

Russia launches European satellite to monitor Earth's atmosphere

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Russia on Friday launched a European satellite dedicated to monitoring the Earth's atmosphere, the protective layer that shields the planet from the sun's radiation, live footage from the cosmodrome showed.

The Sentinel-5P orbiter took off on schedule at 0927 GMT from the Plesetsk Cosmodrome in northern Russia.

The launch went according to plan and the 820-kilogramme (1,800-pound) satellite was delivered into its final orbit 79 minutes after liftoff, the European Space Agency (ESA) said.

"The Sentinel-5P satellite is now safely in orbit so it is up to our mission control teams to steer this mission into its operational life and maintain it for the next seven years or more," the agency's director general, Jan Woerner, said in a statement.

The satellite—carried by a Rokot, derived from the former Soviet intercontinental ballistic missile—left behind billows of yellow smoke amid an autumnal landscape of boreal forest, footage showed earlier Friday.

After separating from the upper stage, the satellite deployed its three solar panels and began communicating, the ESA said.

"The first signal was received 93 minutes after launch as the satellite passed over the Kiruna station in Sweden," it said.

Operational in six months

The launch and the early orbit phase will last three days, and the mission is slated to begin full operations in six months, the ESA said.

It is the first satellite dedicated to monitoring the atmosphere for Europe's Copernicus project, a joint initiative of the European Union and the ESA to track environmental damage and aid disaster relief operations.

It was the sixth satellite to join the Copernicus constellation. Others launched since April 2014 monitor forest cover and land and water pollution.

"Once operational, Sentinel-5P will map the global atmosphere every day with a resolution as high as 7 kilometres x 3.5 kilometres," the ESA said this week.

"At this detail, air pollution over cities can be detected."

The satellite is carrying a state-of-the-art Tropomi monitoring instrument that can map trace gases such as nitrogen dioxide, ozone, methane, carbon monoxide and aerosols that "affect the air we breathe and therefore our health, and our climate," the agency has said.

The Copernicus programme is named after the 16th-century Polish astronomer Nicolaus Copernicus, who determined that the Earth orbited the sun, and not the other way round.

By mapping areas stricken by flood or earthquake, Copernicus will also help emergency teams identify the worst-hit areas and locate passable roads, rail lines and bridges.

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