

Statistics and “logbook” of the Venus Express/VMC observations

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Abstract

Venus Monitoring Camera (VMC) [1], that has wide angle and multi channel (365, 513, 965 and 101 nm), observed the planet for already more than 3 years. It provides the largest and the longest imaging dataset of Venus cloud tops and surfaces. In this study, we analysed the spatial coverage of VMC observation statistically and made “logbook” which gives the users an general over view of available VMC observation and their quality.

Logbook format

VMC “Logbook” is a table that summarizes VMC observations based on the Venus Express science planning [2]. Each column contains observational information (orbital parameters, observation star & end time, number of images, science theme, etc.) and data quality information about one orbit (Figure 1). We classified the data quality associated with VMC scientific topics: Cloud Morphology, Wind, Wave, Limb, Surface.

features, and smaller phase angle. Quality 1-3 has good data available for investigation. Quality 4 has data which has no feature, quality 5 is bad data, and quality 0 means there are no image for the topics.

In the presentation, we will show the detail of statistics and logbook and discuss observation needed in future.

References

[1] Markiewicz, W. J. et al. (2007), *Planetary and Space Science*, 55, 1701–1711.  
[2] Titov, D. V. et al. (2006), *Planetary and Space Science*, 54, 1279–1297.

VMC observations logbook AtsJ-904																		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
1 Orbit and observations										Number of images		Cloud Morphology			Dynamics			
2 Orbit LTAN h Long start hand h UV VIS NIR1 NIR2 Science t										South polar	Mid-Low-lats	North mosaic	Winds	Mid-lat	Waves	Hig		
659	636	6	45787	106.68	-11.55	11.38	63	35	35	35	AC006A-ADC	3	0	3	0	0	0	
660	636	6	56532	106.68	-11.55	11.17	51	22	22	22	AC006A-ADC	3	0	3	0	0	0	
661	637	6	67273	106.67	-04.20	1.06	55	33	33	33	AC006A-ADC	3	0	2	4	0	0	
662	638	6	78011	106.67	-11.55	1.18	36	11	11	11	AC006A-ADC	3	0	3	0	0	0	
663	638	6	88743	106.67	-04.19	-00.25	40	25	25	25	AC006A-ADC	3	0	3	0	0	0	
664	640	6	99472	106.66	-11.55	-04.14	32	8	8	8	AC006A-ADC	0	0	0	0	0	0	
665	641	7	10196	106.66	-06.20	-00.25	24	16	16	16	AC006A-ADC	3	0	2	0	0	0	
666	642	7	20916	106.66	-11.55	-04.14	32	8	8	8	AC006A-ADC	3	0	3	0	0	0	
667	643	7	31631	106.66	-06.20	-00.25	24	16	16	16	AC006A-ADC	3	0	1	0	0	0	
668	644	7	42342	106.65	-11.55	-04.14	32	8	8	8	AC006A-ADC	3	0	3	0	0	0	
669	645	7	53048	106.65	-06.20	-00.03	29	21	21	21	AC006A-ADC	3	0	3	0	0	0	

Figure 1: A part of VMC “Logbook” table.

Quality Classification

To perform classification of data quality as objectively as possible, we set check items for each science topics. Higher quality data has higher contrast, clearer