

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-03-27 (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 $\frac{1}{2}$ 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]	0.610 ± 0.389	18076089	5.000×10^{-3}	0.700	0.800	0.0	1.000
cloud fraction [1]	0.551 ± 0.346	18076089	0.995	0.732	0.507	4.995×10^{-3}	1.000
cloud top height [m]	$(0.383 \pm 0.270) \times 10^4$	18076089	1.575×10^3	3.497×10^3	3.206×10^3	0.0	2.000×10^4
cloud optical thickness [1]	17.7 ± 31.5	18076089	9.34	10.0	9.22	1.000	250
cloud fraction crb [1]	0.551 ± 0.346	18076089	0.995	0.731	0.507	9.154×10^{-4}	1.000
cloud height crb [m]	$(0.302 \pm 0.240) \times 10^4$	18076089	75.0	3.056×10^3	2.475×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.592 ± 0.210	18076089	0.995	0.263	0.570	0.0	1.000
surface albedo fitted [1]	0.251 ± 0.314	18076089	2.500×10^{-2}	0.425	5.161×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.240 ± 0.302	18076089	1.500×10^{-2}	0.450	4.247×10^{-2}	0.0	1.000
fitted root mean square [1]	$(6.444 \pm 15.017) \times 10^{-4}$	18076089	5.000×10^{-5}	7.555×10^{-4}	3.903×10^{-4}	1.521×10^{-6}	0.799
fitted root mean square crb [1]	$(5.663 \pm 15.922) \times 10^{-4}$	18076089	5.000×10^{-5}	6.787×10^{-4}	2.924×10^{-4}	8.540×10^{-7}	1.04
wavelength shift [nm]	$(7.461 \pm 6.794) \times 10^{-3}$	18076089	9.000×10^{-4}	9.278×10^{-3}	6.848×10^{-3}	-4.651×10^{-2}	0.420
cloud fraction apriori [1]	0.559 ± 0.350	18076089	0.995	0.770	0.523	0.0	1.000
reflectance blue ocra [1]	0.568 ± 0.234	18076089	0.265	0.395	0.549	0.125	2.00
reflectance green ocra [1]	0.518 ± 0.259	18076089	0.175	0.464	0.506	6.866×10^{-2}	1.96
reflectance continuum aband [1]	0.471 ± 0.278	18076089	4.500×10^{-2}	0.469	0.476	1.231×10^{-2}	4.71

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	0.250	0.950	1.000	1.000	1.000	1.000
cloud fraction [1]	2.554×10^{-2}	6.652×10^{-2}	0.101	0.147	0.228	0.960	1.000	1.000	1.000	1.000
cloud top height [m]	187	651	1.018×10^3	1.325×10^3	1.749×10^3	5.247×10^3	6.564×10^3	7.774×10^3	9.293×10^3	1.183×10^4
cloud optical thickness [1]	1.04	2.80	3.93	4.76	5.72	15.7	23.3	33.8	55.9	236
cloud fraction crb [1]	2.524×10^{-2}	6.575×10^{-2}	0.101	0.146	0.228	0.958	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	169	511	790	1.151×10^3	4.207×10^3	5.393×10^3	6.464×10^3	7.858×10^3	1.033×10^4
cloud albedo crb [1]	0.0	0.242	0.360	0.419	0.465	0.728	0.819	0.897	0.984	1.000
surface albedo fitted [1]	0.0	9.965×10^{-3}	1.479×10^{-2}	1.917×10^{-2}	2.557×10^{-2}	0.450	0.701	0.802	0.895	0.991
surface albedo fitted crb [1]	5.974×10^{-4}	7.049×10^{-3}	1.073×10^{-2}	1.422×10^{-2}	1.951×10^{-2}	0.470	0.670	0.755	0.846	0.945
fitted root mean square [1]	1.661×10^{-5}	3.213×10^{-5}	5.021×10^{-5}	7.695×10^{-5}	1.318×10^{-4}	8.873×10^{-4}	1.204×10^{-3}	1.536×10^{-3}	2.046×10^{-3}	3.226×10^{-3}
fitted root mean square crb [1]	9.613×10^{-6}	2.085×10^{-5}	3.588×10^{-5}	5.552×10^{-5}	9.426×10^{-5}	7.730×10^{-4}	1.118×10^{-3}	1.468×10^{-3}	1.983×10^{-3}	3.089×10^{-3}
wavelength shift [nm]	-8.327×10^{-3}	-1.208×10^{-3}	3.647×10^{-5}	1.014×10^{-3}	2.543×10^{-3}	1.182×10^{-2}	1.420×10^{-2}	1.627×10^{-2}	1.905×10^{-2}	2.502×10^{-2}
cloud fraction apriori [1]	2.819×10^{-2}	6.481×10^{-2}	9.816×10^{-2}	0.144	0.230	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.232	0.256	0.279	0.309	0.361	0.755	0.814	0.864	0.938	1.18
reflectance green ocra [1]	0.152	0.172	0.191	0.217	0.271	0.736	0.801	0.851	0.920	1.12
reflectance continuum aband [1]	2.959×10^{-2}	5.546×10^{-2}	8.874×10^{-2}	0.134	0.230	0.699	0.772	0.824	0.891	1.05

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]	0.547 ± 0.394	9206025	0.900	0.690	0.0	1.000	0.0	0.900
cloud fraction [1]	0.526 ± 0.345	9206025	0.725	0.453	4.995×10^{-3}	1.000	0.211	0.936
cloud top height [m]	$(0.355 \pm 0.241) \times 10^4$	9206025	3.087×10^3	3.125×10^3	0.0	2.000×10^4	1.709×10^3	4.796×10^3
cloud optical thickness [1]	17.3 ± 33.7	9206025	8.50	8.49	1.000	250	5.50	14.0
cloud fraction crb [1]	0.526 ± 0.345	9206025	0.723	0.454	9.154×10^{-4}	1.000	0.212	0.936
cloud height crb [m]	$(0.270 \pm 0.209) \times 10^4$	9206025	2.777×10^3	2.348×10^3	0.0	2.000×10^4	1.036×10^3	3.813×10^3
cloud albedo crb [1]	0.617 ± 0.233	9206025	0.327	0.603	0.0	1.000	0.467	0.794
surface albedo fitted [1]	0.330 ± 0.323	9206025	0.607	0.208	0.0	1.000	3.608×10^{-2}	0.643
surface albedo fitted crb [1]	0.316 ± 0.306	9206025	0.598	0.206	0.0	1.000	2.936×10^{-2}	0.628
fitted root mean square [1]	$(7.710 \pm 20.056) \times 10^{-4}$	9206025	8.950×10^{-4}	5.074×10^{-4}	2.208×10^{-6}	0.799	1.693×10^{-4}	1.064×10^{-3}
fitted root mean square crb [1]	$(6.551 \pm 21.507) \times 10^{-4}$	9206025	8.087×10^{-4}	3.532×10^{-4}	8.540×10^{-7}	1.04	1.078×10^{-4}	9.165×10^{-4}
wavelength shift [nm]	$(8.197 \pm 6.963) \times 10^{-3}$	9206025	9.816×10^{-3}	7.697×10^{-3}	-4.651×10^{-2}	0.420	3.051×10^{-3}	1.287×10^{-2}
cloud fraction apriori [1]	0.540 ± 0.347	9206025	0.768	0.481	0.0	1.000	0.221	0.989
reflectance blue ocra [1]	0.589 ± 0.245	9206025	0.419	0.592	0.125	2.00	0.360	0.779
reflectance green ocra [1]	0.544 ± 0.268	9206025	0.489	0.561	6.866×10^{-2}	1.96	0.277	0.766
reflectance continuum aband [1]	0.506 ± 0.281	9206025	0.476	0.534	1.296×10^{-2}	3.50	0.260	0.736

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]	0.675 ± 0.372	8870064	0.600	0.900	0.0	1.000	0.400	1.000
cloud fraction [1]	0.578 ± 0.345	8870064	0.726	0.574	7.738×10^{-3}	1.000	0.248	0.974
cloud top height [m]	$(0.413 \pm 0.295) \times 10^4$	8870064	4.098×10^3	3.309×10^3	0.0	2.000×10^4	1.784×10^3	5.882×10^3
cloud optical thickness [1]	18.1 ± 29.1	8870064	11.4	10.1	1.000	250	6.13	17.5
cloud fraction crb [1]	0.577 ± 0.346	8870064	0.725	0.573	8.415×10^{-3}	1.000	0.247	0.972
cloud height crb [m]	$(0.335 \pm 0.265) \times 10^4$	8870064	3.568×10^3	2.627×10^3	0.0	1.789×10^4	1.250×10^3	4.818×10^3
cloud albedo crb [1]	0.566 ± 0.181	8870064	0.202	0.550	0.0	1.000	0.463	0.666
surface albedo fitted [1]	0.169 ± 0.281	8870064	0.102	3.477×10^{-2}	0.0	1.000	2.049×10^{-2}	0.122
surface albedo fitted crb [1]	0.161 ± 0.277	8870064	9.257×10^{-2}	2.710×10^{-2}	0.0	1.000	1.490×10^{-2}	0.107
fitted root mean square [1]	$(5.130 \pm 6.219) \times 10^{-4}$	8870064	5.914×10^{-4}	2.986×10^{-4}	1.521×10^{-6}	0.172	1.067×10^{-4}	6.981×10^{-4}
fitted root mean square crb [1]	$(4.740 \pm 5.907) \times 10^{-4}$	8870064	5.599×10^{-4}	2.433×10^{-4}	1.058×10^{-6}	1.431×10^{-2}	8.364×10^{-5}	6.435×10^{-4}
wavelength shift [nm]	$(6.697 \pm 6.525) \times 10^{-3}$	8870064	8.596×10^{-3}	6.079×10^{-3}	-4.610×10^{-2}	6.114×10^{-2}	2.106×10^{-3}	1.070×10^{-2}
cloud fraction apriori [1]	0.579 ± 0.351	8870064	0.758	0.578	0.0	1.000	0.242	1.000
reflectance blue ocr [1]	0.547 ± 0.220	8870064	0.346	0.519	0.142	1.94	0.361	0.707
reflectance green ocr [1]	0.491 ± 0.246	8870064	0.412	0.467	7.639×10^{-2}	1.92	0.266	0.678
reflectance continuum aband [1]	0.435 ± 0.270	8870064	0.441	0.427	1.231×10^{-2}	4.71	0.198	0.640

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]	0.660 ± 0.373	12680889	0.580	0.880	0.0	1.000	0.400	0.980
cloud fraction [1]	0.566 ± 0.352	12680889	0.755	0.550	7.738×10^{-3}	1.000	0.225	0.980
cloud top height [m]	$(0.349 \pm 0.244) \times 10^4$	12680889	3.050×10^3	2.901×10^3	0.0	2.000×10^4	1.641×10^3	4.691×10^3
cloud optical thickness [1]	18.2 ± 29.5	12680889	10.2	10.0	1.000	250	6.72	16.9
cloud fraction crb [1]	0.566 ± 0.352	12680889	0.754	0.548	9.154×10^{-4}	1.000	0.225	0.979
cloud height crb [m]	$(0.277 \pm 0.220) \times 10^4$	12680889	2.782×10^3	2.245×10^3	0.0	2.000×10^4	1.064×10^3	3.847×10^3
cloud albedo crb [1]	0.571 ± 0.184	12680889	0.217	0.546	0.0	1.000	0.459	0.677
surface albedo fitted [1]	0.141 ± 0.252	12680889	3.835×10^{-2}	3.352×10^{-2}	0.0	1.000	2.043×10^{-2}	5.878×10^{-2}
surface albedo fitted crb [1]	0.130 ± 0.238	12680889	3.357×10^{-2}	2.642×10^{-2}	0.0	1.000	1.522×10^{-2}	4.879×10^{-2}
fitted root mean square [1]	$(5.185 \pm 15.917) \times 10^{-4}$	12680889	5.931×10^{-4}	2.659×10^{-4}	1.521×10^{-6}	0.799	9.536×10^{-5}	6.885×10^{-4}
fitted root mean square crb [1]	$(4.671 \pm 17.929) \times 10^{-4}$	12680889	5.129×10^{-4}	2.108×10^{-4}	8.540×10^{-7}	1.04	7.539×10^{-5}	5.883×10^{-4}
wavelength shift [nm]	$(6.924 \pm 6.771) \times 10^{-3}$	12680889	8.915×10^{-3}	6.190×10^{-3}	-4.651×10^{-2}	0.420	2.212×10^{-3}	1.113×10^{-2}
cloud fraction apriori [1]	0.570 ± 0.356	12680889	0.778	0.556	0.0	1.000	0.222	1.000
reflectance blue oca [1]	0.536 ± 0.215	12680889	0.352	0.510	0.173	1.97	0.349	0.700
reflectance green oca [1]	0.478 ± 0.240	12680889	0.421	0.457	0.100	1.86	0.252	0.673
reflectance continuum aband [1]	0.411 ± 0.268	12680889	0.479	0.406	1.231×10^{-2}	4.71	0.152	0.632

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]	0.485 ± 0.407	4080712	0.900	0.630	0.0	1.000	0.0	0.900
cloud fraction [1]	0.503 ± 0.325	4080712	0.587	0.431	4.995×10^{-3}	1.000	0.228	0.816
cloud top height [m]	$(0.509 \pm 0.310) \times 10^4$	4080712	4.301×10^3	4.640×10^3	0.0	2.000×10^4	2.656×10^3	6.957×10^3
cloud optical thickness [1]	14.4 ± 31.4	4080712	7.00	6.27	1.000	250	4.34	11.3
cloud fraction crb [1]	0.504 ± 0.324	4080712	0.586	0.433	8.072×10^{-3}	1.000	0.229	0.816
cloud height crb [m]	$(0.397 \pm 0.278) \times 10^4$	4080712	3.651×10^3	3.424×10^3	0.0	2.000×10^4	1.836×10^3	5.487×10^3
cloud albedo crb [1]	0.634 ± 0.253	4080712	0.338	0.648	0.0	1.000	0.491	0.830
surface albedo fitted [1]	0.521 ± 0.290	4080712	0.555	0.414	0.0	1.000	0.253	0.807
surface albedo fitted crb [1]	0.512 ± 0.277	4080712	0.529	0.445	6.471×10^{-3}	1.000	0.251	0.780
fitted root mean square [1]	$(9.200 \pm 11.476) \times 10^{-4}$	4080712	8.393×10^{-4}	6.910×10^{-4}	2.549×10^{-6}	0.255	3.560×10^{-4}	1.195×10^{-3}
fitted root mean square crb [1]	$(7.824 \pm 8.112) \times 10^{-4}$	4080712	9.004×10^{-4}	5.418×10^{-4}	2.329×10^{-6}	0.112	2.001×10^{-4}	1.101×10^{-3}
wavelength shift [nm]	$(8.254 \pm 6.494) \times 10^{-3}$	4080712	9.269×10^{-3}	7.825×10^{-3}	-4.213×10^{-2}	5.494×10^{-2}	3.283×10^{-3}	1.255×10^{-2}
cloud fraction apriori [1]	0.519 ± 0.329	4080712	0.622	0.452	0.0	1.000	0.236	0.858
reflectance blue oca [1]	0.645 ± 0.263	4080712	0.443	0.707	0.125	2.00	0.392	0.835
reflectance green oca [1]	0.611 ± 0.281	4080712	0.496	0.688	6.866×10^{-2}	1.95	0.331	0.828
reflectance continuum aband [1]	0.613 ± 0.245	4080712	0.405	0.643	1.556×10^{-2}	4.08	0.393	0.798

3 Granule outlines

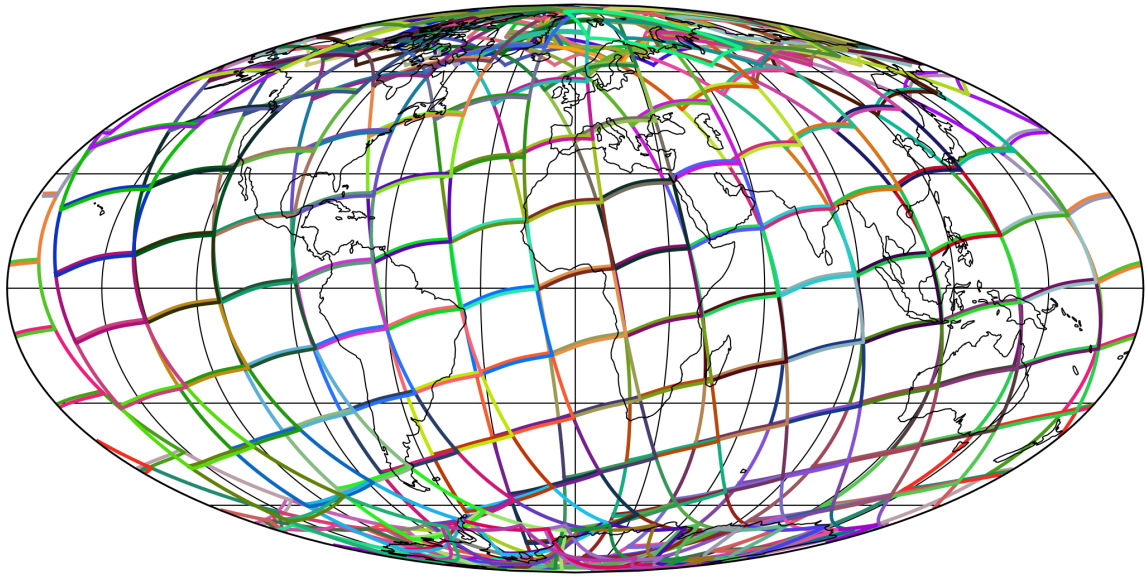


Figure 1: Outline of the granules.

4 Input data monitoring

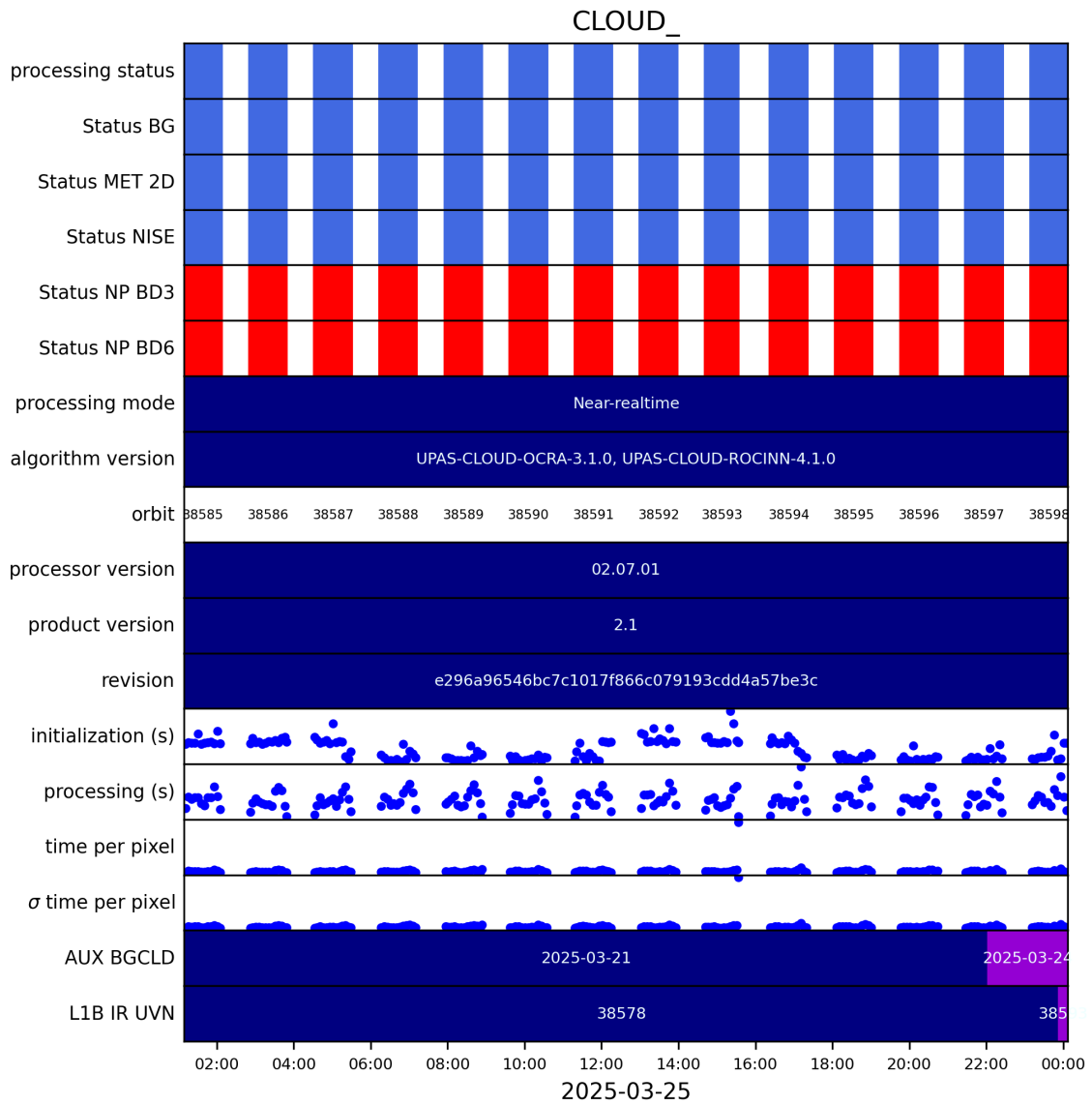


Figure 2: Input data per granule

5 Warnings and errors

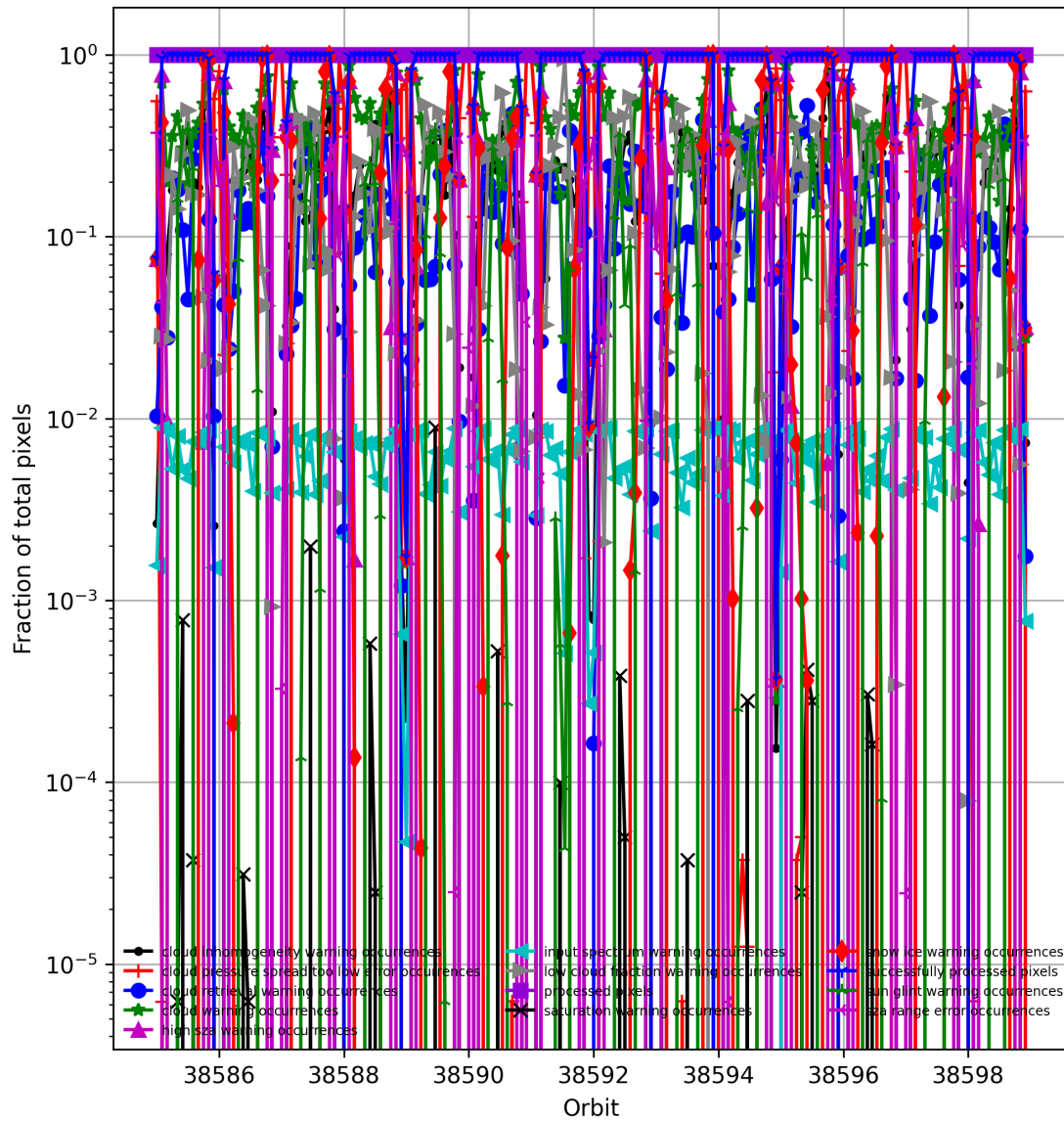


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

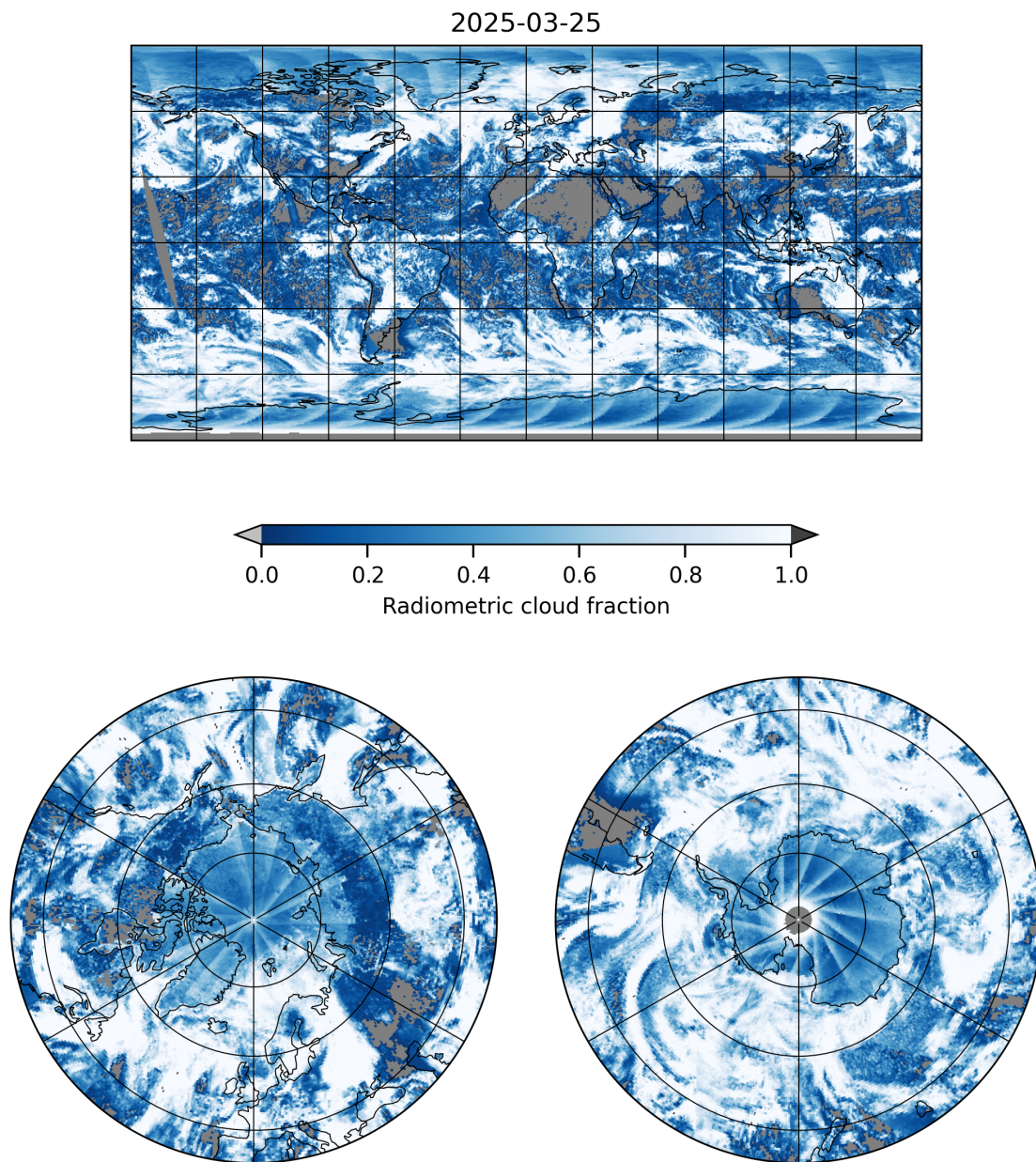


Figure 4: Map of “Radiometric cloud fraction” for 2025-03-25 to 2025-03-26

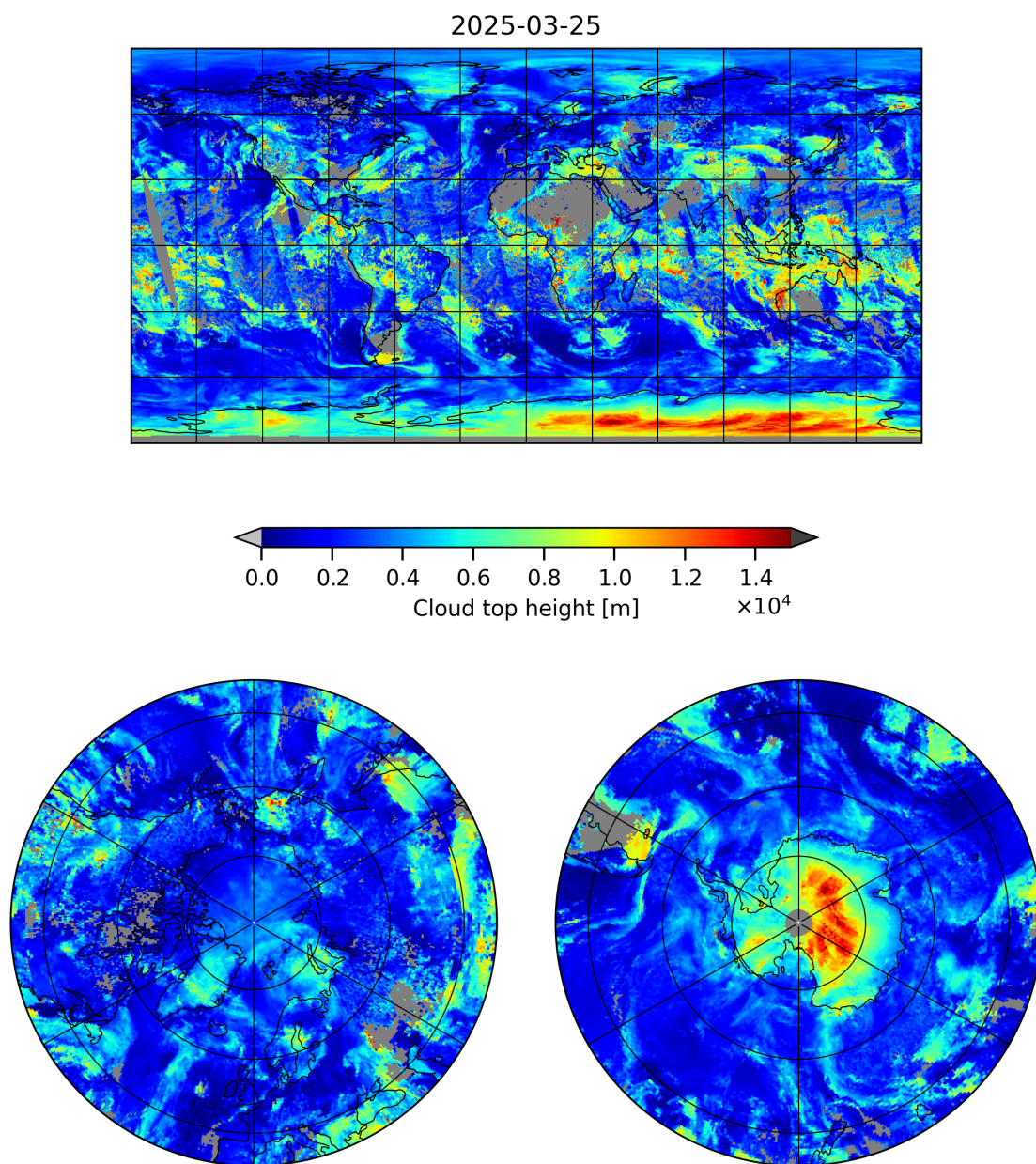


Figure 5: Map of “Cloud top height” for 2025-03-25 to 2025-03-26

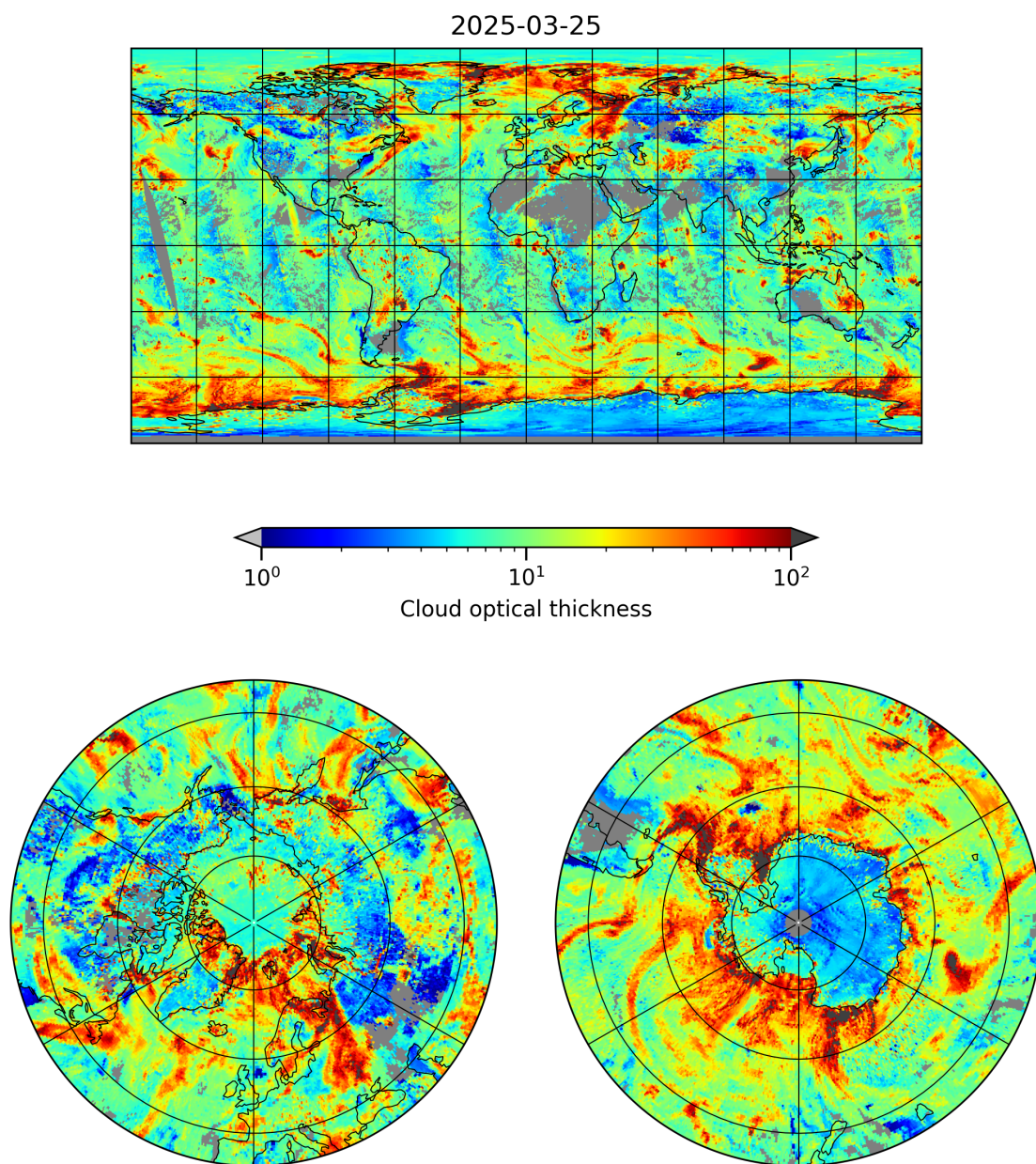


Figure 6: Map of “Cloud optical thickness” for 2025-03-25 to 2025-03-26

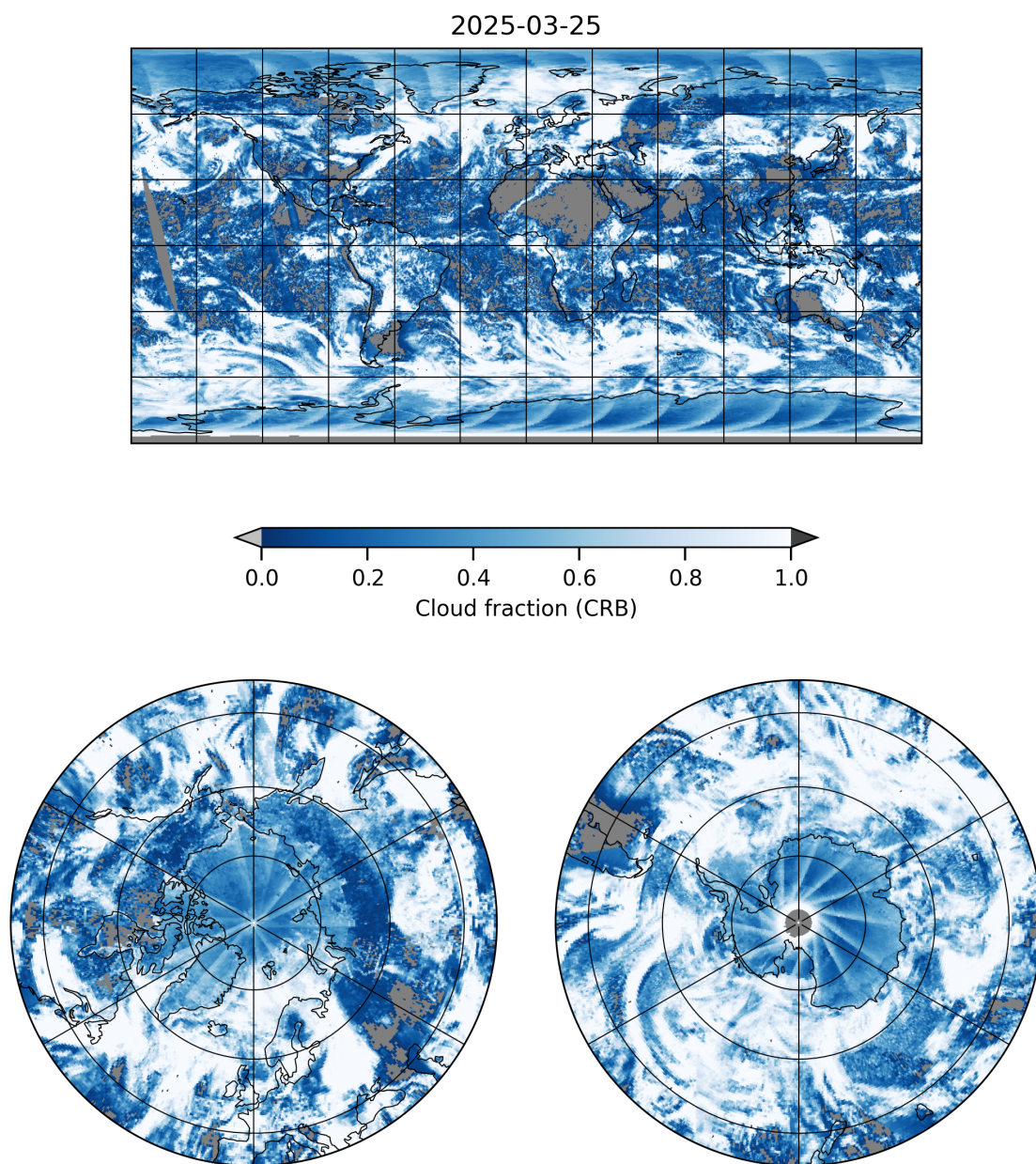


Figure 7: Map of “Cloud fraction (CRB)” for 2025-03-25 to 2025-03-26

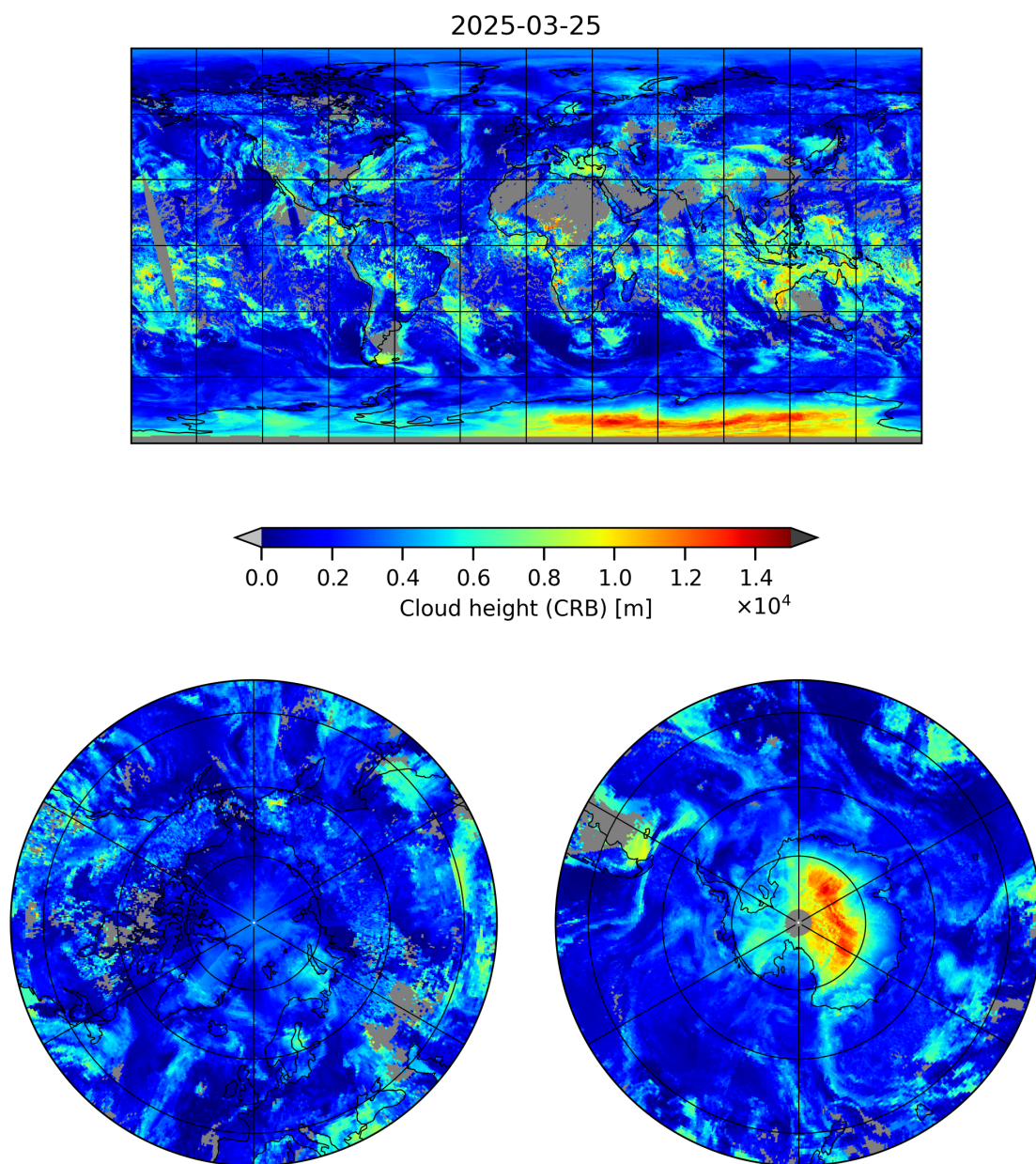


Figure 8: Map of “Cloud height (CRB)” for 2025-03-25 to 2025-03-26

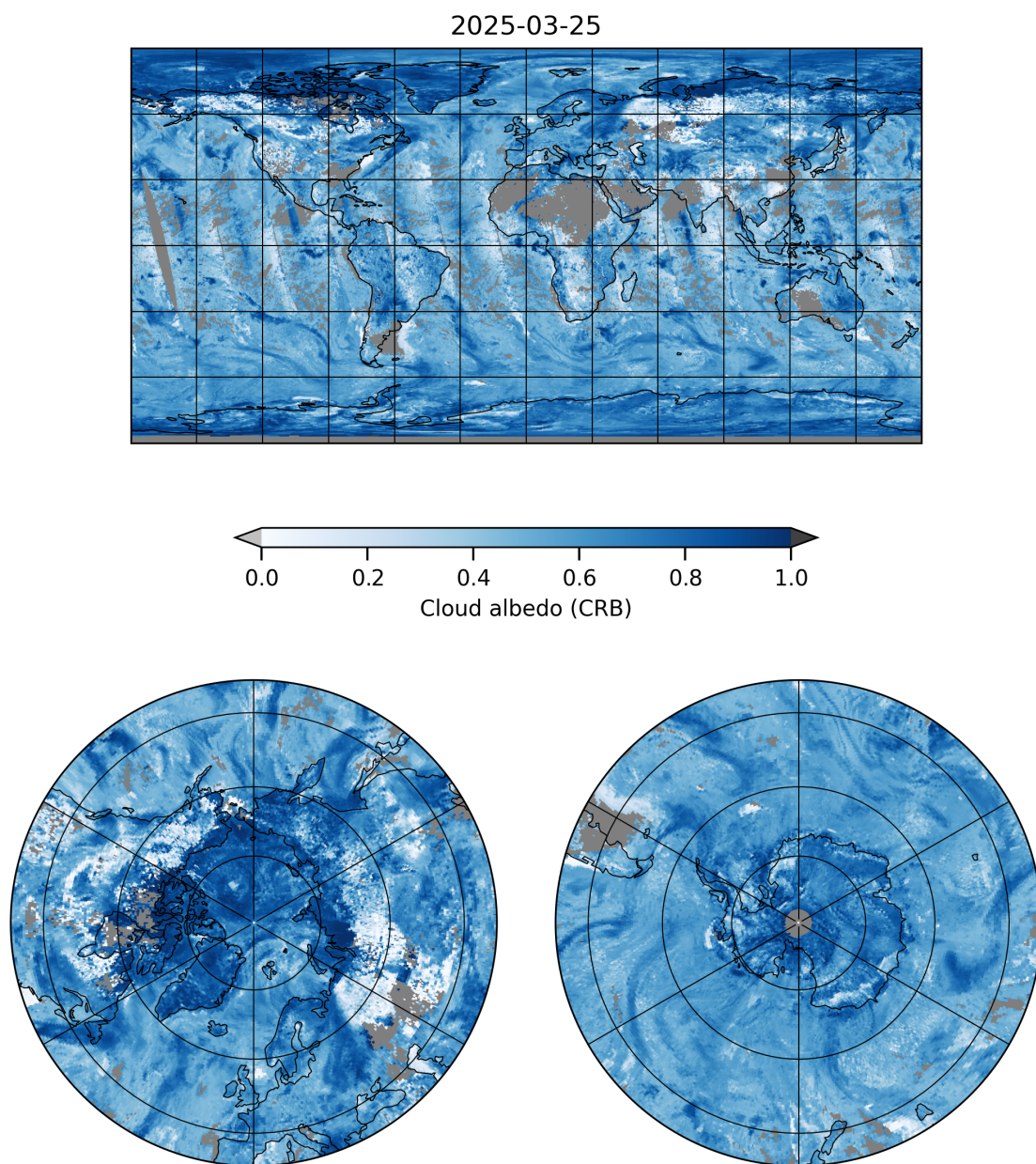


Figure 9: Map of “Cloud albedo (CRB)” for 2025-03-25 to 2025-03-26

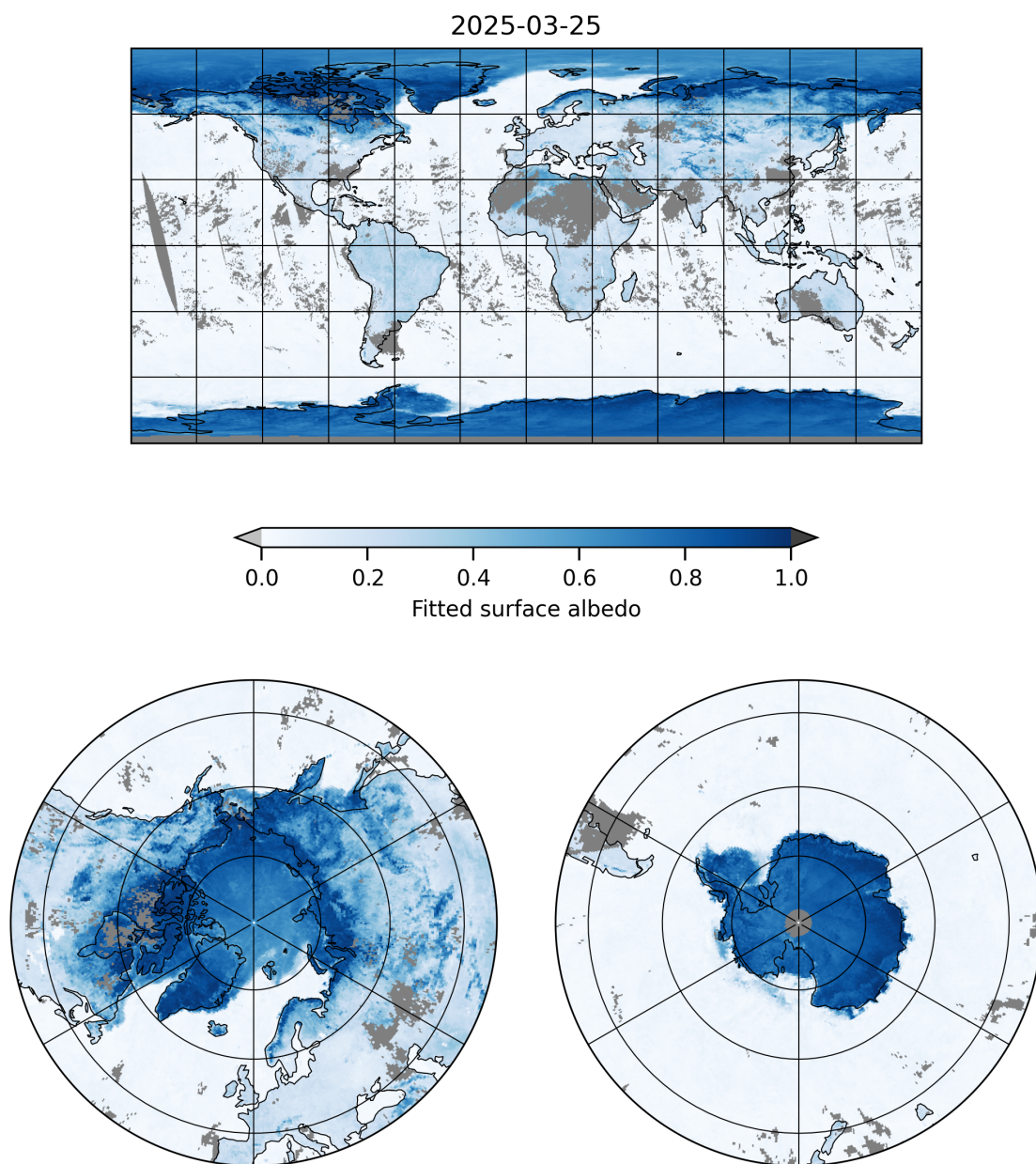


Figure 10: Map of “Fitted surface albedo” for 2025-03-25 to 2025-03-26

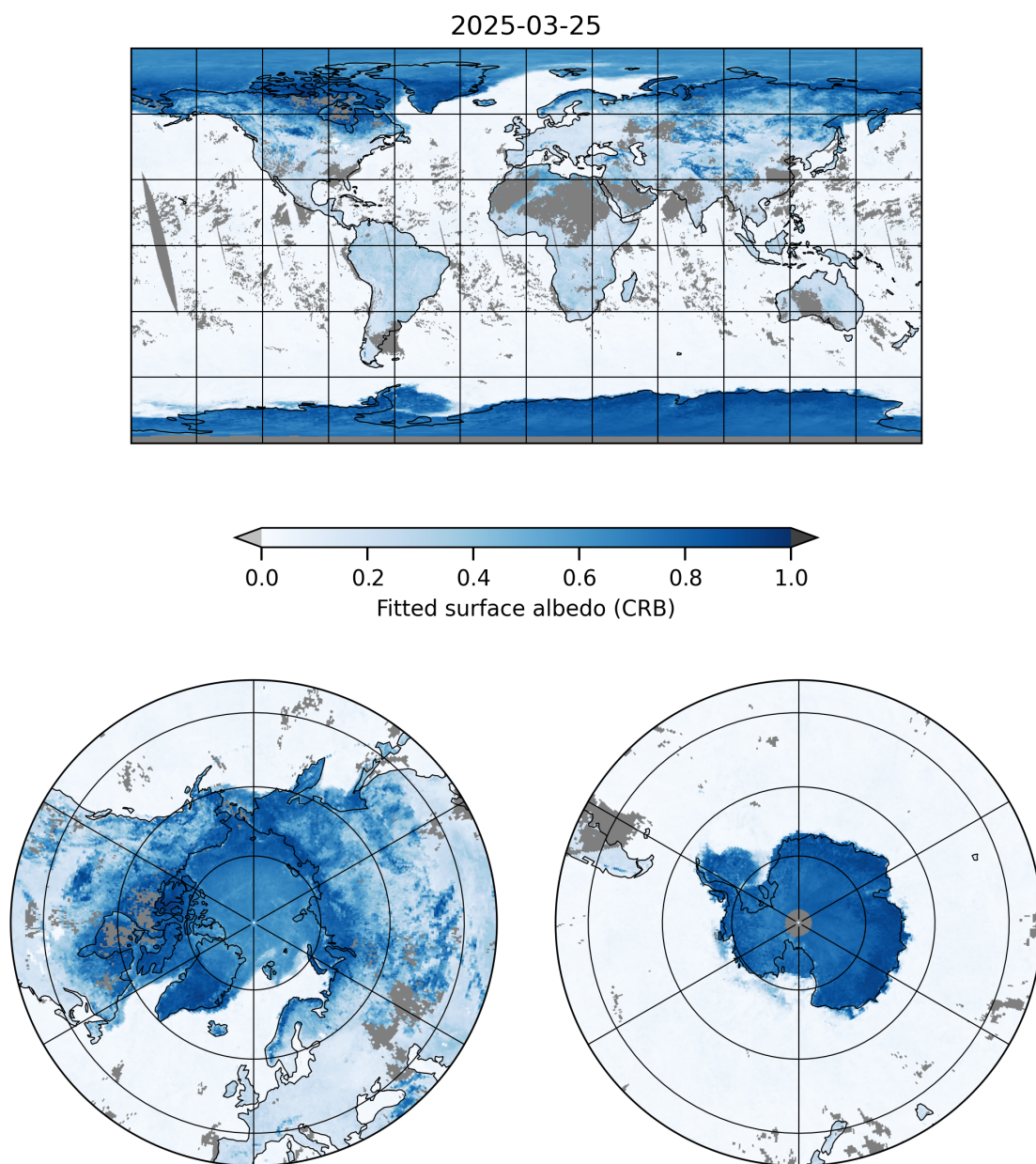


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-03-25 to 2025-03-26

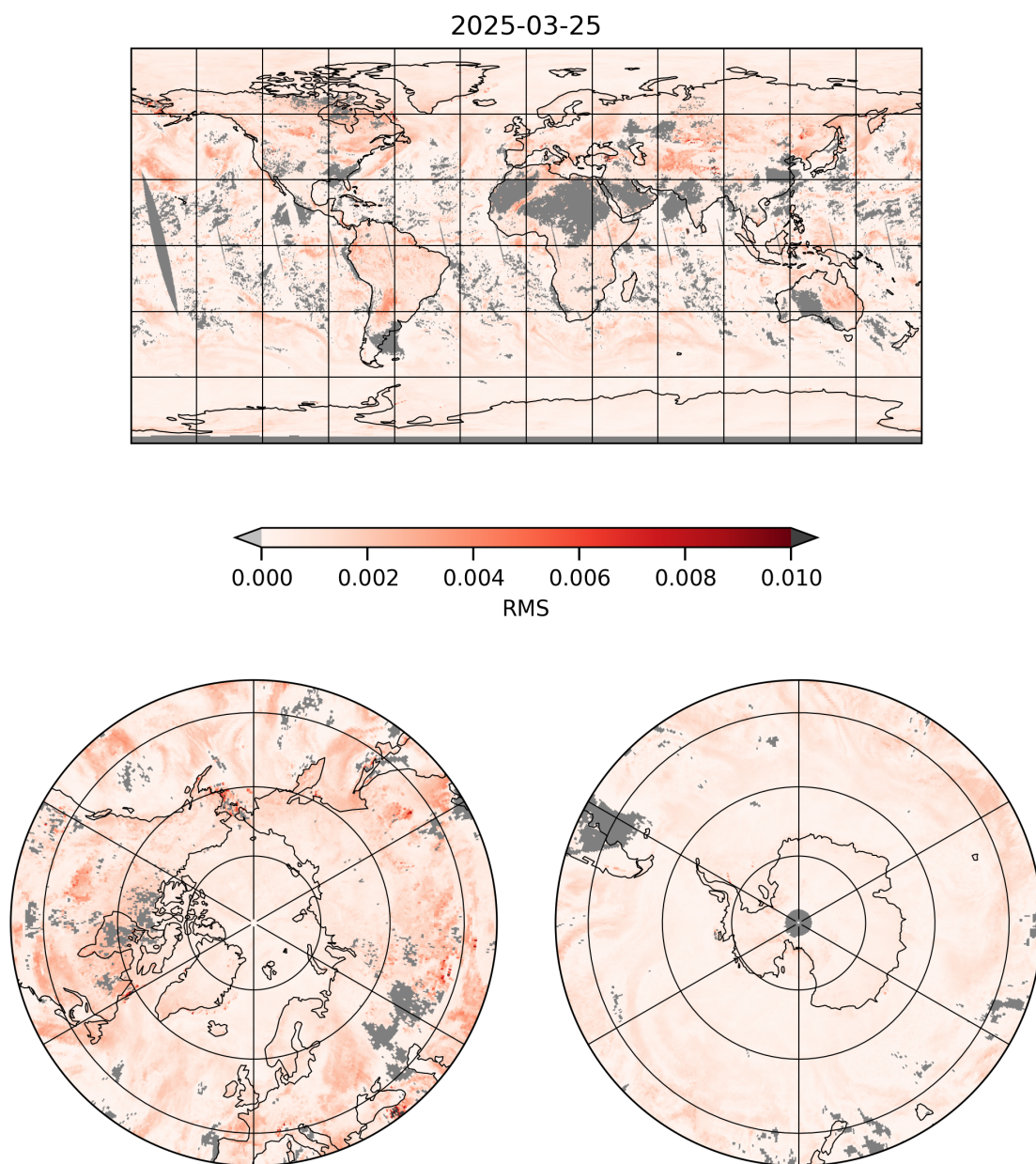


Figure 12: Map of “RMS” for 2025-03-25 to 2025-03-26

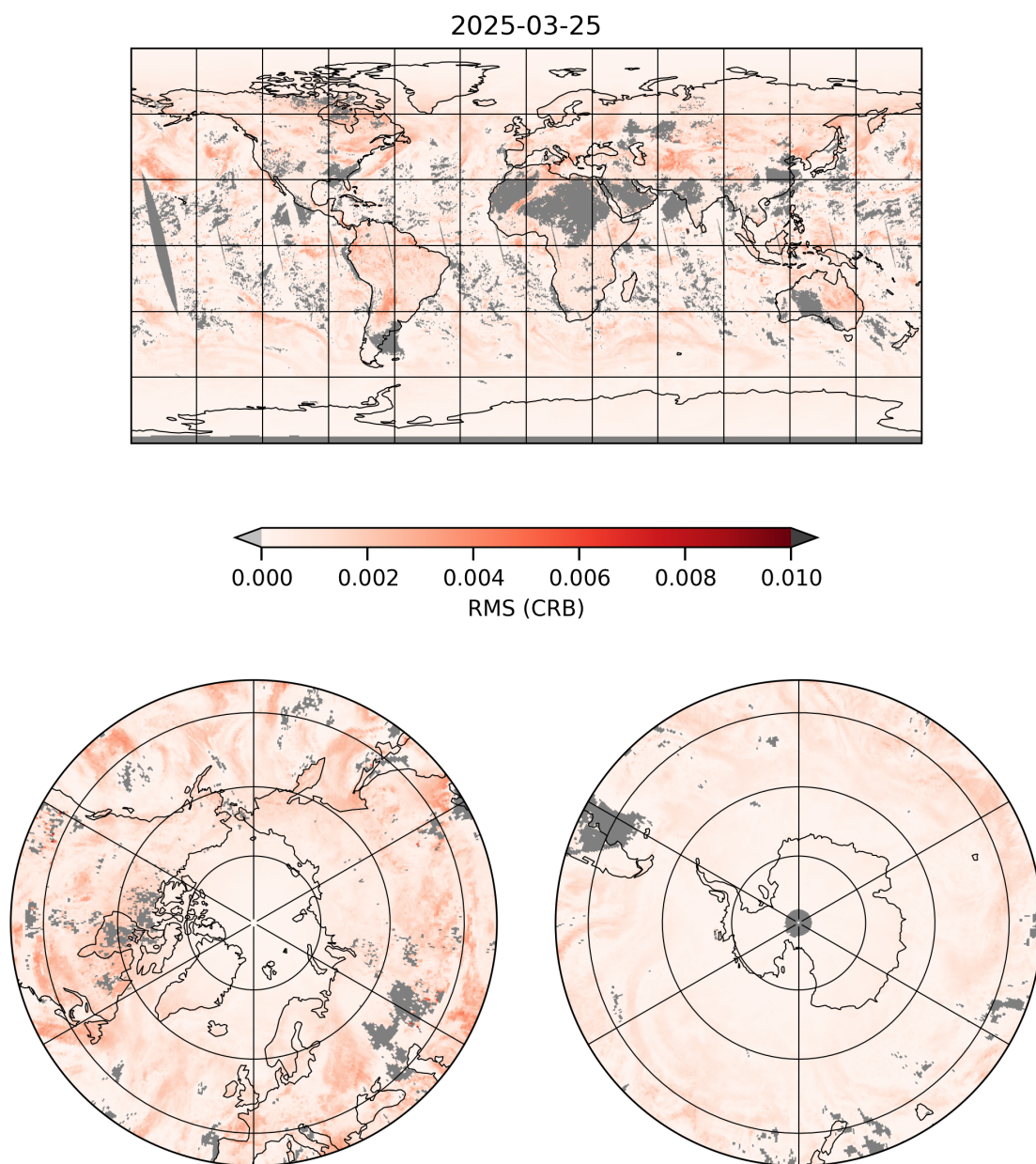


Figure 13: Map of “RMS (CRB)” for 2025-03-25 to 2025-03-26

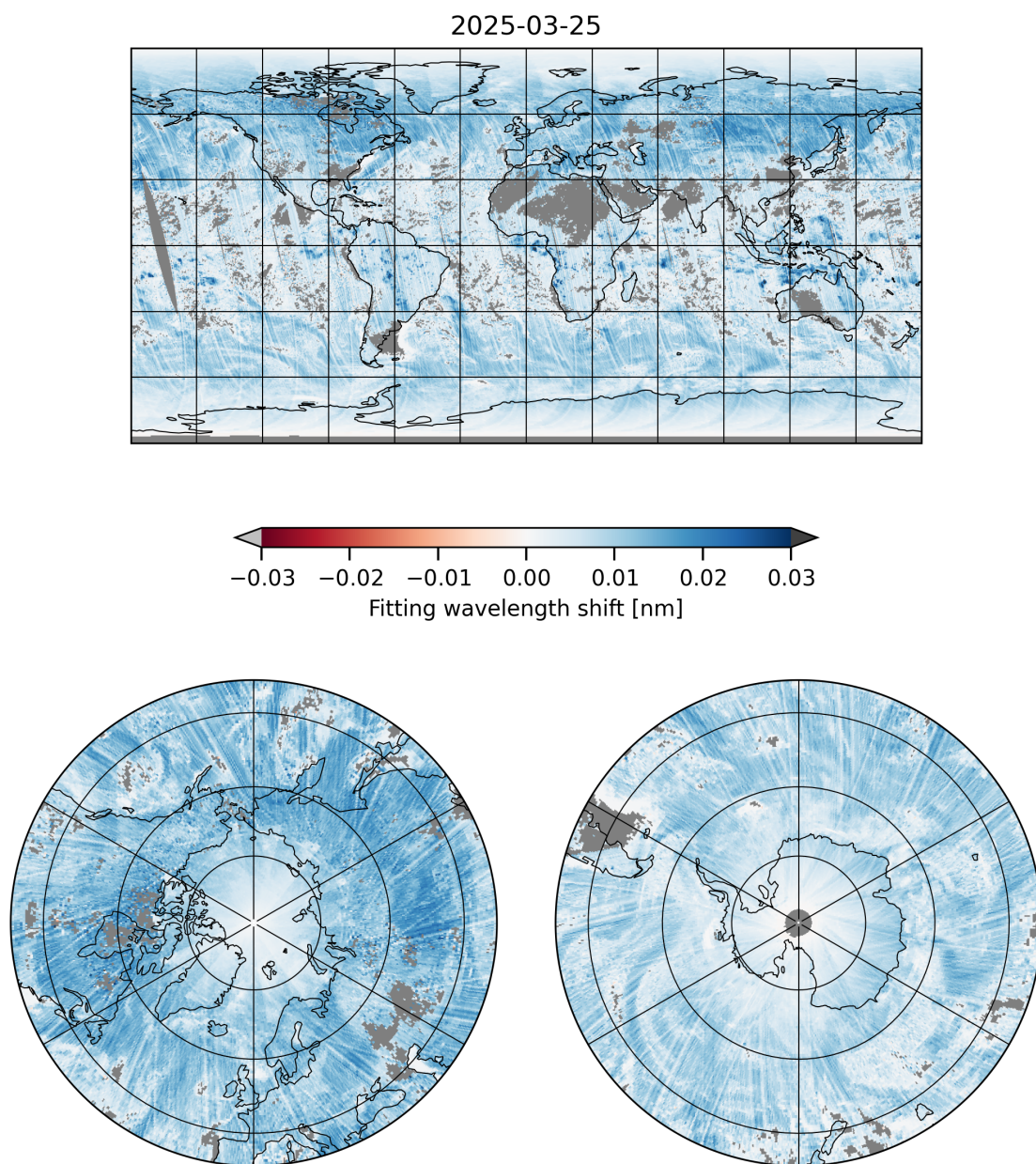


Figure 14: Map of “Fitting wavelength shift” for 2025-03-25 to 2025-03-26

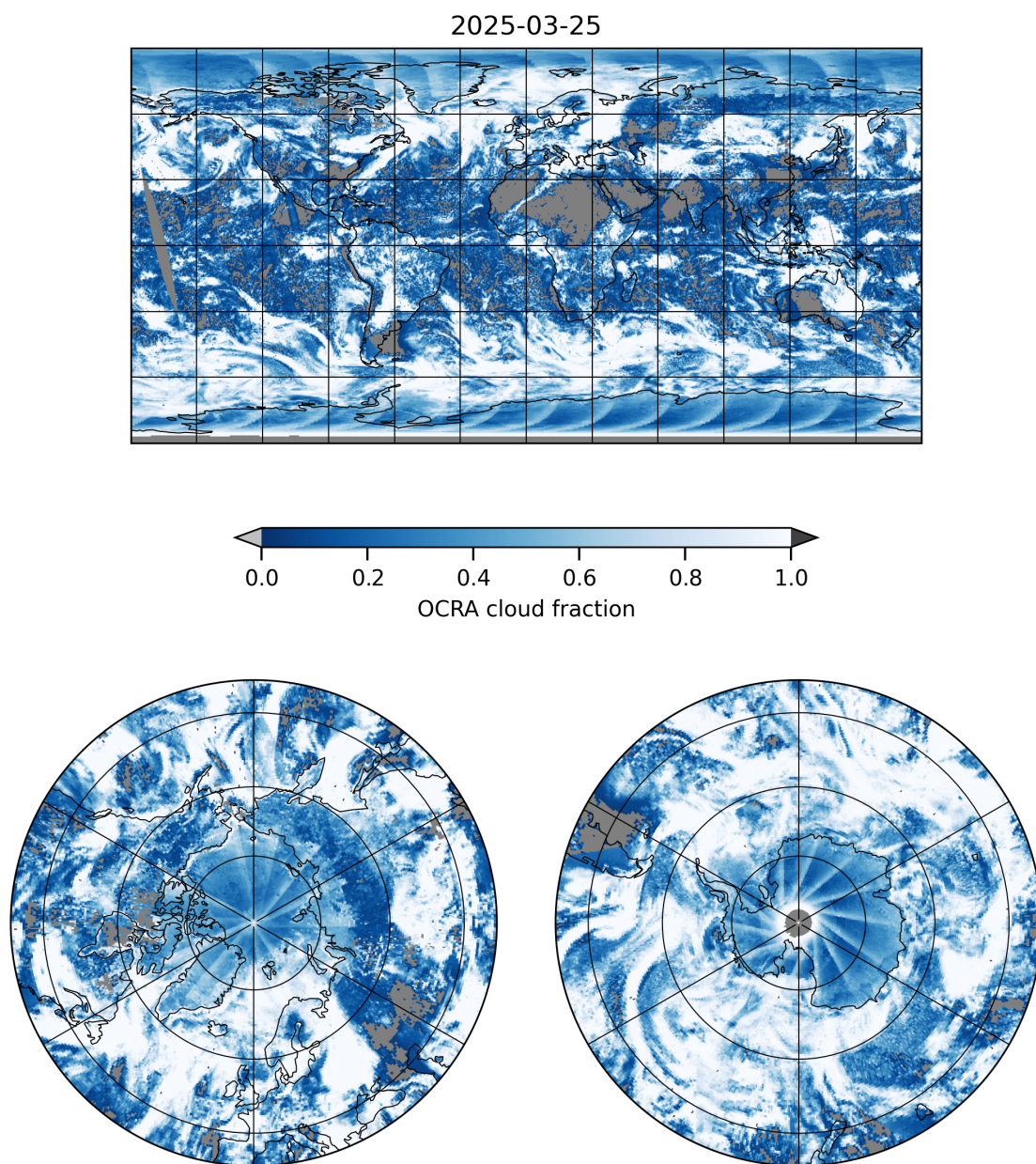


Figure 15: Map of “OCRA cloud fraction” for 2025-03-25 to 2025-03-26

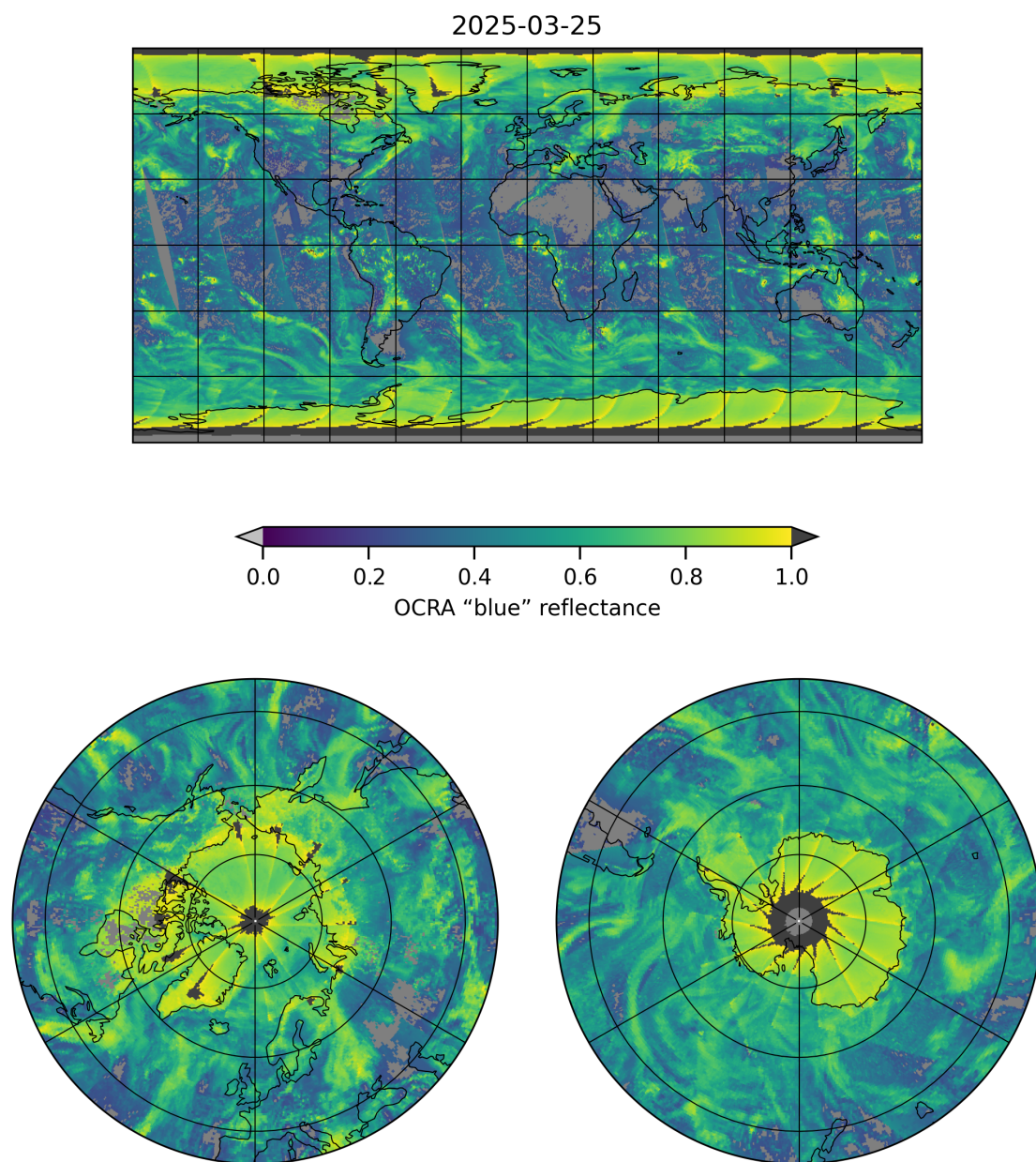


Figure 16: Map of "OCRA "blue" reflectance" for 2025-03-25 to 2025-03-26

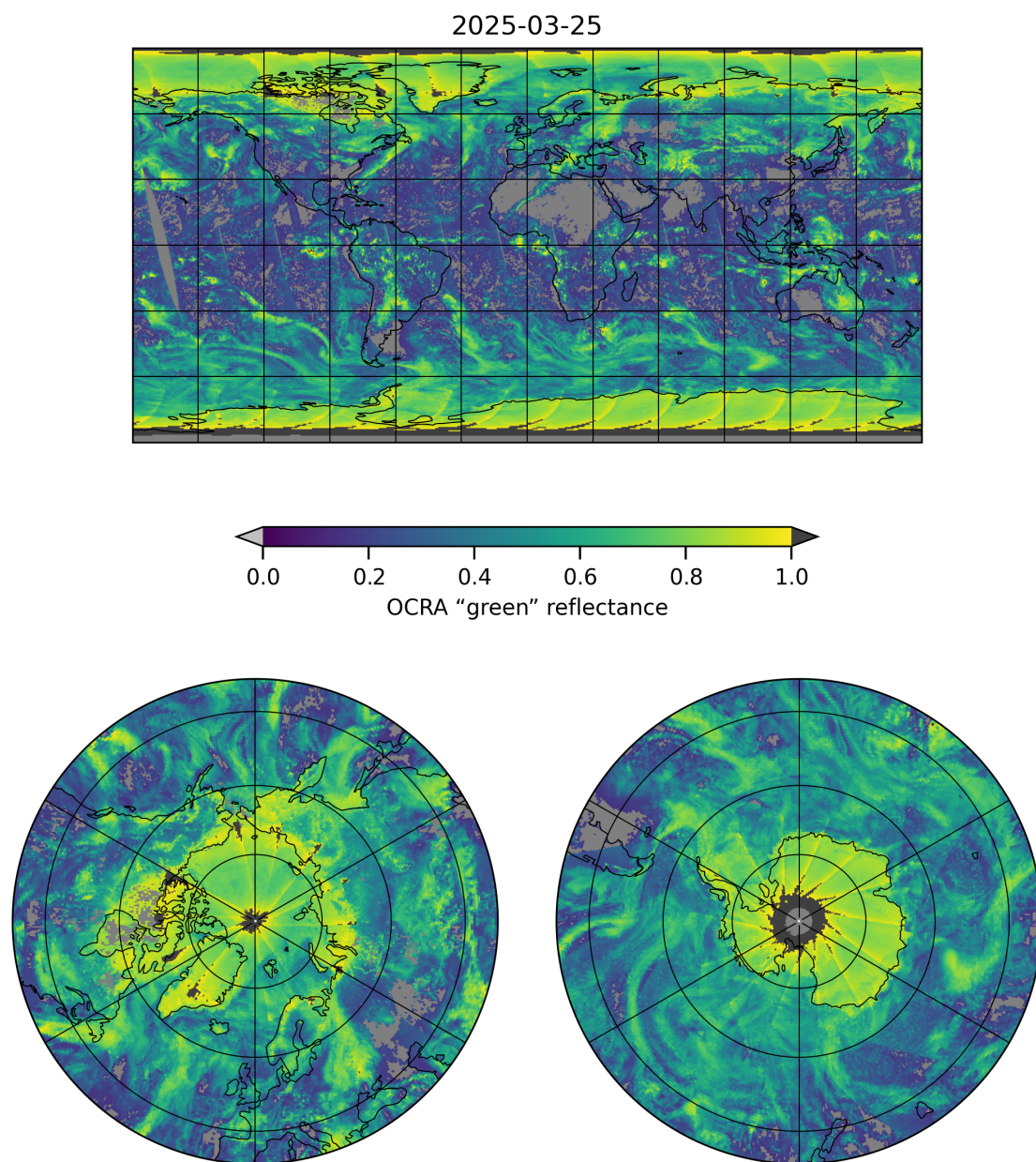


Figure 17: Map of "OCRA "green" reflectance" for 2025-03-25 to 2025-03-26

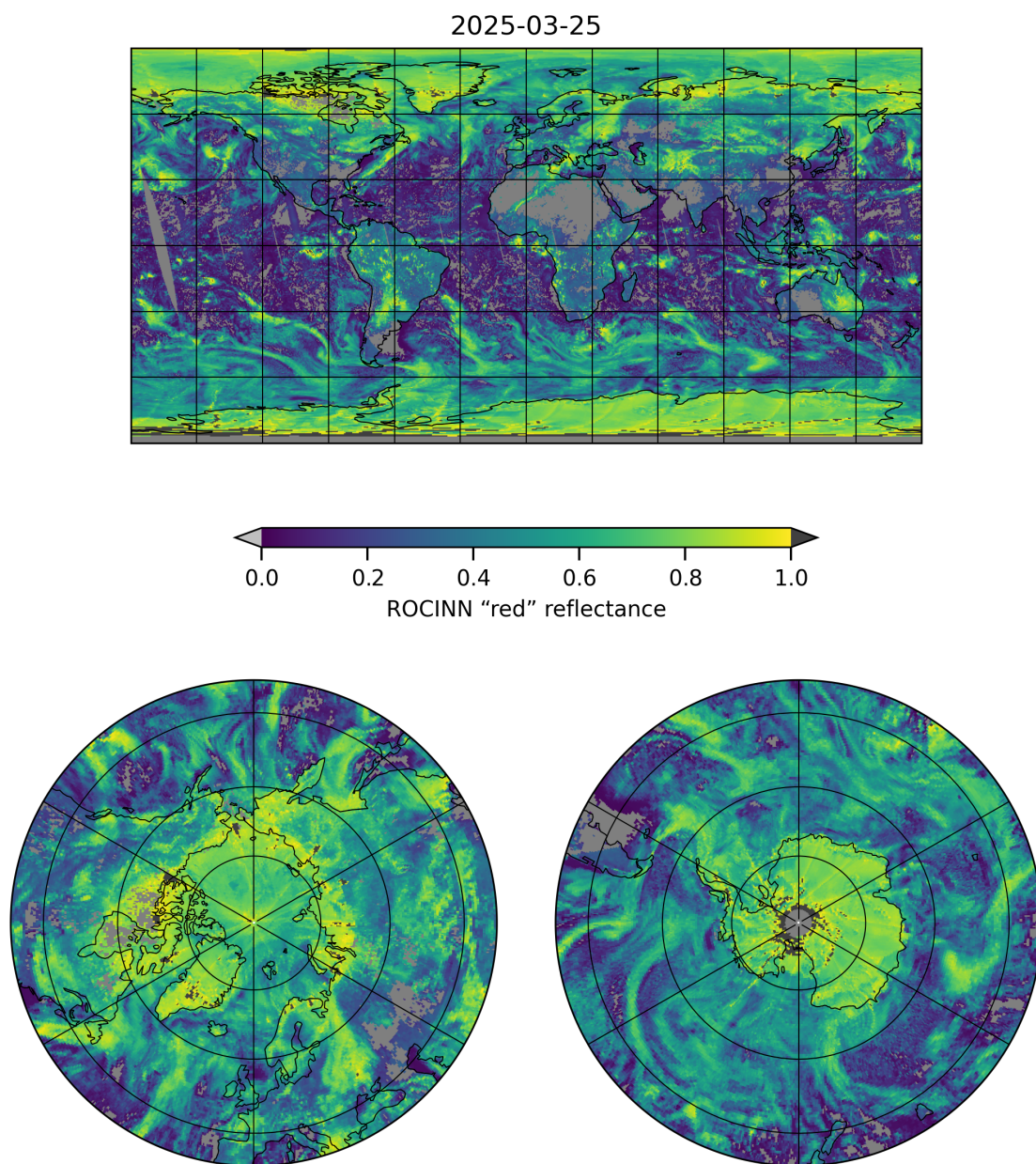


Figure 18: Map of "ROCINN "red" reflectance" for 2025-03-25 to 2025-03-26

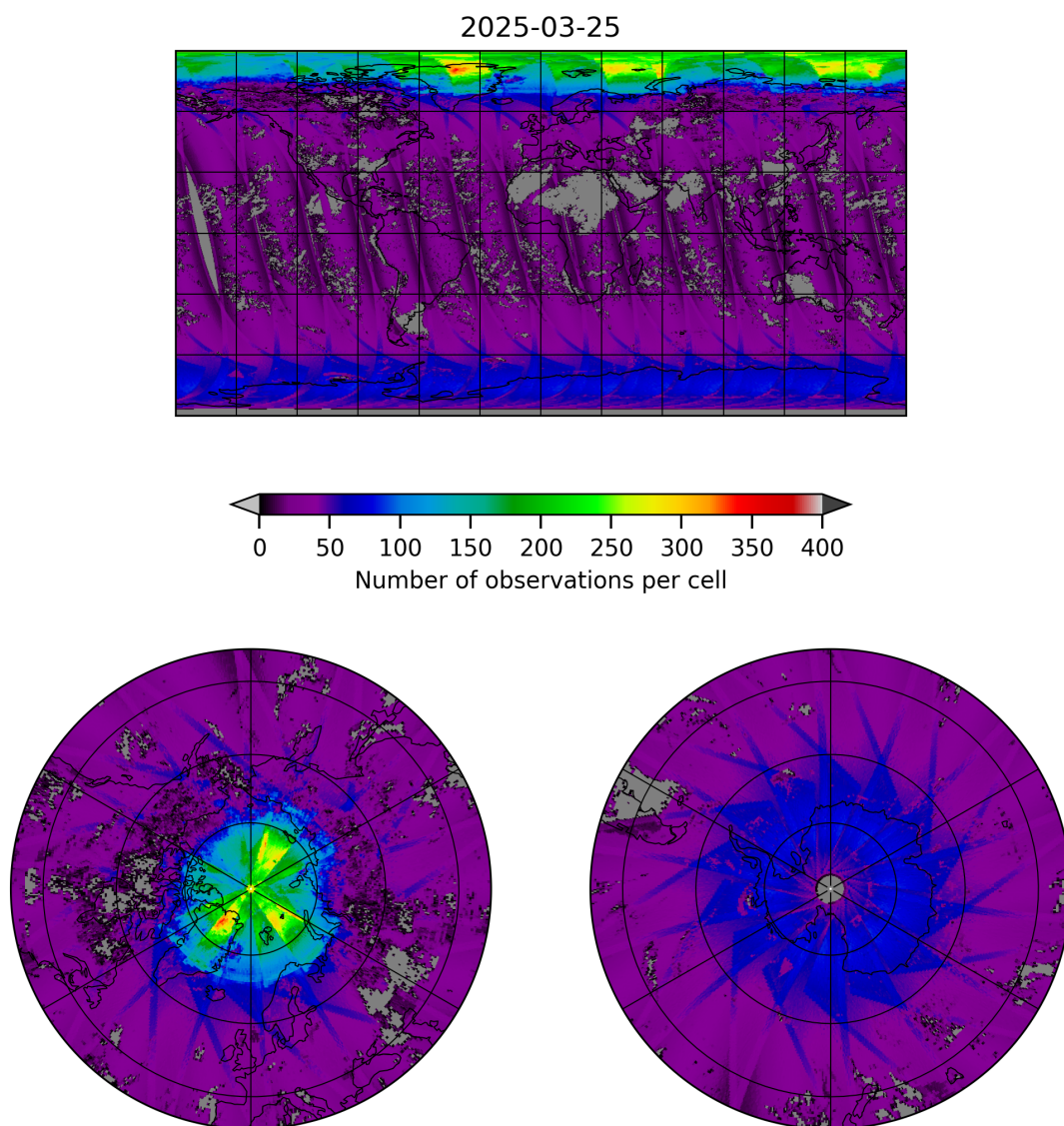


Figure 19: Map of the number of observations for 2025-03-25 to 2025-03-26

7 Zonal average

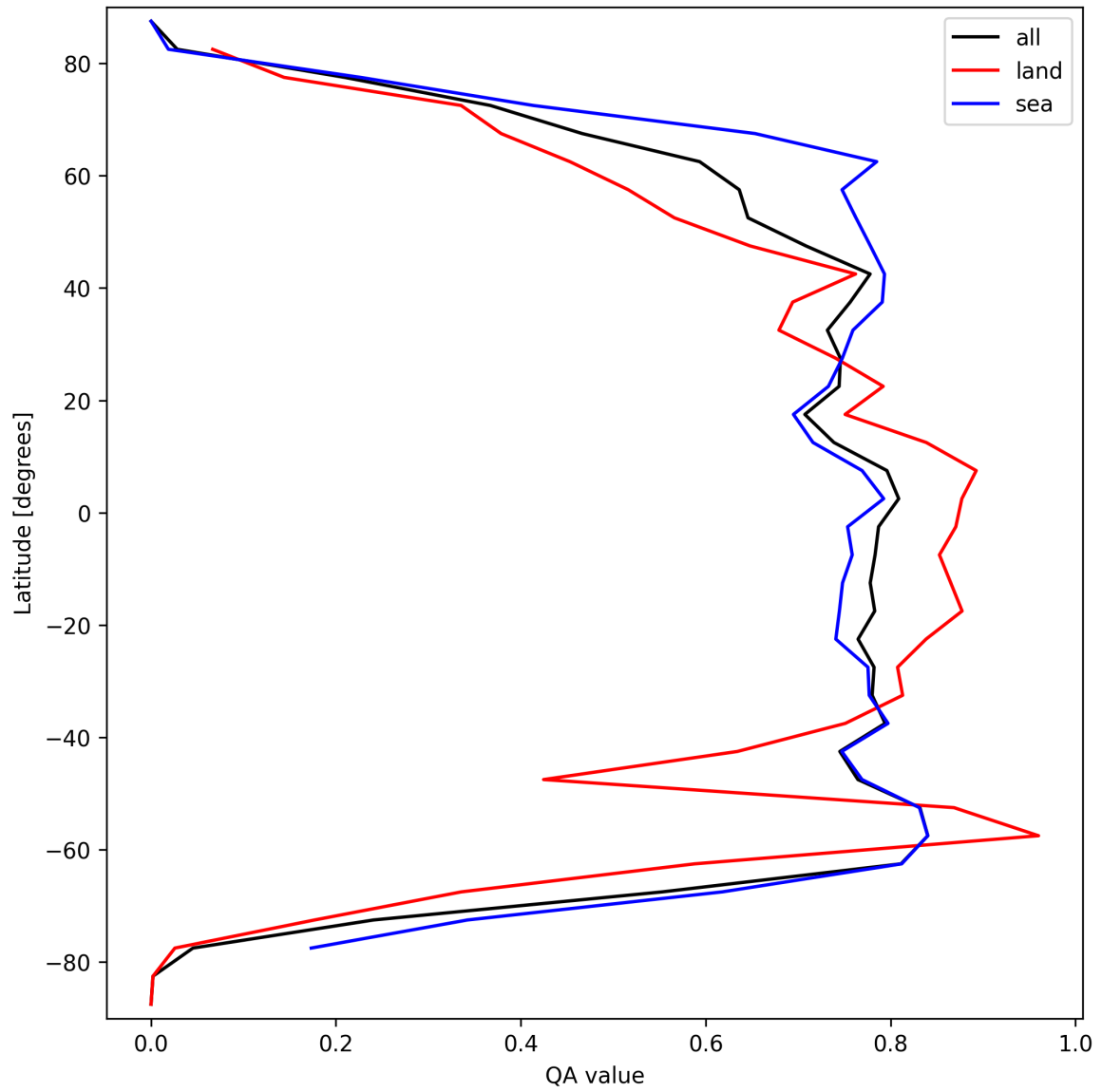


Figure 20: Zonal average of “QA value” for 2025-03-25 to 2025-03-26.

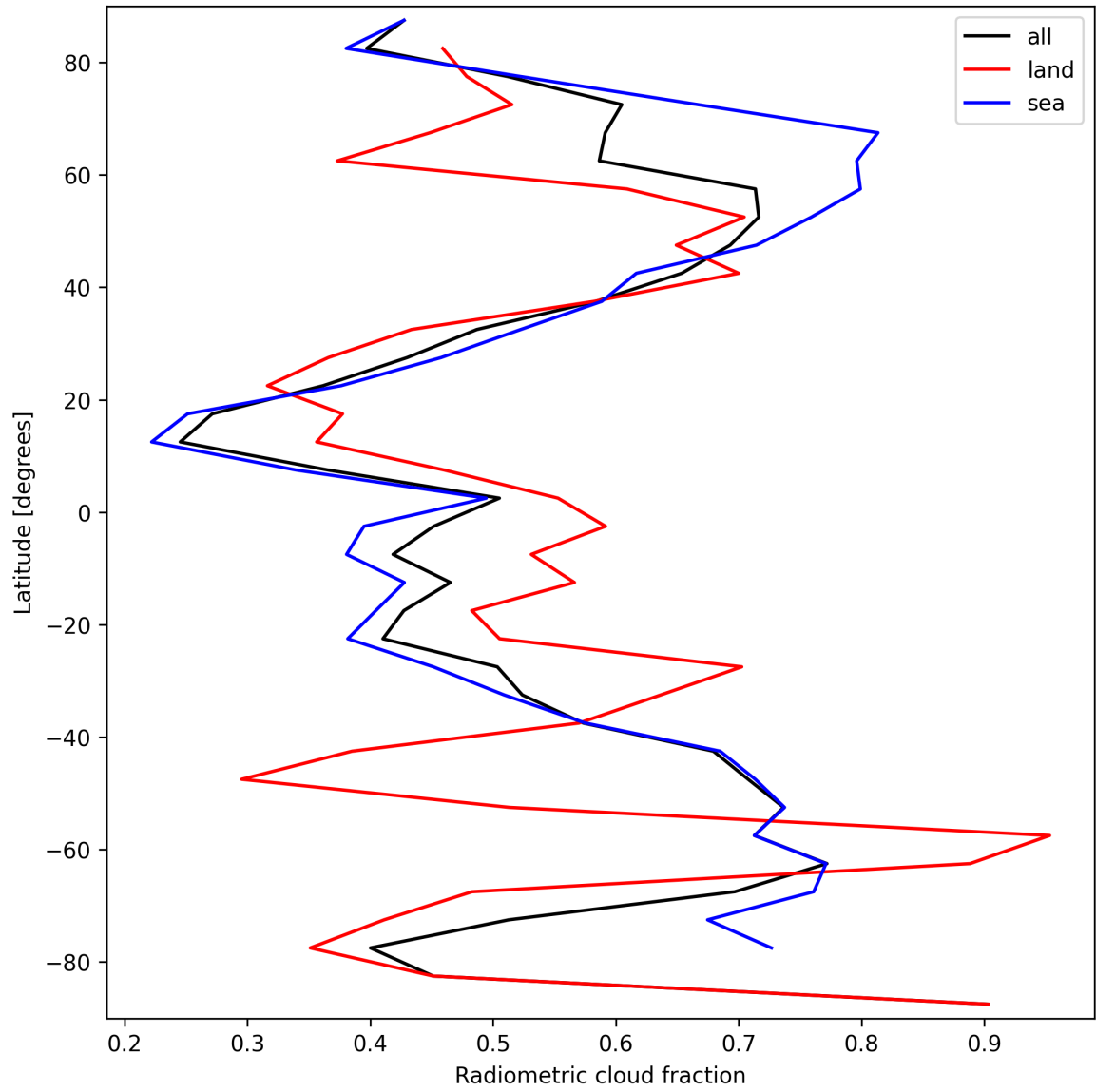


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-03-25 to 2025-03-26.

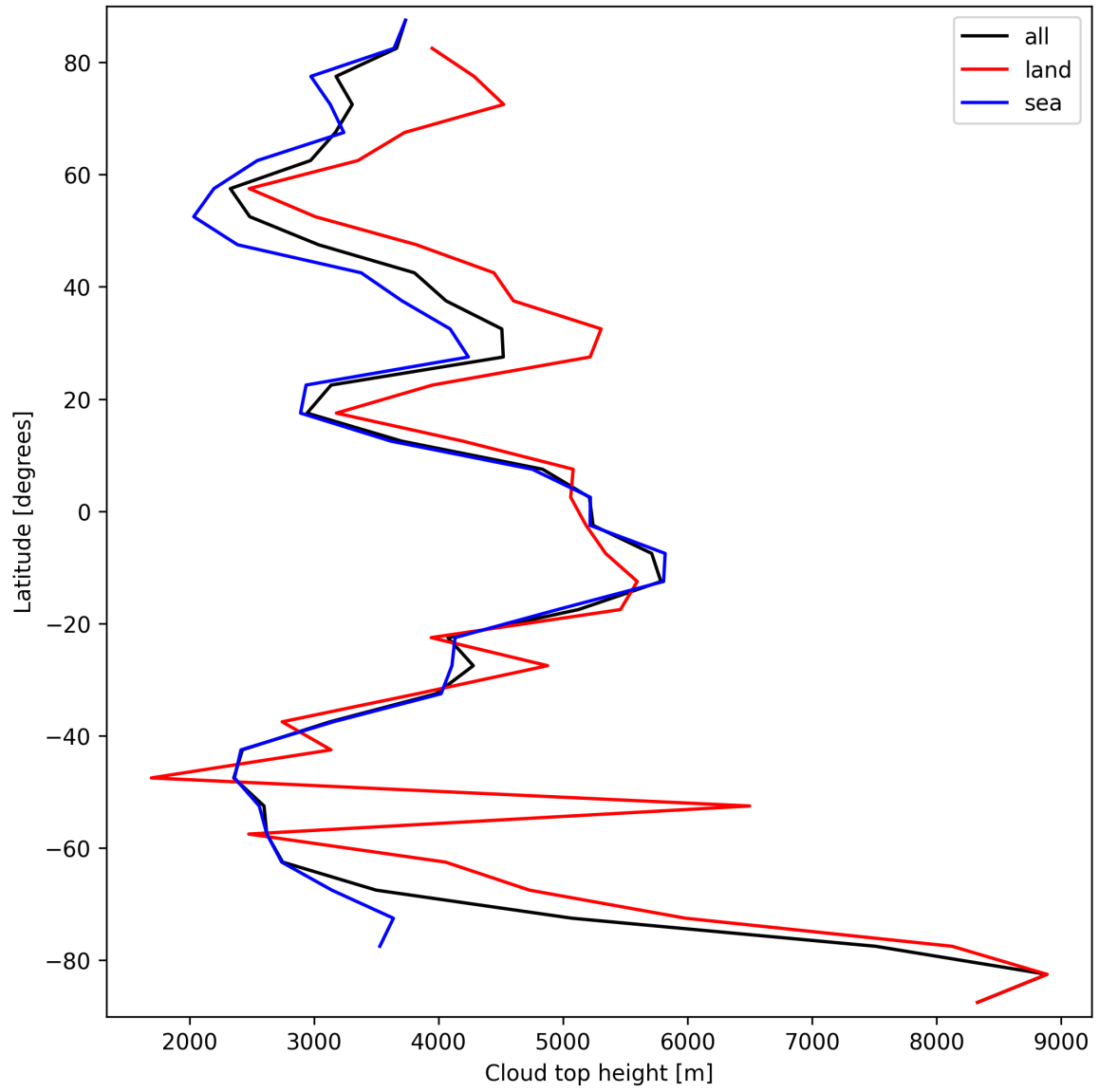


Figure 22: Zonal average of “Cloud top height” for 2025-03-25 to 2025-03-26.

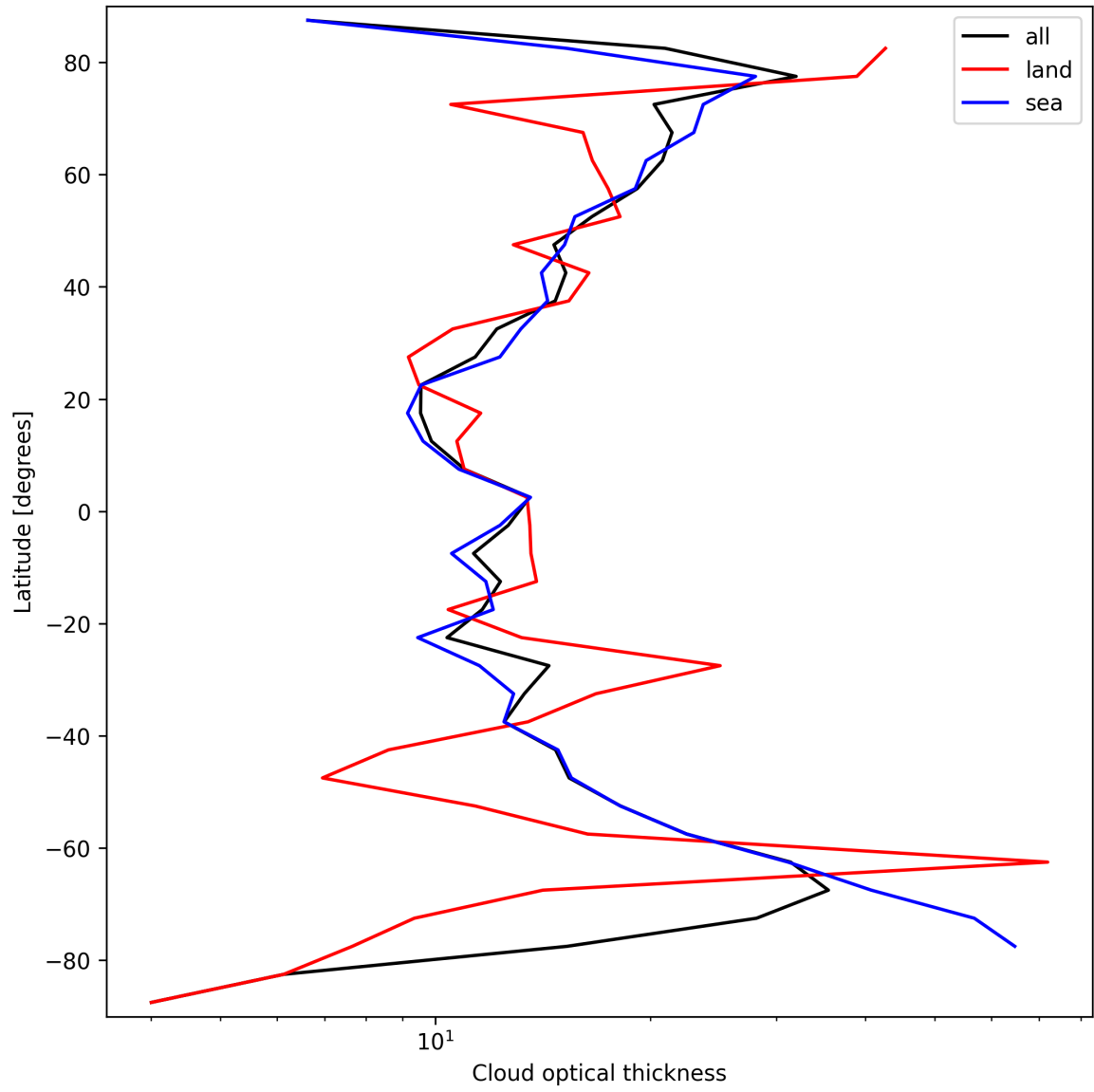


Figure 23: Zonal average of “Cloud optical thickness” for 2025-03-25 to 2025-03-26.

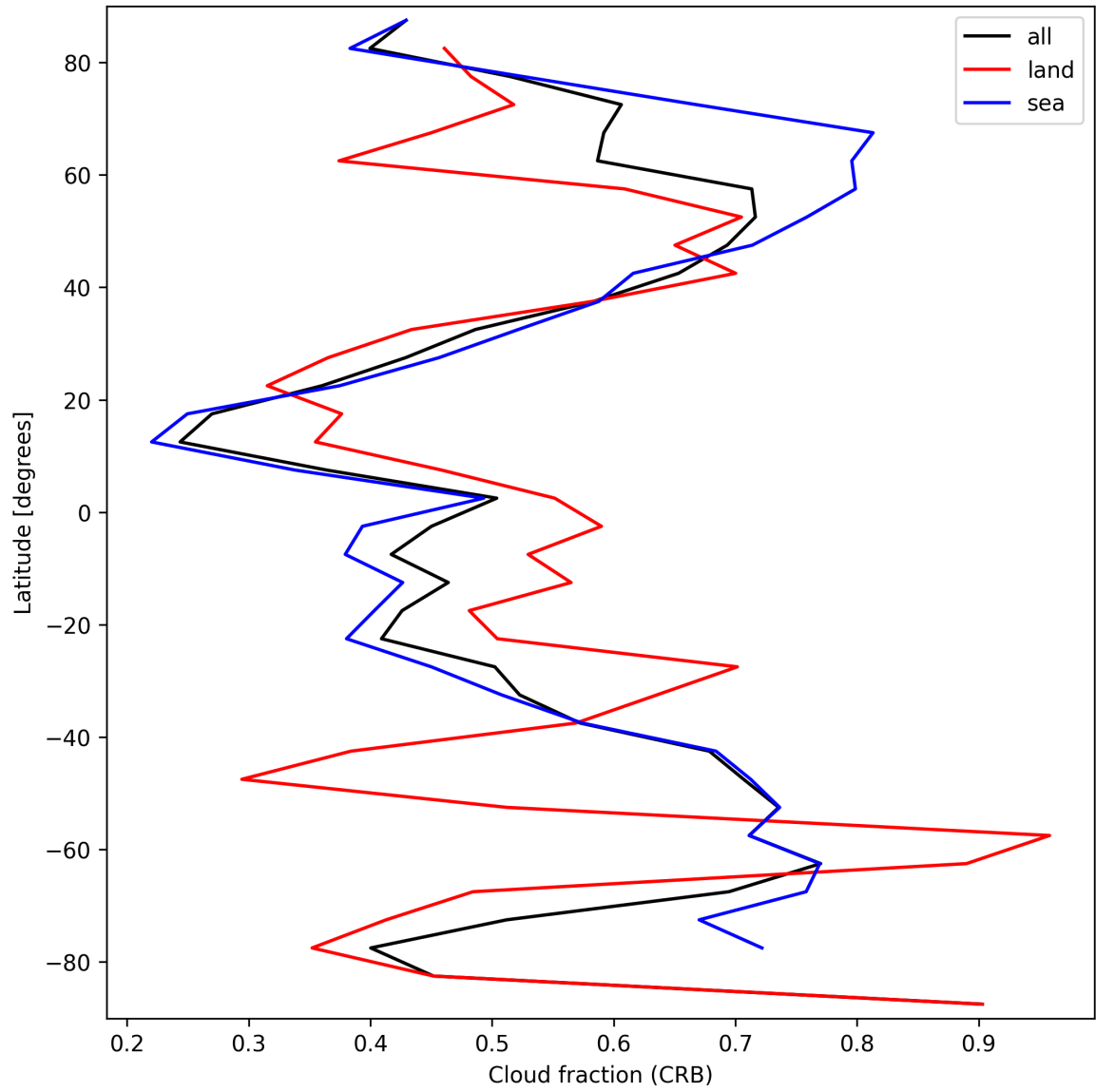


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-03-25 to 2025-03-26.

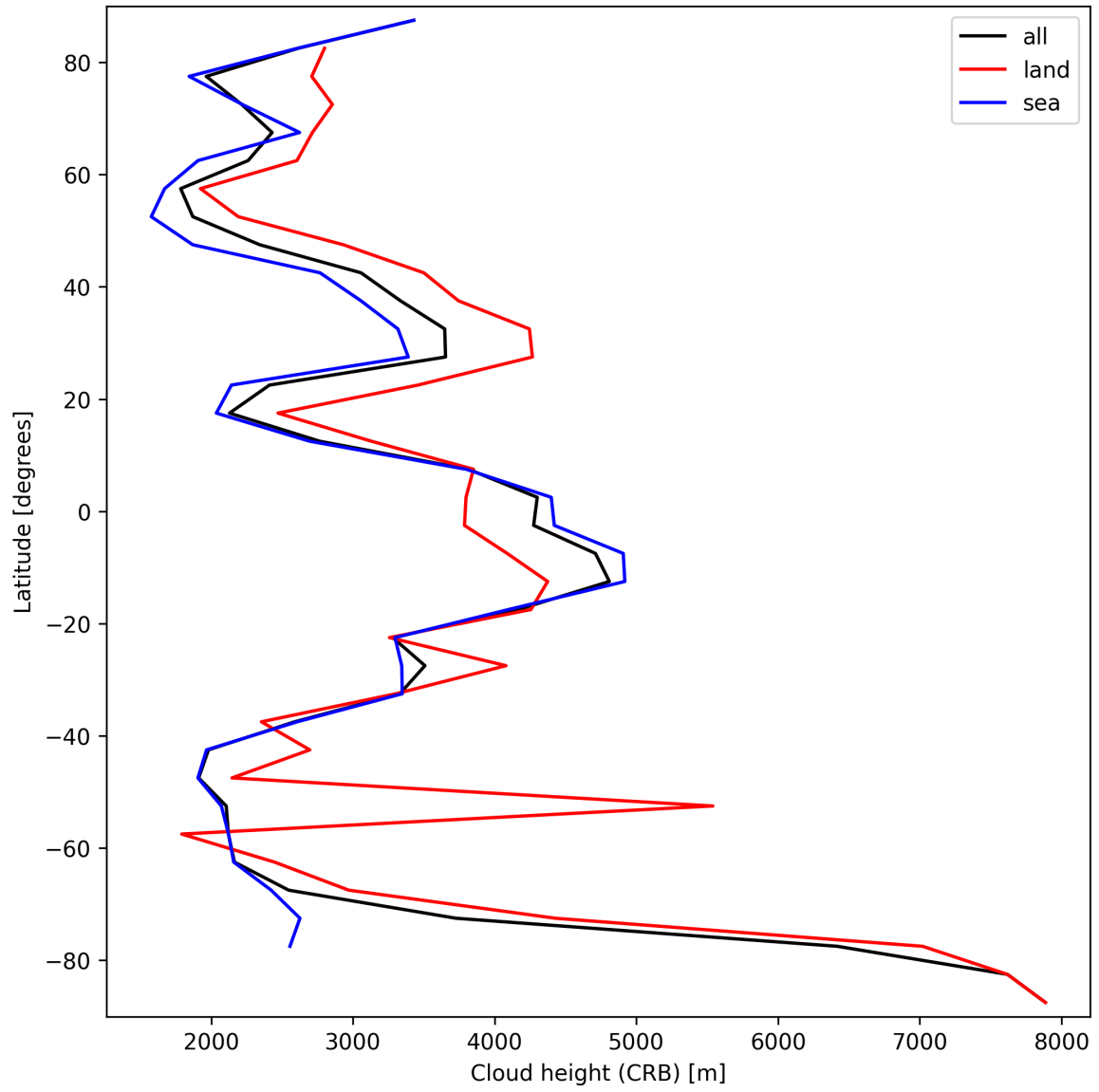


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-03-25 to 2025-03-26.

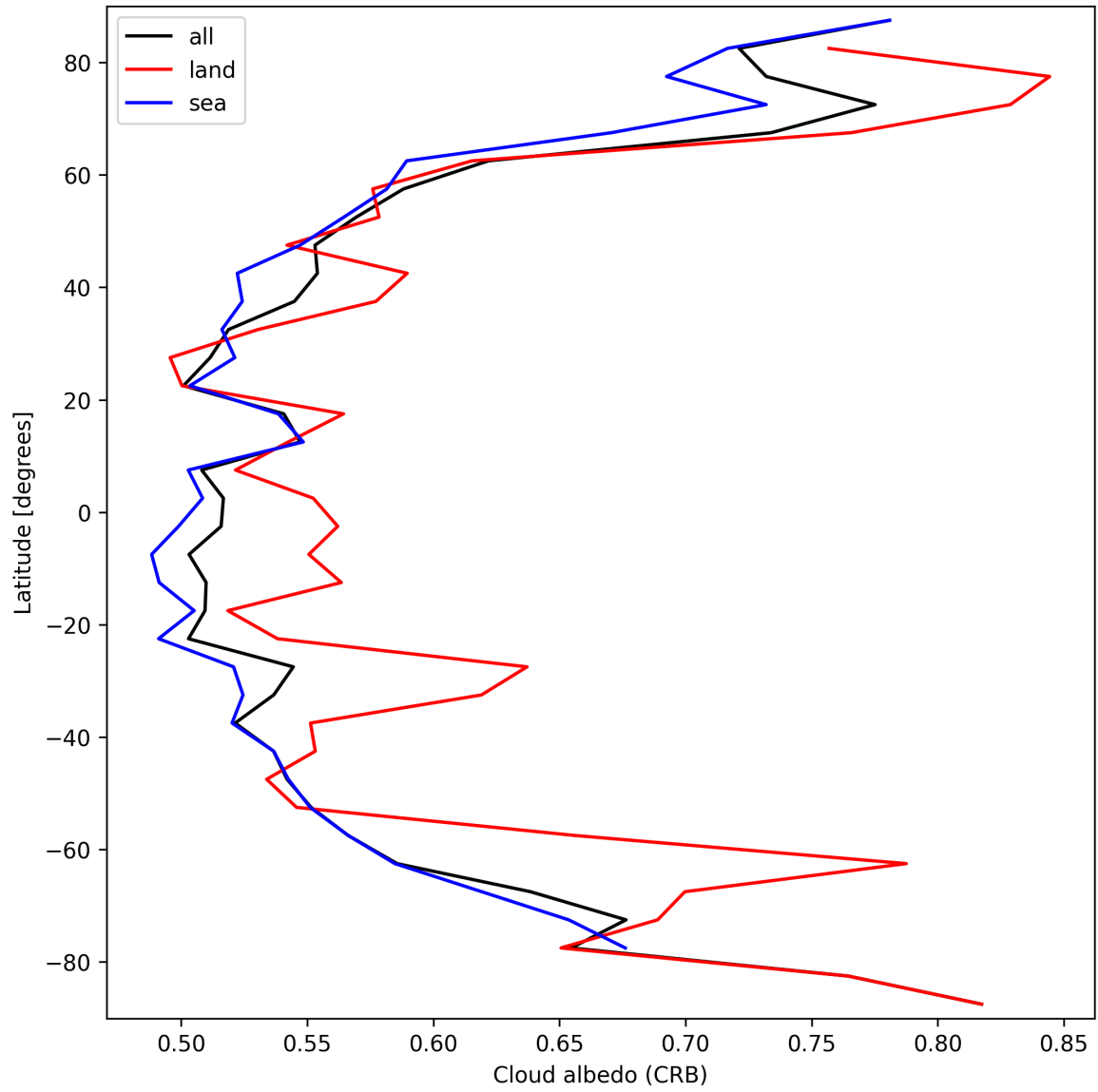


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-03-25 to 2025-03-26.

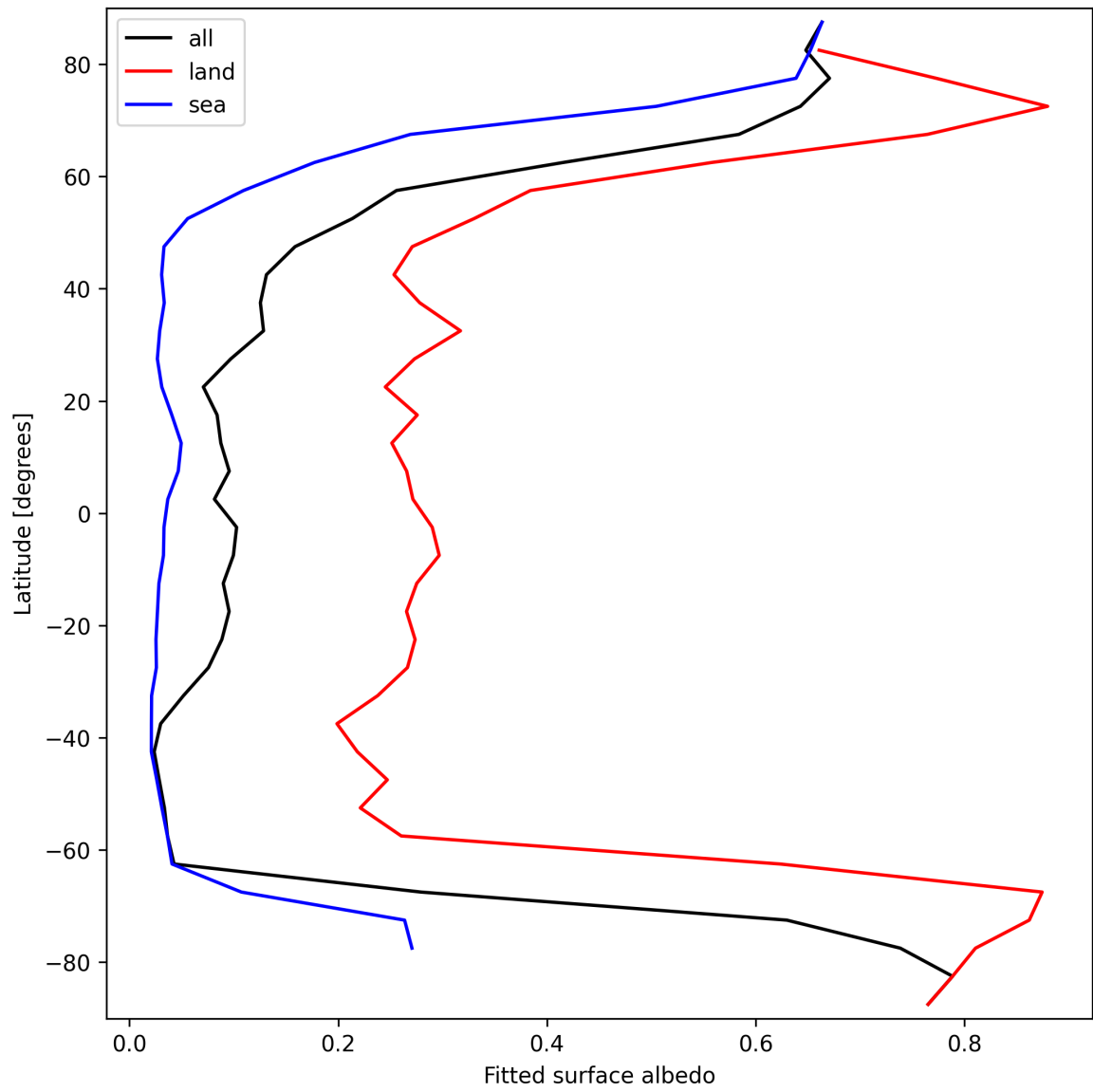


Figure 27: Zonal average of “Fitted surface albedo” for 2025-03-25 to 2025-03-26.

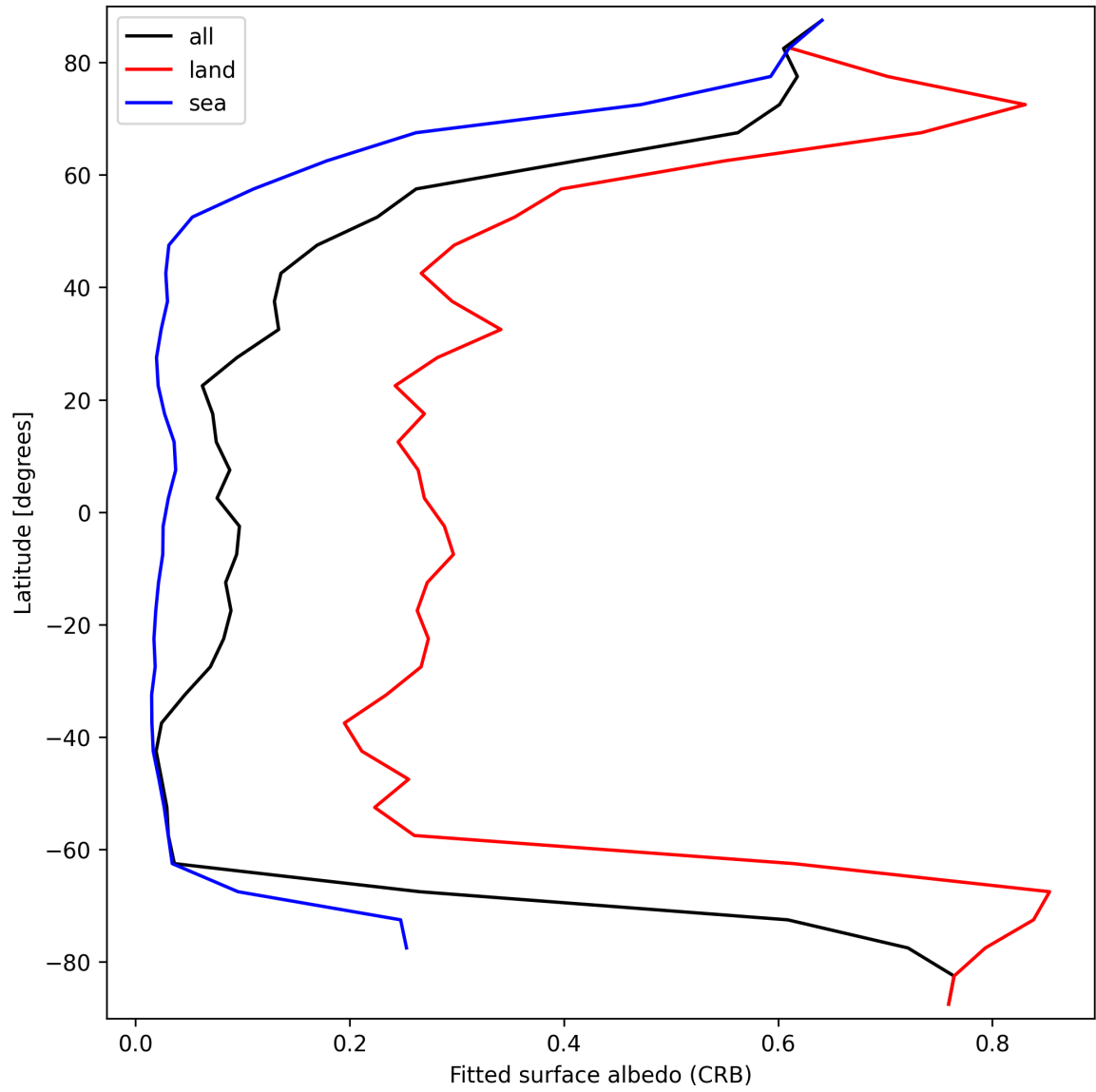


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-03-25 to 2025-03-26.

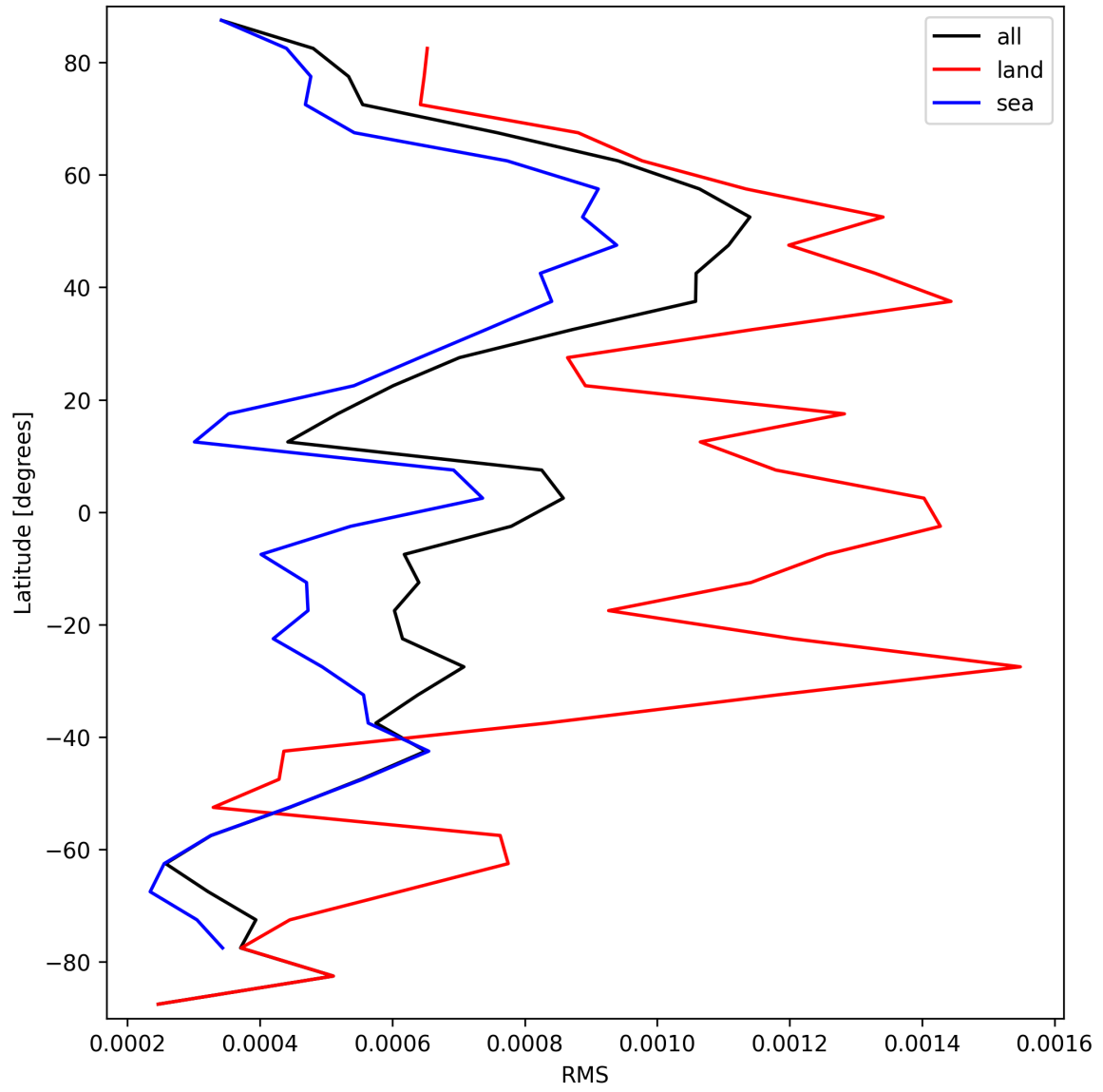


Figure 29: Zonal average of “RMS” for 2025-03-25 to 2025-03-26.

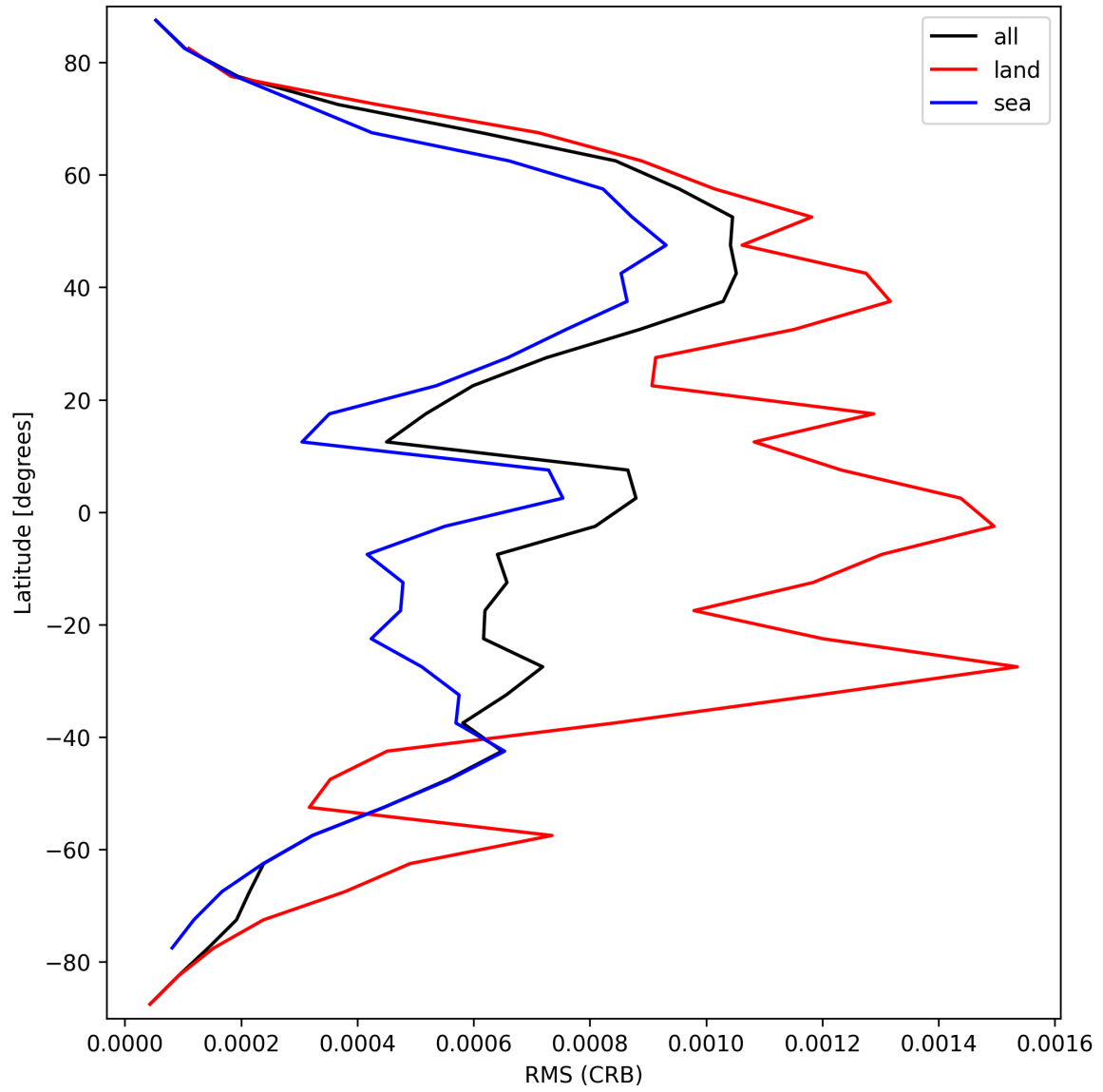


Figure 30: Zonal average of “RMS (CRB)” for 2025-03-25 to 2025-03-26.

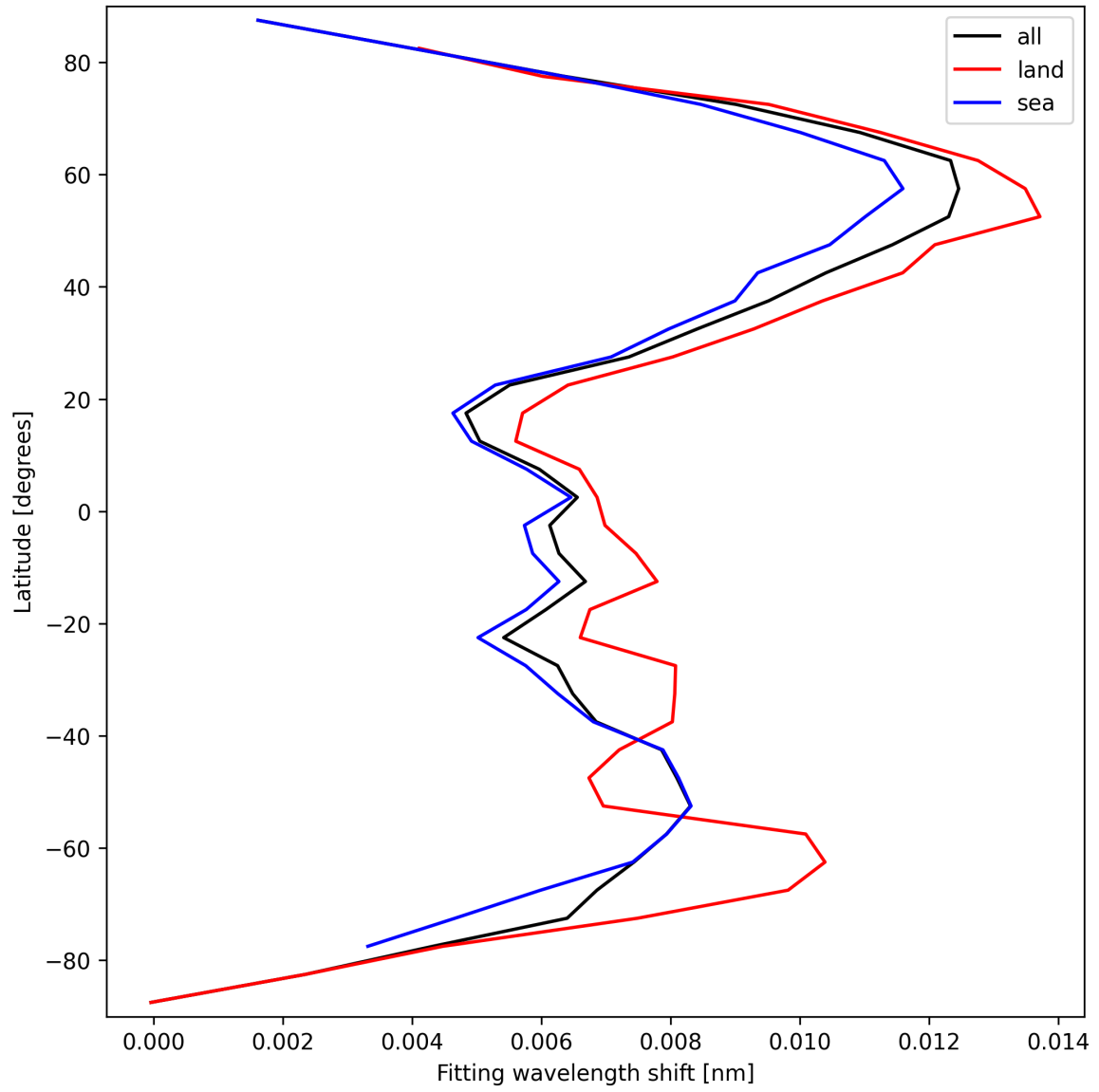


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-03-25 to 2025-03-26.

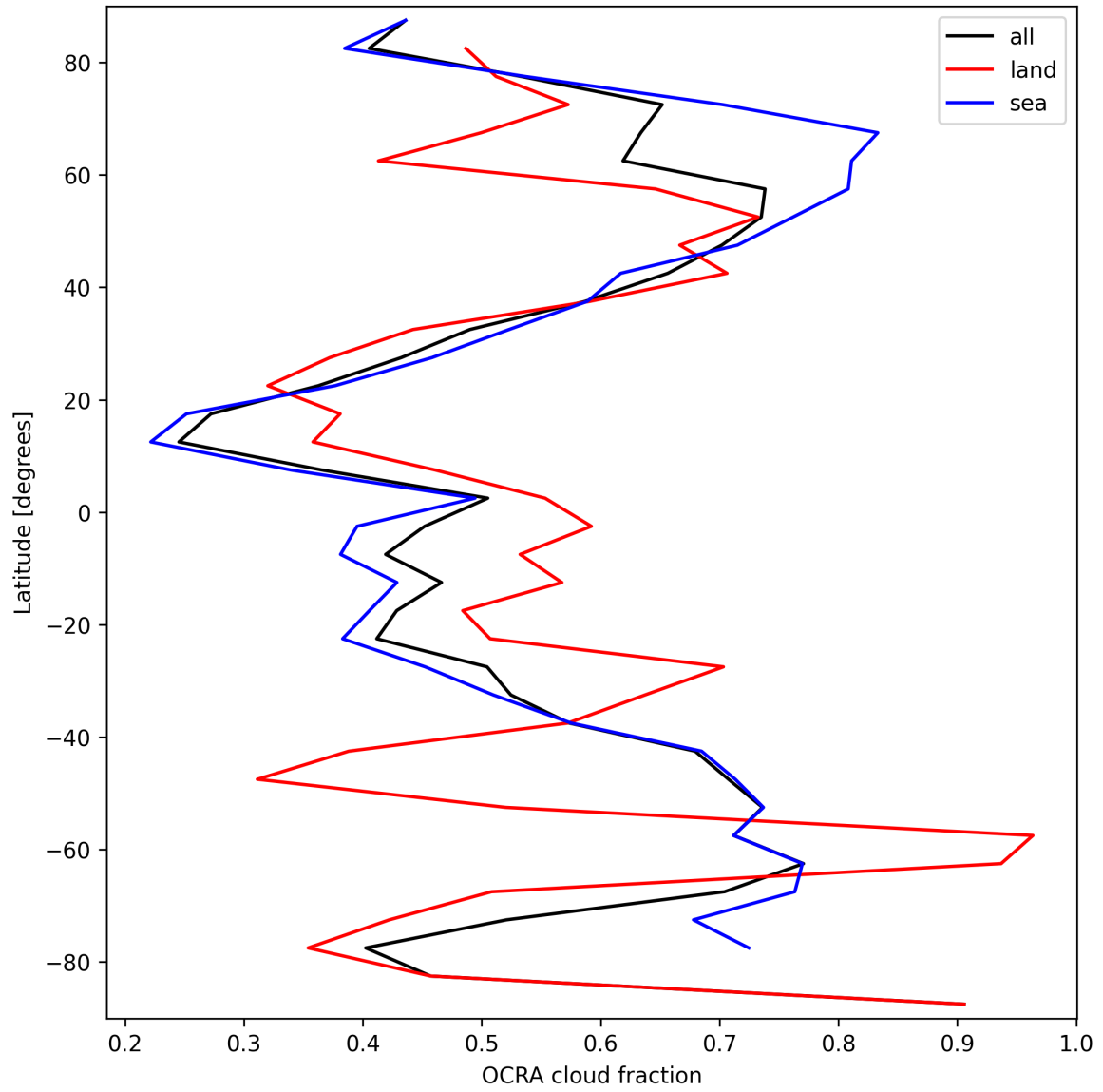


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-03-25 to 2025-03-26.

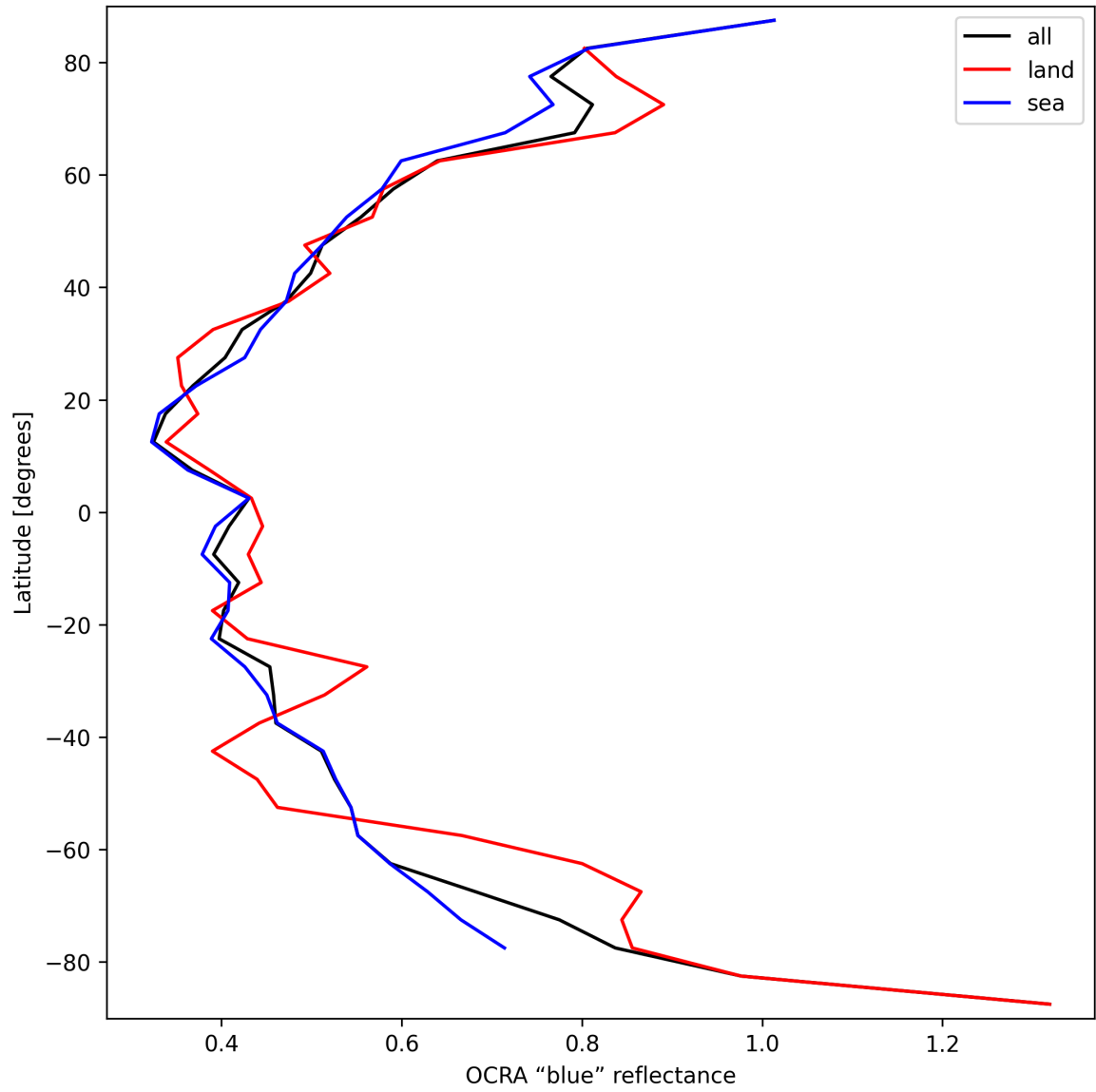


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-03-25 to 2025-03-26.

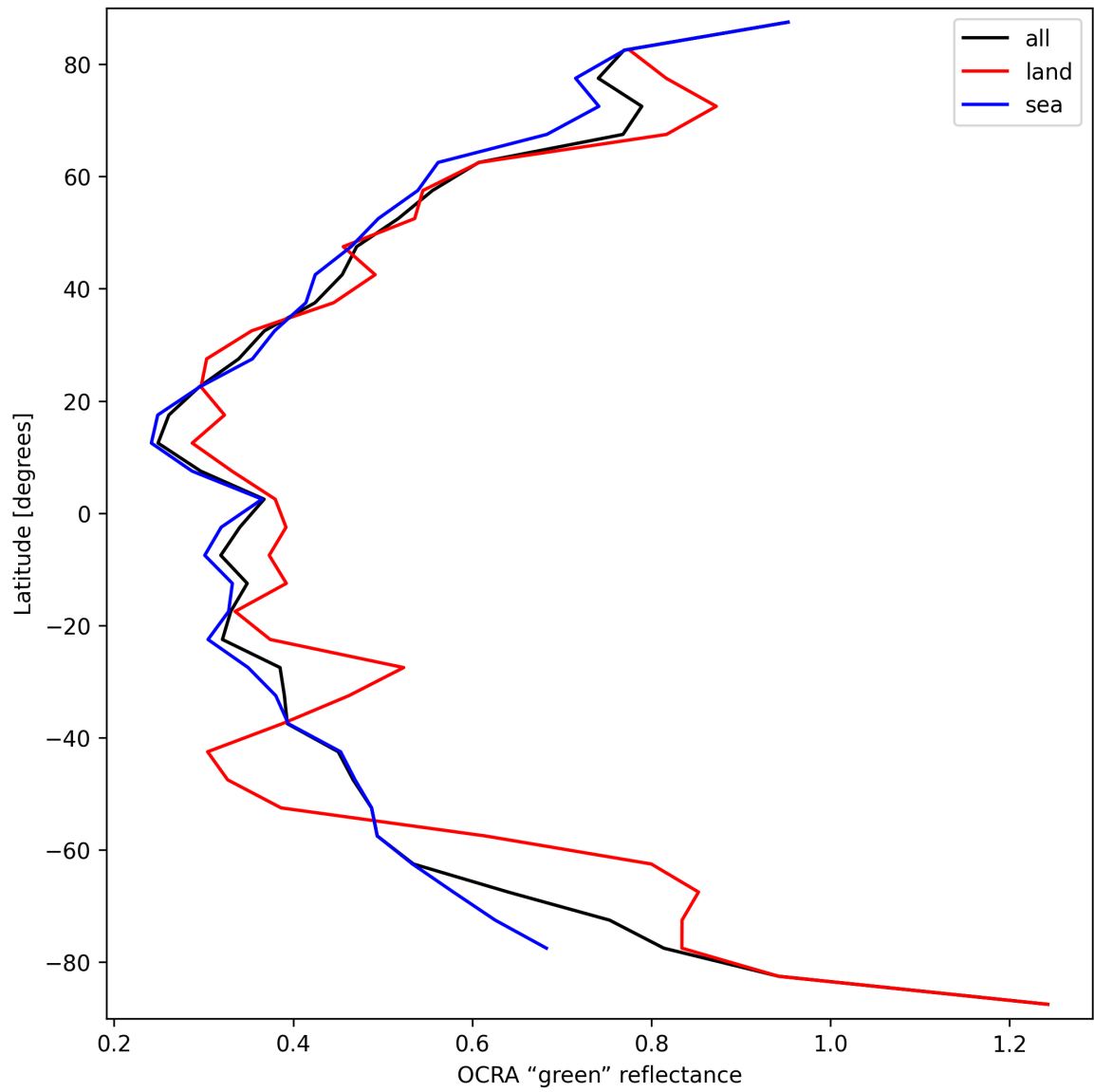


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-03-25 to 2025-03-26.

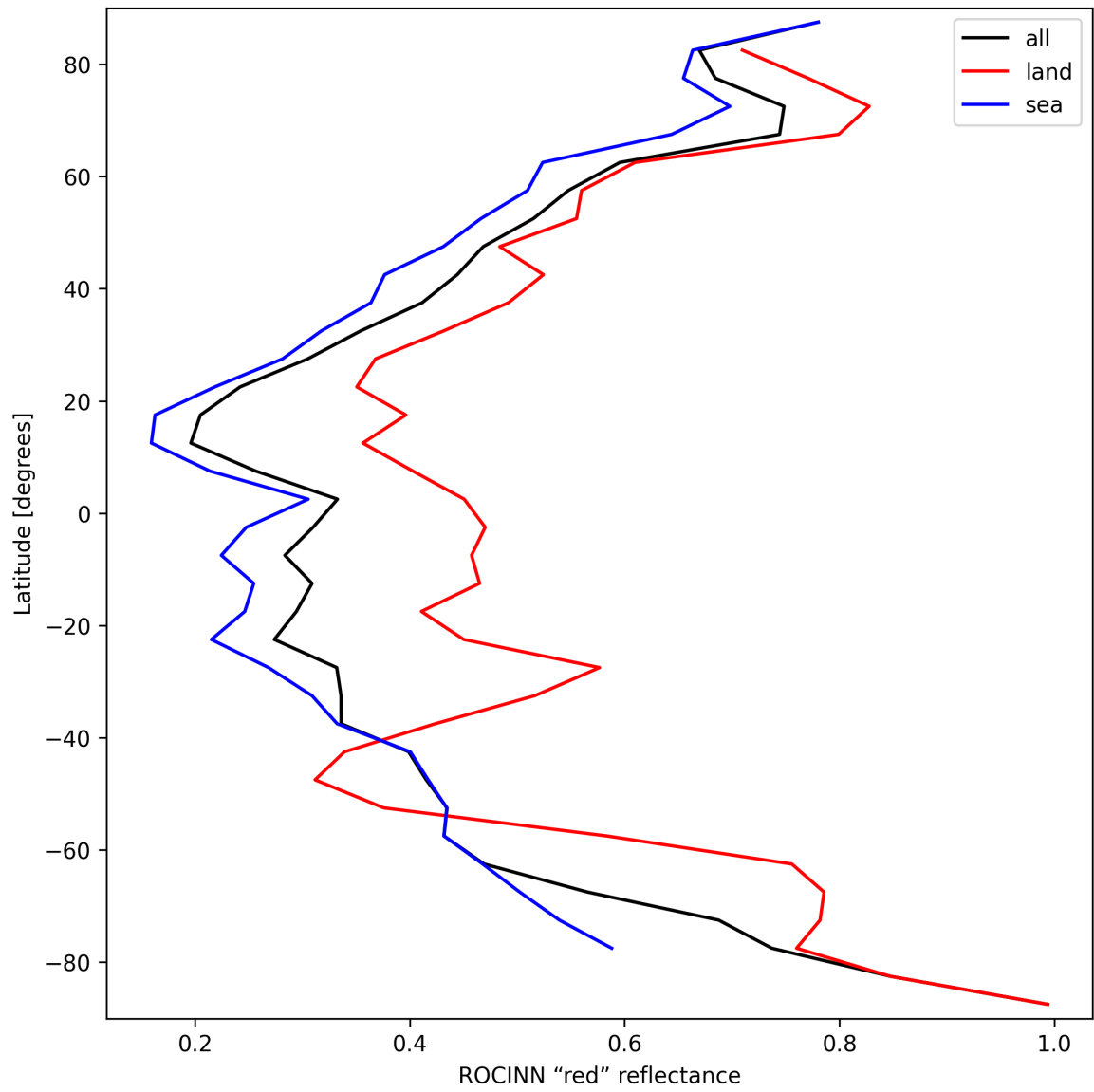


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-03-25 to 2025-03-26.

8 Histograms

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

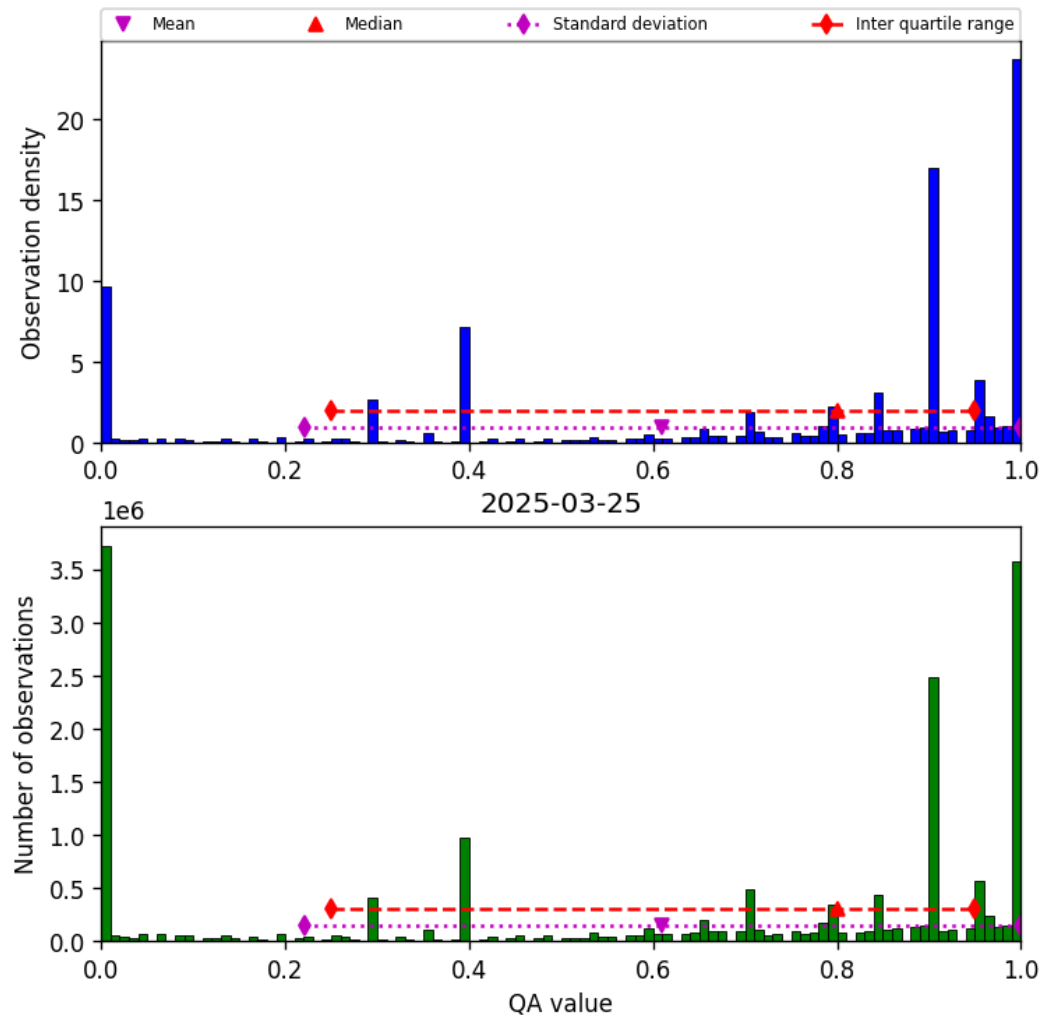


Figure 36: Histogram of “QA value” for 2025-03-25 to 2025-03-26

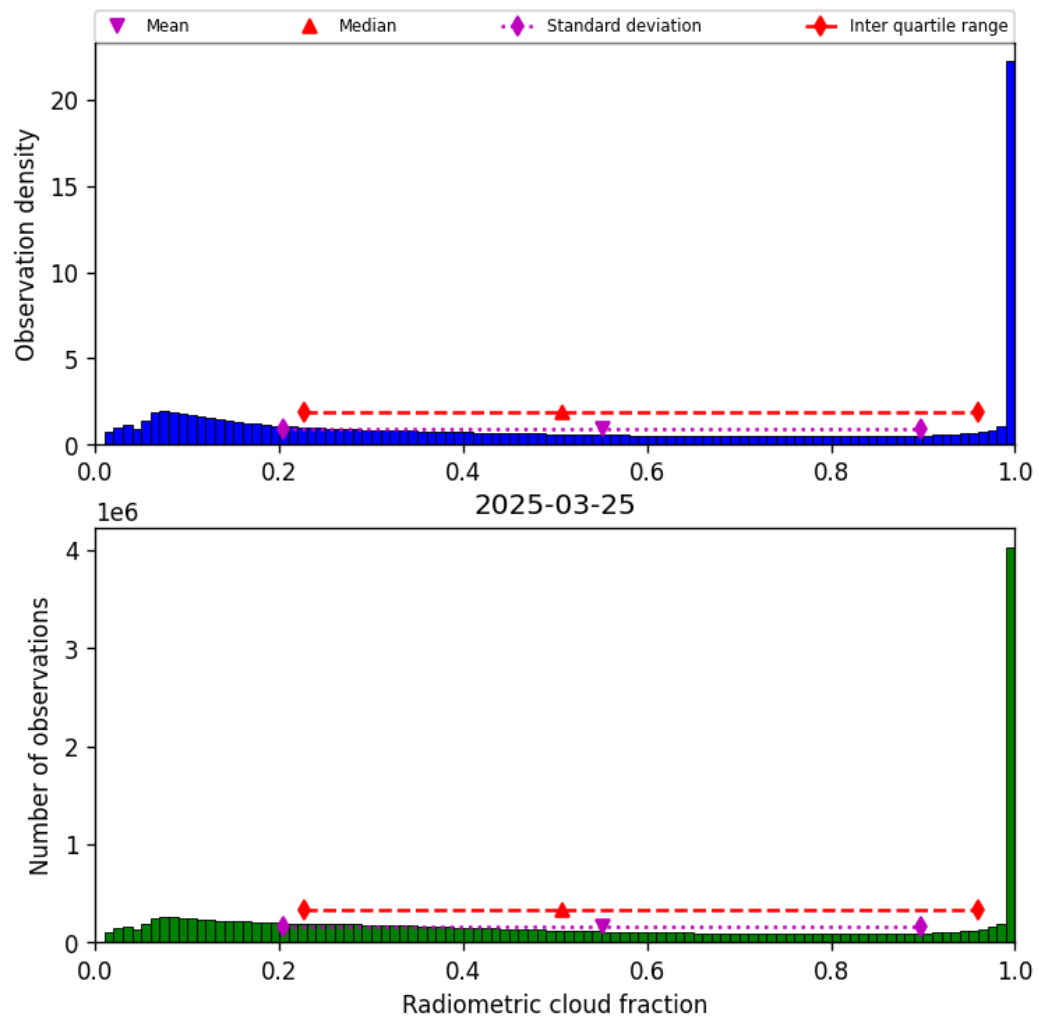


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-03-25 to 2025-03-26

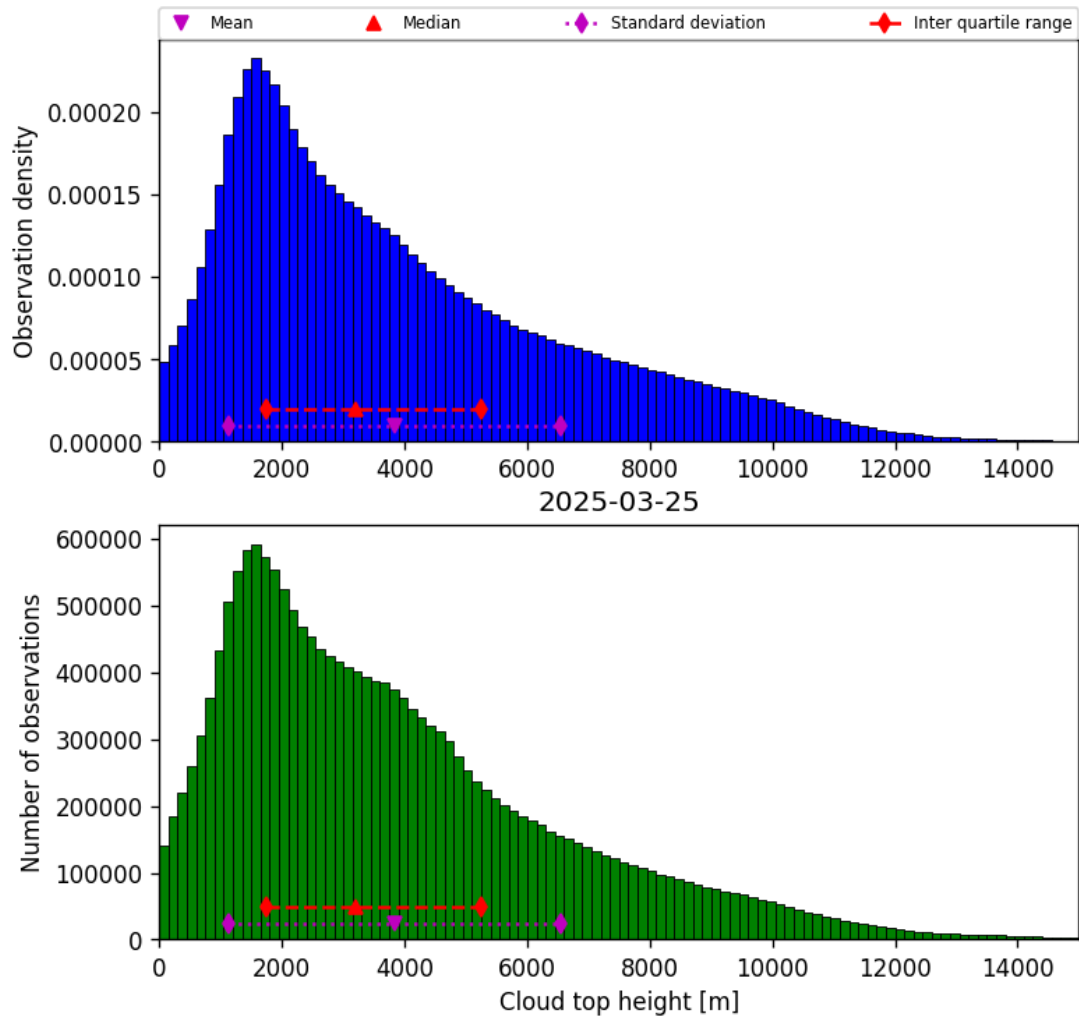


Figure 38: Histogram of “Cloud top height” for 2025-03-25 to 2025-03-26

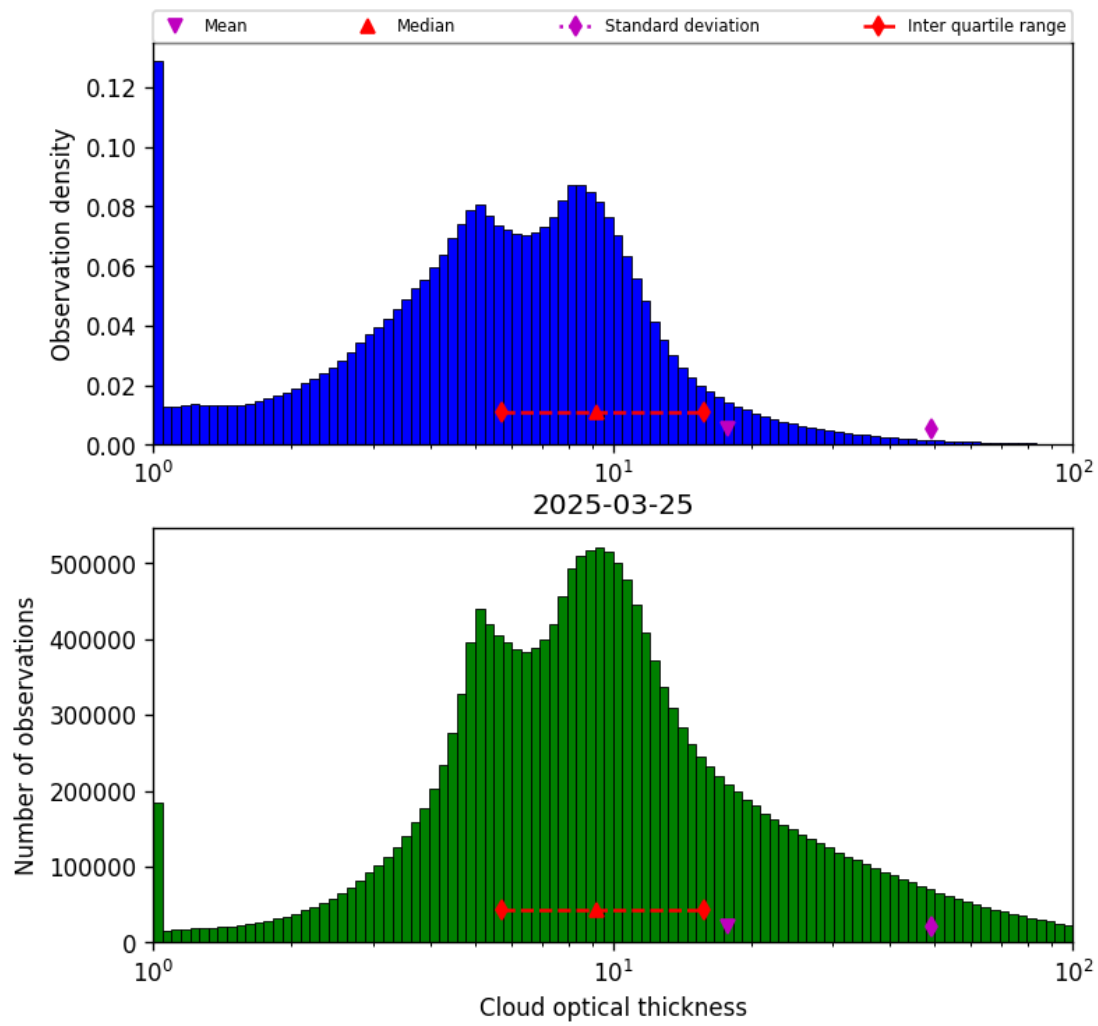


Figure 39: Histogram of “Cloud optical thickness” for 2025-03-25 to 2025-03-26

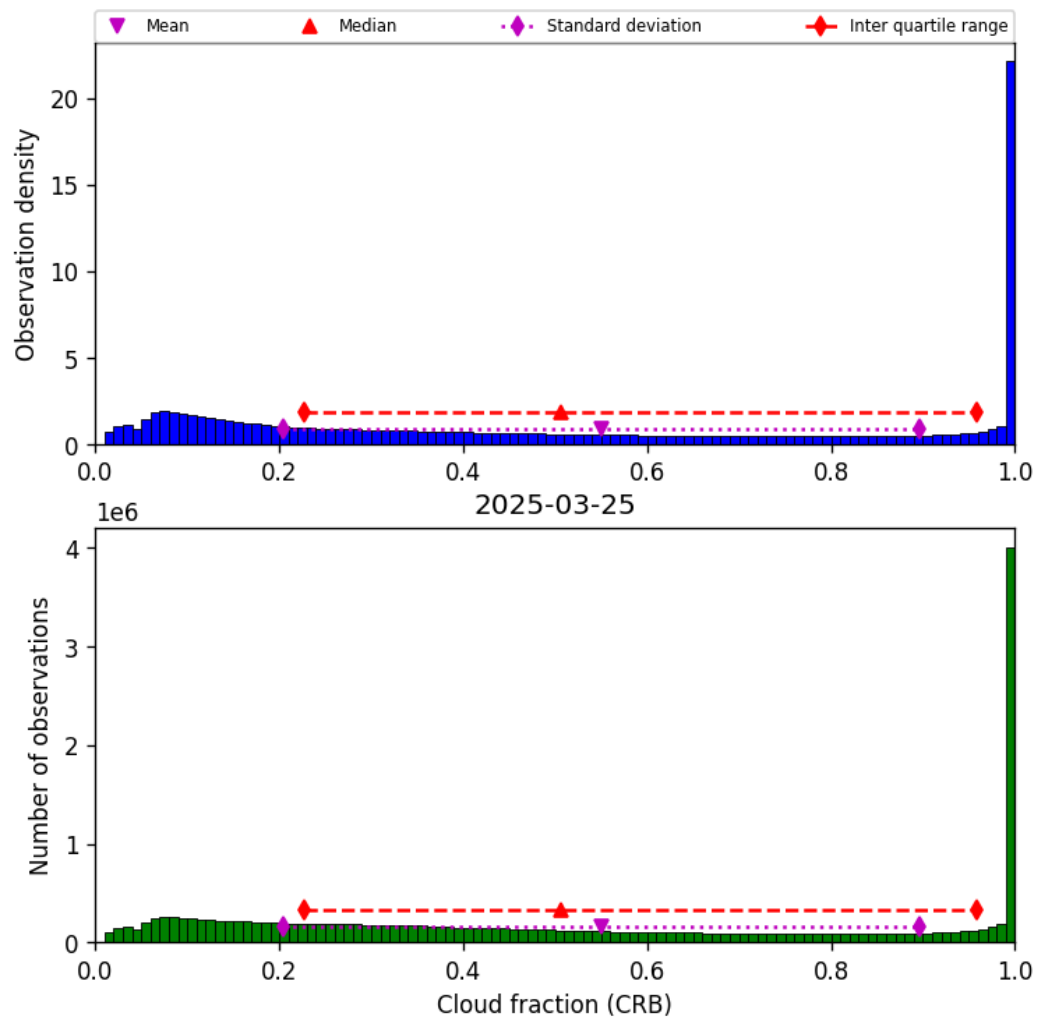


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-03-25 to 2025-03-26

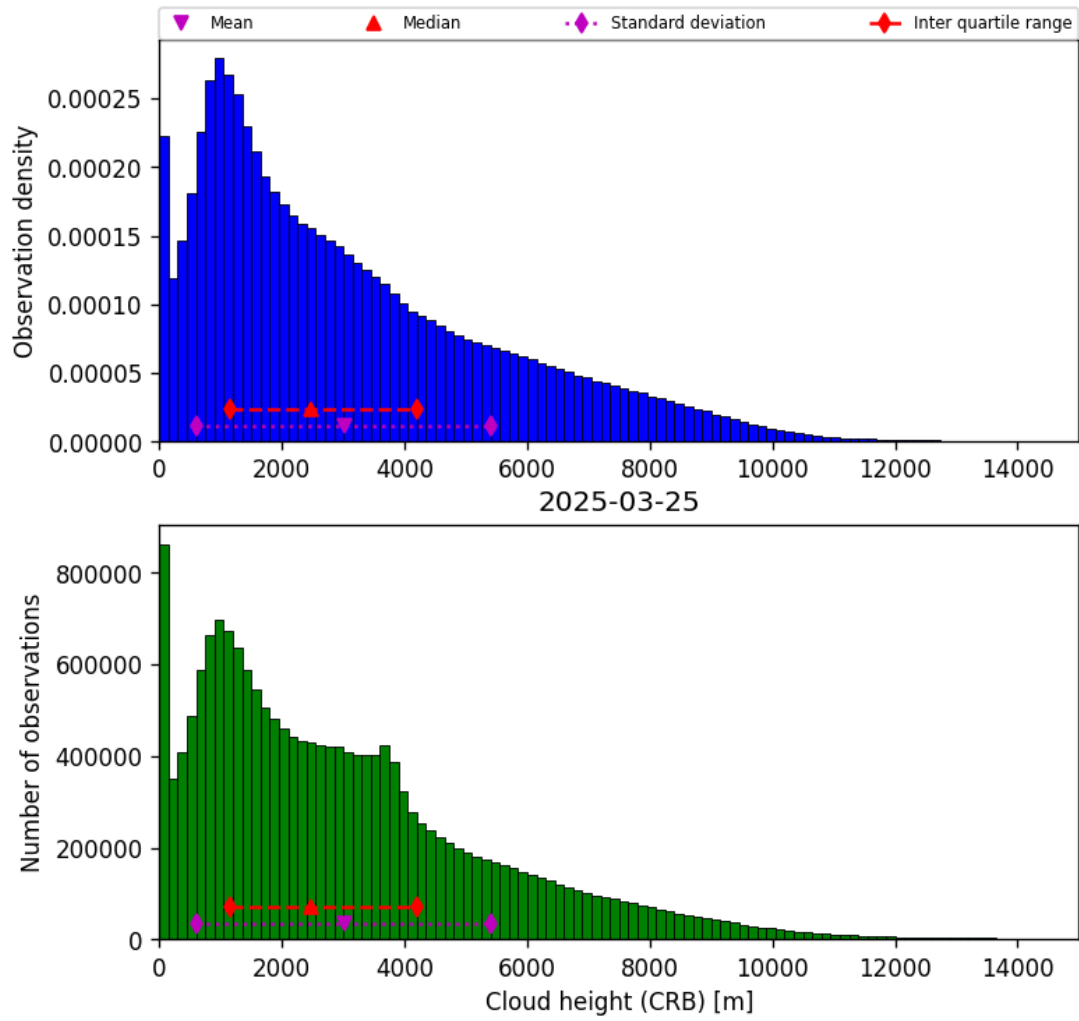


Figure 41: Histogram of “Cloud height (CRB)” for 2025-03-25 to 2025-03-26

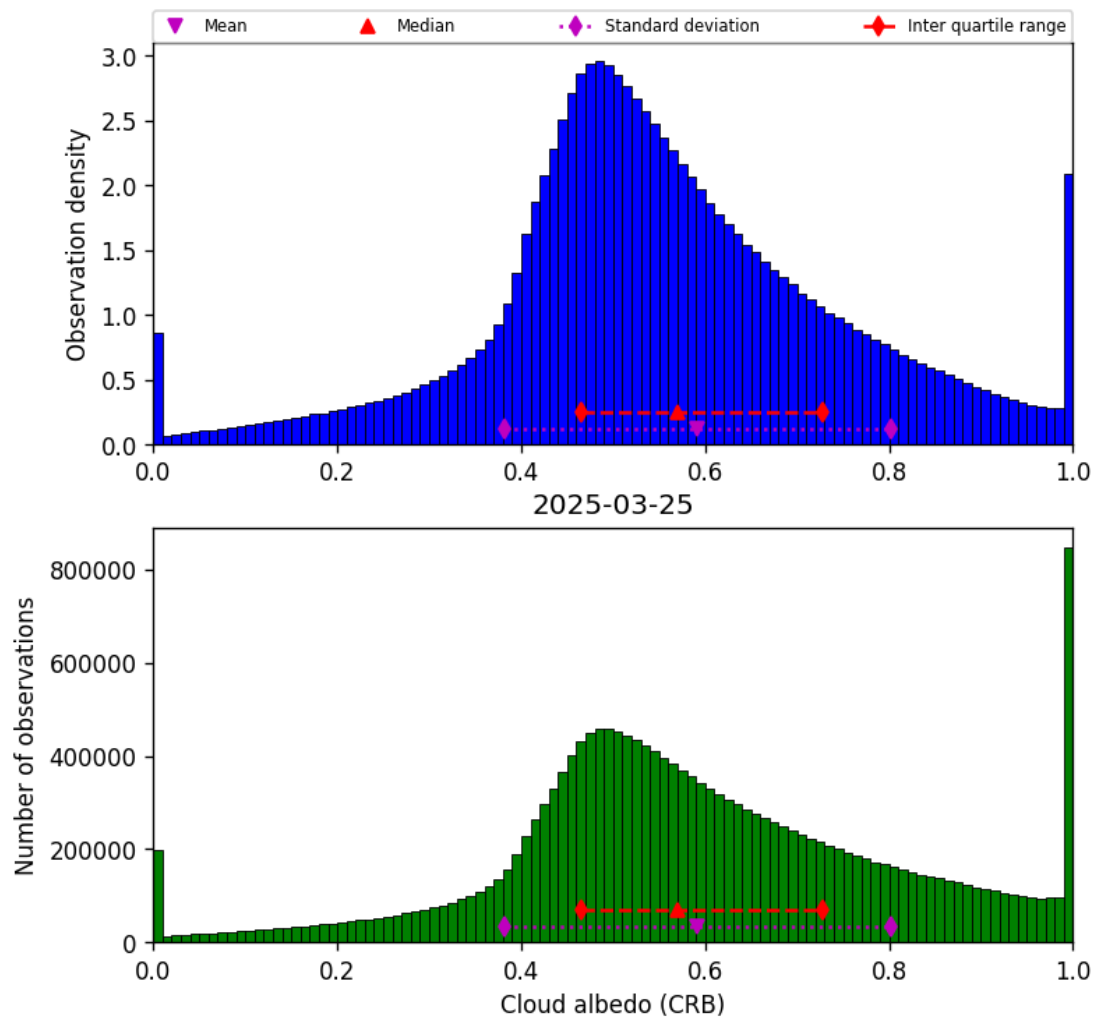


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-03-25 to 2025-03-26

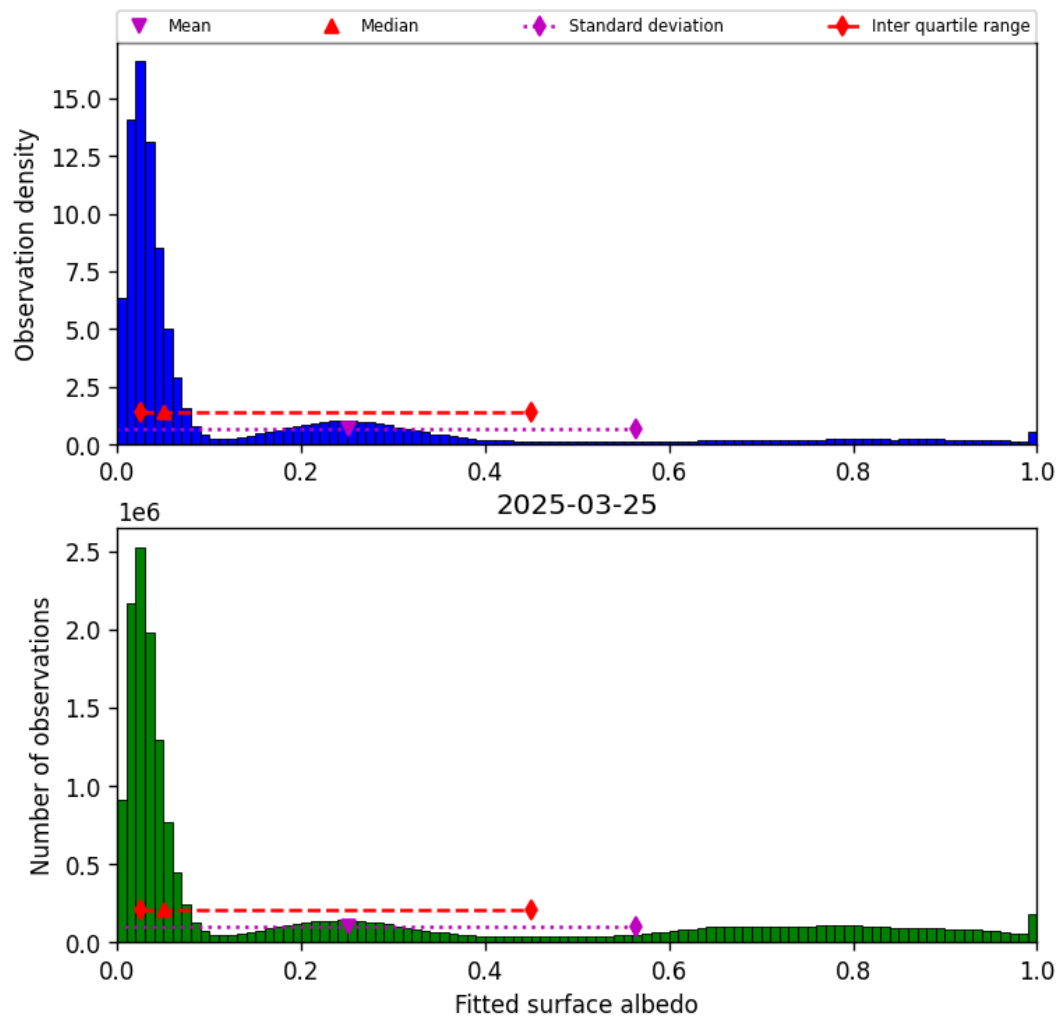


Figure 43: Histogram of “Fitted surface albedo” for 2025-03-25 to 2025-03-26

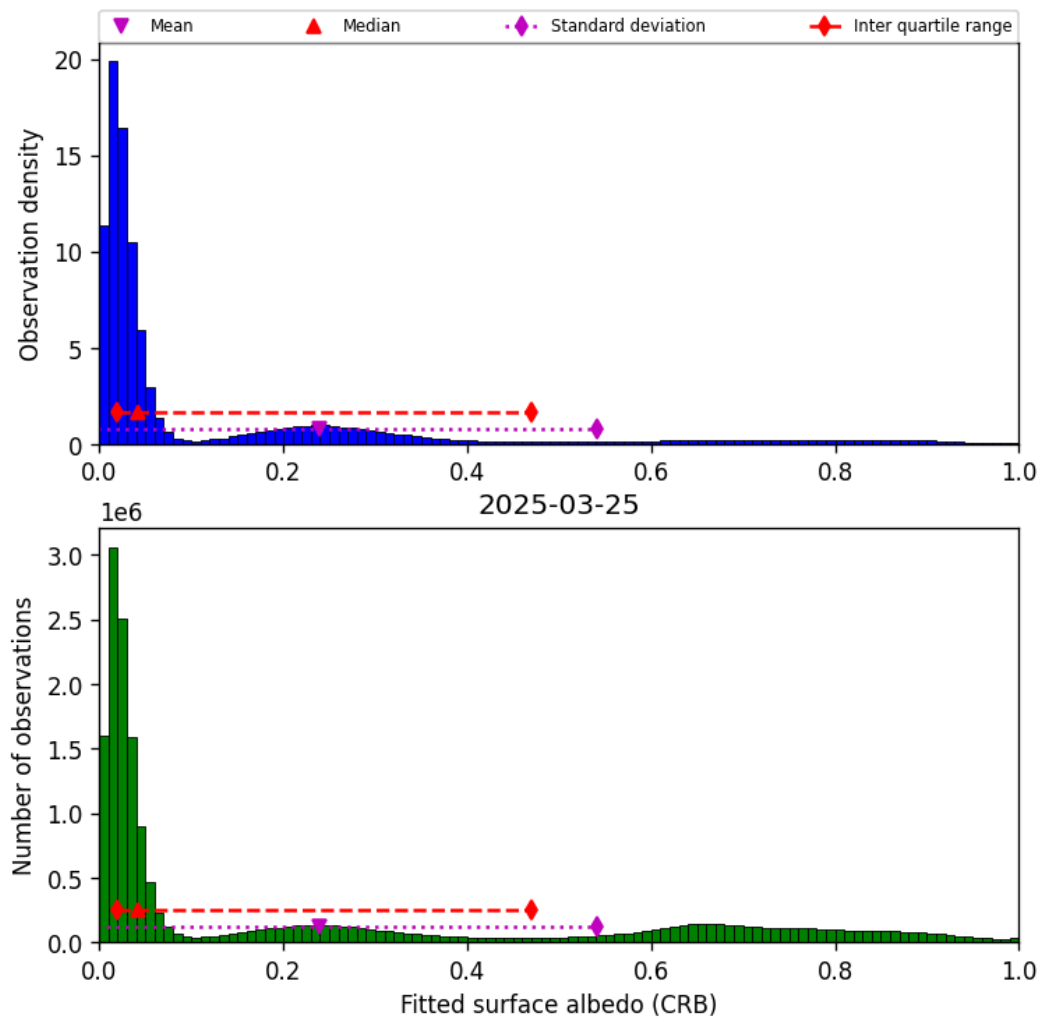


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-03-25 to 2025-03-26

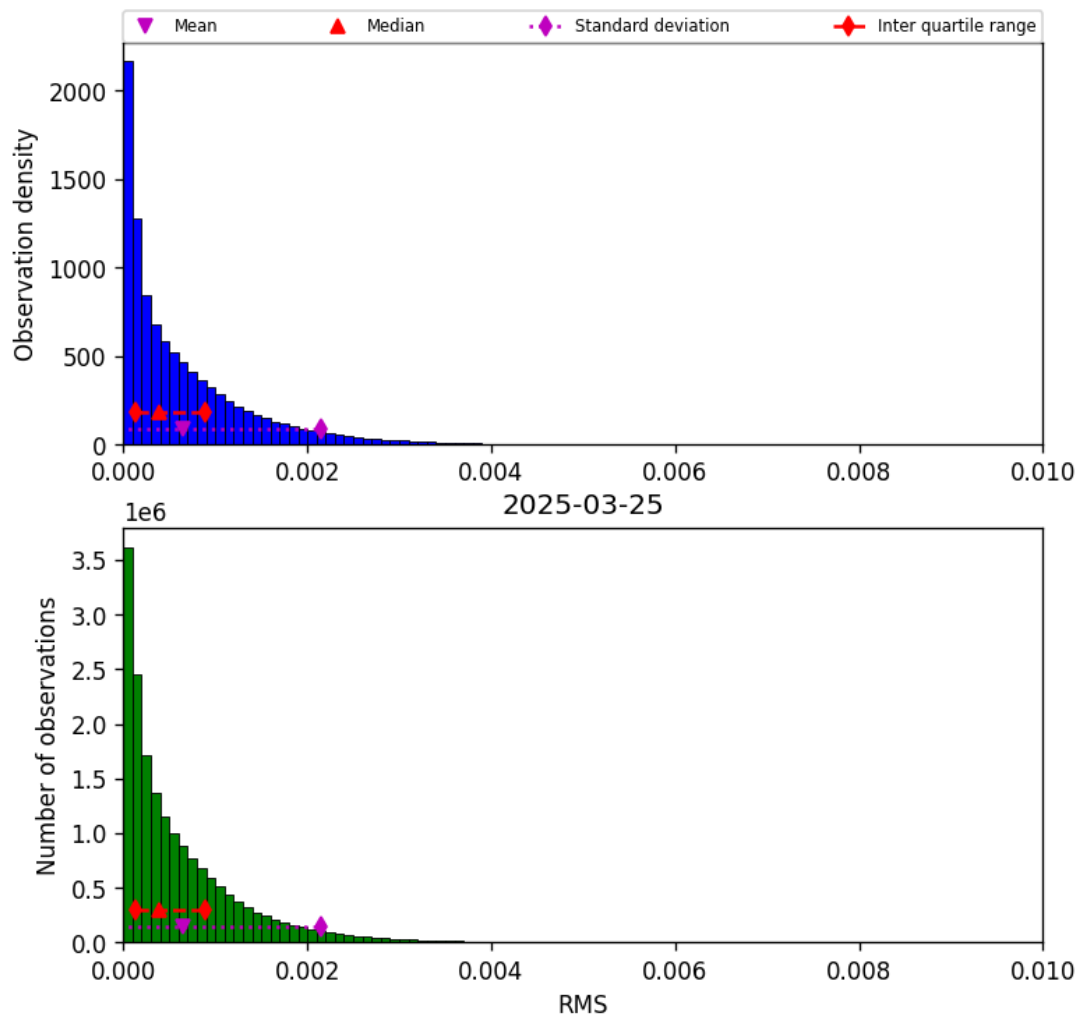


Figure 45: Histogram of “RMS” for 2025-03-25 to 2025-03-26

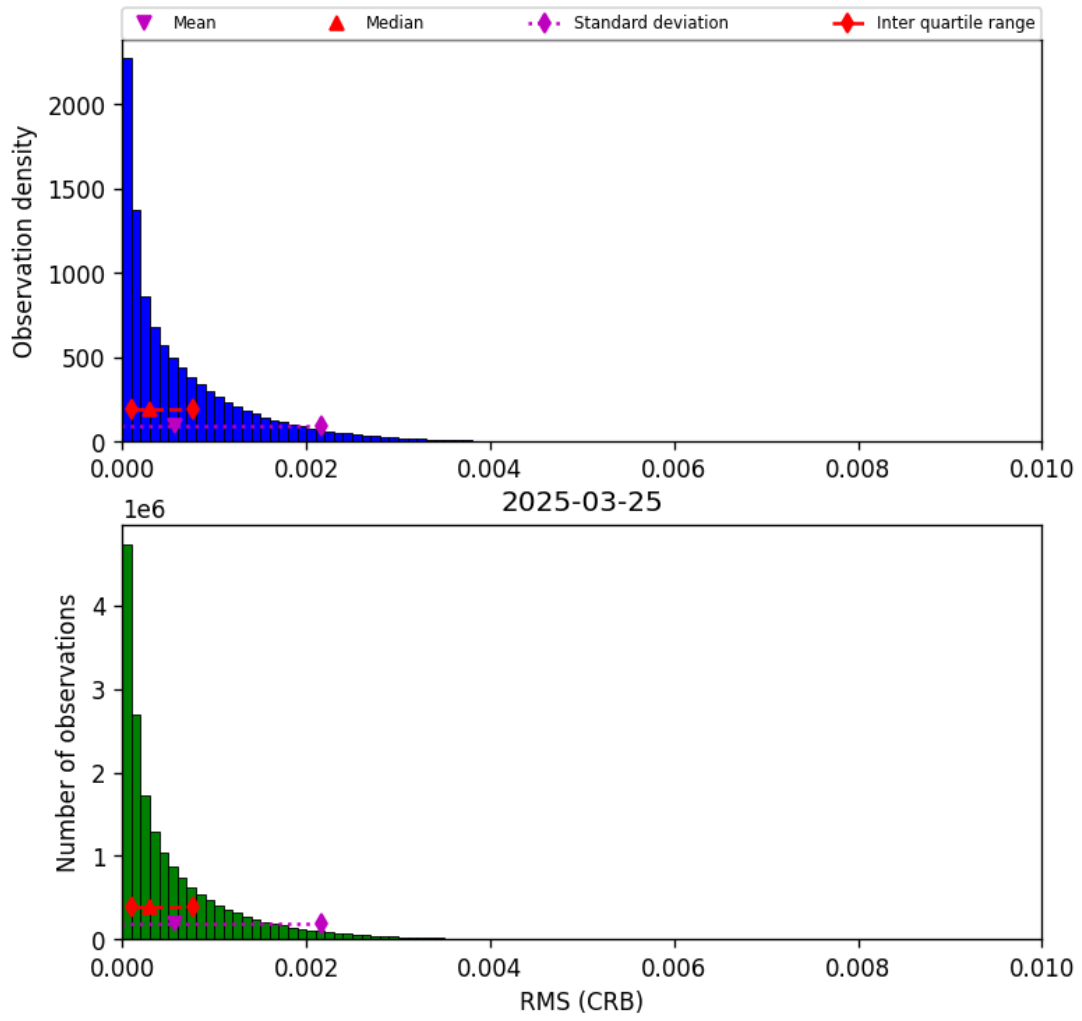


Figure 46: Histogram of "RMS (CRB)" for 2025-03-25 to 2025-03-26

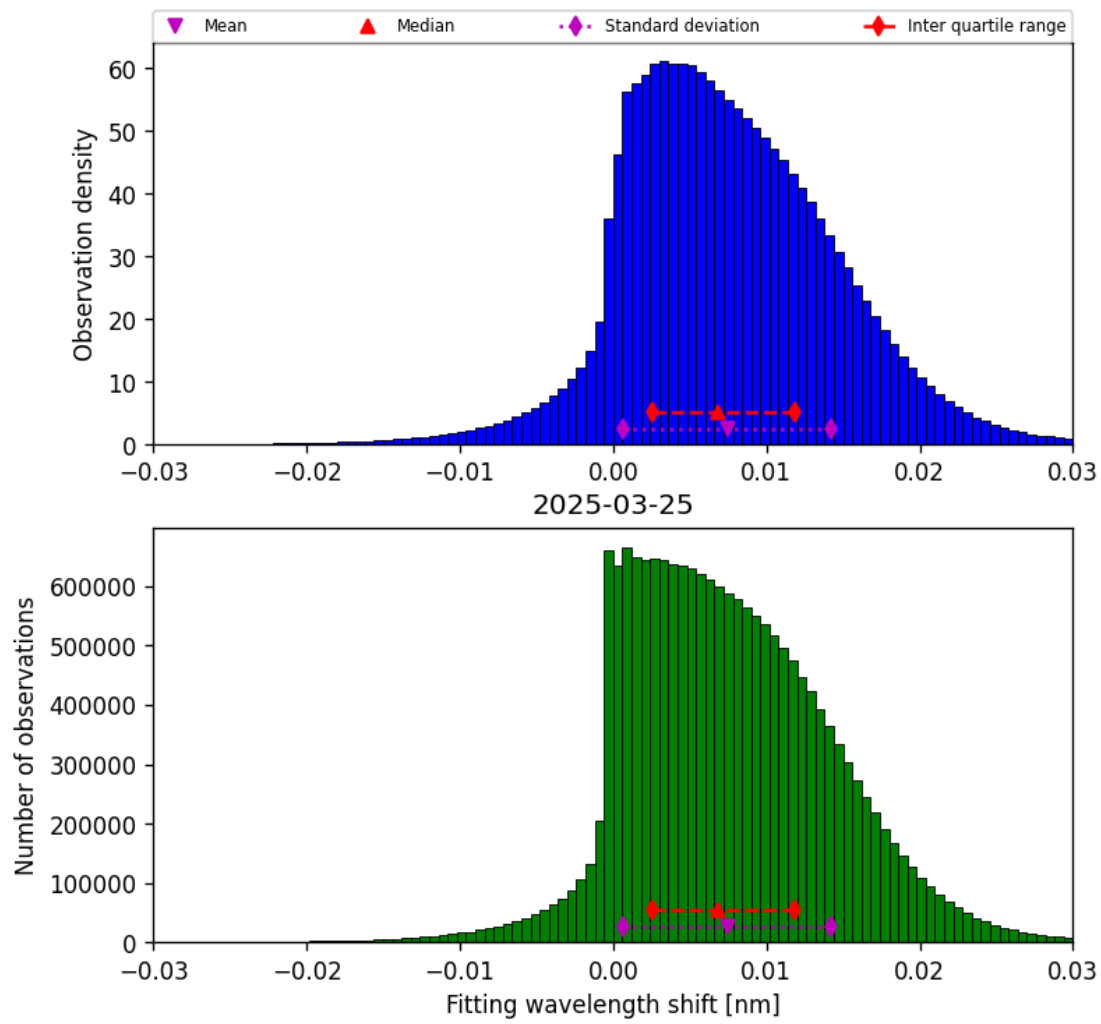


Figure 47: Histogram of “Fitting wavelength shift” for 2025-03-25 to 2025-03-26

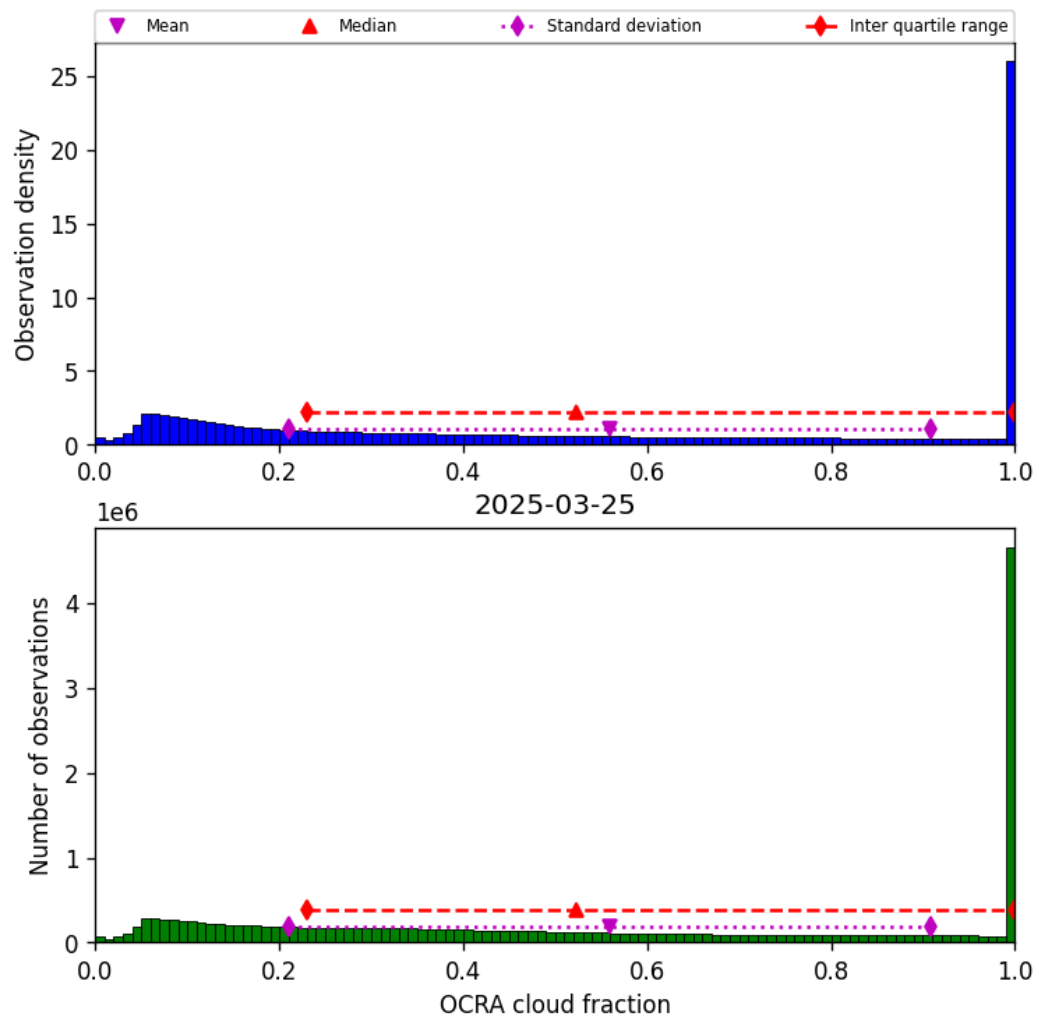


Figure 48: Histogram of “OCRA cloud fraction” for 2025-03-25 to 2025-03-26

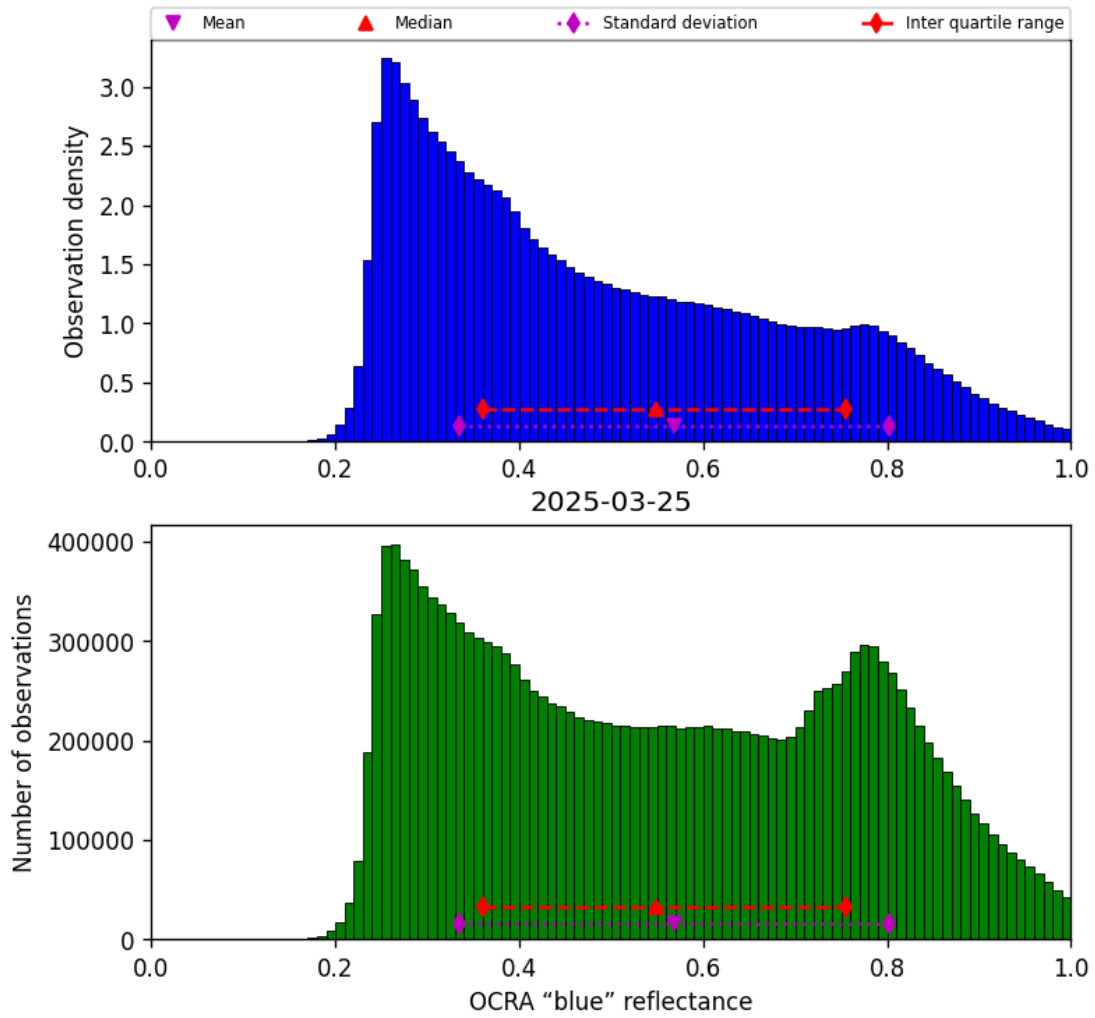


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-03-25 to 2025-03-26

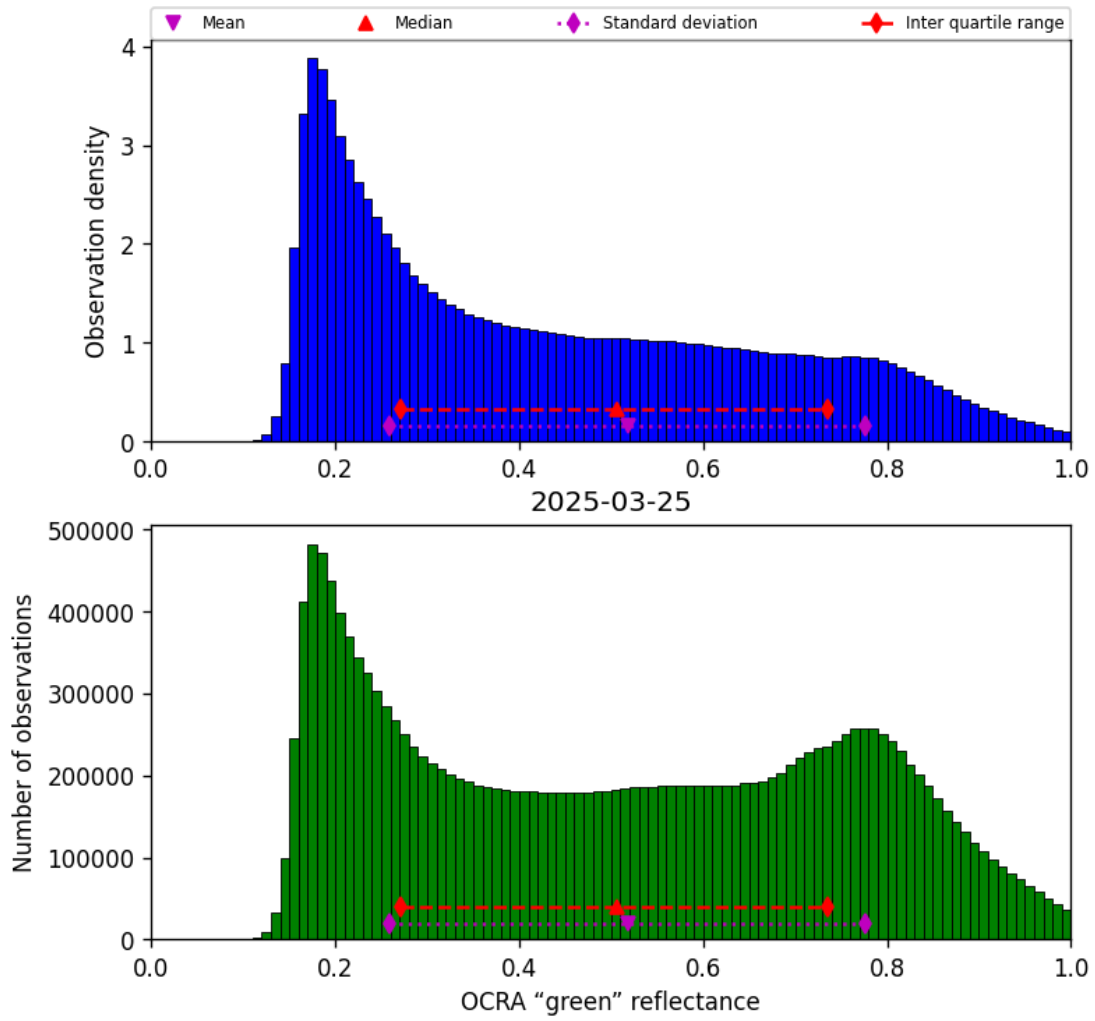


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-03-25 to 2025-03-26

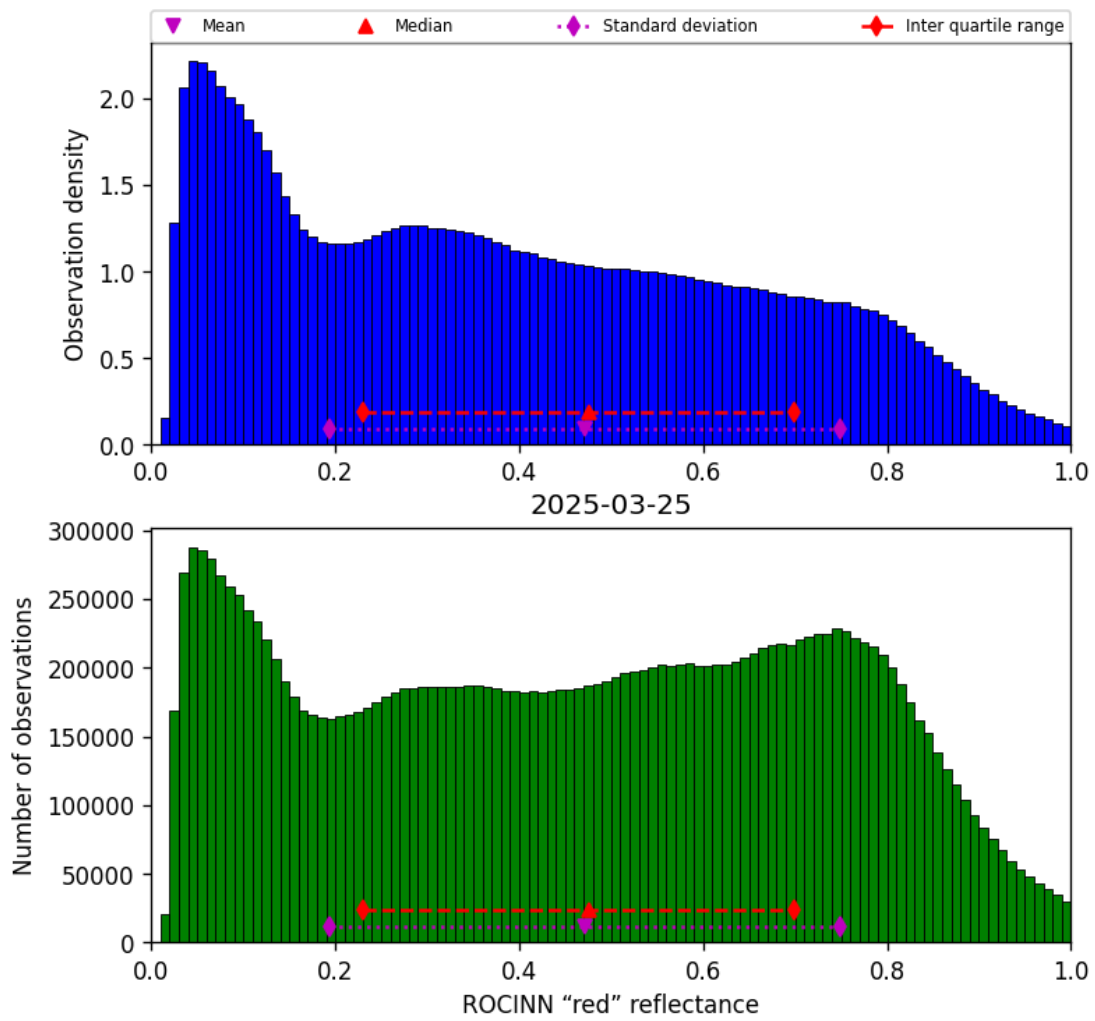


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-03-25 to 2025-03-26

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.

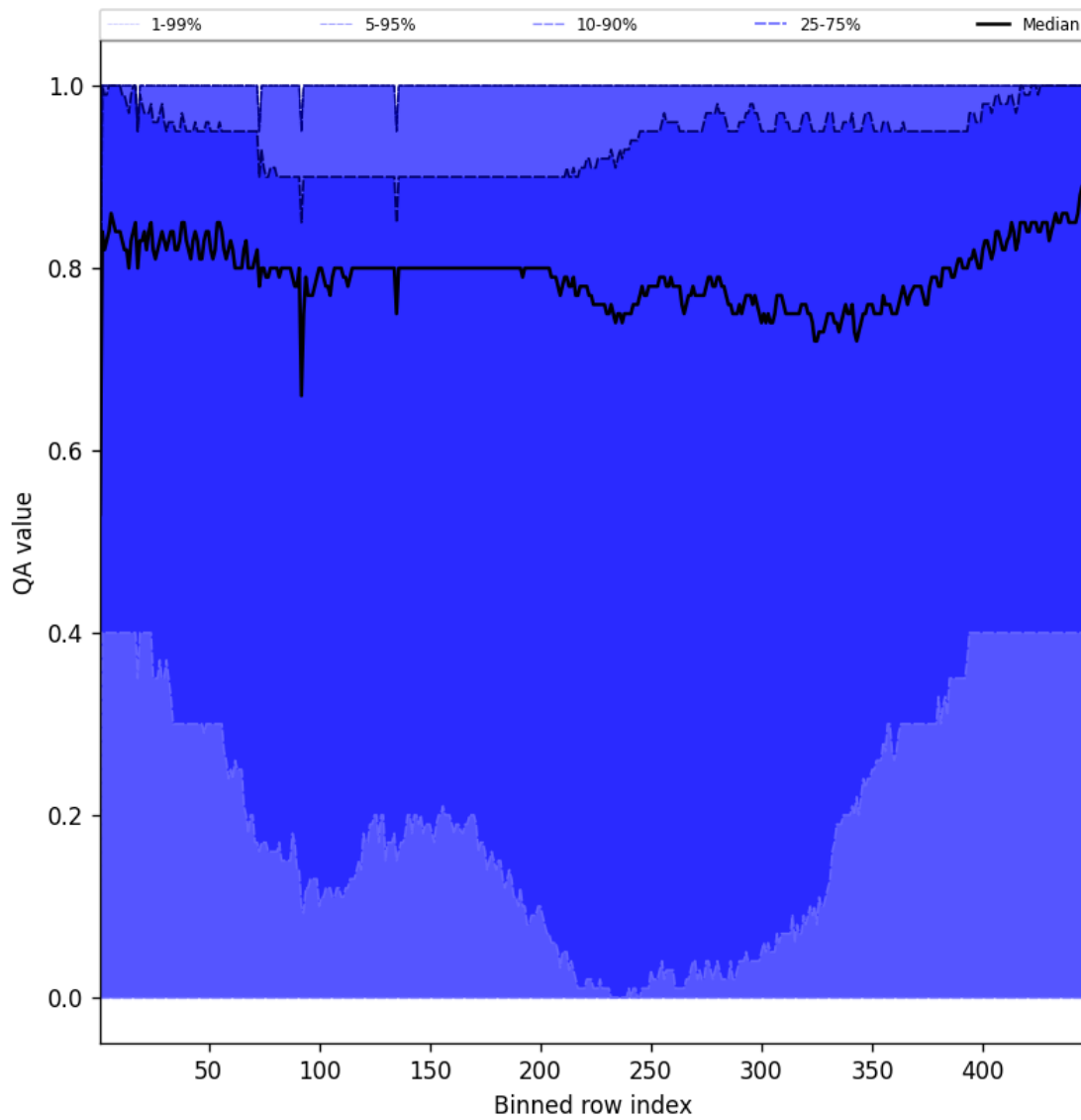


Figure 52: Along track statistics of “QA value” for 2025-03-25 to 2025-03-26

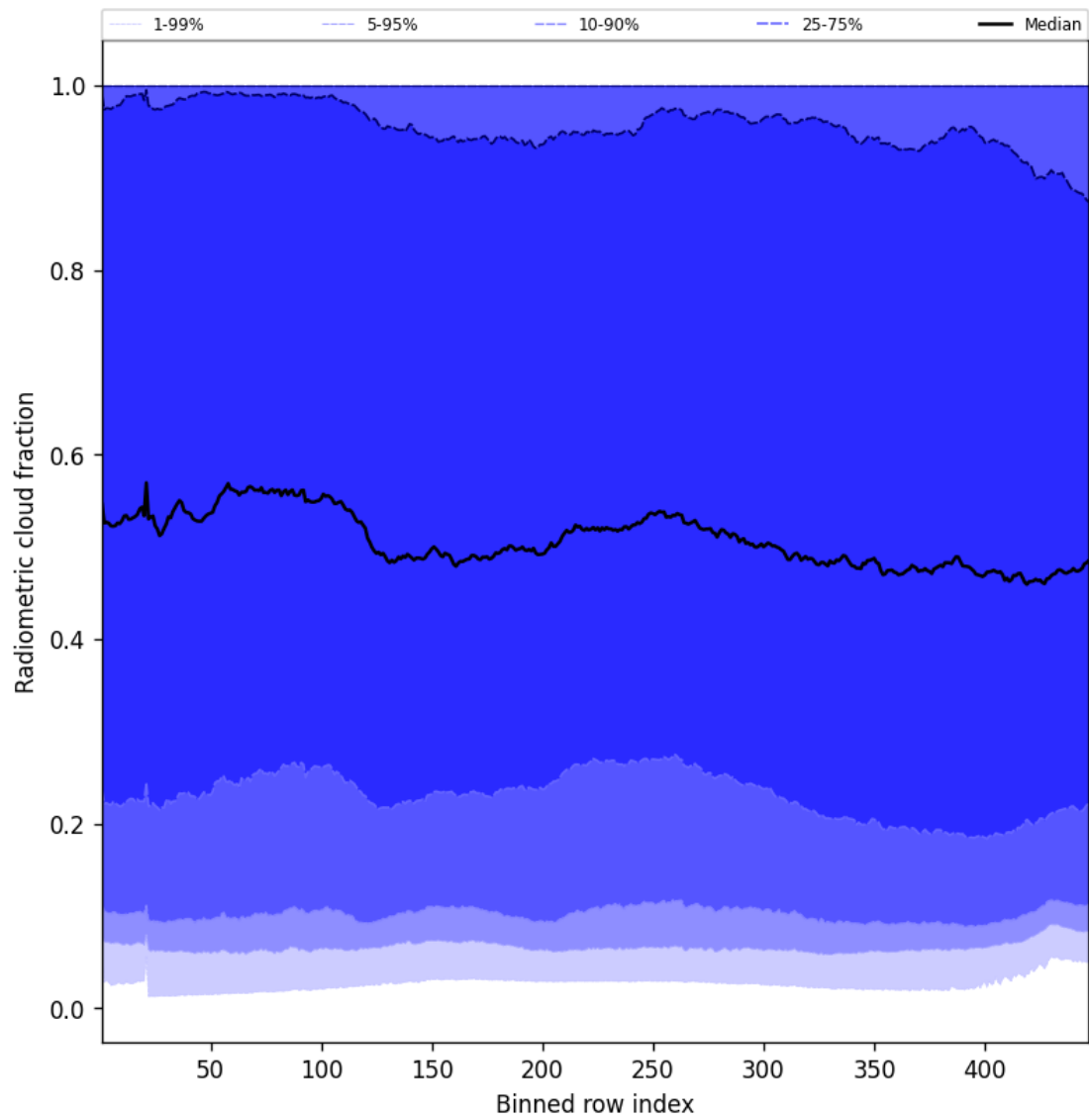


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-03-25 to 2025-03-26

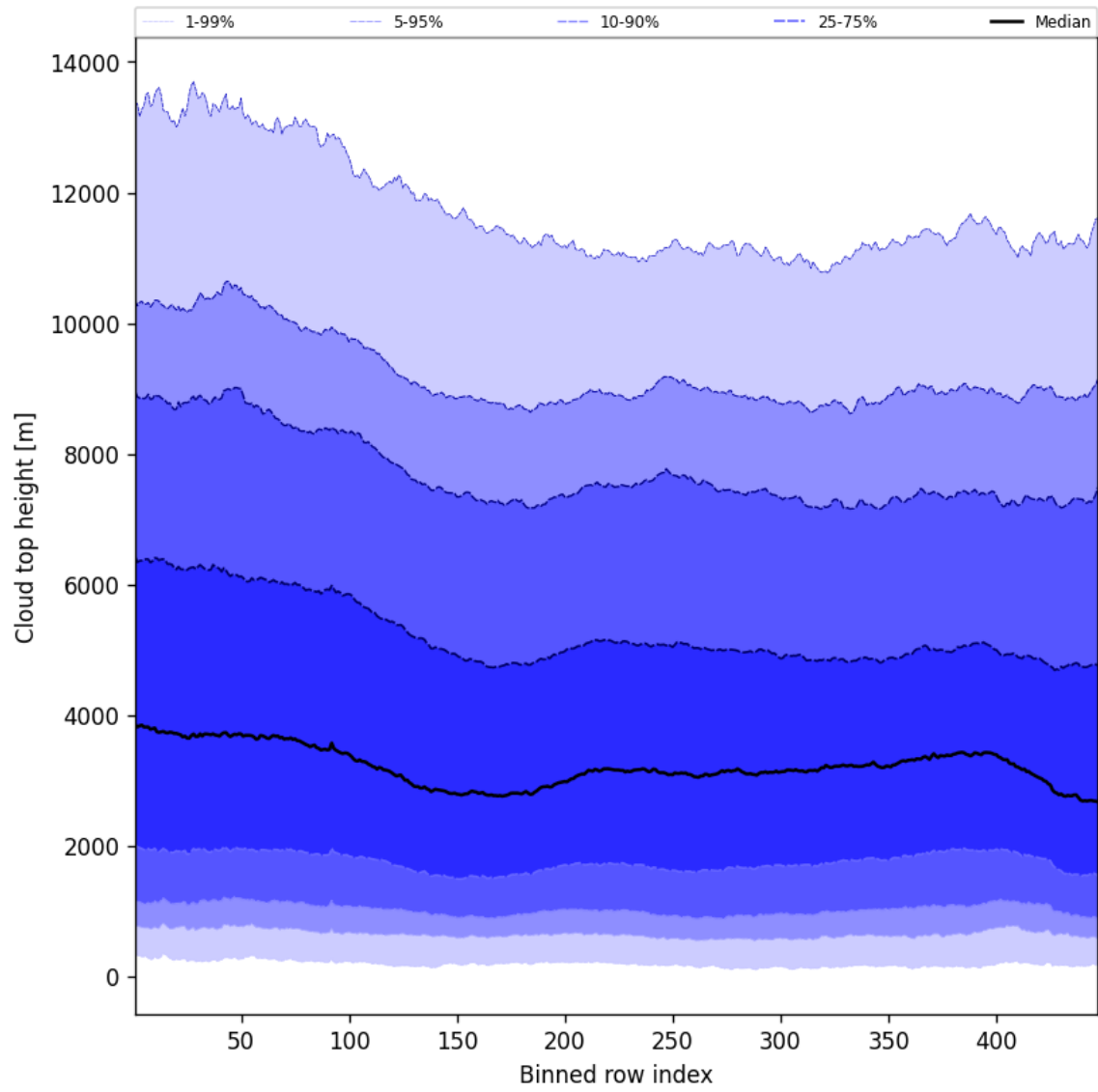


Figure 54: Along track statistics of “Cloud top height” for 2025-03-25 to 2025-03-26

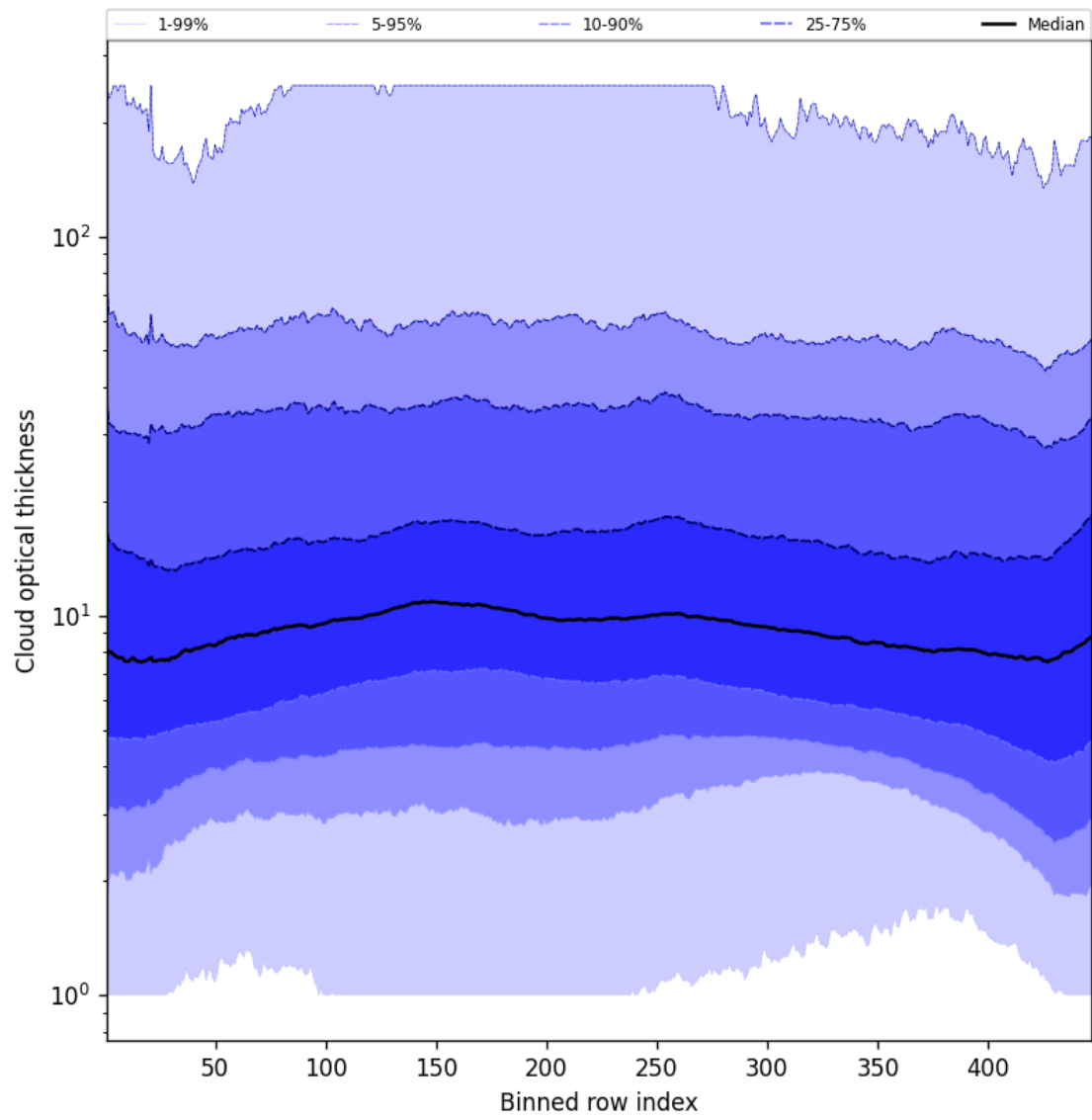


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-03-25 to 2025-03-26

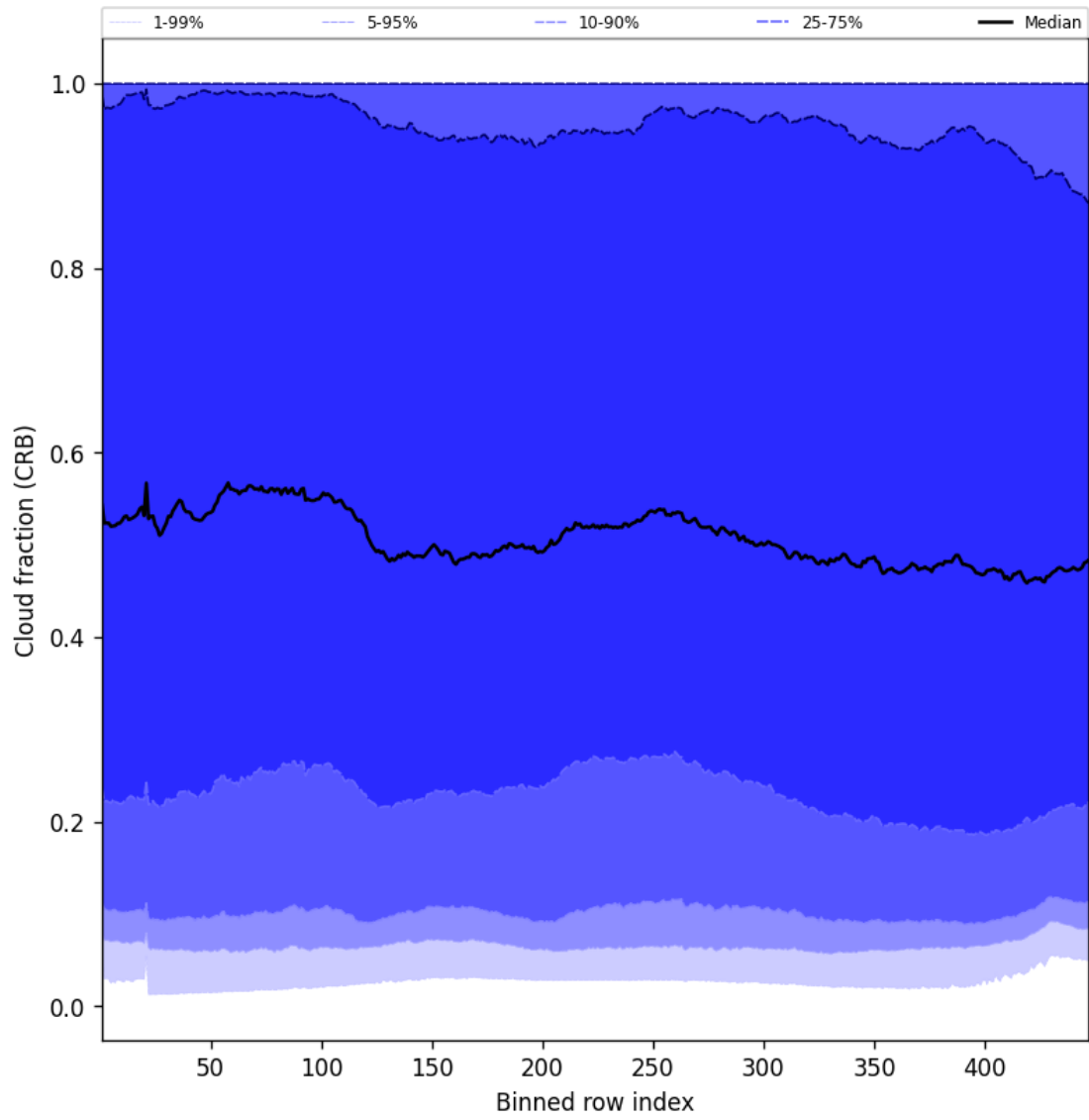


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-03-25 to 2025-03-26

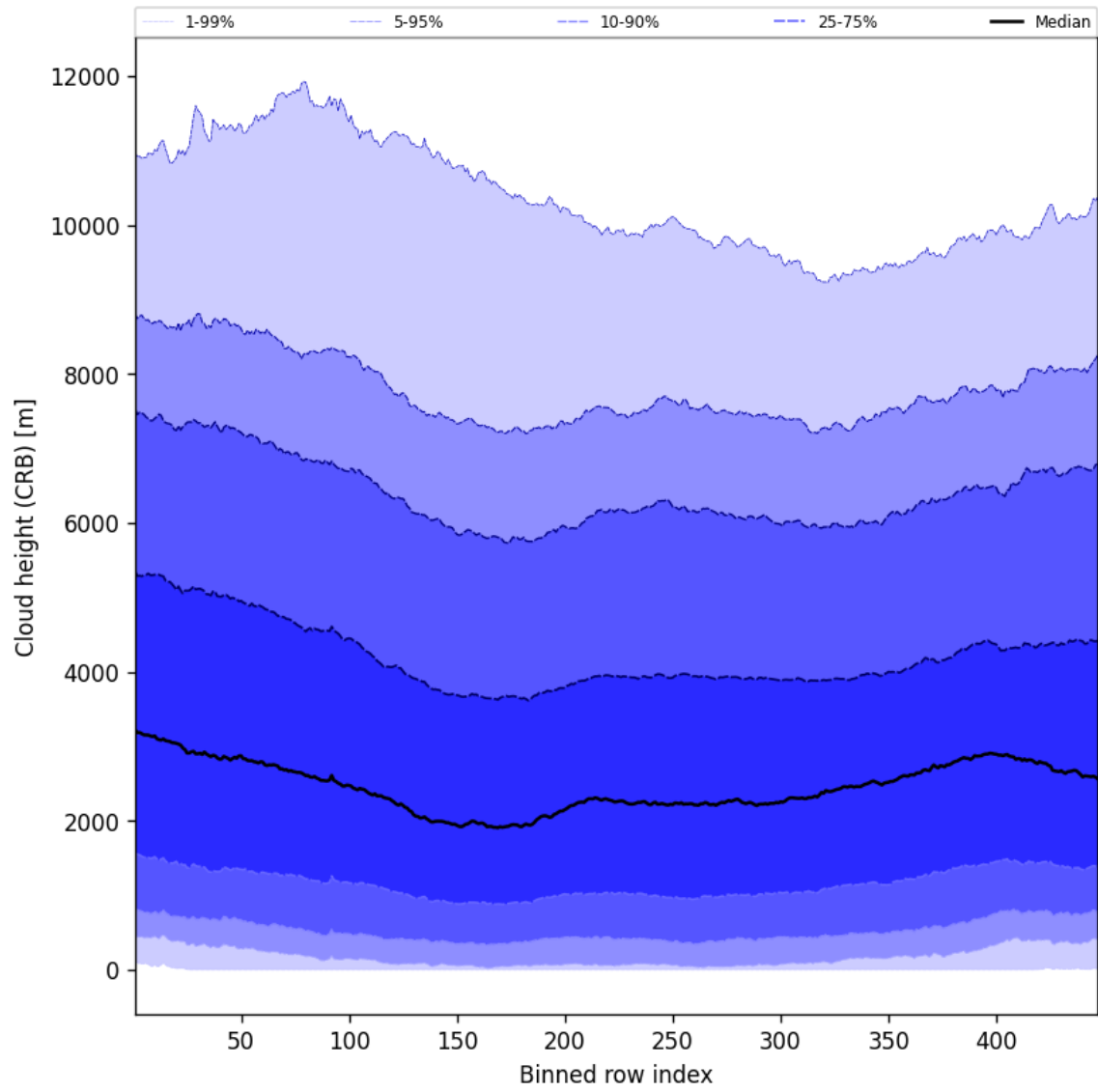


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-03-25 to 2025-03-26

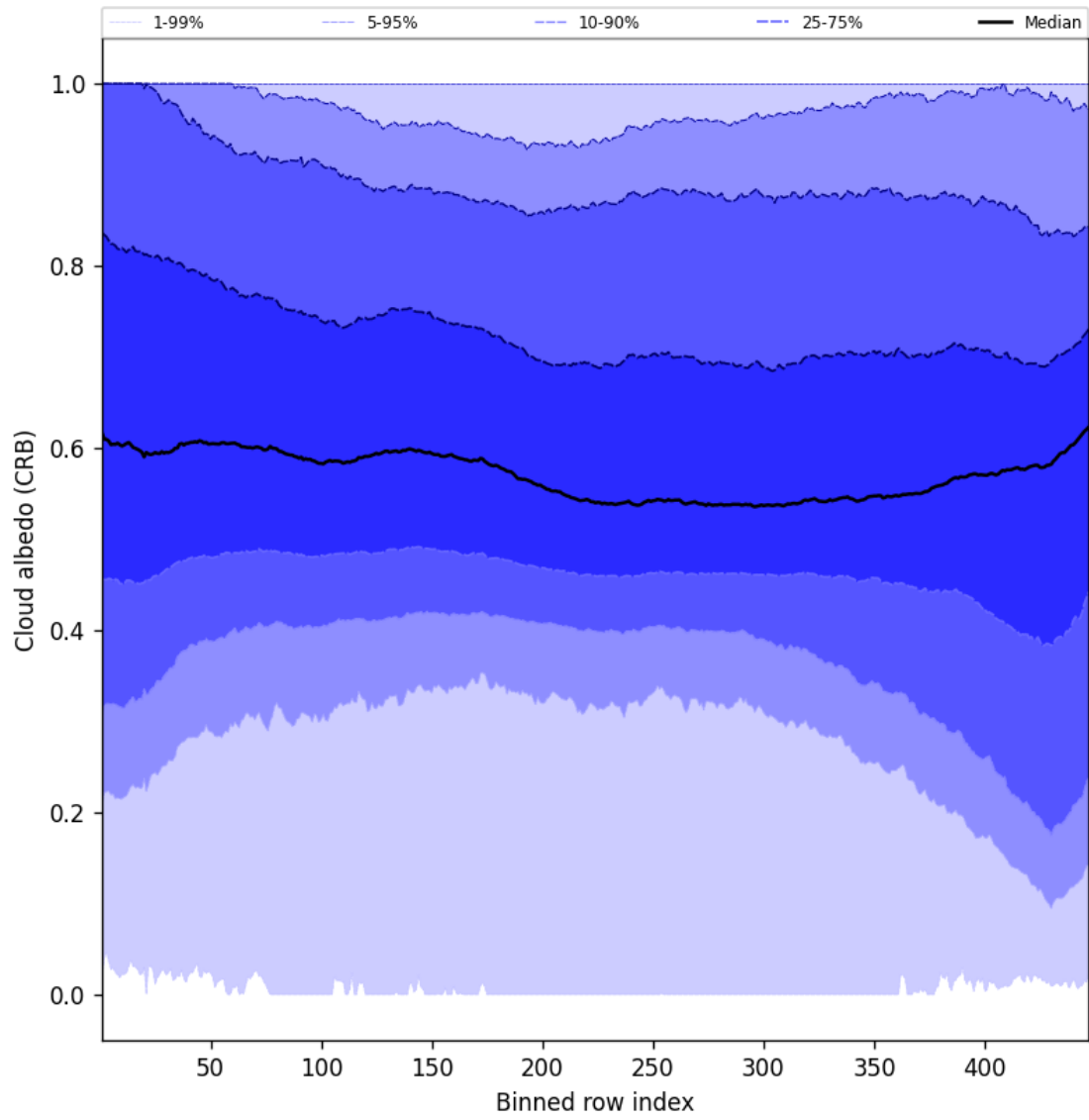


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-03-25 to 2025-03-26

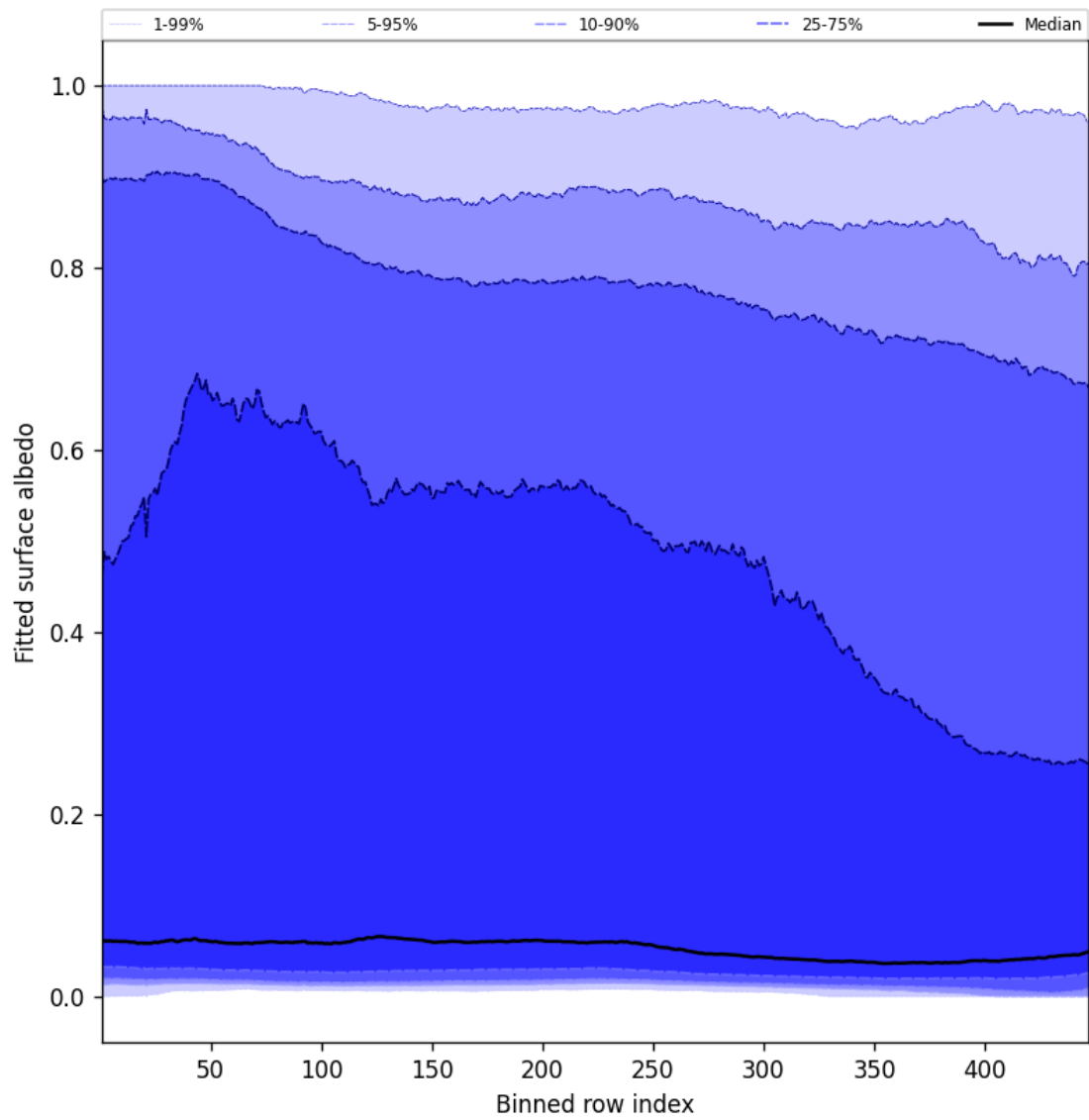


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-03-25 to 2025-03-26

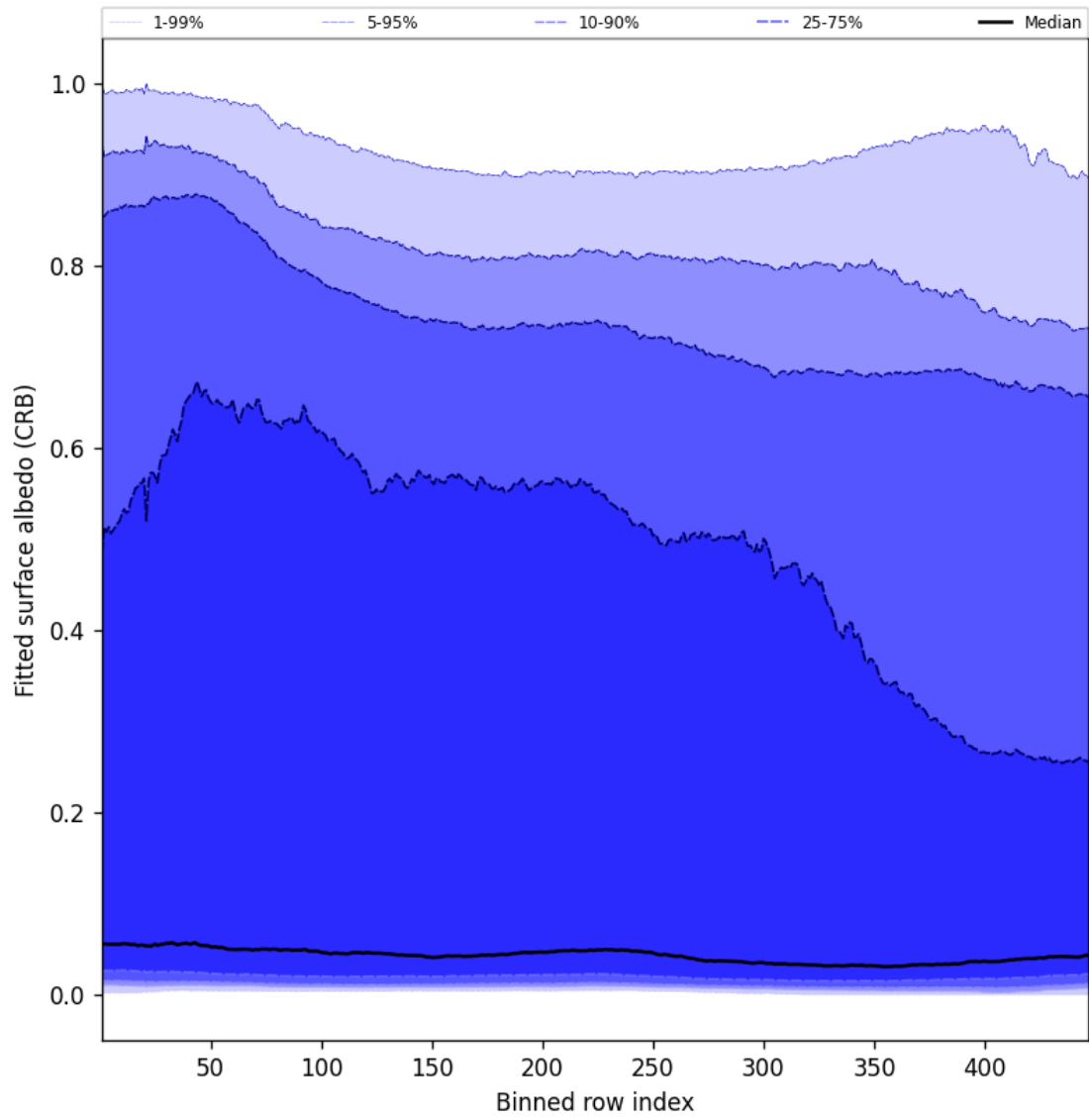


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-03-25 to 2025-03-26

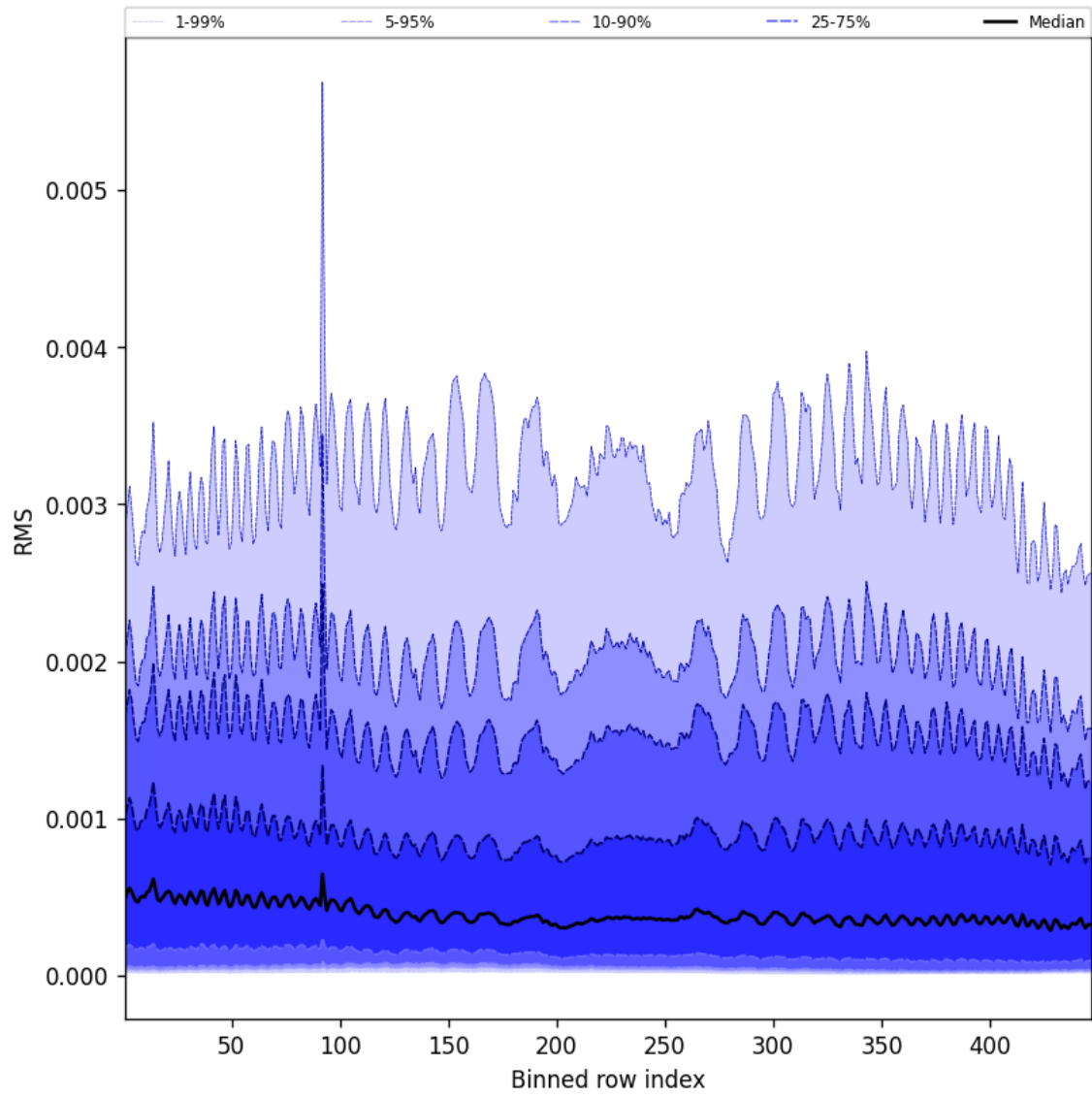


Figure 61: Along track statistics of “RMS” for 2025-03-25 to 2025-03-26

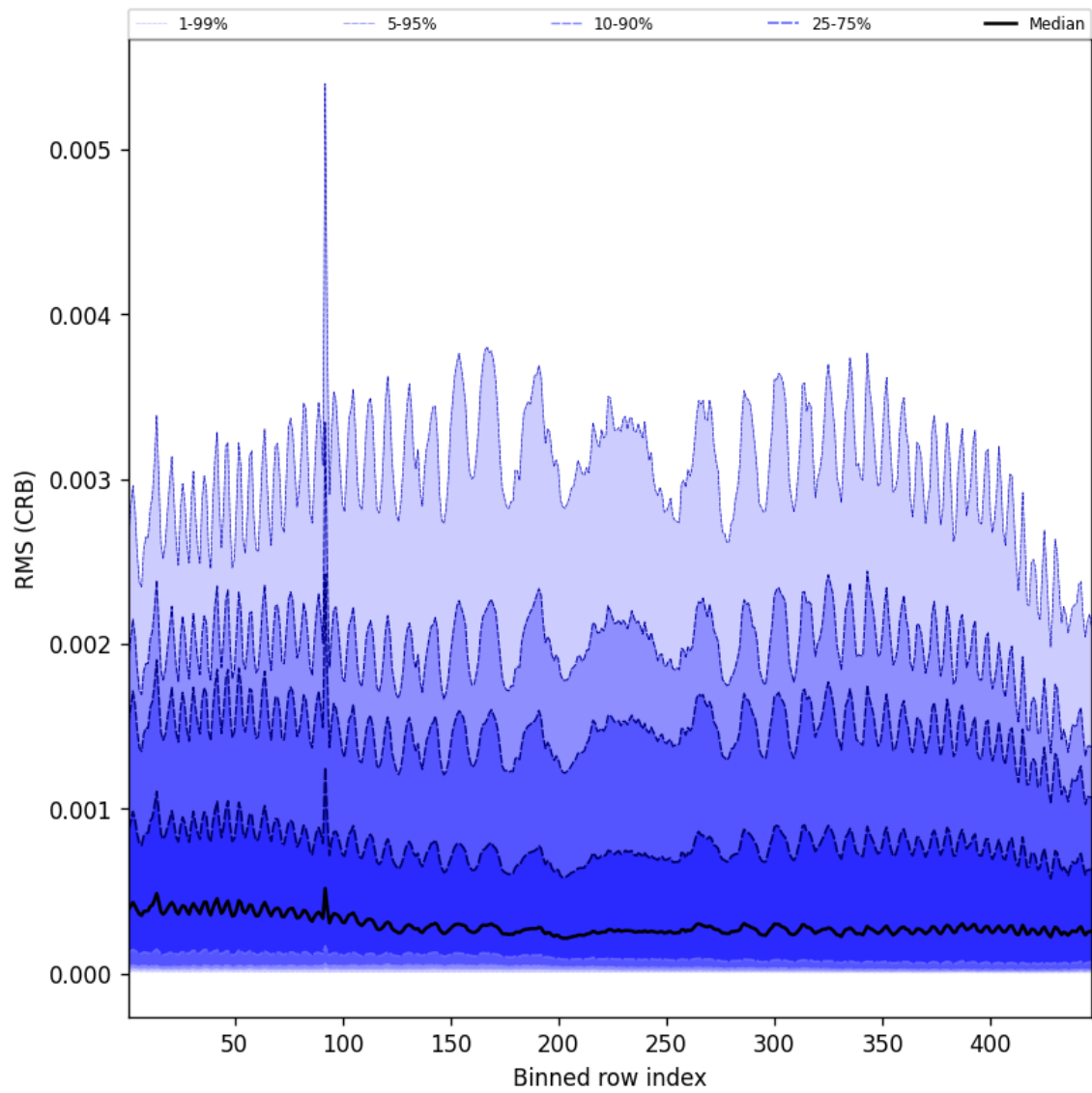


Figure 62: Along track statistics of “RMS (CRB)” for 2025-03-25 to 2025-03-26

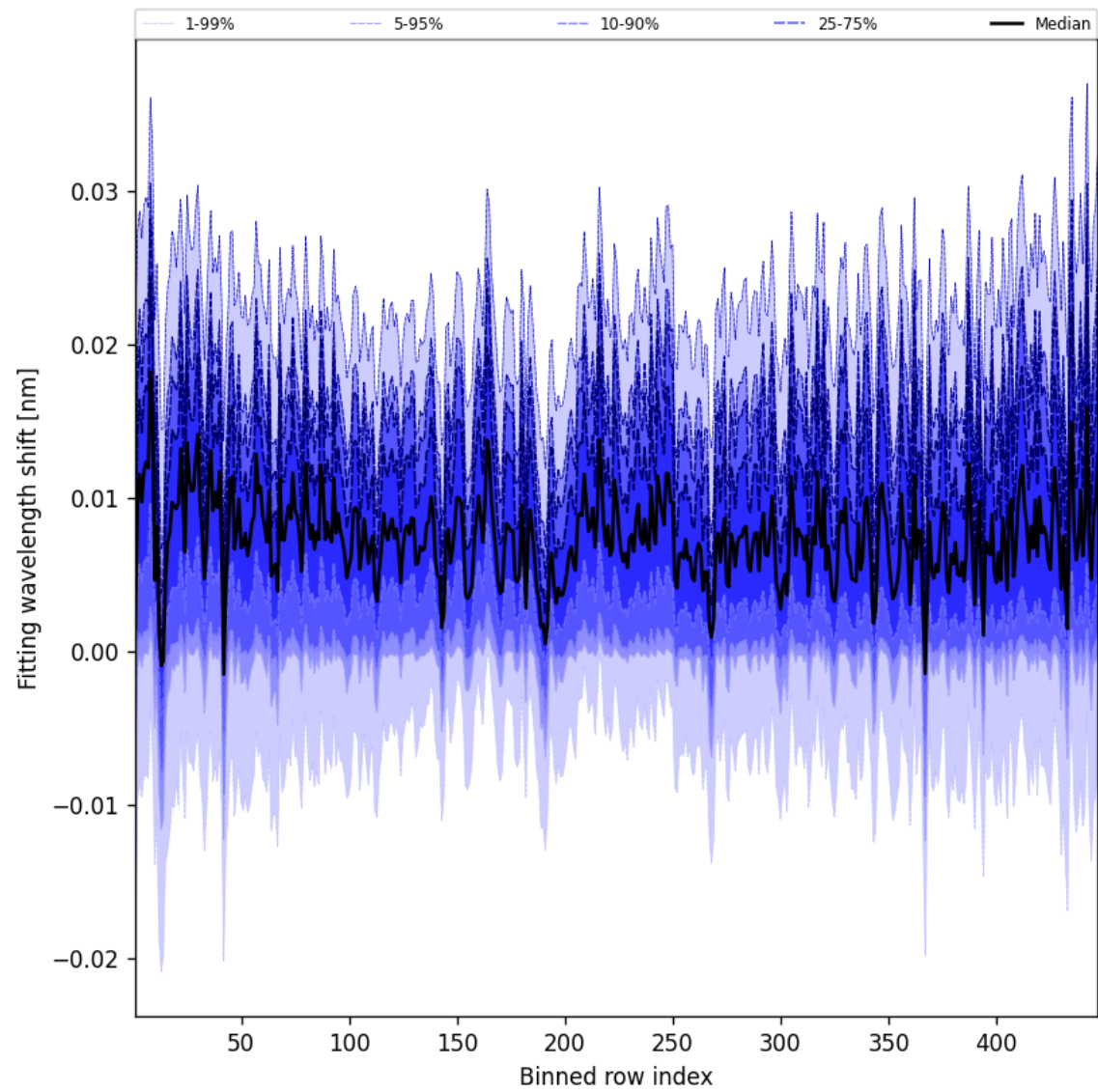


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-03-25 to 2025-03-26

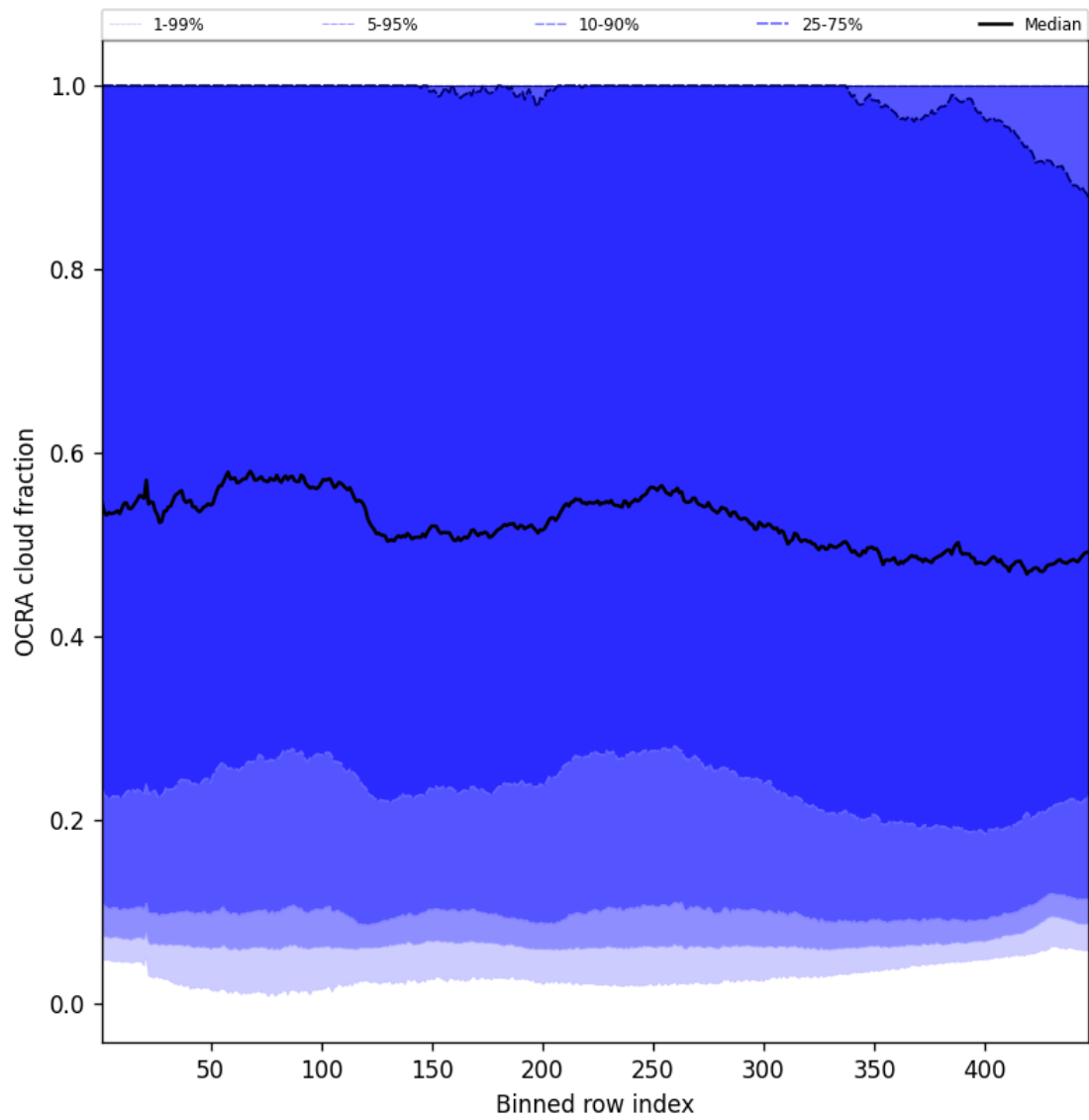


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-03-25 to 2025-03-26

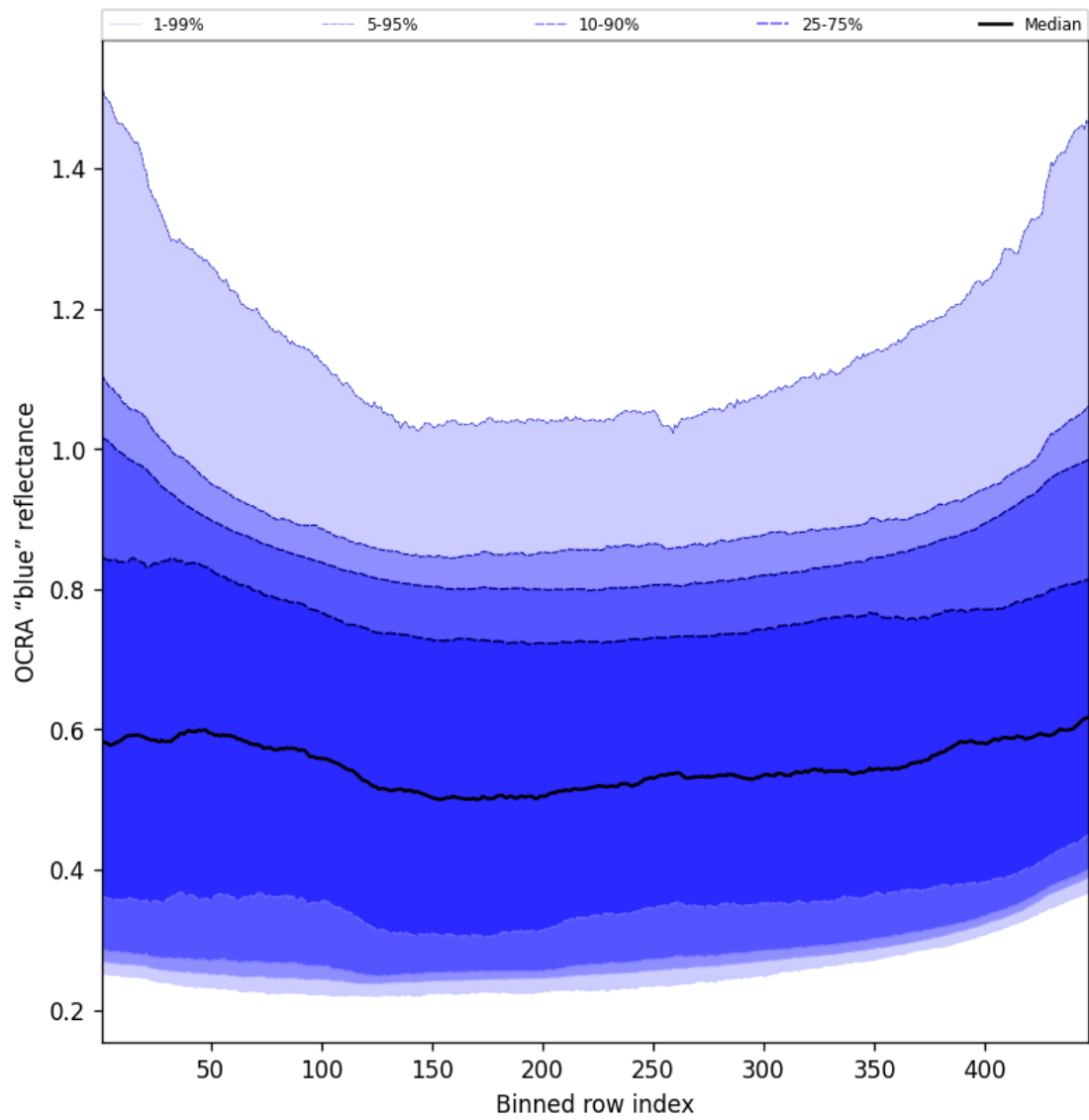


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-03-25 to 2025-03-26

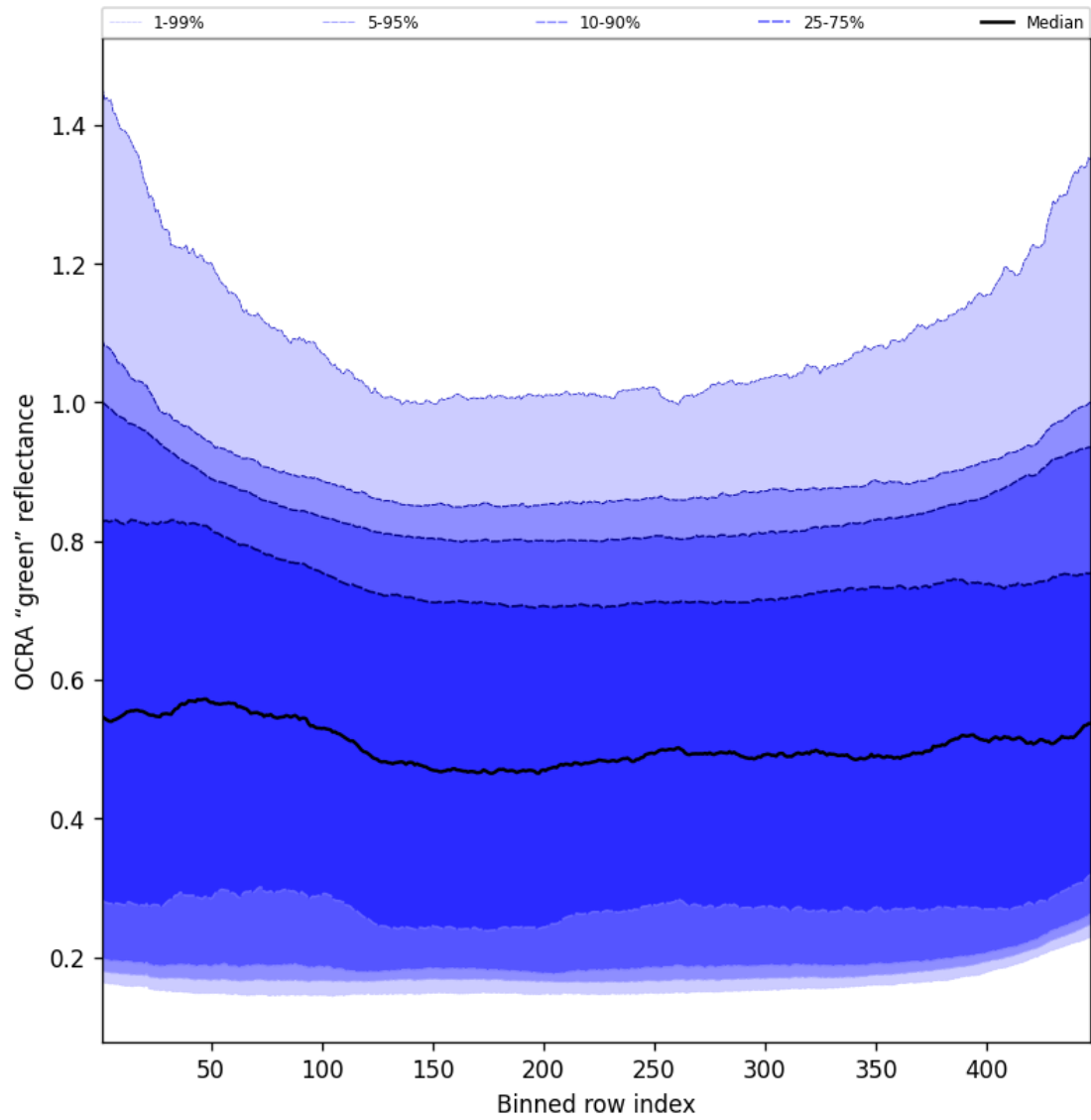


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-03-25 to 2025-03-26

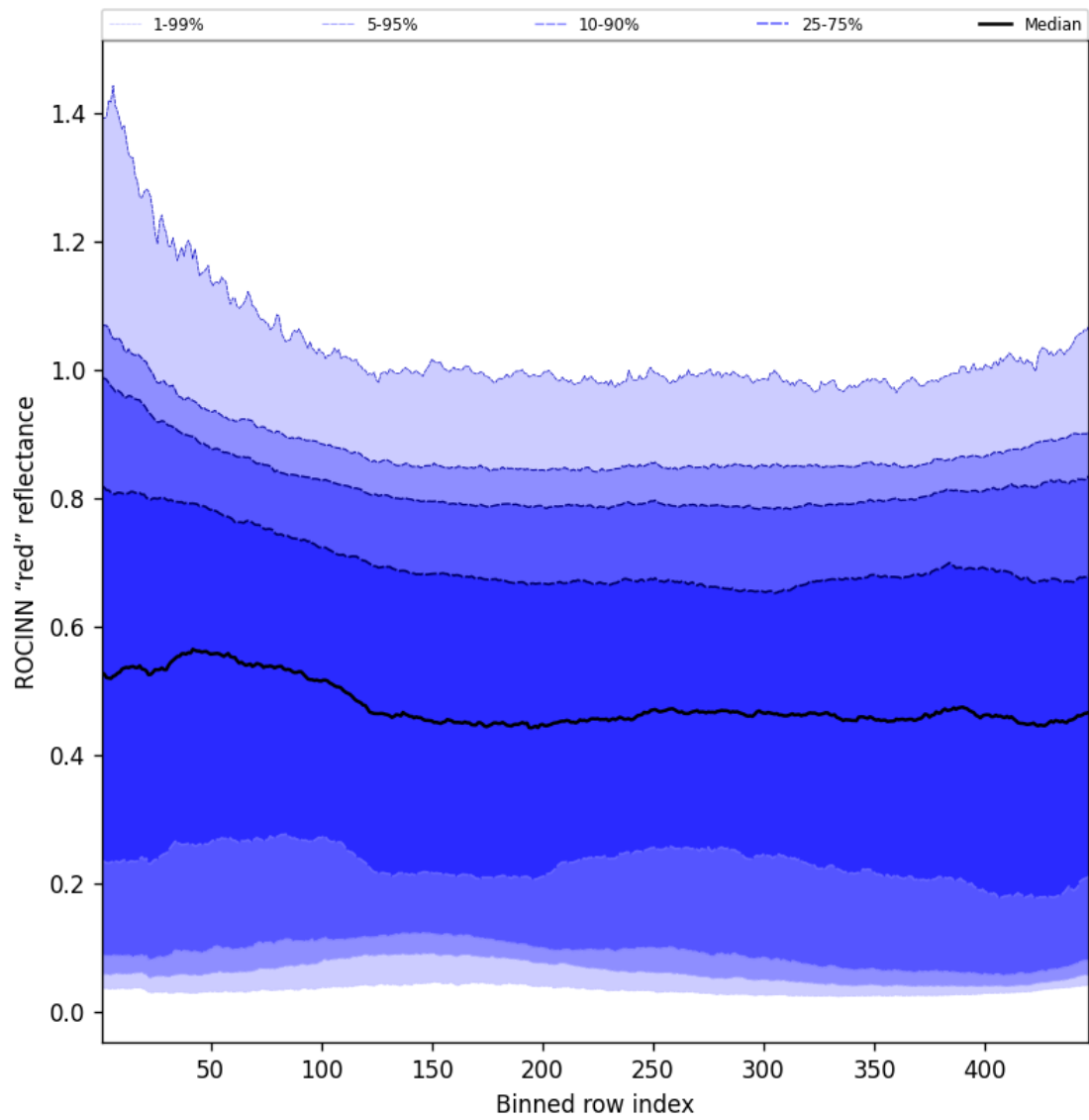


Figure 67: Along track statistics of “ROCINN “red” reflectance” for 2025-03-25 to 2025-03-26

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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