

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-12-05 (01:45)

1 Short Introduction

1.1 The list of parameters

You may want to keep the list given in table 1 at hand when viewing the results.

2 Definitions

The averages shown here are *unweighed* averages:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i \quad (1)$$

with N the number of observations in the dataset.

The spread of the measurements is indicated with the variance $V(x)$, or rather the standard deviation $\sigma(x) = \sqrt{V(x)}$.

$$V(x) = \frac{1}{N-1} \sum_{i=1}^N (x_i - \bar{x})^2 \quad (2)$$

We also report the more robust statistics median, minimum, maximum, various percentiles and inter quartile range.

The median m is the value of parameter x for which half of the observations of x is smaller than m :

$$P(x \leq m) = P(x \geq m) = \int_{-\infty}^m f(x) dx = \frac{1}{2} \quad (3)$$

with $f(x)$ the probability density function.

The median is a special case of a percentile. Instead of 1/2 in equation 3, other threshold values can be used. We report results for 1 %, 5 %, 10 %, 15.9 %, 25 %, 75 %, 84.1 %, 90 %, 95 % and 99 %. The inter quartile range is the difference between the 75 % and 25 % percentiles. Similarly the minimum and maximum values correspond to the 0 % and 100 % percentiles respectively.

For normally distributed parameters the mean and median are the same, while the $\mu \pm \sigma$ values and the 15.9 % and 84.1 % percentiles coincide.

To get a measure for the relation of one variable $x_{(k)}$ with another $x_{(l)}$, we calculate the covariance matrix C_{kl} .

$$C_{kl} = C(x_{(k)}, x_{(l)}) = \frac{1}{N-1} \sum_{i=1}^N (x_{(k),i} - \bar{x}_{(k)})(x_{(l),i} - \bar{x}_{(l)}) \quad (4)$$

Rather than a dimensionally dependent covariance, it is often easier to interpret a correlation matrix R_{kl} , a matrix of Pearson's r coefficients:

$$R_{kl} = R(x_{(k)}, x_{(l)}) = \frac{C_{kl}}{\sqrt{C_{kk}C_{ll}}} = \frac{C_{kl}}{\sqrt{V(x_k)V(x_l)}} \quad (5)$$

The diagonal elements of the covariance matrix are the variances of the elements, $V(x_{(k)}) = C_{kk}$ and obviously $R_{kk} = 1$.

Table 1: Parameterlist and basic statistics for the analysis

Variable	mean $\pm \sigma$	Count	Mode	IQR	Median	Minimum	Maximum
qa value [1]	0.602 ± 0.362	21027090	5.000×10^{-3}	0.570	0.700	0.0	1.000
cloud fraction [1]	0.585 ± 0.336	21027090	0.995	0.697	0.583	4.702×10^{-3}	1.000
cloud top height [m]	$(0.391 \pm 0.261) \times 10^4$	21027090	1.425×10^3	3.760×10^3	3.420×10^3	0.0	2.000×10^4
cloud optical thickness [1]	19.5 ± 36.4	21027090	9.34	10.8	9.06	1.000	250
cloud fraction crb [1]	0.585 ± 0.336	21027090	0.995	0.697	0.583	1.322×10^{-4}	1.000
cloud height crb [m]	$(0.298 \pm 0.224) \times 10^4$	21027090	75.0	3.133×10^3	2.581×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.621 ± 0.220	21027090	0.995	0.317	0.605	0.0	1.000
surface albedo fitted [1]	0.297 ± 0.352	21027090	2.500×10^{-2}	0.563	6.905×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.283 ± 0.337	21027090	1.500×10^{-2}	0.569	5.673×10^{-2}	0.0	1.000
fitted root mean square [1]	$(7.566 \pm 19.931) \times 10^{-4}$	21027090	5.000×10^{-5}	9.497×10^{-4}	4.321×10^{-4}	8.683×10^{-7}	1.65
fitted root mean square crb [1]	$(6.839 \pm 24.546) \times 10^{-4}$	21027090	5.000×10^{-5}	9.214×10^{-4}	3.395×10^{-4}	8.601×10^{-7}	1.78
wavelength shift [nm]	$(9.096 \pm 7.331) \times 10^{-3}$	21027090	9.000×10^{-4}	1.103×10^{-2}	8.739×10^{-3}	-0.222	0.811
cloud fraction apriori [1]	0.594 ± 0.340	21027090	0.995	0.722	0.602	0.0	1.000
reflectance blue ocra [1]	0.602 ± 0.238	21027090	0.265	0.418	0.592	0.143	2.08
reflectance green ocra [1]	0.555 ± 0.267	21027090	0.185	0.491	0.552	7.892×10^{-2}	2.03
reflectance continuum aband [1]	0.507 ± 0.295	21027090	4.500×10^{-2}	0.504	0.516	1.216×10^{-2}	6.24

Table 2: Percentile ranges

Variable	1 %	5 %	10 %	15.9 %	25 %	75 %	84.1 %	90 %	95 %	99 %
qa value [1]	0.0	0.0	0.0	0.0	0.330	0.900	0.990	1.000	1.000	1.000
cloud fraction [1]	2.985×10^{-2}	7.632×10^{-2}	0.120	0.174	0.274	0.971	1.000	1.000	1.000	1.000
cloud top height [m]	274	699	1.039×10^3	1.340×10^3	1.755×10^3	5.516×10^3	6.613×10^3	7.586×10^3	8.868×10^3	1.129×10^4
cloud optical thickness [1]	1.05	2.53	3.62	4.50	5.43	16.2	24.8	37.3	68.9	250
cloud fraction crb [1]	2.939×10^{-2}	7.572×10^{-2}	0.119	0.173	0.273	0.970	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	209	512	778	1.145×10^3	4.278×10^3	5.314×10^3	6.253×10^3	7.362×10^3	9.292×10^3
cloud albedo crb [1]	4.834×10^{-2}	0.249	0.365	0.426	0.474	0.791	0.875	0.933	0.995	1.000
surface albedo fitted [1]	0.0	8.026×10^{-3}	1.366×10^{-2}	1.879×10^{-2}	2.632×10^{-2}	0.589	0.837	0.917	0.966	1.000
surface albedo fitted crb [1]	0.0	6.484×10^{-3}	1.040×10^{-2}	1.442×10^{-2}	2.073×10^{-2}	0.590	0.806	0.860	0.900	0.946
fitted root mean square [1]	1.497×10^{-5}	2.923×10^{-5}	4.917×10^{-5}	8.209×10^{-5}	1.440×10^{-4}	1.094×10^{-3}	1.530×10^{-3}	1.940×10^{-3}	2.461×10^{-3}	3.418×10^{-3}
fitted root mean square crb [1]	8.793×10^{-6}	1.910×10^{-5}	3.208×10^{-5}	5.130×10^{-5}	9.357×10^{-5}	1.015×10^{-3}	1.447×10^{-3}	1.838×10^{-3}	2.339×10^{-3}	3.271×10^{-3}
wavelength shift [nm]	-6.372×10^{-3}	-3.697×10^{-4}	4.359×10^{-4}	1.380×10^{-3}	3.258×10^{-3}	1.429×10^{-2}	1.665×10^{-2}	1.861×10^{-2}	2.112×10^{-2}	2.651×10^{-2}
cloud fraction apriori [1]	3.531×10^{-2}	7.261×10^{-2}	0.115	0.171	0.278	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.234	0.262	0.291	0.327	0.389	0.807	0.873	0.911	0.947	1.10
reflectance green ocra [1]	0.154	0.177	0.201	0.234	0.300	0.791	0.864	0.908	0.944	1.07
reflectance continuum aband [1]	3.000×10^{-2}	5.705×10^{-2}	9.576×10^{-2}	0.150	0.251	0.755	0.832	0.880	0.929	1.09

Table 3: Parameterlist and basic statistics for the analysis for observations in the northern hemisphere

Variable	mean $\pm \sigma$	Count	IQR	Median	Minimum	Maximum	25 % percentile	75 % percentile
qa value [1]	0.594 ± 0.390	8326474	0.730	0.770	0.0	1.000	0.220	0.950
cloud fraction [1]	0.564 ± 0.343	8326474	0.714	0.555	6.664×10^{-3}	1.000	0.235	0.949
cloud top height [m]	$(0.435 \pm 0.268) \times 10^4$	8326474	4.142×10^3	3.913×10^3	0.0	2.000×10^4	2.062×10^3	6.204×10^3
cloud optical thickness [1]	28.9 ± 49.6	8326474	18.8	10.5	1.000	250	6.14	24.9
cloud fraction crb [1]	0.563 ± 0.343	8326474	0.713	0.552	8.575×10^{-3}	1.000	0.234	0.946
cloud height crb [m]	$(0.365 \pm 0.229) \times 10^4$	8326474	3.597×10^3	3.364×10^3	0.0	2.000×10^4	1.655×10^3	5.253×10^3
cloud albedo crb [1]	0.592 ± 0.211	8326474	0.265	0.577	0.0	1.000	0.462	0.727
surface albedo fitted [1]	0.160 ± 0.184	8326474	0.217	5.827×10^{-2}	0.0	1.000	2.794×10^{-2}	0.245
surface albedo fitted crb [1]	0.153 ± 0.183	8326474	0.214	4.946×10^{-2}	0.0	1.000	2.198×10^{-2}	0.236
fitted root mean square [1]	$(3.928 \pm 5.160) \times 10^{-4}$	8326474	4.052×10^{-4}	2.272×10^{-4}	8.683×10^{-7}	7.030×10^{-2}	9.257×10^{-5}	4.977×10^{-4}
fitted root mean square crb [1]	$(3.262 \pm 4.617) \times 10^{-4}$	8326474	3.505×10^{-4}	1.485×10^{-4}	9.315×10^{-7}	2.246×10^{-2}	5.060×10^{-5}	4.011×10^{-4}
wavelength shift [nm]	$(6.633 \pm 6.583) \times 10^{-3}$	8326474	9.177×10^{-3}	5.600×10^{-3}	-4.720×10^{-2}	5.928×10^{-2}	1.534×10^{-3}	1.071×10^{-2}
cloud fraction apriori [1]	0.567 ± 0.348	8326474	0.755	0.558	0.0	1.000	0.229	0.984
reflectance blue ocra [1]	0.547 ± 0.213	8326474	0.317	0.525	0.143	2.06	0.371	0.688
reflectance green ocra [1]	0.488 ± 0.237	8326474	0.376	0.468	7.892×10^{-2}	2.03	0.280	0.657
reflectance continuum aband [1]	0.440 ± 0.276	8326474	0.401	0.422	1.354×10^{-2}	6.24	0.222	0.623

Table 4: Parameterlist and basic statistics for the analysis for observations in the southern hemisphere

Variable	mean $\pm \sigma$	Count	IQR	Median	Minimum	Maximum	25 % percentile	75 % percentile
qa value [1]	0.608 ± 0.342	12700616	0.500	0.700	0.0	1.000	0.400	0.900
cloud fraction [1]	0.599 ± 0.331	12700616	0.683	0.600	4.702×10^{-3}	1.000	0.301	0.984
cloud top height [m]	$(0.362 \pm 0.253) \times 10^4$	12700616	3.514×10^3	3.123×10^3	0.0	2.000×10^4	1.584×10^3	5.098×10^3
cloud optical thickness [1]	13.3 ± 22.0	12700616	7.99	8.43	1.000	250	5.16	13.1
cloud fraction crb [1]	0.599 ± 0.331	12700616	0.684	0.601	1.322×10^{-4}	1.000	0.301	0.984
cloud height crb [m]	$(0.254 \pm 0.209) \times 10^4$	12700616	2.702×10^3	2.133×10^3	0.0	2.000×10^4	890	3.592×10^3
cloud albedo crb [1]	0.641 ± 0.224	12700616	0.345	0.633	0.0	1.000	0.482	0.827
surface albedo fitted [1]	0.387 ± 0.403	12700616	0.823	8.986×10^{-2}	0.0	1.000	2.513×10^{-2}	0.848
surface albedo fitted crb [1]	0.368 ± 0.385	12700616	0.793	7.383×10^{-2}	0.0	1.000	1.981×10^{-2}	0.813
fitted root mean square [1]	$(9.950 \pm 25.017) \times 10^{-4}$	12700616	1.253×10^{-3}	7.296×10^{-4}	1.372×10^{-6}	1.65	2.353×10^{-4}	1.488×10^{-3}
fitted root mean square crb [1]	$(9.184 \pm 31.139) \times 10^{-4}$	12700616	1.227×10^{-3}	6.429×10^{-4}	8.601×10^{-7}	1.78	1.746×10^{-4}	1.401×10^{-3}
wavelength shift [nm]	$(1.071 \pm 0.735) \times 10^{-2}$	12700616	1.055×10^{-2}	1.103×10^{-2}	-0.222	0.811	5.288×10^{-3}	1.583×10^{-2}
cloud fraction apriori [1]	0.612 ± 0.333	12700616	0.686	0.628	0.0	1.000	0.314	1.000
reflectance blue ocra [1]	0.638 ± 0.246	12700616	0.449	0.673	0.147	2.08	0.407	0.856
reflectance green ocra [1]	0.598 ± 0.277	12700616	0.525	0.647	8.534×10^{-2}	2.02	0.323	0.849
reflectance continuum aband [1]	0.550 ± 0.299	12700616	0.525	0.604	1.216×10^{-2}	4.63	0.284	0.809

Table 5: Parameterlist and basic statistics for the analysis for observations over water

Variable	mean $\pm \sigma$	Count	IQR	Median	Minimum	Maximum	25 % percentile	75 % percentile
qa value [1]	0.688 ± 0.333	12932281	0.550	0.850	0.0	1.000	0.400	0.950
cloud fraction [1]	0.613 ± 0.357	12932281	0.752	0.670	4.702×10^{-3}	1.000	0.248	1.000
cloud top height [m]	$(0.345 \pm 0.252) \times 10^4$	12932281	3.366×10^3	2.674×10^3	0.0	2.000×10^4	1.502×10^3	4.868×10^3
cloud optical thickness [1]	17.2 ± 26.6	12932281	10.0	9.94	1.000	250	6.65	16.7
cloud fraction crb [1]	0.612 ± 0.357	12932281	0.753	0.668	1.322×10^{-4}	1.000	0.247	1.000
cloud height crb [m]	$(0.274 \pm 0.230) \times 10^4$	12932281	3.121×10^3	2.045×10^3	0.0	2.000×10^4	929	4.050×10^3
cloud albedo crb [1]	0.563 ± 0.185	12932281	0.235	0.544	0.0	1.000	0.453	0.688
surface albedo fitted [1]	0.121 ± 0.231	12932281	3.644×10^{-2}	3.170×10^{-2}	0.0	1.000	1.844×10^{-2}	5.488×10^{-2}
surface albedo fitted crb [1]	0.116 ± 0.232	12932281	3.091×10^{-2}	2.529×10^{-2}	0.0	1.000	1.412×10^{-2}	4.503×10^{-2}
fitted root mean square [1]	$(7.056 \pm 23.815) \times 10^{-4}$	12932281	9.542×10^{-4}	3.208×10^{-4}	8.683×10^{-7}	1.65	9.589×10^{-5}	1.050×10^{-3}
fitted root mean square crb [1]	$(6.851 \pm 29.079) \times 10^{-4}$	12932281	9.519×10^{-4}	2.953×10^{-4}	8.601×10^{-7}	1.76	7.638×10^{-5}	1.028×10^{-3}
wavelength shift [nm]	$(8.644 \pm 7.679) \times 10^{-3}$	12932281	1.140×10^{-2}	7.997×10^{-3}	-0.222	0.811	2.617×10^{-3}	1.401×10^{-2}
cloud fraction apriori [1]	0.616 ± 0.363	12932281	0.760	0.681	0.0	1.000	0.240	1.000
reflectance blue ocra [1]	0.530 ± 0.210	12932281	0.336	0.496	0.155	2.08	0.351	0.687
reflectance green ocra [1]	0.471 ± 0.238	12932281	0.408	0.436	9.163×10^{-2}	2.02	0.253	0.661
reflectance continuum aband [1]	0.406 ± 0.276	12932281	0.482	0.384	1.216×10^{-2}	5.90	0.148	0.630

Table 6: Parameterlist and basic statistics for the analysis for observations over land

Variable	mean $\pm \sigma$	Count	IQR	Median	Minimum	Maximum	25 % percentile	75 % percentile
qa value [1]	0.447 ± 0.357	6601405	0.700	0.560	0.0	1.000	0.0	0.700
cloud fraction [1]	0.523 ± 0.282	6601405	0.439	0.492	6.664×10^{-3}	1.000	0.299	0.738
cloud top height [m]	$(0.477 \pm 0.255) \times 10^4$	6601405	3.080×10^3	4.572×10^3	0.0	2.000×10^4	3.017×10^3	6.097×10^3
cloud optical thickness [1]	19.6 ± 44.0	6601405	7.45	6.16	1.000	250	4.56	12.0
cloud fraction crb [1]	0.524 ± 0.282	6601405	0.440	0.494	8.694×10^{-3}	1.000	0.300	0.740
cloud height crb [m]	$(0.337 \pm 0.204) \times 10^4$	6601405	2.493×10^3	3.157×10^3	0.0	2.000×10^4	1.944×10^3	4.436×10^3
cloud albedo crb [1]	0.730 ± 0.240	6601405	0.349	0.787	0.0	1.000	0.579	0.928
surface albedo fitted [1]	0.645 ± 0.317	6601405	0.635	0.797	0.0	1.000	0.301	0.936
surface albedo fitted crb [1]	0.613 ± 0.294	6601405	0.577	0.772	3.806×10^{-3}	1.000	0.295	0.873
fitted root mean square [1]	$(8.884 \pm 9.873) \times 10^{-4}$	6601405	9.462×10^{-4}	6.244×10^{-4}	2.593×10^{-6}	0.921	2.883×10^{-4}	1.234×10^{-3}
fitted root mean square crb [1]	$(7.204 \pm 10.497) \times 10^{-4}$	6601405	9.224×10^{-4}	4.552×10^{-4}	2.255×10^{-6}	0.906	1.476×10^{-4}	1.070×10^{-3}
wavelength shift [nm]	$(1.027 \pm 0.662) \times 10^{-2}$	6601405	1.013×10^{-2}	1.040×10^{-2}	-4.614×10^{-2}	5.258×10^{-2}	4.989×10^{-3}	1.512×10^{-2}
cloud fraction apriori [1]	0.544 ± 0.284	6601405	0.447	0.522	0.0	1.000	0.320	0.767
reflectance blue oca [1]	0.743 ± 0.228	6601405	0.308	0.821	0.143	2.06	0.597	0.905
reflectance green oca [1]	0.718 ± 0.250	6601405	0.349	0.808	7.892×10^{-2}	2.03	0.556	0.905
reflectance continuum aband [1]	0.697 ± 0.242	6601405	0.358	0.764	1.413×10^{-2}	6.24	0.518	0.875

3 Granule outlines

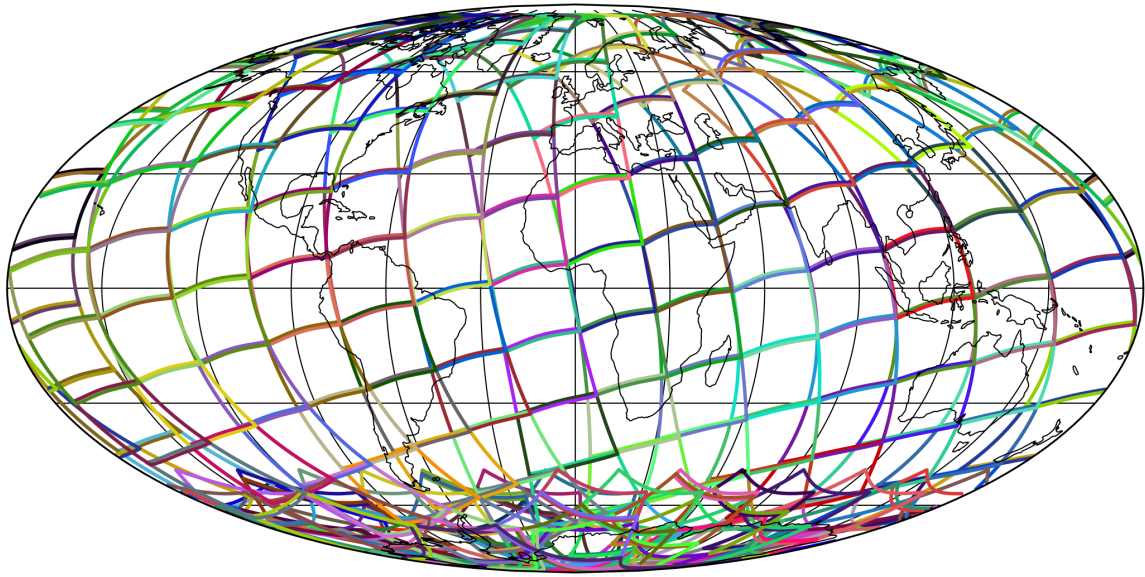


Figure 1: Outline of the granules.

4 Input data monitoring

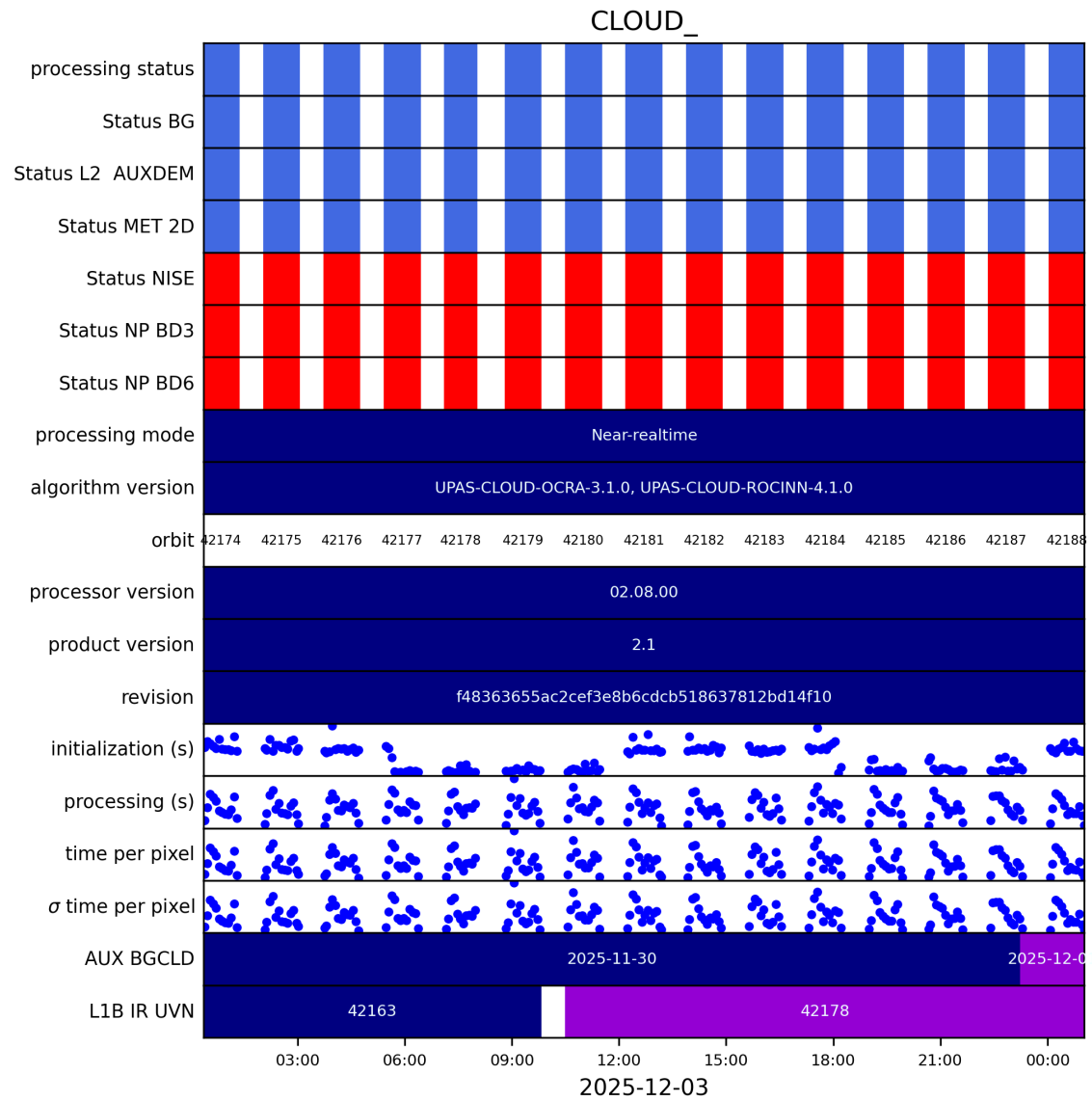


Figure 2: Input data per granule

5 Warnings and errors

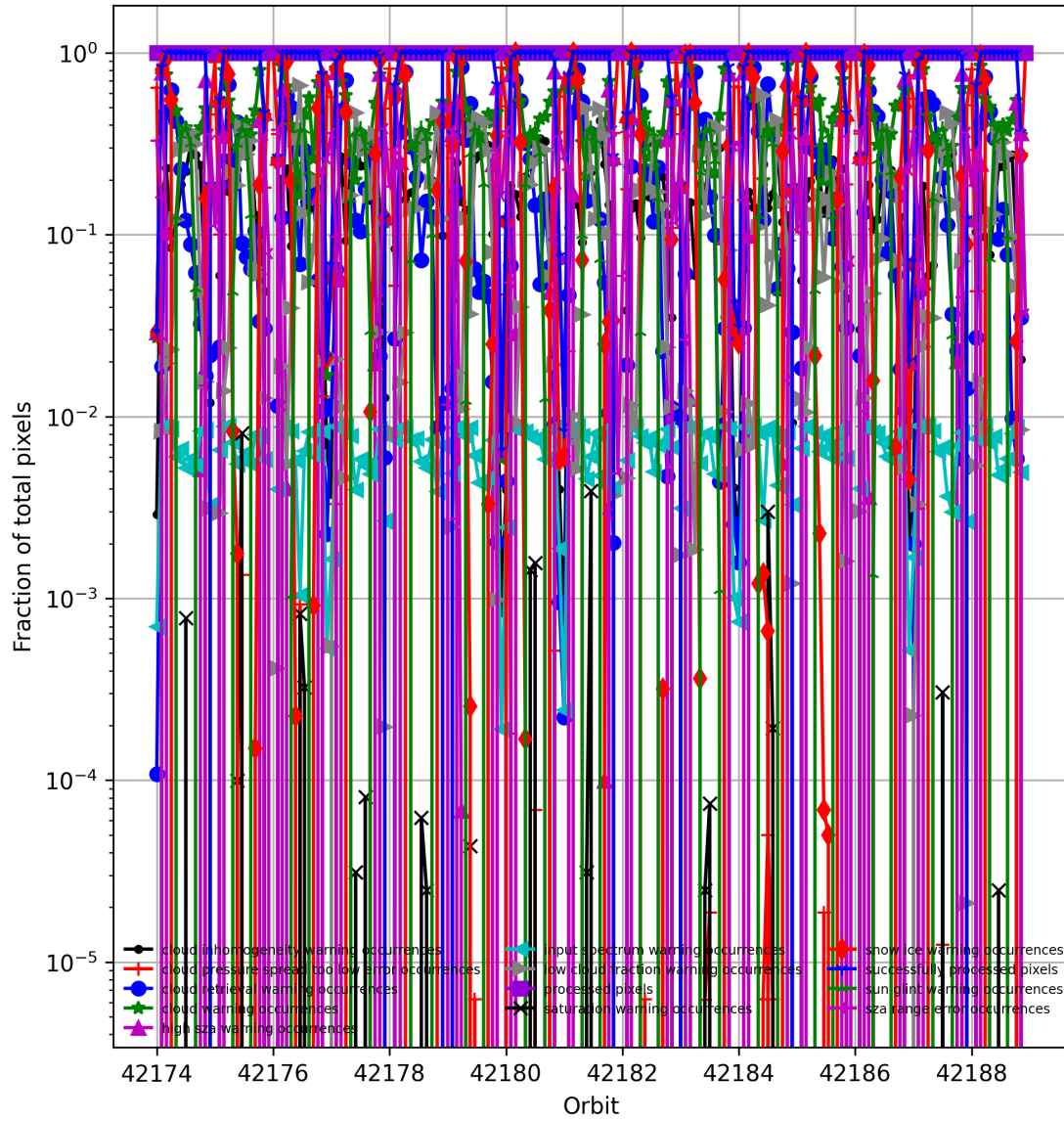


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

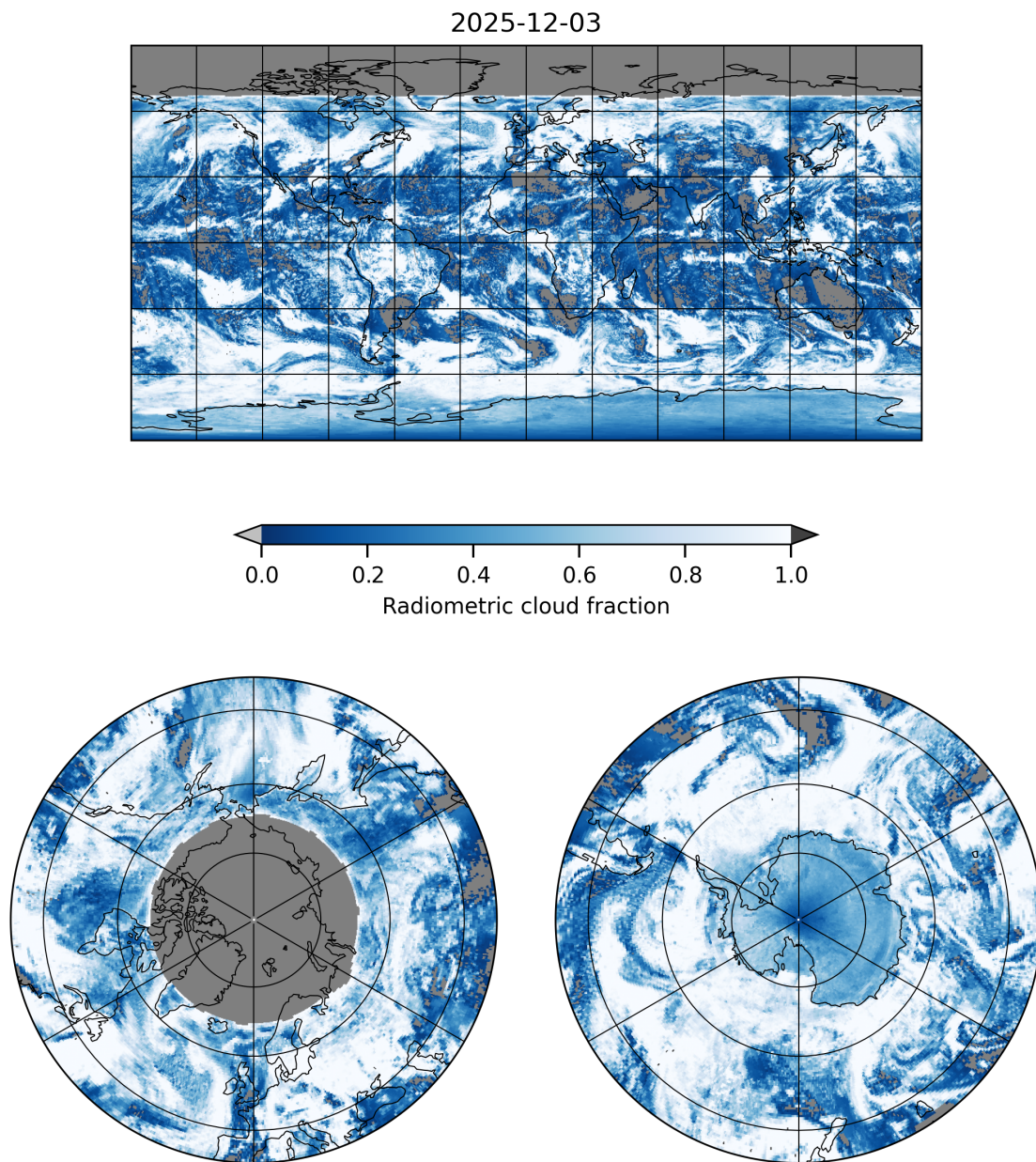


Figure 4: Map of “Radiometric cloud fraction” for 2025-12-03 to 2025-12-04

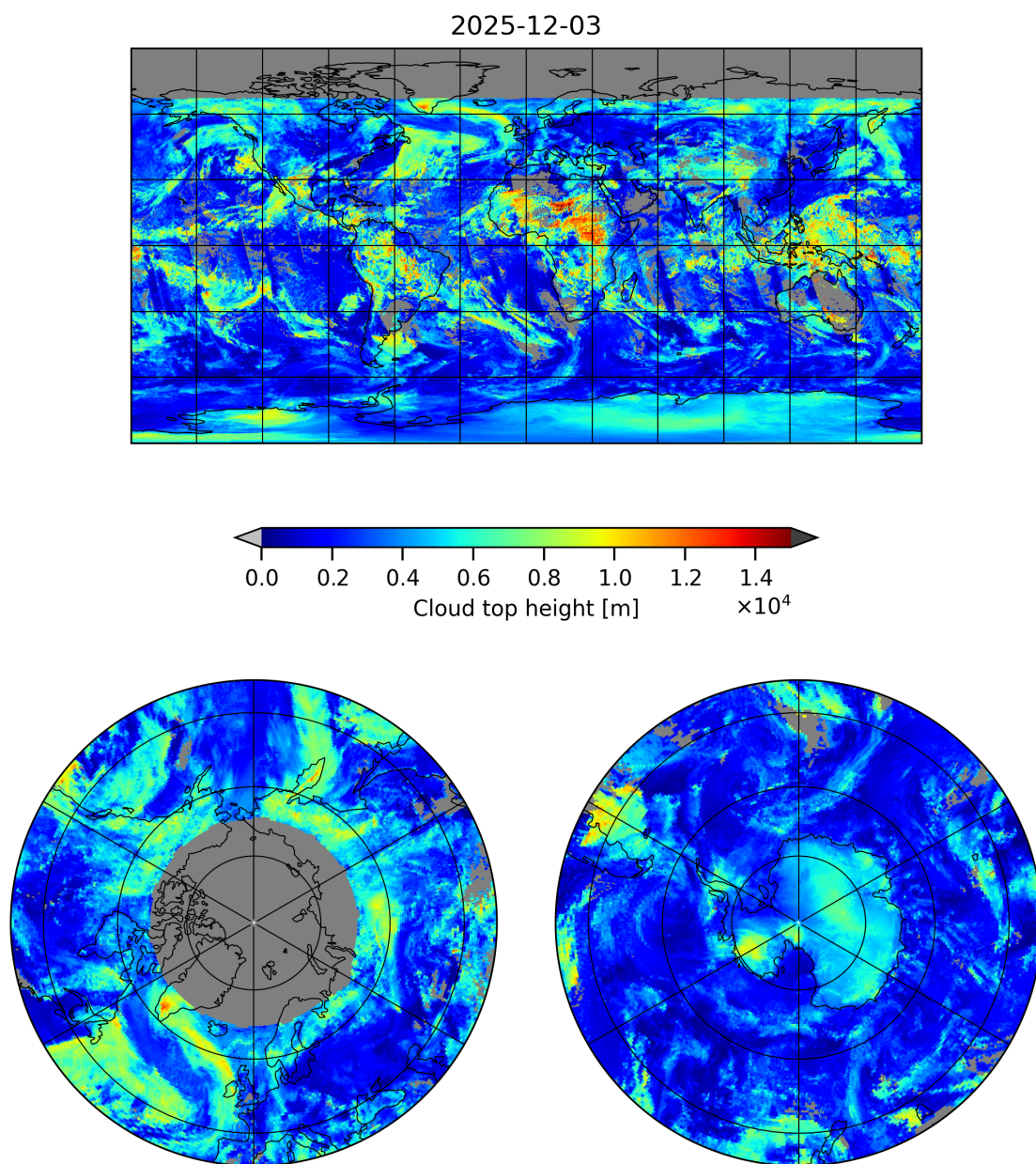


Figure 5: Map of “Cloud top height” for 2025-12-03 to 2025-12-04

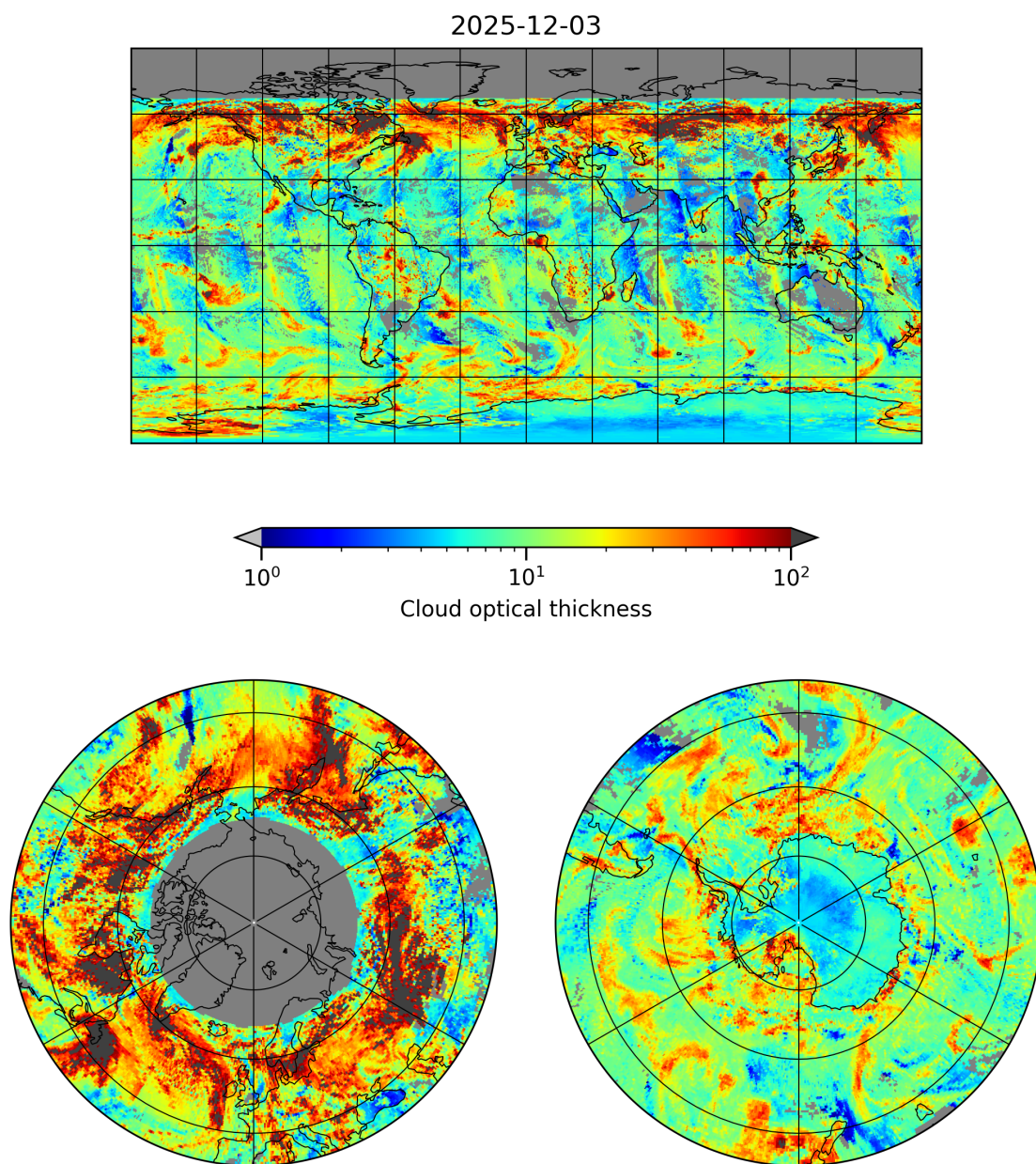


Figure 6: Map of "Cloud optical thickness" for 2025-12-03 to 2025-12-04

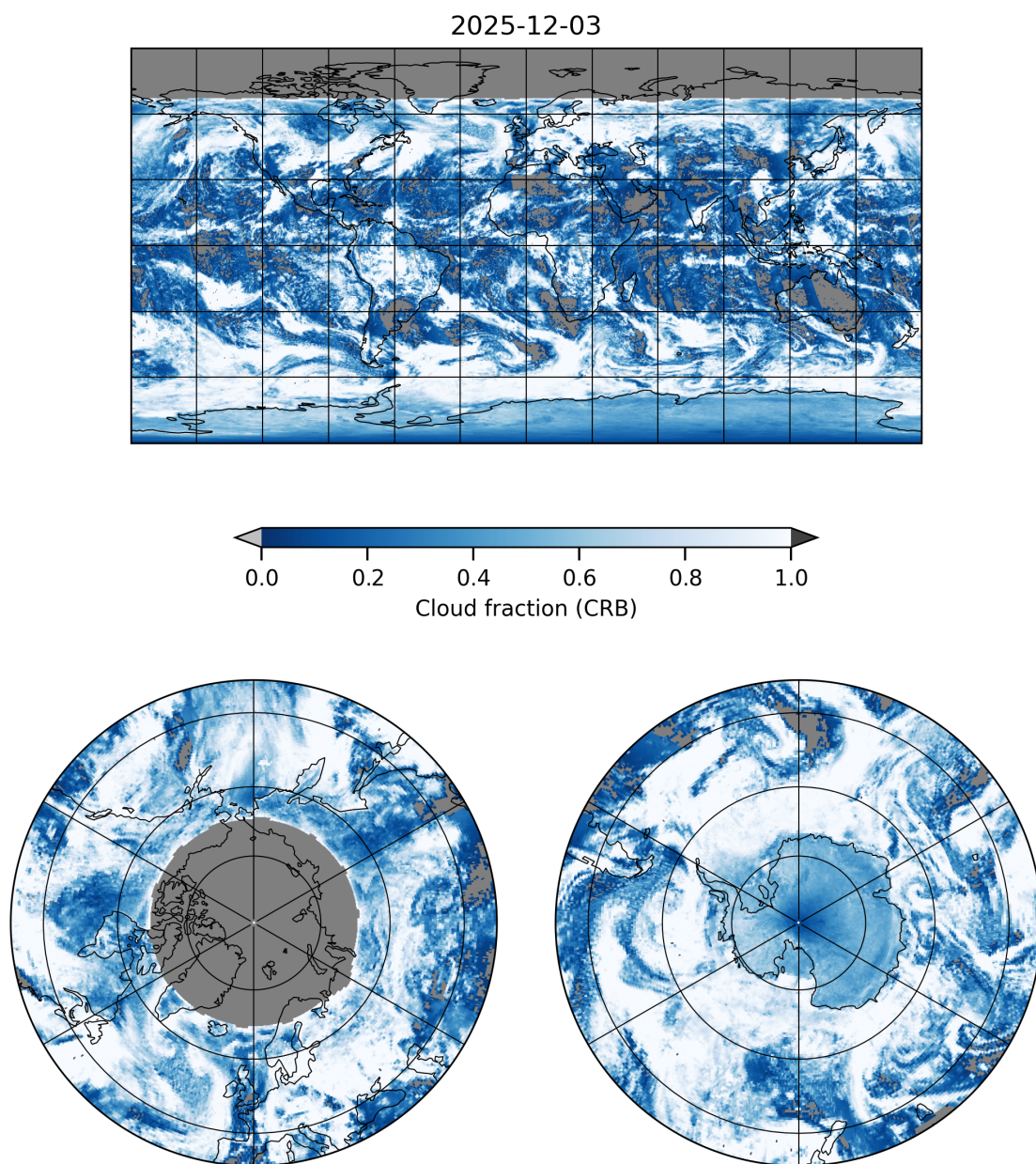


Figure 7: Map of “Cloud fraction (CRB)” for 2025-12-03 to 2025-12-04

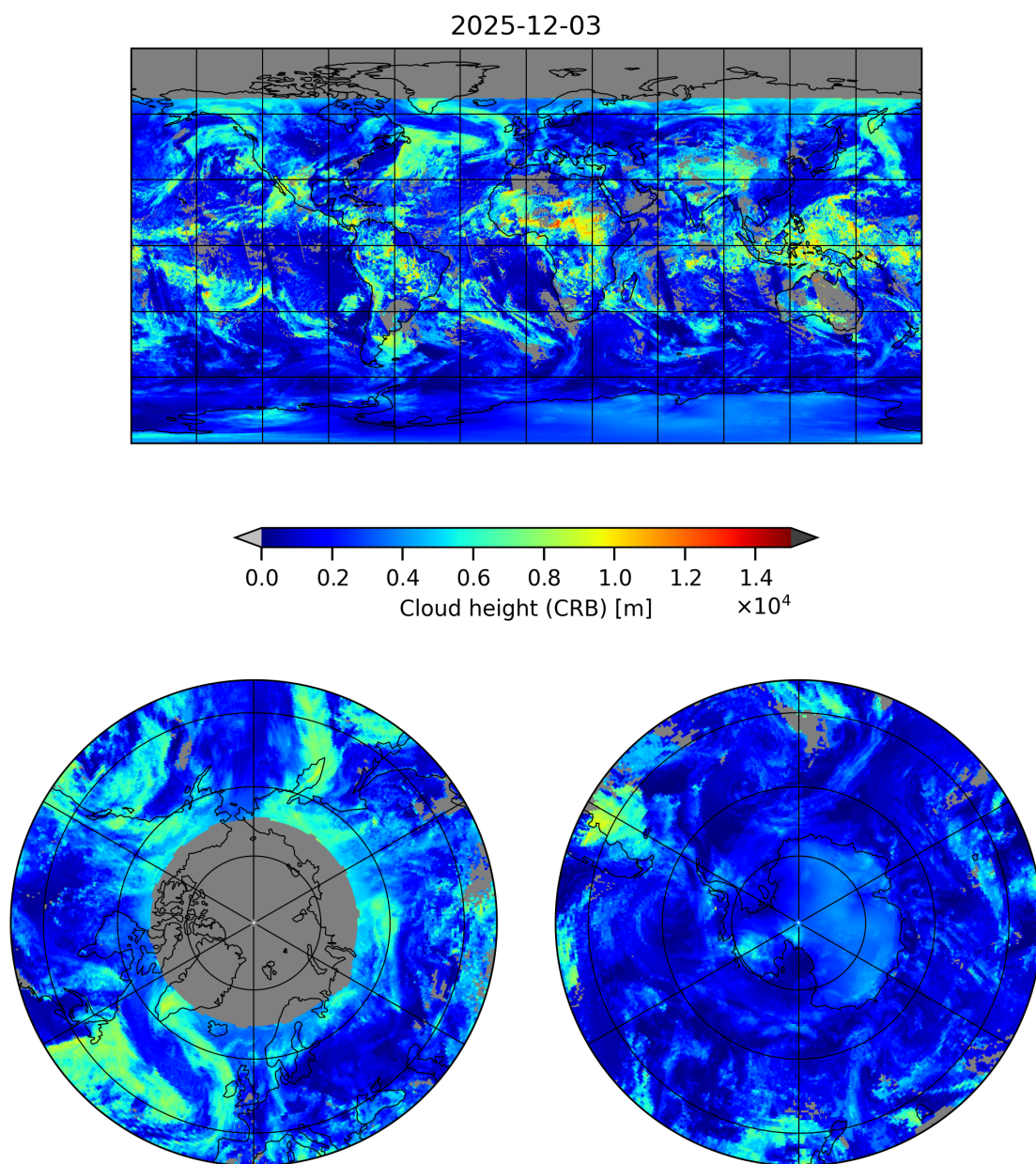


Figure 8: Map of “Cloud height (CRB)” for 2025-12-03 to 2025-12-04

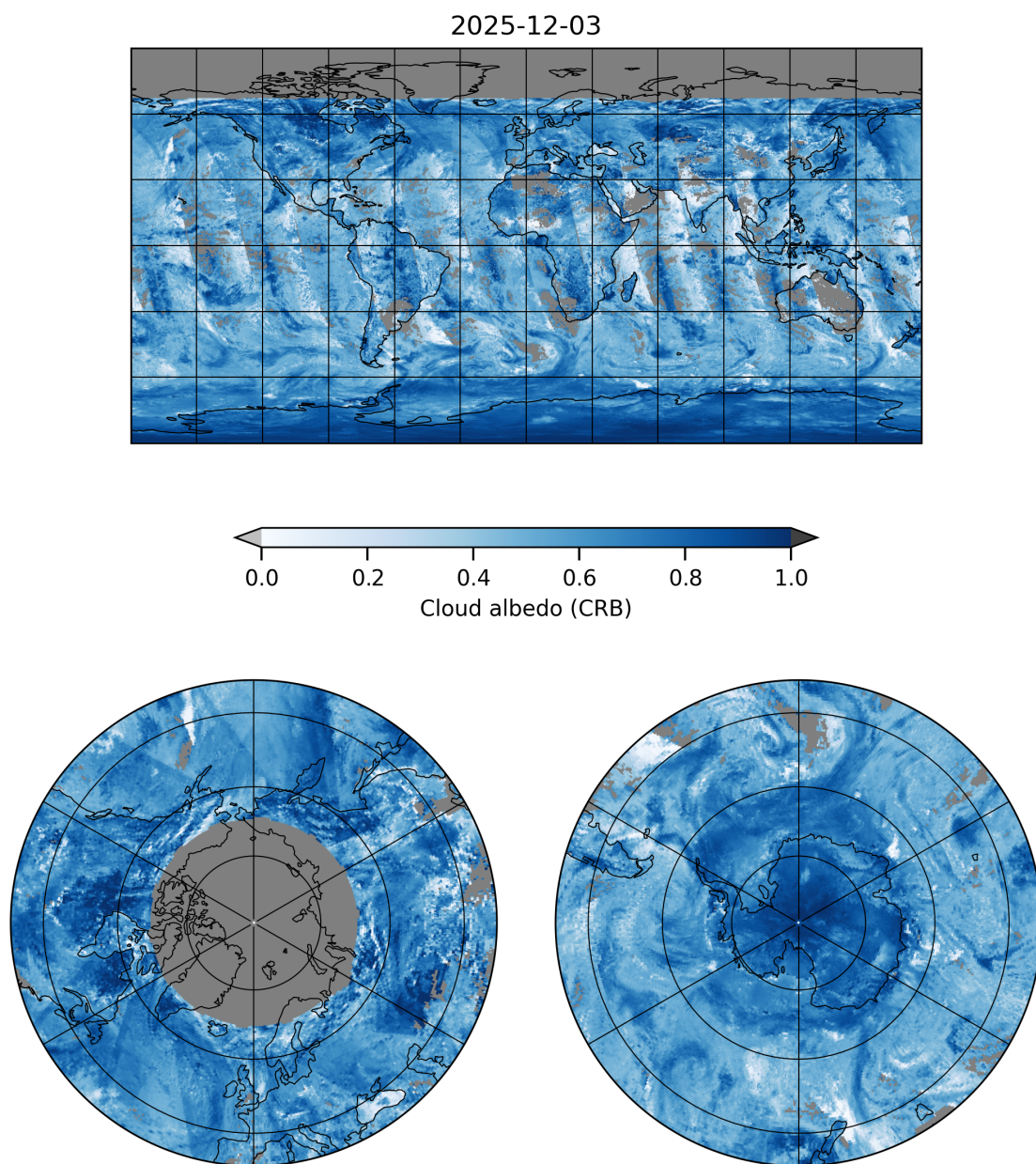


Figure 9: Map of “Cloud albedo (CRB)” for 2025-12-03 to 2025-12-04

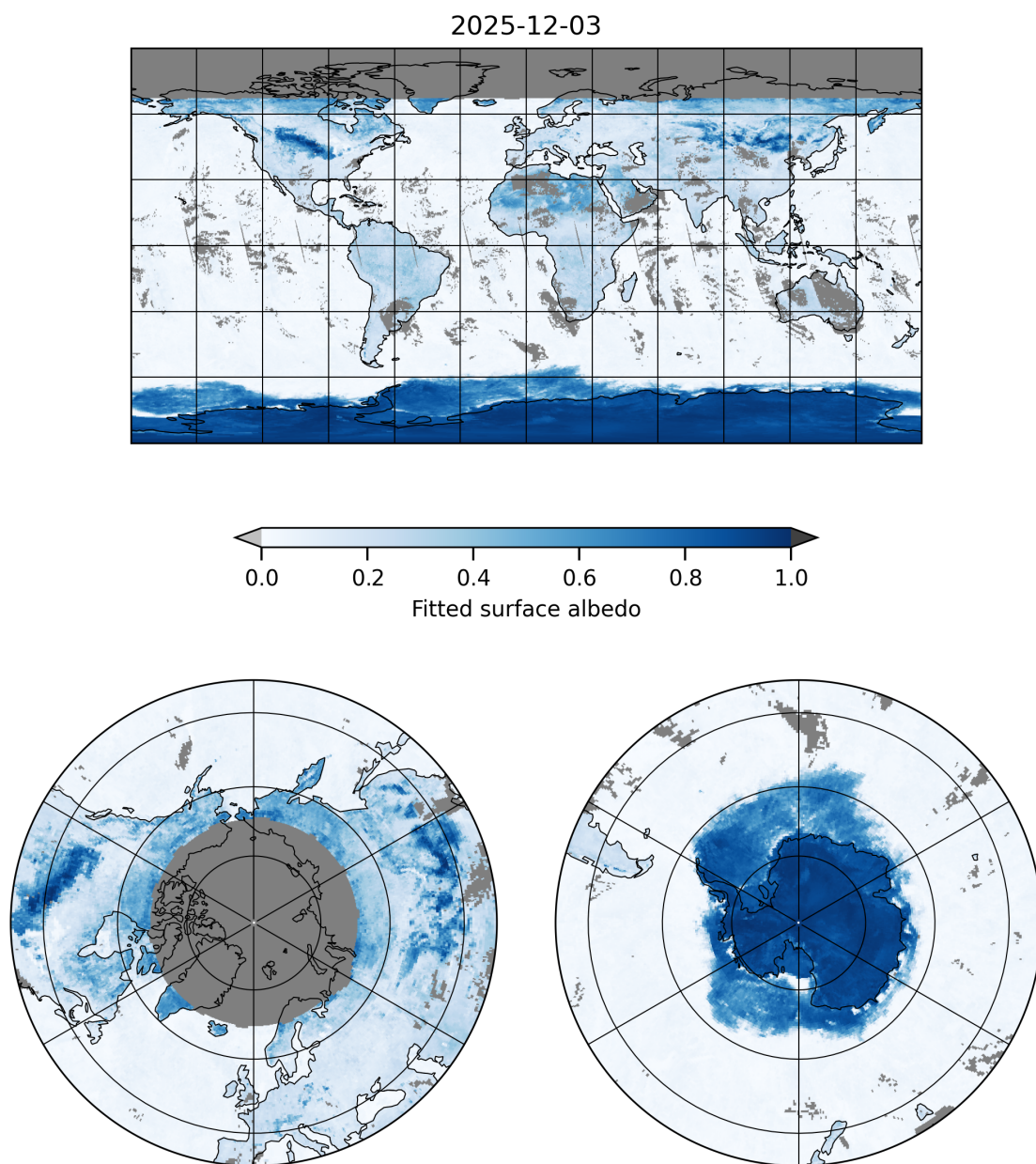


Figure 10: Map of “Fitted surface albedo” for 2025-12-03 to 2025-12-04

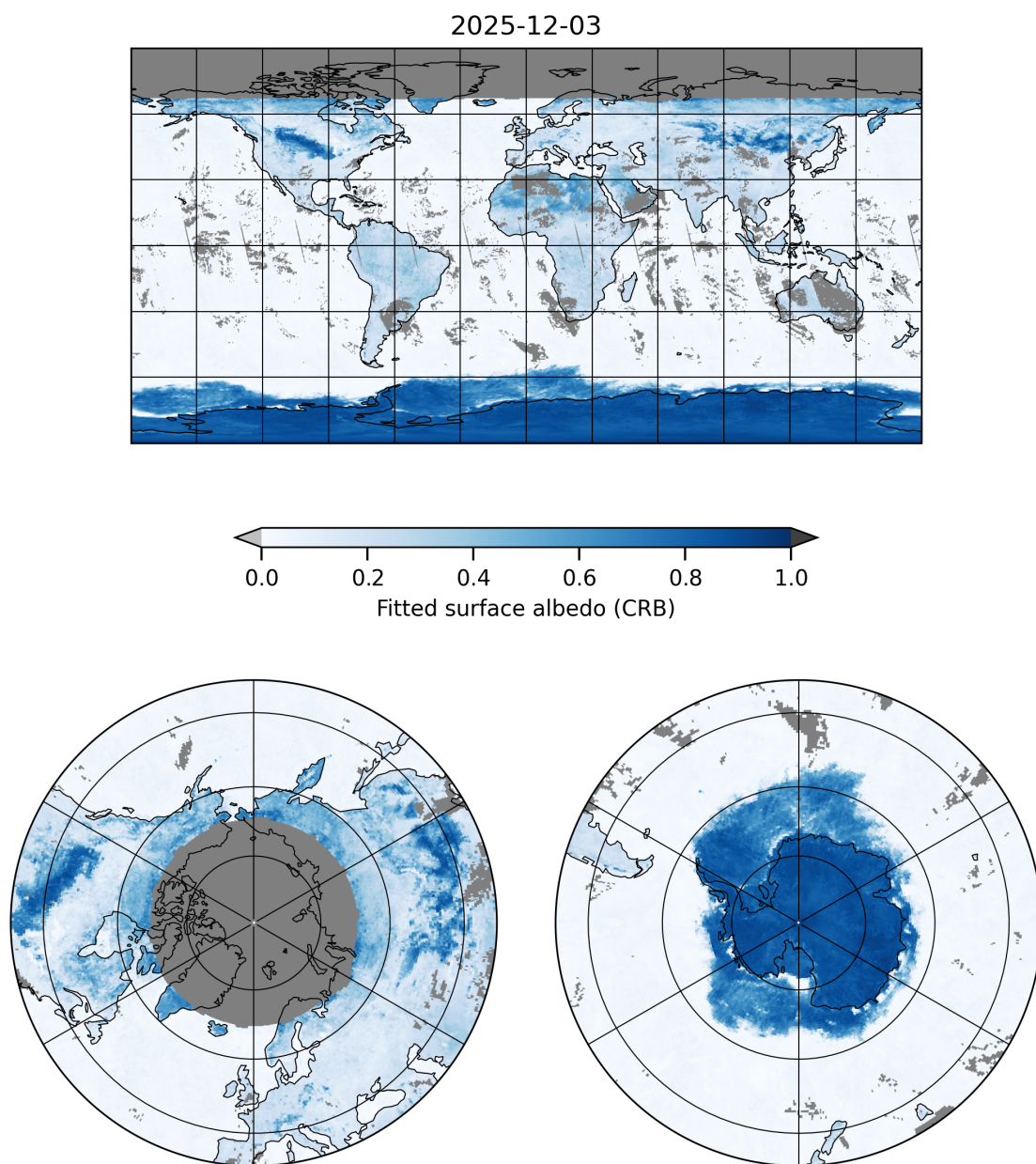


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-12-03 to 2025-12-04

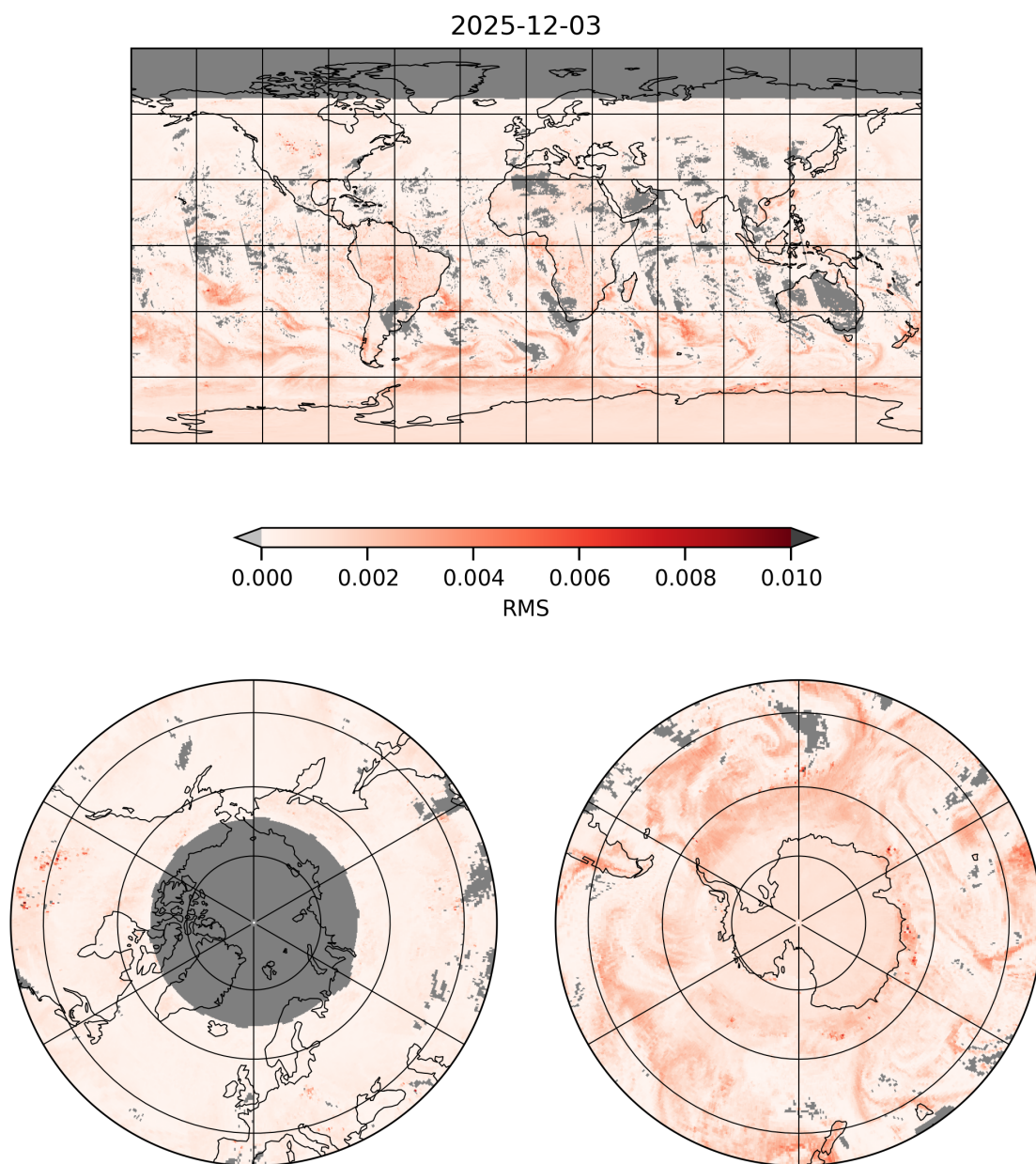


Figure 12: Map of “RMS” for 2025-12-03 to 2025-12-04

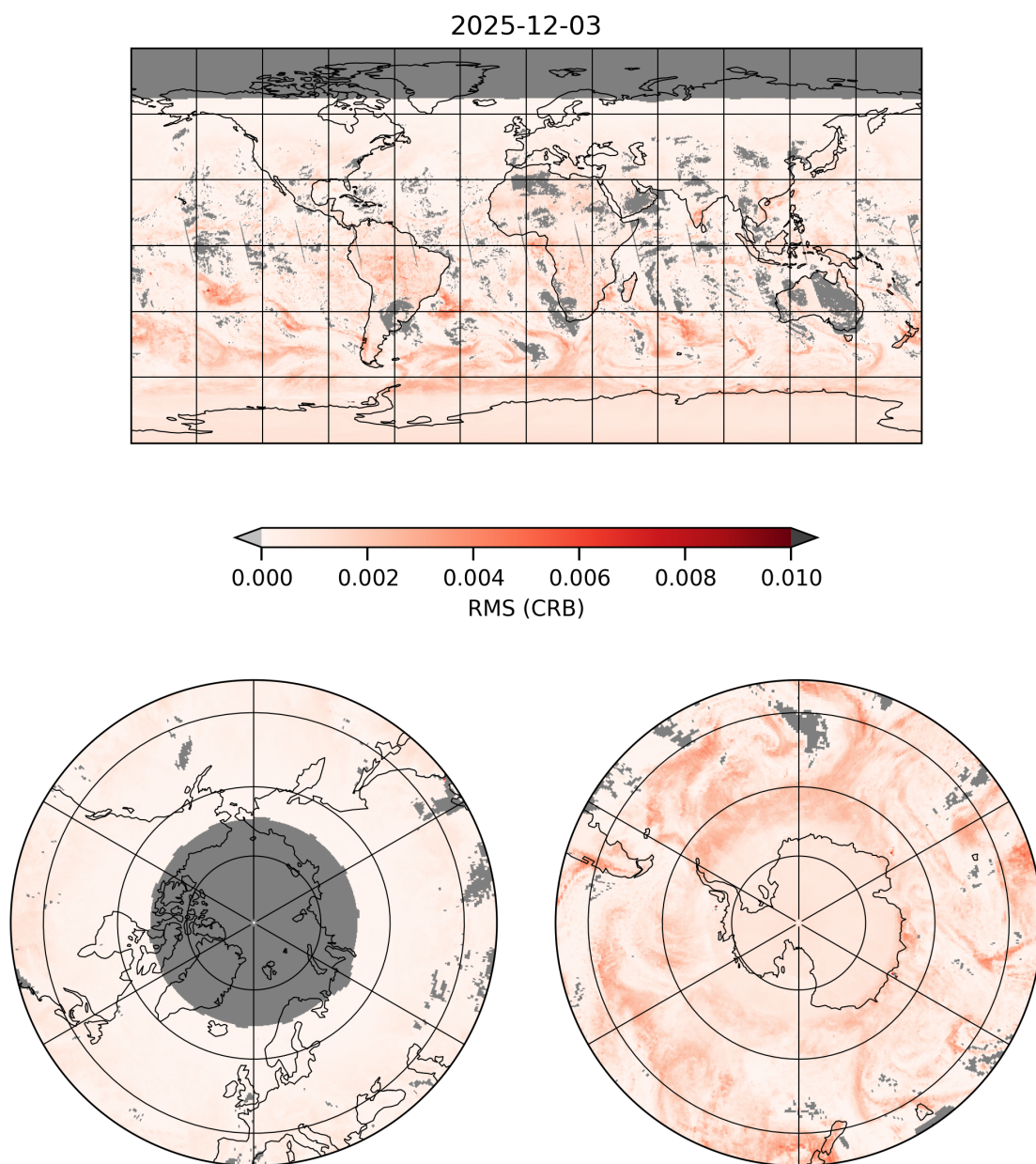


Figure 13: Map of “RMS (CRB)” for 2025-12-03 to 2025-12-04

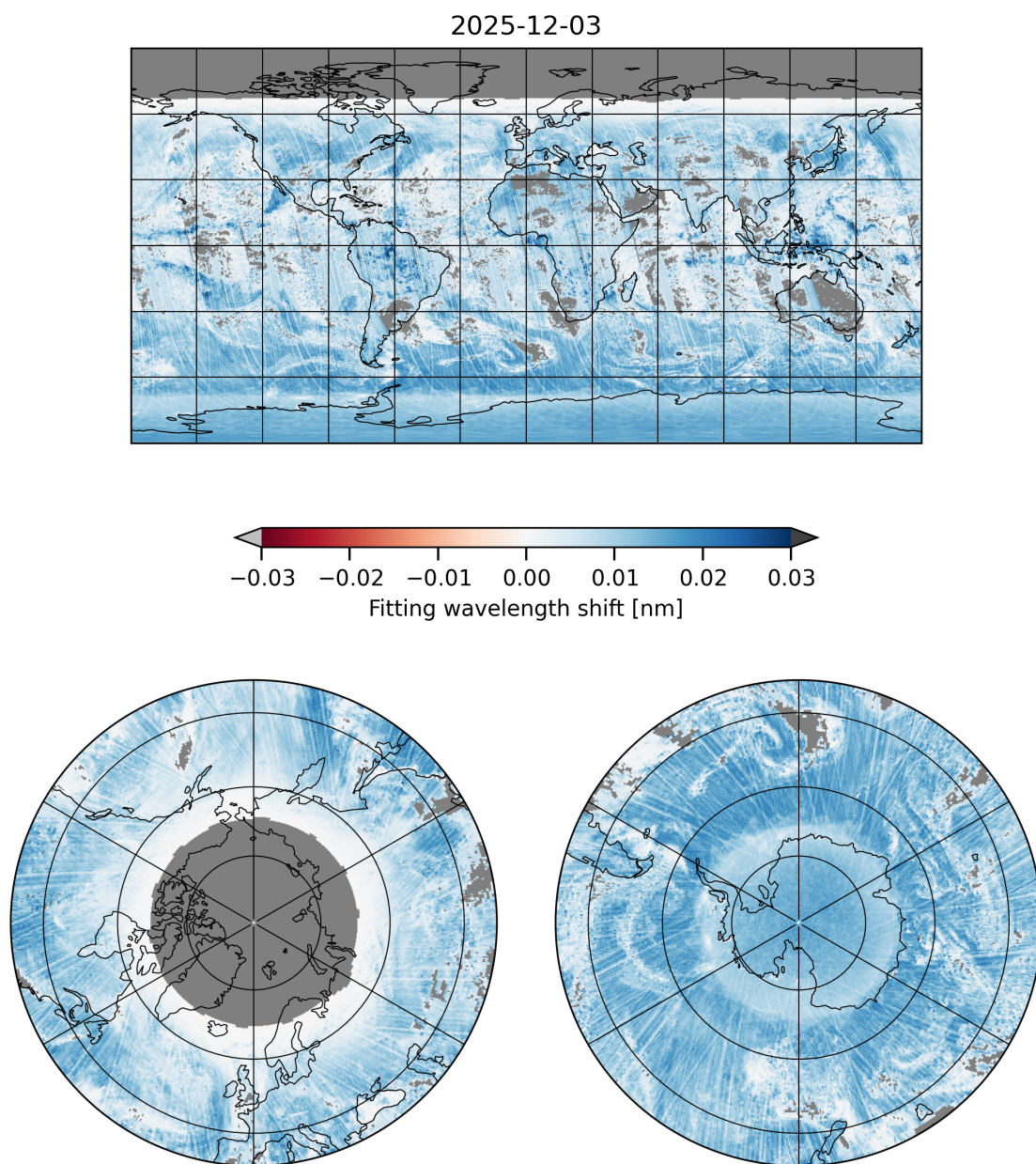


Figure 14: Map of “Fitting wavelength shift” for 2025-12-03 to 2025-12-04

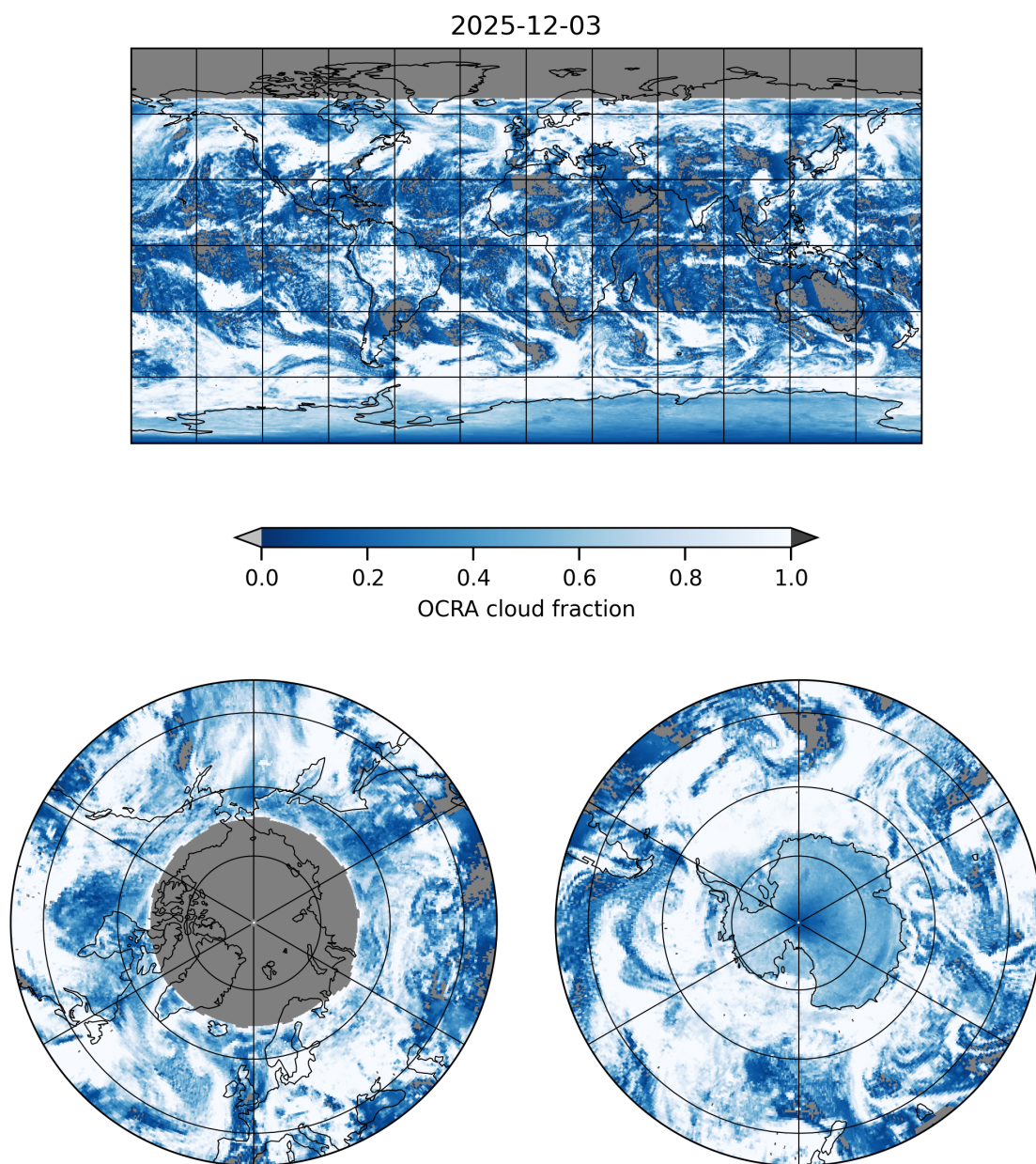


Figure 15: Map of “OCRA cloud fraction” for 2025-12-03 to 2025-12-04

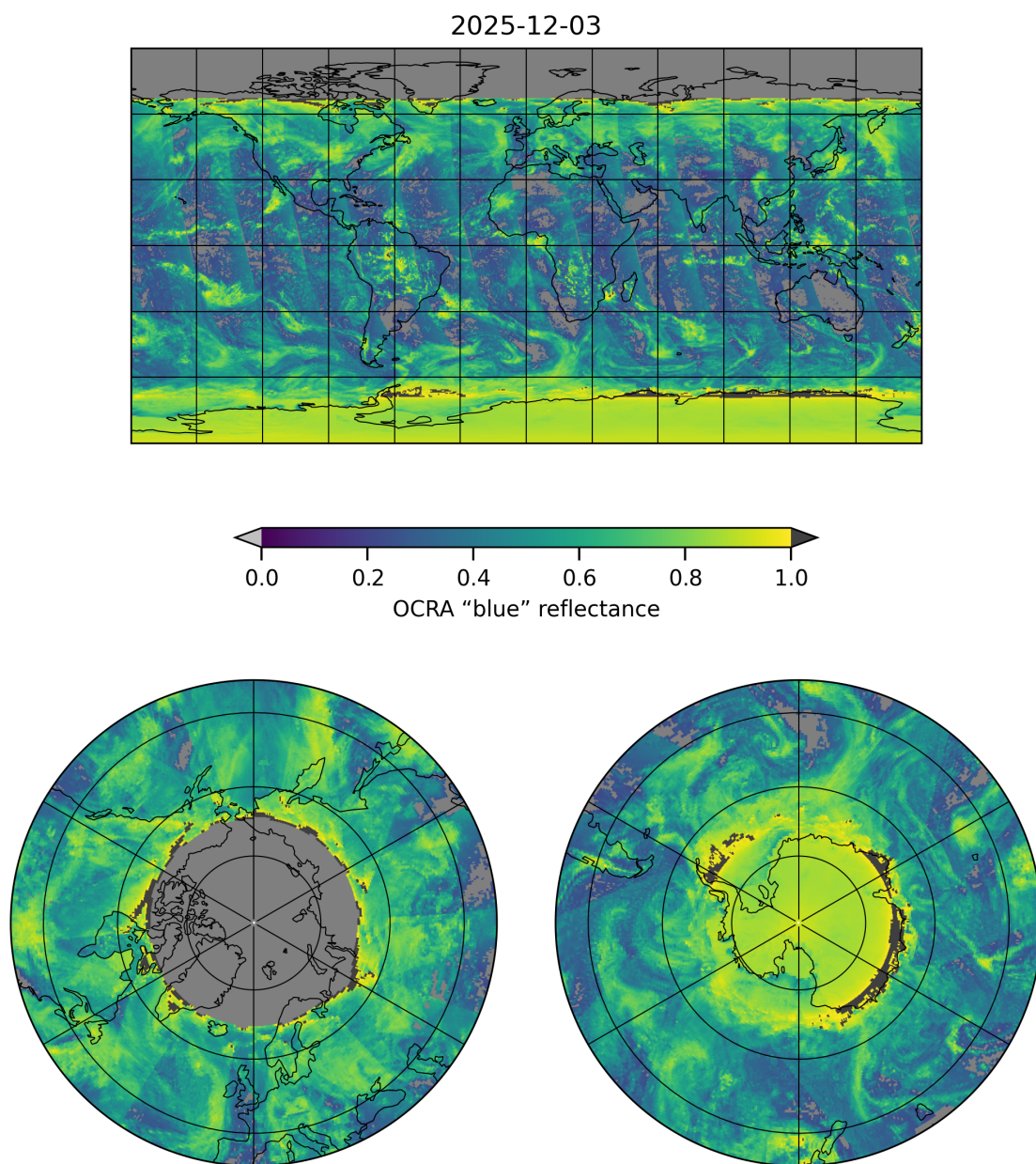


Figure 16: Map of "OCRA "blue" reflectance" for 2025-12-03 to 2025-12-04

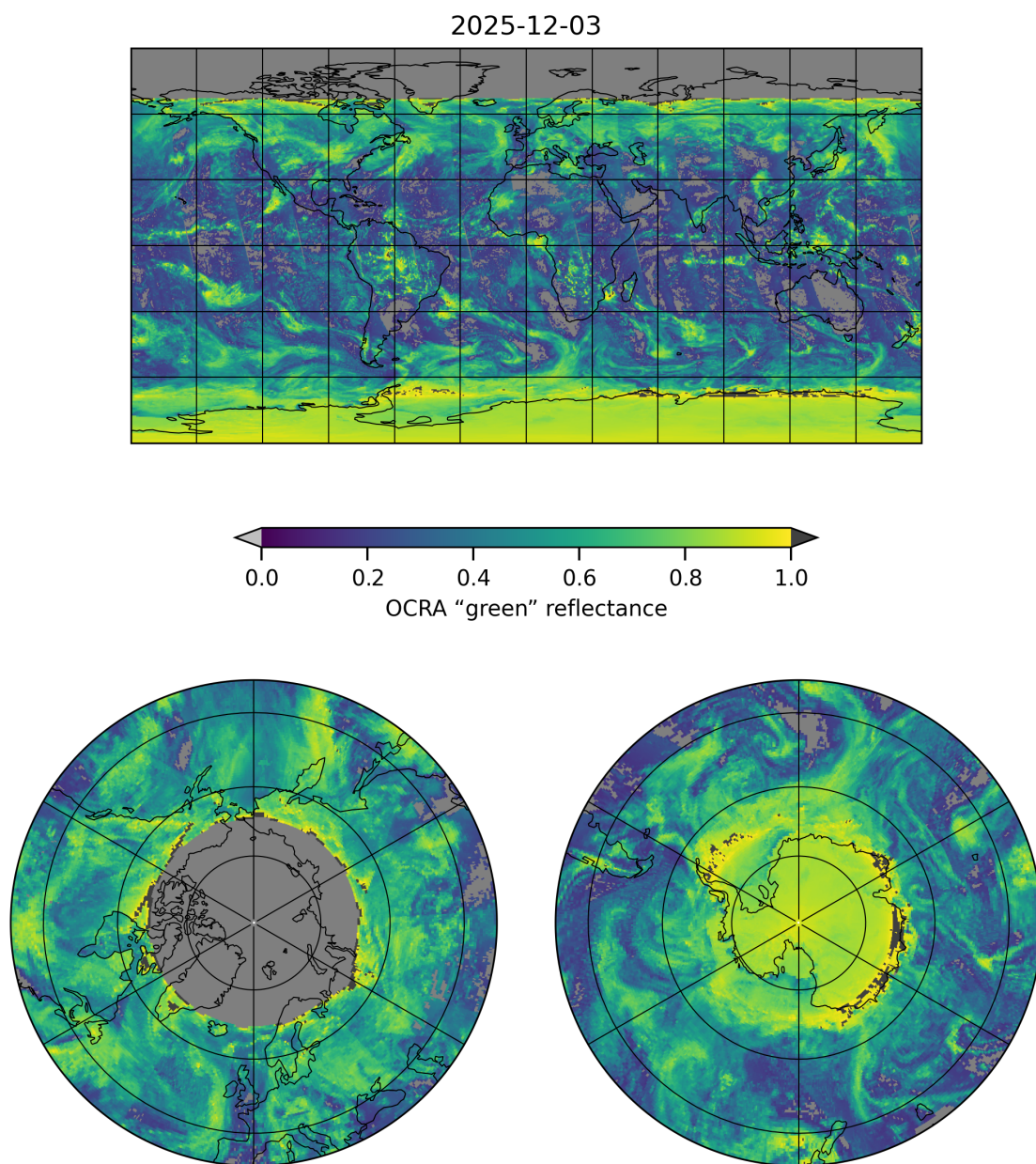


Figure 17: Map of "OCRA "green" reflectance" for 2025-12-03 to 2025-12-04

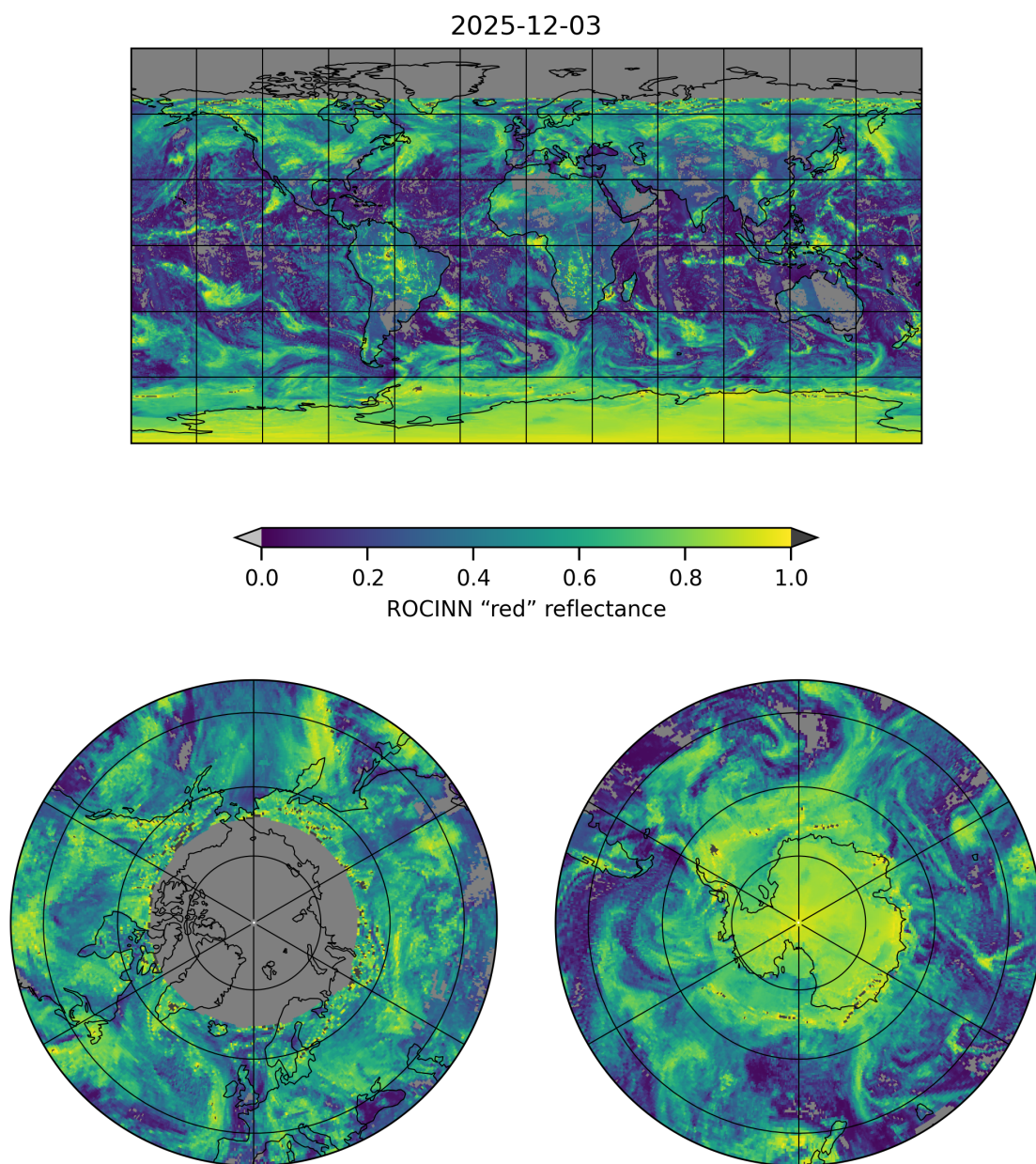


Figure 18: Map of "ROCINN "red" reflectance" for 2025-12-03 to 2025-12-04

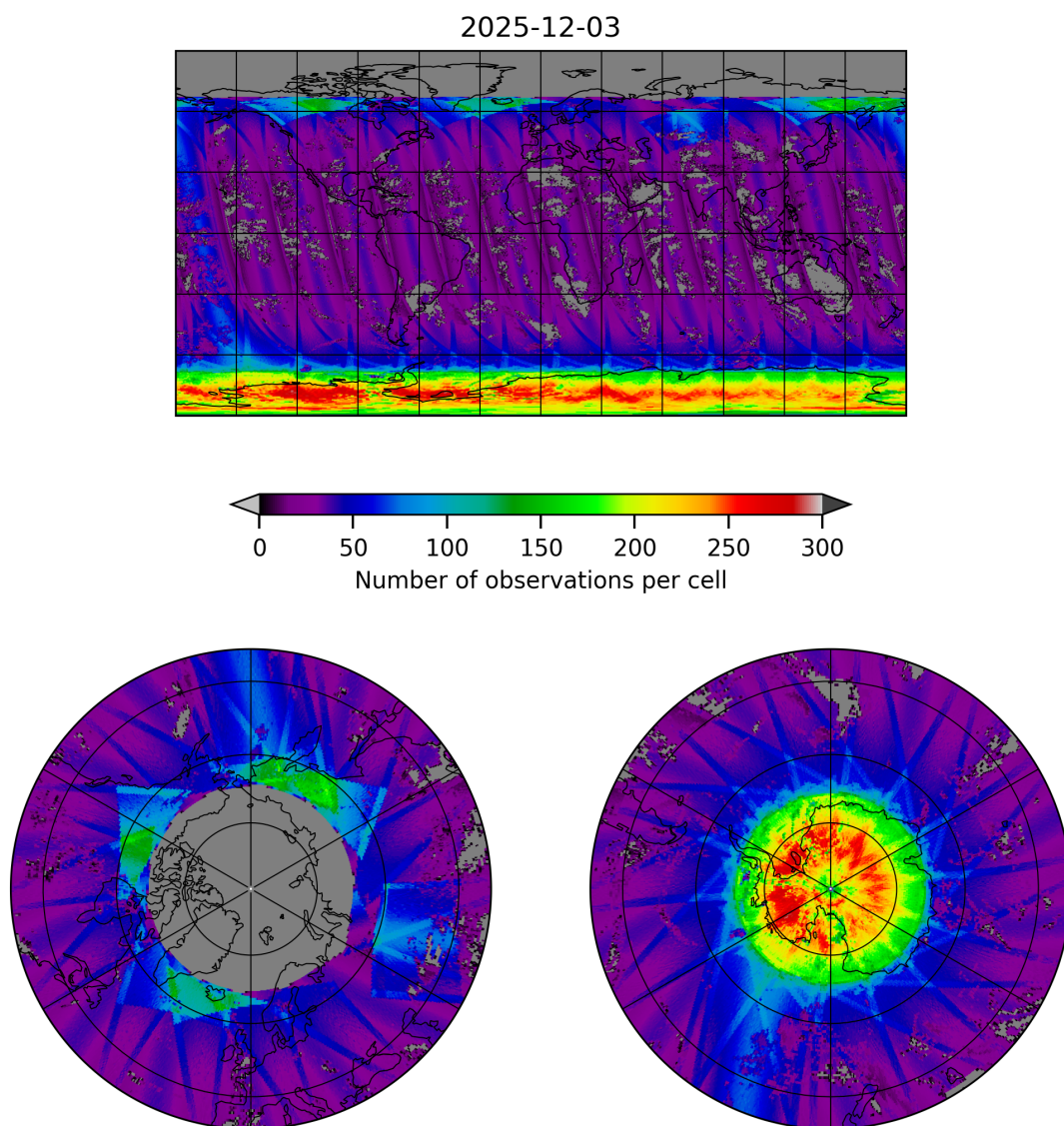


Figure 19: Map of the number of observations for 2025-12-03 to 2025-12-04

7 Zonal average

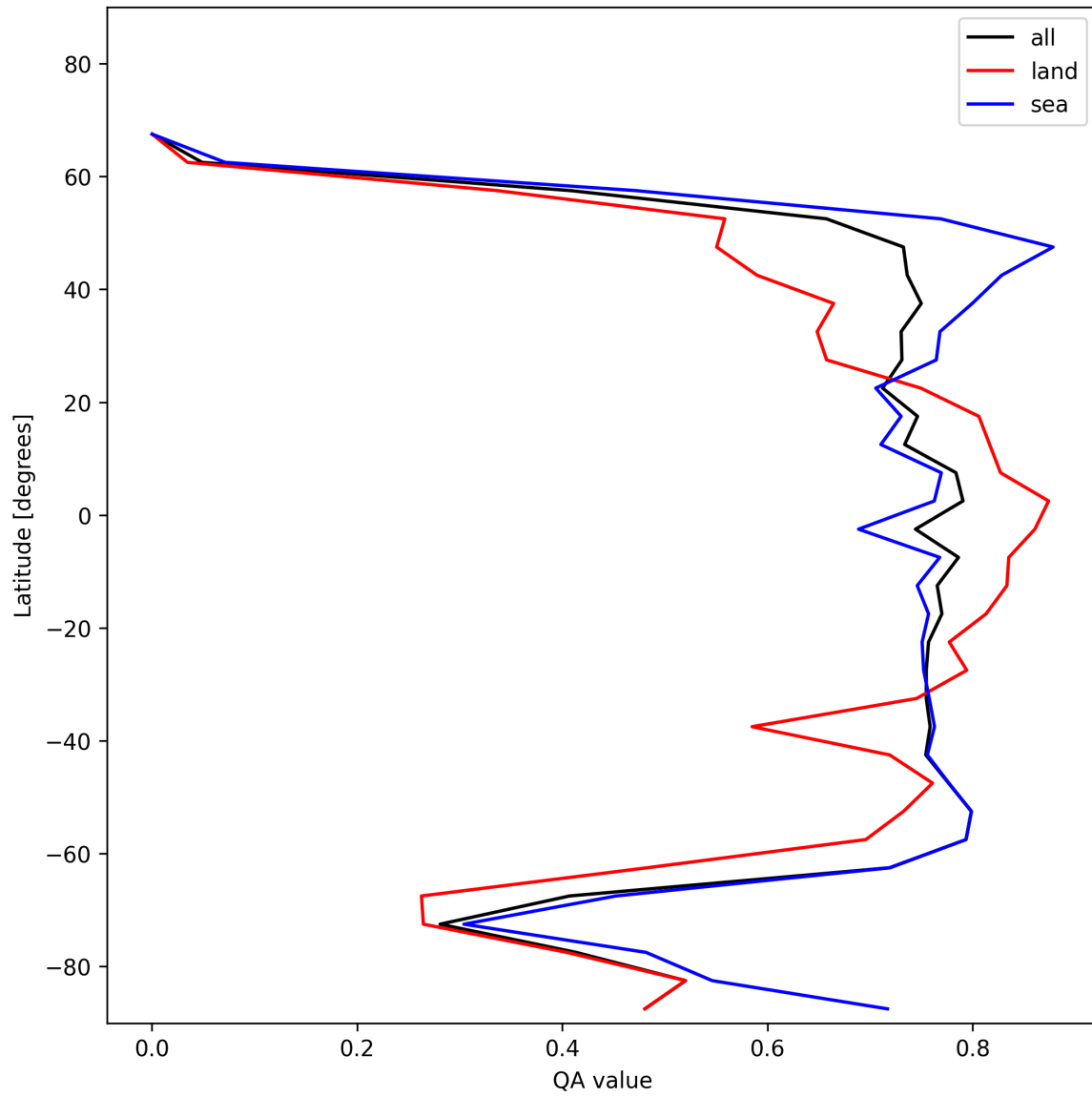


Figure 20: Zonal average of “QA value” for 2025-12-03 to 2025-12-04.

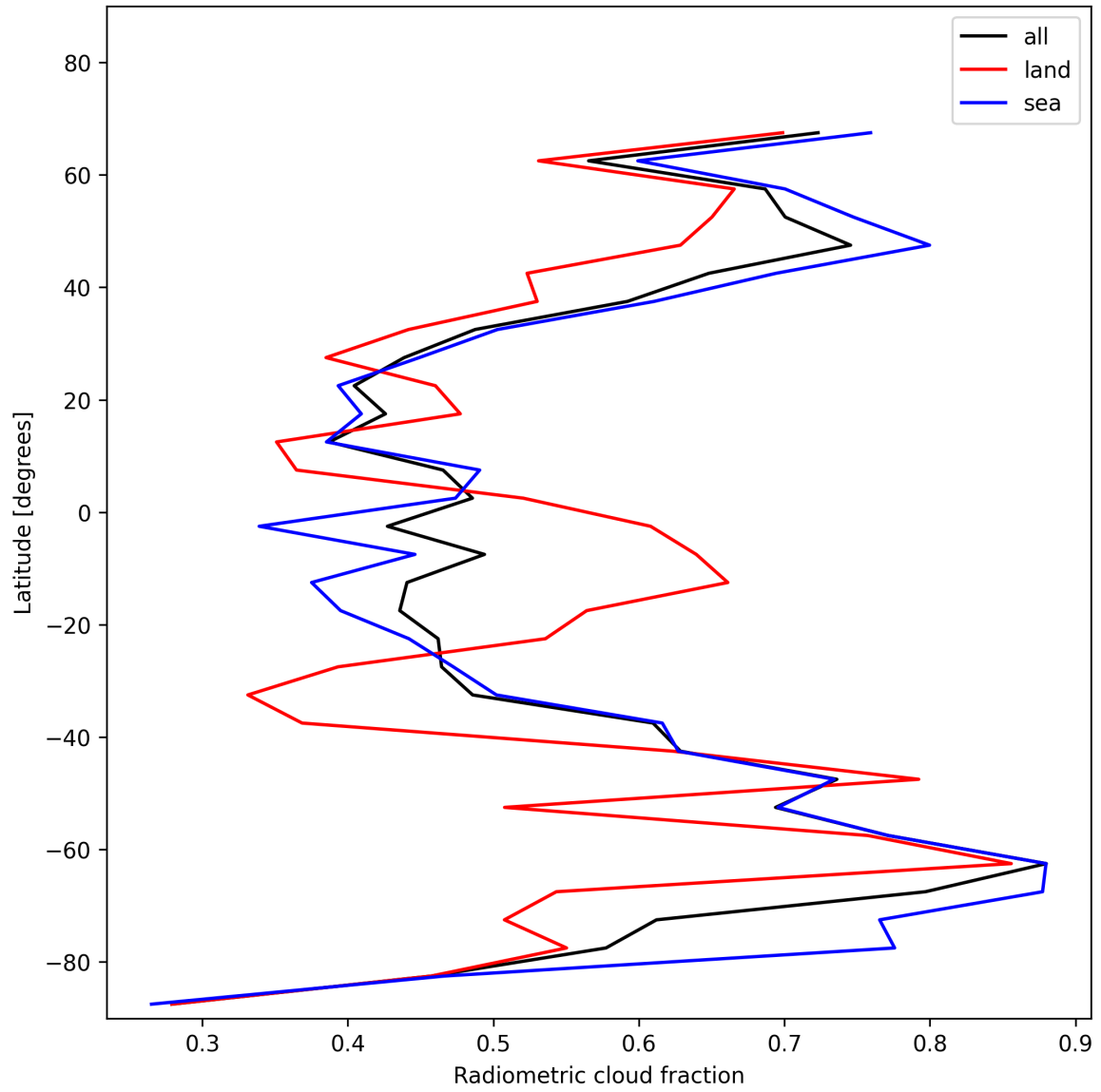


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-12-03 to 2025-12-04.

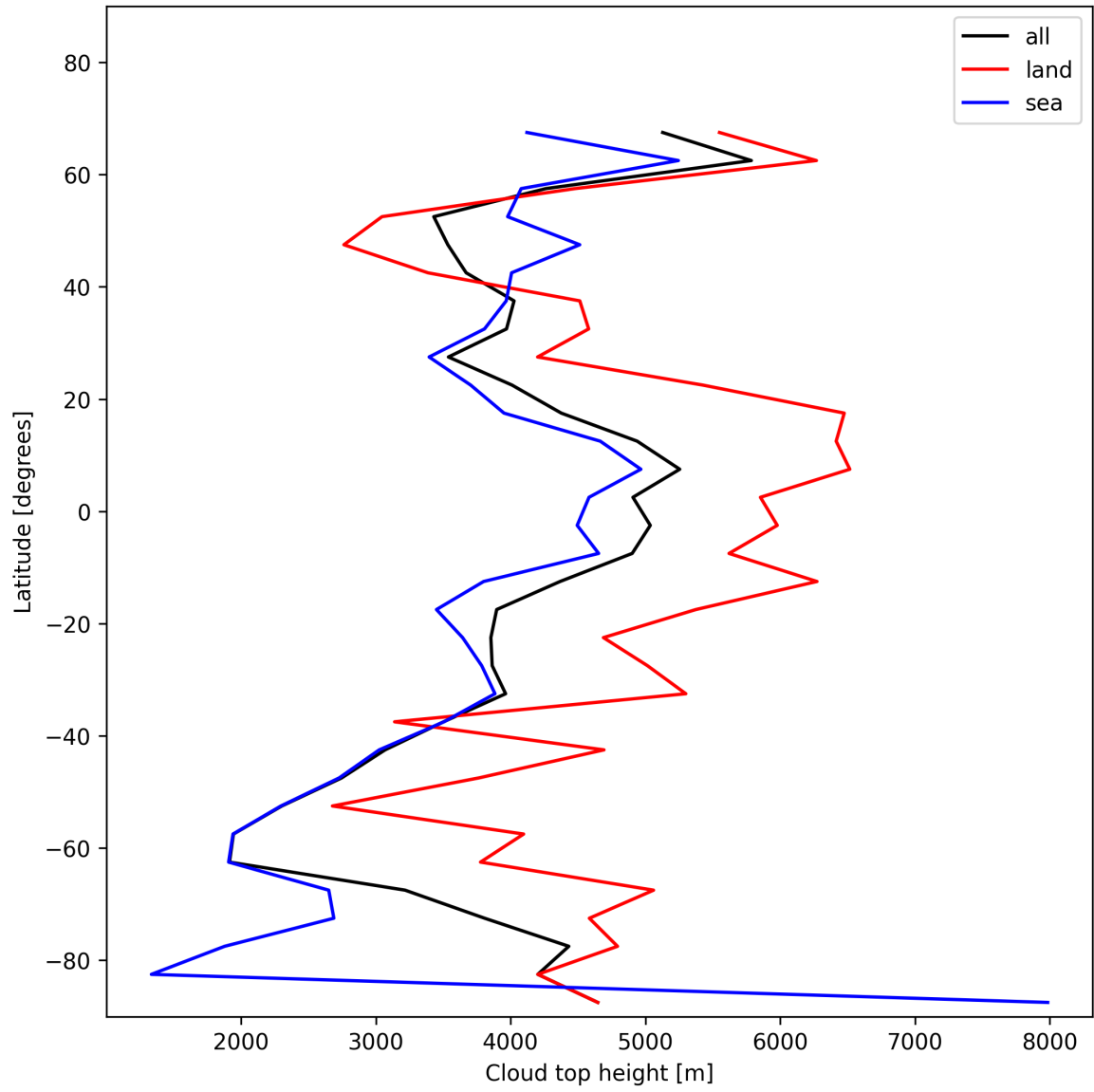


Figure 22: Zonal average of “Cloud top height” for 2025-12-03 to 2025-12-04.

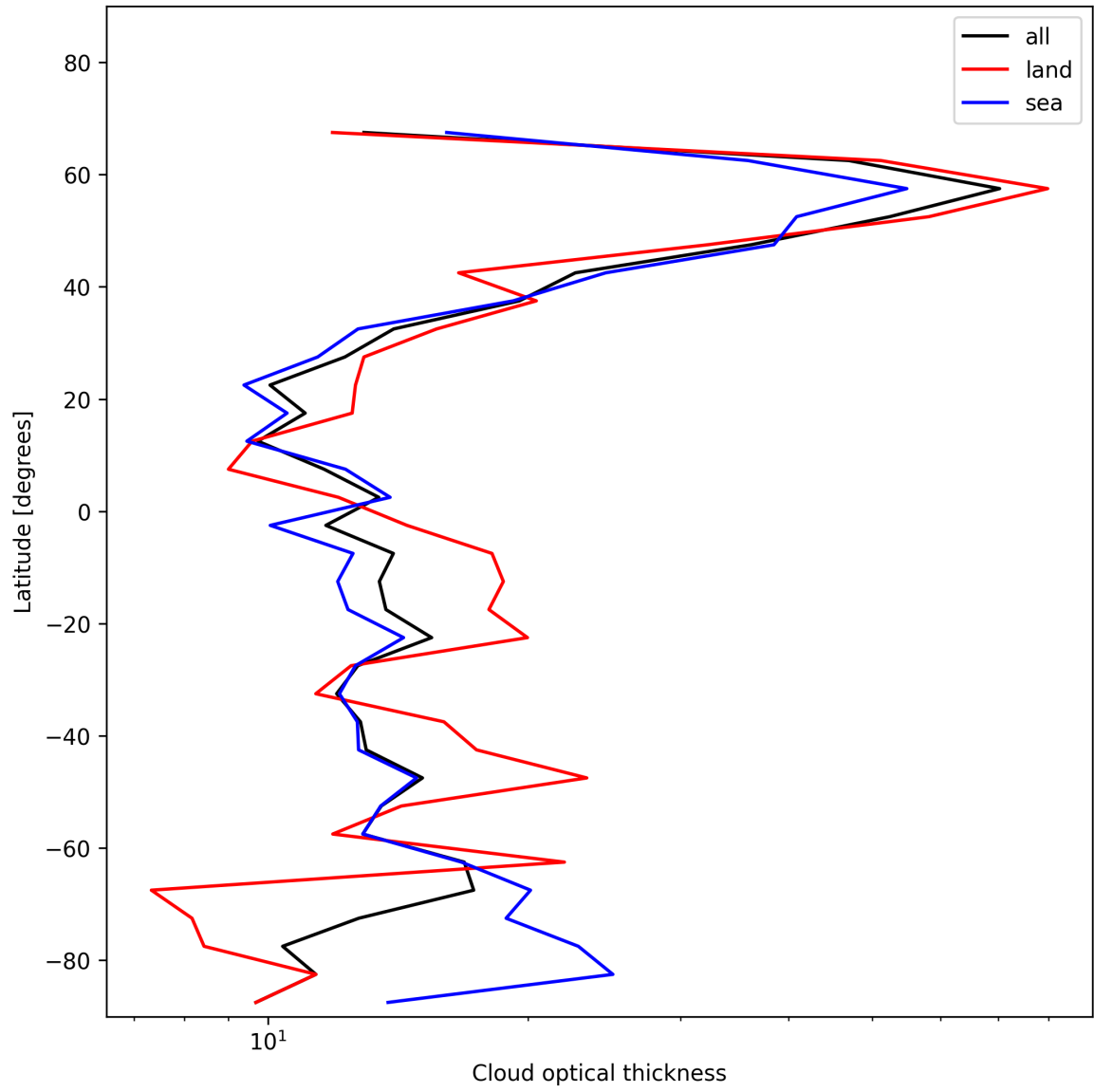


Figure 23: Zonal average of “Cloud optical thickness” for 2025-12-03 to 2025-12-04.

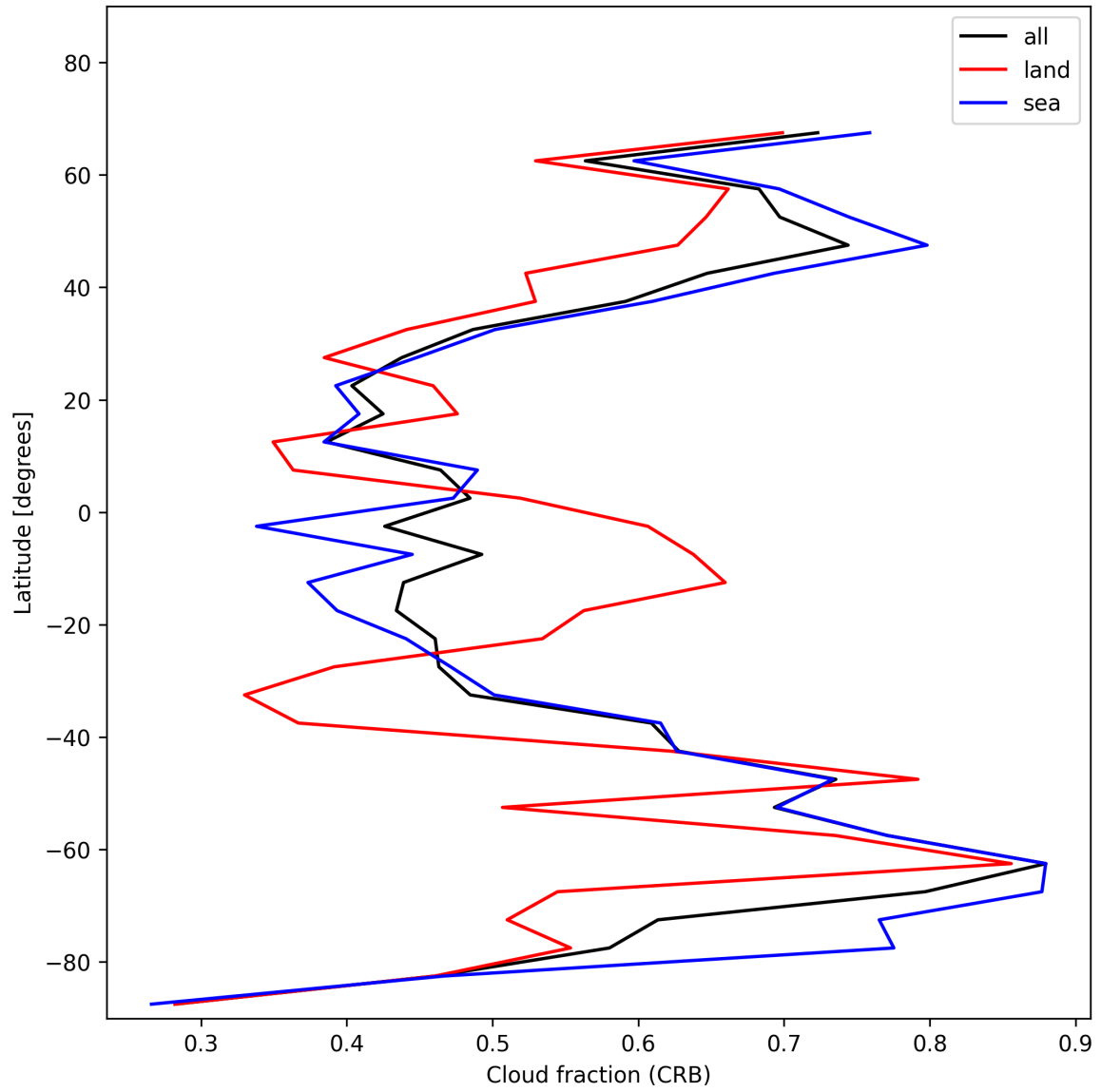


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-12-03 to 2025-12-04.

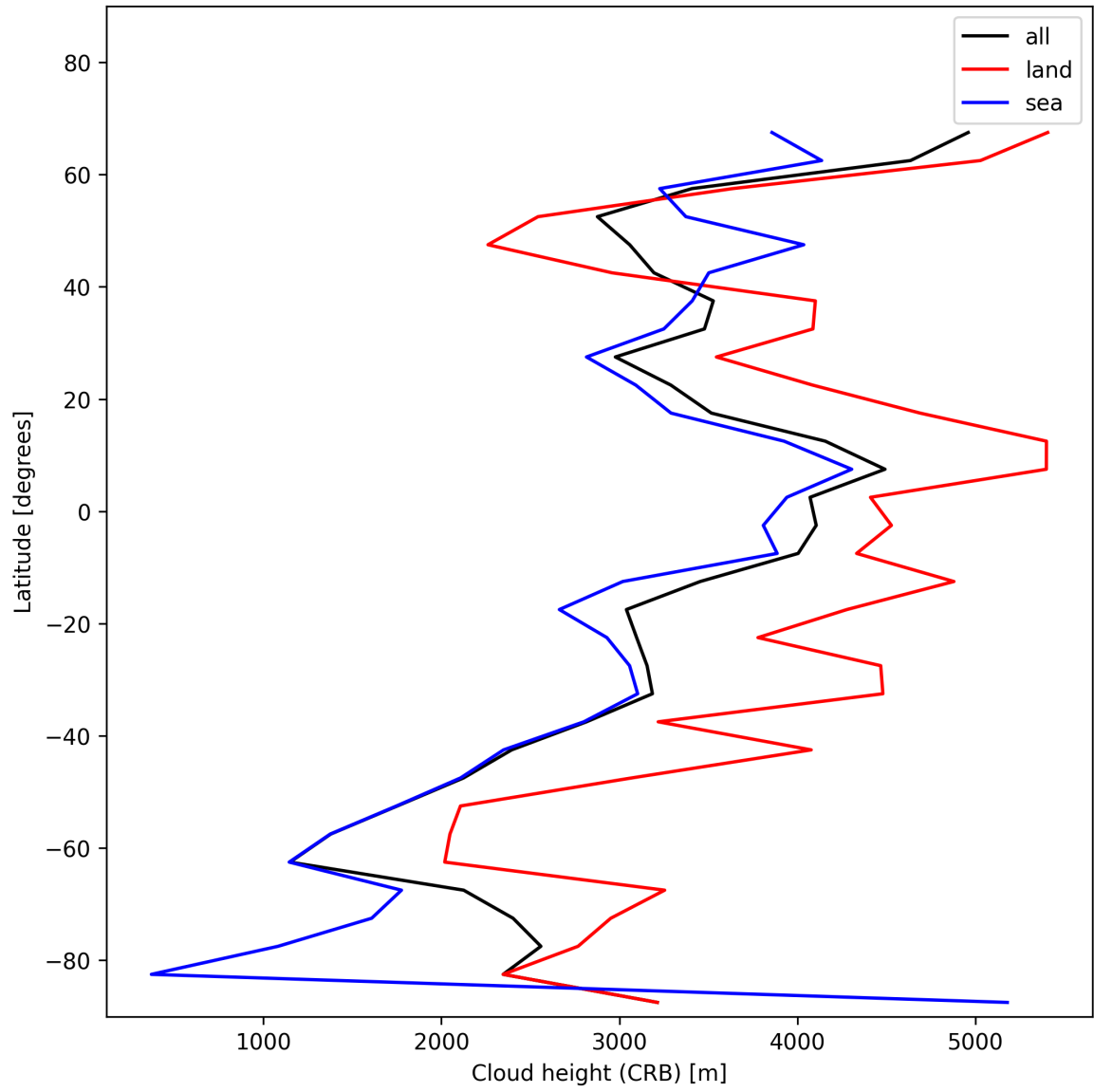


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-12-03 to 2025-12-04.

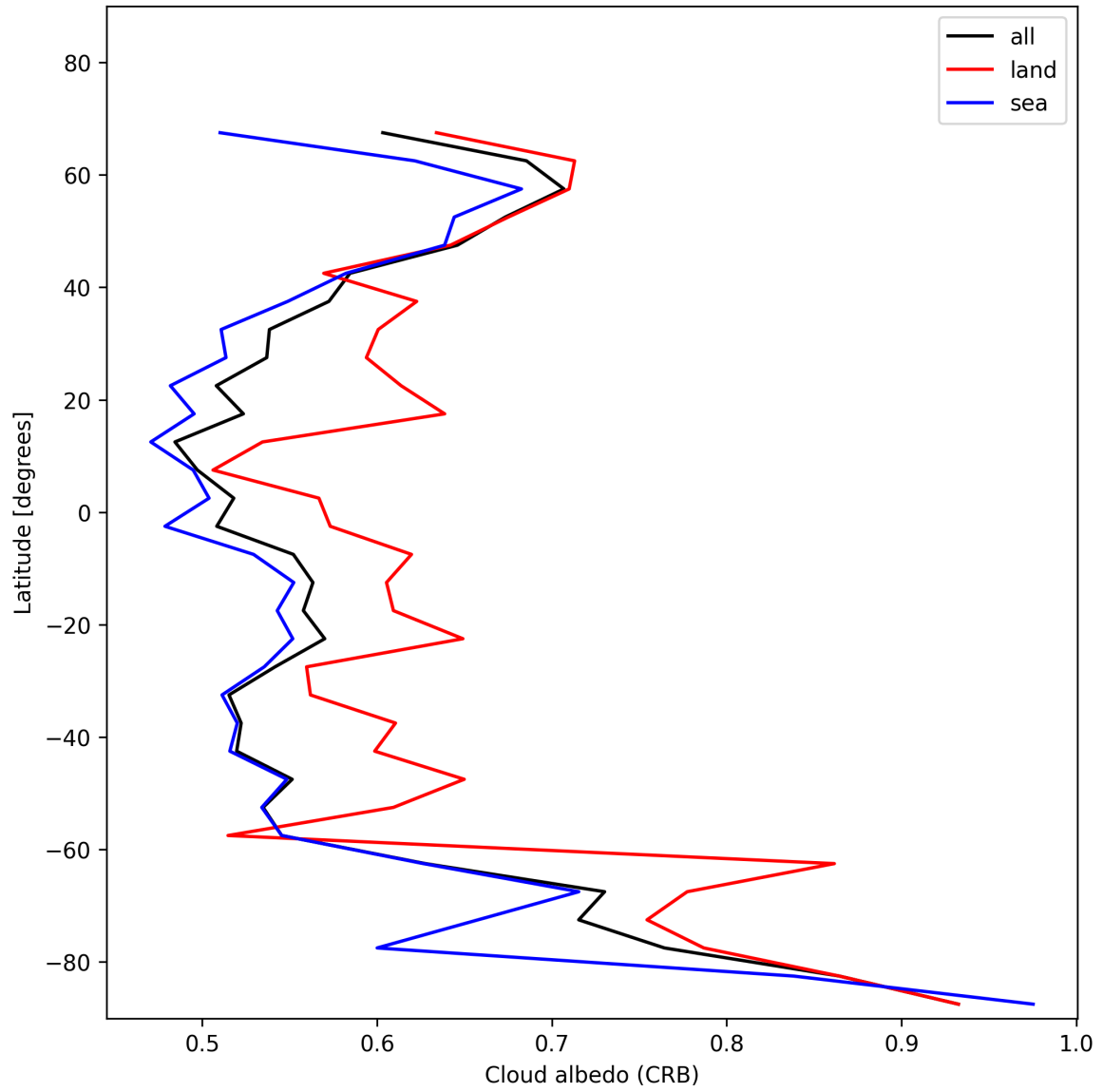


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-12-03 to 2025-12-04.

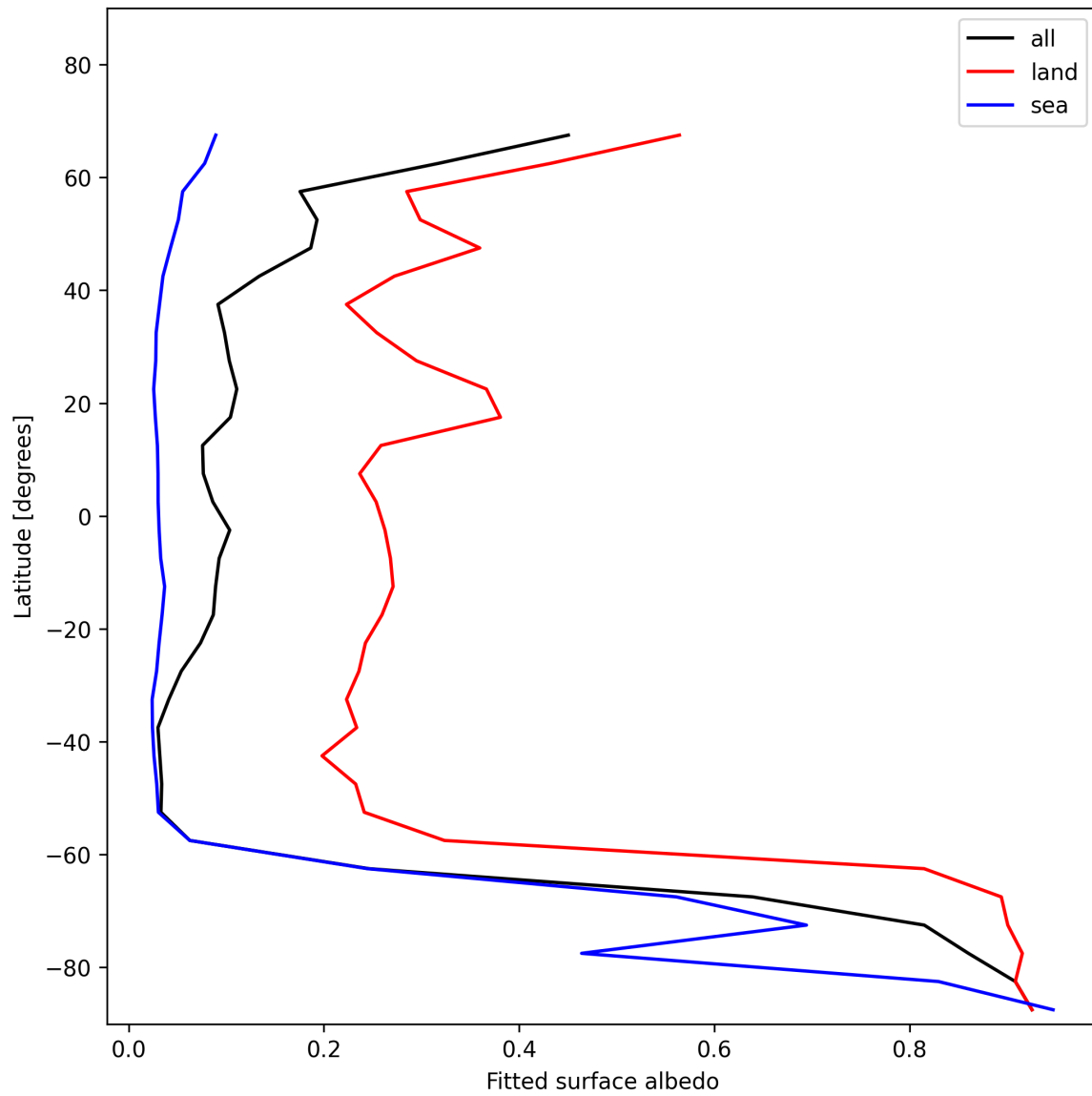


Figure 27: Zonal average of “Fitted surface albedo” for 2025-12-03 to 2025-12-04.

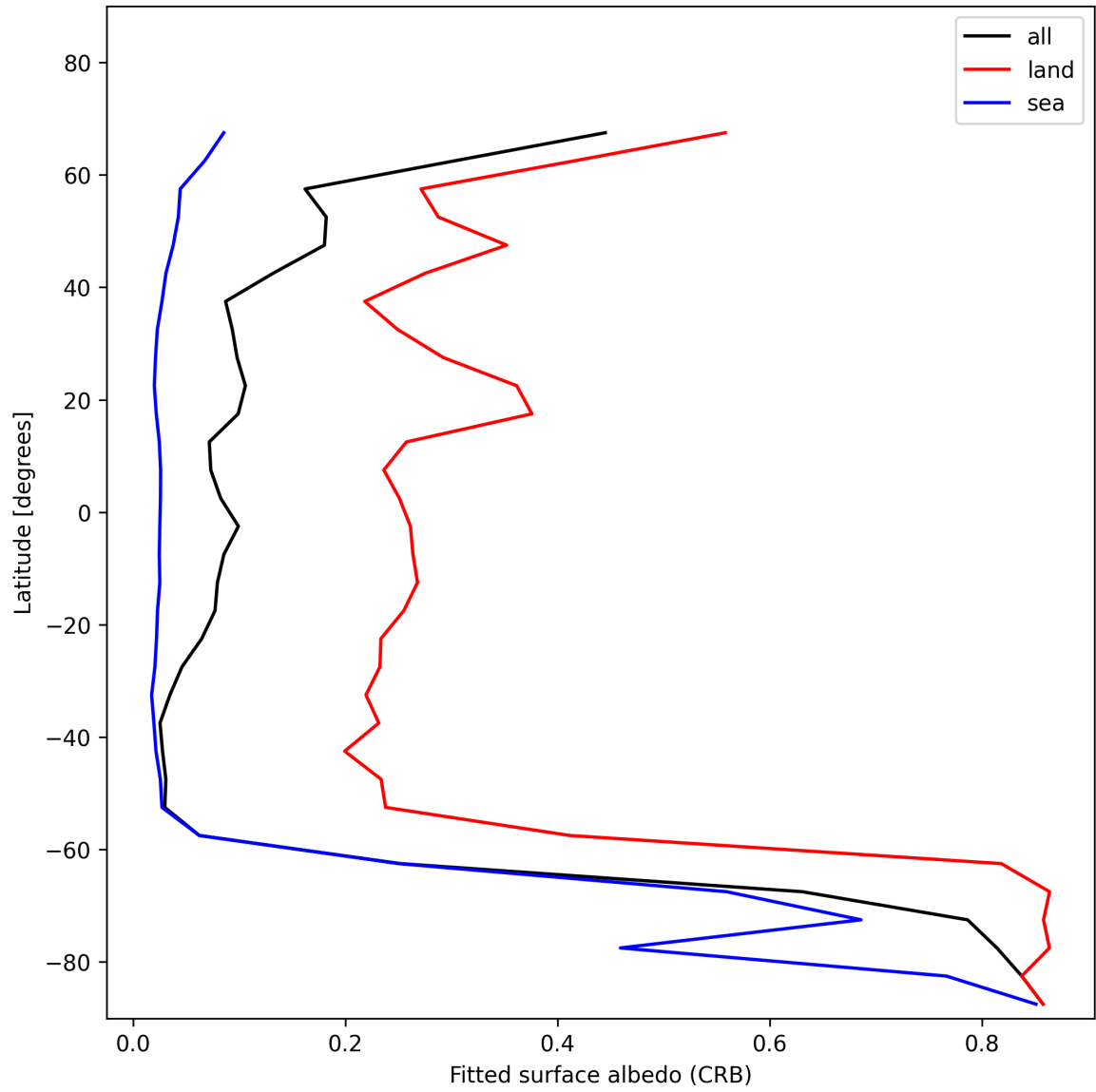


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-12-03 to 2025-12-04.

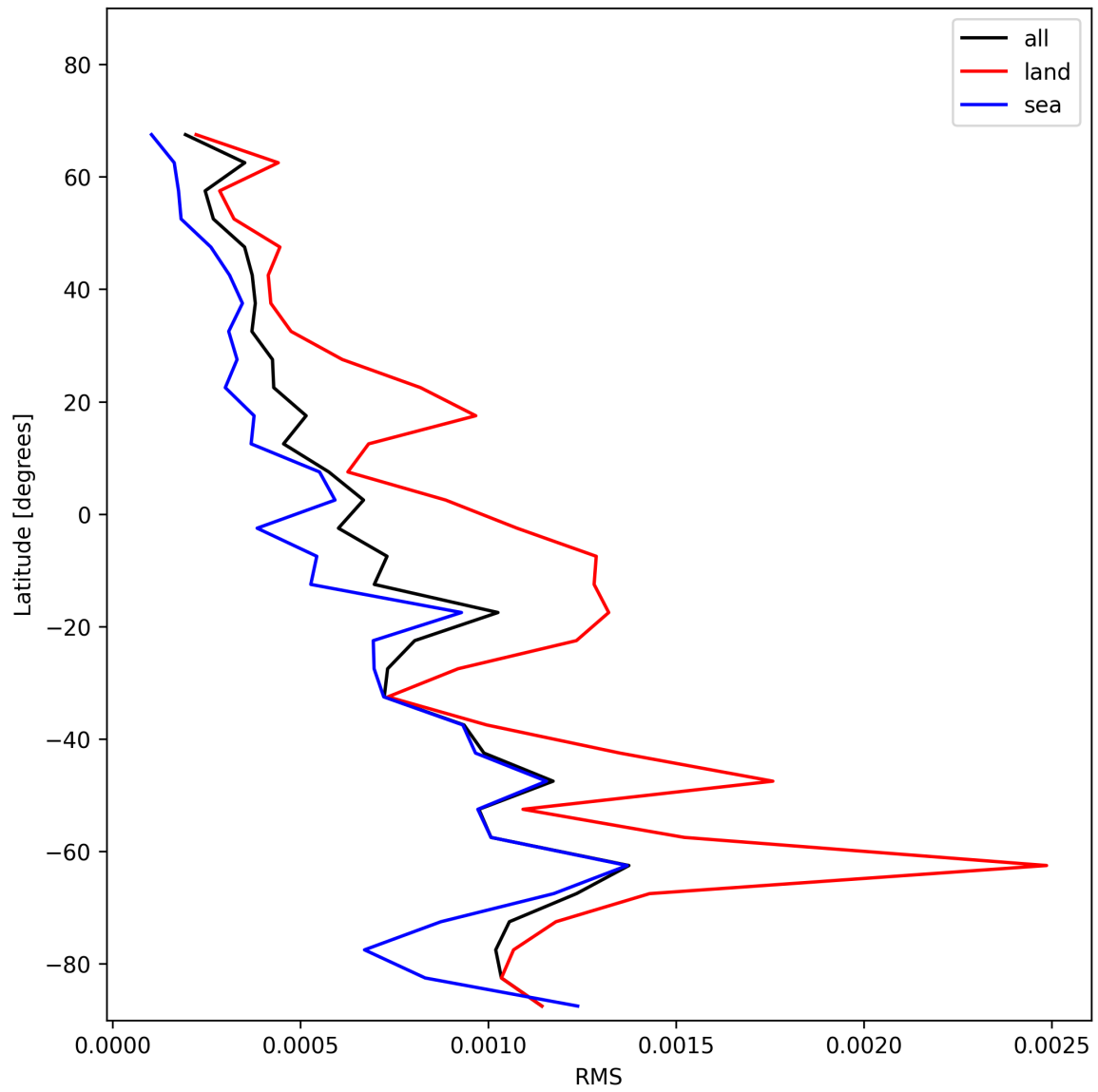


Figure 29: Zonal average of “RMS” for 2025-12-03 to 2025-12-04.

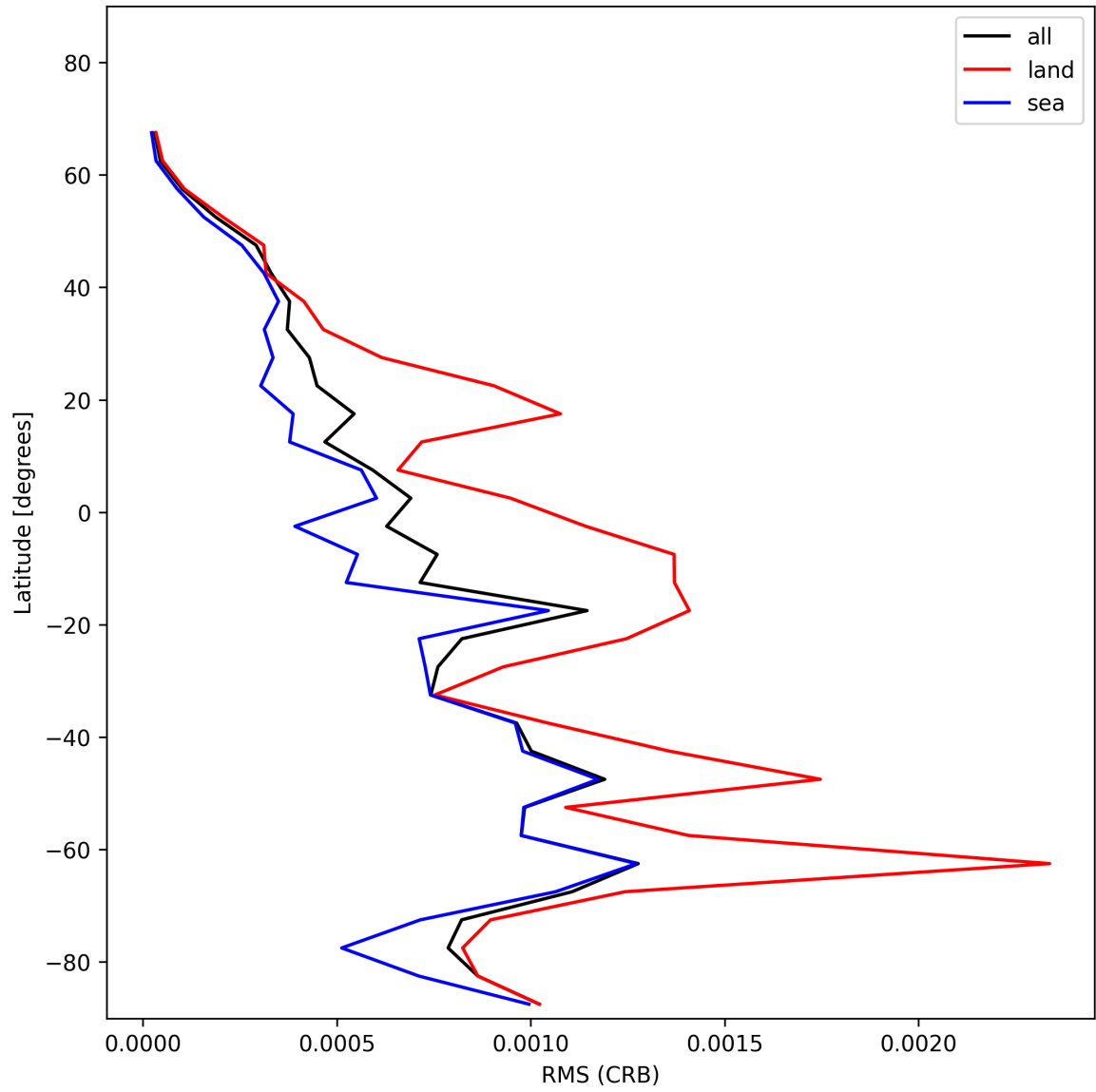


Figure 30: Zonal average of “RMS (CRB)” for 2025-12-03 to 2025-12-04.

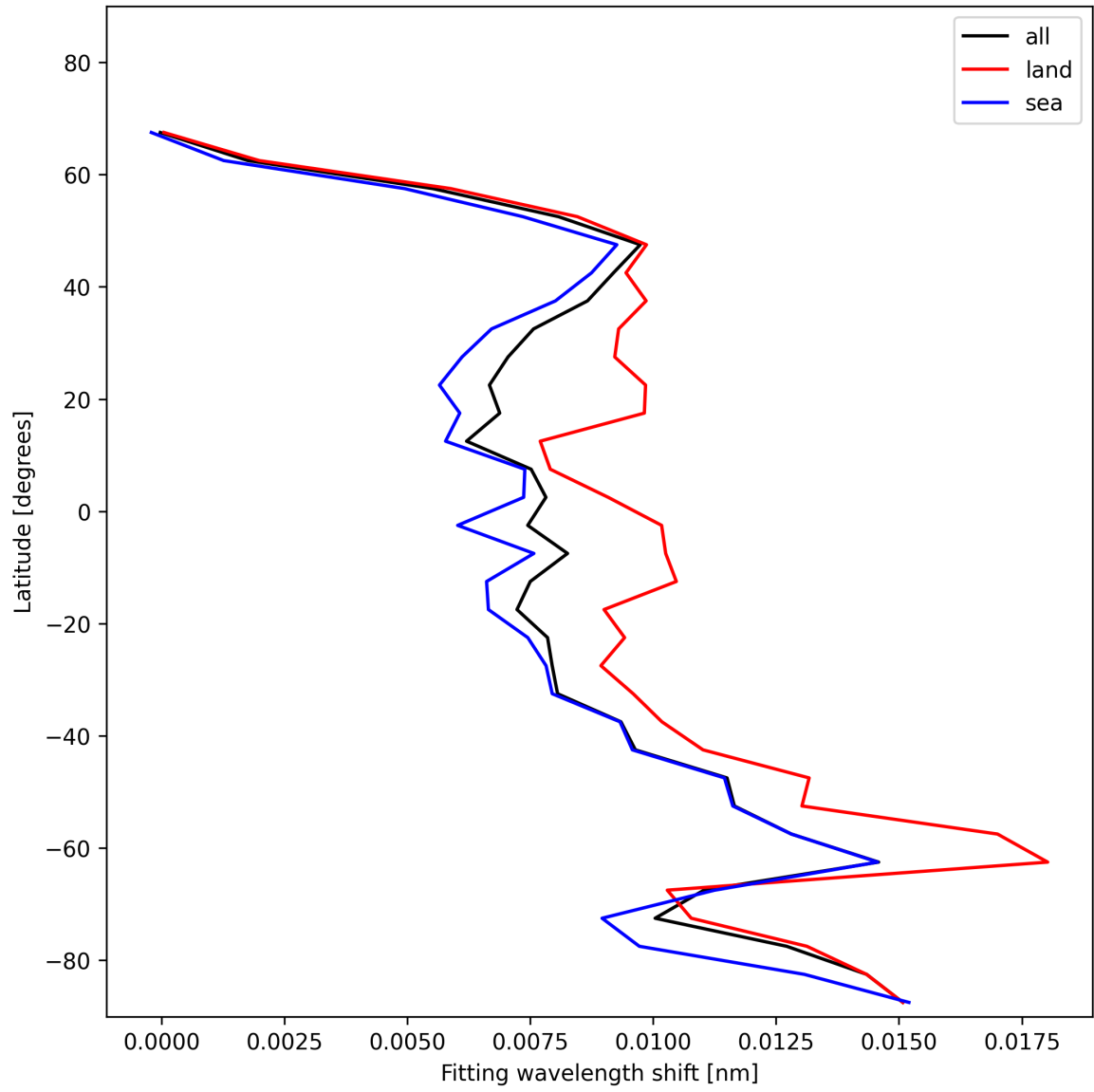


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-12-03 to 2025-12-04.

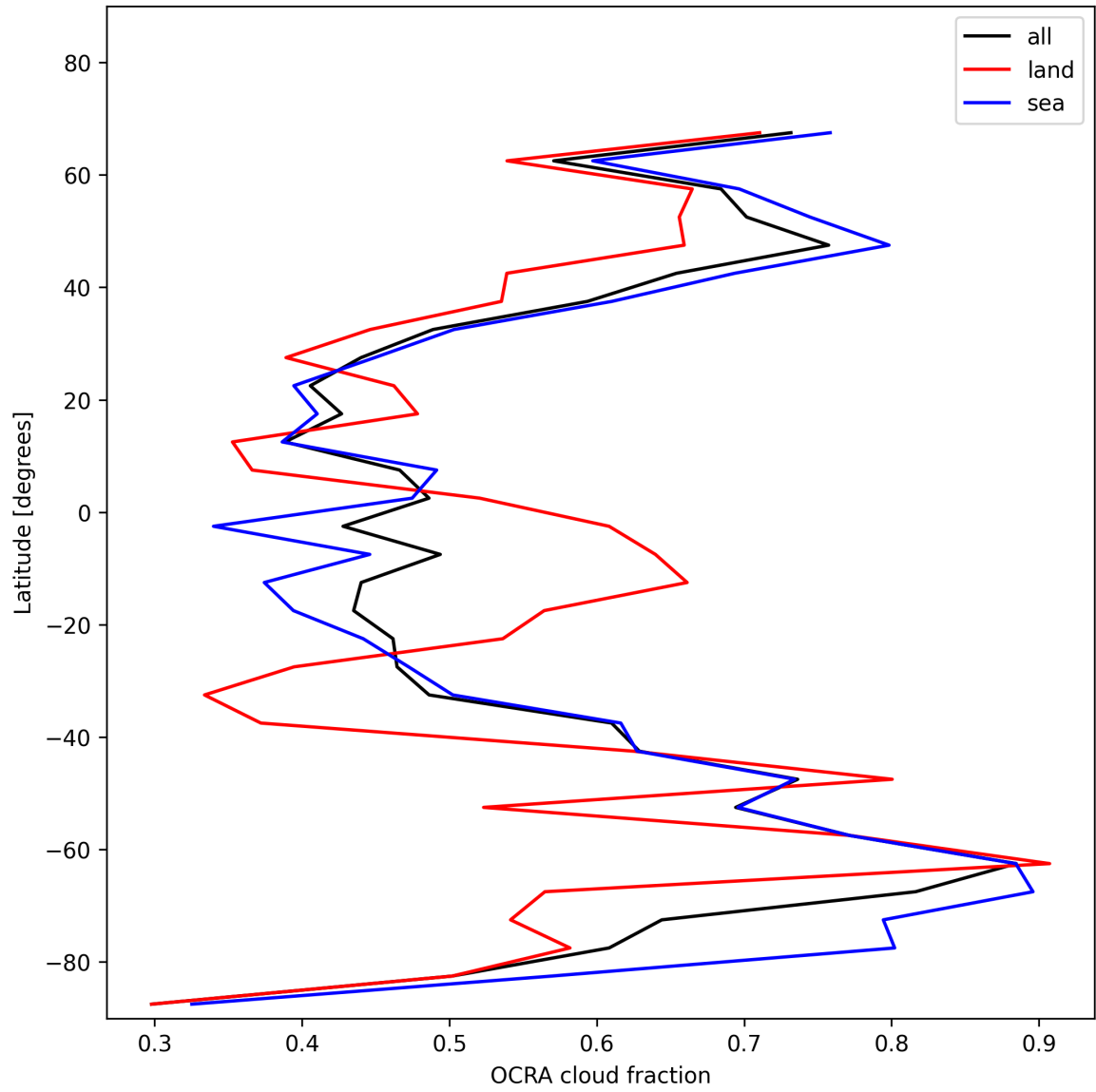


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-12-03 to 2025-12-04.

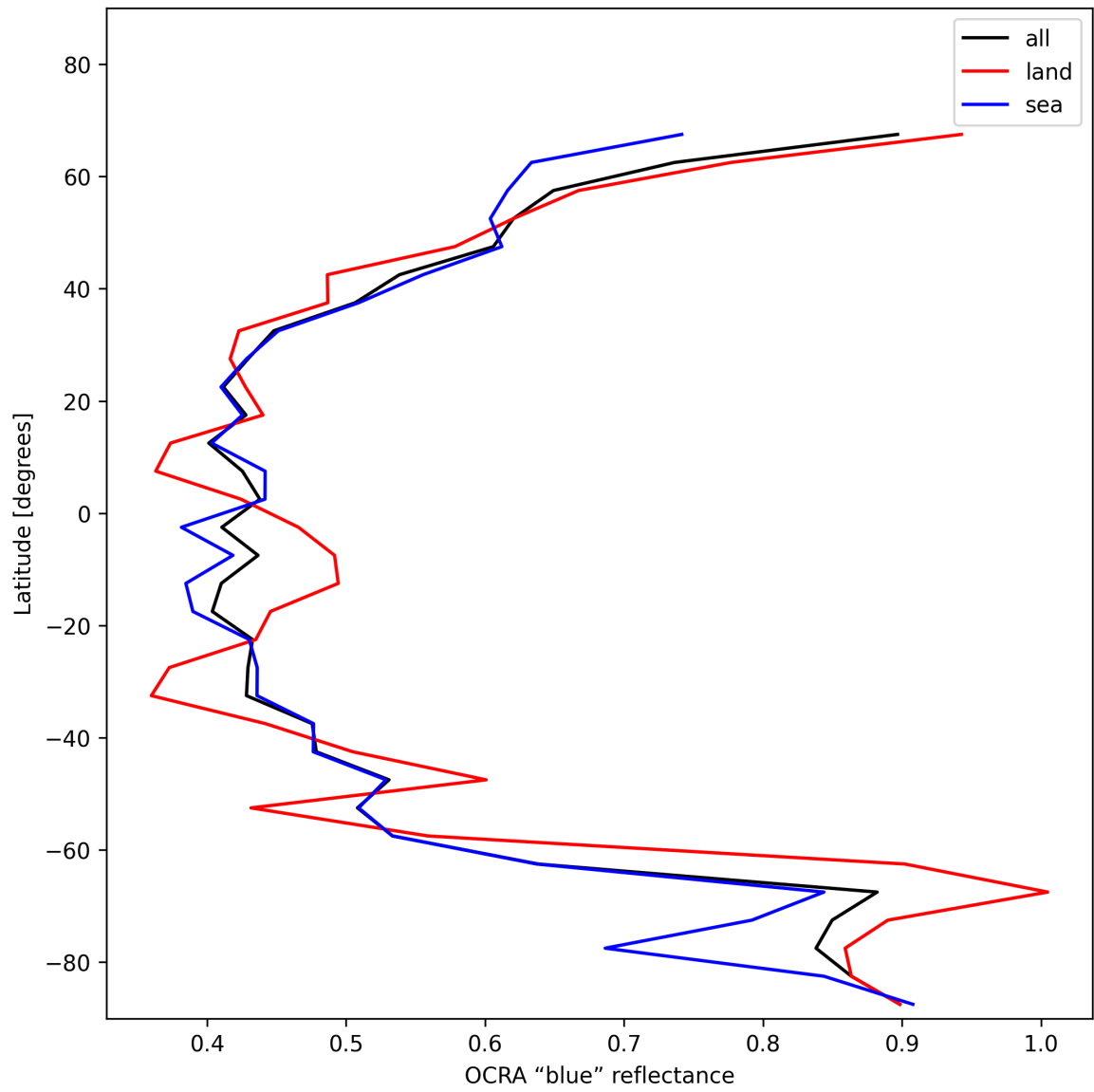


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-12-03 to 2025-12-04.

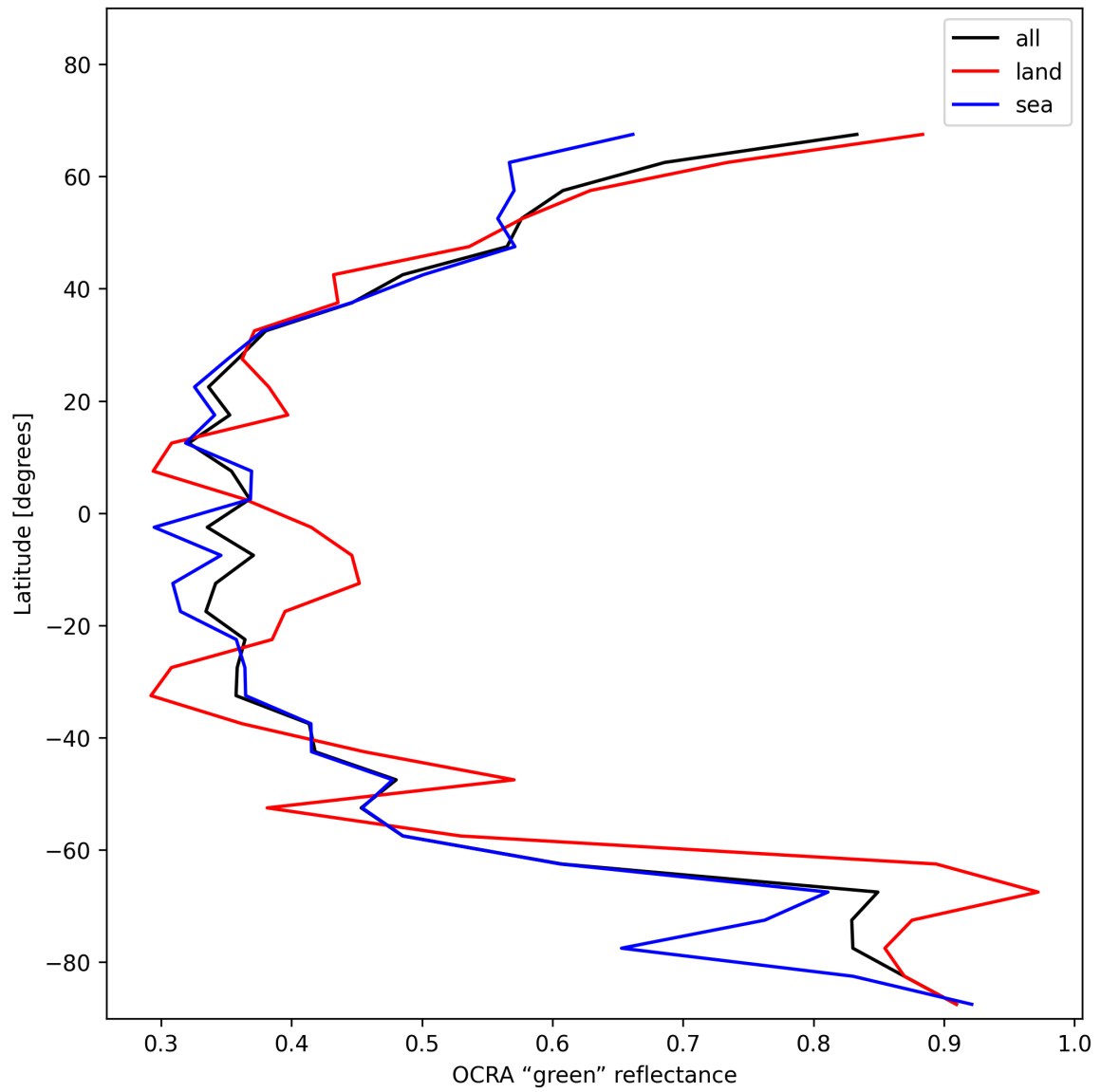


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-12-03 to 2025-12-04.

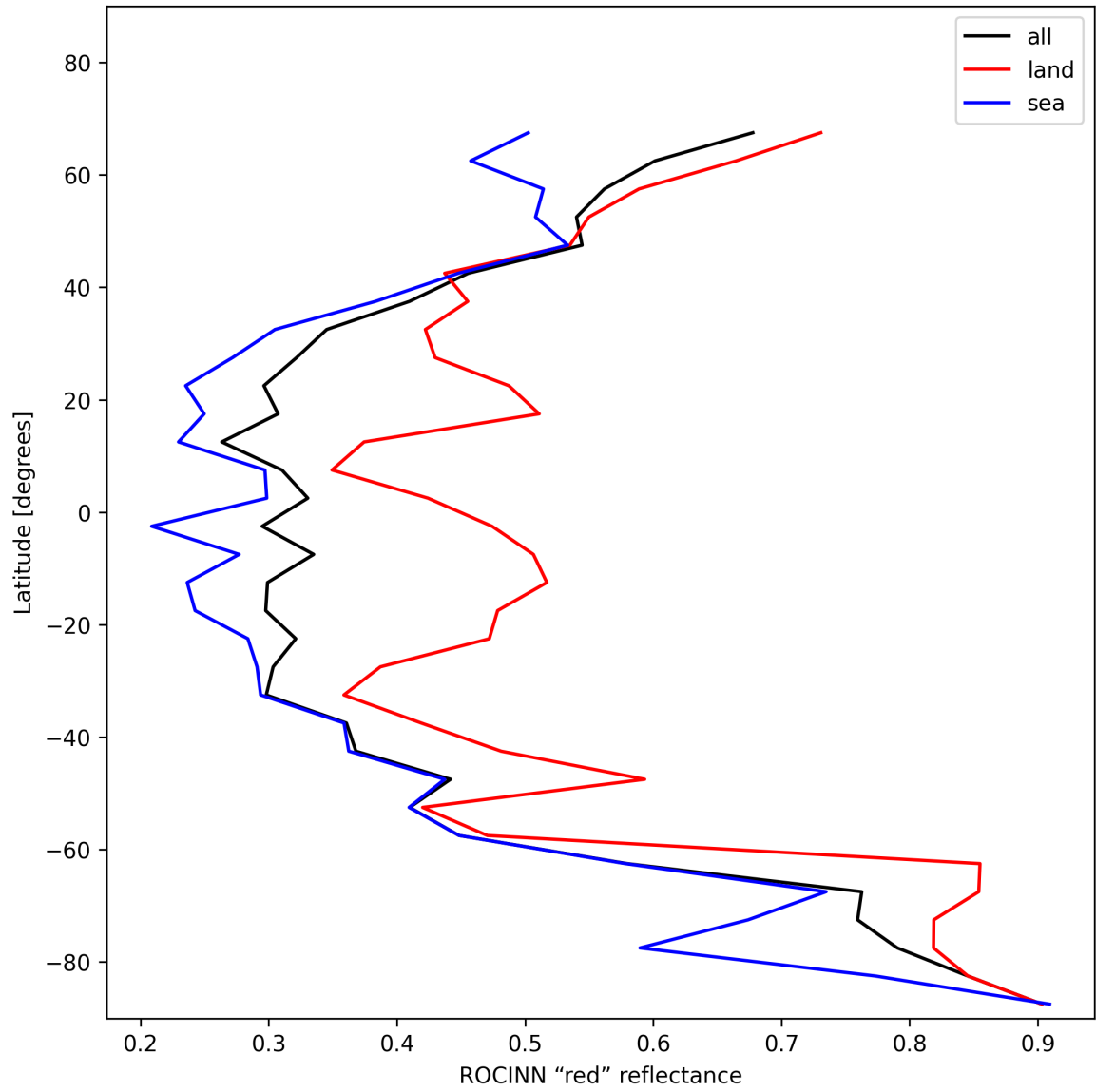


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-12-03 to 2025-12-04.

8 Histograms

The definitions of the parameters given in this section can be found in section 2.

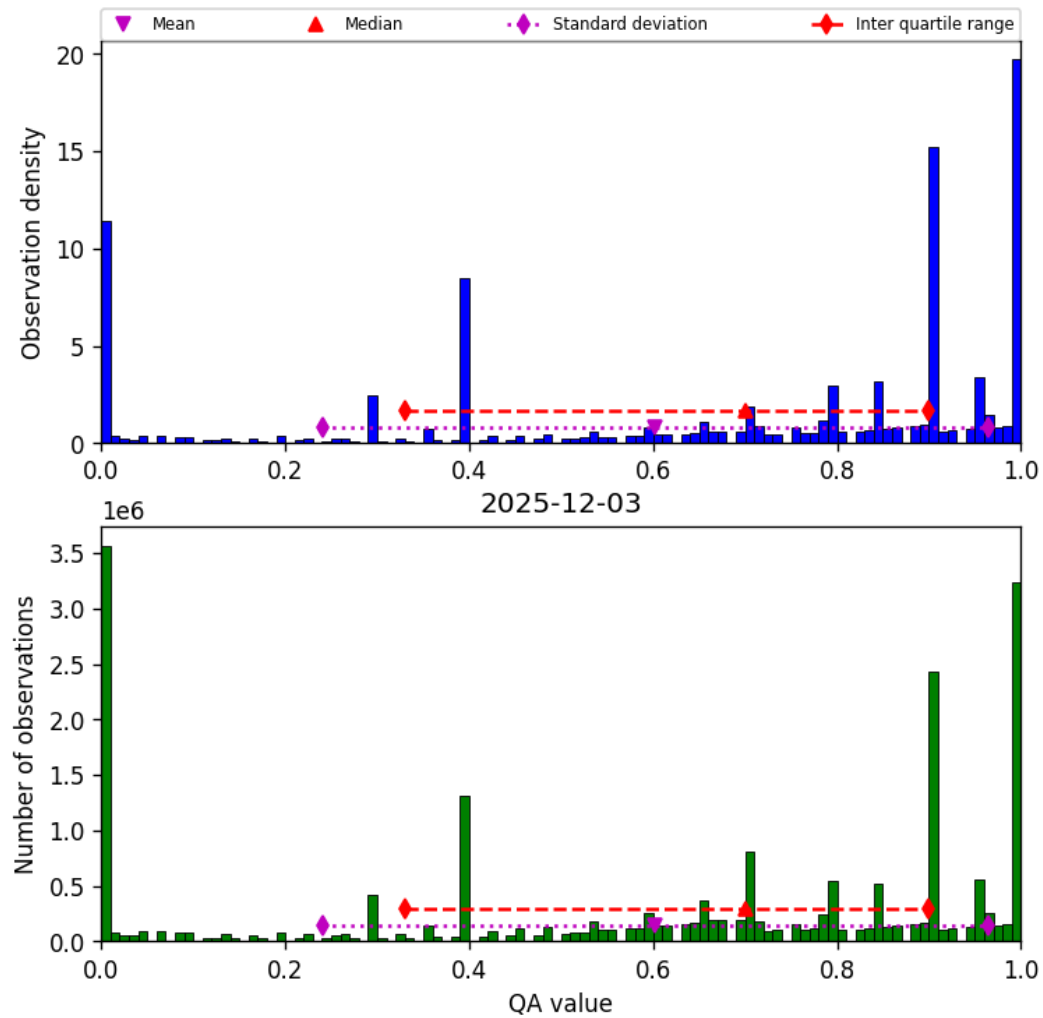


Figure 36: Histogram of “QA value” for 2025-12-03 to 2025-12-04

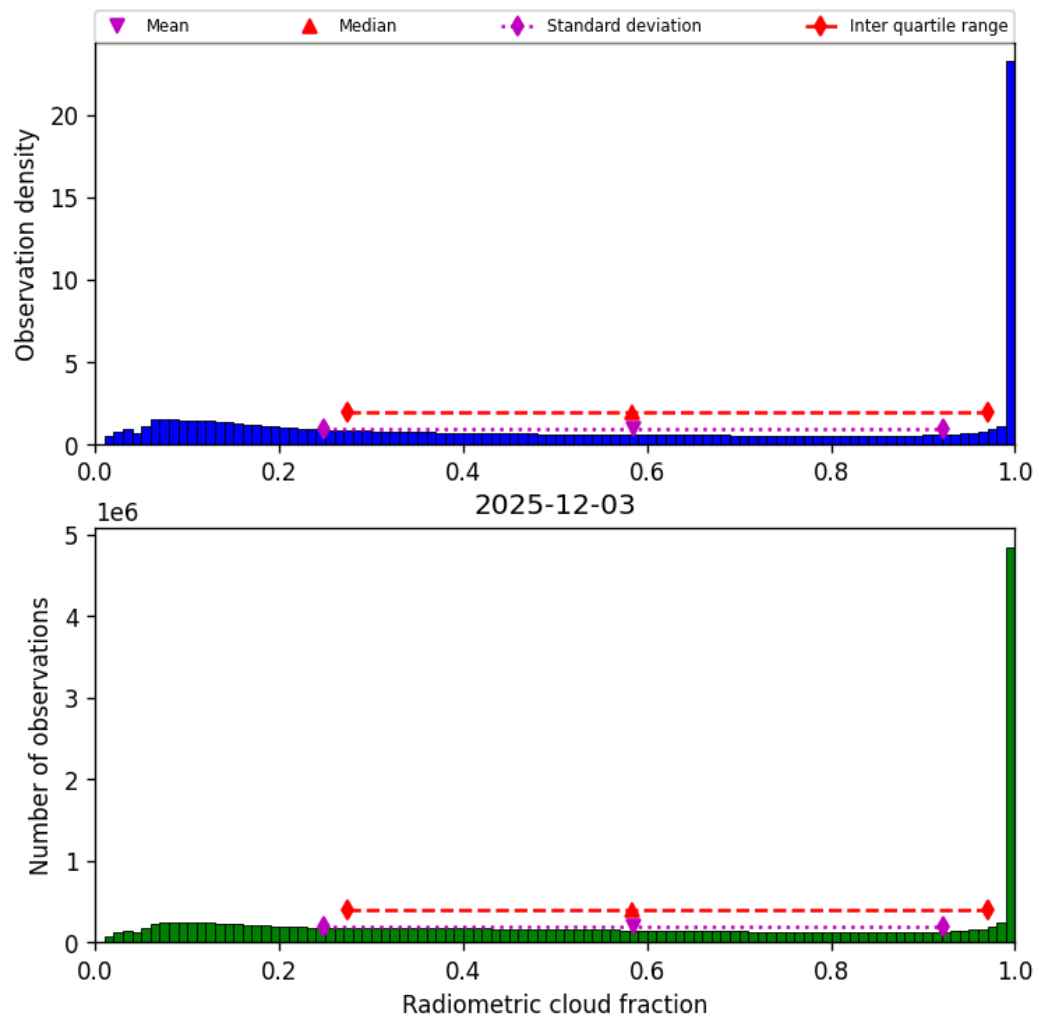


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-12-03 to 2025-12-04

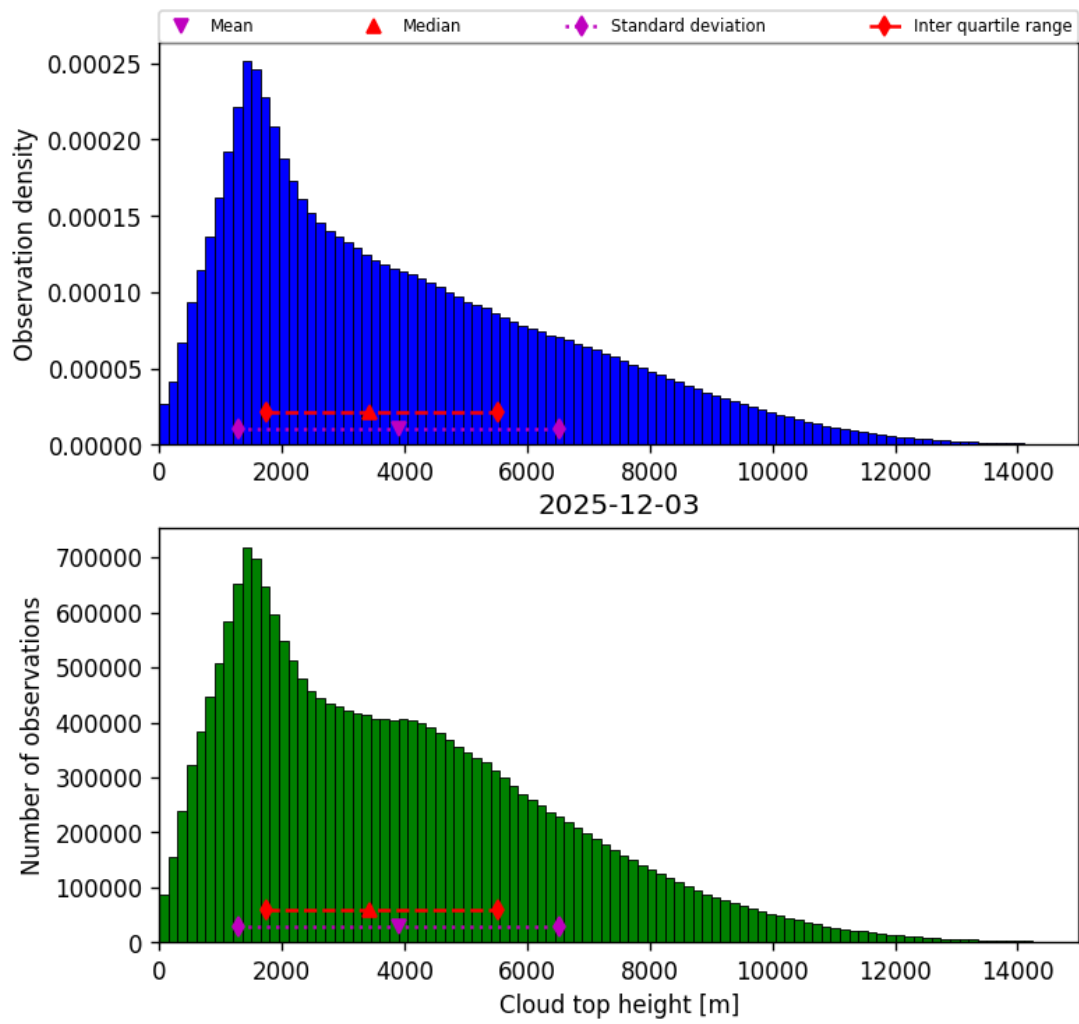


Figure 38: Histogram of “Cloud top height” for 2025-12-03 to 2025-12-04

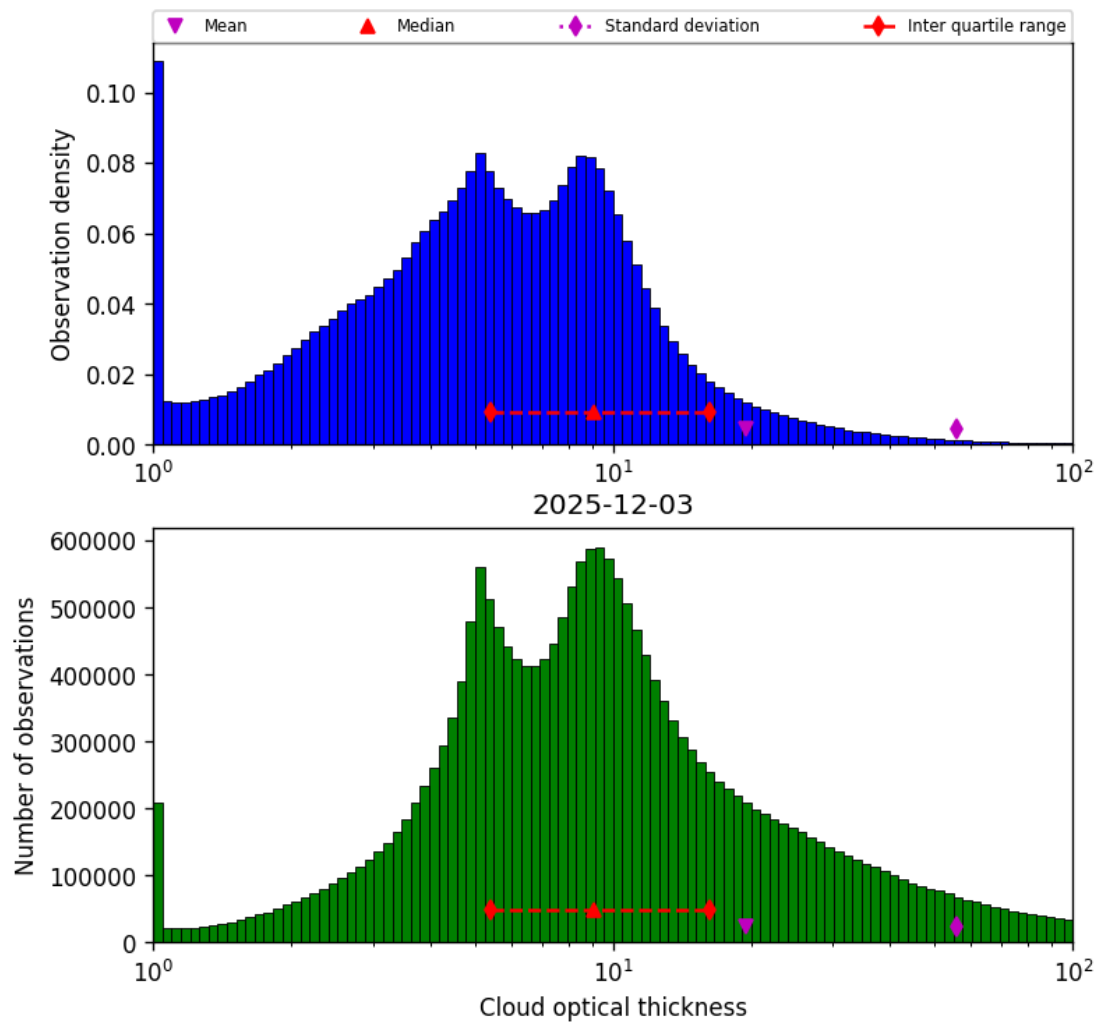


Figure 39: Histogram of “Cloud optical thickness” for 2025-12-03 to 2025-12-04

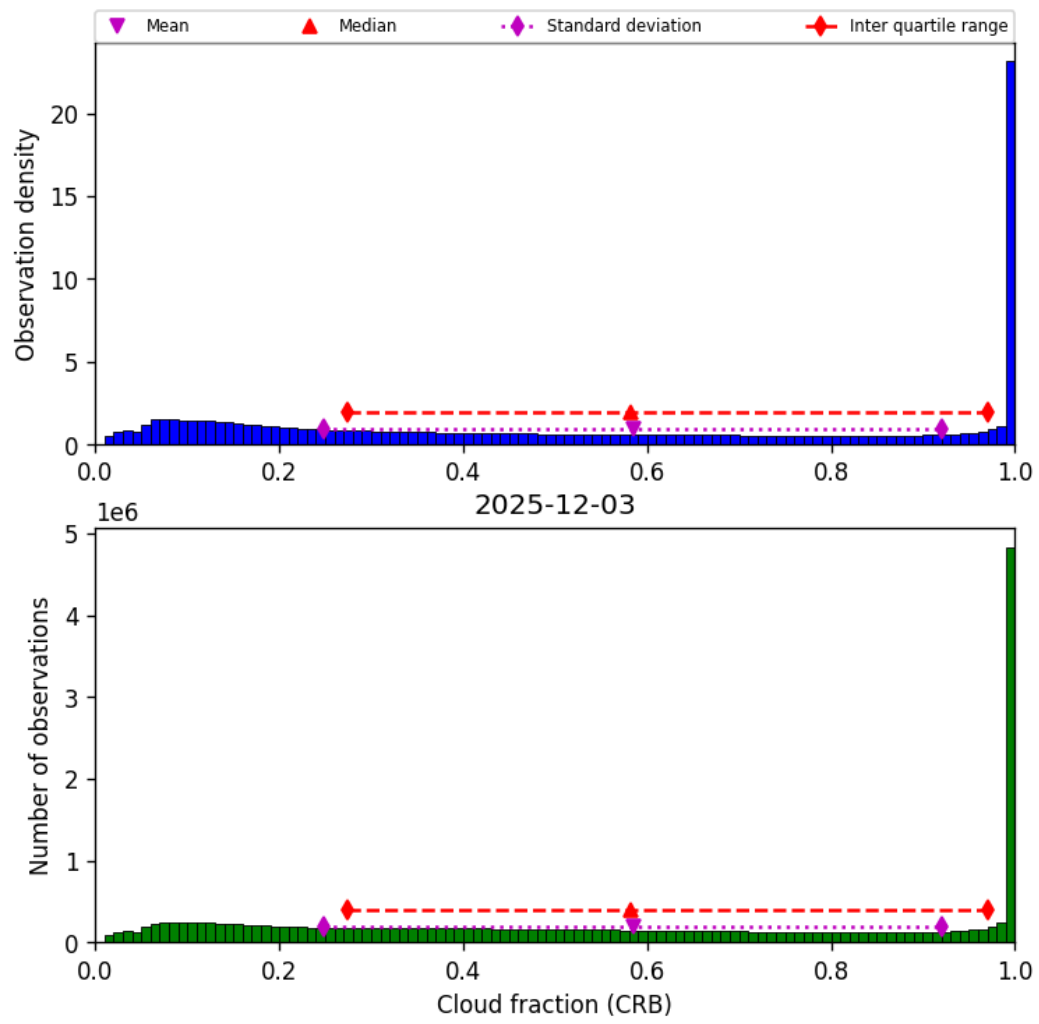


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-12-03 to 2025-12-04

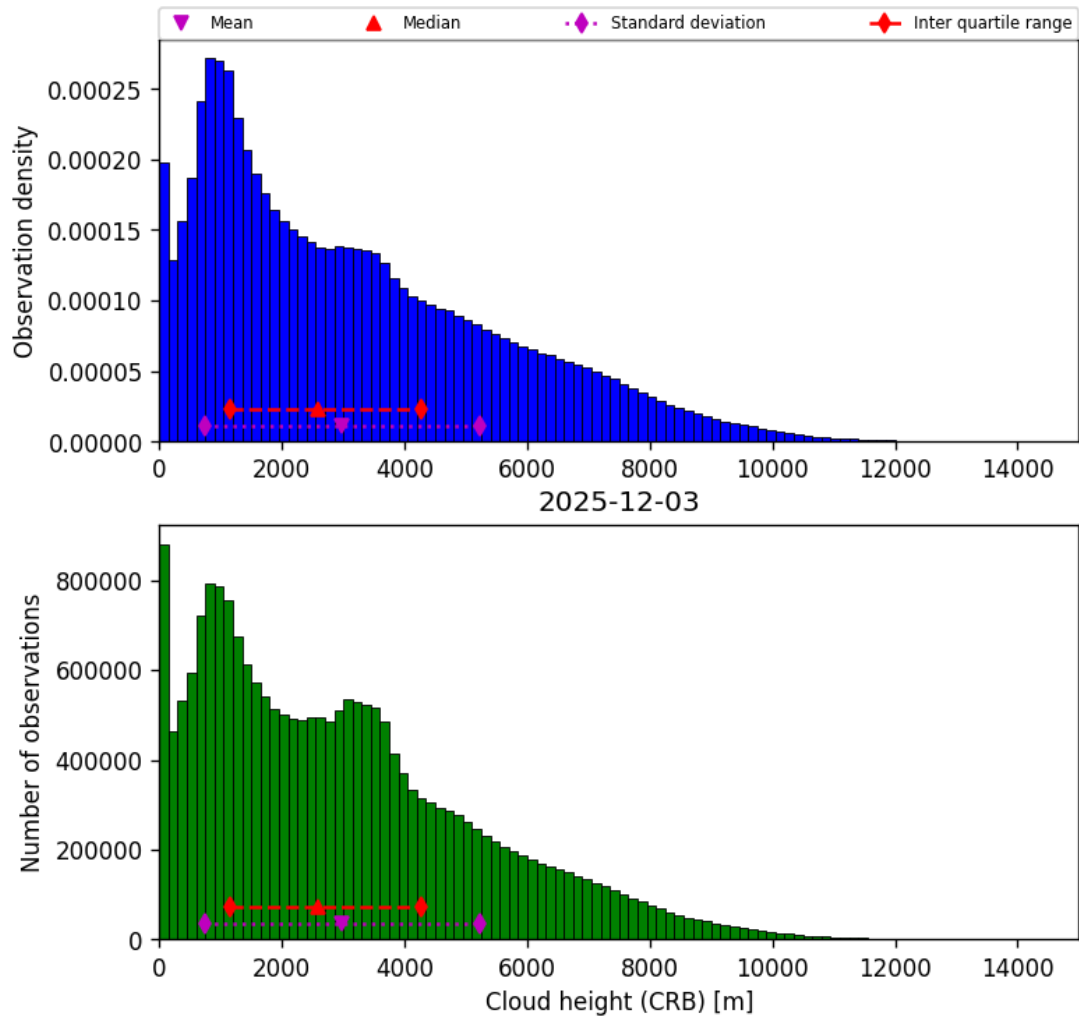


Figure 41: Histogram of “Cloud height (CRB)” for 2025-12-03 to 2025-12-04

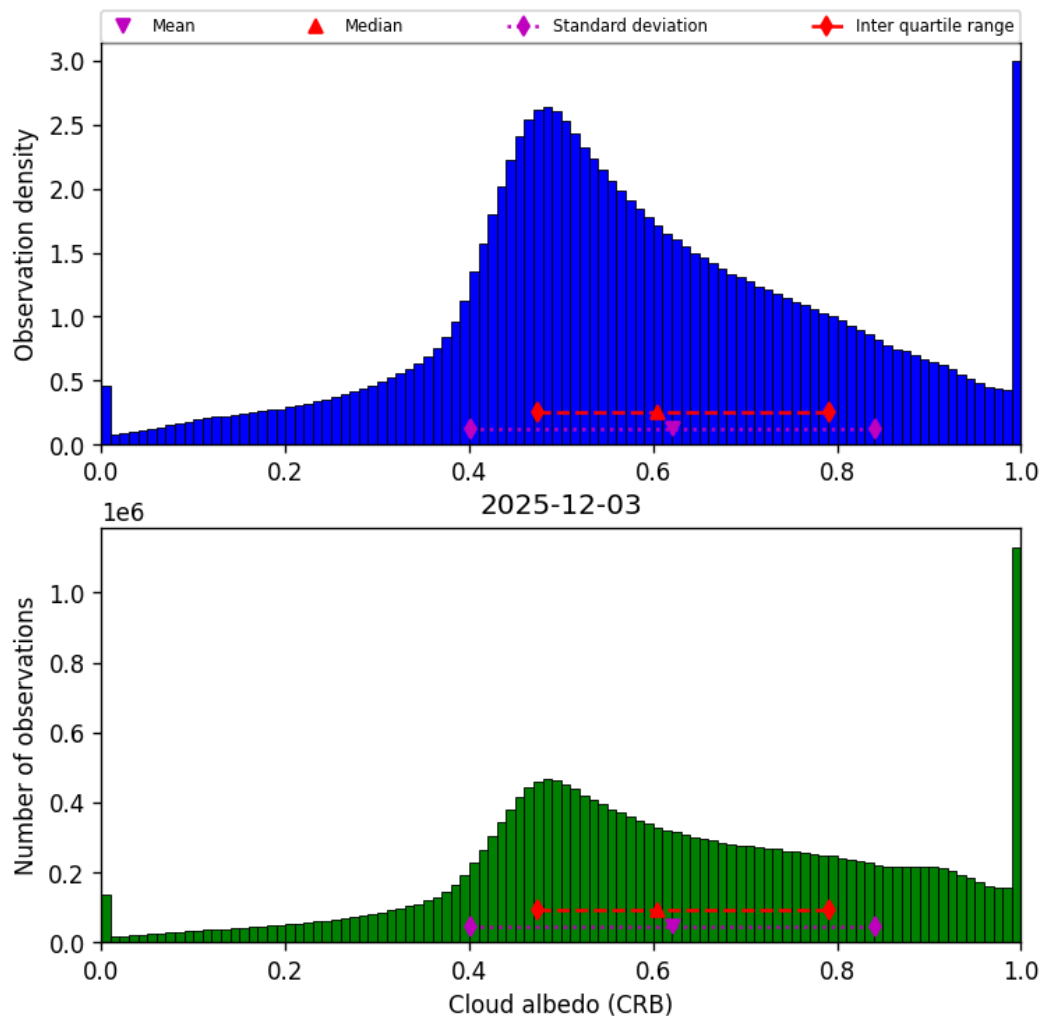


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-12-03 to 2025-12-04

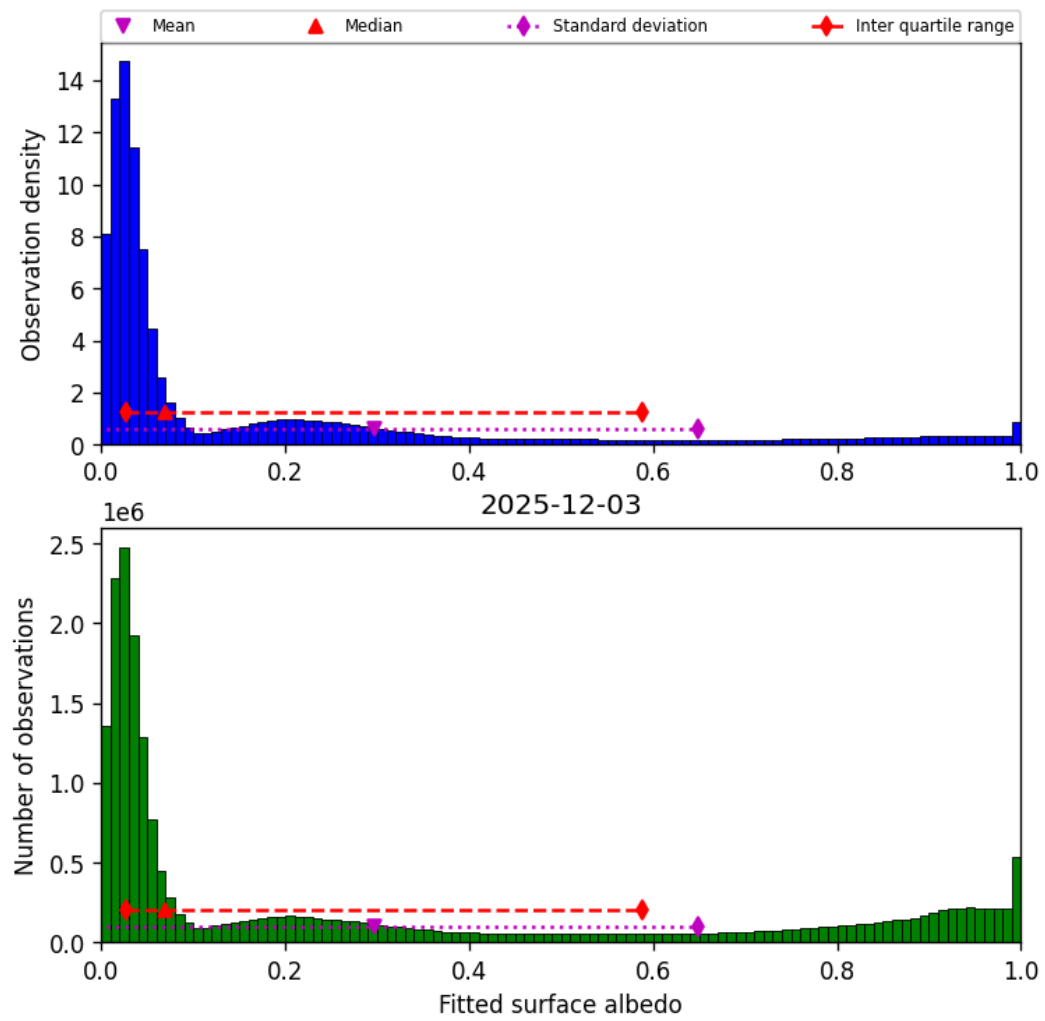


Figure 43: Histogram of “Fitted surface albedo” for 2025-12-03 to 2025-12-04

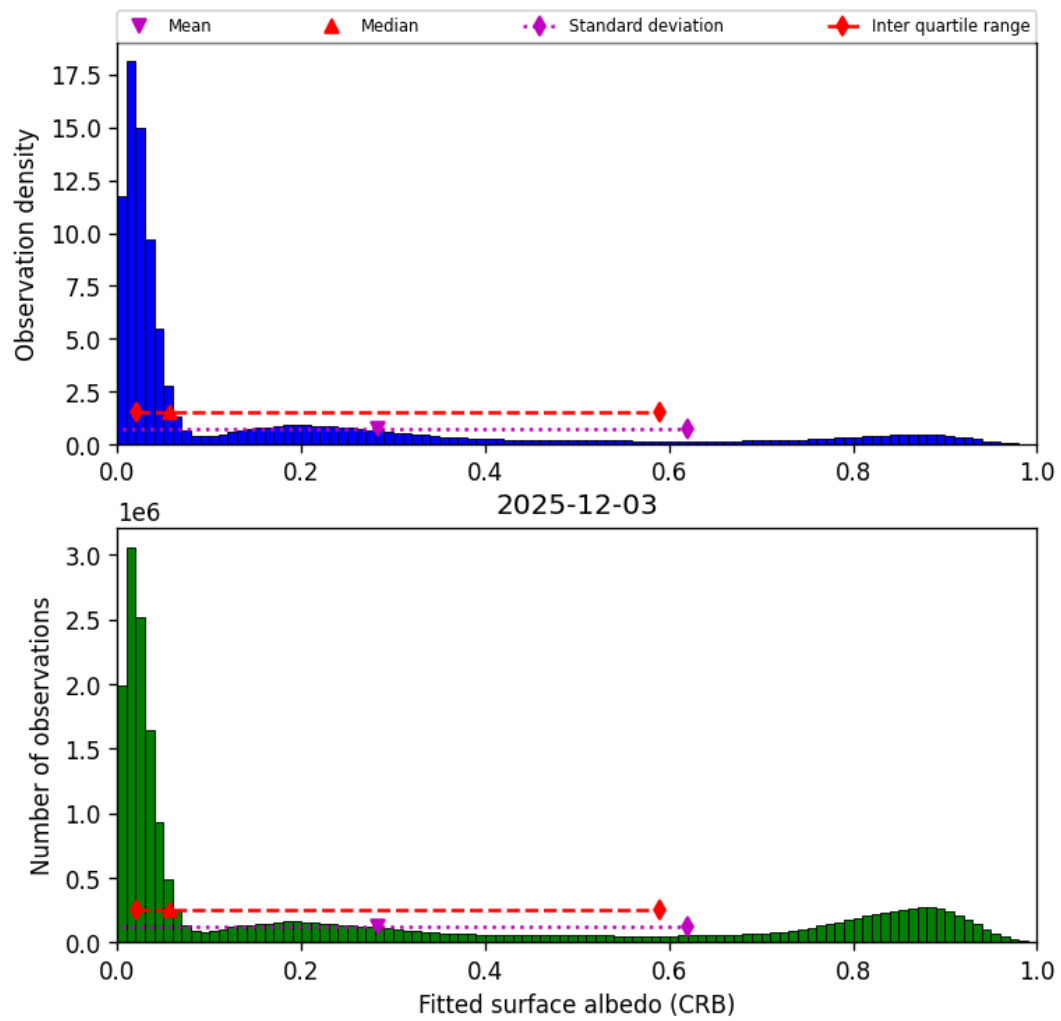


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-12-03 to 2025-12-04

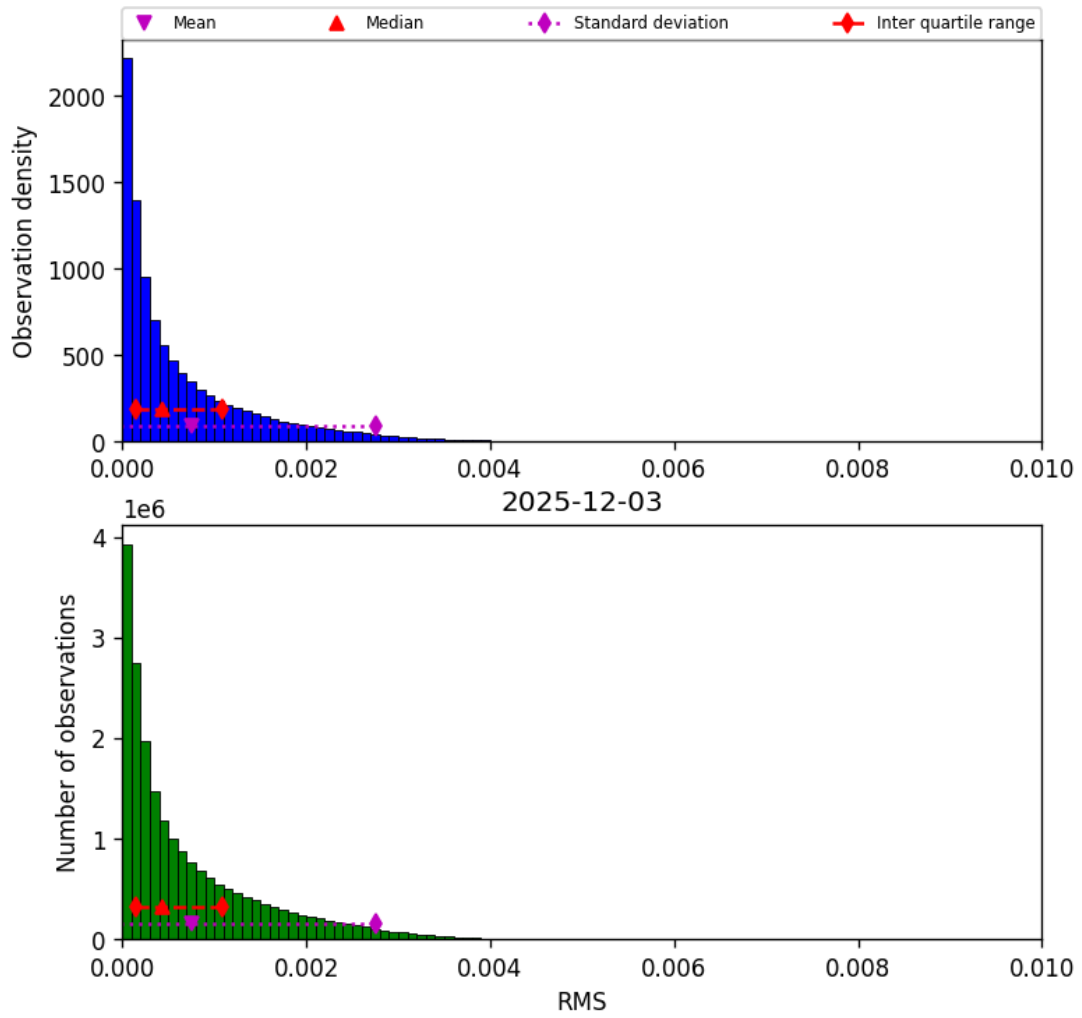


Figure 45: Histogram of “RMS” for 2025-12-03 to 2025-12-04

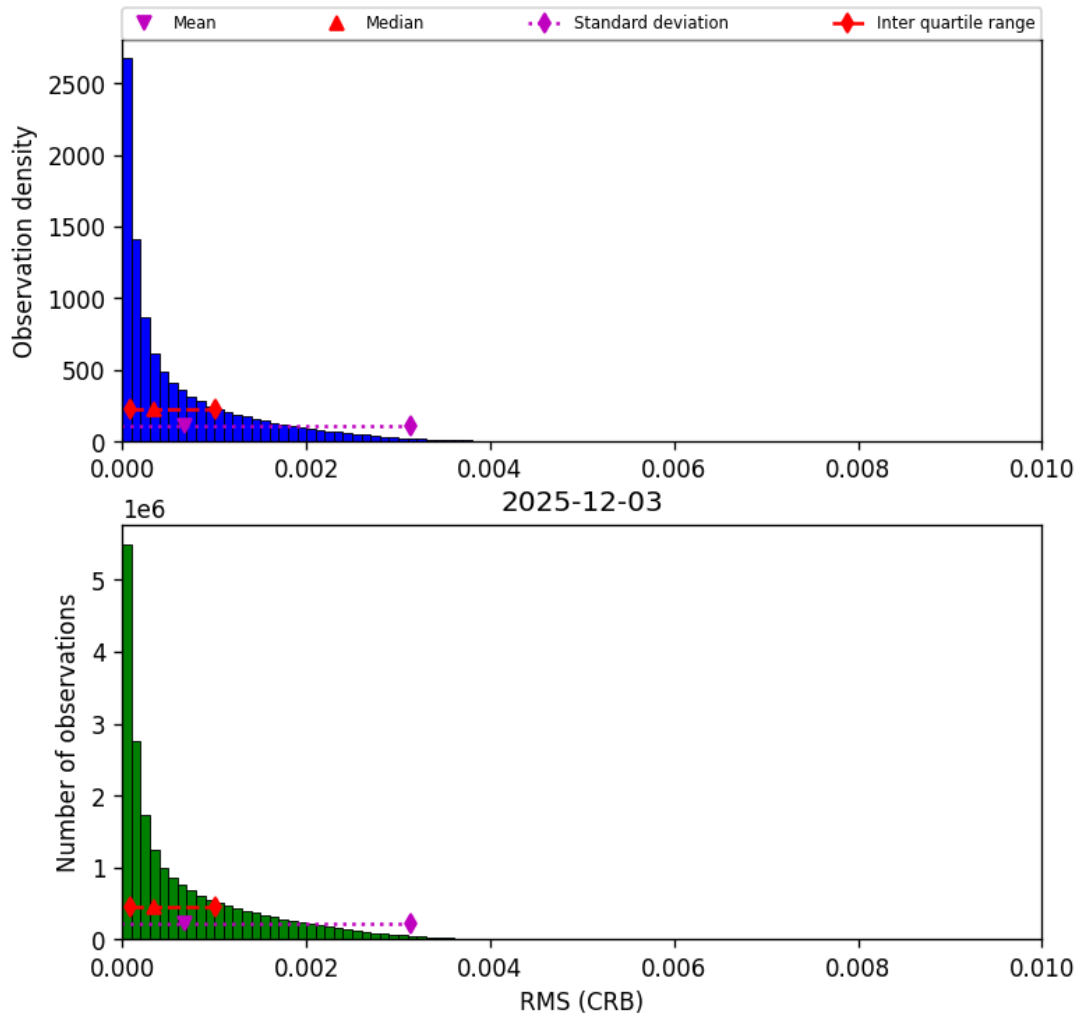


Figure 46: Histogram of “RMS (CRB)” for 2025-12-03 to 2025-12-04

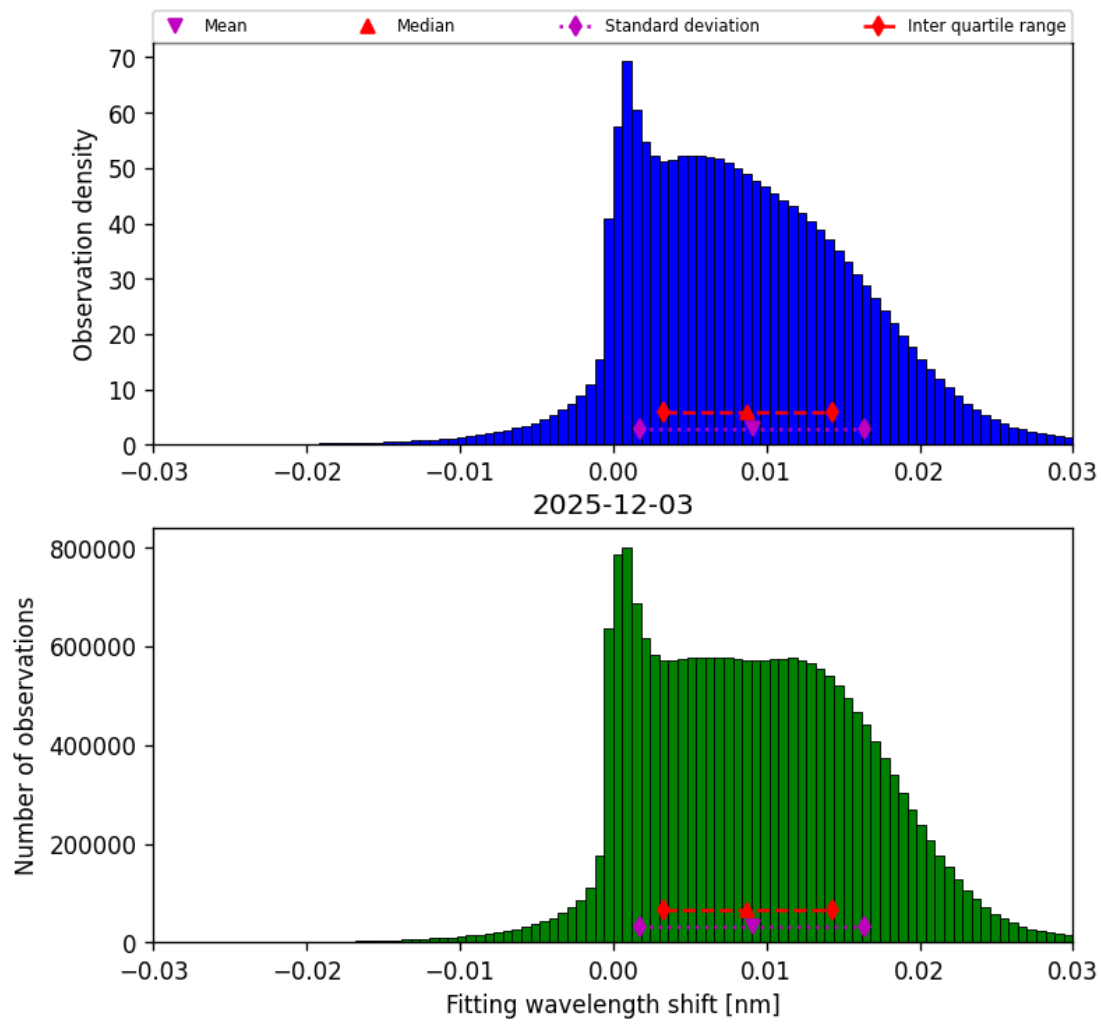


Figure 47: Histogram of “Fitting wavelength shift” for 2025-12-03 to 2025-12-04

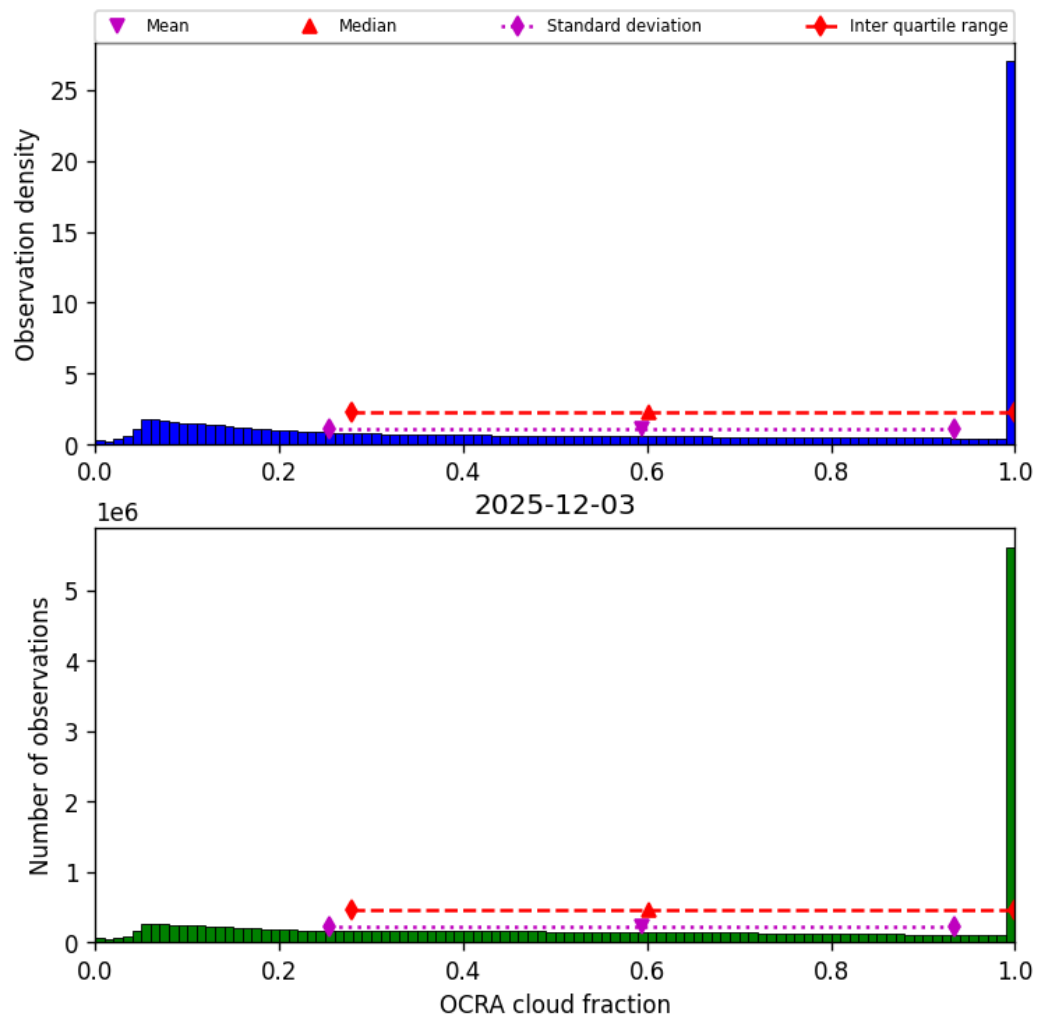


Figure 48: Histogram of “OCRA cloud fraction” for 2025-12-03 to 2025-12-04

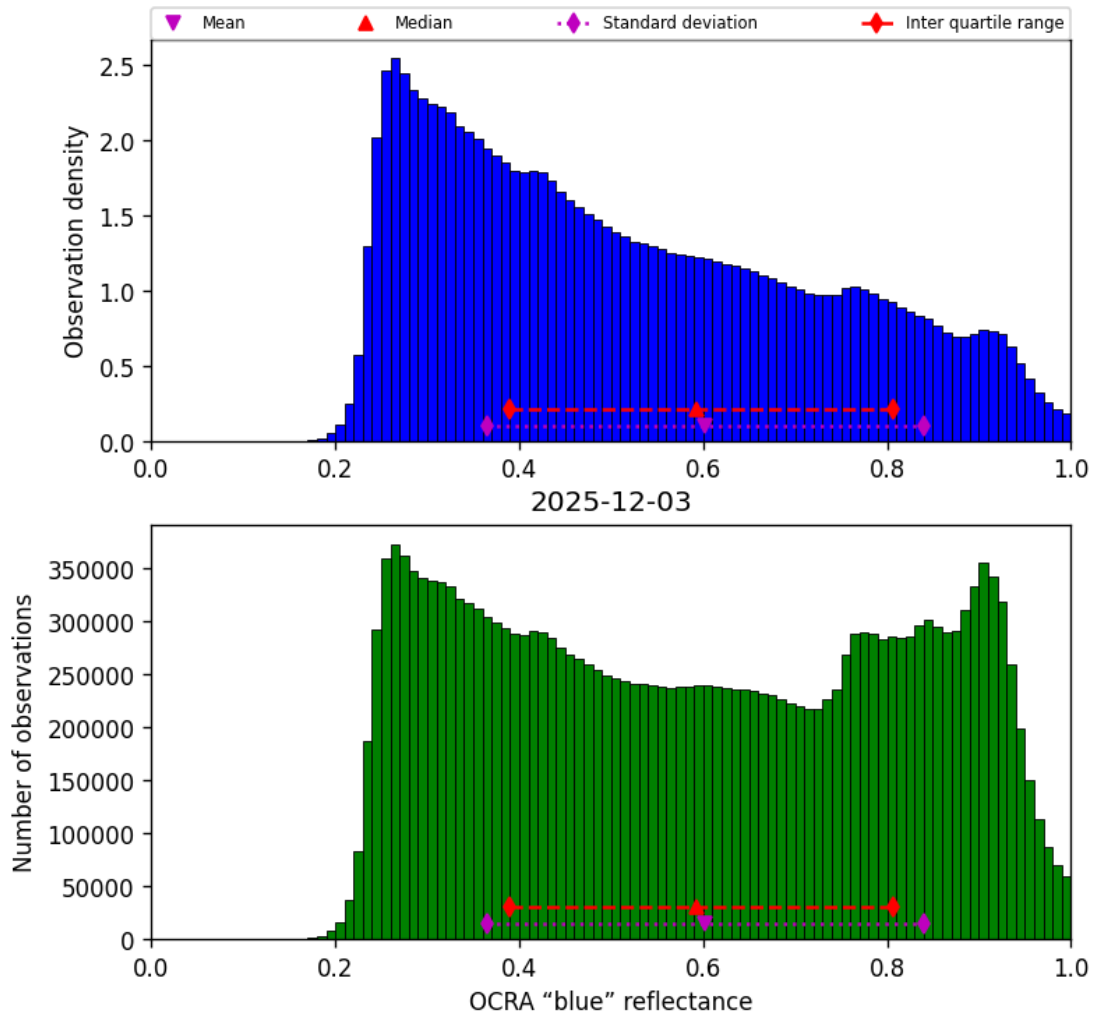


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-12-03 to 2025-12-04

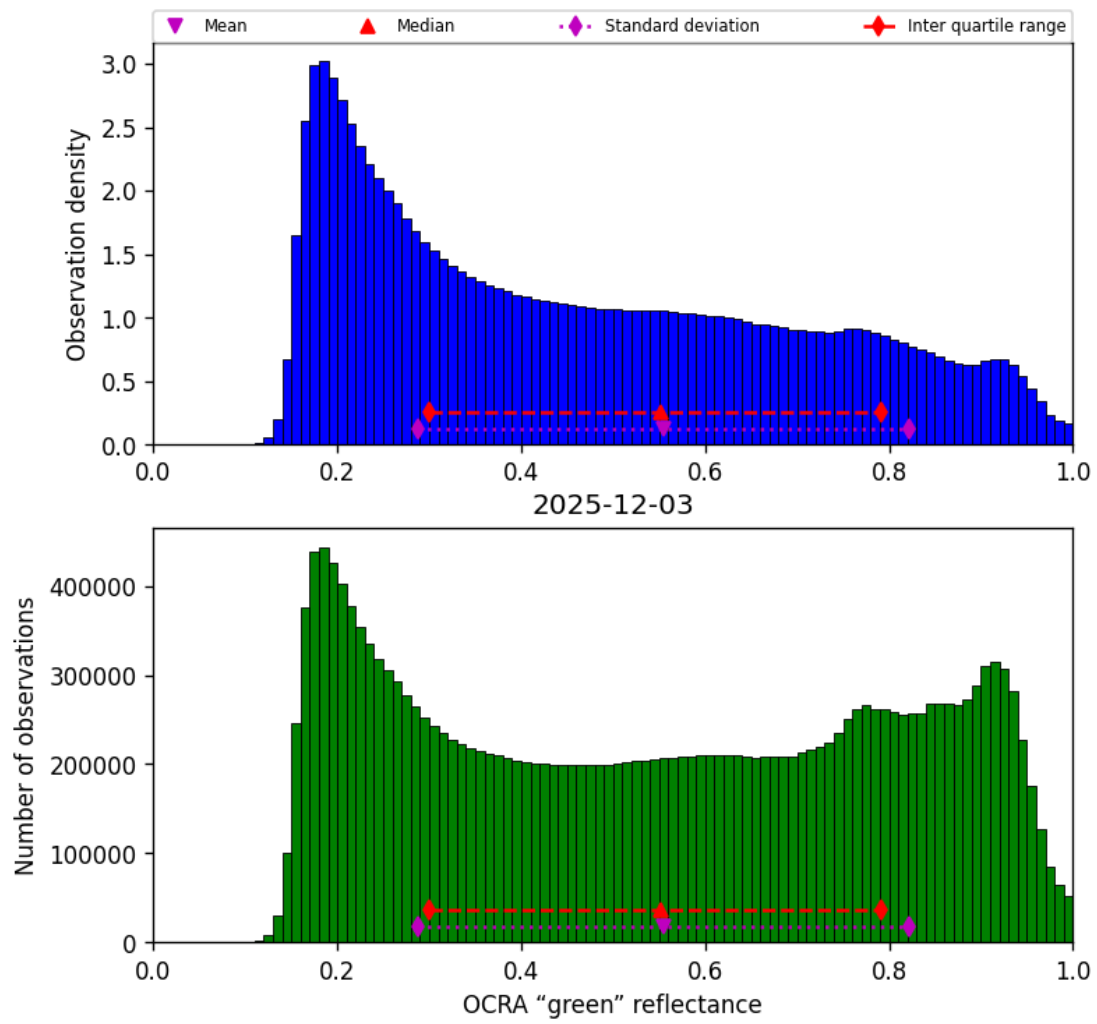


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-12-03 to 2025-12-04

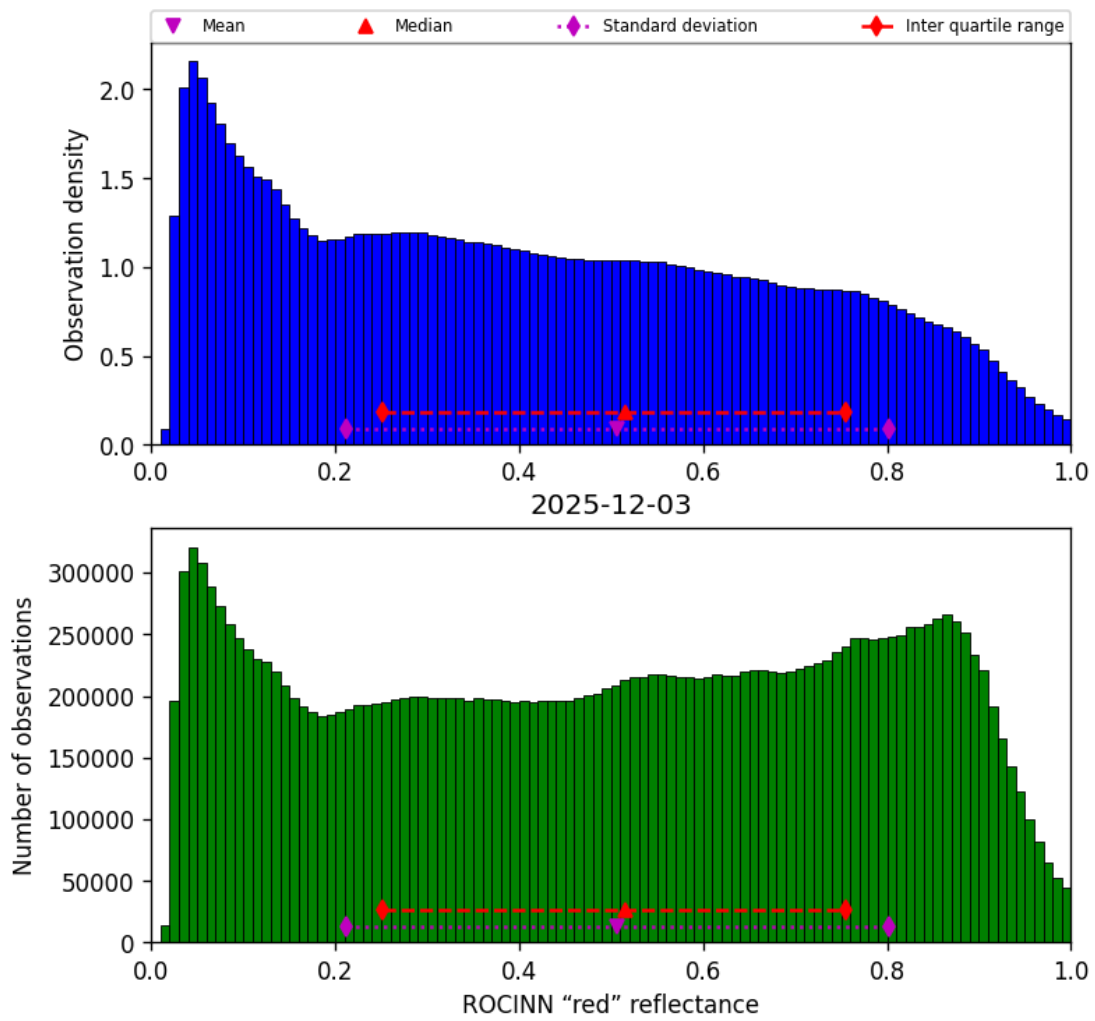


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-12-03 to 2025-12-04

9 Along track statistics

The TROPOMI instrument uses different binned detector rows for different viewing directions. In this section statistics are presented for each of the binned rows in the instrument.

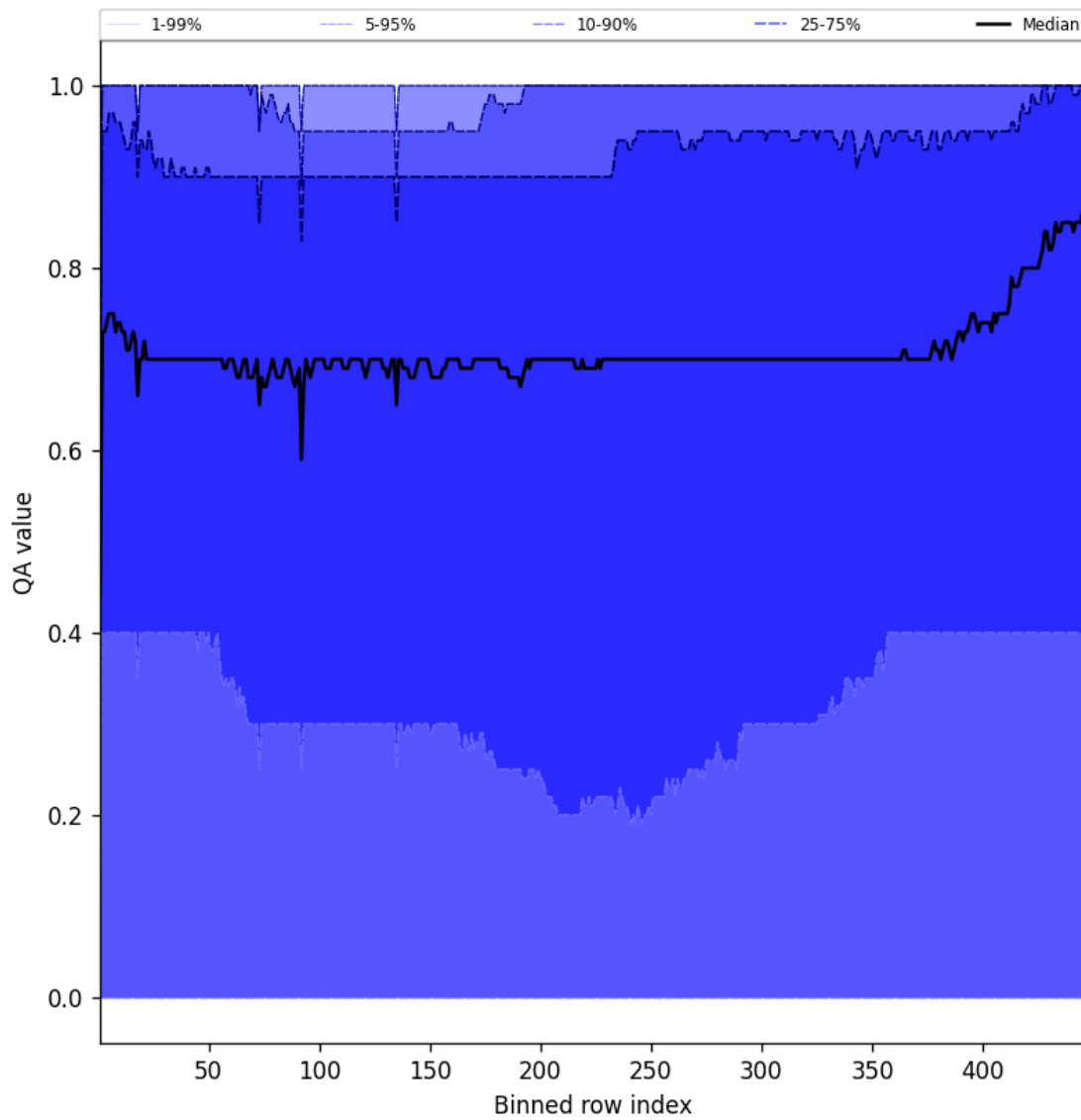


Figure 52: Along track statistics of “QA value” for 2025-12-03 to 2025-12-04

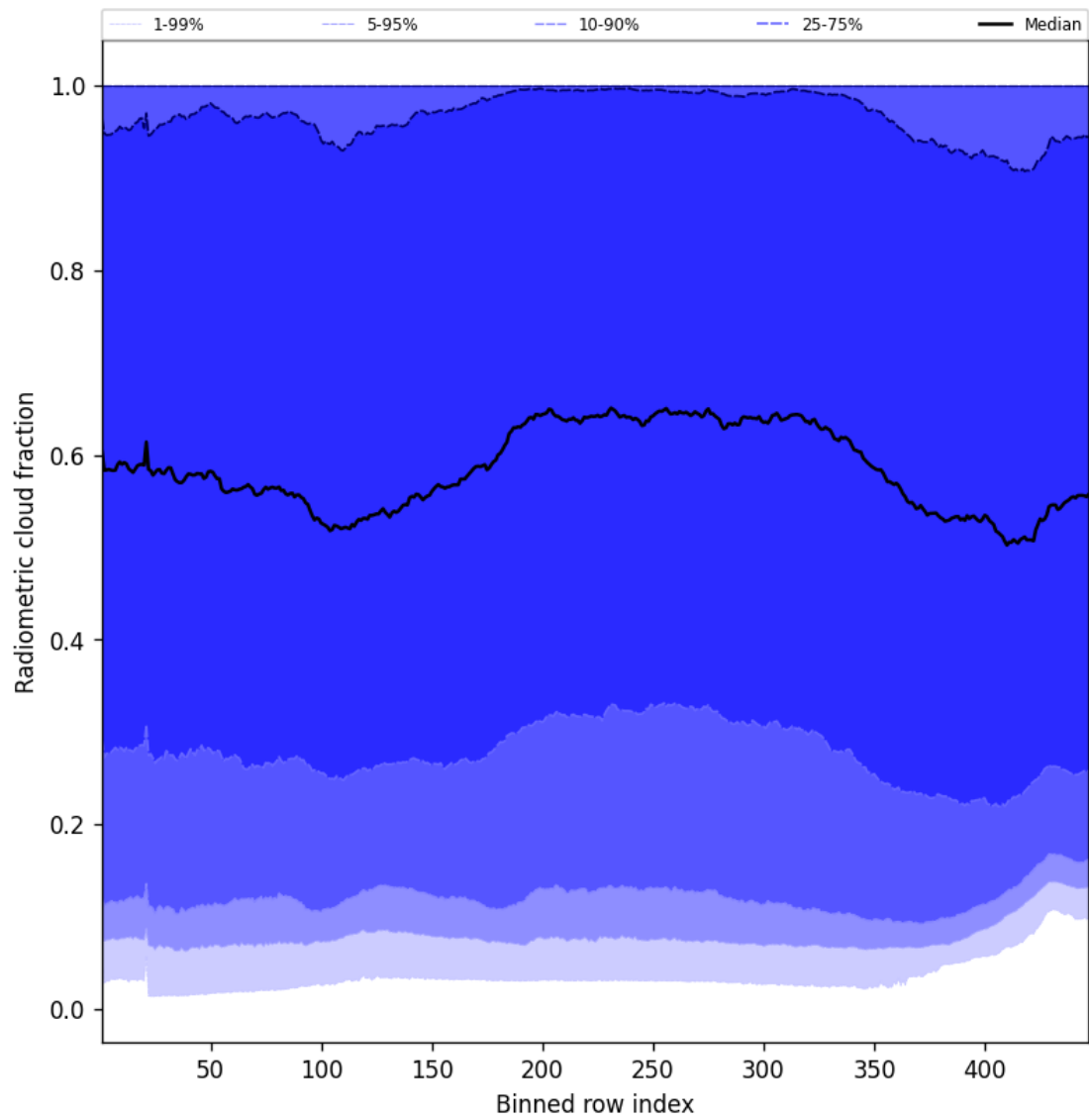


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-12-03 to 2025-12-04

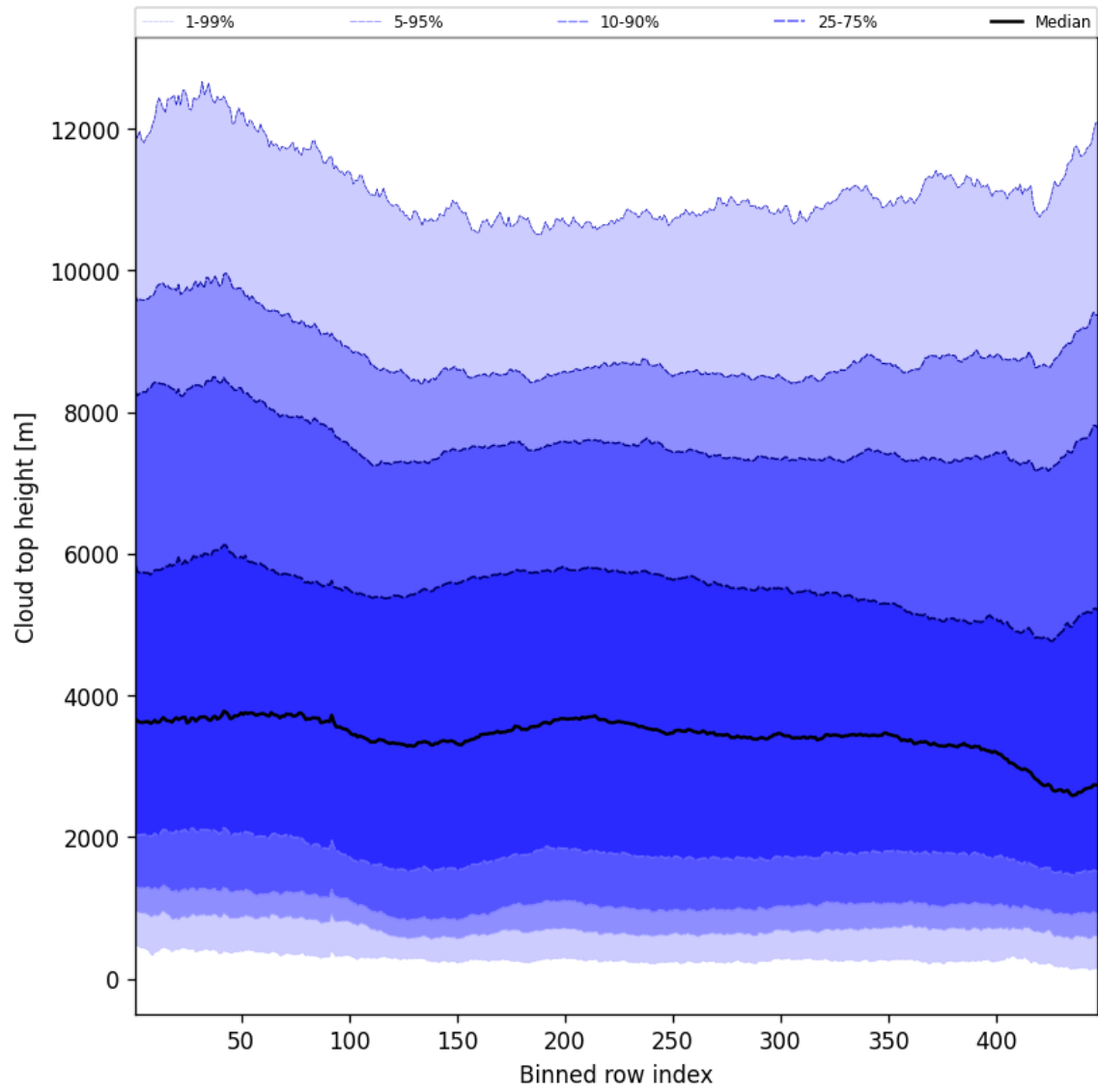


Figure 54: Along track statistics of “Cloud top height” for 2025-12-03 to 2025-12-04

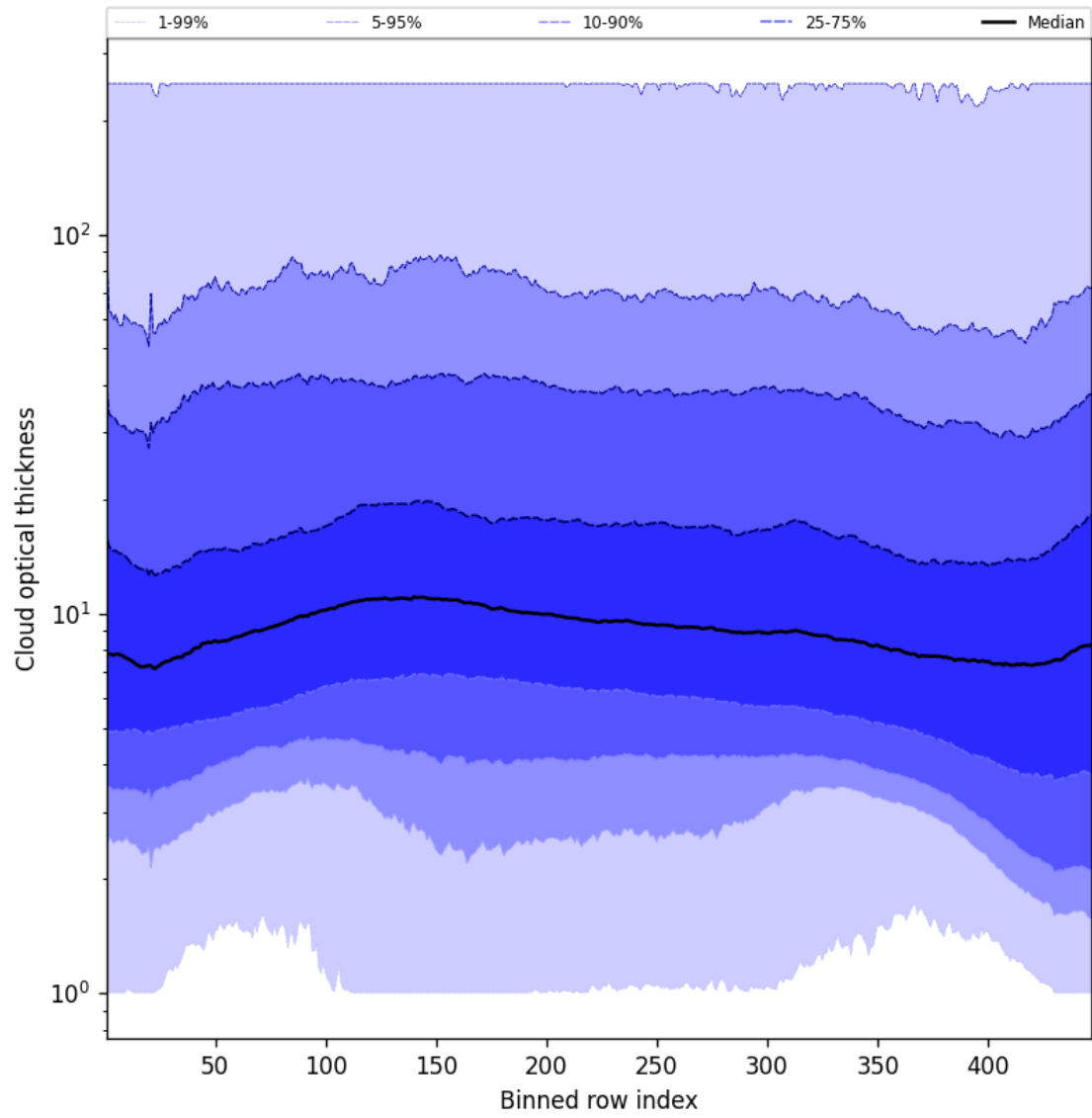


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-12-03 to 2025-12-04

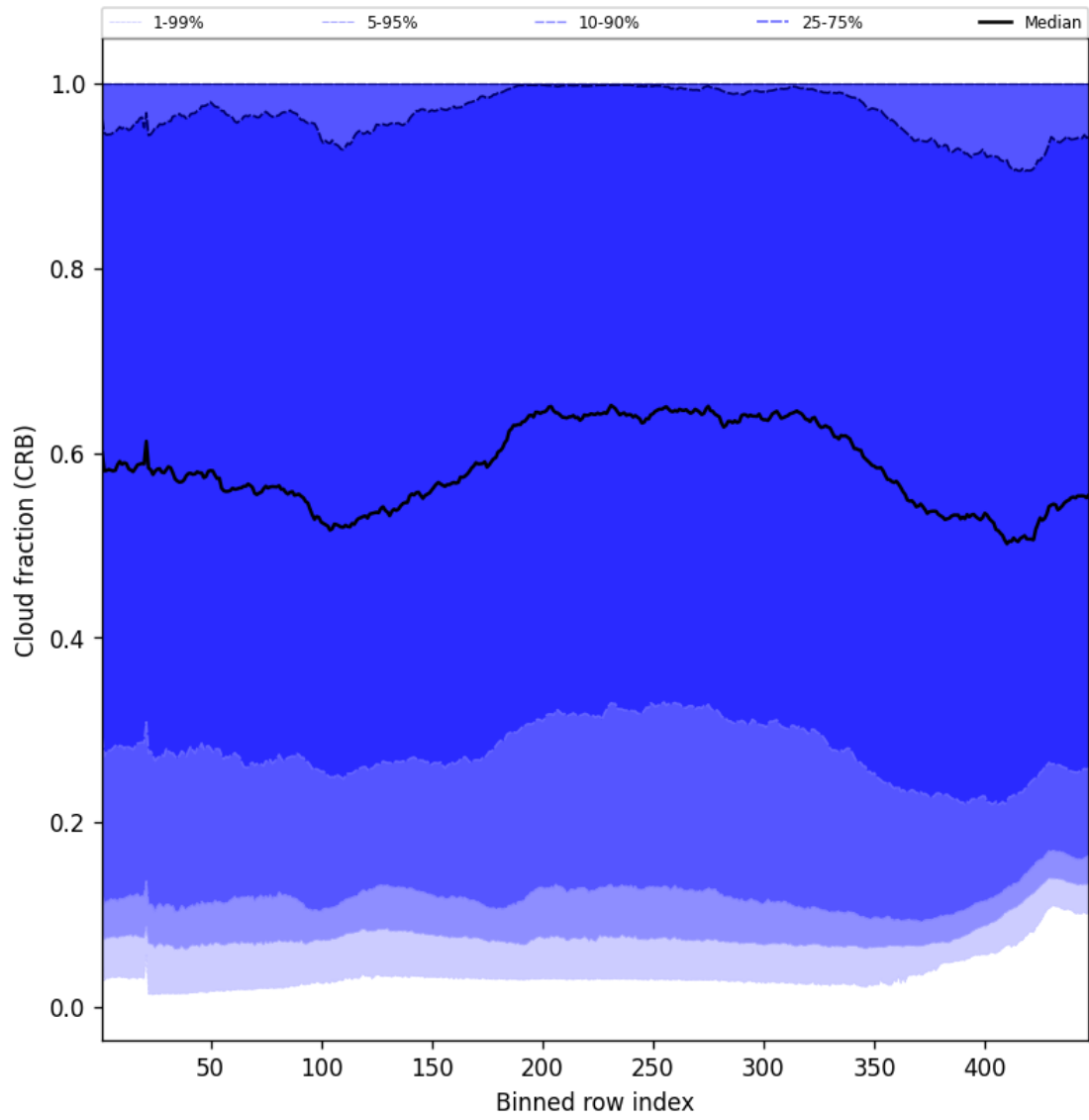


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-12-03 to 2025-12-04

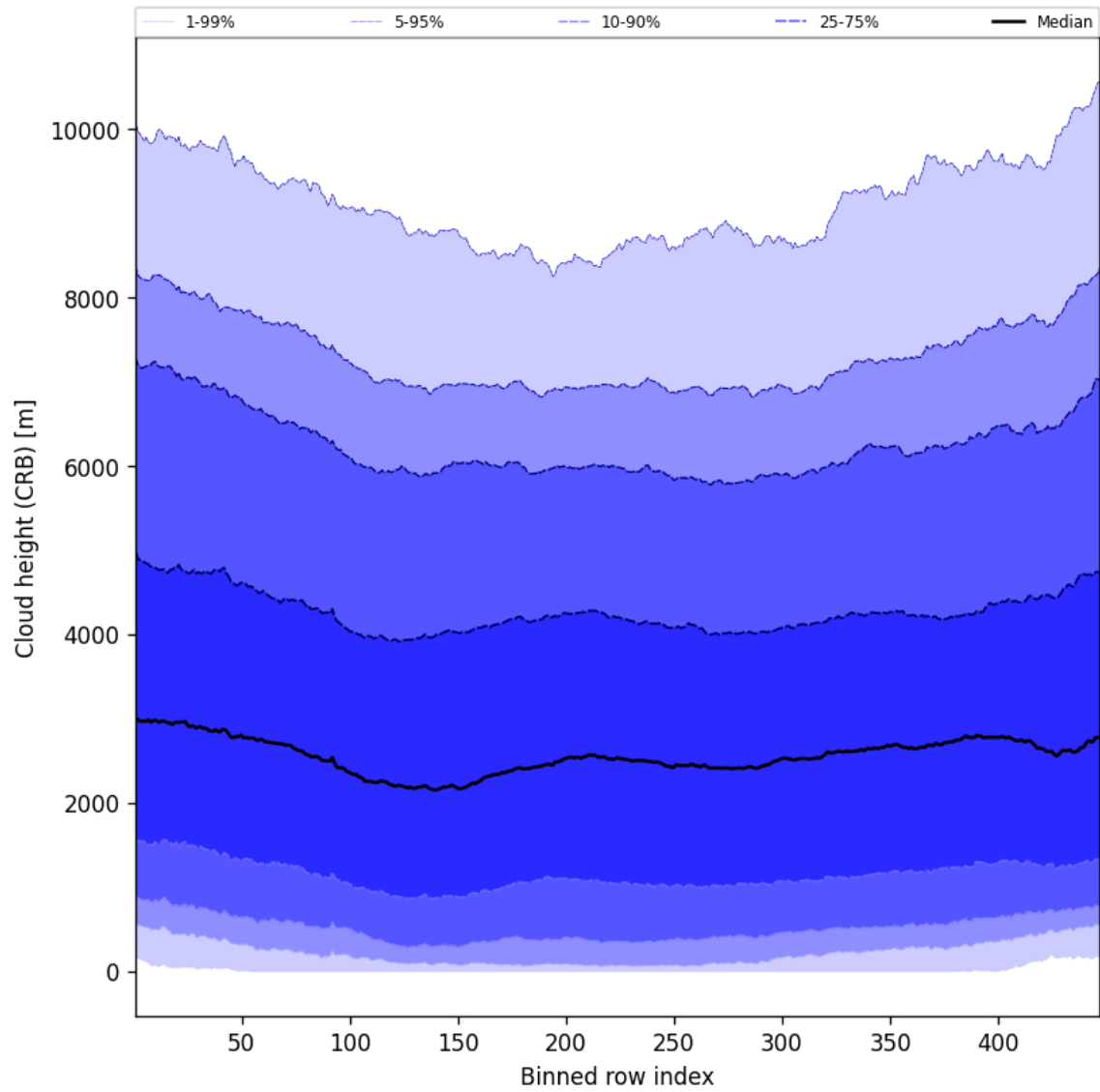


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-12-03 to 2025-12-04

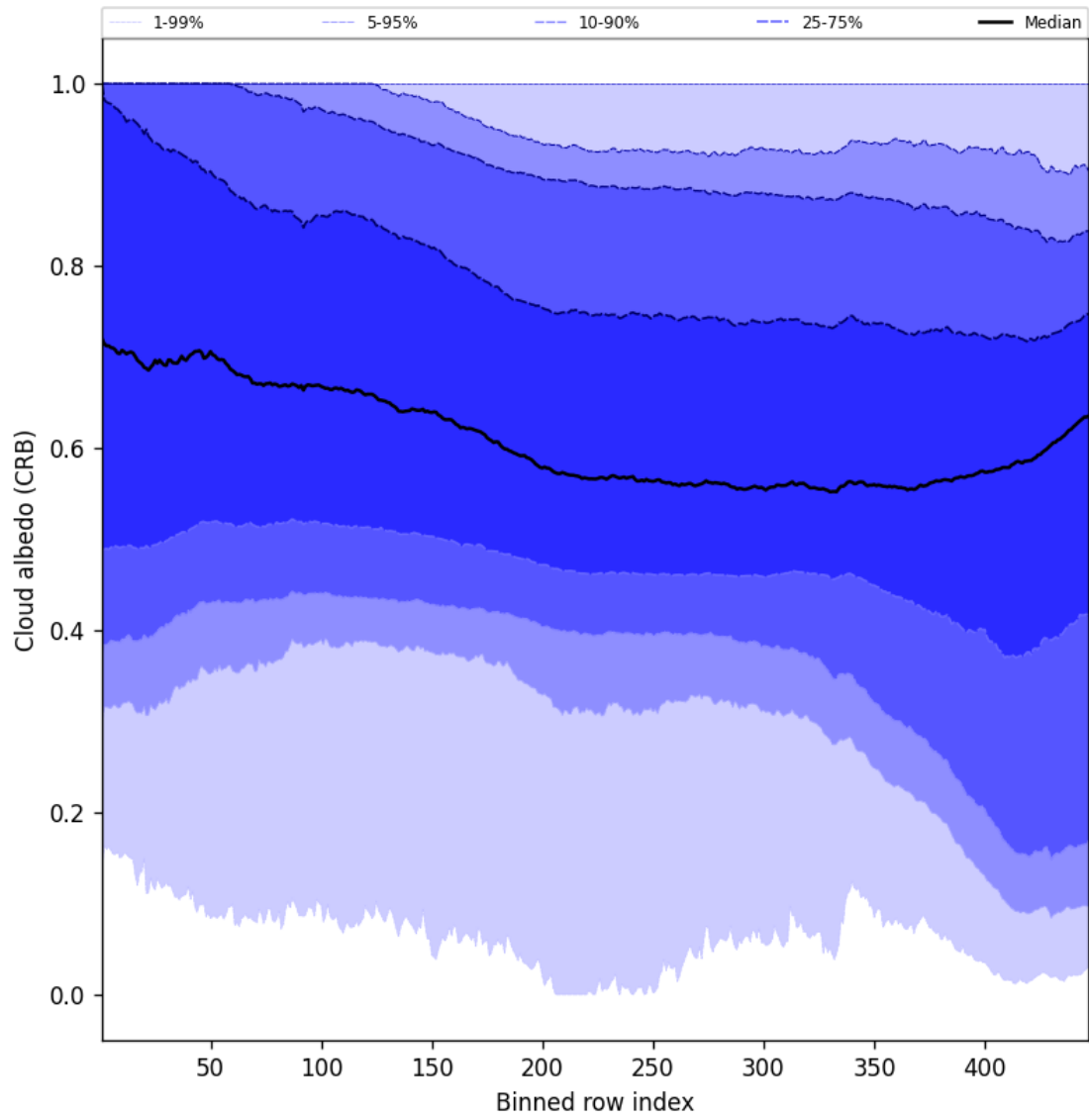


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-12-03 to 2025-12-04

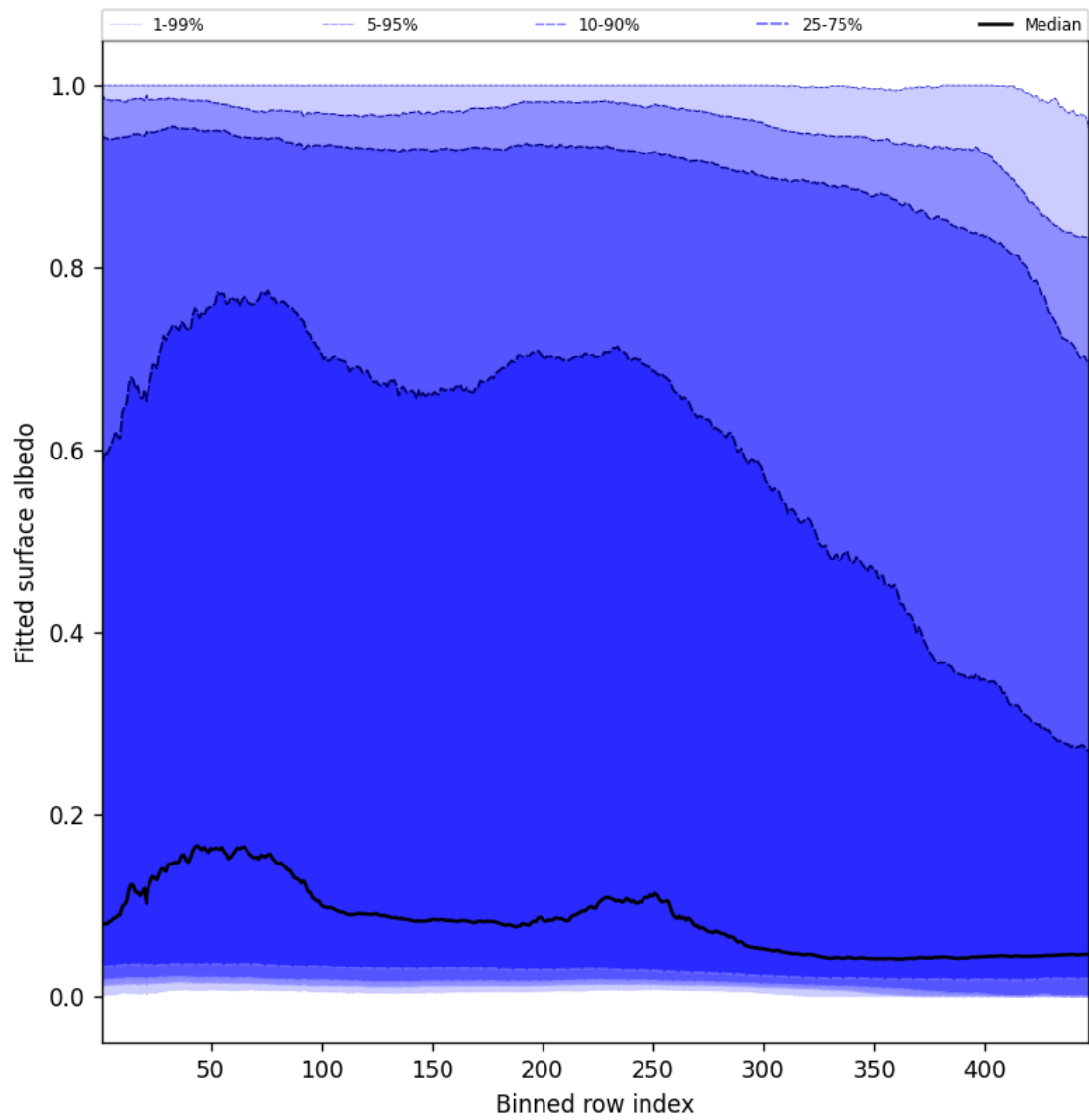


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-12-03 to 2025-12-04

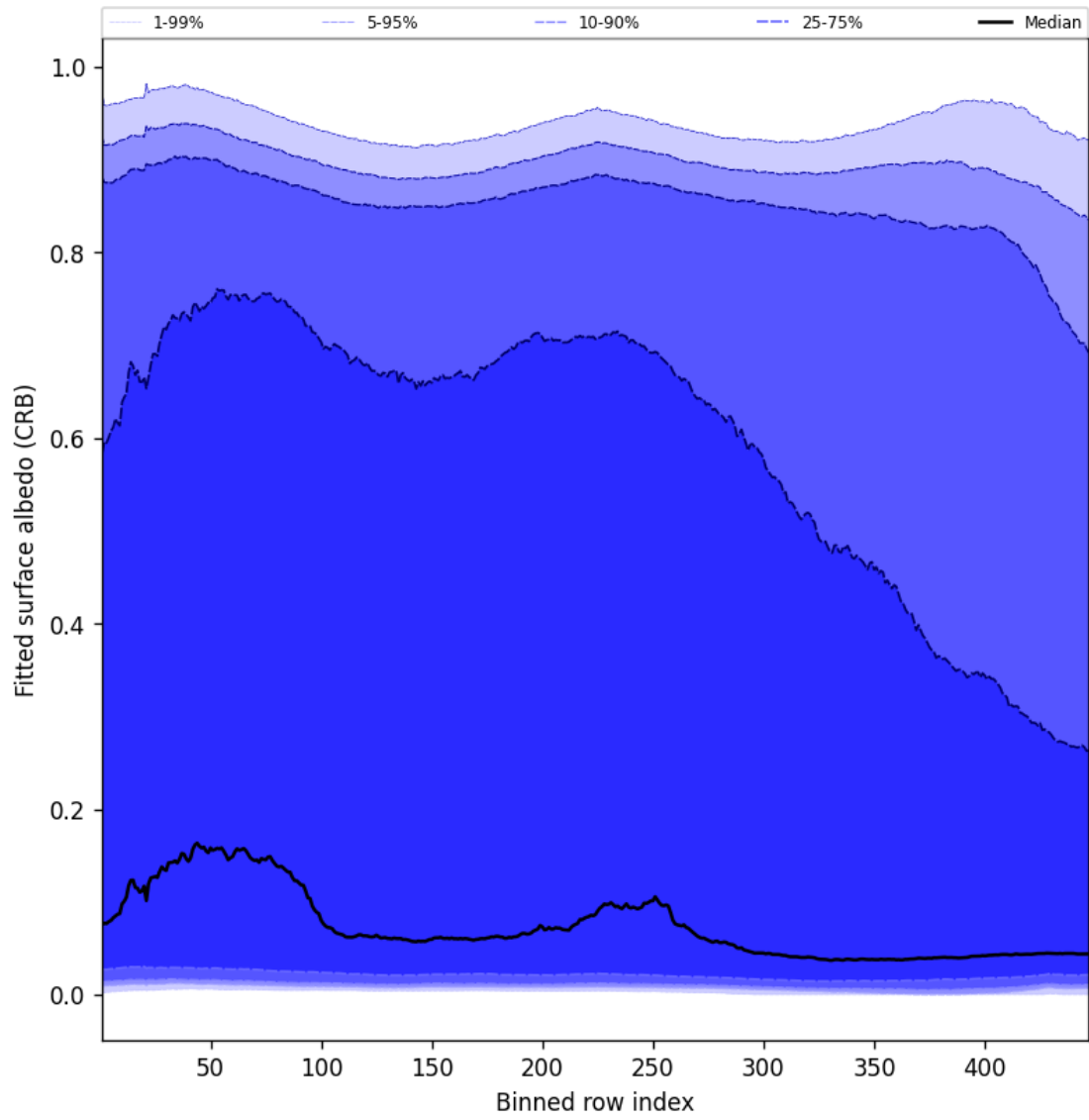


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-12-03 to 2025-12-04

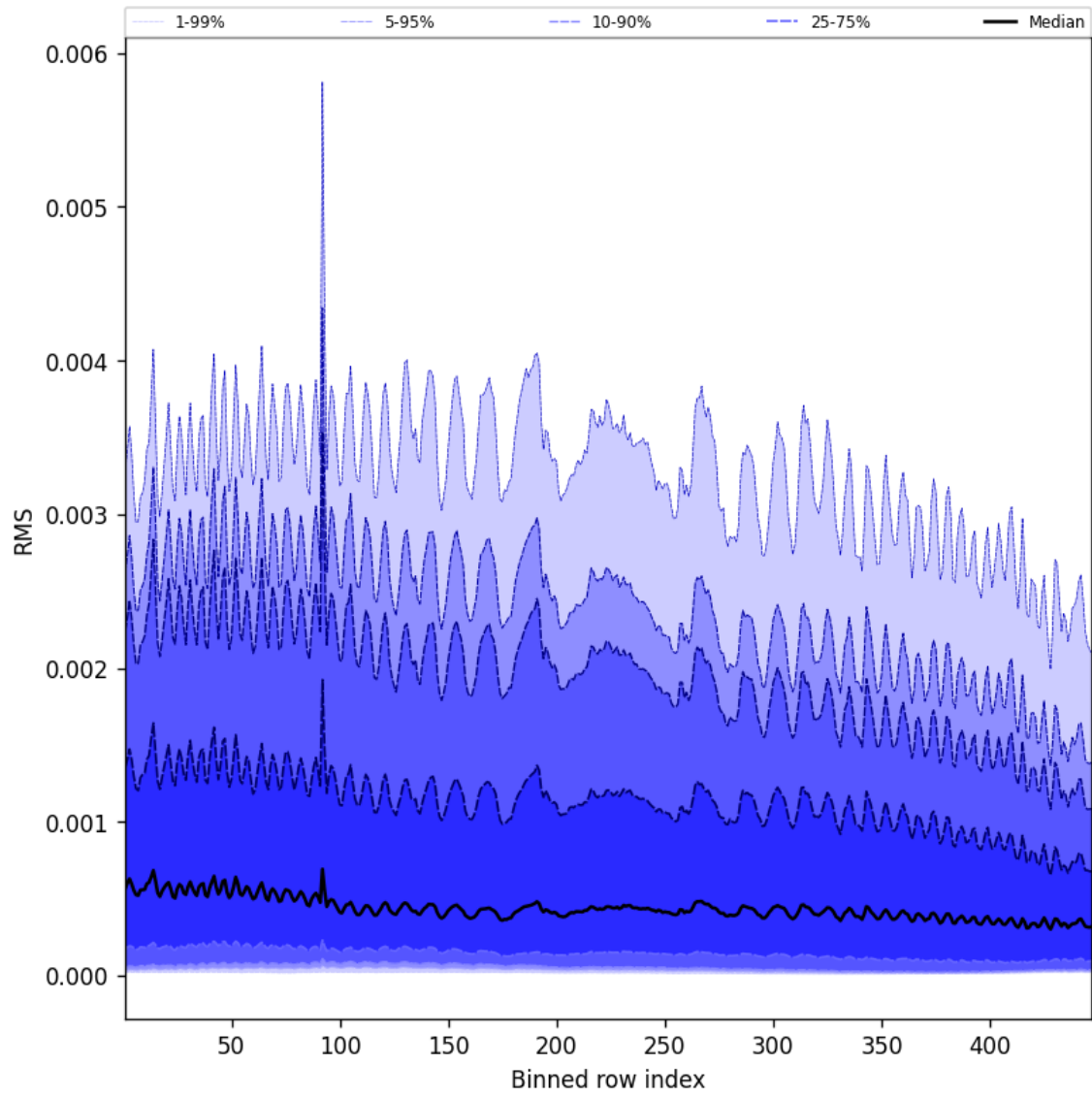


Figure 61: Along track statistics of “RMS” for 2025-12-03 to 2025-12-04

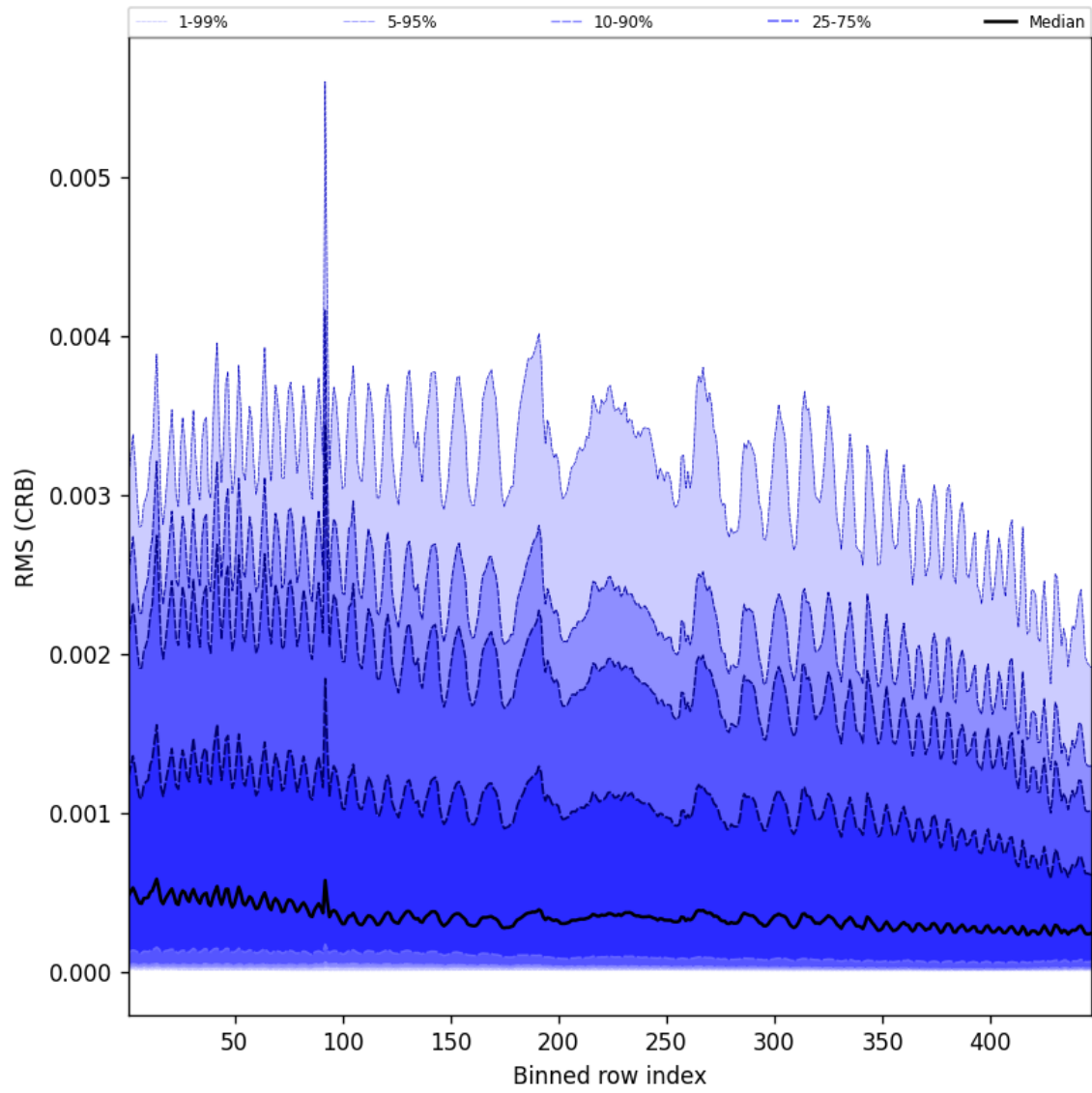


Figure 62: Along track statistics of “RMS (CRB)” for 2025-12-03 to 2025-12-04

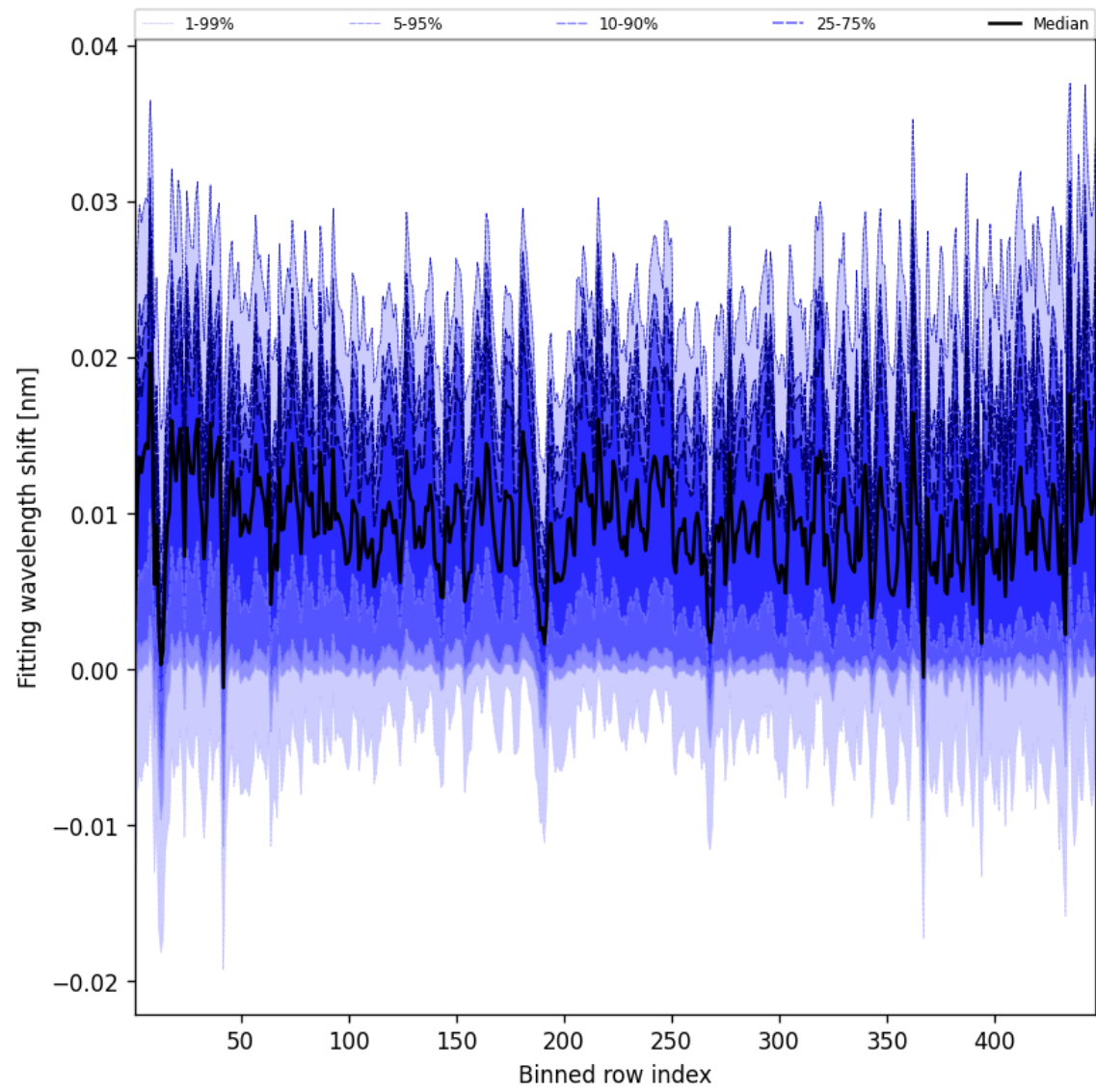


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-12-03 to 2025-12-04

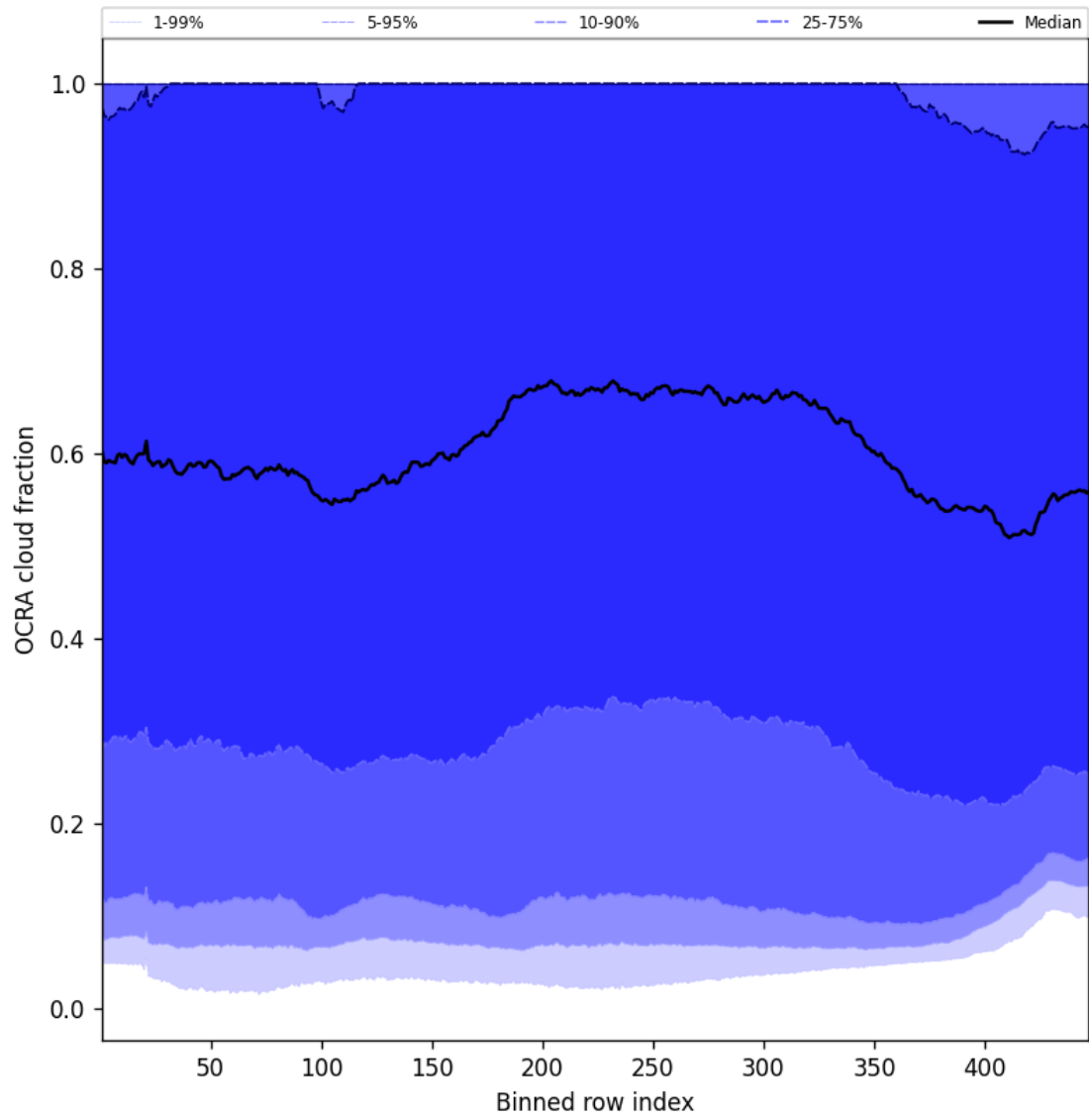


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-12-03 to 2025-12-04

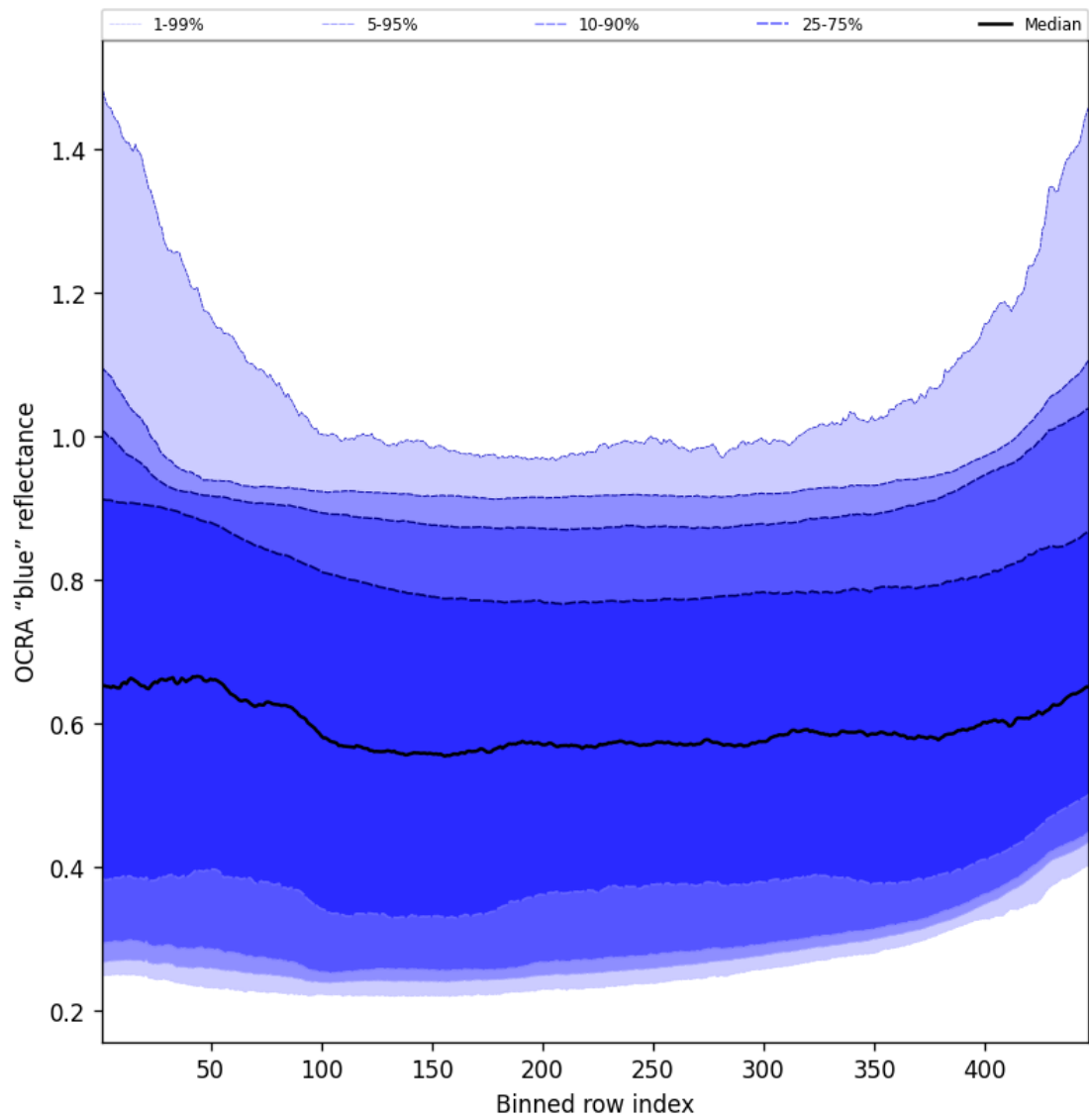


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-12-03 to 2025-12-04

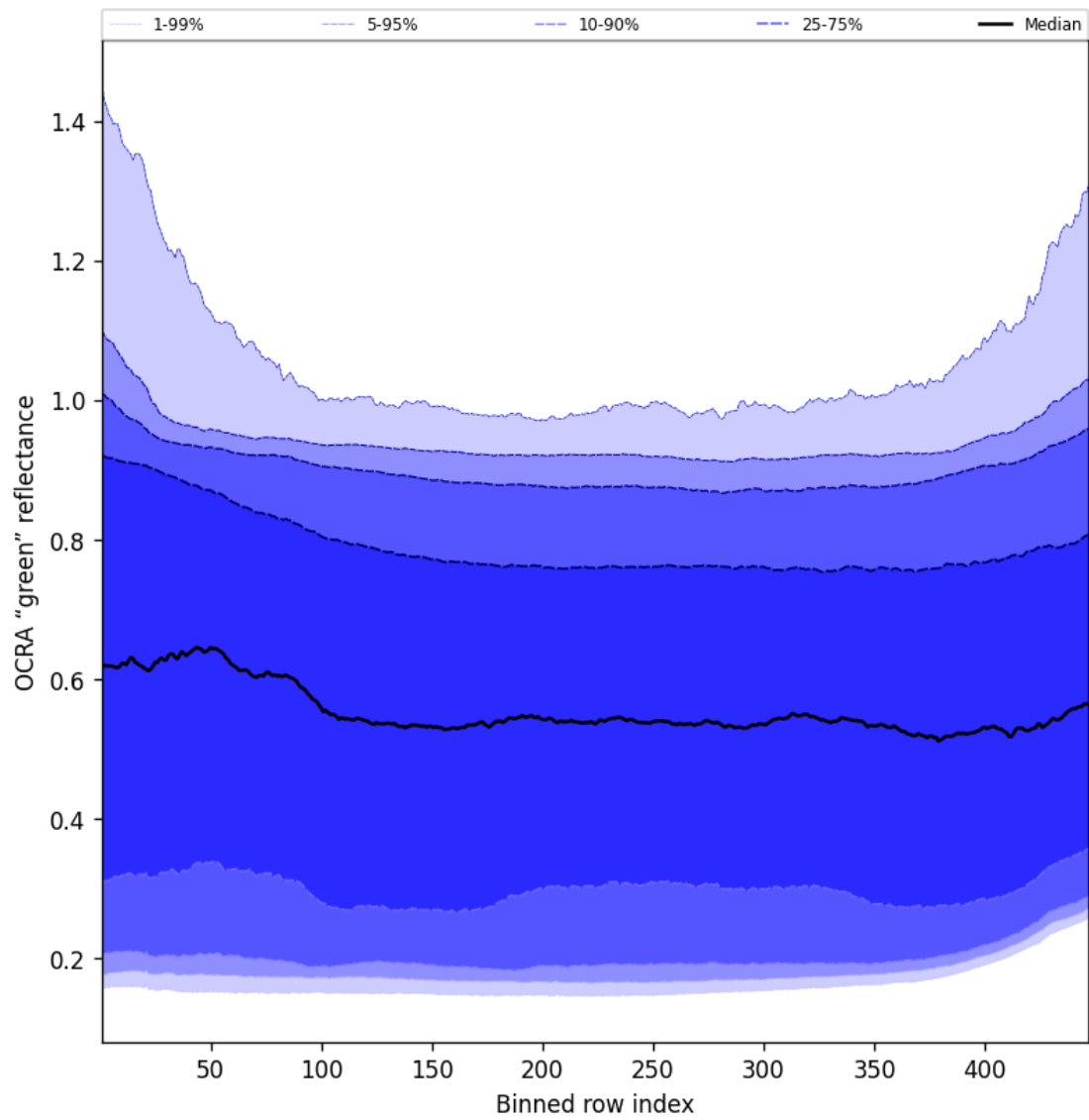


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-12-03 to 2025-12-04

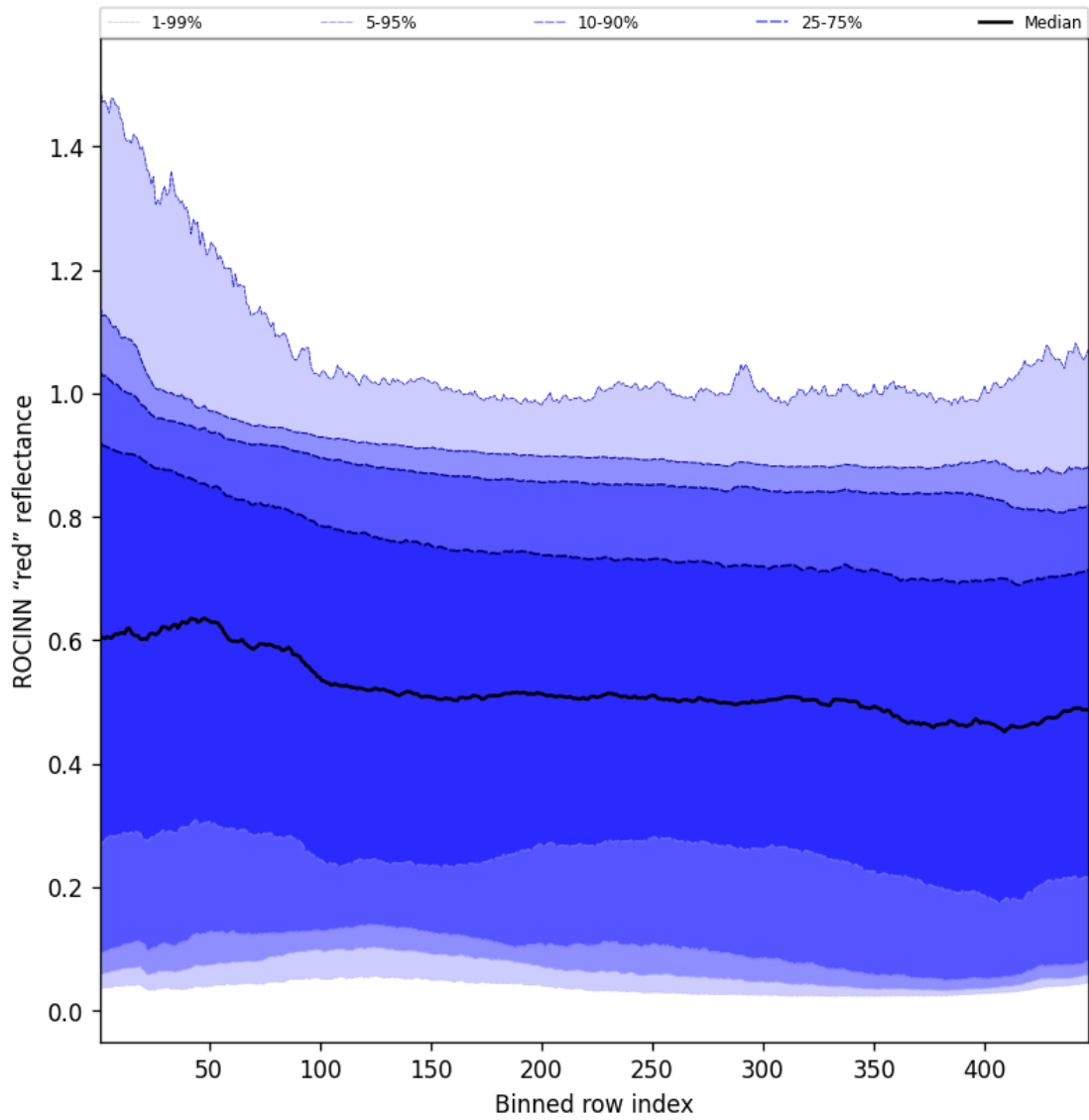


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-12-03 to 2025-12-04

10 Coincidence density

To investigate the relation between parameters scatter density plots are produced. These include some ‘hidden’ parameters, latitude and the solar- and viewing geometries, in addition to all configured parameters. All combinations of pairs of parameters are included *once*, in one direction alone.

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