"Ferrari of space' yields best map of ocean currents

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Undated artist's impression of the Gravity field and Ocean Circulation Explorer (GOCE) satellite which was planned to have lift-off from Plesetsk, Russia on March 16, 2009

A satellite dubbed the "Ferrari of space" has yielded the most accurate model of ocean circulation yet, boosting understanding of the seas and a key impact of global warming, scientists said Tuesday.

Data sent home by the Gravity field and Ocean Circulation Explorer (GOCE) "mapped variations in Earth's gravity with unrivalled precision," the European Space Agency said.

It has opened the way to "the most accurate model of ocean current speeds to date."

Marie-Helene Rio from Italy's Institute of Atmospheric Sciences and Climate said the data "will provide highly valuable new insight" into the oceans.

GOCE's data helped create the most precise "geoid", or a reconstruction of Earth as it is shaped by gravity.

In practical terms, the work creates a hypothetical mean sea level—a crucial benchmark for measuring ocean rise driven by global warming.

In September, Dutch scientists reported they had been able to measure ice loss from West Antarctica with unprecedented accuracy thanks to small variations in gravity in Antarctica recorded by GOCE between November 2009 and June 2012.

Sent into orbit in 2009, GOCE disintegrated on reentry into the Earth's atmosphere in November last year, after running out of fuel.

It had orbited the Earth at an altitude of 260 kilometres (160 miles)—later lowered to 224 km—the lowest-ever for a research satellite.

Its combination of sleekness and fins, designed to maintain stability in the lingering atmosphere, brought it the nickname of the "Ferrari of space."

The 350-million-euro ($430-million) mission lasted twice as long as its initially-scheduled 20 months.