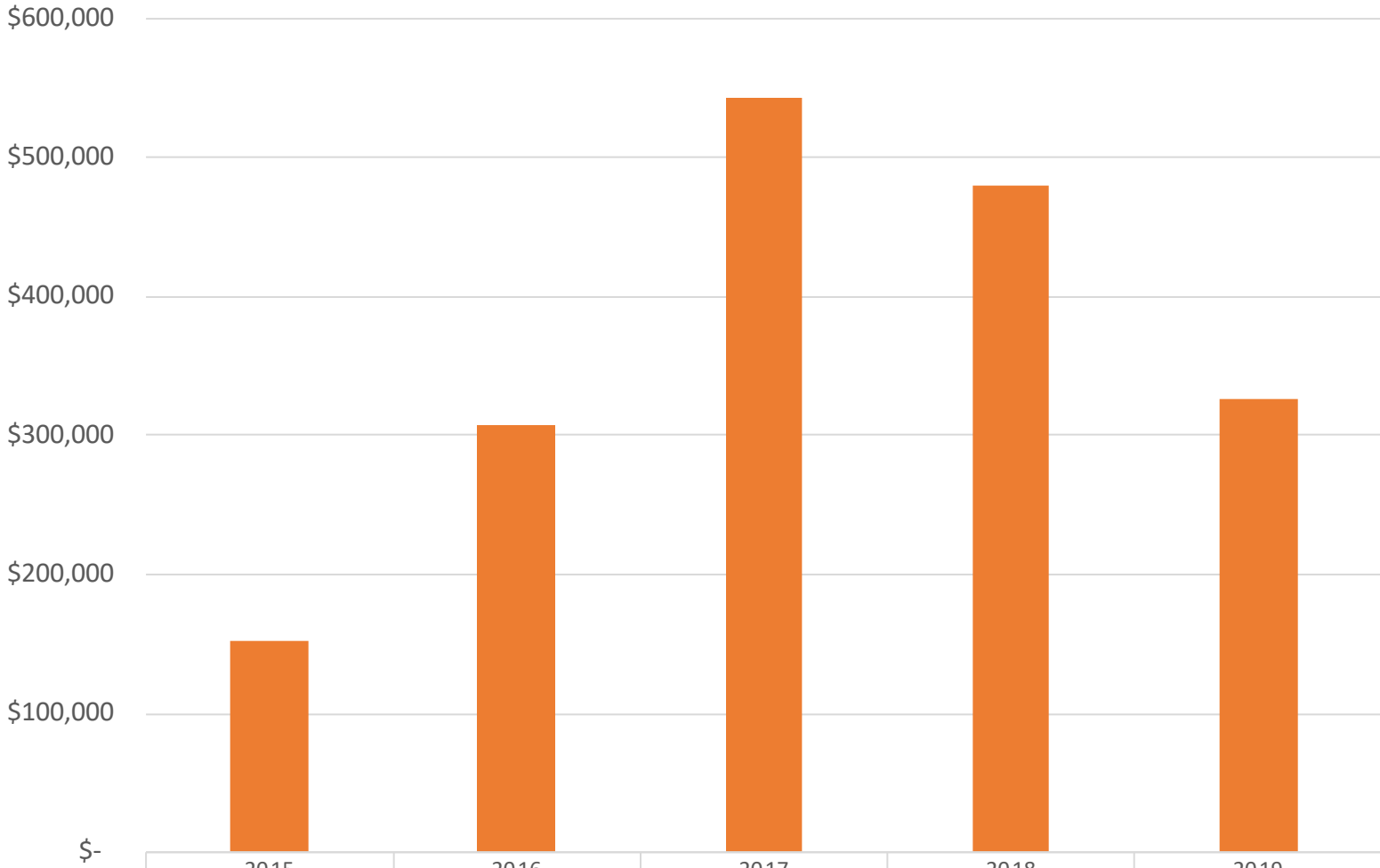
Geosciences Proposals Submitted FY2019

Proposal ID	PI/COPI	Title	Department	Amount Requested
0059-19P	Bilenker, Laura	PI	Geosciences	\$ 7,000.00
0799-19P	Burton, Christopher	PI	Geosciences	\$ 97,194.00
0315-19P	Burton, Christopher	PI	Geosciences	\$ 1,370,025.00
0173-19P	Burton, Christopher	PI	Geosciences	\$ 511,472.00
0183-19P	Burton, Christopher	COPI	Geosciences	\$ 1,098,124.18
0829-19P	Burton, Christopher & Lee, Ming-Kuo	COPIs	Geosciences	\$ 990,131.00
0932-19P	Chaney, Philip	PI	Geosciences	\$ 287,203.00
0171-19P	Chaney, Philip	PI	Geosciences	\$ 35,284.00
0320-19P	Lee, Min-Kuo	COPI	Geosciences	\$ 1,599,925.96
0636-19P	Marzen, Luke	PI	Geosciences	\$ 23,473.00
0462-19P	Marzen, Luke	PI	Geosciences	\$ 10,000.00
0052-19P	Marzen, Luke	PI	Geosciences	\$ 23,498.00
0905-19P	McNeal, Karen	PI	Geosciences	\$ 68,563.00
0821-19P	McNeal, Karen	PI	Geosciences	\$ 100,621.00
0460-19P	McNeal, Karen	PI	Geosciences	\$ 59,540.00
0458-19P	McNeal, Karen	PI	Geosciences	\$ 100,621.00
0182-19P	McNeal, Karen	PI	Geosciences	\$ 588,134.00
0176-19P	McNeal, Karen	PI	Geosciences	\$ 2,975,640.00
0172-19P	McNeal, Karen	PI	Geosciences	\$ 226,937.00
0053-19P	McNeal, Karen	PI	Geosciences	\$ 721,071.00
0026-19P	McNeal, Karen	PI	Geosciences	\$ 609,211.00
0300-19P	McNeal, Karen	PI	Geosciences	\$ 2,998,770.00
0853-19P	McNeal, Karen	COPI	Geosciences	\$ 141,260.00

Geosciences Proposals Submitted FY2019

0038-19P	Medina-Elizalde, Martin	PI	Geosciences	\$ 372,543.00
1043-19P	Ojeda, Ann	PI	Geosciences	\$ 605,611.00
0342-19P	Shepherd, Stephanie	COPI	Geosciences	\$ 344,651.00
0578-19P	Wolf, Lorraine	PI	Geosciences	\$ 23,173.00
	Total Requested:			\$ 15,989,676.14

Mathematics and Statistics



	2015	2016	2017	2018	2019
Mathematics and Statistics	\$152,156	\$308,138	\$543,479	\$479,395	\$325,978

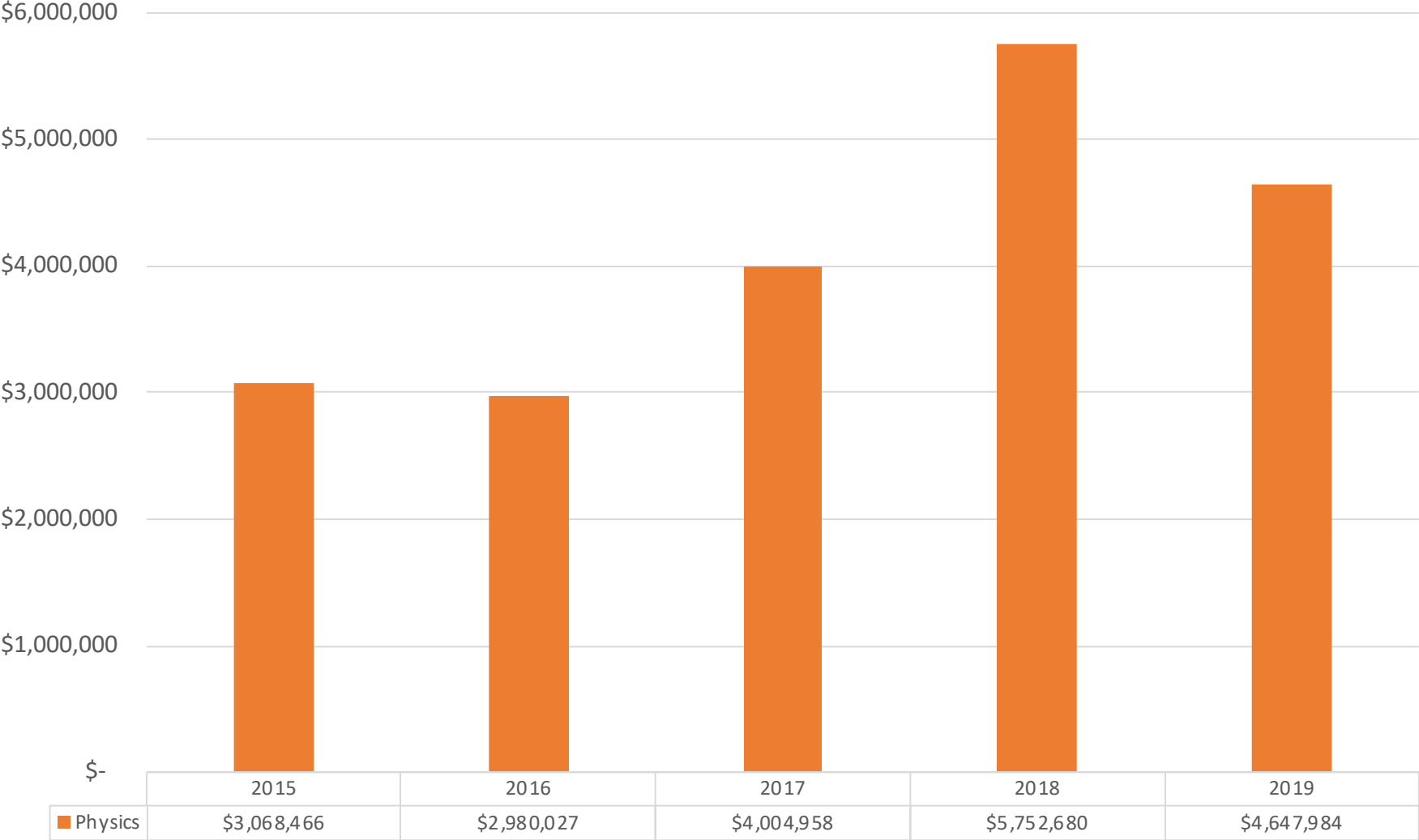
**Extramural Research Grants with New Dollars Received in FY2019
Mathematics Statistics**

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Carpenter, David	PI	Mathematics & Statistics	Authorization to Proceed-Emerging Threat Analysis	Dynetics, Inc.	\$ 89,624.00
Han, Xiaoying	PI	Mathematics & Statistics	Stochastic Dynamical Systems Arising from the Applied Sciences	Simons Foundation Inc.	\$ 7,000.00
Hoang, Thi Thao Phuong	PI	Mathematics & Statistics	Global-in-Time Domain Decomposition Methods for Evolution Partial Differential Scattering & Imaging of Subwavelength Nanostructures	National Science Foundation	\$ 149,660.00
Lin, Junshan	PI	Mathematics & Statistics		National Science Foundation	\$ 79,694.00
			Mathematics & Statistics Count:	4	
		Mathematics & Statistics Total	Mathematics & Statistics Total:		\$ 325,978.00

**Mathematics and Statistics
Proposals Submitted FY2019**

Proposal ID	PI/COPI	Title	Department	Amount Requested
1005-19P	Cao, Guanqun	PI	Mathematics and Statistics	\$ 90,020.40
0175-19P	Cao, Yanzhao	PI	Mathematics and Statistics	\$ 195,943.00
0562-19P	Carpenter, Mark	COPI	Mathematics and Statistics	\$ 3,103,357.00
1019-19P	Feng, Ziqin	PI	Mathematics and Statistics	\$ 176,219.01
0162-19P	Hoang, Thi Thao Phuyong	PI	Mathematics and Statistics	\$ 149,660.00
0139-19P	Huang, Huajun	PI	Mathematics and Statistics	\$ 23,300.00
0899-19P	Huang, Huajun	COPI	Mathematics and Statistics	\$ 75,000.00
0975-19P	McDonald, Jessica	PI	Mathematics and Statistics	\$ 175,459.62
0240-19P	Nane, Erkan	PI	Mathematics and Statistics	\$ 8,400.00
0689-19P	Van Wyk, Hans Werner	PI	Mathematics and Statistics	\$ 11,030.00
0514-19P	Zeng, Peng	COPI	Mathematics and Statistics	\$ 741,856.00
1041-19P	Zheng, Jingyi	PI	Mathematics and Statistics	\$ 149,909.93
	Total Requested:			\$ 4,900,154.96

Physics



Extramural Research Grants with New Dollars Received in FY2019

Physics

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Bodewits, Dennis	PI	Physics	Ceasar: Comet Astrobiology Exploration Sample Return	Cornell University	\$ 30,685.00
Bodewits, Dennis	PI	Physics	Rotation & Chemical Heterogeneity of Hyperactive Comet 46P	NASA	\$ 39,999.00
Bodewits, Dennis	PI	Physics	Deep Impact Narrowband Imaging of Gas & Dust Around Comet 9P	NASA	\$ 288,150.00
Bodewits, Dennis	PI	Physics	Unravel Photon & Electron Processes & Their Interaction with Coma of 67P	NASA	\$ 210,681.00
Bodewits, Dennis	PI	Physics	FAR UV Spectroscopic Measurements of the Deuterium Abundance of Comets	Assn of Universities for Research in Astronomy	\$ 16,246.00
Bodewits, Dennis	PI	Physics	Composition & Physical Processes of Inner Coma of Comet 46P-Wirtanen	Assn of Universities for Research in Astronomy	\$ 28,842.00
Bodewits, Dennis	PI	Physics	Nucleus of Comet 41P	Assn of Universities for Research in Astronomy	\$ 8,094.00
Bodewits, Dennis	PI	Physics	Close Encounter With Comet 46P-Wirtanen	Smithsonian Institution	\$ 27,458.00
Bodewits, Dennis	PI	Physics	Close Encounter With Comet 46P	Assn of Universities for Research in Astronomy	\$ 19,657.00
Dhar, Sarit Kuroda, Marcelo	PI COPI	Physics	Investigation of Novel High-K Wide Bandgap Dielectrics for Wide Bandgap Semiconductor Misfets	US Army	\$ 246,910.00
Dhar, Sarit	PI	Physics	Improving Sic Wafers & Processing for Lower Costs & Higher Reliability	Alliance for Sustainable Energy, LLC (NREL)	\$ 75,000.00
Dhar, Sarit	PI	Physics	Accelerator Services (6)	various	\$ 53,181.56
Dhar, Sarit	PI	Physics	Cobalt Services 60	Times Microwave Systems	\$ 37,750.00
Ennis, David Loch, Stuart	PI COPI	Physics	Erosion & Re-Deposition Sepctroscopic Diagnostic Dvlmts for High-Z PFCS in DIII-D	Us Department of Energy	\$ 228,657.00
Fogle, Michael	PI	Physics	Momentum Resolved Charge Exchange Cross Section Measurements & X-Ray Spectroscopy	Clemson University	\$ 220,272.00
Fogle, Michael Adam, Mark (EE)	PI COPI	Physics	Trusted-Node Quantum Key Distribution from a CUBESAT	Space Dynamics Labaoratory (AF)	\$ 137,988.00
Guazzotto, Luca	PI	Physics	Two Fluid Equilibrium & Stability Analysis in Axisymmetric Plasmas	U.S. Department of Energy	\$ 108,308.00
Konopk, Uwe Thomas, Edward	PI COPI	Physics	Complex Plasma Under Microgravity: Utilizing the Intl Space Station Experiment PK-4 & Beyond	Jet Propulsion Lab- California Inst. Technology	\$ 146,500.00
Kuroda, Marcelo	PI	Physics	Modulation of the Interlayer Coupling in Heterostructures Based on Two-Dimensional Materials*	National Science Foundation	\$ 322,699.00
Lin, Yu	PI	Physics	Particle Simulation of Collisionless Magnetic Reconnection Under Finite Guide Field	U.S. Department of Energy	\$ 133,000.00

Extramural Research Grants with New Dollars Received in FY2019

Physics

Lin, Yu	PI	Physics	Tracers Phase A	Univeristy of Iowa	\$ 20,000.00
Lin, Yu	PI				
Perez, Joseph Wang, Xueyi	COPI COPI	Physics	Global Coupling of Fast Flows in the Magnetotail to Kinetic Scales by Alfvénic Processes	NASA	\$ 447,561.00
Lock, Stuart Van Wyk, Hans Werner(Math)	PI COPI	Physics	Participation in High Fidelity Line Diagnostics for the X-Ray Astrophysics Recovery Mission	Smithsonian Institution	\$ 87,302.00
Lock, Stuart Fogle, Michael	PI COPI	Physics	Bound-Bound & Bound-Free Opacities of Heavy Lowly-Charged r-Process IONS	National Science Foundation	\$ 96,923.00
Maurer, David	PI	Physics	Three Dimensional Equilibrium Stability&its Impact on Edge Transport&Divertor Performance in Wendelstein7-X	U.S. Department of Energy	\$ 200,000.00
Maurer, David	PI	Physics	MHD Stability & Equilibrium in a Current Driven Stellarator-Tokamak Hybrid	U.S. Department of Energy	\$ 540,000.00
Perez, Joseph	PI	Physics	Two Wide-Angle Imaging Neutral Atoms Spectrometers Mission of Opportunity	Princeton University	\$ 134,000.00
Perez, Joseph	PI	Physics	Interpreting Magnetic Field & Cosmic Ray Observations in the Outer Heliosheath	Univeristy of AL in Huntsville	\$ 52,418.00
Schmitt, John Maurer, David	PI COPI	Physics	Stellarator Optimization Support	Princeton University	\$ 21,435.00
Thomas, Edward	PI	Physics	Connecting the Plasma Universe to Plasma Technology in Alabama*	University of AL in Huntsville	\$ 3,550.00
Thomas, Edward	PI	Physics	Cerif Grad Student Support for Taylor Hall	University of AL in Huntsville	\$ 60,000.00
Thomas, Edward Konopka, Uwe	PI COPI	Physics	Magnetized Plasma Resch Lab as a DOE Plasma Science Facility	U.S. Department of Energy	\$ 499,996.00
Wang, Xueyi	PI	Physics	Investigating Magnetosonic Wave Excitationn in the Earth's Magnetosphere	University of TX at Dallas	\$ 104,721.00
				Accounts: 33	
				Service Center: 6	
			Physics Count:	Individual Awards: 24	
*Participant Support Costs Included			Physics Total:		\$ 4,647,983.56

Physics Active Awards

PI	Sponsor	Title	Start Date	End Date
Bodewits, Dennis	NASA	NASA-80NSSC19K0245	3/14/19	3/13/20
Bodewits, Dennis	NASA	NASA-80NSSC19K1304	9/1/19	8/31/22
Bodewits, Dennis	Planetary Science Institute	PSI-Subaward 1528 Auburn	8/1/18	5/15/20
Bodewits, Dennis	Planetary Science Institute	PSI-Subaward 1529 Auburn	8/1/18	5/15/20
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15625.001-A	3/1/19	2/28/22
Bodewits, Dennis	Smithsonian Institution	SAO-GO8-19001A	12/7/18	12/6/20
Bodewits/Konopka/Thomas	University of Alabama in Huntsville	UAH-2019-215-PY	7/1/19	6/30/20
Comes, Ryan	National Science Foundation	NSF-DMR-1809847	7/1/18	6/30/21
Comes, Ryan	US Air Force	AF-FA9550-20-1-0034	1/1/20	1/26/23
Dhar, Sarit	US Army	ARMY-W911NF-18-2-0160	6/21/18	6/20/20
Dhar, Sarit	Alliance for Sustainable Energy, LLC	NREL-AHL-9-92362-01	9/10/19	9/17/20
Dhar, Sarit	The Aerospace Corporation	TAX-PO 4600006756	8/8/19	9/30/20
Ennis, David	US Department of Energy	DE-SC0015877	6/1/16	5/31/20
Fogle, Michael	National Science Foundation	NSF-AGS-1445465-PHY	8/15/15	7/31/20
Fogle, Michael	Clemson University	CU-2125-204-2013329	2/1/19	3/11/20
Giordano, Nicholas	National Science Foundation	NSF-PHY-1806231	12/15/19	11/30/22
Guazzotto, Luca	US Department of Energy	DE-SC0014196	7/1/15	6/30/20
Konopka, Uwe	Jet Propulsion Lab-California Inst Technology	JPL-RSA 1571699	4/15/07	4/15/20
Kuroda, Marcelo	National Science Foundation	NSF-DMR-1848344	7/1/19	6/30/24
Landers, Allen	National Science Foundation	NSF-IIA-1348368 *	3/15/14	7/31/20
Laurent, Guillaume	US Department of Energy	DE-SC0017984	8/15/17	8/14/20
Laurent, Guillaume	US Air Force	AF-FA9550-18-1-0333	6/15/18	6/14/22
Lin, Yu	NASA	NASA-80NSSC17K0012	6/13/17	6/12/20
Lin, Yu	NASA	NASA-NNX17AI47G	4/1/17	3/31/20
Lin, Yu	US Department of Energy	DE-SC0018071	8/15/17	8/14/20

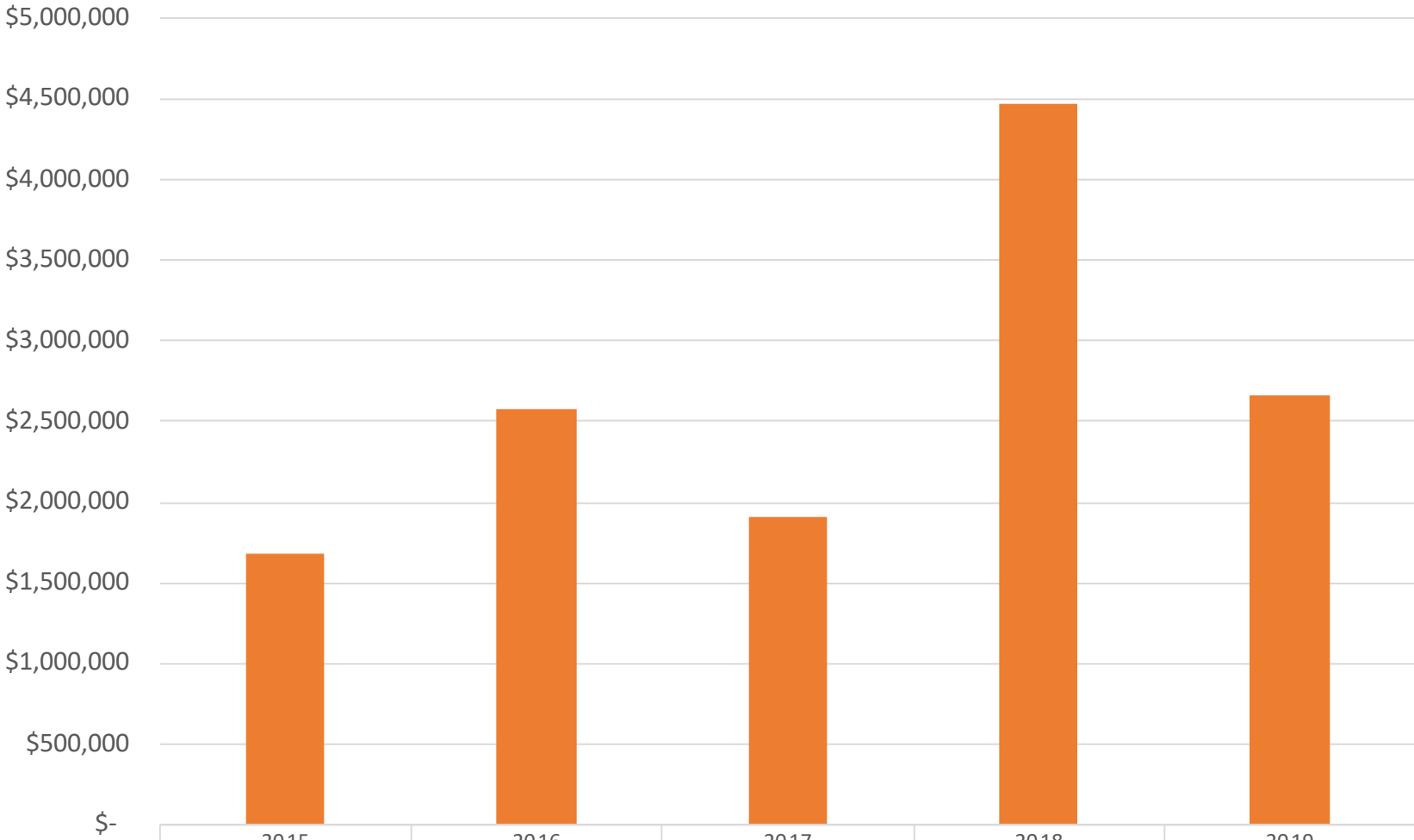
Physics Proposals Submitted FY2019

Proposal ID	PI/COPI	Title	Department	Amount Requested
0196-19P	Bodewits, Dennis	PI	Physics	\$ 178,249.00
0144-19P	Bodewits, Dennis	PI	Physics	\$ 74,267.00
0116-19P	Bodewits, Dennis	PI	Physics	\$ 76,803.00
0076-19P	Bodewits, Dennis	PI	Physics	\$ 567,242.00
0057-19P	Bodewits, Dennis	PI	Physics	\$ 76,682.00
0042-19P	Bodewits, Dennis	PI	Physics	\$ 8,094.00
0579-19P	Bodewits, Dennis	COPI	Physics	\$ 142,605.15
0703-19P	Comes, Ryan	PI	Physics	\$ 579,272.00
0634-19P	Comes, Ryan	PI	Physics	\$ 107,111.00
0592-19P	Comes, Ryan	PI	Physics	\$ 448,791.00
0480-19P	Comes, Ryan	PI	Physics	\$ 751,534.00
0355-19P	Comes, Ryan	PI	Physics	\$ 971,019.00
0848-19P	Dhar, Sarit	PI	Physics	\$ 9,791.40
0795-19P	Dhar, Sarit	PI	Physics	\$ 187,002.00
0657-19P	Dhar, Sarit	PI	Physics	\$ 5,385.27
0430-19P	Dhar, Sarit	PI	Physics	\$ 465,543.00
0371-19P	Dhar, Sarit	PI	Physics	\$ 979.14
0370-19P	Dhar, Sarit	PI	Physics	\$ 26,338.96
0294-19P	Dhar, Sarit	PI	Physics	\$ 2,545.76
0284-19P	Dhar, Sarit	PI	Physics	\$ 8,910.17
0027-19P	Dhar, Sarit	PI	Physics	\$ 37,750.00
0404-19P	Fogle, Michael	PI	Physics	\$ 562,456.00
0137-19P	Fogle, Michael	PI	Physics	\$ 599,168.00

Physics Proposals Submitted FY2019

0563-19P	Giordano, Nicholas	PI	Physics	\$ 1,346,872.00
0777-19P	Gramlich, Michael	PI	Physics	\$ 1,867,018.00
0058-19P	Gramlich, Michael	PI	Physics	\$ 1,875,036.00
1048-19P	Hanson, James	PI	Physics	\$ 1,566.62
0228-19P	Hanson, James	PI	Physics	\$ 1,887.50
0226-19P	Hanson, James	PI	Physics	\$ 40,215.00
0954-19P	Jaiswal, Surabhi	PI	Physics	\$ 35,000.00
0896-19P	Lin, Yu	PI	Physics	\$ 182,971.00
0895-19P	Lin, Yu	PI	Physics	\$ 650,636.00
0686-19P	Lin, Yu	PI	Physics	\$ 44,444.00
0686-19P	Lin, Yu	PI	Physics	\$ 69,215.00
0494-19P	Loch, Stuart	PI	Physics	\$ 628,607.00
0066-19P	Park, Minseo	PI	Physics	\$ 480,526.00
0372-19P	Pindzola, Michael	PI	Physics	\$ 217,236.00
0956-19P	Shi, Feng	PI	Physics	\$ 38,438.00
0949-19P	Thomas, Edward	PI	Physics	\$ 29,999.00
	Total Requested:			\$ 13,397,205.97

Outreach and Admin



■ Outreach and Admin	2015	2016	2017	2018	2019
	\$1,684,483	\$2,572,758	\$1,912,027	\$4,465,250	\$2,658,317

**Extramural Research Grants with New Dollars Received in FY2019
COSAM Outreach**

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Ewald, Mary L. Martin, Wayne Strutchen Marilyn	PI COPI COPI	Alabama Math, Science and Technology Initiative	ALA MATH, SCIENCE & TECHNOLOGY INITIATIVE	Alabama State Department of Education	\$ 1,858,572.00
Ewald, Mary L. Martin, Wayne Strutchen Marilyn	PI COPI COPI	Alabama Math, Science and Technology Initiative	Teacher Stipend Costs Only	Alabama State Department of Education	\$ 85,000.00
Ewald, Mary L.	PI	Alabama Math, Science and Technology Initiative	ALA Science in Motion	Alabama State Department of Education	\$ 355,583.00
			AMSTI Count:	3	
			AMSTI Total:		\$ 2,299,155.00
Jenda, Overtoun	PI	Sciences & Math Admin	College Quest Summer Academy for Blind & Low Visioned High School Students	Alabama Department of Rehabilitation Services	\$ 117,245.00
Jenda, Overtoun	PI	Sciences & Math Admin	GABBR Stem Initiative	Alabama State Department of Education	\$ 30,000.00
Jenda, Overtoun	PI	Sciences & Math Admin	ACT Summer Academy For Deaf & Hard of Hearing HS Students	Alabama Department of Rehabilitation Services	\$ 35,000.00
Wit, Lawrence	PI	Sciences & Math Admin	Rural Medicine Program	Alabama Department of Public Health	\$ 176,917.50
			Sciences & Math - Admin Count:	4	
			Sciences & Math - Admin Total:		\$ 359,162.50
			Cumulative Total Count:	7	
			Cumulative Total Amount:		\$ 2,658,317.50

**COSAM
Proposals Submitted FY2019**

Proposal ID	PI/COPI	Title	Department	Amount Requested
0922-19P	Jenda, Overtoun	PI	Admin Science-Math/Research	\$ 287,973.00
0420-19P	Jenda, Overtoun	PI	Admin Science-Math/ Outreach	\$ 2,854,989.00
0266-19P	Jenda, Overtoun	PI	Admin Science-Math/Research	\$ 1,389,637.00
0908-19P	Mulligan-Guy, Kimberly	PI	Admin Science-Math/Research	\$ 400,879.17
0893-19P	Ewald, Mary Lou	PI	COSAM Outreach	\$ 356,561.00
0874-19P	Ewald, Mary Lou	PI	COSAM Outreach	\$ 22,000.00
0729-19P	Ewald, Mary Lou	PI	COSAM Outreach	\$ 2,043,078.54
	Total Requested:			\$ 7,355,117.71

Analysis of COSAM departments funding profiles using Academic Analytics - 2018 database
(AAD2018.04.01458)

Data filtered on:

- States: AL, AR, FL, GA, KY, LA, MS, MO, SC, TN, TX (approx. SEC)
- Carnegie Very High Research Activity (R1)
- Public, Land Grant Institutions

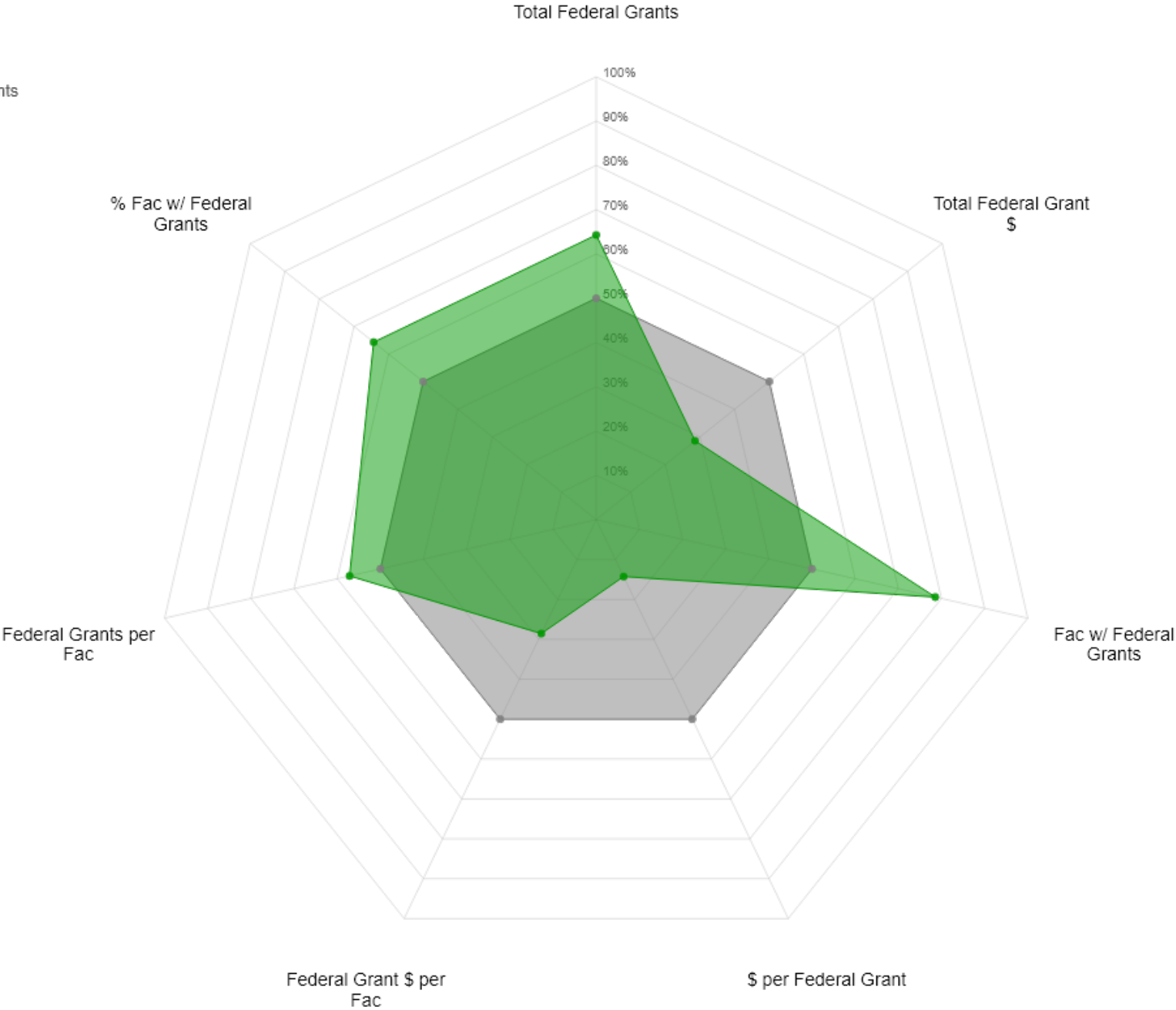
This is aggregated information from publicly available sources that is compiled by Academic Analytic based on FY2018 only. Funding from state funds or foundations is not included. The data for Geosciences in the database is organized by Geology and Geography separately.

The nominal 50% line denotes the average performance for the group of institutions that are being compared.

This data is being included this year to attempt to provide a more global view of the grant activity within the units of COSAM.

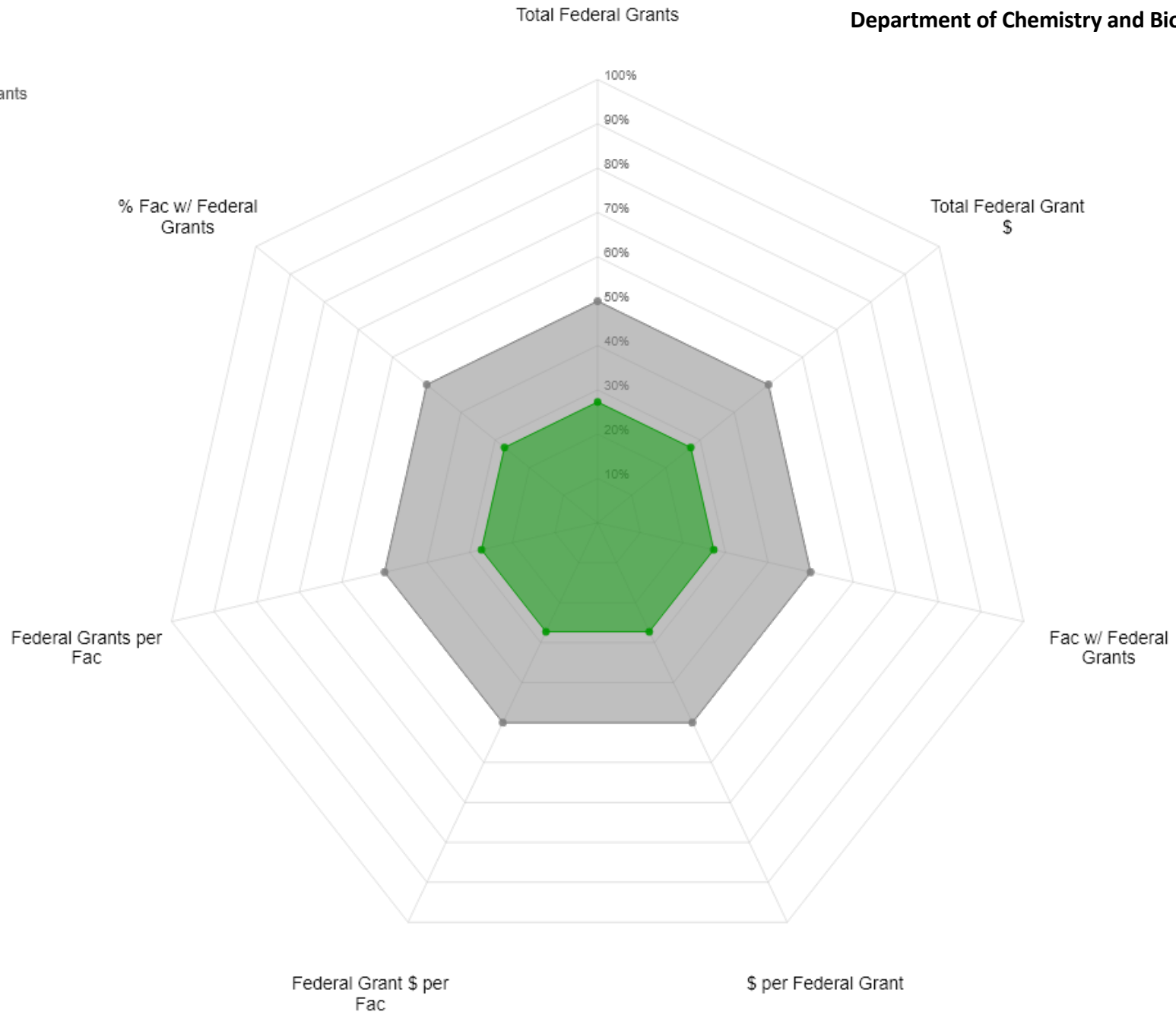
Department of Biological Sciences

- Median
- Articles
- Awards
- Citations
- Federal Grants



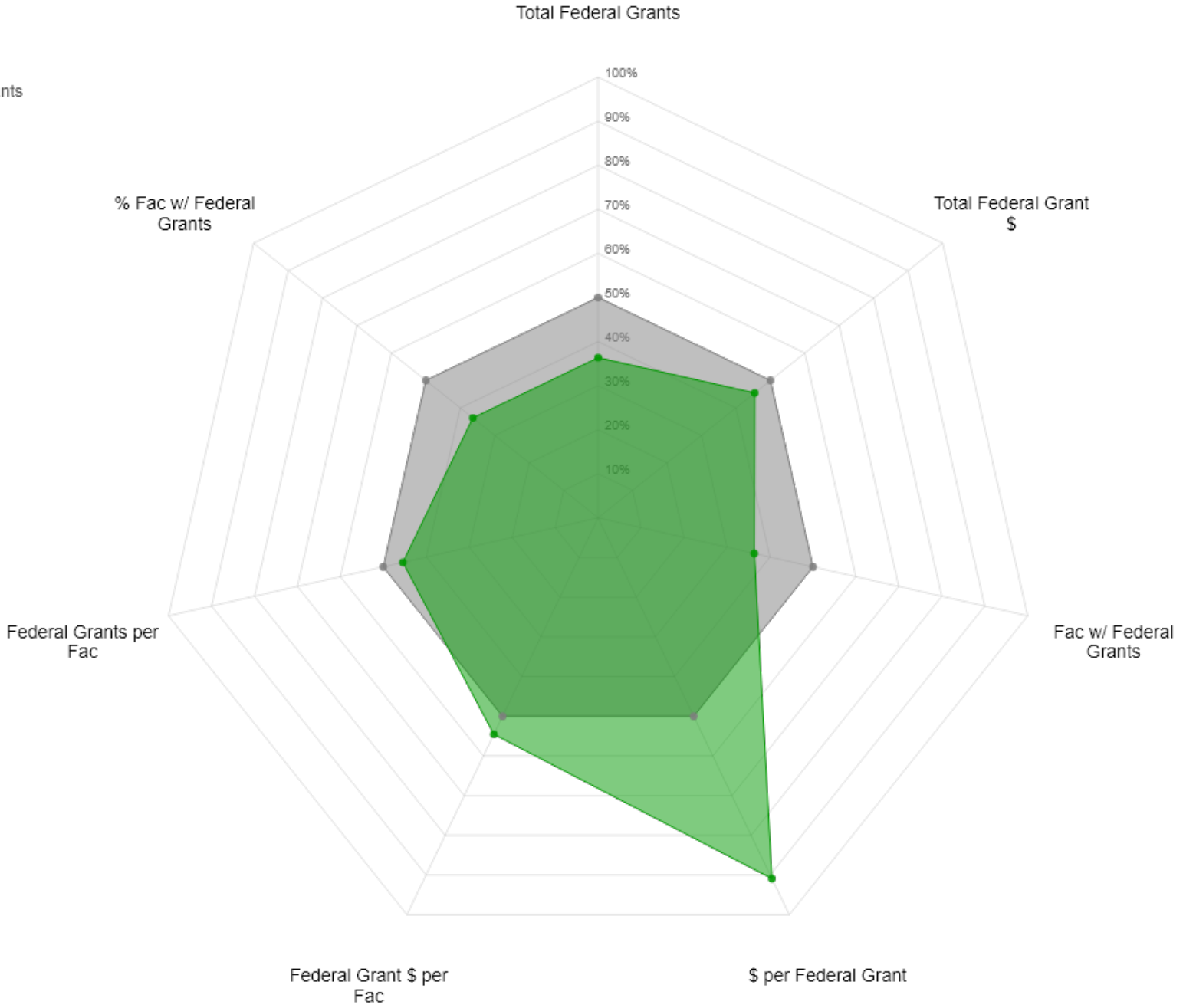
- Median
- Articles
- Awards
- Citations
- Federal Grants

Department of Chemistry and Biochemistry



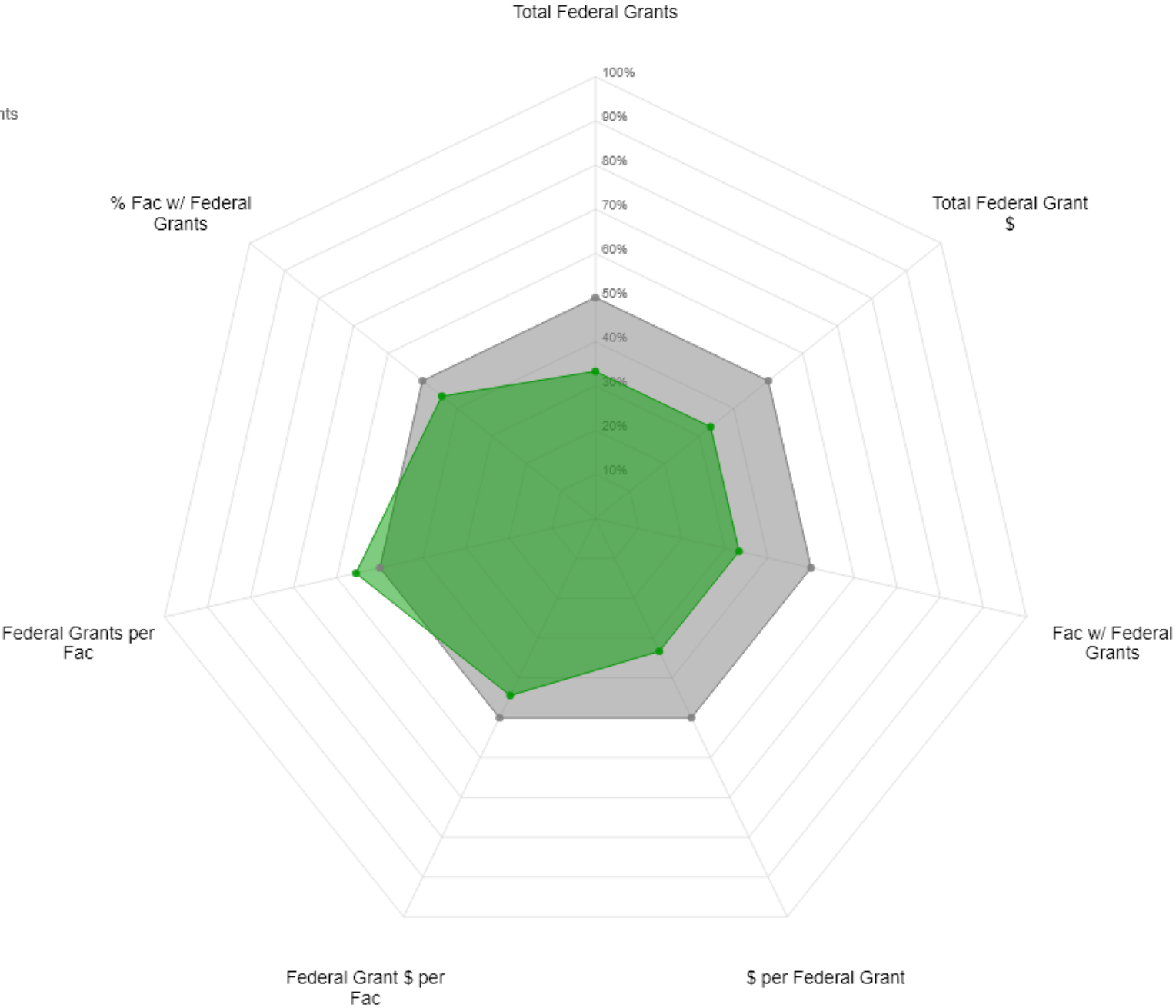
Geosciences: Geology

- Median
- Articles
- Awards
- Citations
- Federal Grants



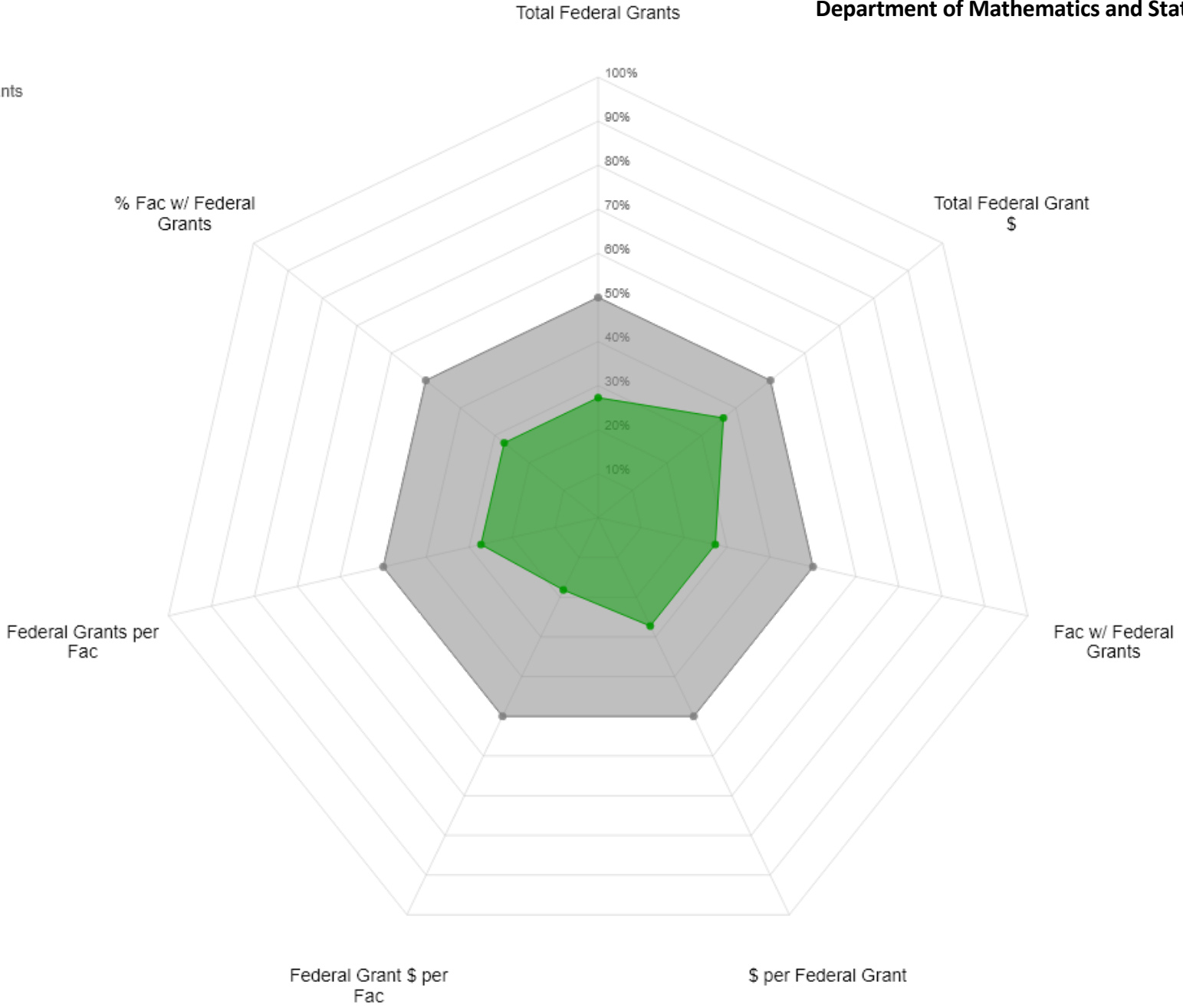
Geosciences: Geography

- Median
- Articles
- Awards
- Books
- Citations
- Federal Grants



Department of Mathematics and Statistics

- Median
- Articles
- Awards
- Citations
- Federal Grants



Department of Physics

- Median
- Articles
- Awards
- Citations
- Conf Proc
- Federal Grants

