# EarthCARE Satellite Launched to Study Atmospheric Clouds and Climate Impact



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A satellite named EarthCARE was launched on May 29, 2024, to study the role of clouds and aerosols in Earth's climate. The launch took place from Vandenberg Space Force Base in California, using SpaceX's Falcon 9 rocket.

EarthCARE, which stands for Earth Cloud Aerosol and Radiation Explorer, aims to enhance understanding of how clouds and particles like dust and smoke affect the heating and cooling of the Earth's atmosphere. The satellite will also measure the radiation emitted by the planet.

This mission, developed by the European Space Agency (ESA) in collaboration with the Japanese space agency JAXA, was initiated by Professor Anthony Illingworth from the University of Reading over 30 years ago. Key components of the satellite were built in the UK, including instruments developed by Surrey Satellite Technology and Thales Alenia Space UK.

The mission, costing over 800 million euros, is scheduled to last three years. The UK Space Agency contributed about 120 million euros to the project. EarthCARE will orbit the Earth at an altitude of roughly 400 km, crossing the equator every 90 minutes to optimize daylight conditions. The data collected are expected to improve weather forecasts and climate predictions, aiding in the understanding and mitigation of global warming threats.