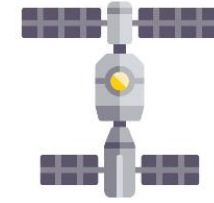




How do space devices use quantum technologies?

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Background

Space technology contains satellites, space stations, rockets, space equipment, and other spacecraft.

From the second half of the 20th century onwards, space exploration became possible with the development of powerful rockets that could overcome gravity.

USSR - 1961 Vostok-K U.S - 1961 M. Redstone-3 China - 2003 L.March 2F India - 2021 GSLV



The advancement of quantum technologies has enabled the development of space technologies.



Apollo 11 Guidance Computer

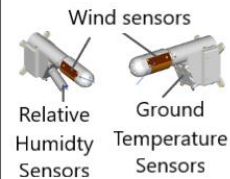


Falcon 9 has successfully landed back to the world.

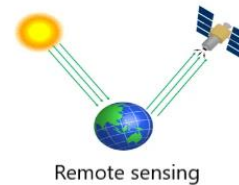
How does quantum technology work in space devices and what does it do?

Quantum technologies generally provide communicating, sensing and computing in space devices and all of them work in connection.

Sensing

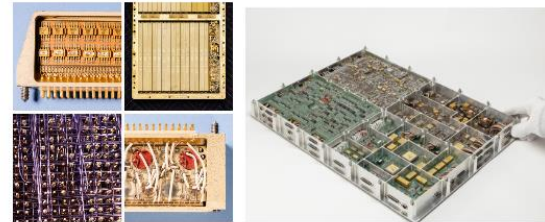


Relative Humidity Sensors Ground Temperature Sensors



Remote sensing

Computing



Guidance and control computers of spacecrafts

Communicating



Communication diagram of satellites

Examples of space technologies with quantum technology

1) SOCRATES Microsatellite

With this satellite, for the first time the communication between space and the world was established using the quantum nature of photons.



Socrates Microsatellite

James Webb Space Telescope

2) James Webb Space Telescope

The Webb telescope, which will become the most advanced telescope, will provide information about other galaxies and the birth of the universe, focusing on the depths of the universe.

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