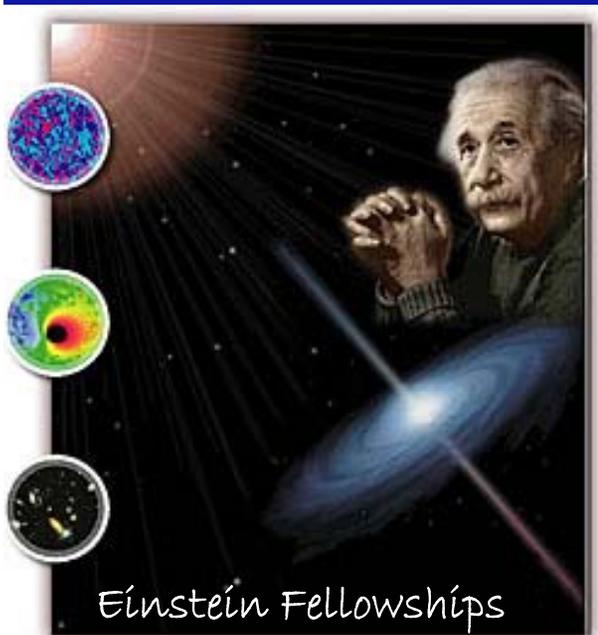


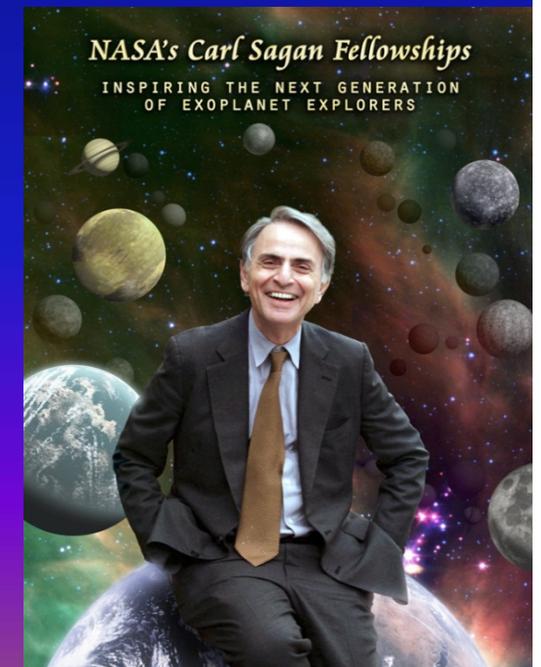
NASA's Postdoctoral Fellowship Programs



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Goals of NASA Astrophysics' Named Postdoctoral Fellowship Programs

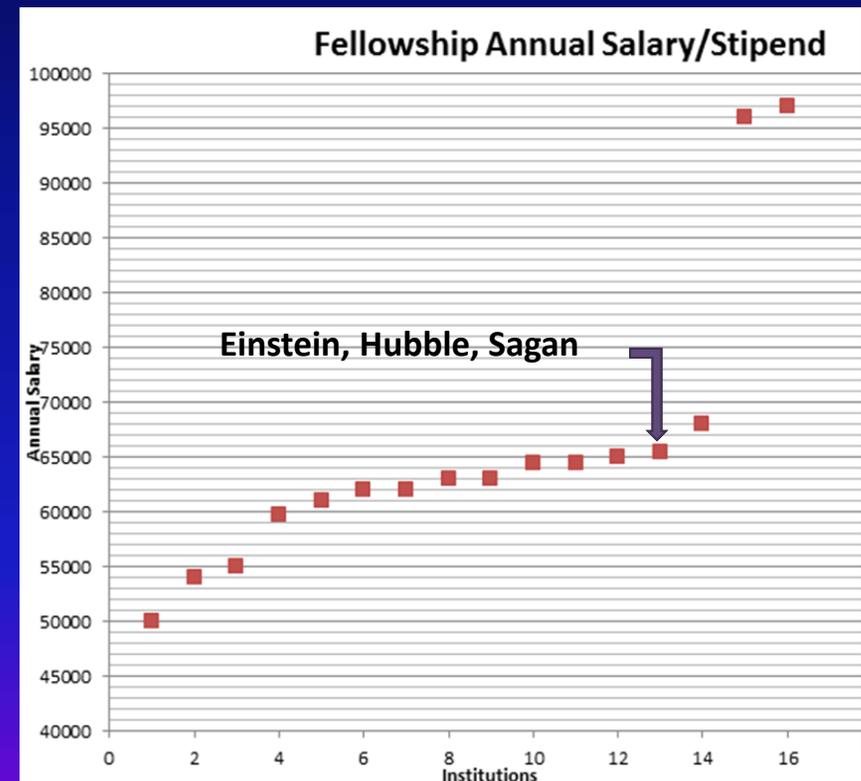
- Enable excellent science aligned with NASA's strategic goals
- Combine outstanding research opportunities with excellent mentoring to train the next generation of space scientists
- In 2008 the named Astrophysics Fellowships were redirected from mission-based programs to one for each of the science themes in the astrophysics
 - Chandra & Fermi combined into **Einstein Fellowships: Physics of the Cosmos**
 - Hubble and Spitzer combined to make **Hubble Fellowships: Cosmic Origins**
 - Michelson became **Sagan Fellowships: Exoplanet Exploration**

Importance of NASA Astrophysics Fellowship Programs

- Average rate of astronomy PhD production in the 2000-2006 AAS survey was 271/year
 - NASA fellowships account for roughly 10% of the available pool of newly minted PhDs
 - Roughly consistent with the over-subscription rate for the 3 programs
- 97% of fellows are still working in the field, with 85% having permanent positions (faculty, large projects, Science Centers, etc)

Common Characteristics of NASA Fellowships

- Properties are coordinated across all three programs
- 3-Year Fellowships
 - Applicants
 - Can be of any nationality
 - Must be within 3 years of their PhD
 - Must serve at US host institution
 - Proposed research may be theoretical, observational, or instrumental
 - Consistent stipend & budgets:
 - \$65,500 for 2013-2014 year
 - \$16,000 for Research which may be front-loaded
 - \$18,000 for Healthcare
 - \$7,500 for Relocation
 - Consistent healthcare and family leave policies



Hubble Program

- The “new” Hubble program was established by merging the “old” 1990s Hubble program with the Spitzer Fellowship Program
 - The 2009 class of Fellows “graduated” in 2012
- The Hubble Program supports outstanding recent PhDs related to NASA’s Cosmic Origins program, including the following missions:
 - Herschel Space Observatory
 - Hubble Space Telescope (HST)
 - James Webb Space Telescope (JWST)
 - Stratospheric Observatory for Infrared Astronomy (SOFIA)
 - Spitzer Space Telescope
- Basic statistics
 - 17 Fellows per year (17 will be awarded in 2013)
 - Oversubscription rate typically 16:1 (17:1 for 2013)
 - 30% (5 out of 17) female fellows in the “class” of 2009
 - First class recently “graduated” in Fall 2012
 - 8 completed the full 3 yr term
 - 9 left the program early (LSST, UVa, UAz, GSu, GTu, NRAO, LLNL, UToronto, Finance)
 - 1 fellow moved institutions during his/her tenure
 - 1 fellow went on maternity leave during her tenure

Einstein Program

- The Einstein program was established in 2008 with the merging of Chandra (est. 1998) and Fermi Programs
- The Einstein Program supports outstanding recent PhDs in research related to the NASA Physics of the Cosmos program
 - High energy astrophysics: Chandra, Fermi, XMM-Newton
 - Cosmology: PLANCK, WFIRST
 - Gravitational astrophysics: LISA Pathfinder
- Basic statistics
 - ~10 Fellows per year (10 will be awarded in 2013)
 - 17:1 Oversubscription rate (19:1 in 2013)
 - 26% (11 out of 42) female fellows since 2009
 - First class recently “graduated” in Fall 2012
 - Three moved to faculty positions, remainder postdocs. Of the ~100 Chandra and Einstein Fellows since 1998, 95 are still working in astronomy
 - 3 fellows moved institutions during their tenure since 2009
 - No fellows went on maternity during their tenure

Sagan Program

- In Sept 2008 the Michelson Fellowship program (est. 1999) was renamed the Sagan Program with the first 2009 Sagan Fellows “graduating” in the Fall of 2012
- The Sagan Fellowship Program aims to advance the scientific and technological goals of NASA's Exoplanet Exploration Program
 - Enable the discovery and characterization of planetary systems and Earth-like planets around nearby stars
 - Develop new measurement techniques and technologies
 - Train young scientists in the science and technology of an emerging and rapidly evolving field of astrophysics
- Basic statistics
 - 5 – 6 Fellows per year (5 will be awarded in 2013)
 - 11:1 – 16:1 Oversubscription rate (16:1 in 2013)
 - 35% (8 out of 23) female fellows since 2009
 - First class recently “graduated” in Fall 2012
 - 5 fellows (3 from 2009 class, 2 from 2010 class) have become faculty members
 - Remaining 2009 fellows have NSF money or continued at their host institutions
 - 2 fellows moved institutions during their tenure
 - 2 fellows went on maternity leave during their tenure

“Family-Friendly” Practices

- NASA sends funding to the host institution, not to the fellow
- NASA Fellowships support family health care packages through the host institution or as a separately purchased package
- Postdocs are paid by their host institution and are subject to the rules of that institution for the fellow’s employment status with regard to parental leave, etc.
 - Most fellows are considered “stipendary” fellows, but in a few cases they are employees of their host institutions
 - Fellowship programs can grant no-cost extensions, i.e. for parental leave (consistent with FMLA)
 - Fellowship programs are flexible about transfer of host institution (two body problem)
 - Fellows usually have considerable flexibility in negotiating family-friendly working hours since they are often not regular employees
- ***At present, none of the three Fellowship programs offer paid parental leave, although this policy is presently under review at NASA HQ***