

NASA's Hubble Space Telescope pauses science due to gyro issue

November 30 2023



S125E011844

Hubble orbiting more than 300 miles above Earth as seen from the space shuttle.
Credit: NASA

NASA is working to resume science operations of the agency's Hubble Space Telescope after it entered safe mode Nov. 23 due to an ongoing

gyroscope (gyro) issue. Hubble's instruments are stable, and the telescope is in good health.

The [telescope](#) automatically entered safe mode when one of its three gyroscopes gave faulty readings. The gyros measure the telescope's turn rates and are part of the system that determines which direction the telescope is pointed. While in safe mode, science operations are suspended, and the telescope waits for new directions from the ground.

Hubble first went into safe mode Nov. 19. Although the operations team successfully recovered the [spacecraft](#) to resume observations the following day, the unstable [gyro](#) caused the observatory to suspend science operations once again Nov. 21. Following a successful recovery, Hubble entered safe mode again Nov. 23.

The team is now running tests to characterize the issue and develop solutions. If necessary, the spacecraft can be re-configured to operate with only one gyro. The spacecraft had six new gyros installed during the fifth and final space shuttle servicing mission in 2009. To date, three of those gyros remain operational, including the gyro currently experiencing fluctuations. Hubble uses three gyros to maximize efficiency, but could continue to make science observations with only one gyro if required.

NASA anticipates Hubble will continue making groundbreaking discoveries, working with other observatories, such as the agency's James Webb Space Telescope, throughout this decade and possibly into the next.

Provided by NASA

Citation: NASA's Hubble Space Telescope pauses science due to gyro issue (2023, November

30) retrieved 27 April 2024 from <https://phys.org/news/2023-11-nasa-hubble-space-telescope-science.html>

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