

Preparing to launch Swarm

September 20 2013



The first Swarm satellite arrived at the Plesetsk Cosmodrome in Russia on 17 September 2013. The remaining two satellites will arrive in the next few days. The trio will be tested and prepared for launch, which is scheduled for 14 November. Credit: ESA/G. Spinella

With the launch of ESA's Swarm trio set for 14 November, the first satellite has arrived safely at the Plesetsk Cosmodrome in Russia. This

new mission will unravel one of the most mysterious aspects of our planet: the magnetic field.

The arrival marks the beginning of the 'launch campaign', which includes an intensive period of tests to make sure that the satellites are fit for launch after their journey from Germany to Russia.

The campaign also includes the careful task of fuelling the satellites and attaching them to the rocket that will deliver them into orbit.

The remaining two satellites will arrive in the next couple of days, the second later today and the third at the weekend.

All three will be launched together on a single Rockot.

This first satellite has already been unloaded and taken by lorry to the integration facility, the 'MIK'.

Swarm is the next in the series of Earth Explorer missions and ESA's first constellation to advance our understanding of how Earth works.

The three satellites, developed for ESA by a consortium led by EADS Astrium GmbH, have a rather unusual shape – trapezoidal with a boom 9 m long that opens once in orbit.

This long boom means that the sensors at the tip avoid any magnetic interference from the rest of the satellite. Magnetic cleanliness is paramount for the mission.

Harnessing European and Canadian technological excellence, the three identical satellites will untangle and measure very precisely the different magnetic signals from Earth's core, mantle, crust and oceans, as well as its [ionosphere](#) and magnetosphere.

The measurements from this state-of-the-art mission will yield new insights into many natural processes, from those occurring deep inside the planet to weather in space caused by [solar activity](#).

In turn, this information will yield a better understanding of why our [magnetic field](#) is weakening.

Preparations for the [launch](#) of the Swarm mission from Plesetsk can be followed on [ESA's launch campaign blog](#).

Provided by European Space Agency

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