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The Venus Express mission
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The ESA mission Venus Express was launched from Baikonur, Kazakhstan, on 9 November 2005. After a 5 months cruise phase, the spacecraft was inserted in a Venus orbit on 11 April 2006. The main objective of the mission is to carry out a detailed study of the atmosphere and the plasma environment and a number of properties of the surface of Venus, both on a global level and on a small scale level. The nominal duration of the mission was two Venus sidereal days (486 earth days) but the mission has been extending three times and is now funded until end of 2014, enabling data to be collected during a significant part of a full solar cycle.

The orbit is a highly elliptical polar orbit with 24 hours period and a percicentre located close to the North Pole. It is optimised for remote observations of the southern hemisphere at a global scale from high altitude, and for detailed studies of the northern hemisphere from low altitude, both at varying solar aspect angles. It also allows for in-situ plasma measurements covering a large range of distances from the planet. The payload is dedicated to studies of the physics and chemistry of the atmosphere and the clouds and the related processes. The interaction of the upper atmosphere with the solar wind will be investigated by dedicated instruments. With a time from the mission approval to the launch of just above three years this mission by far is the fastest scientific mission undertaken by ESA until now.

This talk will describe the main features of the mission and summarise the most important results from the different investigations as an introduction to the subsequent talks on the individual investigations.

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