

# EUWE

EXTREME ULTRAVIOLET EXPLORER



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# EUVE Satellite to Explore Newly Opened Window

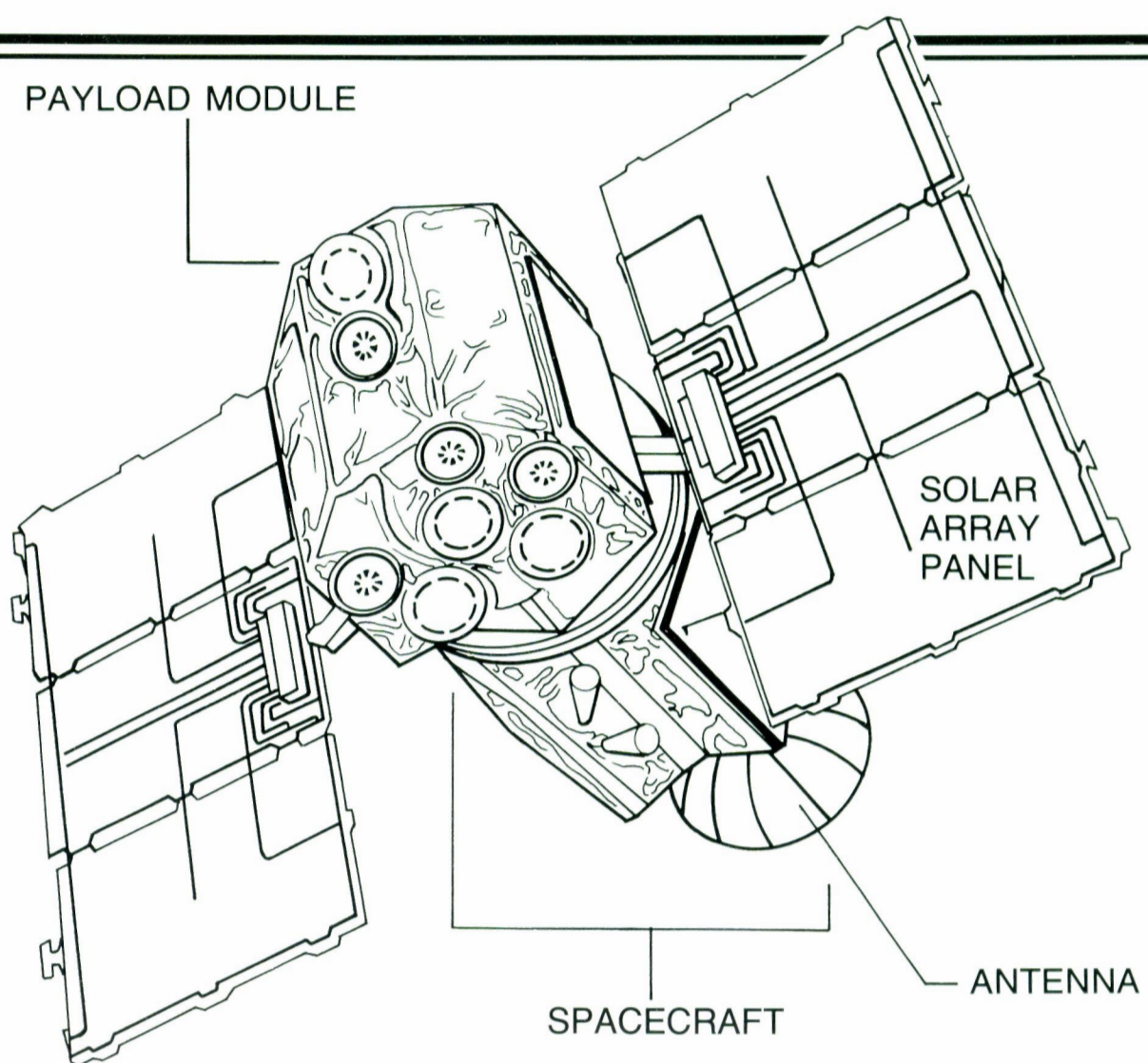
In the past, the extreme ultraviolet was one of the least-studied portions of the electromagnetic spectrum. Now, with the launch of NASA's Extreme Ultraviolet Explorer (EUVE) satellite, this new window on the Universe will be opened to detailed study.

The Extreme Ultraviolet Explorer will be the first satellite to make both spectroscopic and wide-band observations over the entire extreme ultraviolet (EUV) region. It is managed by NASA's Goddard Space Flight Center, Greenbelt, MD, and scheduled for launch aboard a McDonnell Douglas Delta II expendable launch vehicle from Cape Canaveral Air Force Station, FL, in mid 1992.

This unique satellite consists of four telescopes – the most powerful EUV telescopes ever flown. Three of these instru-

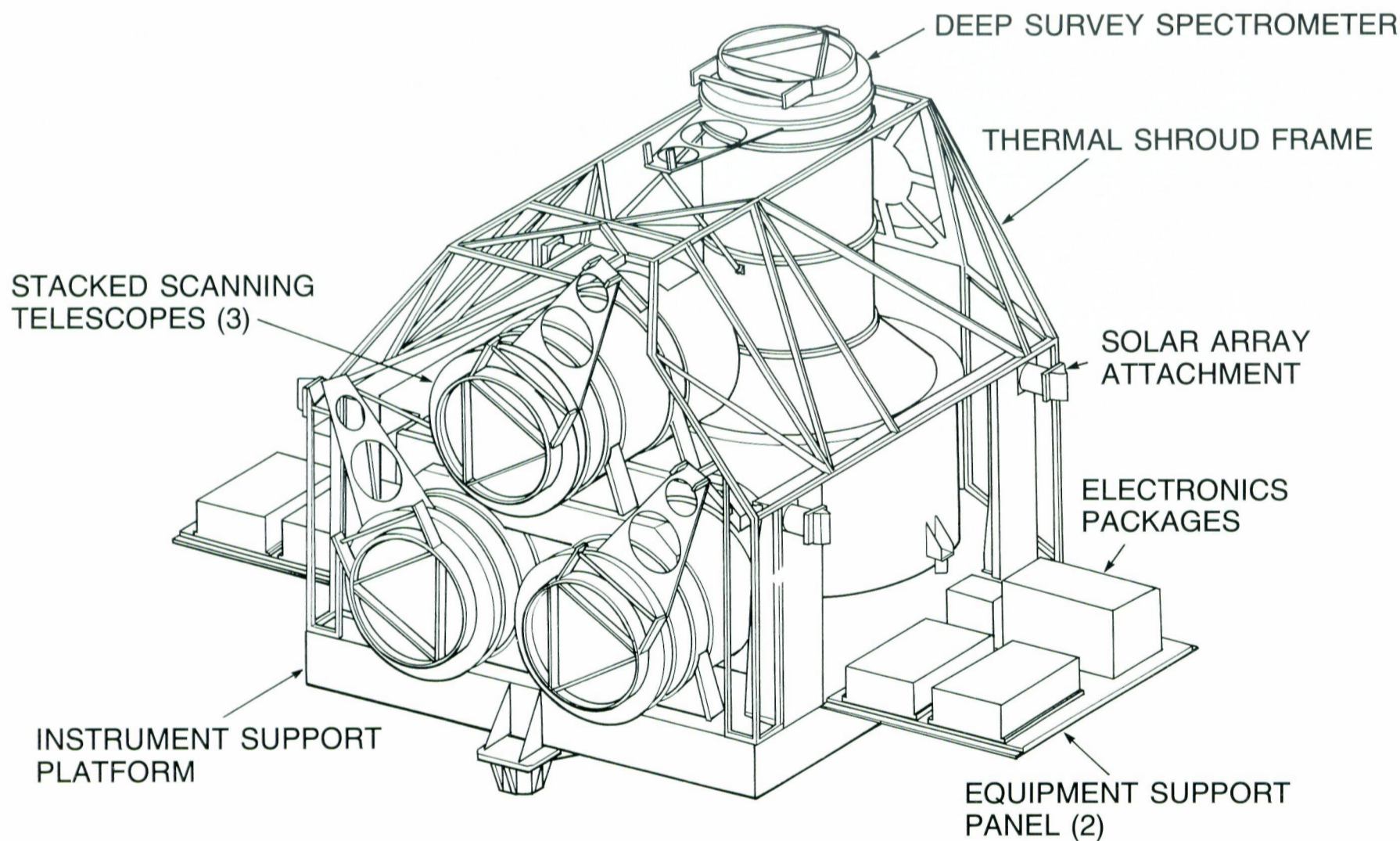
ments will map the entire sky to determine the existence, direction, brightness and temperature of sources of extreme ultraviolet radiation. The fourth instrument is designed to determine the composition and temperature of the EUV sources discovered during the sky mapping. Some of the objects the explorer is likely to detect are white dwarf stars, binary star systems and the hot outer atmospheres (coronae) of stars similar to our Sun.

From the many objects of astronomical interest discovered during the all-sky survey and other objects already thought to be observable in the extreme ultraviolet, guest observers will propose to study targets using the spacecraft's extreme ultraviolet spectrometer.



Goddard Space Flight Center is responsible for the design, construction, integration, checkout and operation of the Extreme Ultraviolet Explorer. The spacecraft's science instrumentation was designed, constructed and calibrated by the Space Science Laboratories of the University of California at Berkeley. The EUVE is managed by Goddard for NASA's Office of Space Science and Applications.

ABOVE: The Explorer Platform spacecraft, plus the science payload make up the Extreme Ultraviolet Explorer observatory. The observatory is thermally controlled to protect the science payload from extreme temperature changes. Like most satellites, the Extreme Ultraviolet Explorer is solar powered. Photovoltaic cells on the satellite's solar array panels convert solar energy into electricity, which is stored in rechargeable batteries.



LEFT: The satellite's three scanning telescopes will map sources across the sky during the mission's six-month survey phase. The Deep Survey/Spectrometer will measure the wavelength distribution of radiation from individual sources to determine their chemical composition, velocities and temperatures.

BELOW: The Electromagnetic Spectrum extends from gamma rays to radio waves. Only certain spectral bands, such as visible light and radio waves, completely penetrate Earth's atmosphere. All others, including the extreme ultraviolet, must be studied from space.

