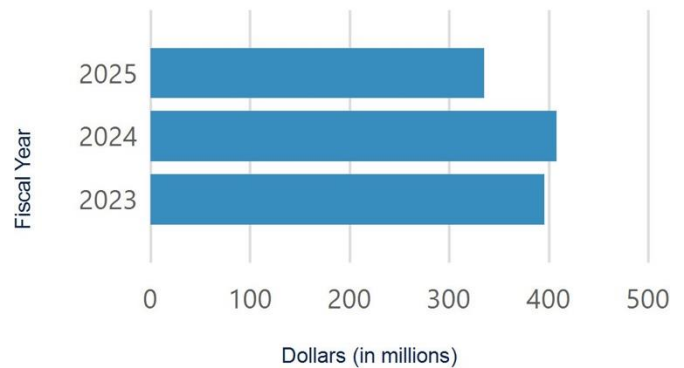


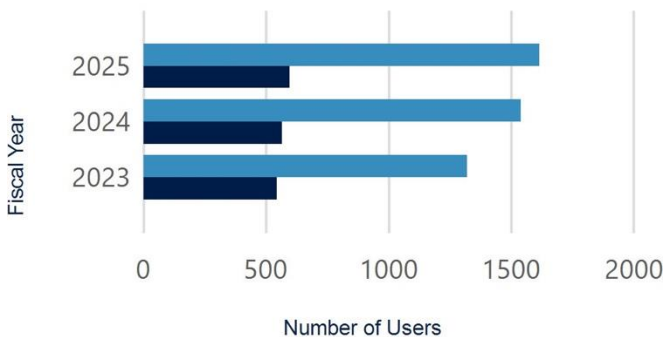
# University of Arizona Research Computing FY25 Highlights

Research and Discovery Technologies provides advanced computing resources (including HPC) to research faculty. These resources are utilized at full capacity, ensuring research faculty have access to extensive processing capabilities.

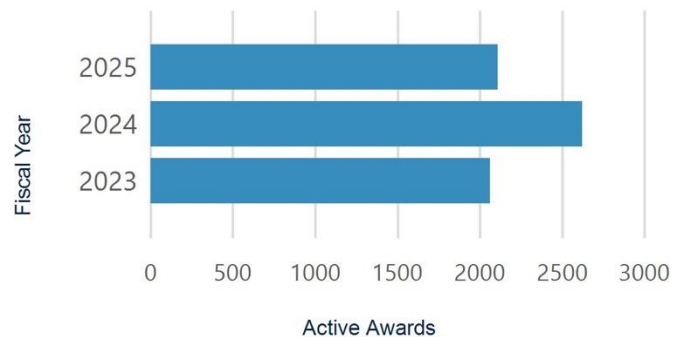
Research Expenditures by HPC Users



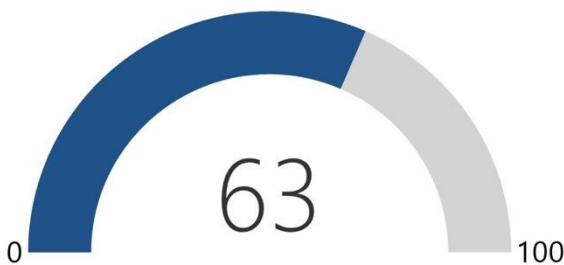
Users and Primary Investigators using the HPC



Active Awards by Researchers with HPC Accounts



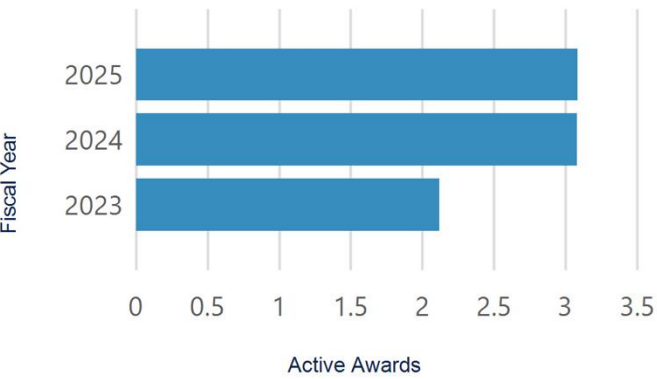
Number of Top 100 Researchers Using HPC FY25



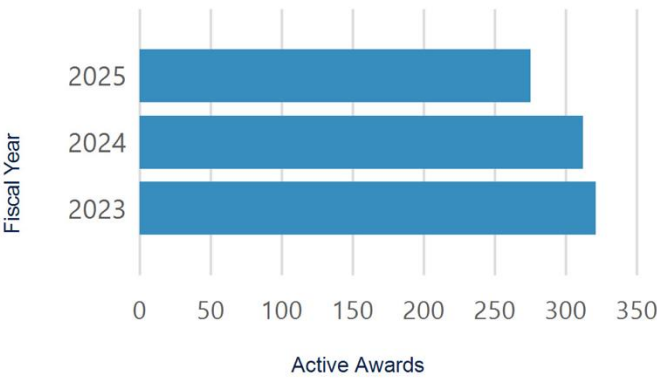
## College of Veterinary Medicine

"Terrific - thanks so much! So far I've just done some quick tests using the compiled version you shared and everything is working nicely - a wonderful feeling after days of head scratching"

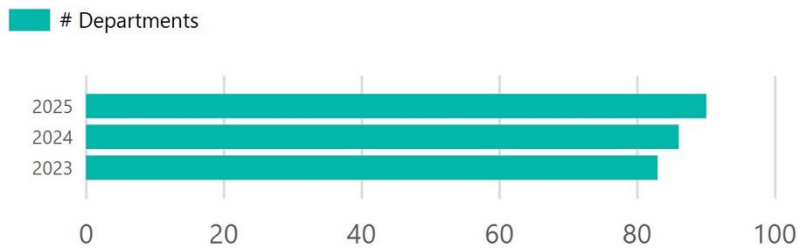
HPC CPU Allocations



HPC Hours Consumed by Researchers

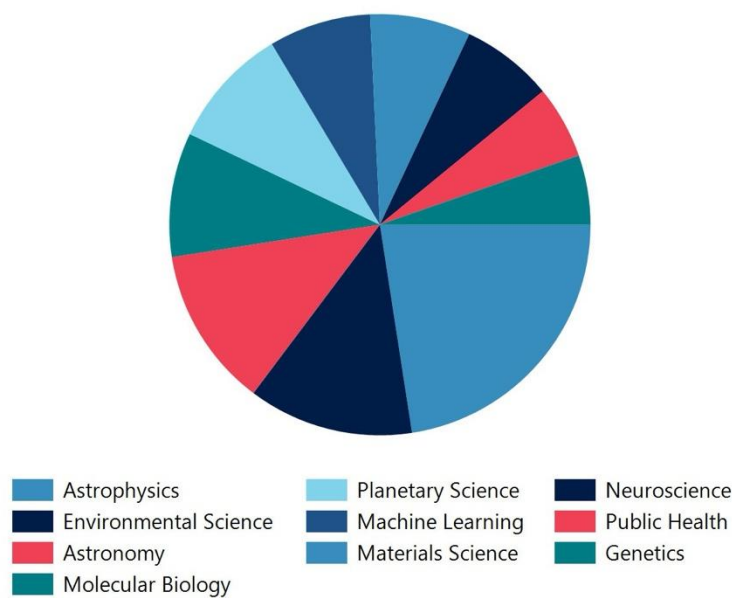


Number of Active Departments



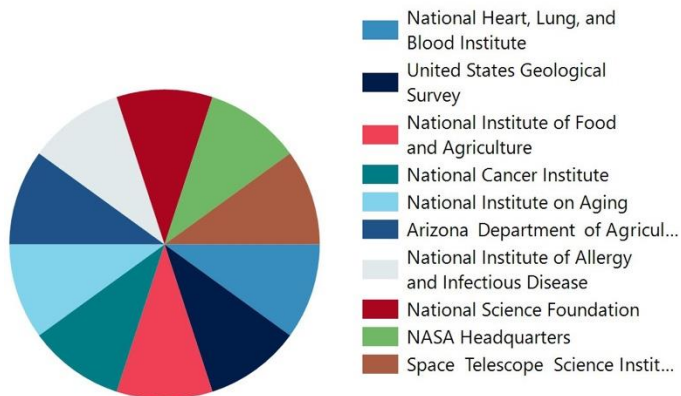
Fiscal Year	Active Departments
2025	90
2024	86
2023	83

Top Publication Topics 2022-2024



Publication Topic	Publications
Astrophysics	1198
Environmental Science	674
Astronomy	652
Molecular Biology	507
Planetary Science	496
Machine Learning	416
Materials Science	410
Neuroscience	377
Genetics	297
Public Health	283

## Top Sponsored Research Funding Sources 2022-2024

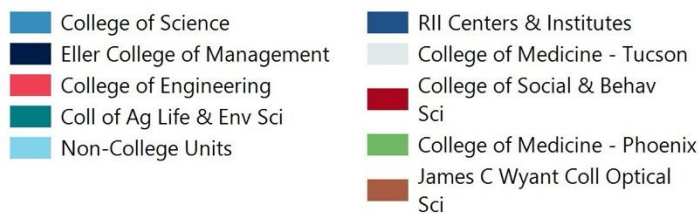


### College of Medicine

"I really like the automatic allocations, which were very generous and made it easy to try things without having to write up a request. Thanks for providing a great service to the research community!"

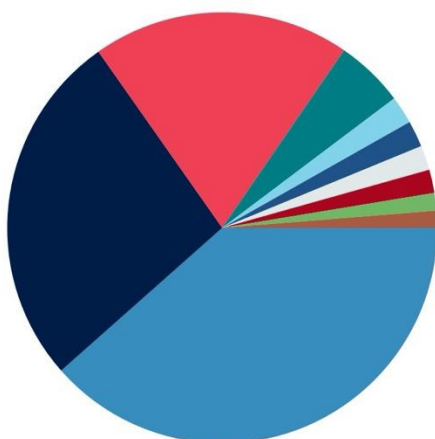
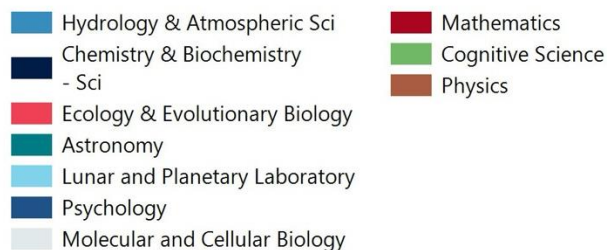
Funder	Count
Arizona Department of Agriculture	43
NASA Headquarters	117
National Cancer Institute	45
National Heart, Lung, and Blood Institute	
National Institute of Allergy and Infectious Disease	37
National Institute of Food and Agriculture	
National Institute on Aging	45
National Science Foundation	269
Space Telescope Science Institute	102
United States Geological Survey	55

## College Compute Hours



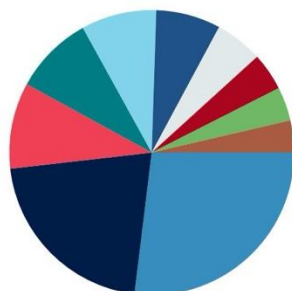
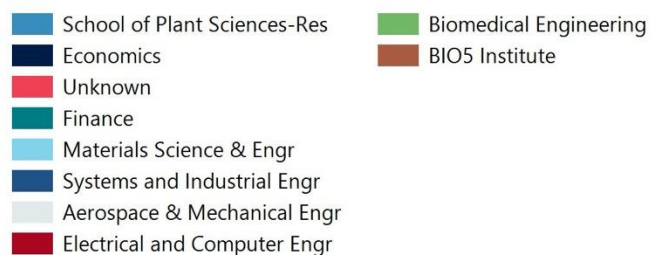
College	Compute Hours
College of Science	14,208,700
Eller College of Management	793,310
College of Engineering	741,120
Coll of Ag Life & Env Sci	717,144
Non-College Units	231,918
RII Centers & Institutes	147,058
College of Medicine - Tucson	106,593
College of Social & Behavioral Science	97,907
College of Medicine - Phoenix	84,082
James C Wyant Coll Optical Sci	73,275

## College of Science Department Compute Hours



Department	Compute Hours
Hydrology & Atmospheric Sci	5,363,437
Chemistry & Biochemistry - Sci	3,731,219
Ecology & Evolutionary Biology	2,697,790
Astronomy	718,640
Lunar and Planetary Laboratory	291,078
Psychology	275,647
Molecular and Cellular Biology	257,500
Mathematics	243,646
Cognitive Science	184,014
Physics	178,556

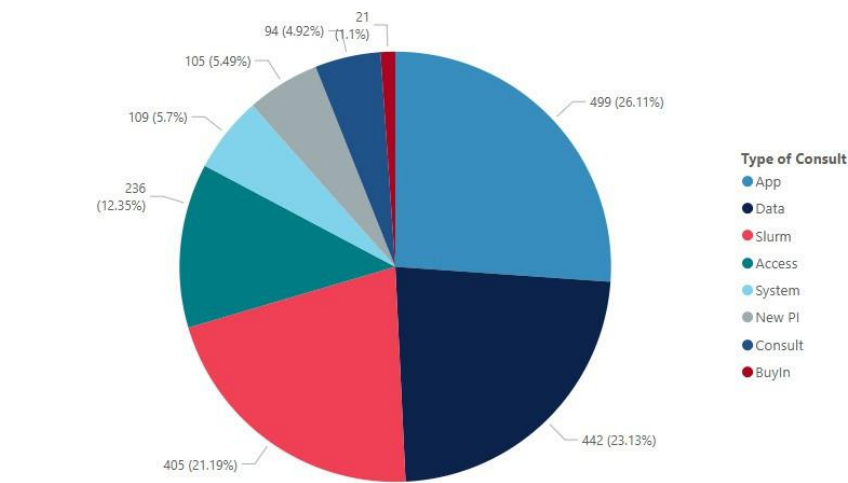
## Department Compute Hours, outside College of Science



Department	Compute Hours
School of Plant Sciences-Res	638,481
Economics	503,624
Unknown	231,918
Finance	213,235
Materials Science & Engr	202,474
Systems and Industrial Engr	173,819
Aerospace & Mechanical Engr	128,361
Electrical and Computer Engr	101,140
Biomedical Engineering	90,753
BIO5 Institute	86,314

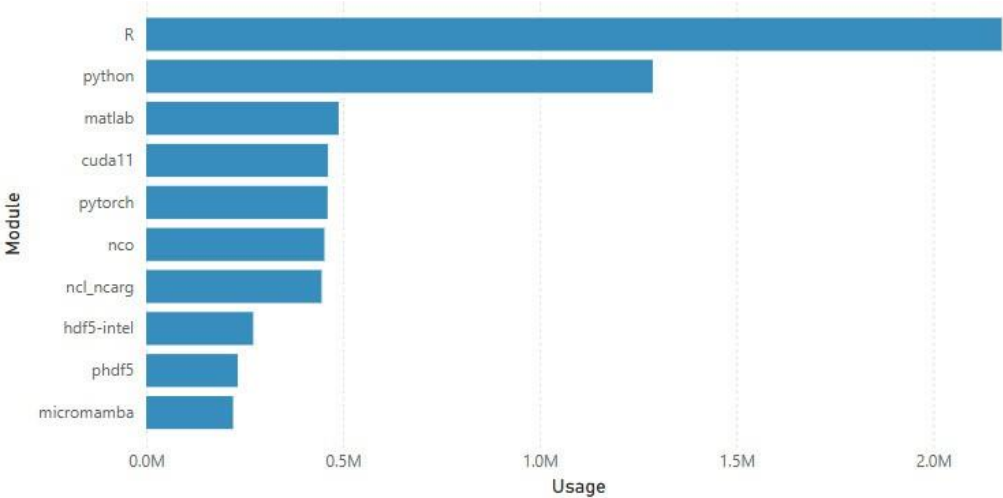
Consult Types FY25

Type of Consult	Count of Users
App	499
Data	442
Slurm	405
Access	236
System	109
New PI	105
Consult	94
BuyIn	21

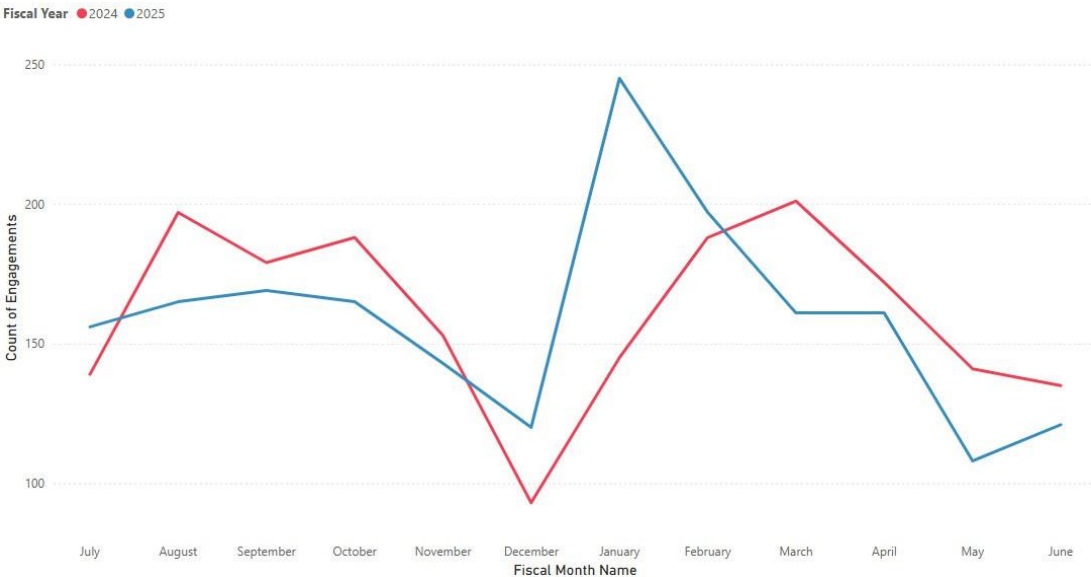


Top 10 Software Usage FY25

Software	Usage
R	2,174,137
python	1,287,194
matlab	489,130
cuda11	461,860
pytorch	460,995
nco	452,810
ncl_ncarg	445,654
hdf5-intel	271,915
phdf5	232,637
micromamba	220,627



Support Engagements FY25 vs FY24



Month	FY24	FY25
Jul	139	156
Aug	197	165
Sep	179	169
Oct	188	165
Nov	153	143
Dec	93	120
Jan	145	245
Feb	188	197
Mar	201	161
Apr	172	161
May	141	108
Jun	135	121
Total	1,931	1,911



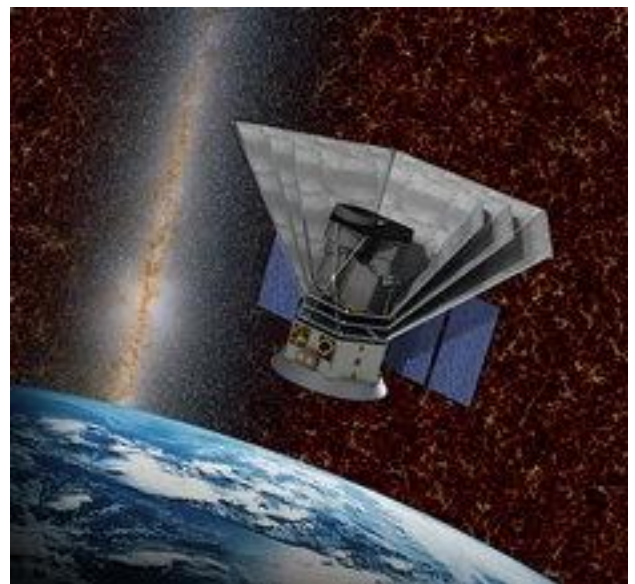
## 2025 Featured Stories

A new space telescope launches into orbit to explore the origins of the Universe. The mission will use sophisticated software developed at the Arizona Cosmology Lab to help astronomers understand what happened in the first trillionth of a second after the Big Bang.

SPHEREx, *Spectro-Photometer for the History of the Universe, Epoch of Reionization and Ice Explorer*, is a NASA mission that will use a wide-field telescope to gather optical and infrared data on more than 450 million galaxies, as well as more than 100 million stars in the Milky Way.

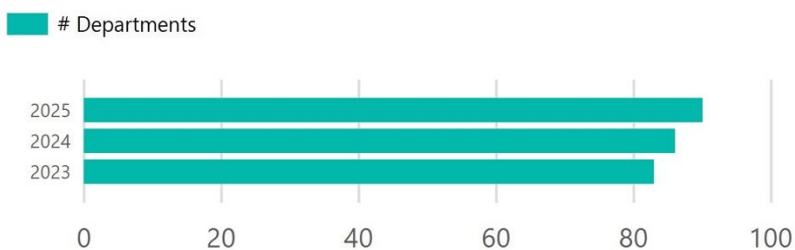
Tim Eifler, associate professor, says; “We are looking for tracers. Galaxies trace the presence of dark matter. Where there are a lot of galaxies, there is likely a lot of dark matter because of gravity”. Elisabeth Krause, also associate professor, is looking for the imprints of the very early universe by making the largest ever 3D map of galaxies.

Given the very large amounts of data the Arizona Cosmology Lab has turned to machine learning to accelerate the software.



The state-of-the-art high performance computing system on the U of A campus makes this kind of innovation possible, according to the research team

### Number of Active Departments

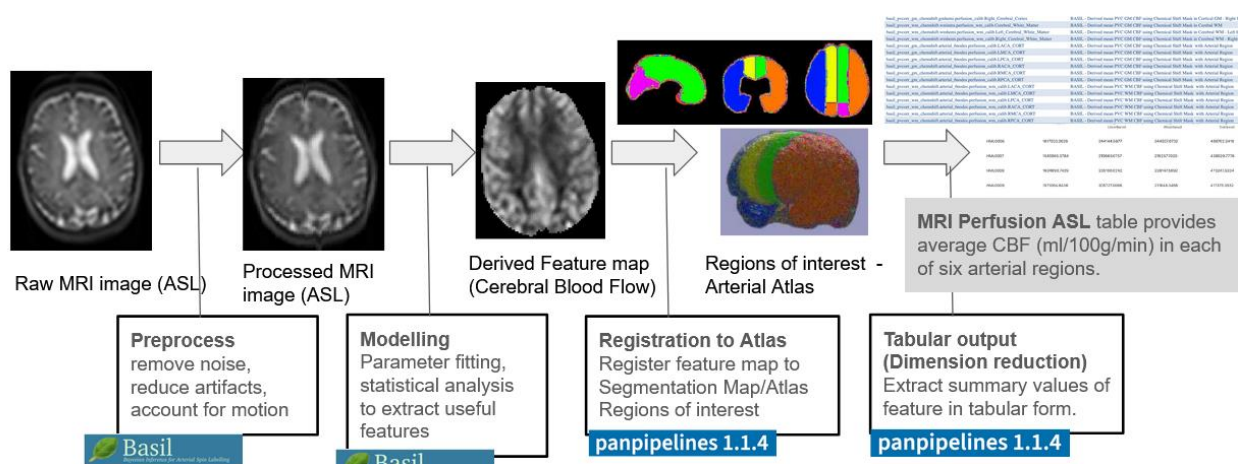


## 2025 Featured Stories

The Precision Aging Network (PAN) <https://precisionagingnetwork.org/>, headed by Carol Barnes, is conducting a detailed cross-sectional and longitudinal study in more than one thousand diverse participants across four sites in the United States (Atlanta, Baltimore, Miami, and Tucson) to better understand how age-related cognitive deficits are linked to demographic, biometric, metabolic, genetic, and biomarker profiles. A central component of this work is advanced neuroimaging using Magnetic Resonance Imaging (MRI).

To achieve these goals, the project relies very heavily on the high-performance computing (HPC) infrastructure at the University of Arizona. The HPC allows us to run extremely demanding workflows on each subject's extraordinarily rich MRI datasets. These can be run in parallel allowing us to scale our analysis to accommodate the large number of participants in the study and to conveniently derive precise MRI-derived biomarkers which are candidates for inclusion in a model on healthy aging.

“Without the University of Arizona’s High performance computing infrastructure our research would be severely impaired and would be unacceptably slowed down. We have benefitted so much from the creativity and support of the HPC team as well. They keep the system running optimally and help trouble shoot issues that invariably arise every day. We are grateful to have access to this world-class research technology and professional staff and look forward to seeing it grow and expand into the future”., says Chidi Ugonna, lead researcher.



HPC workflow for deriving cerebral blood flow (CBF) in 6 arterial regions of the brain