

THOMAS M. BROWN

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EDUCATION

Ph.D. (1996), Johns Hopkins University, Astrophysics

M.A. (1994), Johns Hopkins University, Astrophysics

B.S. (1992) with honors, Pennsylvania State University, Physics / Astronomy & Astrophysics

EXPERIENCE

Space Telescope Science Institute:

Assistant Astronomer (2001 – 2004)

Associate Astronomer (2004 – 2007)

Associate Astronomer with Tenure (2007 – present)

- Mission Scientist for the James Webb Space Telescope – mission planning, leading the input of science considerations into ground system & operations, leading the planning & execution of STScI science support for the instruments & optical telescope element, serving as the lead point of contact for integration/testing/commissioning
- Principal Investigator for a series of observing programs with HST and FUSE under two broad themes – the formation history of giant galaxies and late phases of stellar evolution
- Member of the Spectrographs Group – servicing mission support, two-gyro mode investigation, user support, and calibration
- Member of the HST/WFC3 Group – ground testing, calibration, development of instrument performance model, exploration of science capabilities, and user support
- Developing science drivers for future UV/Optical space telescopes in response to NASA Research Announcements for mission studies
- Chair of STScI Colloquium Series
- 2005 AURA Outstanding Scientific Achievement Award

NASA/GSFC: NOAO Research Associate, STIS Instrument Definition Team (1997 – 2001)

- Leader of two HST/STIS Guaranteed Time Programs observing elliptical galaxies to reveal the nature and evolution of their hot stellar populations
- Principal Investigator of HST/STIS and FUSE programs investigating the hot populations of elliptical galaxies
- HST/STIS initial calibration
- Participation in the planning and execution of the Hubble Deep Field South

Loyola College: Adjunct Professor (1997 – 1999)

- Teaching an astronomy class for non-majors, including the use of cooperative lessons and laboratory demonstrations

Hopkins Ultraviolet Telescope Project: Research Assistant (1992 – 1996)

- Ground testing, ground calibration, and flight calibration
- Analysis of far-UV spectroscopy from the Astro-1 and Astro-2 Space Shuttle missions
- Computation of model stellar atmospheres and synthetic spectra
- Ground crew for Space Shuttle Mission STS-67 (Astro-2) – observation planning, instrument troubleshooting, and telescope ground-control

OBSERVING PROGRAMS AND GRANT AWARDS

Formation Histories of Spiral Galaxies:

- PI, HST/WFC3 Treasury program #11664 (\$402K)
The WFC3 Galactic Bulge Treasury Program: Populations, Formation History, and Planets
- PI, HST/ACS Large General Observer program #10816 (\$590K)
The Formation History of Andromeda's Extended Metal-Poor Halo
- PI, HST/ACS Large General Observer program #10265 (\$526K)
The Formation History of Andromeda
- PI, HST/ACS Large General Observer program #9453 (\$383K)
The Age of the Andromeda Halo
- Co-I on seven other programs

Late Evolution in Low-Mass Stars:

- PI, HST/STIS + HST/WFC3 General Observer program #11665 (\$138K)
The Formation Mechanisms of Extreme Horizontal Branch Stars
- PI, HST/ACS General Observer program #10815 (\$78K)
The Blue Hook Populations of Massive Globular Clusters
- PI, HST/STIS General Observer program #10261 (\$99K)
The Formation Mechanisms of Extreme Horizontal Branch Stars
- PI, FUSE Guest Investigator program #E821 (\$30K)
The Formation Mechanism of Hot Helium-Rich Subdwarfs
- PI, FUSE Guest Investigator program #C129 (\$33K)
The Formation Mechanism of Hot Helium-Rich Subdwarf B Stars
- PI, HST/STIS General Observer program #9053 (\$90K)
The Late Evolution of Low-Mass Stars: a Deep UV Color-Magnitude Diagram of M32
- Co-I on five other programs

The Evolution of Stellar Populations in Elliptical Galaxies:

- PI, FUSE Guest Investigator program #C128 (\$93K)
How Does Abundance Affect the Strength of UV Emission in Elliptical Galaxies?
- PI, HST/STIS General Observer program #8564 (\$52K)
Measuring the Evolution of the UV Upturn
- PI, FUSE Guest Investigator program #B066 (\$46K)
The Hot Stellar Population and Cooling Flow of M87
- PI, FUSE Guest Investigator program #A088 (\$59K)
Hot Populations in Nearby Elliptical Galaxies
- Co-I on three other programs

Starbursting and Star Formation:

- PI, HST/STIS General Observer program #9054 (\$78K)
Star Formation Triggers and Chemical Reprocessing in I Zw 18
- Co-I on seven other programs