



気候変動観測衛星

GC0M-C
Global Change Observation Mission-Climate

Approximation of Ver.2 L1B VN01-11 from Ver.1 L1B

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Difference between Ver. 1 and Ver. 2

- ① Offset detector selection (Ver. 1 was over corrected by non-dark offset pixels)
- ② Temporal change correction (Ver. 2 is corrected by the Lunar calibration results)

$$L_{(V2)}(\lambda, D) = \frac{L_{(c\Delta)}(\lambda, D)}{k_v(\lambda, D)}$$

$$L_{(c\Delta)}(\lambda, D) = L_{(V1)}(\lambda) + \sum_{i=0}^2 \{a_i(\lambda, R)D^i\}$$

$$k_v(\lambda, D) = 1 + k_{vt}(\lambda) \times D$$

where:

- $L_{(V2)}$: Ver. 2 Level-1B radiance ($\text{W}/\text{m}^2/\mu\text{m}/\text{sr}$)
- $L_{(V1)}$: Ver. 1 Level-1B radiance ($\text{W}/\text{m}^2/\mu\text{m}/\text{sr}$)
- $L_{(c\Delta)}$: Offset corrected radiance
- λ : wavelength (VNR channels)
- D : Days from 1st Jan 2018 ($D = 0.0$)
- R : VNR resolution (Q or K)
- a_i : offset correction coefficients
- k_v : temporal change correction factor at D
- k_{vt} : gain degradation coefficients per day

Ch	a_i for Q(250m)			a_i for K(1km)			k_{vt}
	a0	a1	a2	a0	a1	a2	
VN01	-0.021426	1.064.E-03	-2.48.E-07	-0.009722	8.356.E-04	-1.81.E-07	-6.20.E-05
VN02	0.008461	7.478.E-04	-4.41.E-08	0.007594	6.888.E-04	-1.71.E-07	-6.06.E-05
VN03	-0.002960	6.077.E-04	8.68.E-10	-0.001505	5.360.E-04	-6.42.E-08	-5.79.E-05
VN04	-0.010513	6.533.E-04	-1.21.E-07	-0.002564	5.100.E-04	-5.46.E-08	-5.05.E-05
VN05	0.003113	2.371.E-04	1.66.E-08	0.003148	2.154.E-04	-2.95.E-08	-4.20.E-05
VN06	-0.012615	4.089.E-04	-1.20.E-07	-0.003941	3.030.E-04	-5.33.E-08	-3.06.E-05
VN07	-0.011460	2.526.E-04	-4.15.E-08	-0.005830	1.977.E-04	-1.84.E-08	-5.04.E-06
VN08	-0.004370	1.879.E-04	-1.21.E-08	-0.003119	1.692.E-04	-4.63.E-08	-4.34.E-06
VN09	0.008436	2.221.E-04	3.16.E-08	0.006613	1.946.E-04	-3.59.E-08	0.00.E+00
VN10	-0.000424	2.749.E-04	-1.17.E-07	-0.003417	2.697.E-04	-1.52.E-07	0.00.E+00
VN11	-0.000249	2.200.E-04	-1.67.E-08	-0.000727	1.955.E-04	-5.33.E-08	0.00.E+00

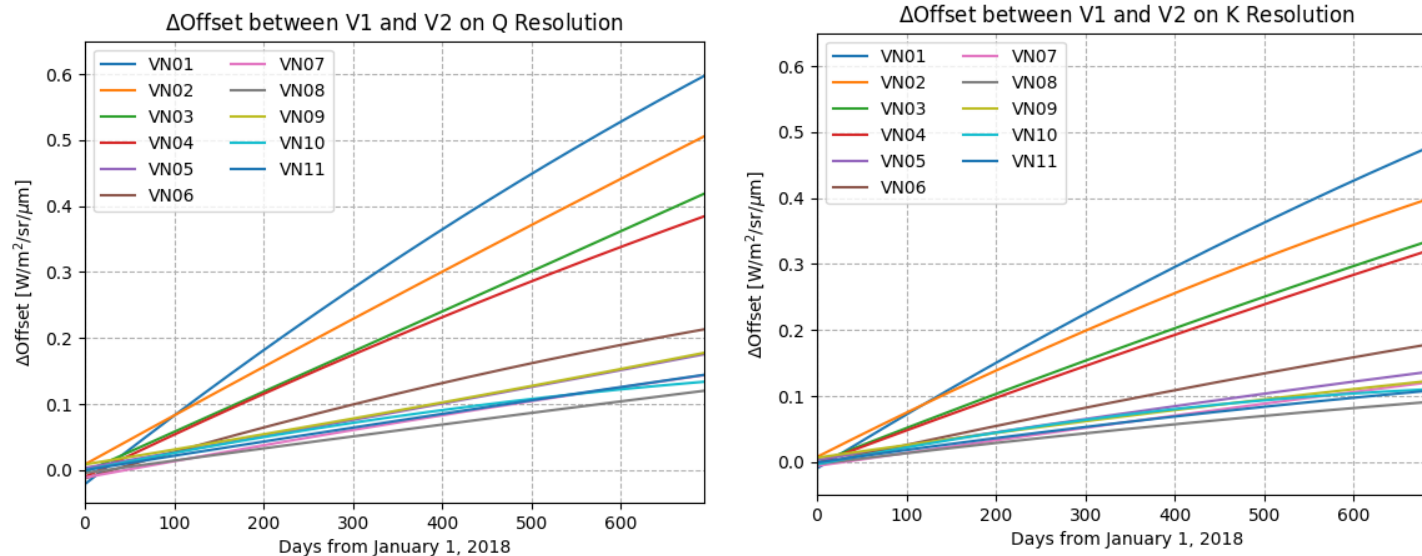


Figure 1. Δ offset Trends from January 1, 2018 to November 15, 2019.