

Twin sportscar-sized satellites to chase water changes on Earth

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A SpaceX Falcon 9, as seen in this NASA photo released in April 2018, will take NASA's new water-monitoring satellites into orbit

A pair of identical, sportscar-sized satellites are poised to zoom around the Earth and track changes in water and ice, offering new insights into

global warming and sea level rise, NASA said Monday.

Groundwater, oceans, lakes, rivers and ice sheets will be monitored by the Gravity Recovery and Climate Experiment Follow-On (GRACE-FO), a joint mission between the US space agency and German Research Centre for Geosciences (GFZ).

The satellites are scheduled to blast off from Vandenberg Air Force Base in California on Tuesday at 12:47 pm Pacific time (1947 GMT).

A SpaceX Falcon 9 rocket will propel the satellites to an orbit about 310 miles (500 kilometers) above the Earth.

The pair will fly 137 miles (220 kilometers) apart, or about the distance from Los Angeles to San Diego.

NASA has spent \$430 million on the mission, and Germany has spent about \$91 million.

The new pair of satellites will pick up where the first GRACE mission left off, having completed its 15-year mission in 2017.

The first GRACE mission gave scientists a trove of data about the ever-dwindling ice mass in Antarctica and Greenland, and contributed data for thousands of scientific papers, NASA said.

"Water is critical to every aspect of life on Earth – for health, for agriculture, for maintaining our way of living," said Michael Watkins, GRACE-FO science lead and director of NASA's Jet Propulsion Laboratory in Pasadena, California.

"You can't manage it well until you can measure it. GRACE-FO provides a unique way to measure water in many of its phases, allowing

us to manage water resources more effectively."

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