

Venus Transit 2012: the expeditions to Svalbard, Norway, and Canberra, Australia

M. Pérez-Ayúcar (1), Michel G. Breitfellner (2), Manuel Castillo (3), Santa Martínez (4), Roberto Prieto (5), Miguel Sánchez Portal (6)

(1) Venus Express Science Operations, European Science and Astronomy Center (ESAC), Madrid, Spain
(miguel.perez.ayucar@esa.int)

(2) Venus Express Science Operations, European Science and Astronomy Center (ESAC), Madrid, Spain
(mbreitfe@sciops.esa.int)

(3) SMOS Operations, European Science and Astronomy Center (ESAC), Madrid, Spain (manuel.castillo@esa.int)

(4) Planetary Science Archives, European Science and Astronomy Center (ESAC), Madrid, Spain (smartinez@sciops.esa.int)

(5) Computer Support Group, European Science and Astronomy Center (ESAC), Madrid, Spain (mbreitfe@sciops.esa.int)

(6) Herschell Project Scientist Group, European Science and Astronomy Center (ESAC), Madrid, Spain
(Miguel.Sanchez@sciops.esa.int)

Abstract

This talk will summarize the two expeditions, its preparations and its results.

A transit of Venus in front of the solar disk as seen from Earth is a rare astronomical event which comes in pairs separated by approximately 8 years and occurs only about every 105 years.

Although its historic scientific importance, e.g. to measure the distances in the solar system or to analyze the Venus atmosphere, has diminished since humanity roams our solar system with robotic spacecrafts, a Venus Transit remains a spectacular astronomical event, worth observing.

Unfortunately, this time the transit occurs during the night in Europe, from about midnight to seven o'clock in the morning, CEST. However, some astronomy enthusiasts working at ESA's European Space Astronomy Centre (ESAC) in Madrid, Spain, will organize a campaign to observe the Venus Transit 2012 from two separate locations: Svalbard in Norway, and Canberra in Australia. The expeditions are done in the framework of ESA and its educational project CESAR (Cooperation through Education in Science and Astronomy Research).

Both teams will be equipped with a twin set of telescopes, each comprising a 90mm solar H_alpha (656 nm wavelength) telescope, and a white light 102mm telescope. H-alpha and white light images will be simultaneously transmitted live during the whole Venus Transit, through a dedicated public web page.