

# Ariane 5 rocket puts European GPS satellites into orbit (Update)

12 December 2017



The Ariane 5 rocket blasted off in French Guiana on Tuesday with four more satellites for the Galileo navigation system, scheduled to be operational by 2020

An Ariane 5 rocket put four GPS satellites into orbit on Tuesday for Europe's Galileo navigation project, Arianespace said.

The European space workhorse took off at 1836 GMT and deployed the satellites four hours after launch.

The Galileo programme, when complete, will have 30 satellites in three orbital planes by 2020.

If all goes according to plan the system will be able to pinpoint a location on Earth to within a metre—compared to several metres for the United States' GPS and the Russian GLONASS systems.

The civilian-controlled Galileo system, seen as strategically important to Europe, went live in December last year, providing initial services with a weak signal, having taken 17 years at more than triple the original budget to get there.

"With this sixth successful launch of an Ariane 5 in 2017, marking the second mission of the year for

the benefit of the European Commission and the European Space Agency (ESA), Arianespace is proud to guarantee Europe reliable and independent access to space," said Stephane Israel, Arianespace's executive chairman.

The satellites launched Tuesday, each one weighing 715 kilogrammes (1,590 pounds), were placed into orbit 23,000 kilometres (14,000 miles) from Earth.

The Galileo programme is funded and owned by the EU.

The European Commission has overall responsibility for the programme, managing and overseeing the implementation of all activities, but the deployment, design and development of the infrastructure is entrusted to the ESA.

The European Commission announced in July that investigators had uncovered the problems behind the failure of atomic clocks onboard satellites already launched as part of the Galileo satnav system.

For months, the ESA had been investigating the reasons behind failing clocks onboard some of the 18 navigation satellites it had already launched for Galileo.

The ESA found after an investigation that its rubidium clocks had a faulty component that could cause a short circuit, according to European sources.

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