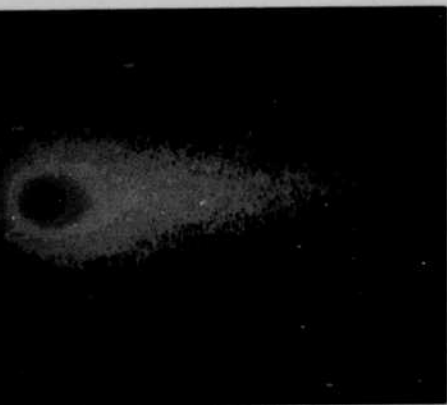


SCIENCE

Reaching for the Stars

Business is looking up in astronomy, a career that is more like a calling



ROYAL GREENWICH OBSERVATORY—PHOTO RESEARCHERS
Computer-colored: *Halley's comet*

Eric Feigelson has just tapped a few keys on the customized "imaging" computer at Penn State's astronomy department. At his touch, an eerily beautiful plume spreads along the screen. It is a portrait of a galaxy, but one that cannot be seen through your average telescope. It is a depiction of the radio waves that the galaxy emits—"cos-

mic jets" that spew out of a black hole like water from a fire hose. Feigelson, a 33-year-old associate professor of formidable enthusiasm, collected his data using the Very Large Array, a massive set of 10-story dish antennas in New Mexico; a million-line program crunches the numbers. He is not only in love with these highest-tech toys but thrilled by the excitement of the puzzles that lie beyond. "Tight, fabulous results pop into your lap," he exults, "and you're awed not by your skills but by nature's richness to give us these phenomena that we don't understand."

They labor on one of the last romantic frontiers, these modern practitioners of an ancient science. Astronomy offers scholars the rare opportunity to do pure research, with the universe for a laboratory. Often arduous and arcane, the field attracts brilliant and sometimes eccentric minds that can apply the physics lessons of subatomic particles to vast objects light-years away. For many, astronomy is more a calling than a career. They have been stargazing since childhood, and their fascination remains undimmed by adult-

hood. Feigelson, for one, rhapsodizes that the development of the theory of stellar evolution (which describes the life cycle of stars) is an achievement "right up there with Shakespeare, or something—and it might even be right."

Astronomy divides itself into two concentrations. Observational astronomers collect information by scanning the skies; science has expanded their range of snooping well beyond what the old lens or mirror telescopes can see, into the realm of radio waves and high-energy radiation. Theoretical astronomers often interpret the observations of their peers, using complex mathematical models to decide what's out there.

Pinhole cameras: Whichever form they practice, about 60 percent of astronomers wind up working in university surroundings. Professorial pay is good, though not lavish: average salaries run from \$20,000 to more than \$50,000 for prestigious posts. The fringes can be fun: frequent travels around the country and the world to attend conferences or visit observatories in exotic locales. As faculty, they energetically teach bread-and-butter introductory courses and

Heavenly bodies: Georgia State's John Wilson (pointing) uses a telescope to project the image of the October 1986 solar eclipse

DIANA LINSLEY—GSU

