

## Ariane 5 - Fifth launch of 2008

August 15 2008

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Ariane 5 makes an on-time liftoff from Europe's Spaceport ELA-3 launch zone as it begins the successful mission to orbit Superbird-7 and AMC-21. This wide-angle view also shows a portion of the assembly and integration area for Ariane 5, which is partly visible in the foreground at right. Credits: ©2008 - ESA/CNES/ARIANESPACE/Activité Photo Optique Video CSG

Yesterday evening, an Ariane 5 ECA launcher lifted off from Europe's Spaceport at Kourou, in French Guiana, on its mission to place two telecommunications satellites into geostationary transfer orbits.

Lift-off of flight V185 took place at 22:44 CEST/Paris on 14 August (20:44 UTC/GMT; 17:44 UTC-3/Kourou). The satellites were accurately injected into the correct transfer orbits about 30 minutes later.

The payload comprised AMC-21, which will provide will provide 24 Ku-band channels of television and enterprise data distribution services over the USA, the Gulf of Mexico, Central America and the Caribbean, and Superbird 7, which will provide 28 Ku-band channels of broadcast services and mobile terminal links over Japan, eastern Asia and the Pacific Ocean. The payload mass was 8068 kg; the satellite masses totalled 7229 kg, with payload adapters and dispensers making up the additional 839 kg.

This fifth launch of the year keeps Arianespace and Europe's Spaceport on target for the seven missions planned for 2008 – the busiest year ever for Ariane 5.

## **Flight timeline**

The Ariane 5's cryogenic, liquid fuelled main engine was ignited first. Seven seconds later, the solid fuel rocket boosters were also fired, and a fraction of a second after that, the launch vehicle lifted off.

The solid boosters were jettisoned 2 min 20 sec after main engine ignition, and the fairing protecting the payload during the climb through the Earth's atmosphere was discarded at 3 min 12 sec. The launcher's main engine was shut down at 8 min 54 sec; 5 seconds later the main cryogenic stage separated from the upper stage and its payload.

4 seconds after main stage separation, the engine of the launcher's cryogenic upper stage was ignited to continue the journey. The upper stage engine was shut down at 24 min: 44 sec into the flight, at which point the launch vehicle was travelling at 9438 metres per second (34 000 km/h) at an altitude of 547 kilometres and the conditions for geostationary transfer orbit injection had been achieved.

At 25 min 42 sec after main engine ignition, Superbird-7 separated from

the launcher's upper stage, followed by AMC-21 at 29 min 56 sec.

Ariane 5 ECA is the latest version of the Ariane 5 launcher. It is designed to place payloads weighing up to 9.6 tonnes into geostationary transfer orbit. With its increased capacity, Ariane 5 ECA can handle dual launches of very large satellites.

Provided by ESA

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