

# CU's \$70 million Hubble project faces delays

**Matthew Pizzuti**

*Staff Writer*

The product of a \$70 million grant and years of hard work by University of Colorado scientists and students now rests in a storage facility in Maryland, said those who worked on the project.

CU worked with Ball Aerospace on the Cosmic Origins Spectrograph, a device that can peer farther into space than anything previously built., said Jim Green, A CU professor who designed the equipment and led the university's efforts on the project.

However, years after completion, the future of the COS is unclear, Green said.

CU professors who worked on COS hope that the new plan to improve the Hubble Telescope goes through.

CU Professor Michael Shull said in an e-mail that the mission to re-service the Hubble would extend its life eight years, but would more importantly "upgrade its capabilities for imaging and spectra by a factor of 10 or more."

That mission is planned for late 2007, Green said, and added that the planned launch will probably be pushed back.

"The likelihood of actually launching on that date is almost zero," Green said.

Problems resulting in launch postponement have plagued the COS. When the 2003 Columbia disaster suspended space shuttle flights indefinitely, the planned 2004 installation of the COS manned space mission was put on hold, Green said, and the project still had another hurdle to jump.

To complicate matters further, budget requirements have put a possible end to the Hubble program in 2007, Green said.

The COS remains useless on Earth because the ultraviolet wavelengths it detects cannot pass through the atmosphere.

The COS can detect ultraviolet light so dim that no other instrument can see it, which allows it to look farther away and into denser matter than anything else, explained CU Professor Ted Snow, who worked on the project's science team.

The instrument's data would be collected into charts, which would help scientists decipher the nature of distant galaxies and the composition of interstellar clouds, Snow said.

COS scientists said CU already is a leader in developing the instruments that astrophysical science depends on.

CU's reputation allowed the university to win the contract to develop the COS in the first place, and CU's role in the project "augments that reputation," Snow said.

Shull said that CU will reap a harvest of over 500 orbits of Hubble data if COS operates, and would get \$20 million in research funds to analyze that data.

"Many of these funds will pay the salaries of students and researchers brought to CU Boulder for this project," Shull said.

The project is now in the hands of NASA, which works with the US Senate Science, Technology- and Space Subcommittee, Snow said.

NASA's decision will likely be based on whether it can get its shuttle program back in flight, which depends on a May 2006 planned launch, Shull explained.

"It's contingent on the Shuttle working properly without concern," Snow said.

If that program is successful, Shull said, "NASA will likely agree to a Hubble servicing mission in late 2007."

If the mission that would attach the COS to the Hubble Telescope is

canceled, Green said CU will ask NASA if it can build its own spacecraft and small space telescope for the sole purpose of putting the COS to use.

If NASA doesn't accept that proposal, Green said that the COS will likely become a museum piece.

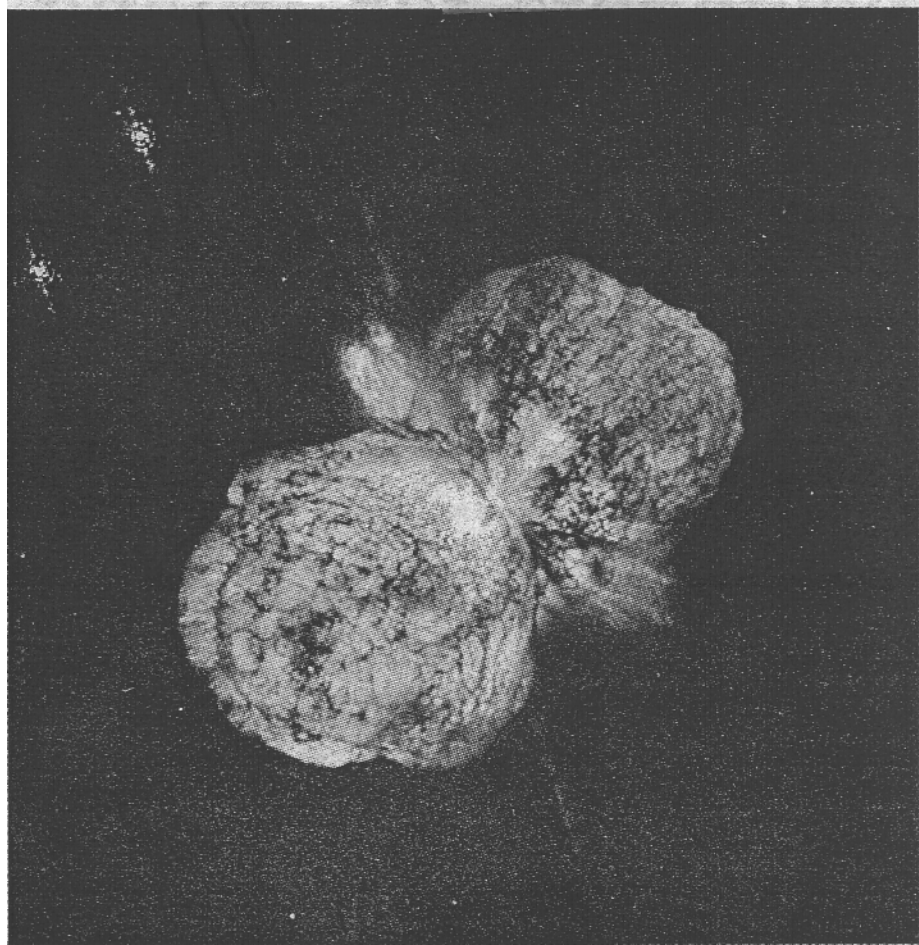


Photo courtesy of Jon Morse

**Shown here is an image of Eta Carinae, a supermassive star, taken from NASA Hubble Space Telescope, according to the Center for Astrophysics and Space Astronomy website. The University of Colorado has an outstanding reputation in aerospace engineering, which helped CU get a contract to develop the Cosmic Origins Spectrograph, a new instrument that looks deep into space.**