



The Venus Monitoring Camera - design and first results

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The Venus Monitoring Camera (VMC) is part of the Venus Express payload. The original VMC design foresaw six optical filters and two CCD detectors. The VMC, although having partial heritage from Rosetta and Mars Express missions, is a new development. The limited time and resources forced us to compromise to having only four channels and one CCD. One of the main goals of the Venus Express mission is to study the dynamics of the Venus atmosphere. This objective requires global imaging of the planet. The VMC is designed to meet this goal having a relatively wide field of view of 17.5°. The VMC takes images of Venus in four narrow band filters from UV to near-IR.. The spatial resolution is 0.2 km to 45 km per pixel, depending on the distance from the planet. The full disc of Venus is in the VMC FOV near the apocentre of the orbit. The VMC complements other instruments of Venus Express by, 1) tracking cloud motions at 70 km (cloud tops) and at 50 km (main cloud layer) altitude; 2) mapping O₂ night-glow and its variability 3) mapping the night side thermal emission from the surface and studying of the lapse rate and H₂O content in the lower 6-10 km. In addition the VMC provides imaging context for the whole mission. This contribution will describe the VMC design and present some of the results obtained to date.