

***Goddard 2010 Internship Profile
and Collaboration with Space
Grants***

NASA/Goddard Space Flight Center

*Mid-Atlantic Regional Space Grant
Meeting*
October 6, 2009

ABOUT GODDARD: NASA/Goddard was established as NASA's first Space Flight Center. The primary focus of the Center is to enable science through engineering and project management capabilities. NASA/Goddard employs about 12,000 people (on & off site) including **3230 civil servants, 6612 contractors** and **2157 university representatives**. Two of its nine directorates, the Applied Engineering (Code 500) and Science & Exploration (Code 600) employ the majority of engineers and scientists and host 2/3rd of all Goddard interns.



Internships at Goddard are NOT just for Aerospace Engineers!

Office of Education Goals for 2010 Internships

- All Interns Placed with **Meaningful** Projects
 - ✓ Mentors select first/Education Programs select second
- Decrease Number/Increase Academic Quality of Applicant Pool
- Increase Number of Minority and Disability students placed
- Establish a Network of Space Grant/ Affiliate Faculty and Minority/Disability Serving Administrators who nominate one or two highly qualified applicants
- High % of nominated students who apply are placed
- Qualified Interns are placed on fast track to return or for hire (GSFC pipeline)

Office of Education Recruitment and Placement Strategies for 2010 Internships

- Space Grant/Affiliate Faculty identifies highly qualified applicants (especially minority and students with disabilities)
- GSFC sends Space Grant Colleagues and Faculty partners the list of available summer 2010 intern project assignments (November)
- SG/Affiliate Faculty submits one or two highly qualified nominations matched to one or two preferred projects from list provided
- Nominated students apply and select the desired project(s); SG/Faculty submits letter of recommendation for nominee(s)
- GSFC works internal process to maximize placement of nominated applicants

Applied Engineering and Technology Directorate (AETD)

540 - Mechanical Systems Division

- a. Materials Engineering
- b. Mechanical Systems Analysis & Simulations
- c. Mechanical Engineering
- d. Electro-Mechanical Systems
- e. Thermal Engineering
- f. Contamination and Coatings Engineering
- g. Advanced Manufacturing
- h. Environmental Test Engineering and Integration

550 - Instrument Systems & Technology Division

- a. Optics
- b. Cryogenics and Fluids
- c. Detector Systems
- d. Laser & Electro- Optics
- e. Microwave Instrument Technology
- f. Instrument Systems

560 - Electrical Engineering Division

- a. Flight Data Systems and Radiation Effects
- b. Parts, Packaging, and Assembly Tech Office
- c. Power Systems
- d. Microelectronics and Signal Processing
- e. Electrical Systems
- f. Microwave & Communication Systems
- g. Flight Systems Integration and Test

580 - Software Engineering Division (SED)

- a. Software Systems Engineering
- b. Flight Software Systems
- c. Ground Software Systems
- d. Mission Validation and Operations
- e. Computing Environments and Collaborative Technologies
- f. Science Data Systems
- g. Science Data Processing

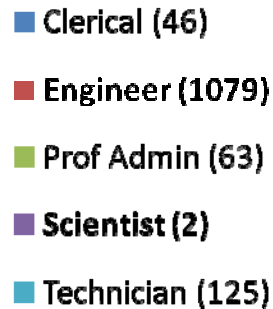
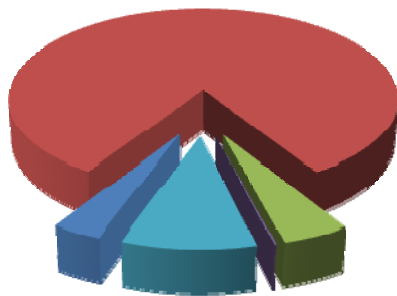
590 - Mission Engineering and Systems Analysis Division

- a. GN&C Systems Engineering
- b. Systems Engineering Services and Advanced Concepts
- c. Flight Dynamics Analysis
- d. Component Hardware Systems
- e. Propulsion
- f. GN&C Mission Systems Engineering
- g. Mission Systems Engineering

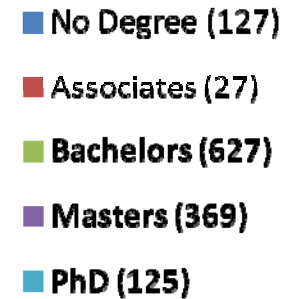
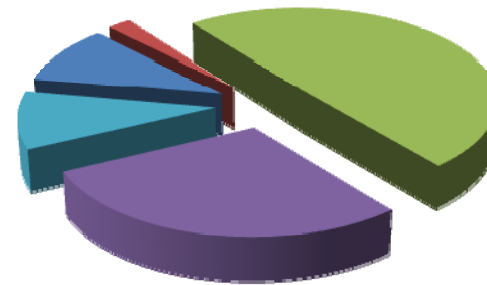
Distribution of AETD Personnel

(Code 500 – employs 1315 people)

By Function



By Degree



We anticipate placing **80-100** interns in Code 500 Labs next summer
-the majority **Engineering** oriented-

Science and Exploration Directorate

610 - Earth Sciences Division

- a. Global Modeling and Assimilation Office
- b. Global Change Data Center
- c. Software Integration and Visualization Office
- d. Goddard Institute for Space Studies (New York)
- e. Laboratory for Atmospheres
 - Mesoscale Atmospheric Processes
 - Climate and Radiation
 - Atmospheric Chemistry and Dynamics
- f. Hydrospheric and Biospheric Science Laboratory
 - Cryospheric Sciences
 - Ocean Sciences
 - Hydrological Sciences
 - Biospheric Sciences
 - Terrestrial Information Systems
 - Instrumentation Sciences

660 - Astrophysics Science Division

- Office for General Investigator Programs
 - Science Operations and Data Management Office
 - Instrument Development Group
- a. Astroparticle Physics Laboratory
 - b. X-ray Astrophysics Laboratory
 - c. Gravitational Astrophysics Laboratory
 - d. Observational Cosmology Laboratory
 - e. Exoplanets and Stellar Astrophysics Laboratory

670 - Heliophysics Science Division

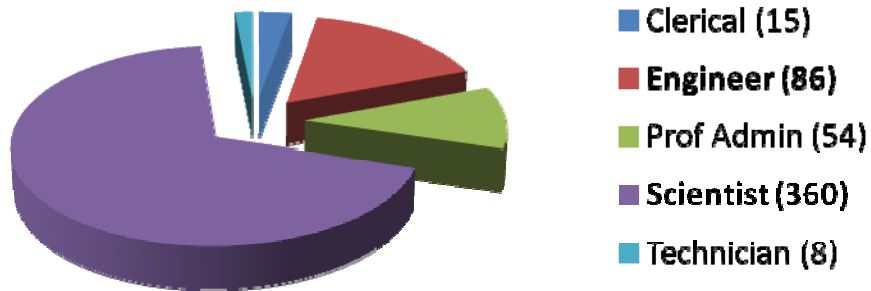
- a. Solar Physics Laboratory
- b. Heliospheric Physics Laboratory
- c. Geospace Physics Laboratory
- d. Space Weather Laboratory

690 - Solar Systems Exploration Division

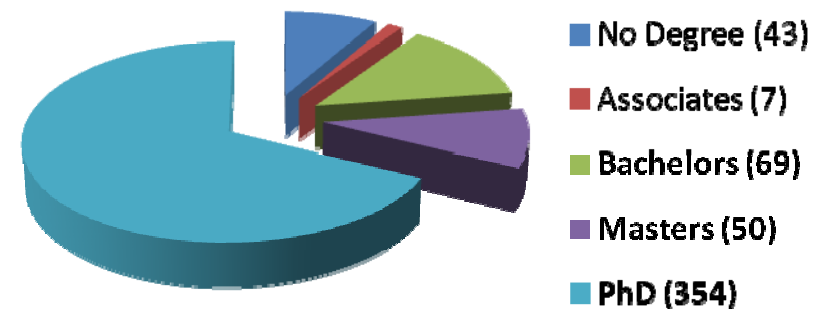
- Solar System Exploration Data Services Office
- a. Astrochemistry Laboratory
 - b. Planetary Systems Lab
 - c. Laser Remote Sensing Laboratory
 - d. Planetary Magnetospheres Lab
 - e. Planetary Geodynamics Lab
 - f. Atmospheric Experiments Lab

Distribution of Science & Exploration Personnel (Code 600 – employs 523 people)

By Function



By Degree



We anticipate placing **50-60** interns in Code 600 Labs next Summer
-the majority **Science** oriented-

NASA/Goddard offers internship assignments in a wide range of engineering disciplines, space sciences, computer science, Earth sciences, robotics, lunar & planetary sciences and leadership development.

During the application process, applicants **must** select projects to which they'd like to be assigned.



Internships at Goddard are for all kinds of ENGINEERS!

Goddard offers internship opportunities during the spring, summer, fall and winter....BUT....the majority come for ten weeks during the summer from early June through mid-August



Internships at Goddard are for all kinds of SCIENCE types such as Physics, Biology, Chemistry, Astronomy, Environmental, Oceanography and Atmospheric!

ELIGIBILITY REQUIREMENTS:

All successful applicants must meet or exceed these basic qualifications....

- 1) At least a 3.0 GPA (unweighted)
- 2) Citizenship status is one of the following:
 - a) US citizen
 - b) Green card holder with employment eligibility
 - c) Naturalized citizen with a naturalization number
- 3) A major aligned with NASA Goddard's Research & Development areas:
 - a) Science
 - b) Technology (e.g., IT, CS, etc.)
 - c) Engineering
 - d) Mathematics

Internships at Goddard are for all kinds of COMPUTER Types!

APPLY: The 2010 Online Application will be available for students to complete in the mid-November 2009 timeframe at:

<http://education.gsfc.nasa.gov/opportunities>



Come join us
at NASA
Goddard
Space Flight
Center

Internships at Goddard are for Math Types and many others!

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