

A photograph of the Venus Express rocket launch. The rocket is positioned vertically on the launch pad, surrounded by a large plume of white smoke and a bright orange glow from the engines. In the background, there are several tall, dark metal towers and a large, multi-story building. The sky is filled with soft, white clouds, suggesting a dawn or dusk setting. The overall scene is dramatic and captures the moment of the mission's beginning.

Venus Express: The Mission Begins

The Venus Express spacecraft was launched successfully at 04:33:34 CET on 9 November, by a Soyuz-Fregat Launcher from the Baikonur Cosmodrome in Kazakhstan. The launch and subsequent Fregat operations were picture perfect, giving the satellite exactly the boost it needed to start its journey to Venus, with only a 3 m/sec error in its velocity against a relative speed with respect to Earth of some 2.7 km/sec!

The satellite was activated automatically after the Fregat upper stage commanded separation and the ESA ground station at New Norcia in Western Australia picked up the radio signal from Venus Express at precisely the expected time and with the expected strength. From there the spacecraft performed flawlessly with deployment of the solar arrays and acquisition of the Sun's rays in order to achieve a positive power balance.

The Venus Express Mission Operations Centre at ESA's European Space Operations Centre (ESOC) in Darmstadt then put the spacecraft through its paces by configuring it for normal operations and turning on the high power X-band transmitters. The Launch and Early Orbit Phase (LEOP) of the mission was completed on time without incident on 11 November and the spacecraft is now on its way to Venus, travelling an average of one million kilometres every four days during the initial part of its voyage. The 'cruise phase' will continue until the spacecraft reaches Venus on 11 April 2006, and during this period the spacecraft platform and the experiments that it carries will be exercised to confirm correct performance and operability. The very critical Venus Orbit Insertion (VOI) manoeuvre will also be practised to ensure that operation is successful. Once the satellite is in orbit around Venus, the final experiment commissioning will take place in order to start routine science operations in early June 2006.



The Soyuz fairing being moved over the horizontally tilted stack of the Venus Express spacecraft and the Fregat upper stage