Observations of global dynamics in the Venus upper cloud deck by the Venus Monitoring Camera

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The spectrum of the solar radiation reflected by Venus features a broad absorption signature between 0.2 - 0.5 μm. Although the part between 0.2 and 0.32 μm is explained by the presence of SO2 at the cloud tops, the spectrum above 0.32 μm corresponds to another yet unknown UV-blue absorber. The UV channel of the Venus Monitoring Camera (VMC) onboard Venus Express is centered at 0.365 μm. Brightness contrasts on the Venus disc seen by VMC are about 20%. One of the main goals of these observations is to study cloud morphology and global and local dynamics of the Venus mesosphere by tracking motion of the UV markings. Apocentre observations provide a picture of global atmospheric dynamics of the Southern hemisphere that shows air masses spiraling polewards. Pericentre observations give a close-up view of cloud structures with resolution of up to few hundred meters and reveal different kinds of wave activity like wave trains. The paper will discuss first observations of Venus in the VMC UV filter.