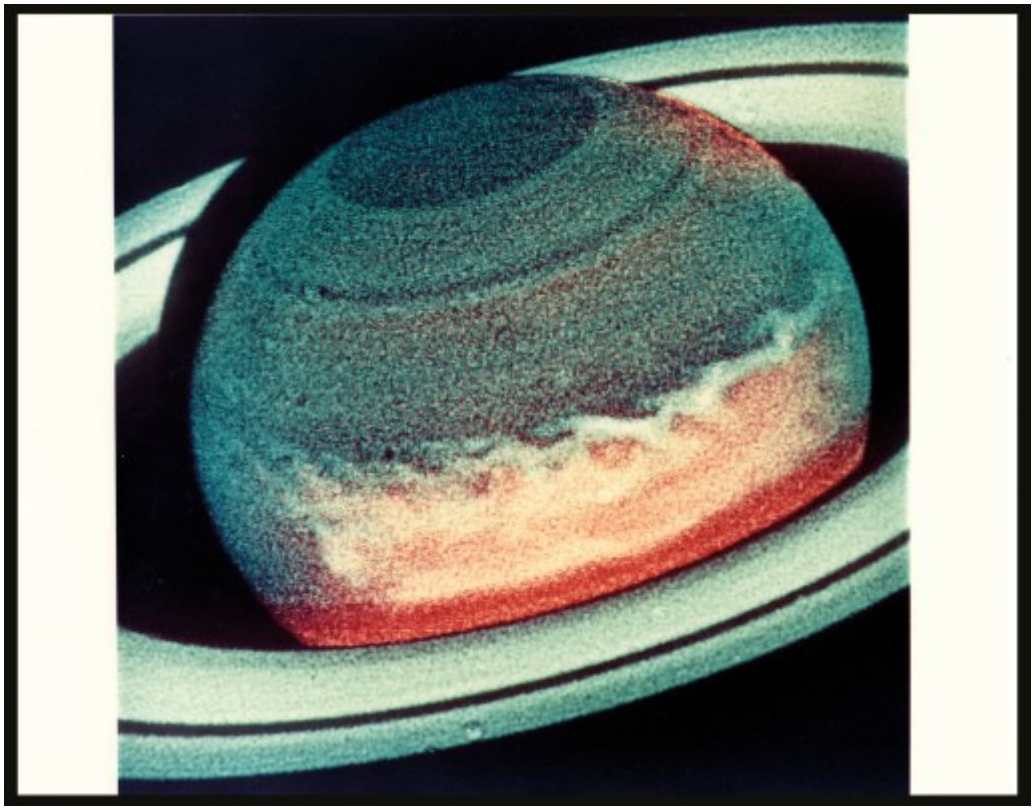


Vintage chromogenic print, NASA caption hinged to verso.

SIXTH PLANET FROM THE SUN

White spot on Saturn seen from the Hubble Telescope, Nov 1990.

Author
NASA

Publication date
[November 1990].

Publisher

Publication place

Physical description
Vintage chromogenic print, NASA caption hinged to verso.

Dimensions
202 by 254mm. (8 by 10 inches).

Notes
Taken by the Planetary Camera in blue and infrared light.

In 1923, the “father of modern rocketry”, Hermann Oberth, along with Robert H. Goddard and Konstantin Tsiolkovsky, published Die Rakete zu den Planetenräumen (“The Rocket into Planetary Space”), which mentioned how a telescope could be propelled into Earth orbit by a rocket.

The Hubble Space Telescope (named after astronomer Edwin Hubble) was not the first space

telescope, but it is one of the largest and most versatile. Its history can be traced back as far as 1946, to astronomer Lyman Spitzer's paper entitled Astronomical advantages of an extraterrestrial observatory. In it, he discussed the two main advantages that a space-based observatory would have over ground-based telescopes: First, the angular resolution (the smallest separation at which objects can be clearly distinguished) would be limited only by diffraction, rather than by the turbulence in the atmosphere, which causes stars to twinkle, known to astronomers as seeing. Second, a space-based telescope could observe infrared and ultraviolet light, which are strongly absorbed by the atmosphere of Earth. Also crucial was the work of Nancy Grace Roman, the "Mother of Hubble", who gave public lectures touting the scientific value of the telescope.

The Hubble telescope was launched into low Earth orbit in 1990 and remains in operation. It was originally funded and built in the 1970s by the United States space agency NASA with contributions from the European Space Agency. Its intended launch was in 1983, but the project was beset by technical delays, budget problems, and the 1986 Challenger disaster. Hubble was finally launched in 1990, but its main mirror had been ground incorrectly, resulting in spherical aberration that compromised the telescope's capabilities. The optics were corrected to their intended quality by a servicing mission in 1993.

Hubble is the only telescope designed to be maintained in space by astronauts. Five Space Shuttle missions have repaired, upgraded, and replaced systems on the telescope, including all five of the main instruments.

Bibliography

Provenance

Price: £10000

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