

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-10-22 (02:45)

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]	0.606 ± 0.377	18851707	5.000×10^{-3}	0.630	0.730	0.0	1.000
cloud fraction [1]	0.561 ± 0.338	18851707	0.995	0.699	0.526	5.705×10^{-3}	1.000
cloud top height [m]	$(0.385 \pm 0.258) \times 10^4$	18851707	1.425×10^3	3.687×10^3	3.329×10^3	0.0	2.000×10^4
cloud optical thickness [1]	19.7 ± 36.8	18851707	9.77	11.0	9.30	1.000	250
cloud fraction crb [1]	0.561 ± 0.338	18851707	0.995	0.698	0.525	7.489×10^{-3}	1.000
cloud height crb [m]	$(0.301 \pm 0.219) \times 10^4$	18851707	975	3.042×10^3	2.619×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.610 ± 0.222	18851707	0.995	0.299	0.591	0.0	1.000
surface albedo fitted [1]	0.255 ± 0.326	18851707	2.500×10^{-2}	0.332	6.086×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.241 ± 0.310	18851707	1.500×10^{-2}	0.346	4.932×10^{-2}	0.0	1.000
fitted root mean square [1]	$(6.477 \pm 9.584) \times 10^{-4}$	18851707	5.000×10^{-5}	7.954×10^{-4}	3.975×10^{-4}	7.857×10^{-7}	1.15
fitted root mean square crb [1]	$(5.750 \pm 9.123) \times 10^{-4}$	18851707	5.000×10^{-5}	7.360×10^{-4}	3.025×10^{-4}	7.318×10^{-7}	0.902
wavelength shift [nm]	$(9.001 \pm 7.414) \times 10^{-3}$	18851707	-3.000×10^{-4}	1.115×10^{-2}	8.438×10^{-3}	-4.251×10^{-2}	0.658
cloud fraction apriori [1]	0.569 ± 0.343	18851707	0.995	0.745	0.540	0.0	1.000
reflectance blue ocra [1]	0.582 ± 0.238	18851707	0.255	0.414	0.557	0.125	2.08
reflectance green ocra [1]	0.531 ± 0.267	18851707	0.175	0.491	0.509	6.794×10^{-2}	2.05
reflectance continuum aband [1]	0.483 ± 0.292	18851707	4.500×10^{-2}	0.503	0.474	9.452×10^{-3}	5.50

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	0.300	0.930	1.000	1.000	1.000	1.000
cloud fraction [1]	2.797×10^{-2}	7.135×10^{-2}	0.111	0.162	0.254	0.952	1.000	1.000	1.000	1.000
cloud top height [m]	264	722	1.061×10^3	1.342×10^3	1.753×10^3	5.440×10^3	6.524×10^3	7.447×10^3	8.753×10^3	1.113×10^4
cloud optical thickness [1]	1.000	2.17	3.34	4.32	5.46	16.4	25.1	38.0	68.5	250
cloud fraction crb [1]	2.749×10^{-2}	7.073×10^{-2}	0.111	0.161	0.253	0.951	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	313	605	853	1.224×10^3	4.267×10^3	5.245×10^3	6.133×10^3	7.283×10^3	9.337×10^3
cloud albedo crb [1]	3.637×10^{-2}	0.230	0.349	0.418	0.470	0.768	0.861	0.939	1.000	1.000
surface albedo fitted [1]	0.0	8.333×10^{-3}	1.448×10^{-2}	1.964×10^{-2}	2.691×10^{-2}	0.358	0.766	0.855	0.932	1.000
surface albedo fitted crb [1]	0.0	7.258×10^{-3}	1.140×10^{-2}	1.538×10^{-2}	2.125×10^{-2}	0.367	0.728	0.794	0.875	0.951
fitted root mean square [1]	1.519×10^{-5}	2.961×10^{-5}	4.723×10^{-5}	7.442×10^{-5}	1.313×10^{-4}	9.267×10^{-4}	1.250×10^{-3}	1.573×10^{-3}	2.037×10^{-3}	3.192×10^{-3}
fitted root mean square crb [1]	7.559×10^{-6}	1.744×10^{-5}	2.975×10^{-5}	4.875×10^{-5}	8.749×10^{-5}	8.235×10^{-4}	1.168×10^{-3}	1.508×10^{-3}	1.976×10^{-3}	3.086×10^{-3}
wavelength shift [nm]	-6.552×10^{-3}	-4.431×10^{-4}	2.975×10^{-4}	1.270×10^{-3}	3.107×10^{-3}	1.425×10^{-2}	1.678×10^{-2}	1.886×10^{-2}	2.150×10^{-2}	2.692×10^{-2}
cloud fraction apriori [1]	3.135×10^{-2}	6.759×10^{-2}	0.105	0.157	0.255	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.231	0.256	0.283	0.316	0.371	0.785	0.844	0.887	0.942	1.15
reflectance green ocra [1]	0.152	0.173	0.194	0.222	0.279	0.770	0.837	0.882	0.938	1.11
reflectance continuum aband [1]	3.049×10^{-2}	5.508×10^{-2}	9.024×10^{-2}	0.139	0.227	0.730	0.808	0.861	0.924	1.08

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]	0.593 ± 0.392	8641200	0.750	0.770	0.0	1.000	0.200	0.950
cloud fraction [1]	0.573 ± 0.351	8641200	0.752	0.576	5.705×10^{-3}	1.000	0.225	0.976
cloud top height [m]	$(0.393 \pm 0.249) \times 10^4$	8641200	3.375×10^3	3.488×10^3	0.0	2.000×10^4	1.953×10^3	5.328×10^3
cloud optical thickness [1]	23.5 ± 41.2	8641200	14.3	10.2	1.000	250	5.98	20.3
cloud fraction crb [1]	0.571 ± 0.351	8641200	0.751	0.574	8.112×10^{-3}	1.000	0.224	0.975
cloud height crb [m]	$(0.331 \pm 0.218) \times 10^4$	8641200	3.021×10^3	2.933×10^3	0.0	1.889×10^4	1.558×10^3	4.579×10^3
cloud albedo crb [1]	0.575 ± 0.208	8641200	0.258	0.566	0.0	1.000	0.452	0.710
surface albedo fitted [1]	0.151 ± 0.192	8641200	0.175	6.081×10^{-2}	0.0	1.000	2.801×10^{-2}	0.203
surface albedo fitted crb [1]	0.146 ± 0.194	8641200	0.176	4.832×10^{-2}	0.0	1.000	2.182×10^{-2}	0.198
fitted root mean square [1]	$(4.584 \pm 6.435) \times 10^{-4}$	8641200	4.766×10^{-4}	2.368×10^{-4}	7.857×10^{-7}	0.144	9.336×10^{-5}	5.699×10^{-4}
fitted root mean square crb [1]	$(4.027 \pm 5.822) \times 10^{-4}$	8641200	4.495×10^{-4}	1.671×10^{-4}	7.318×10^{-7}	3.693×10^{-2}	5.485×10^{-5}	5.044×10^{-4}
wavelength shift [nm]	$(7.151 \pm 6.922) \times 10^{-3}$	8641200	9.733×10^{-3}	6.141×10^{-3}	-4.251×10^{-2}	6.190×10^{-2}	1.734×10^{-3}	1.147×10^{-2}
cloud fraction apriori [1]	0.577 ± 0.357	8641200	0.781	0.585	0.0	1.000	0.219	1.000
reflectance blue ocra [1]	0.537 ± 0.218	8641200	0.335	0.503	0.126	2.06	0.356	0.691
reflectance green ocra [1]	0.477 ± 0.243	8641200	0.396	0.440	6.794×10^{-2}	2.05	0.262	0.658
reflectance continuum aband [1]	0.428 ± 0.275	8641200	0.416	0.395	1.158×10^{-2}	5.50	0.205	0.621

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]	0.618 ± 0.364	10210507	0.550	0.700	0.0	1.000	0.350	0.900
cloud fraction [1]	0.552 ± 0.327	10210507	0.646	0.496	5.976×10^{-3}	1.000	0.273	0.920
cloud top height [m]	$(0.377 \pm 0.265) \times 10^4$	10210507	3.927×10^3	3.153×10^3	0.0	2.000×10^4	1.610×10^3	5.536×10^3
cloud optical thickness [1]	16.4 ± 32.3	10210507	8.73	8.76	1.000	250	5.17	13.9
cloud fraction crb [1]	0.552 ± 0.326	10210507	0.645	0.496	7.489×10^{-3}	1.000	0.274	0.919
cloud height crb [m]	$(0.275 \pm 0.217) \times 10^4$	10210507	2.992×10^3	2.273×10^3	0.0	2.000×10^4	999	3.991×10^3
cloud albedo crb [1]	0.640 ± 0.229	10210507	0.338	0.619	0.0	1.000	0.483	0.821
surface albedo fitted [1]	0.343 ± 0.385	10210507	0.760	6.092×10^{-2}	0.0	1.000	2.603×10^{-2}	0.786
surface albedo fitted crb [1]	0.322 ± 0.363	10210507	0.717	5.043×10^{-2}	0.0	1.000	2.073×10^{-2}	0.738
fitted root mean square [1]	$(8.079 \pm 11.355) \times 10^{-4}$	10210507	9.455×10^{-4}	6.181×10^{-4}	4.331×10^{-6}	1.15	2.130×10^{-4}	1.159×10^{-3}
fitted root mean square crb [1]	$(7.208 \pm 10.971) \times 10^{-4}$	10210507	9.025×10^{-4}	4.830×10^{-4}	2.384×10^{-6}	0.902	1.507×10^{-4}	1.053×10^{-3}
wavelength shift [nm]	$(1.057 \pm 0.746) \times 10^{-2}$	10210507	1.109×10^{-2}	1.071×10^{-2}	-4.223×10^{-2}	0.658	4.835×10^{-3}	1.593×10^{-2}
cloud fraction apriori [1]	0.561 ± 0.330	10210507	0.677	0.513	0.0	1.000	0.280	0.957
reflectance blue ocr [1]	0.619 ± 0.247	10210507	0.440	0.630	0.125	2.08	0.389	0.829
reflectance green ocr [1]	0.576 ± 0.278	10210507	0.522	0.600	7.924×10^{-2}	1.96	0.301	0.822
reflectance continuum aband [1]	0.529 ± 0.298	10210507	0.525	0.574	9.452×10^{-3}	3.82	0.258	0.783

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]	0.678 ± 0.345	11713437	0.550	0.850	0.0	1.000	0.400	0.950
cloud fraction [1]	0.571 ± 0.350	11713437	0.751	0.570	5.976×10^{-3}	1.000	0.226	0.976
cloud top height [m]	$(0.348 \pm 0.255) \times 10^4$	11713437	3.193×10^3	2.786×10^3	0.0	2.000×10^4	1.542×10^3	4.735×10^3
cloud optical thickness [1]	18.3 ± 30.3	11713437	9.80	10.1	1.000	250	6.76	16.6
cloud fraction crb [1]	0.569 ± 0.350	11713437	0.751	0.568	7.489×10^{-3}	1.000	0.224	0.976
cloud height crb [m]	$(0.280 \pm 0.228) \times 10^4$	11713437	2.967×10^3	2.197×10^3	0.0	2.000×10^4	1.010×10^3	3.976×10^3
cloud albedo crb [1]	0.564 ± 0.191	11713437	0.235	0.546	0.0	1.000	0.453	0.688
surface albedo fitted [1]	0.112 ± 0.226	11713437	3.377×10^{-2}	3.229×10^{-2}	0.0	1.000	1.948×10^{-2}	5.325×10^{-2}
surface albedo fitted crb [1]	0.103 ± 0.218	11713437	2.778×10^{-2}	2.568×10^{-2}	0.0	1.000	1.524×10^{-2}	4.301×10^{-2}
fitted root mean square [1]	$(6.098 \pm 10.447) \times 10^{-4}$	11713437	8.125×10^{-4}	3.157×10^{-4}	7.857×10^{-7}	1.15	9.019×10^{-5}	9.027×10^{-4}
fitted root mean square crb [1]	$(5.839 \pm 10.229) \times 10^{-4}$	11713437	8.030×10^{-4}	2.813×10^{-4}	7.318×10^{-7}	0.902	7.117×10^{-5}	8.742×10^{-4}
wavelength shift [nm]	$(8.702 \pm 7.808) \times 10^{-3}$	11713437	1.195×10^{-2}	7.987×10^{-3}	-4.251×10^{-2}	0.658	2.352×10^{-3}	1.431×10^{-2}
cloud fraction apriori [1]	0.575 ± 0.356	11713437	0.781	0.580	0.0	1.000	0.219	1.000
reflectance blue ocr [1]	0.525 ± 0.211	11713437	0.336	0.487	0.147	2.07	0.346	0.682
reflectance green ocr [1]	0.464 ± 0.238	11713437	0.405	0.423	8.815×10^{-2}	1.90	0.248	0.652
reflectance continuum aband [1]	0.395 ± 0.275	11713437	0.483	0.360	1.250×10^{-2}	5.50	0.140	0.623

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]	0.458 ± 0.397	5471783	0.850	0.570	0.0	1.000	0.0	0.850
cloud fraction [1]	0.501 ± 0.302	5471783	0.468	0.427	6.118×10^{-3}	1.000	0.271	0.739
cloud top height [m]	$(0.462 \pm 0.250) \times 10^4$	5471783	3.572×10^3	4.545×10^3	0.0	2.000×10^4	2.675×10^3	6.247×10^3
cloud optical thickness [1]	16.9 ± 38.8	5471783	7.85	6.04	1.000	250	4.04	11.9
cloud fraction crb [1]	0.502 ± 0.301	5471783	0.466	0.430	8.112×10^{-3}	1.000	0.273	0.739
cloud height crb [m]	$(0.340 \pm 0.196) \times 10^4$	5471783	2.659×10^3	3.230×10^3	0.0	2.000×10^4	1.916×10^3	4.575×10^3
cloud albedo crb [1]	0.699 ± 0.256	5471783	0.397	0.727	0.0	1.000	0.534	0.931
surface albedo fitted [1]	0.564 ± 0.322	5471783	0.642	0.657	1.241×10^{-3}	1.000	0.234	0.876
surface albedo fitted crb [1]	0.536 ± 0.297	5471783	0.570	0.638	4.717×10^{-3}	1.000	0.232	0.802
fitted root mean square [1]	$(7.684 \pm 8.018) \times 10^{-4}$	5471783	7.567×10^{-4}	5.754×10^{-4}	4.331×10^{-6}	0.204	2.730×10^{-4}	1.030×10^{-3}
fitted root mean square crb [1]	$(6.016 \pm 6.917) \times 10^{-4}$	5471783	6.764×10^{-4}	3.788×10^{-4}	2.834×10^{-6}	0.156	1.413×10^{-4}	8.177×10^{-4}
wavelength shift [nm]	$(9.909 \pm 6.722) \times 10^{-3}$	5471783	1.008×10^{-2}	9.547×10^{-3}	-3.499×10^{-2}	6.730×10^{-2}	4.650×10^{-3}	1.473×10^{-2}
cloud fraction apriori [1]	0.516 ± 0.305	5471783	0.490	0.445	0.0	1.000	0.283	0.772
reflectance blue ocra [1]	0.691 ± 0.255	5471783	0.418	0.781	0.125	2.08	0.454	0.872
reflectance green ocra [1]	0.661 ± 0.282	5471783	0.487	0.772	6.794×10^{-2}	2.05	0.384	0.872
reflectance continuum aband [1]	0.648 ± 0.256	5471783	0.429	0.715	1.824×10^{-2}	3.82	0.416	0.845

3 Granule outlines

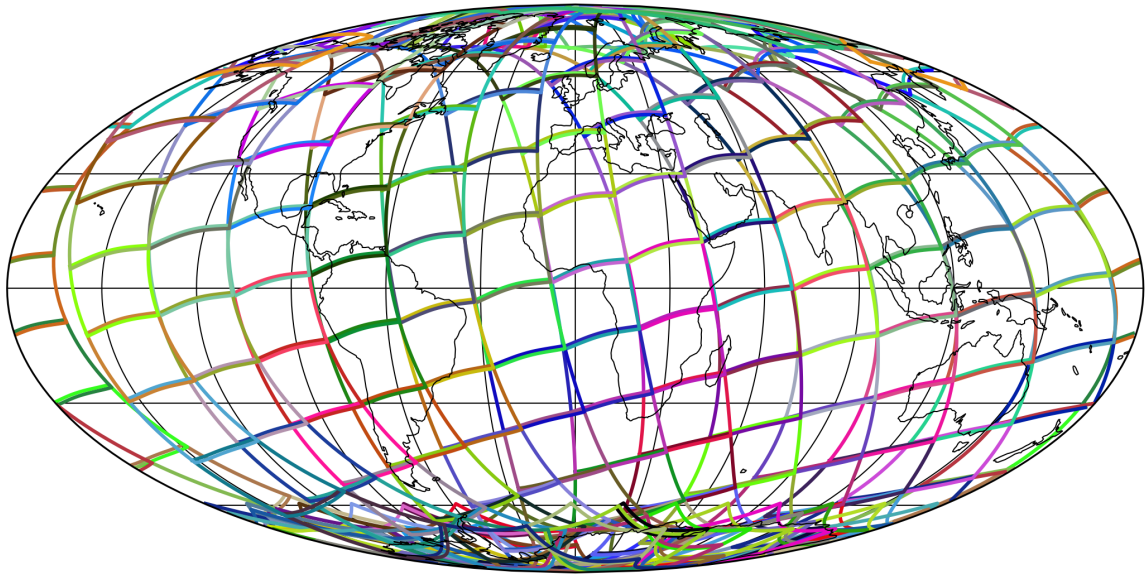


Figure 1: Outline of the granules.

4 Input data monitoring

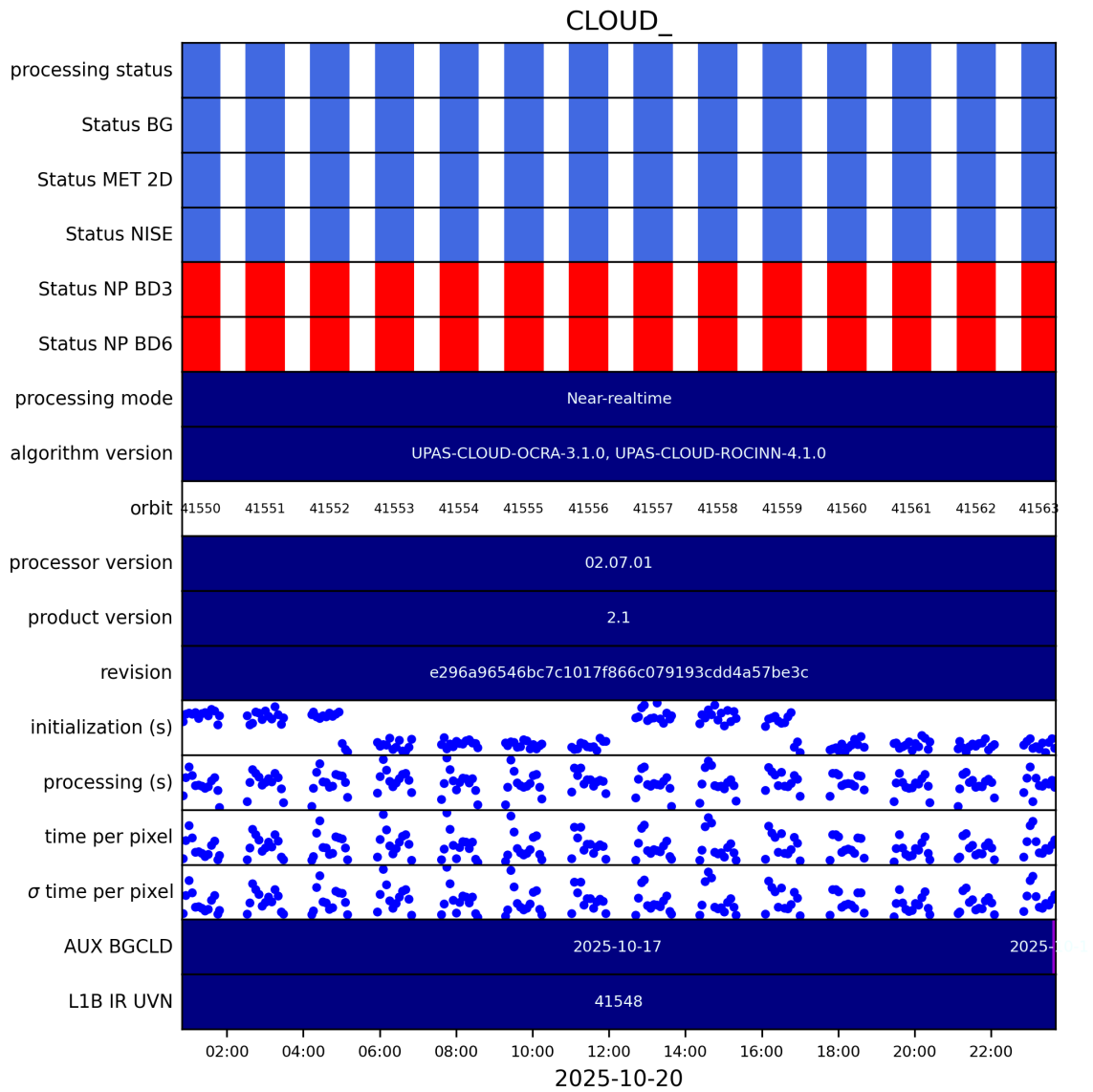


Figure 2: Input data per granule

5 Warnings and errors

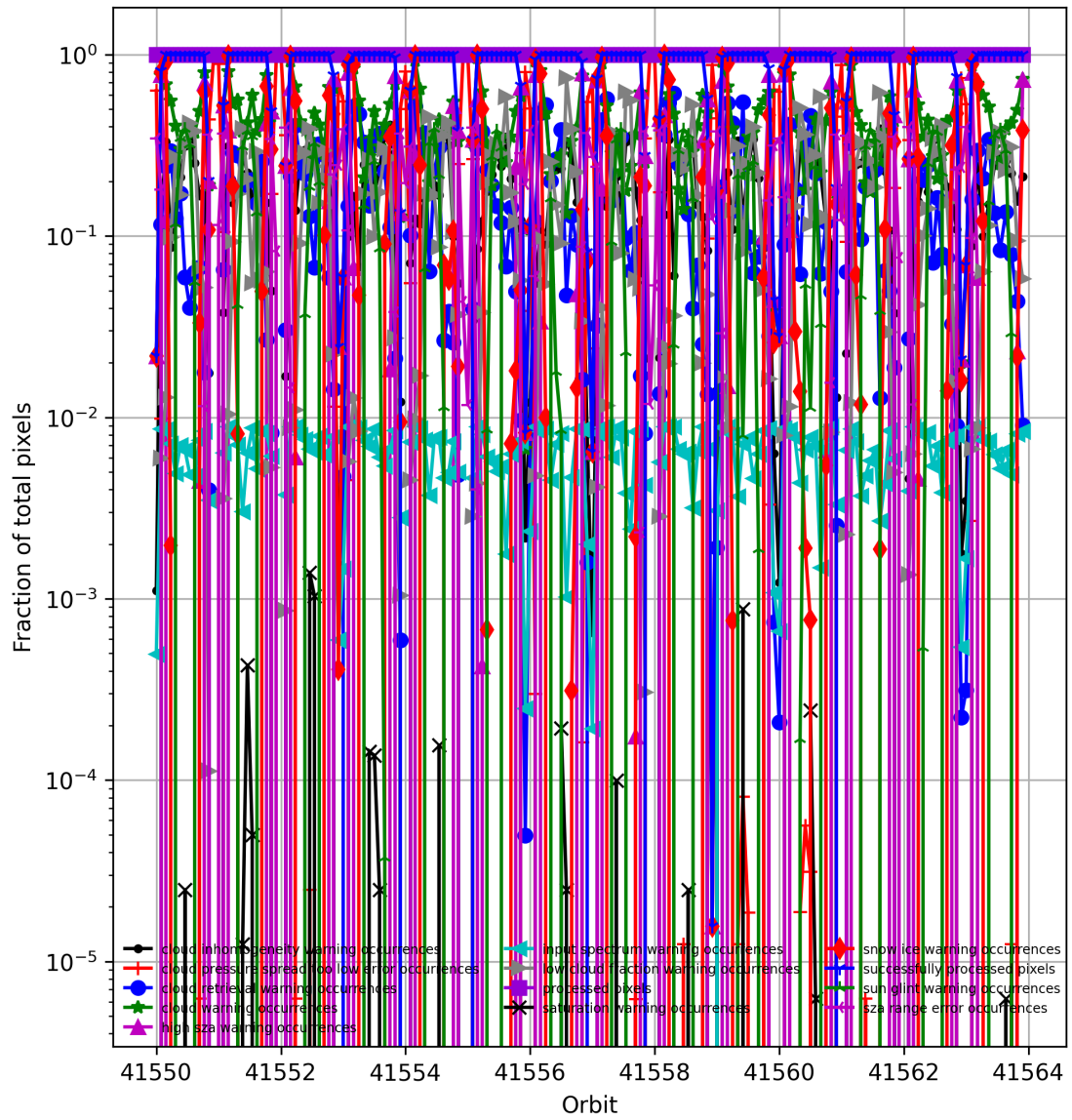


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

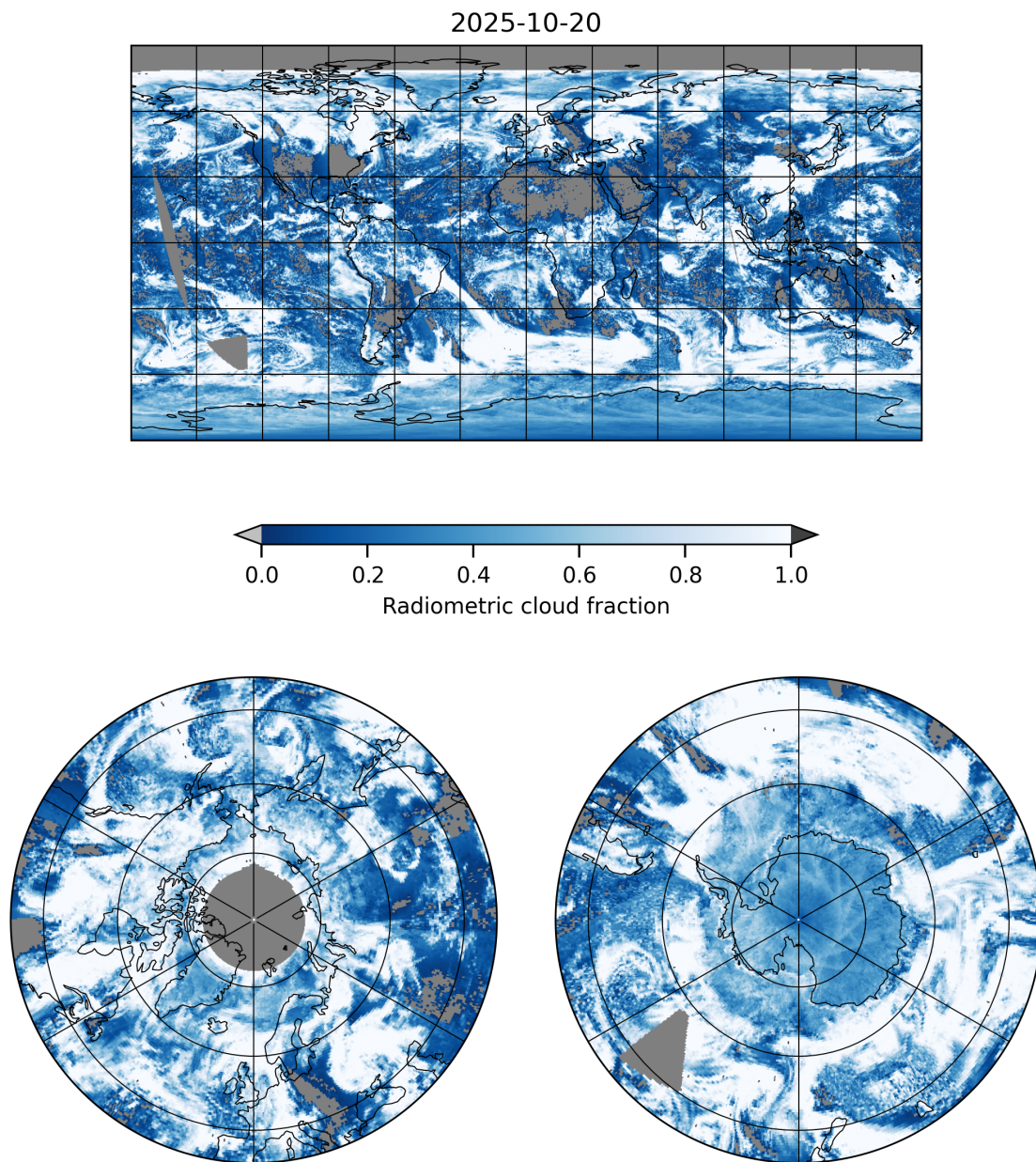


Figure 4: Map of “Radiometric cloud fraction” for 2025-10-20 to 2025-10-20

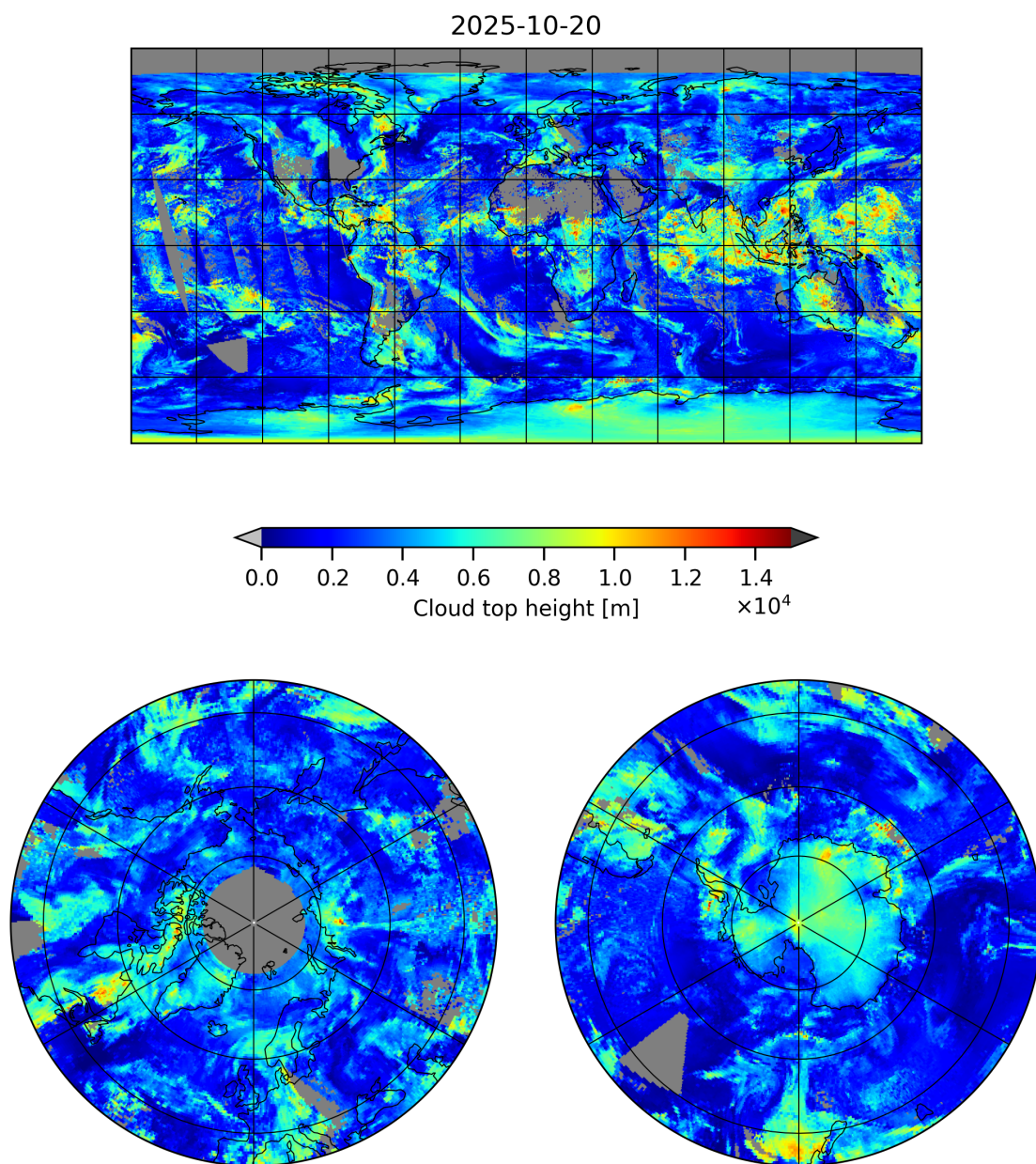


Figure 5: Map of “Cloud top height” for 2025-10-20 to 2025-10-20

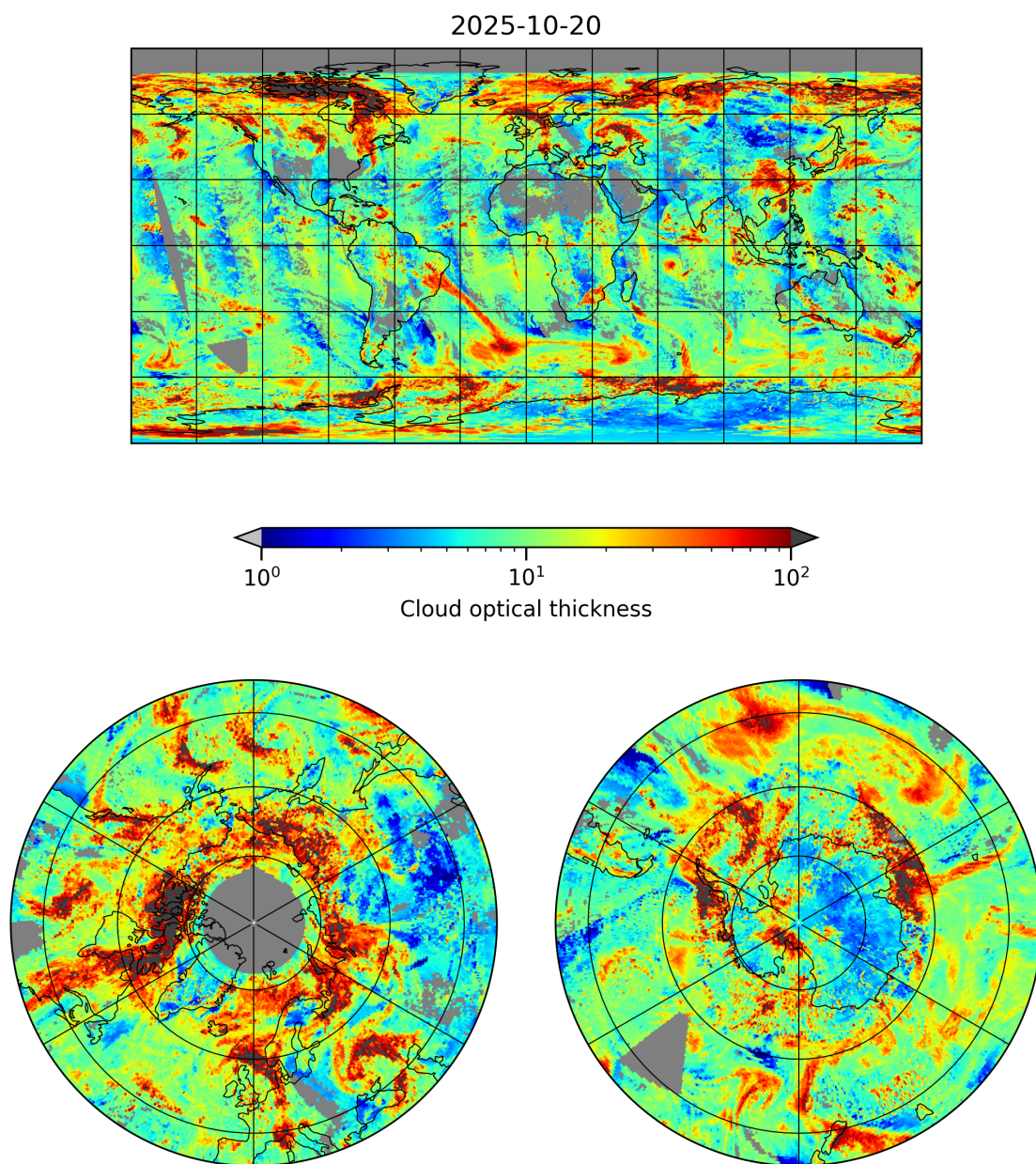


Figure 6: Map of “Cloud optical thickness” for 2025-10-20 to 2025-10-20

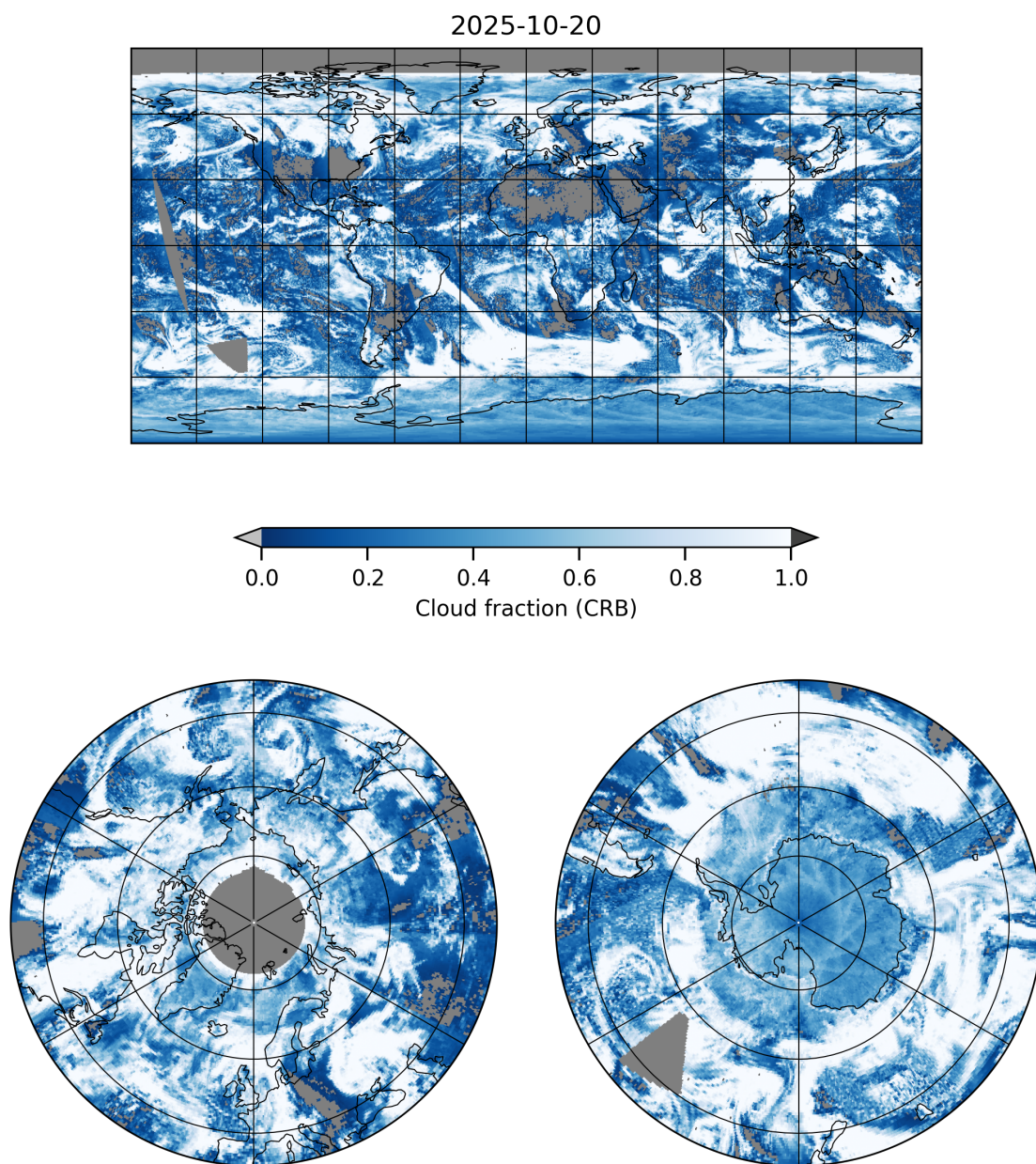


Figure 7: Map of “Cloud fraction (CRB)” for 2025-10-20 to 2025-10-20

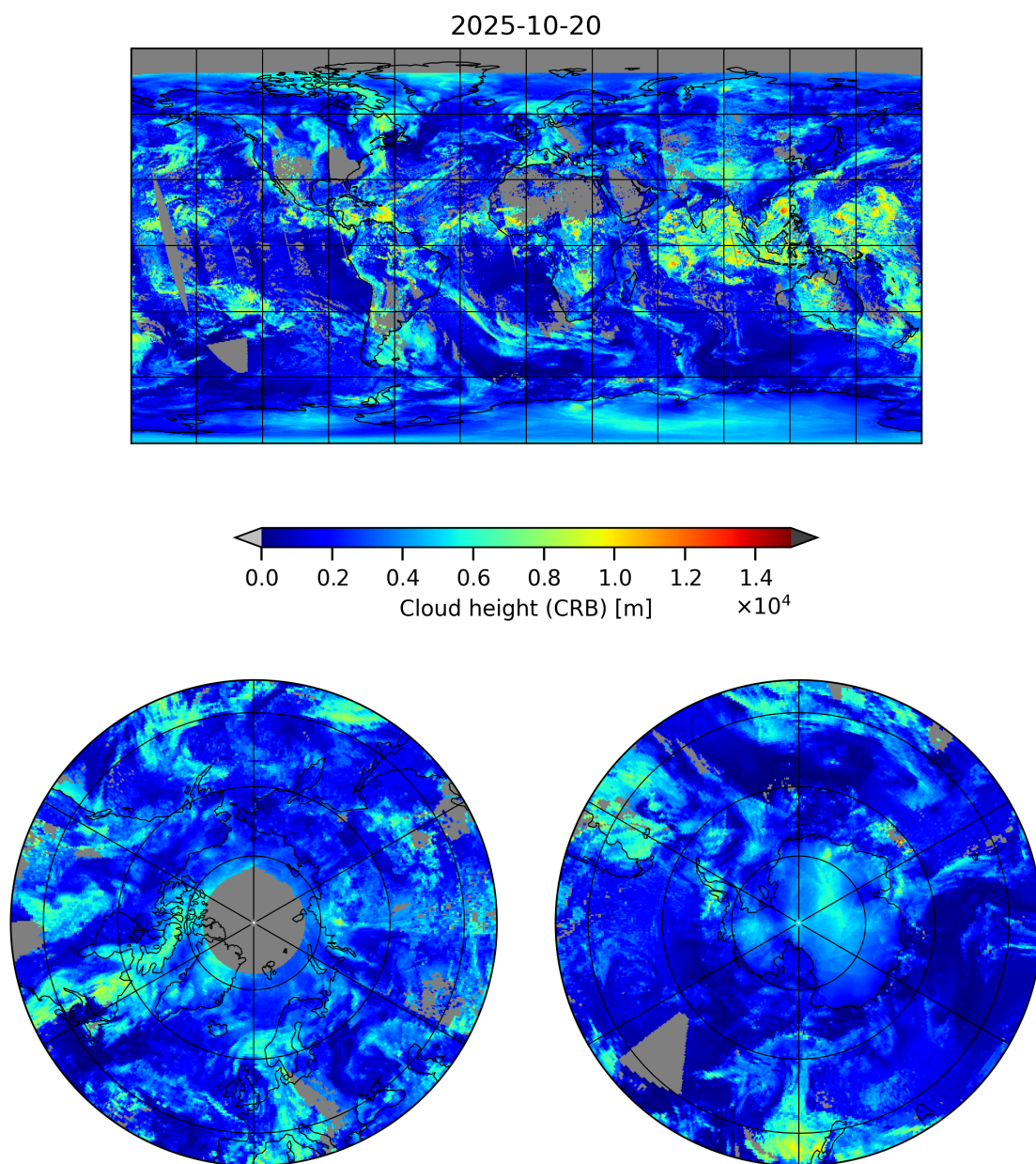


Figure 8: Map of “Cloud height (CRB)” for 2025-10-20 to 2025-10-20

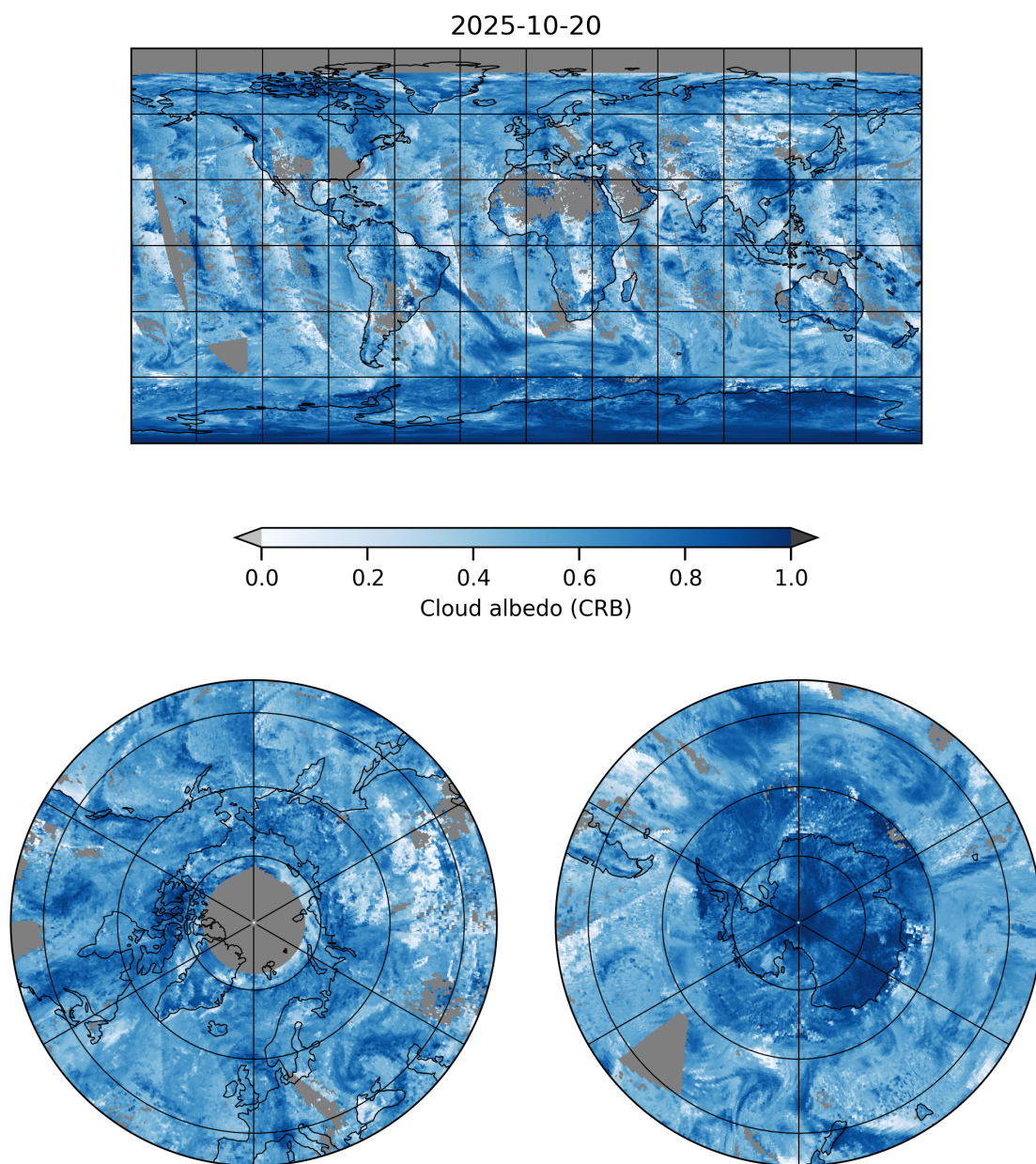


Figure 9: Map of “Cloud albedo (CRB)” for 2025-10-20 to 2025-10-20

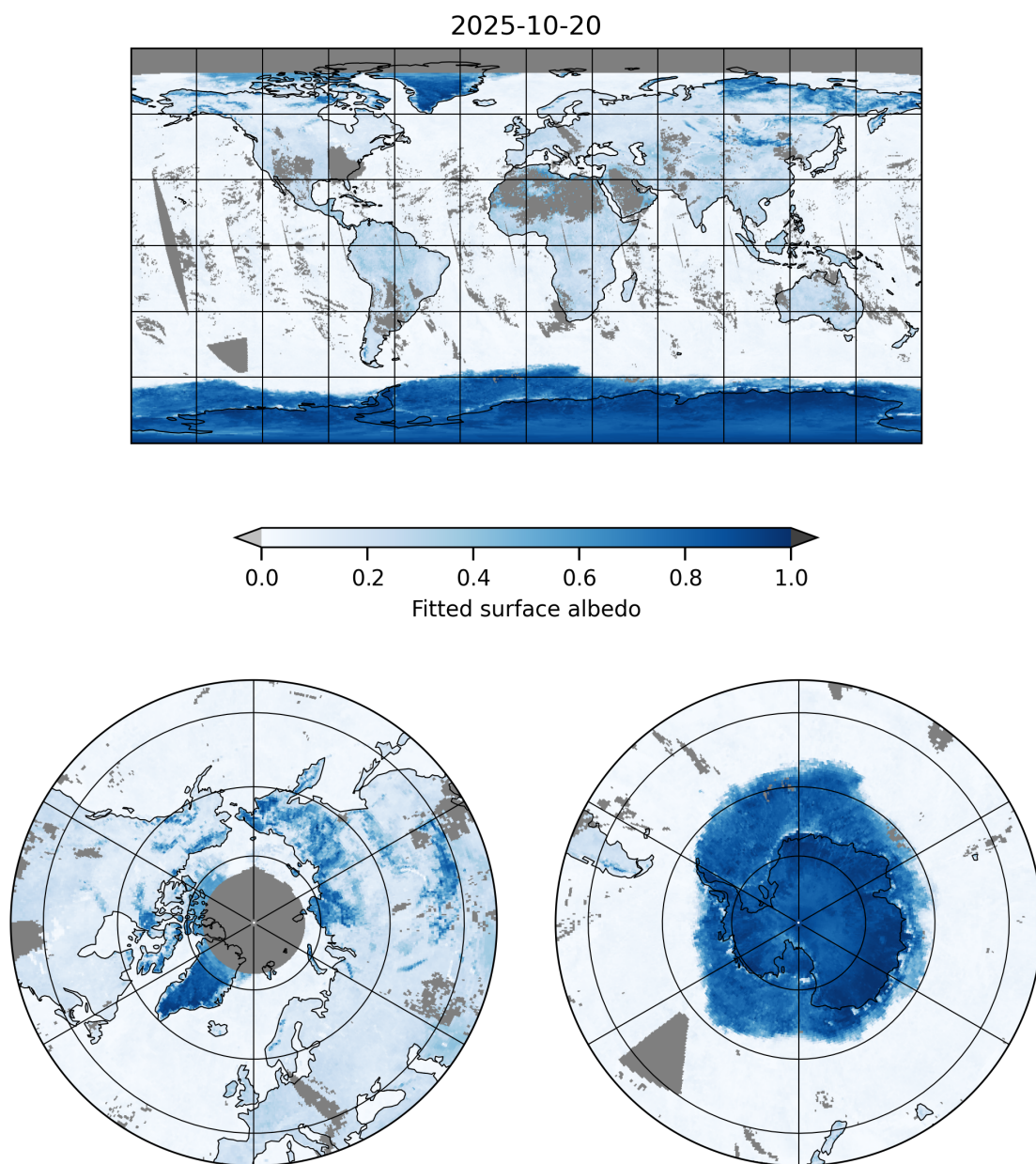


Figure 10: Map of “Fitted surface albedo” for 2025-10-20 to 2025-10-20

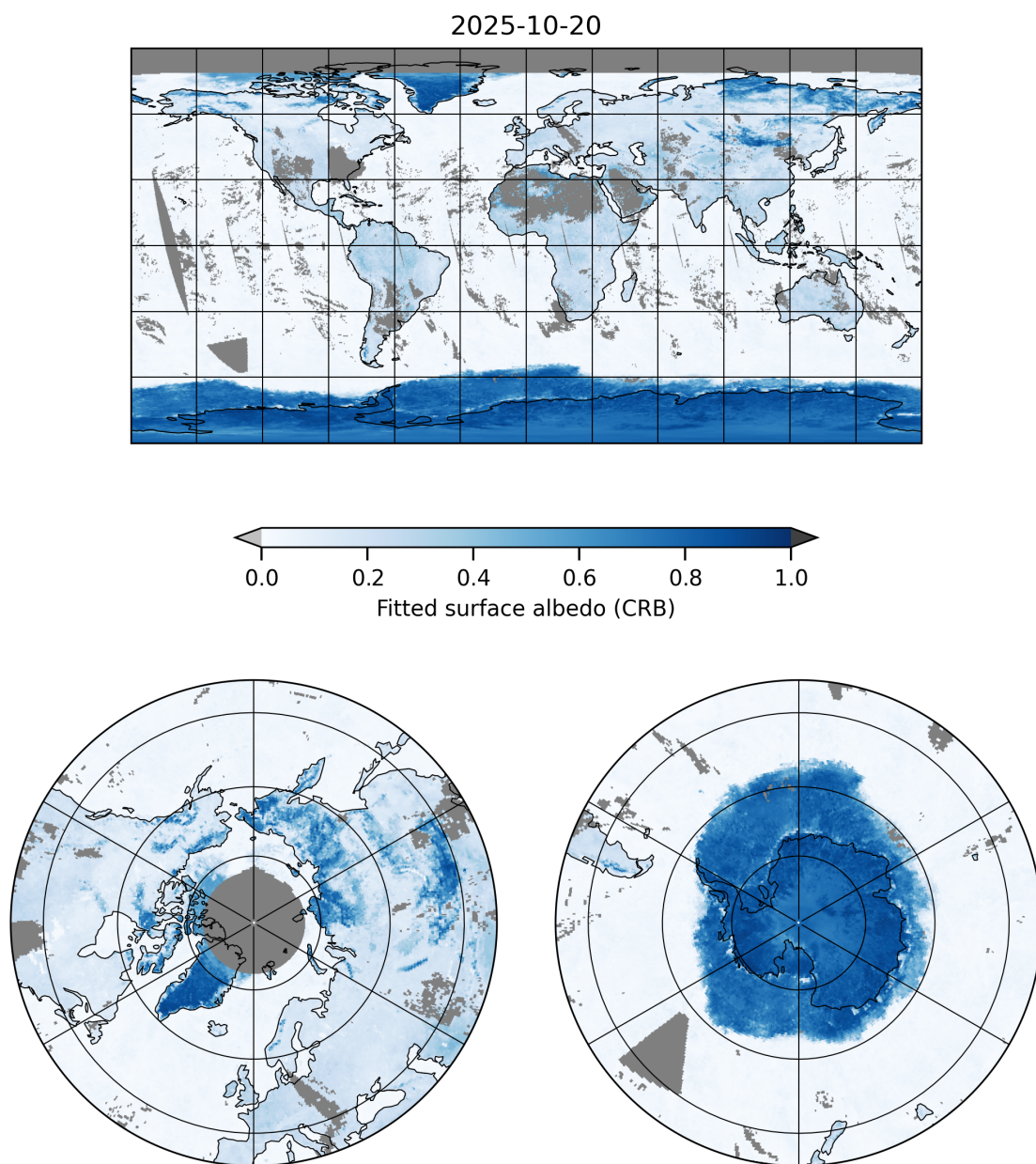


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-10-20 to 2025-10-20

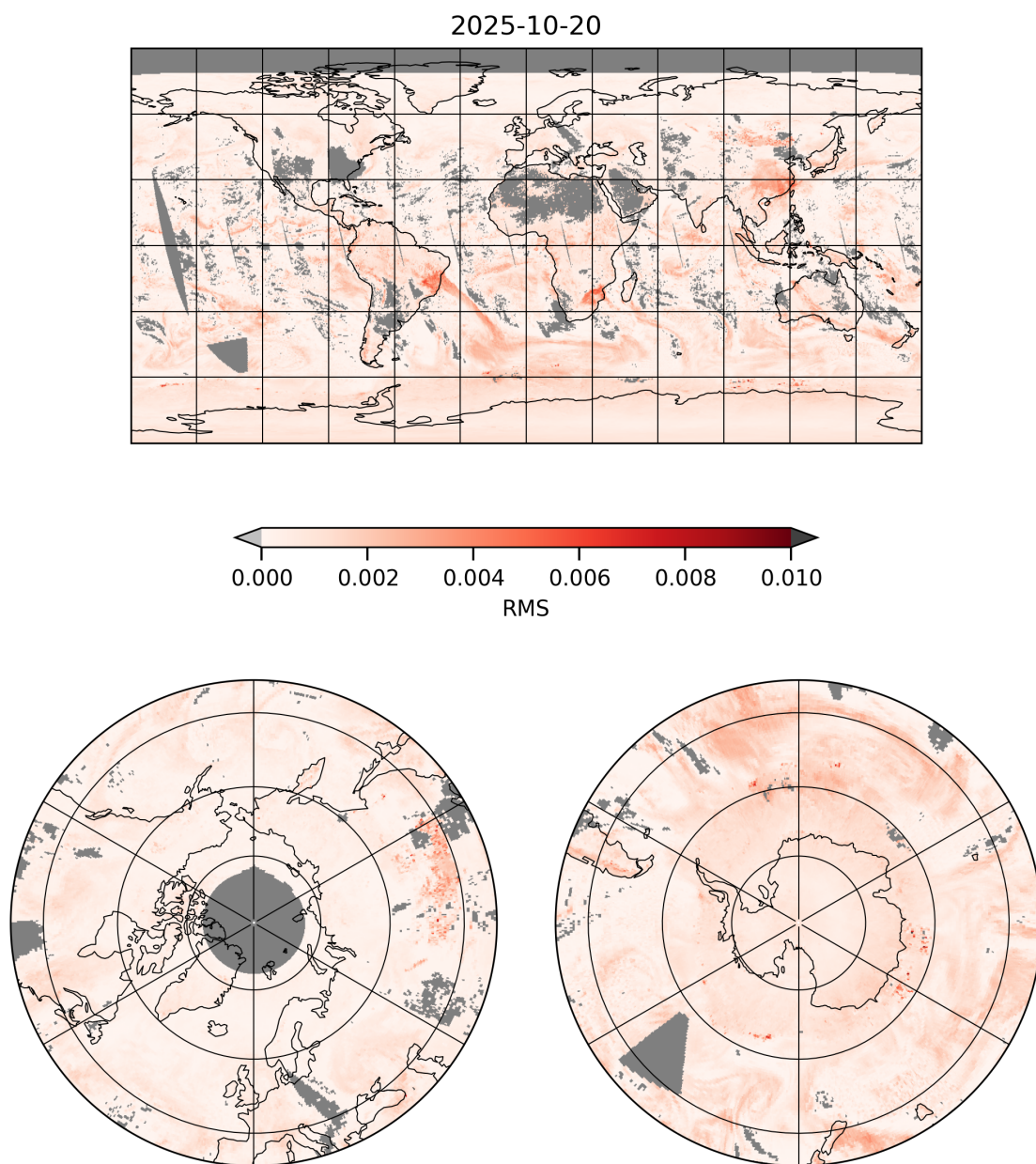


Figure 12: Map of “RMS” for 2025-10-20 to 2025-10-20

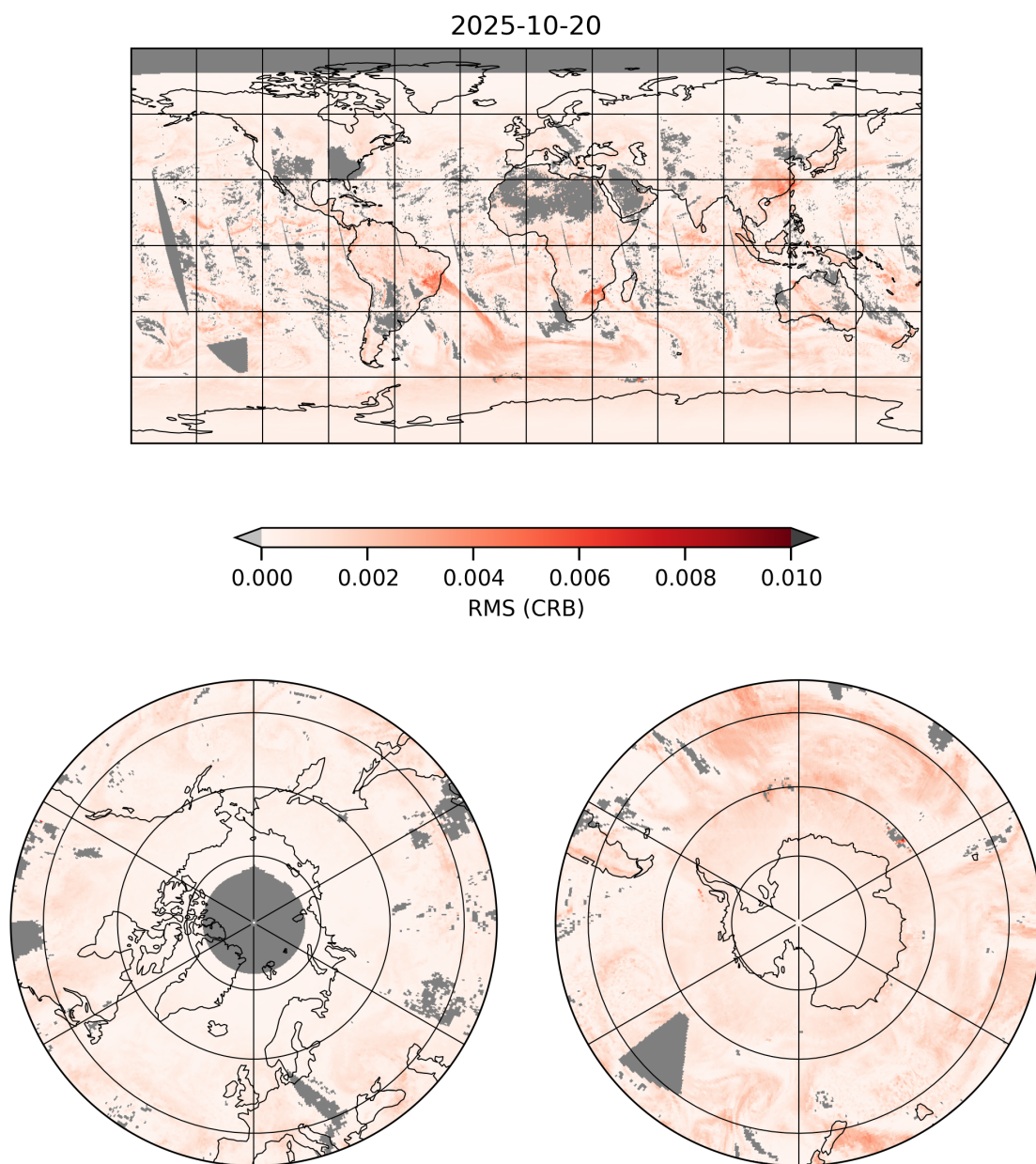


Figure 13: Map of “RMS (CRB)” for 2025-10-20 to 2025-10-20

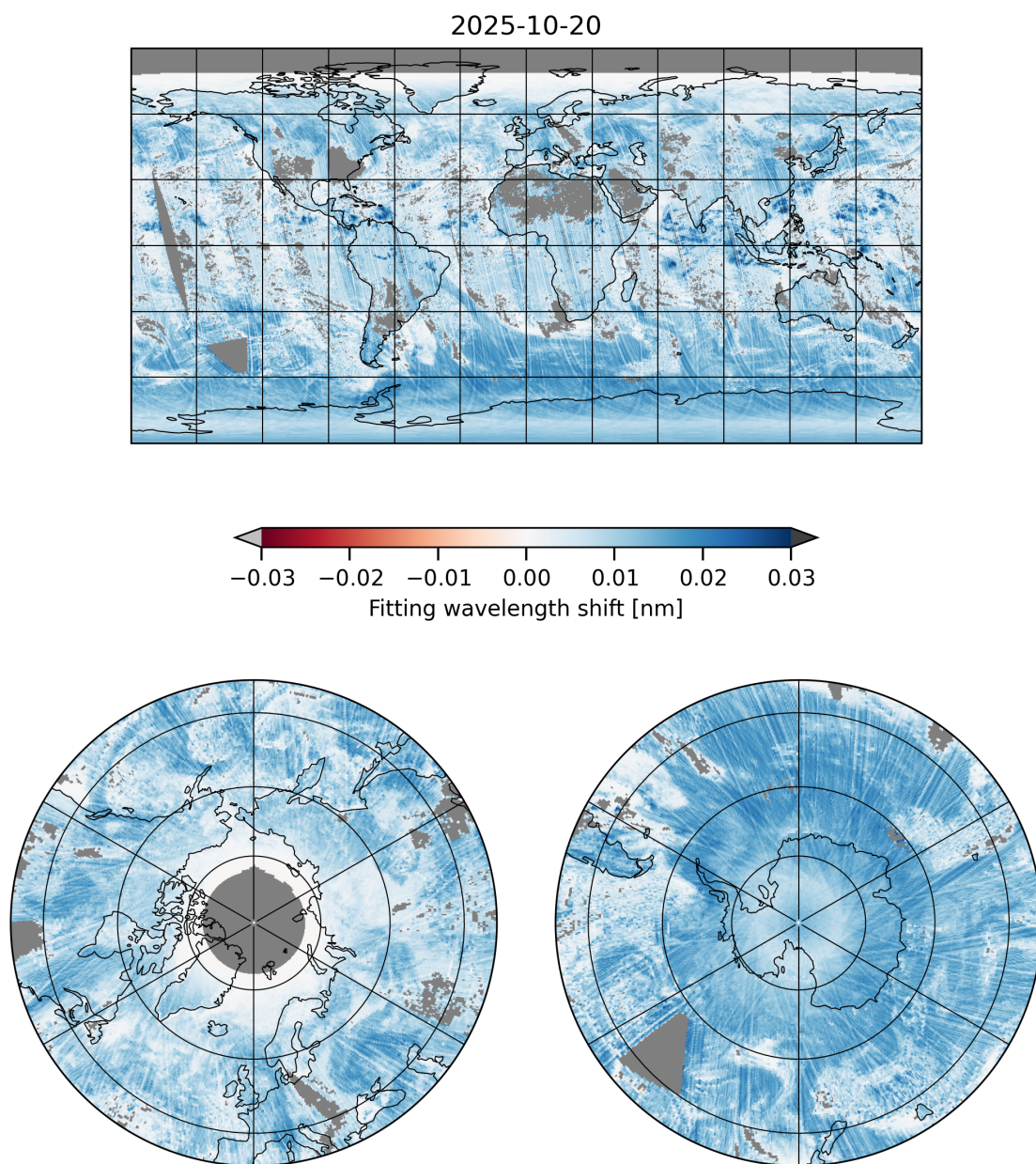


Figure 14: Map of “Fitting wavelength shift” for 2025-10-20 to 2025-10-20

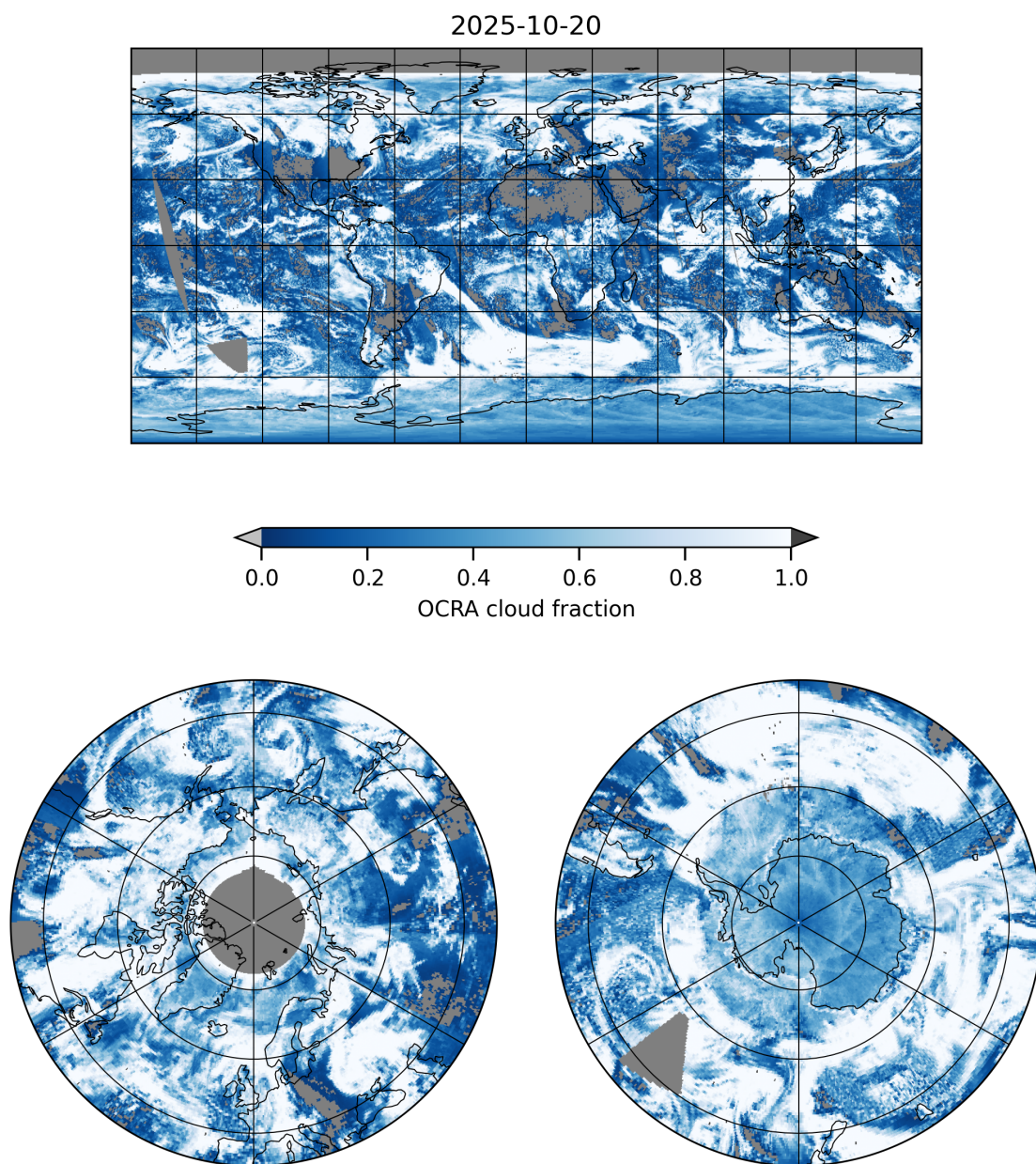


Figure 15: Map of “OCRA cloud fraction” for 2025-10-20 to 2025-10-20

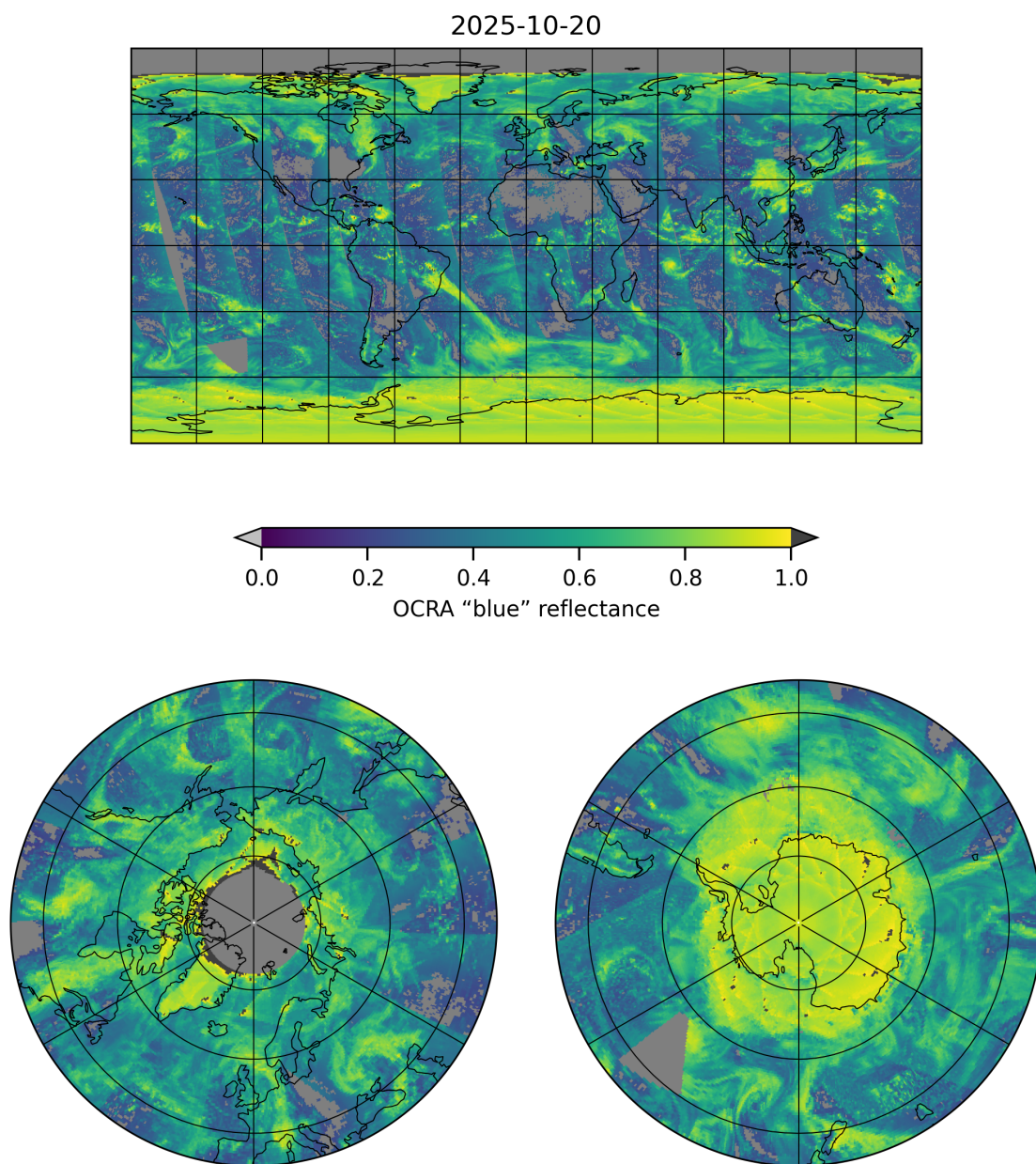


Figure 16: Map of "OCRA "blue" reflectance" for 2025-10-20 to 2025-10-20

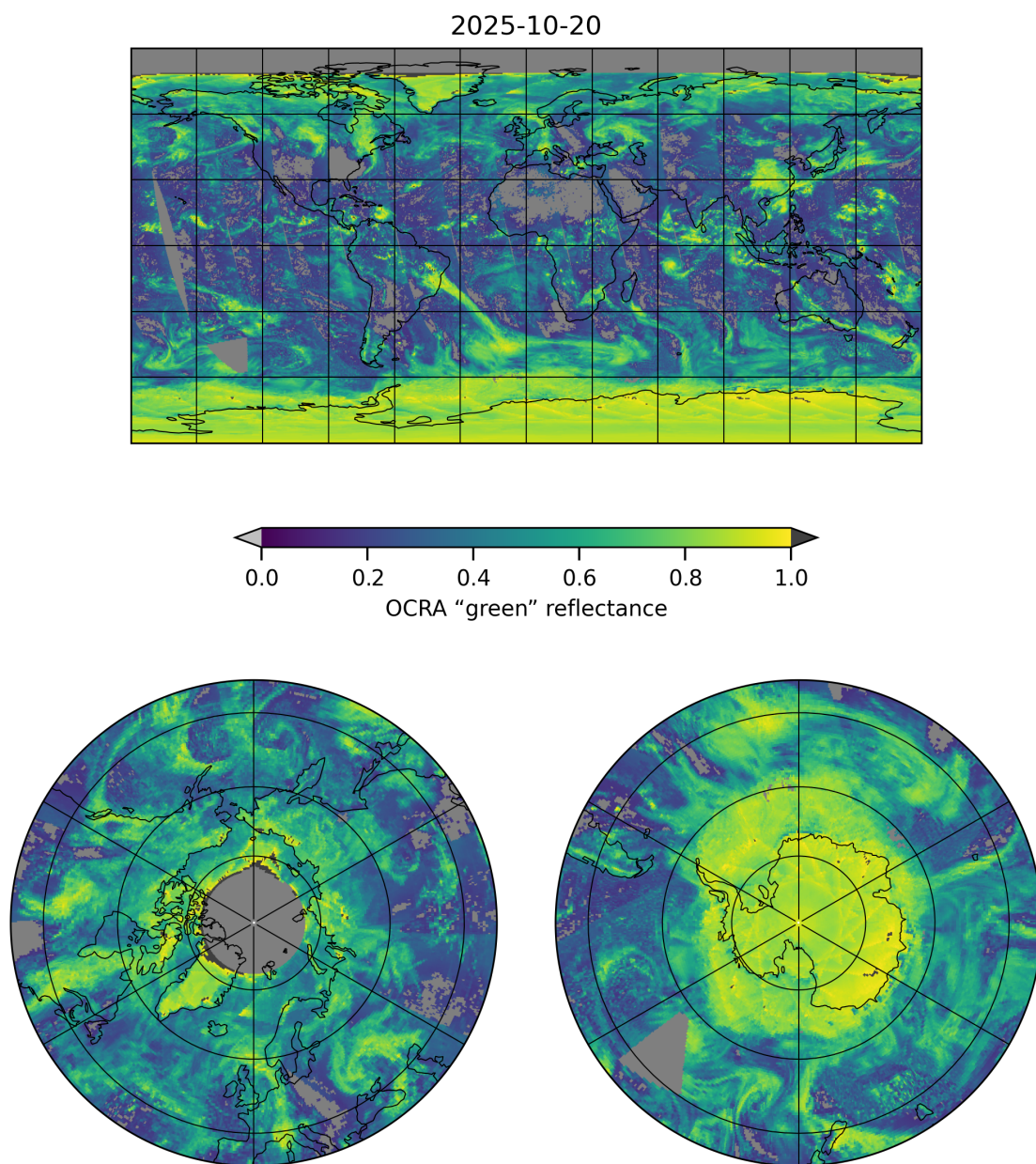


Figure 17: Map of "OCRA "green" reflectance" for 2025-10-20 to 2025-10-20

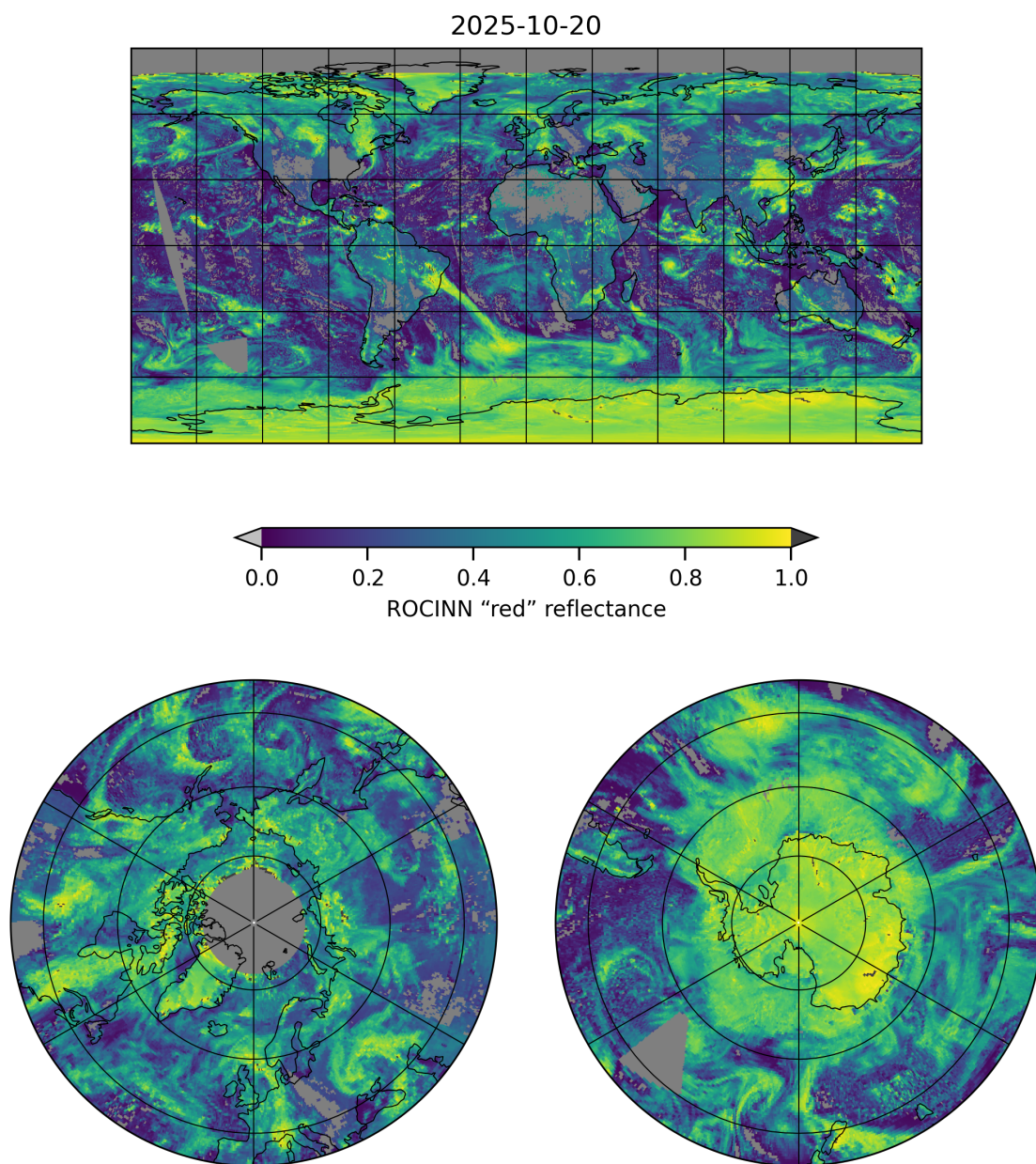


Figure 18: Map of "ROCINN "red" reflectance" for 2025-10-20 to 2025-10-20

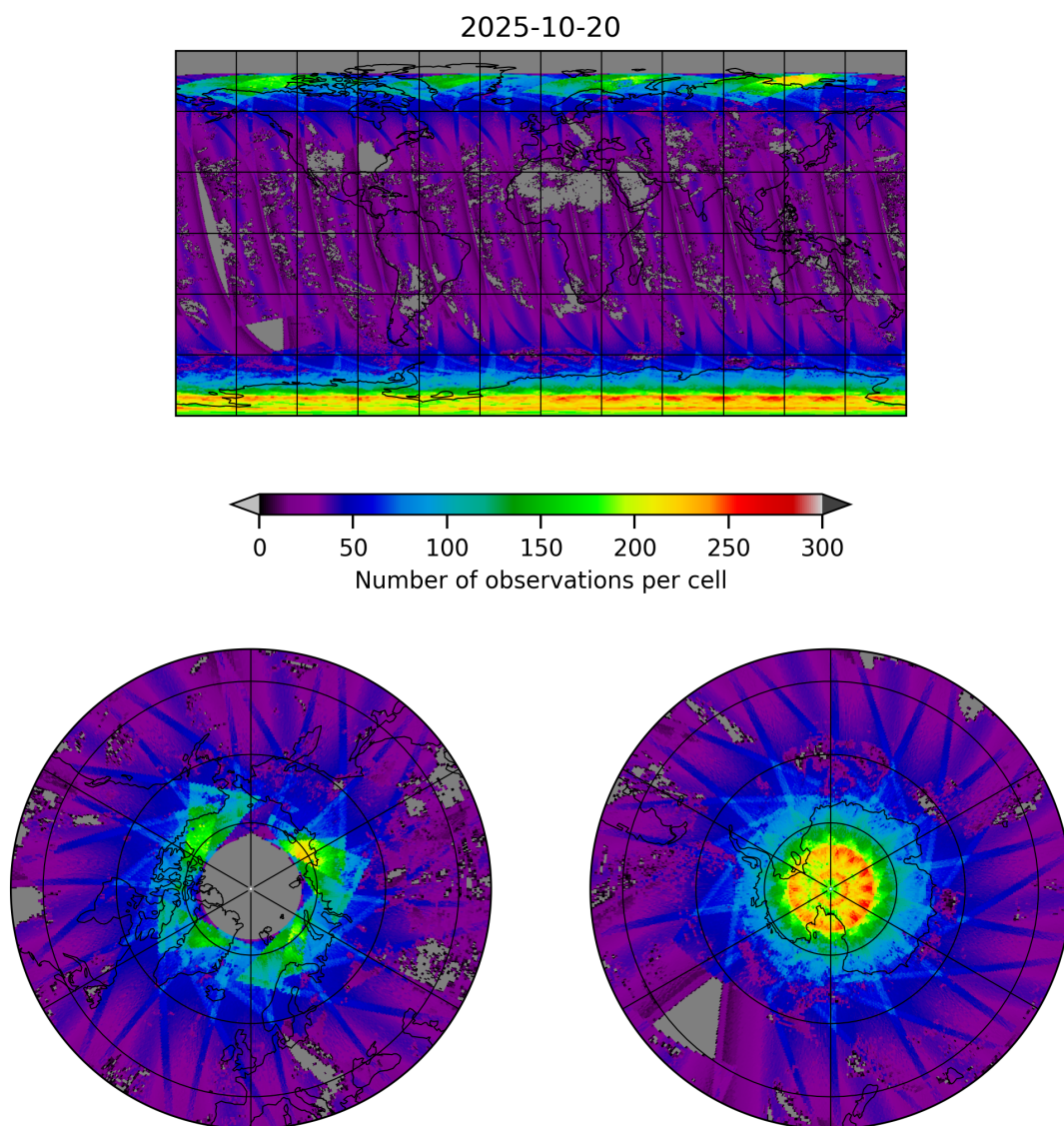


Figure 19: Map of the number of observations for 2025-10-20 to 2025-10-20

7 Zonal average

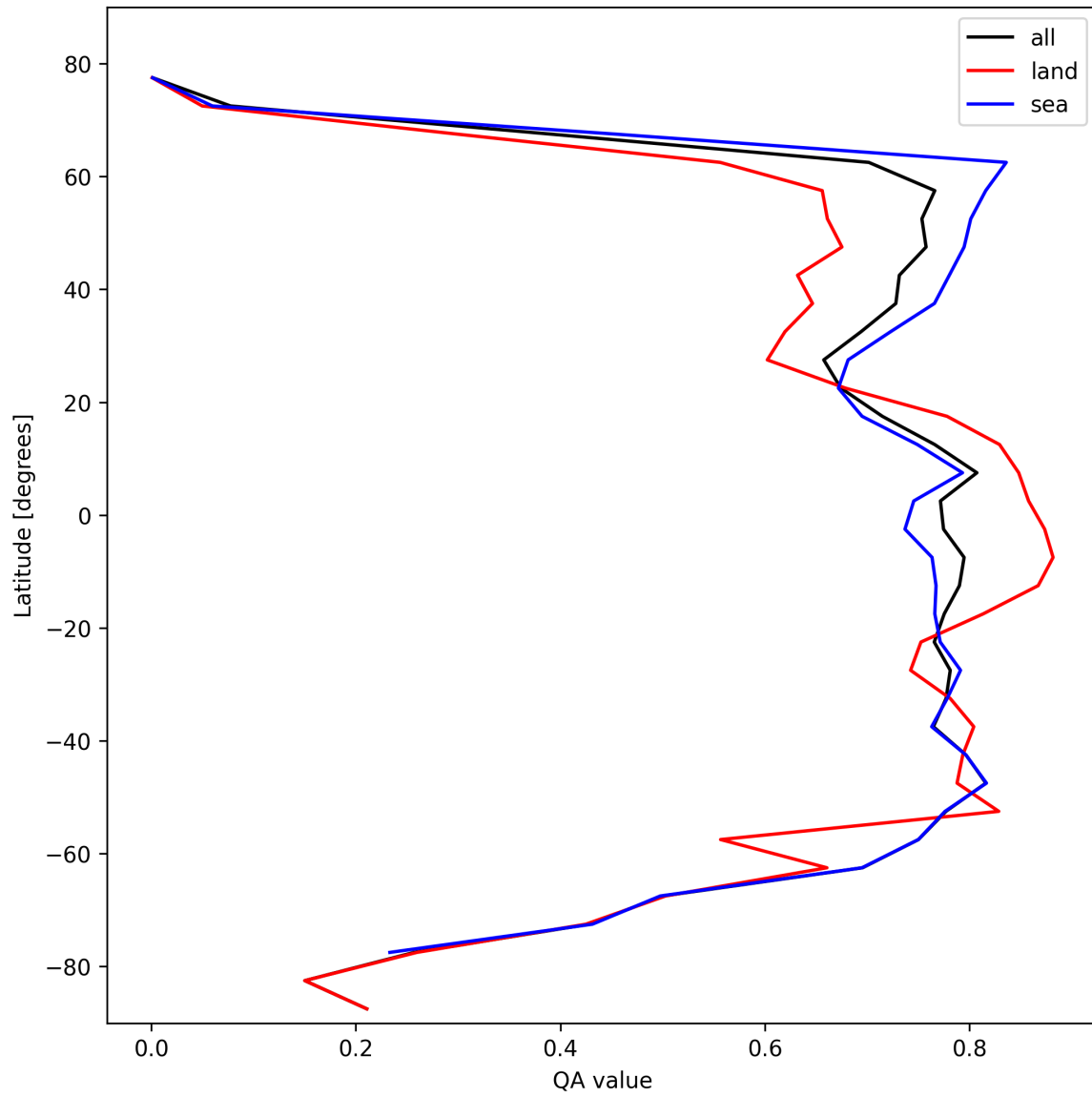


Figure 20: Zonal average of “QA value” for 2025-10-20 to 2025-10-20.

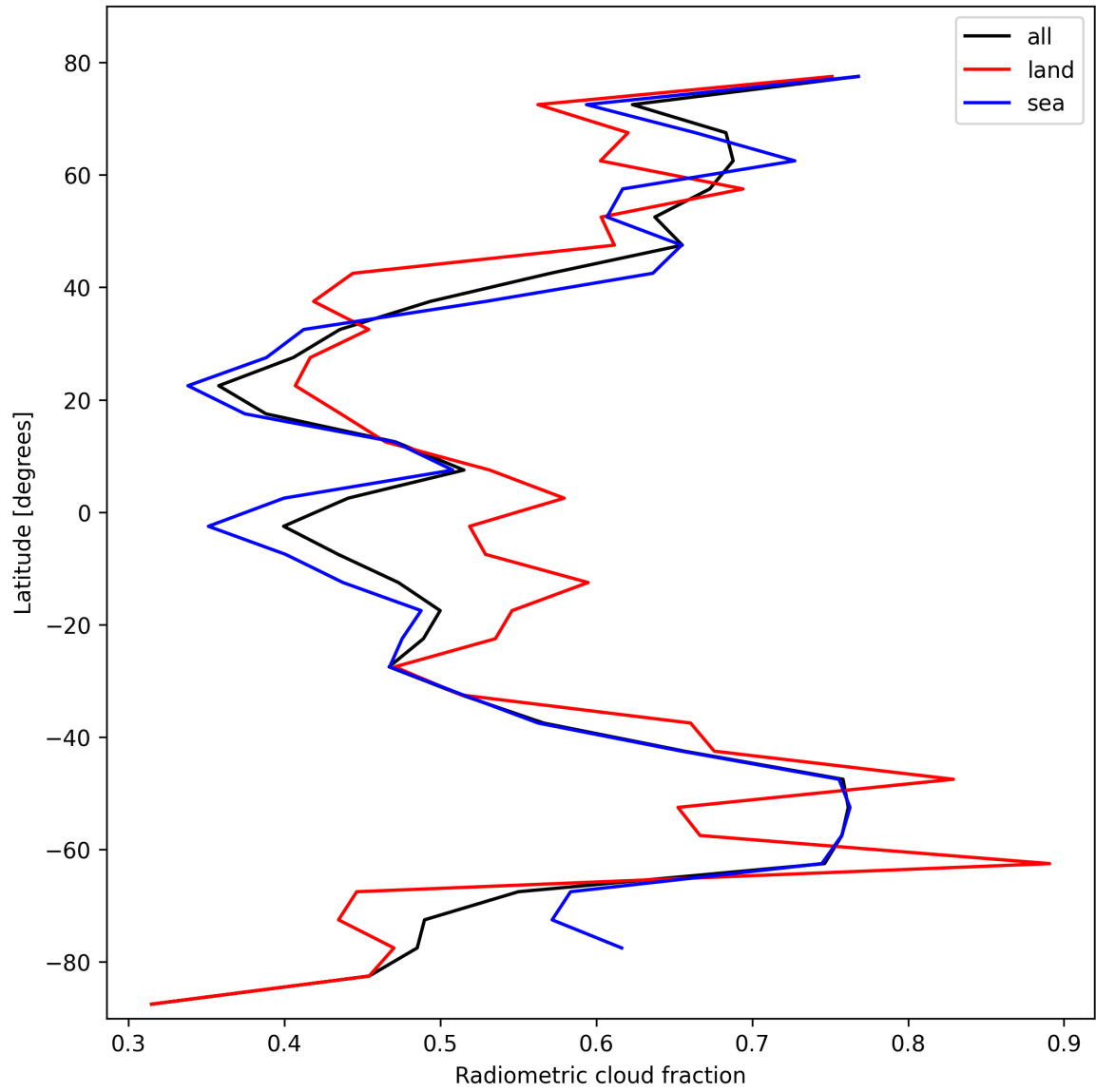


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-10-20 to 2025-10-20.

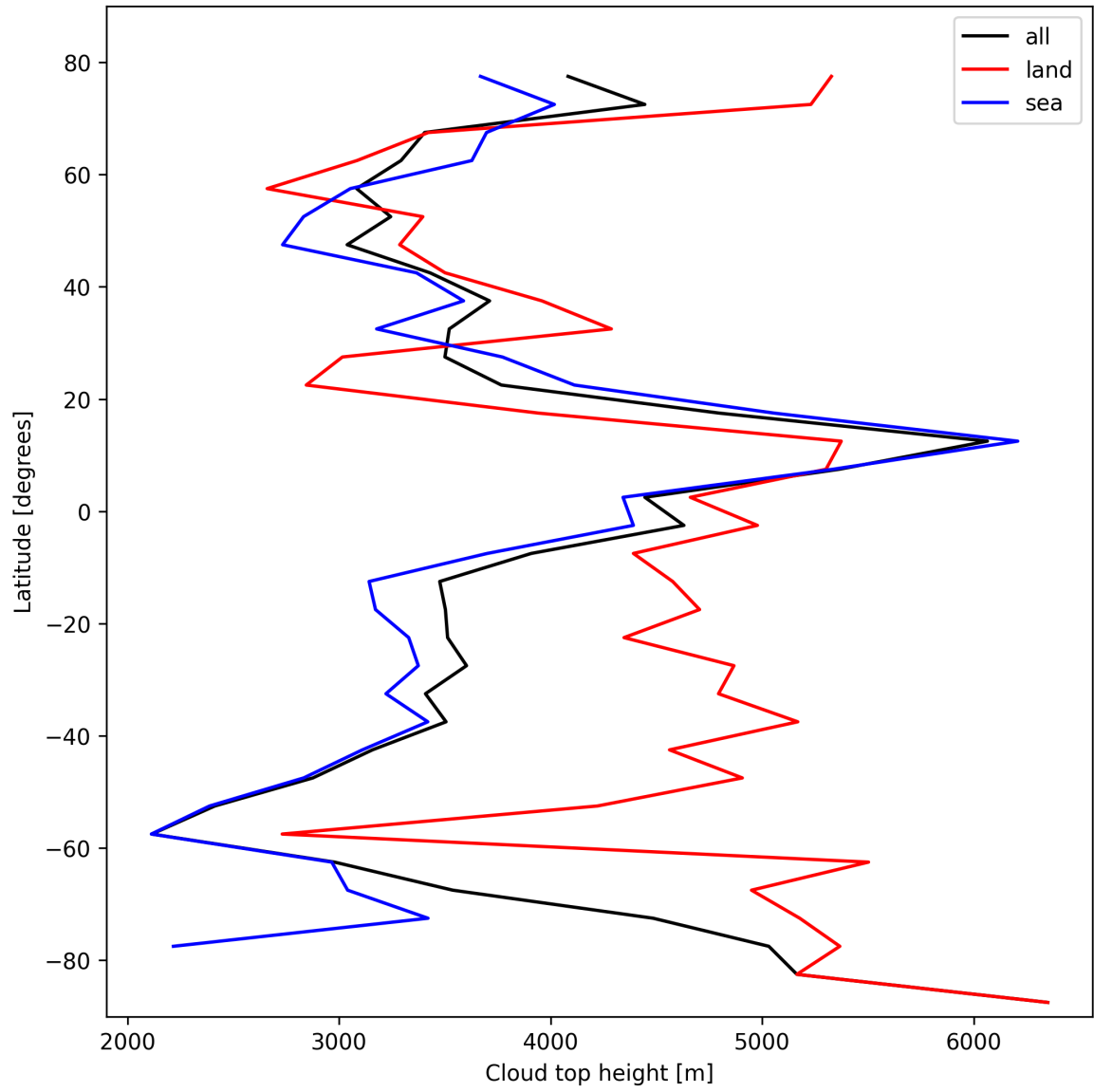


Figure 22: Zonal average of “Cloud top height” for 2025-10-20 to 2025-10-20.

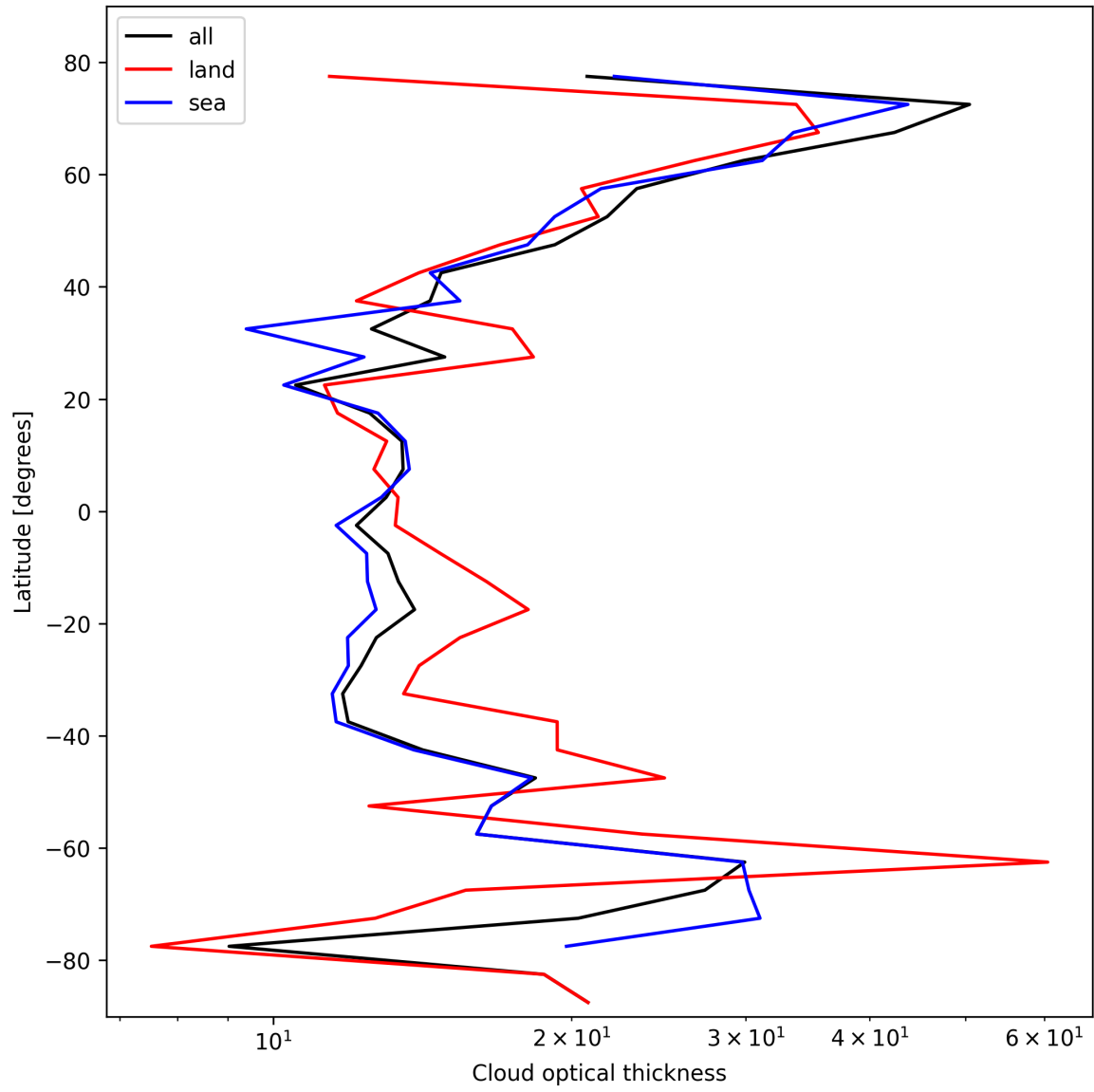


Figure 23: Zonal average of “Cloud optical thickness” for 2025-10-20 to 2025-10-20.

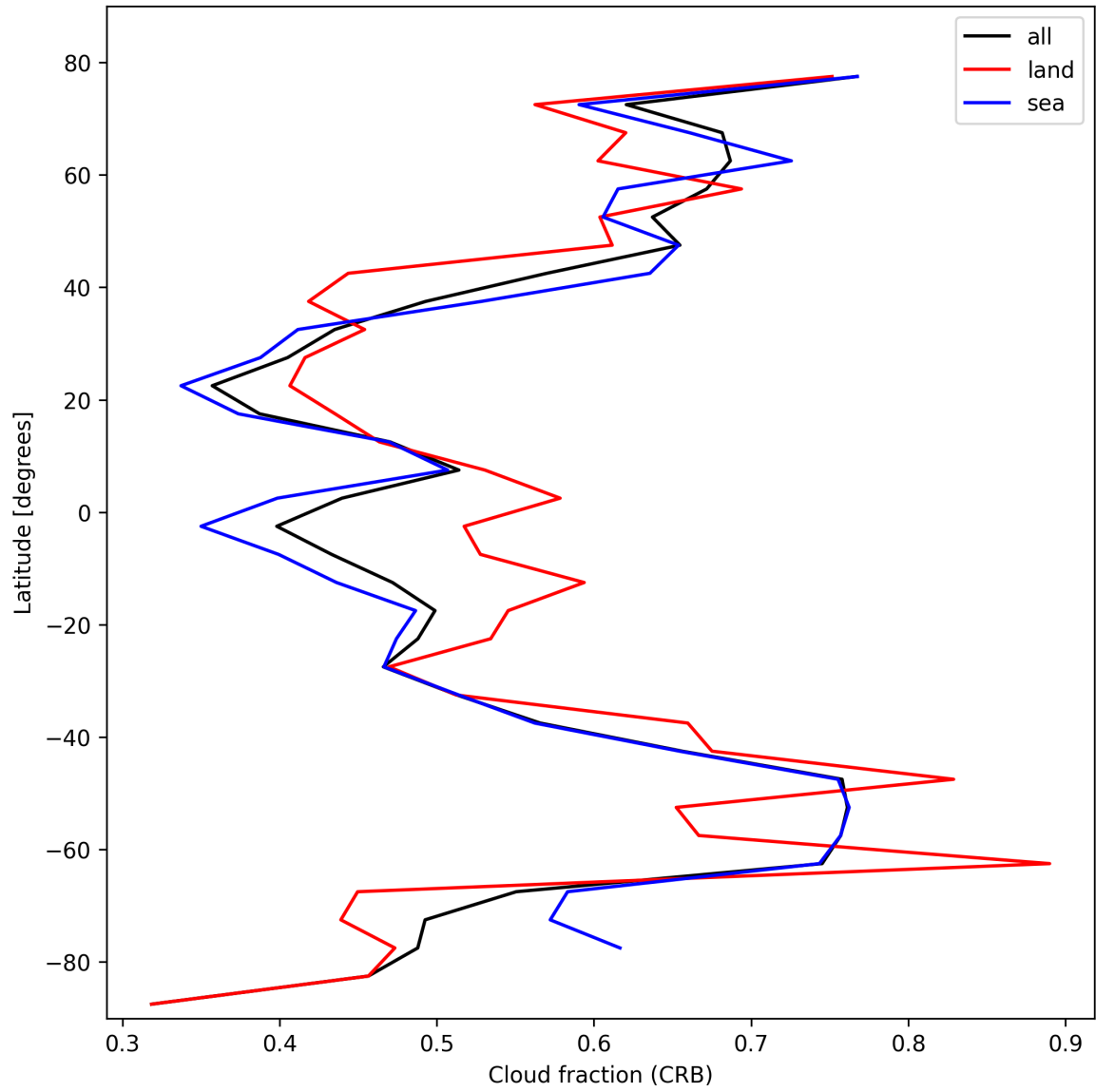


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-10-20 to 2025-10-20.

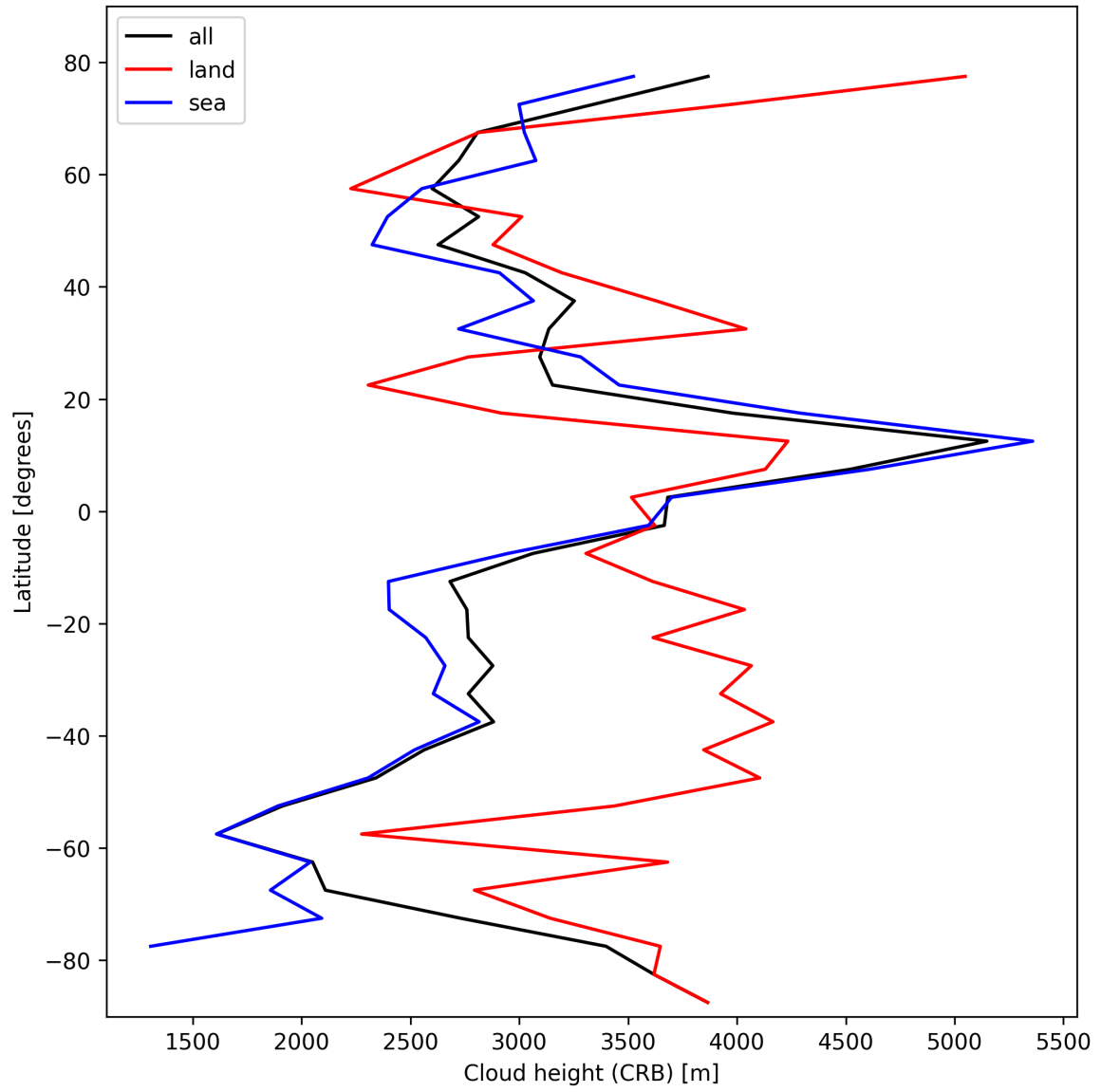


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-10-20 to 2025-10-20.

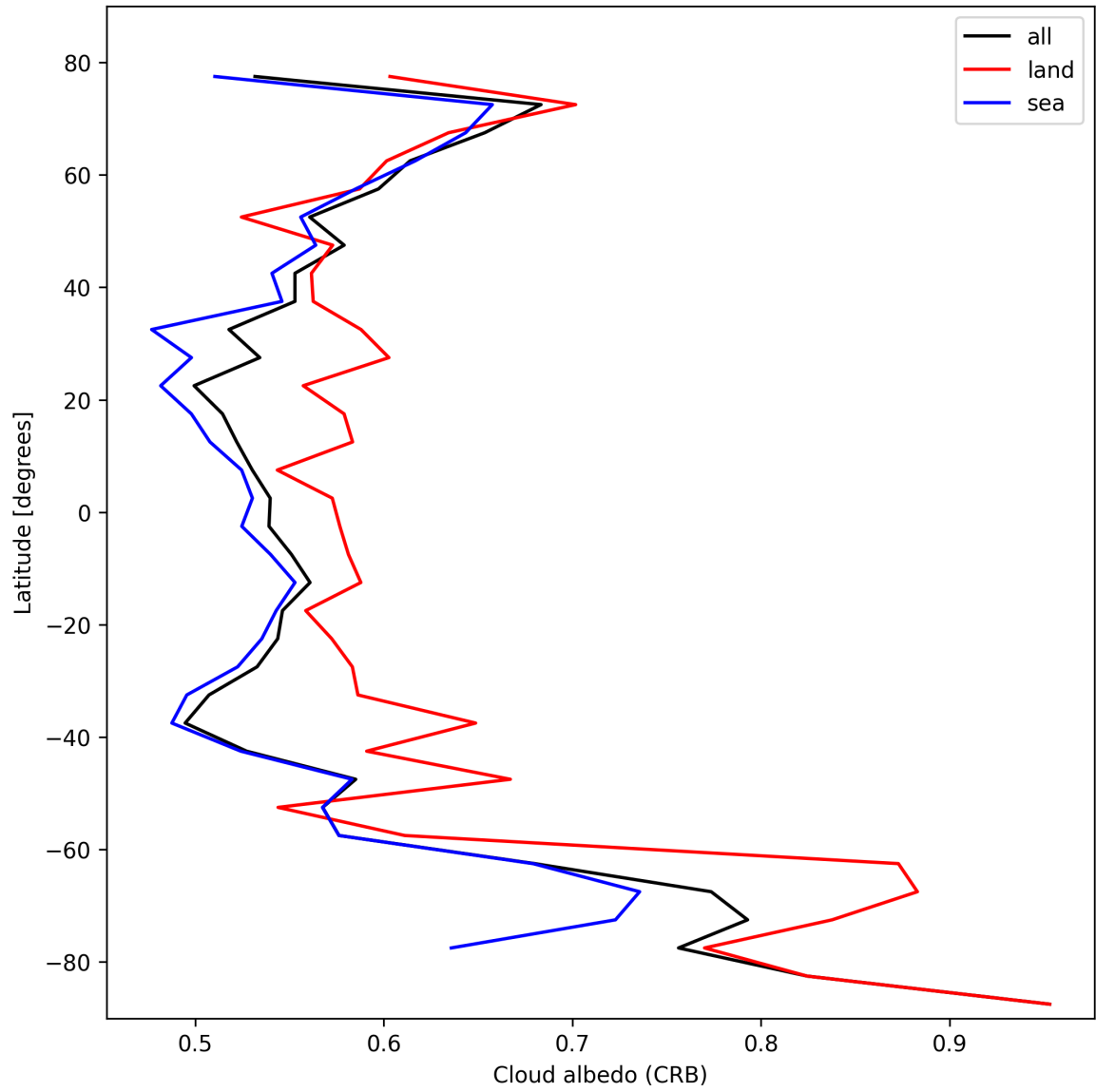


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-10-20 to 2025-10-20.

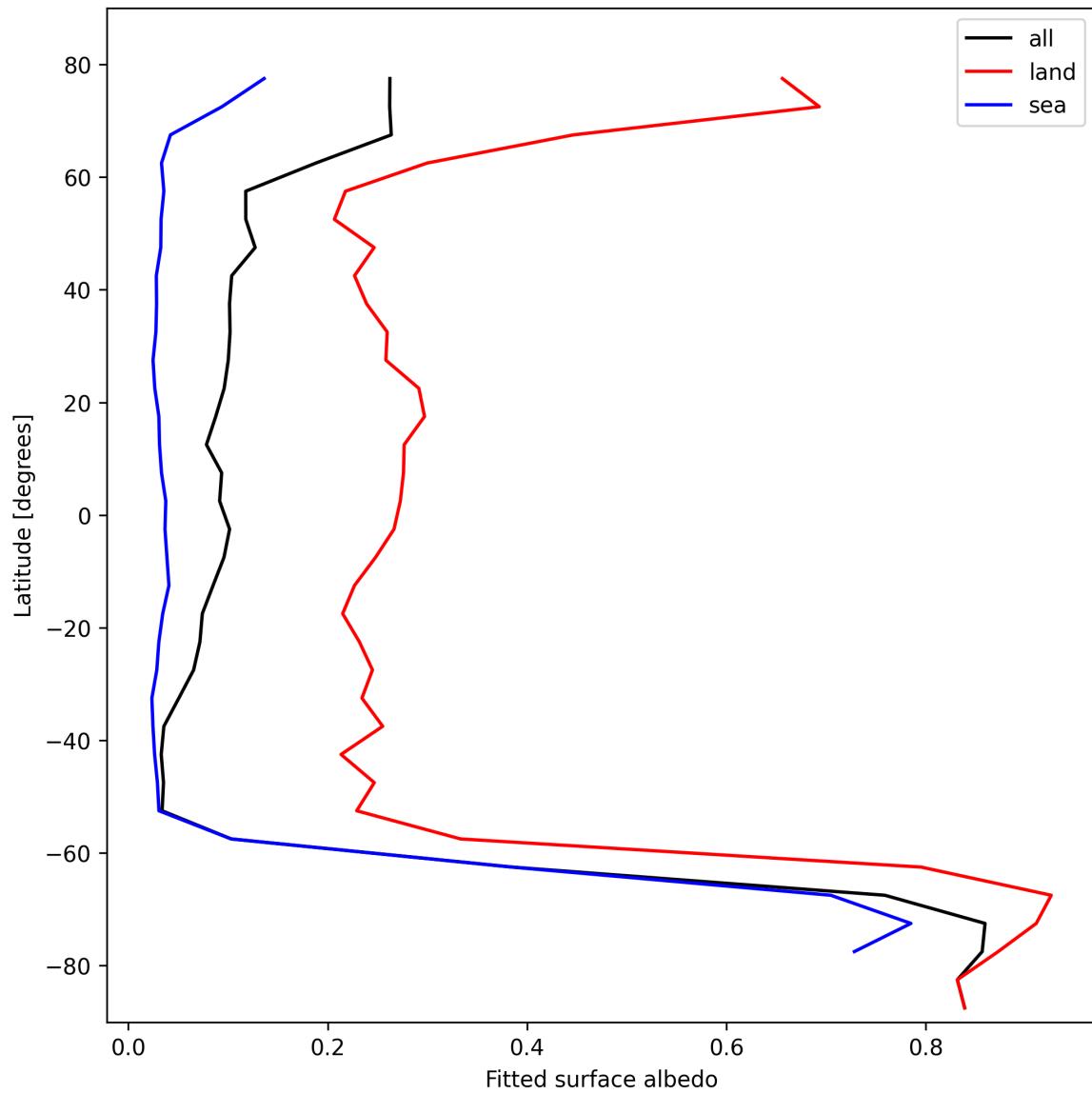


Figure 27: Zonal average of “Fitted surface albedo” for 2025-10-20 to 2025-10-20.

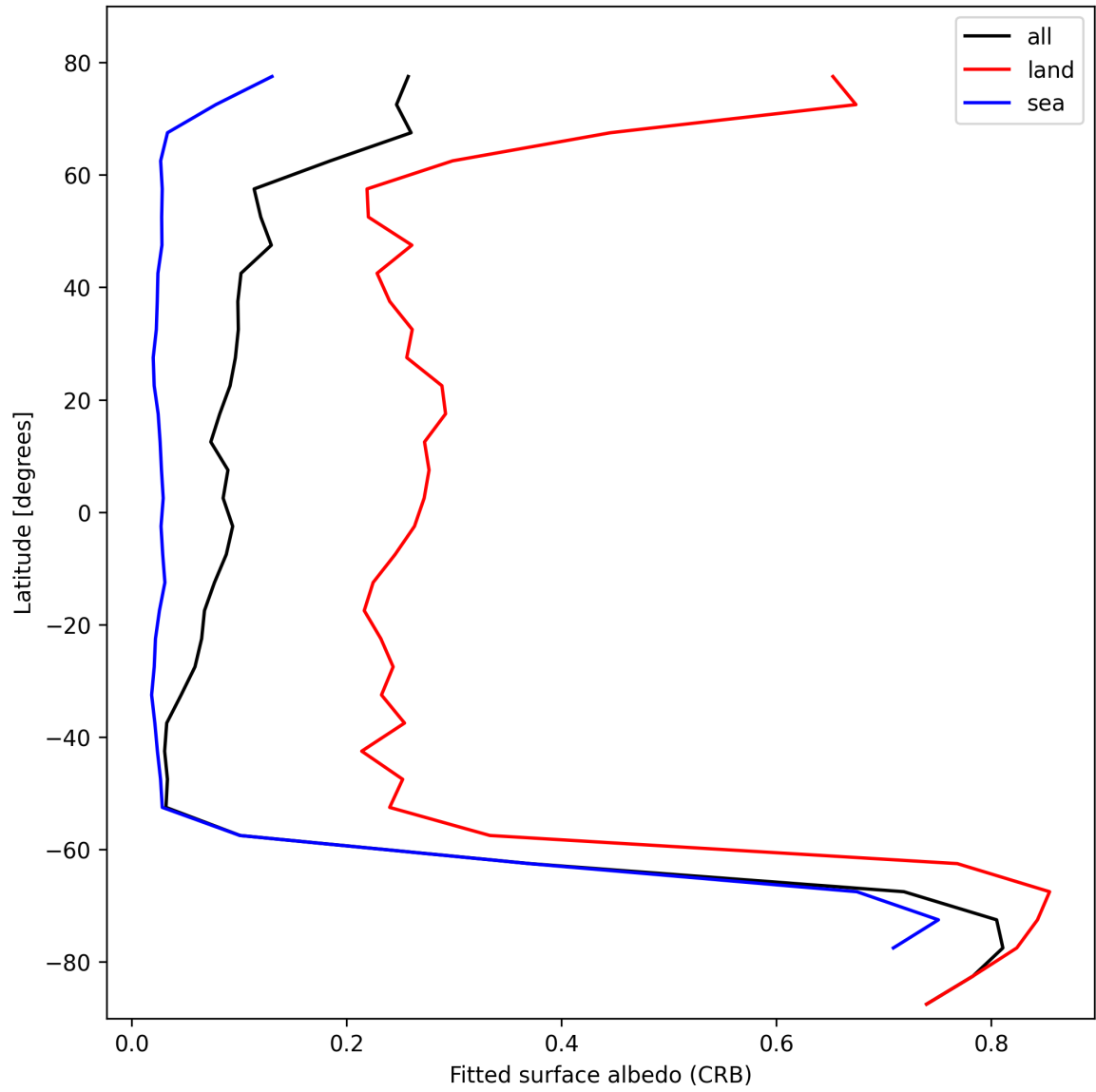


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-10-20 to 2025-10-20.

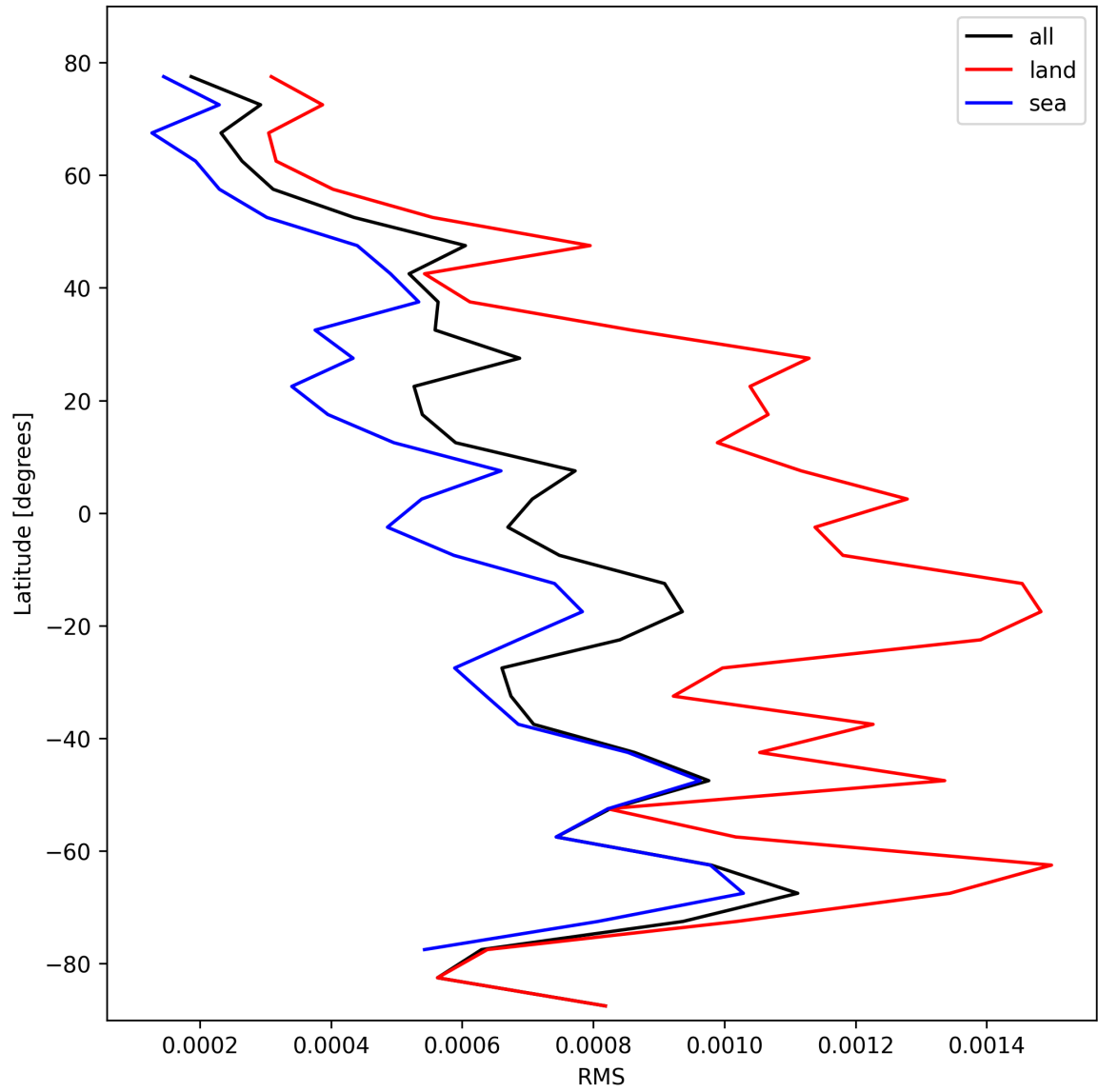


Figure 29: Zonal average of “RMS” for 2025-10-20 to 2025-10-20.

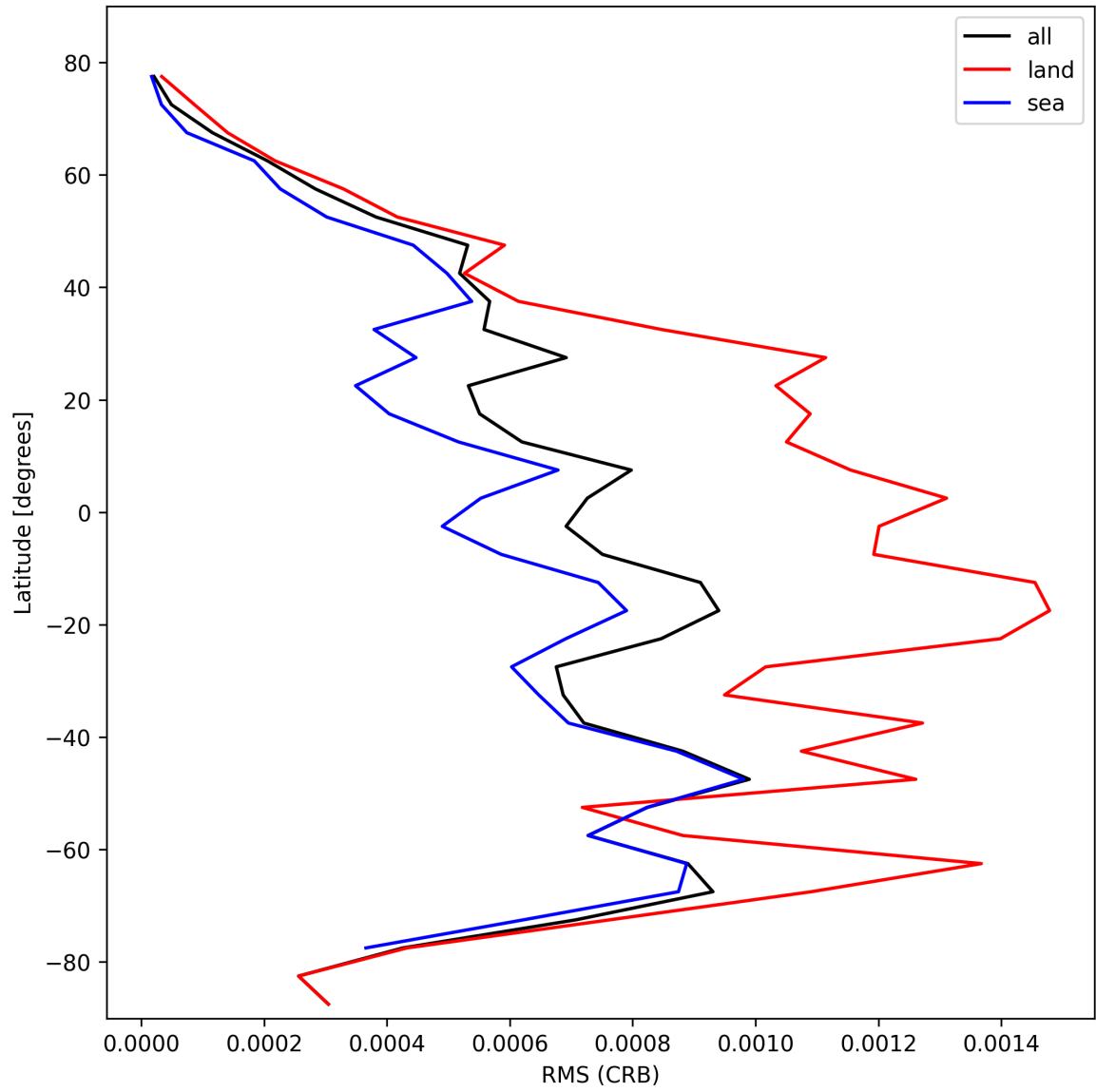


Figure 30: Zonal average of “RMS (CRB)” for 2025-10-20 to 2025-10-20.

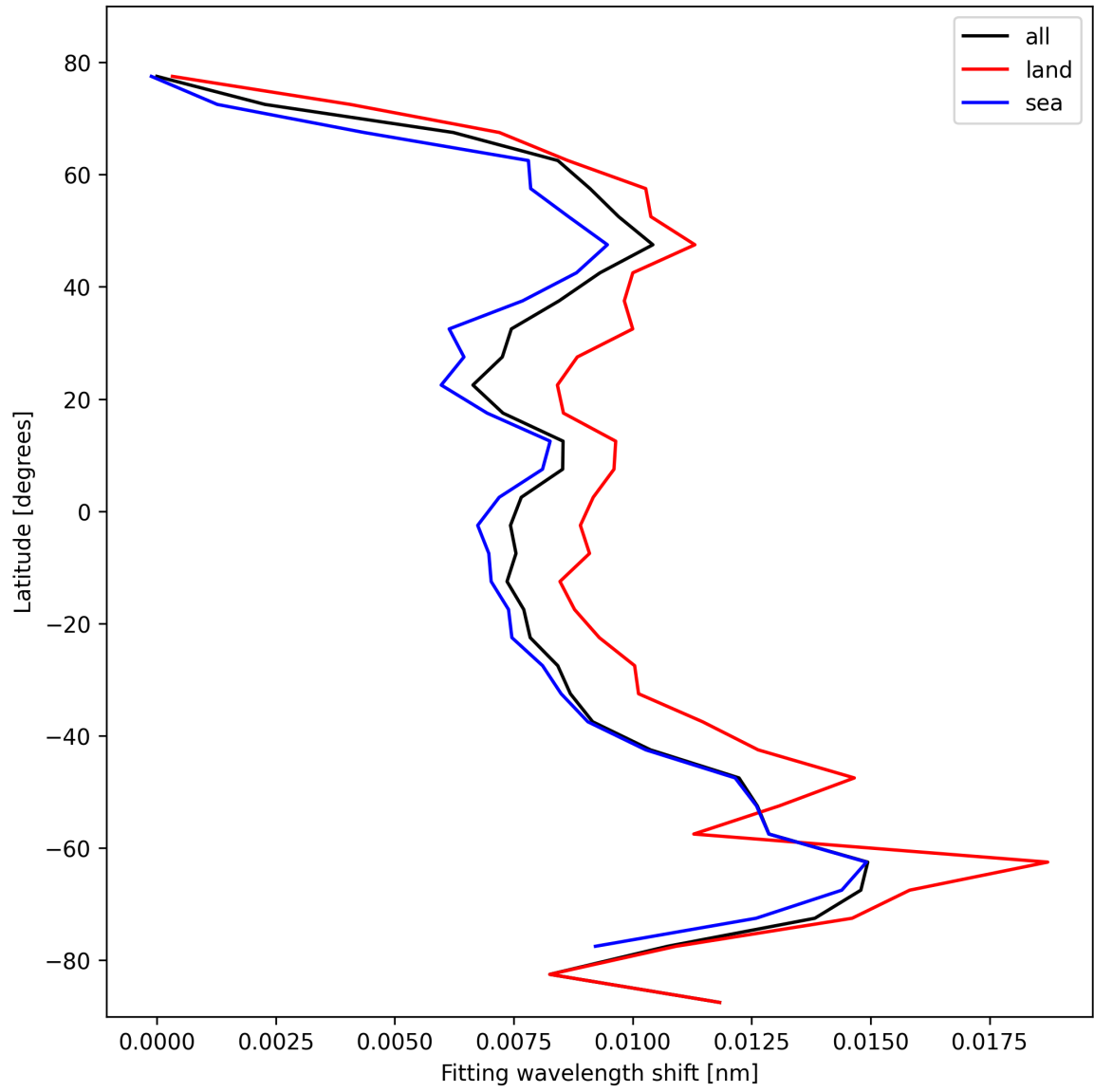


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-10-20 to 2025-10-20.

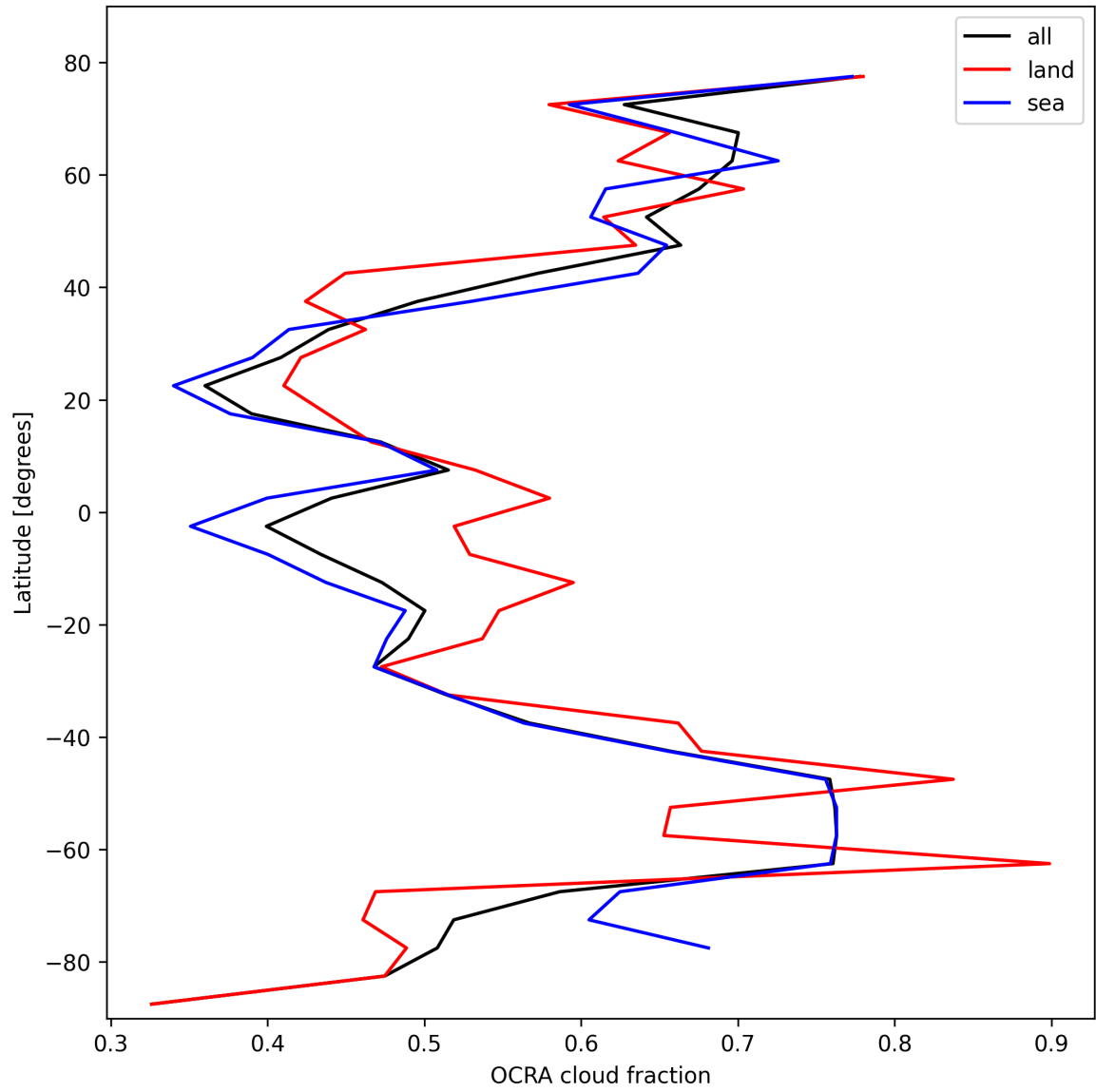


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-10-20 to 2025-10-20.

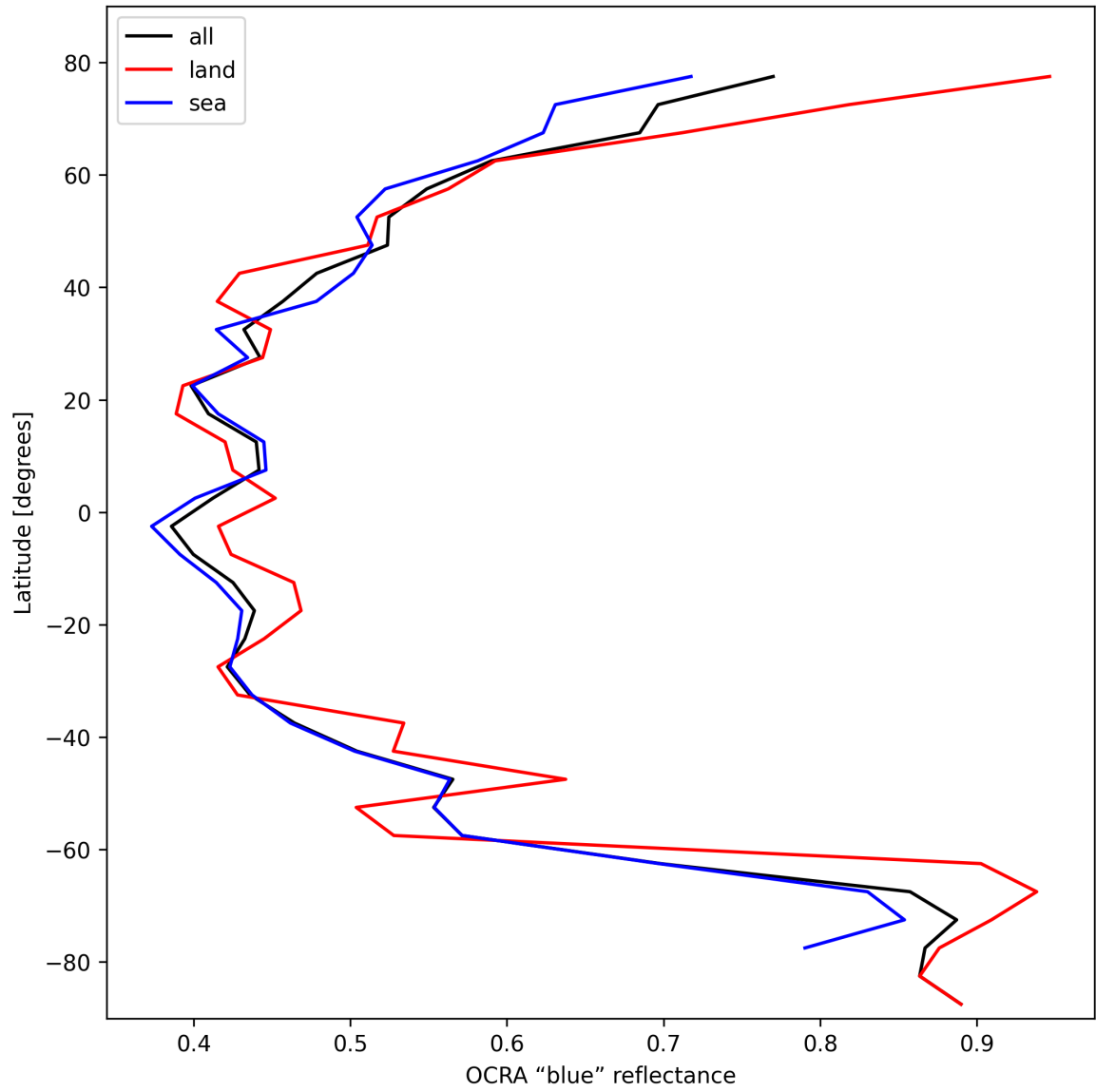


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-10-20 to 2025-10-20.

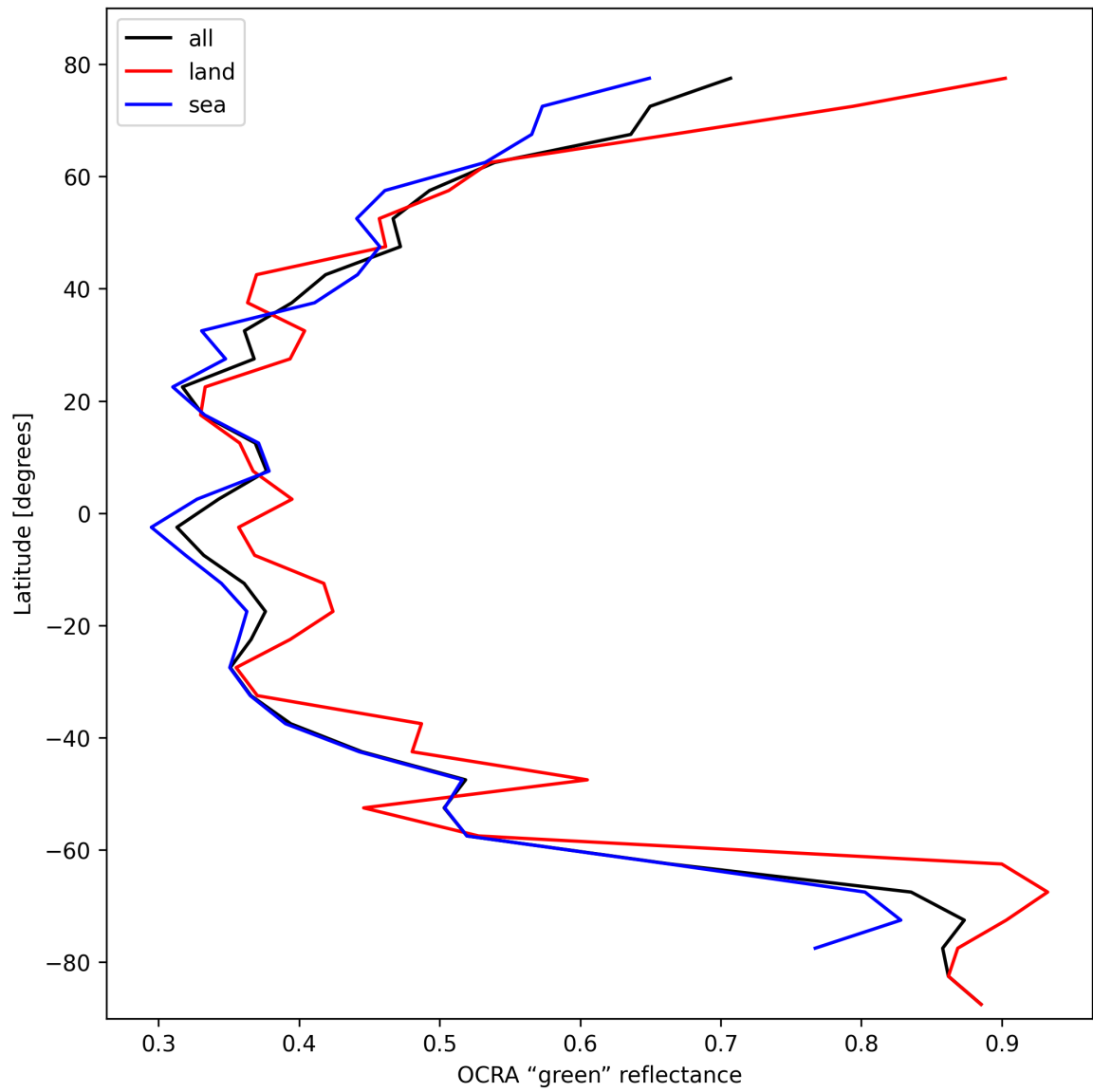


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-10-20 to 2025-10-20.

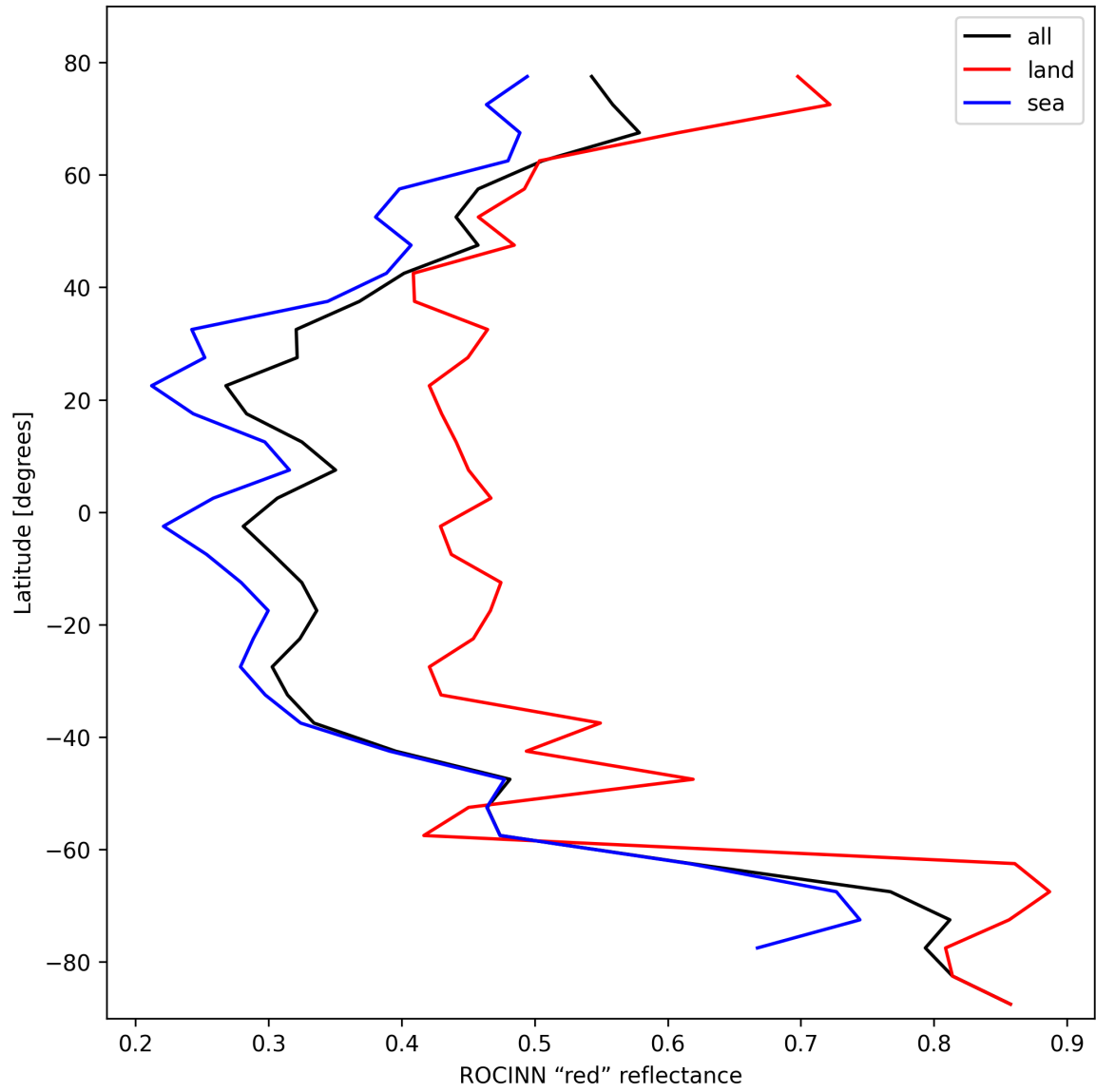


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-10-20 to 2025-10-20.

8 Histograms

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

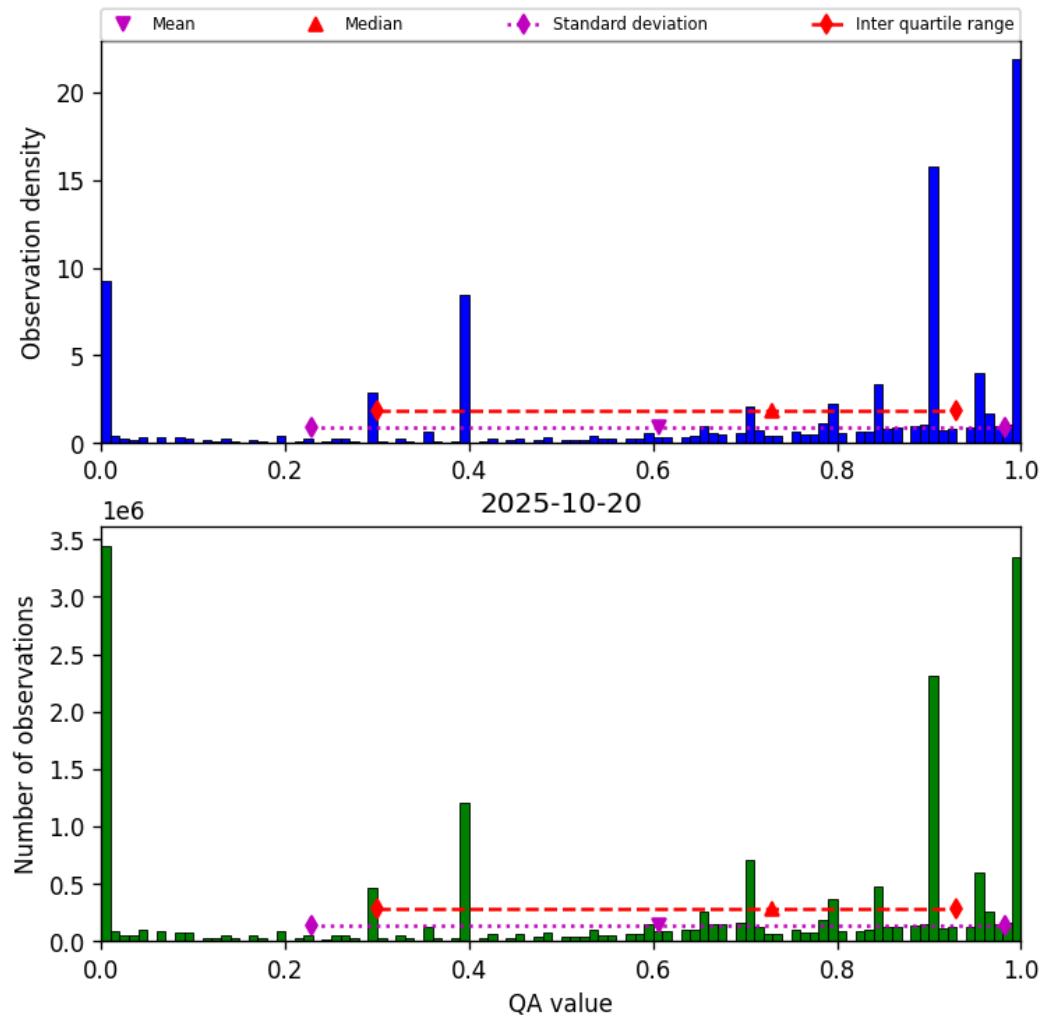


Figure 36: Histogram of “QA value” for 2025-10-20 to 2025-10-20

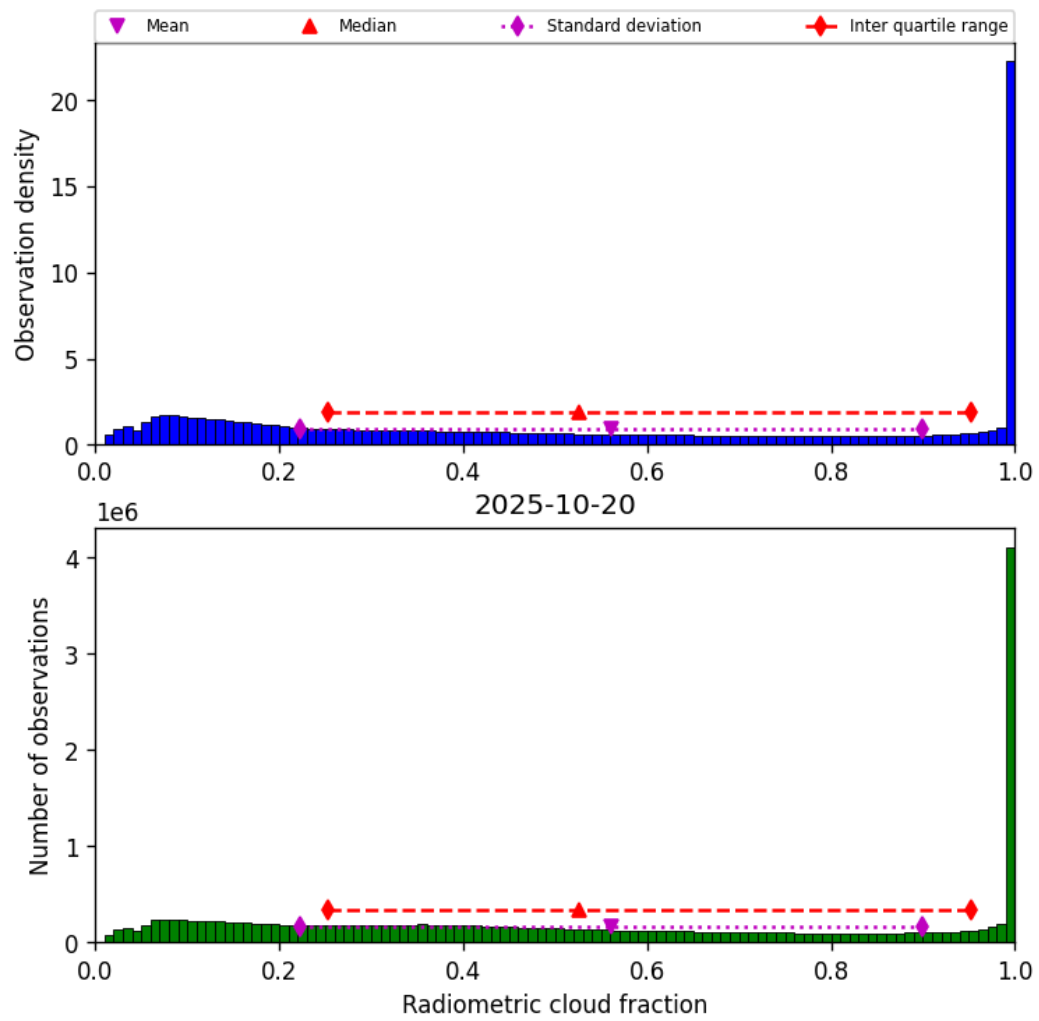


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-10-20 to 2025-10-20

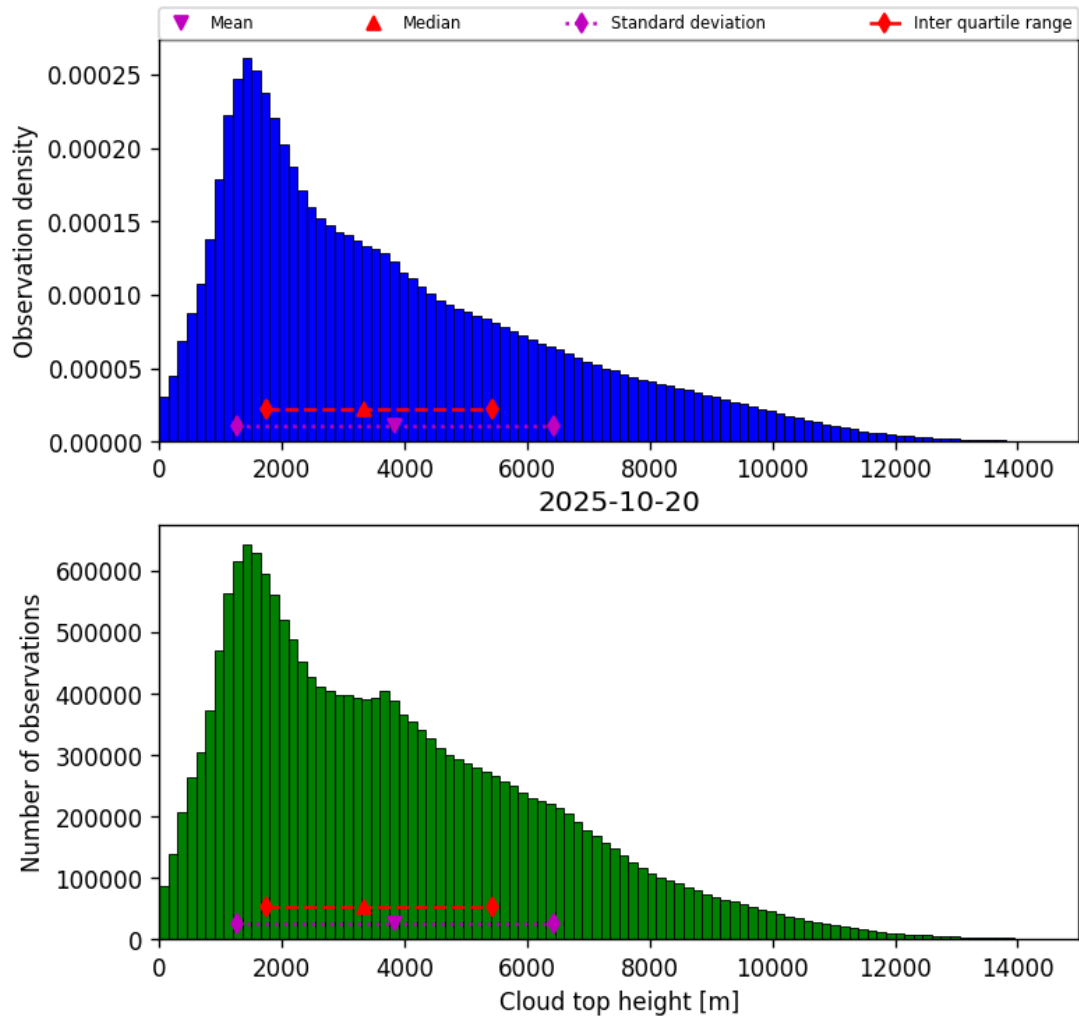


Figure 38: Histogram of “Cloud top height” for 2025-10-20 to 2025-10-20

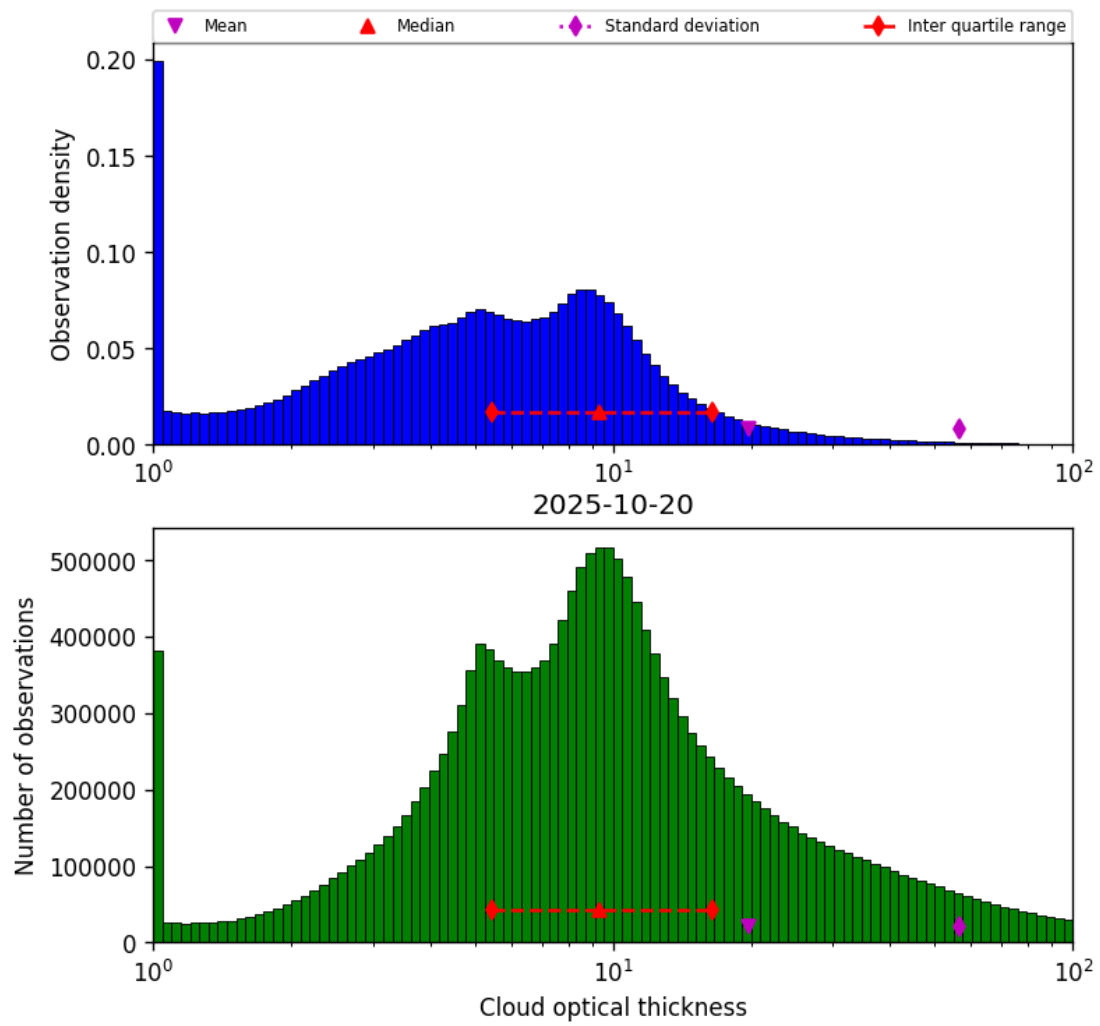


Figure 39: Histogram of “Cloud optical thickness” for 2025-10-20 to 2025-10-20

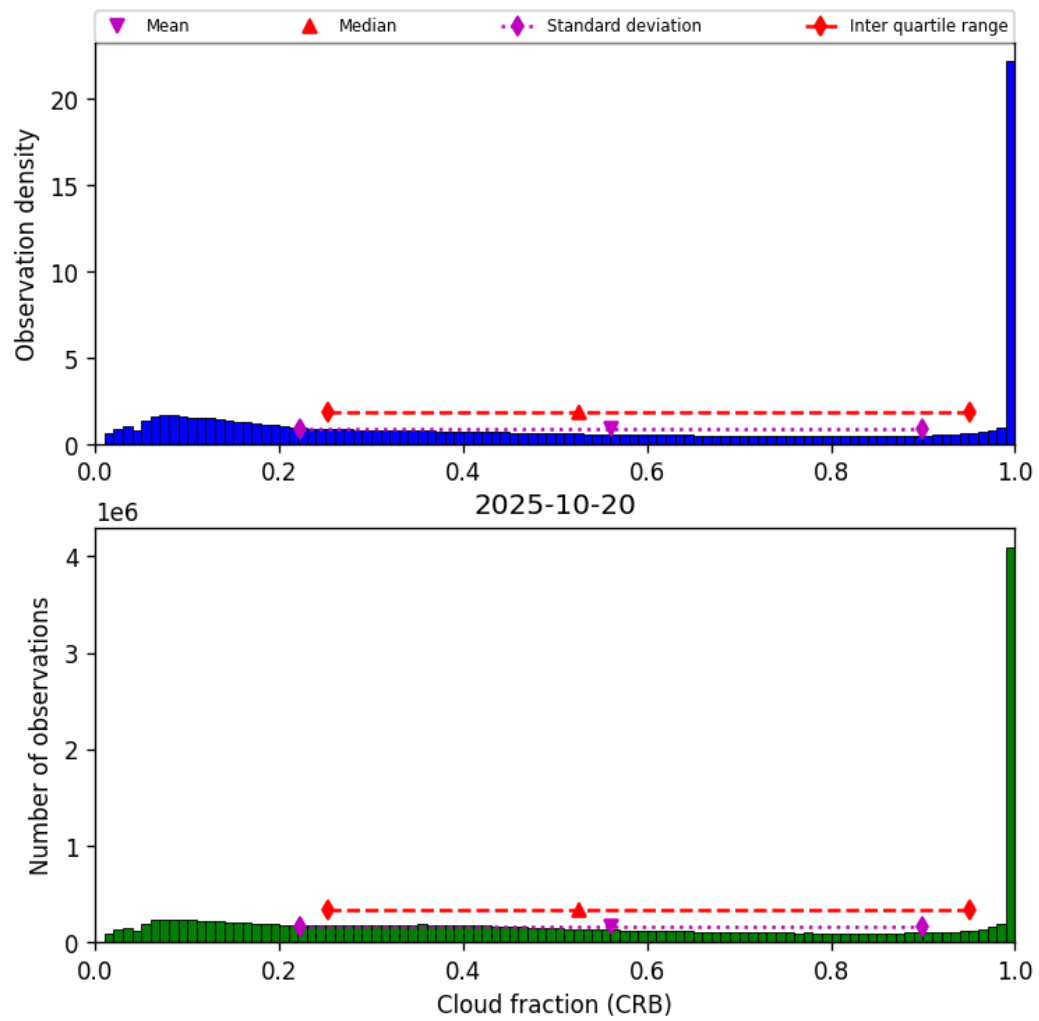


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-10-20 to 2025-10-20

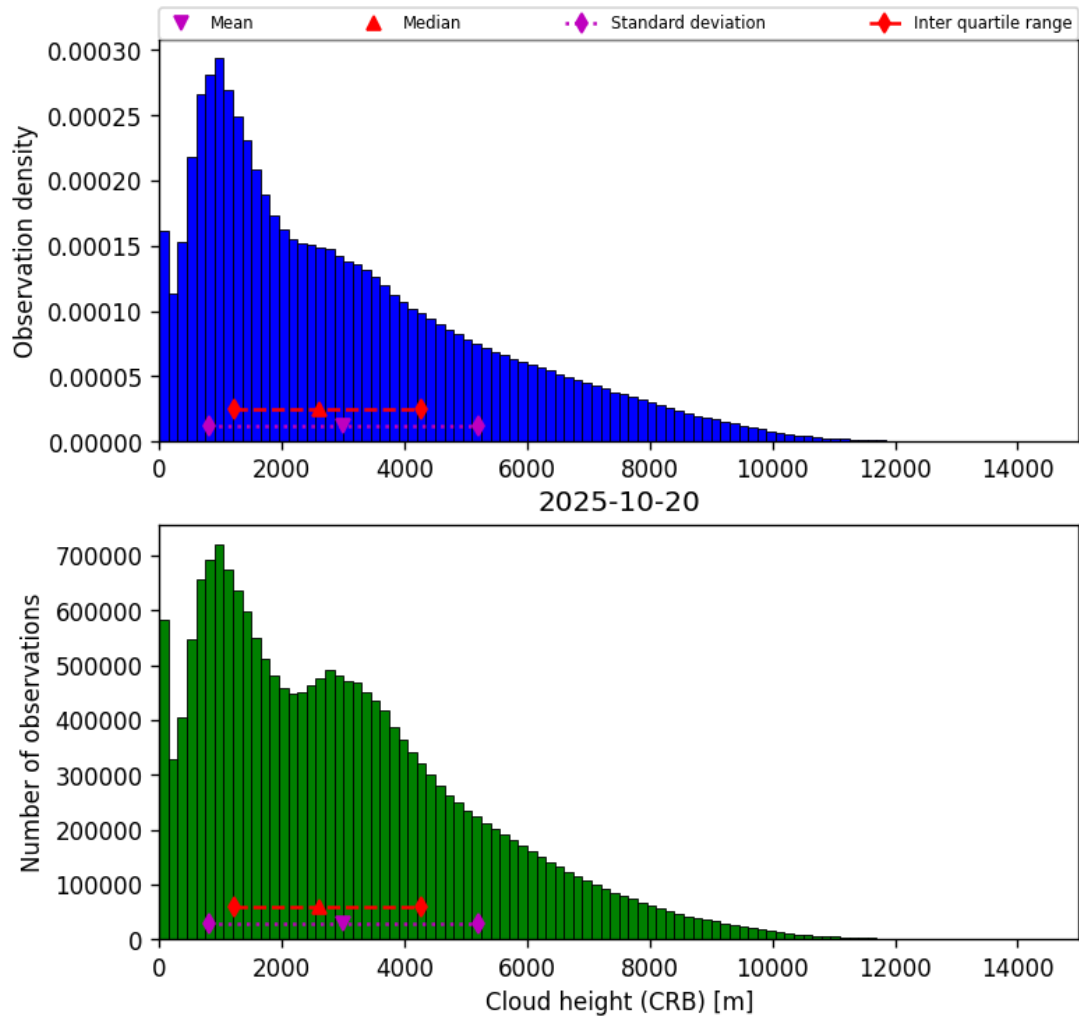


Figure 41: Histogram of “Cloud height (CRB)” for 2025-10-20 to 2025-10-20

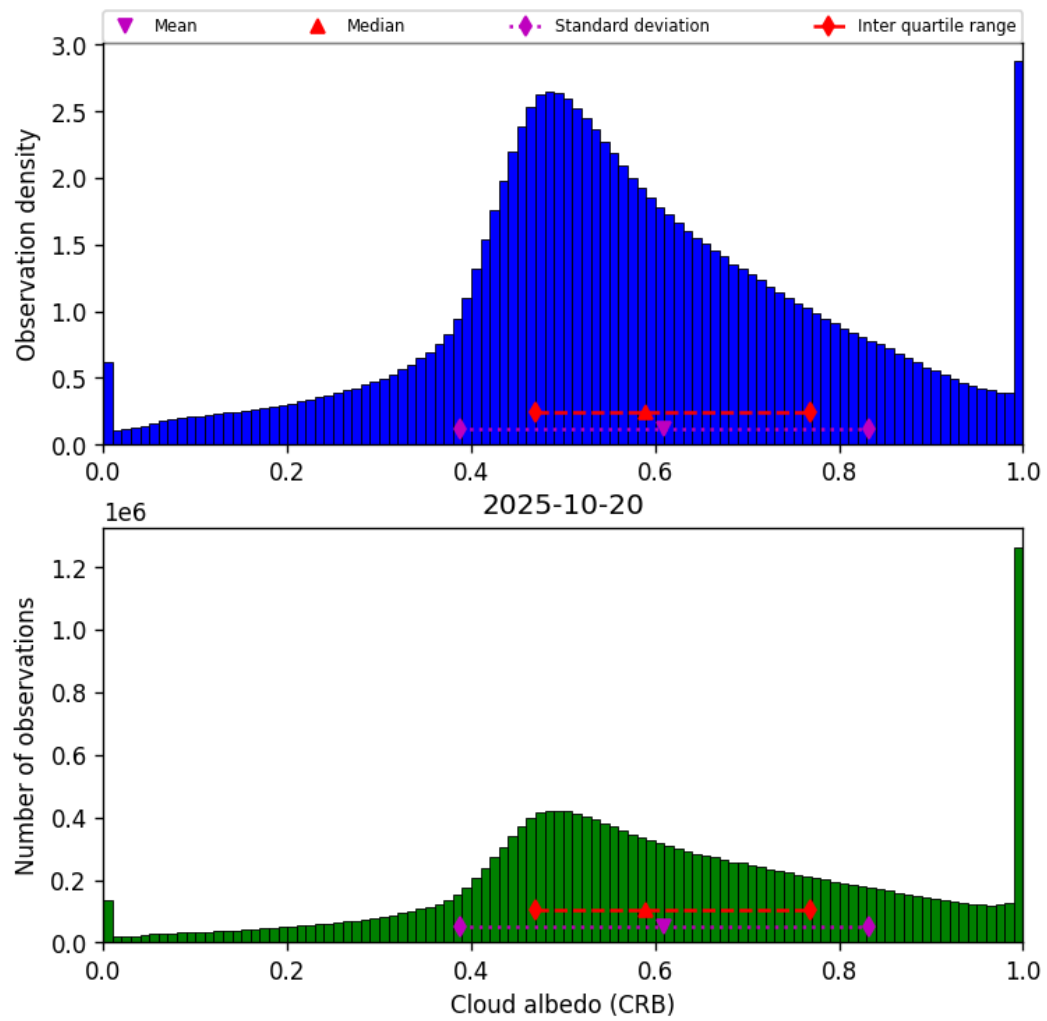


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-10-20 to 2025-10-20

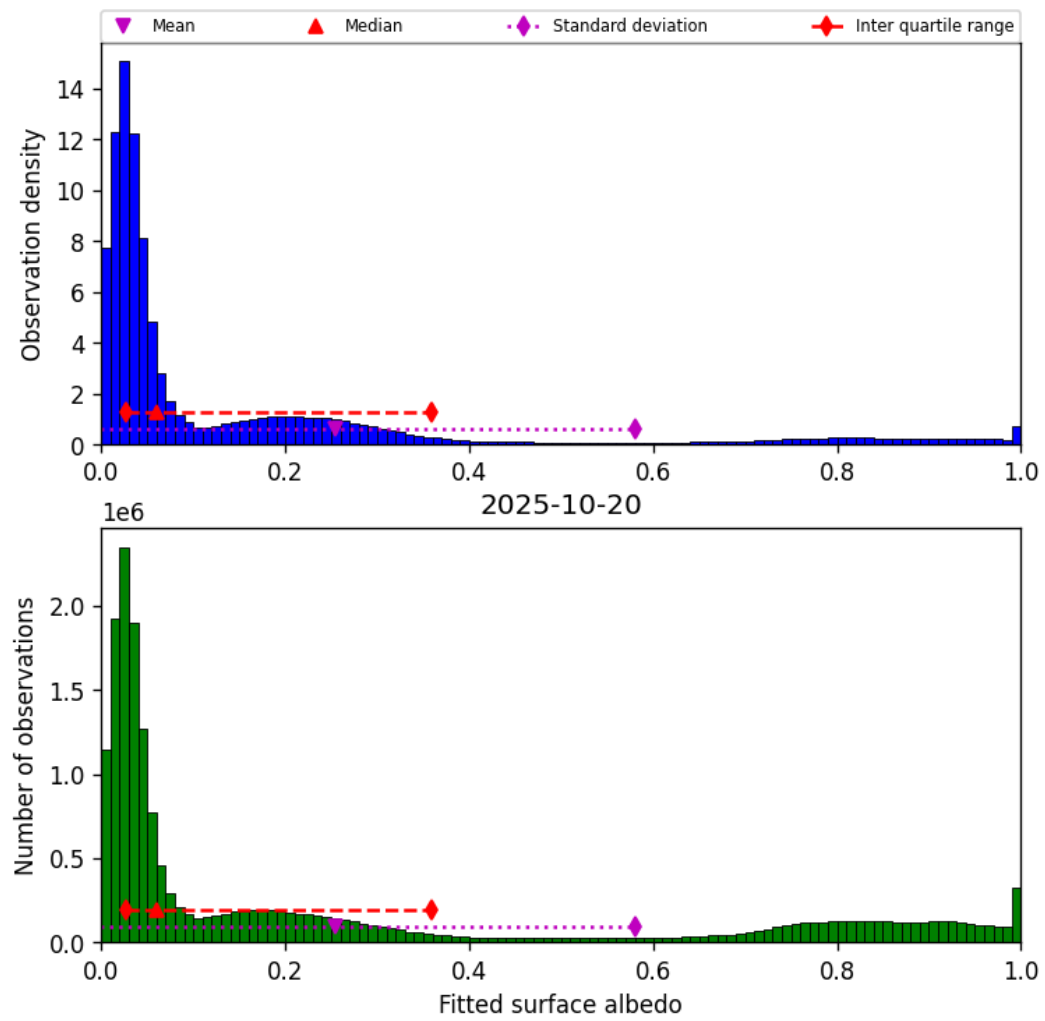


Figure 43: Histogram of “Fitted surface albedo” for 2025-10-20 to 2025-10-20

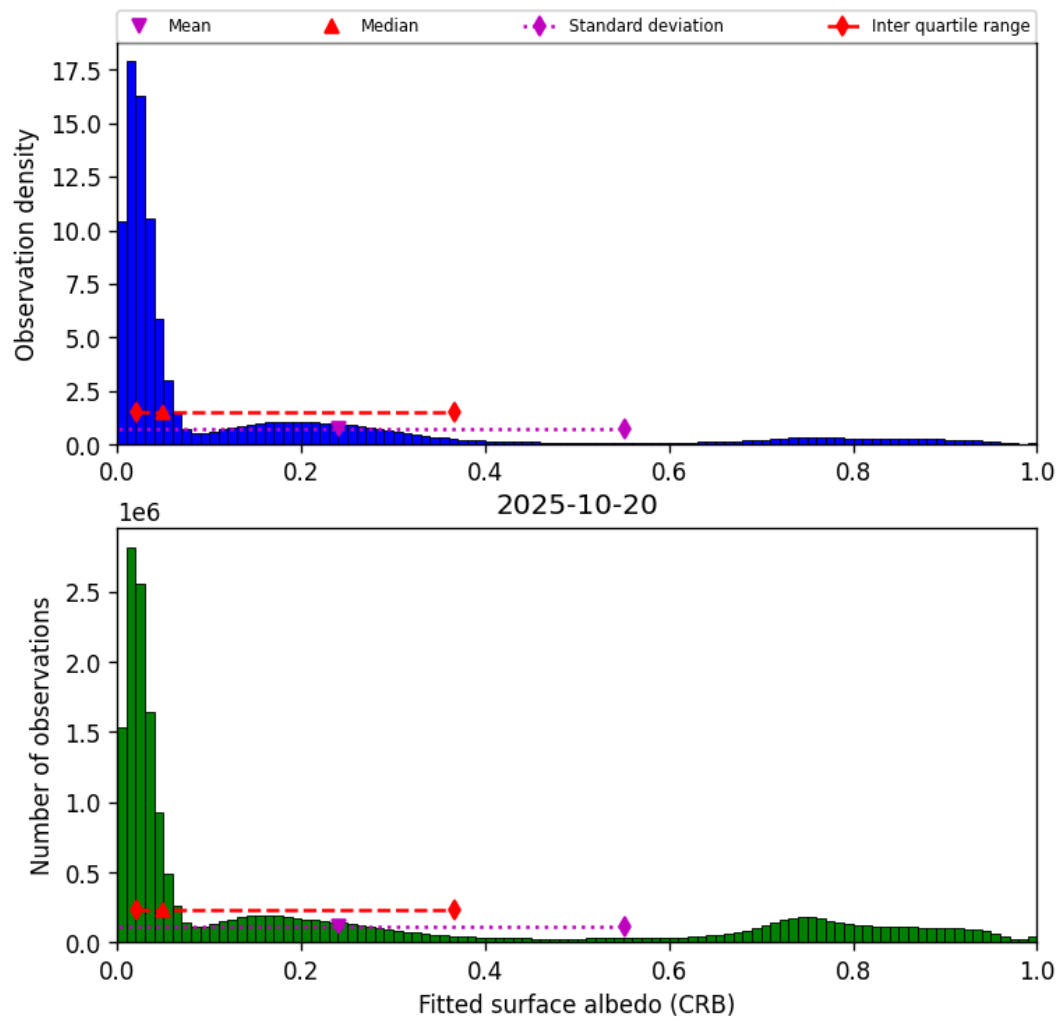


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-10-20 to 2025-10-20

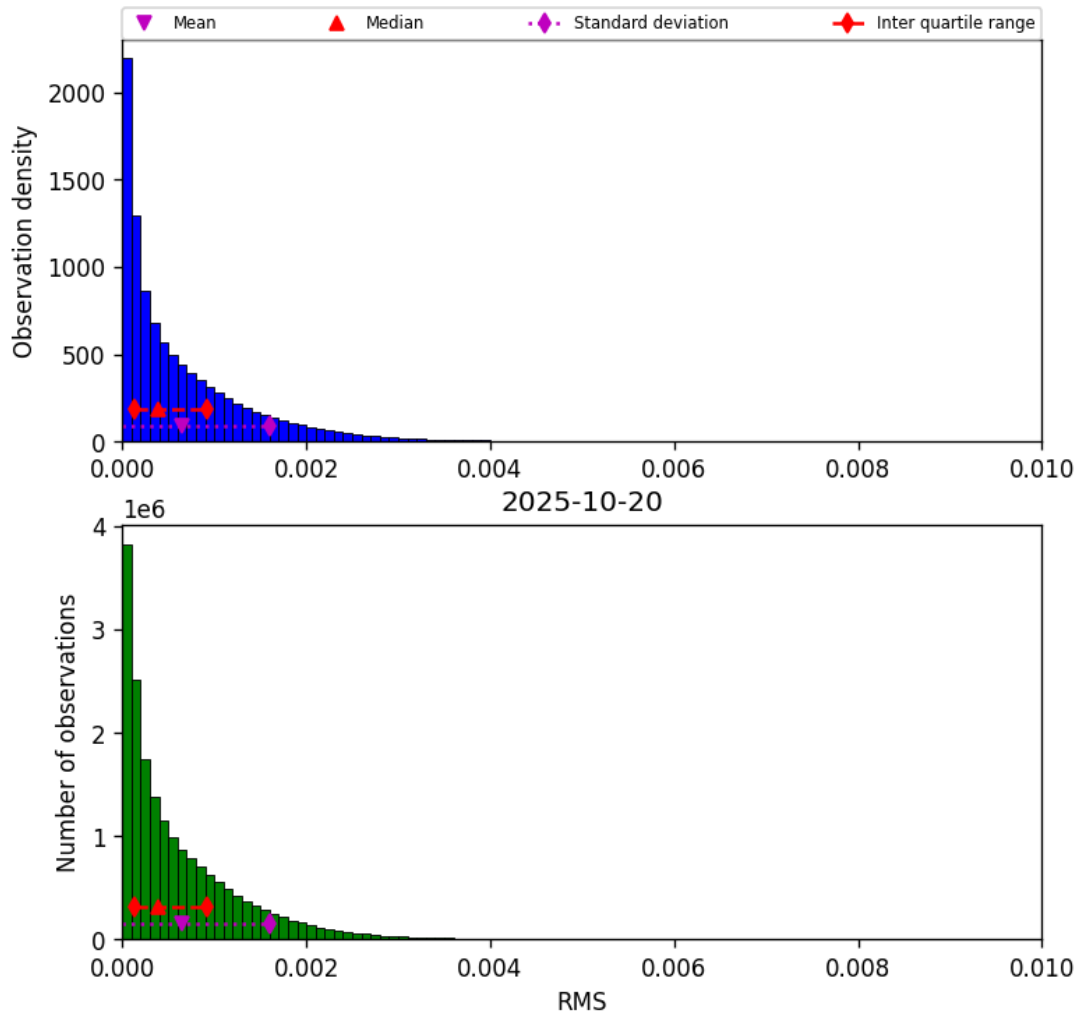


Figure 45: Histogram of “RMS” for 2025-10-20 to 2025-10-20

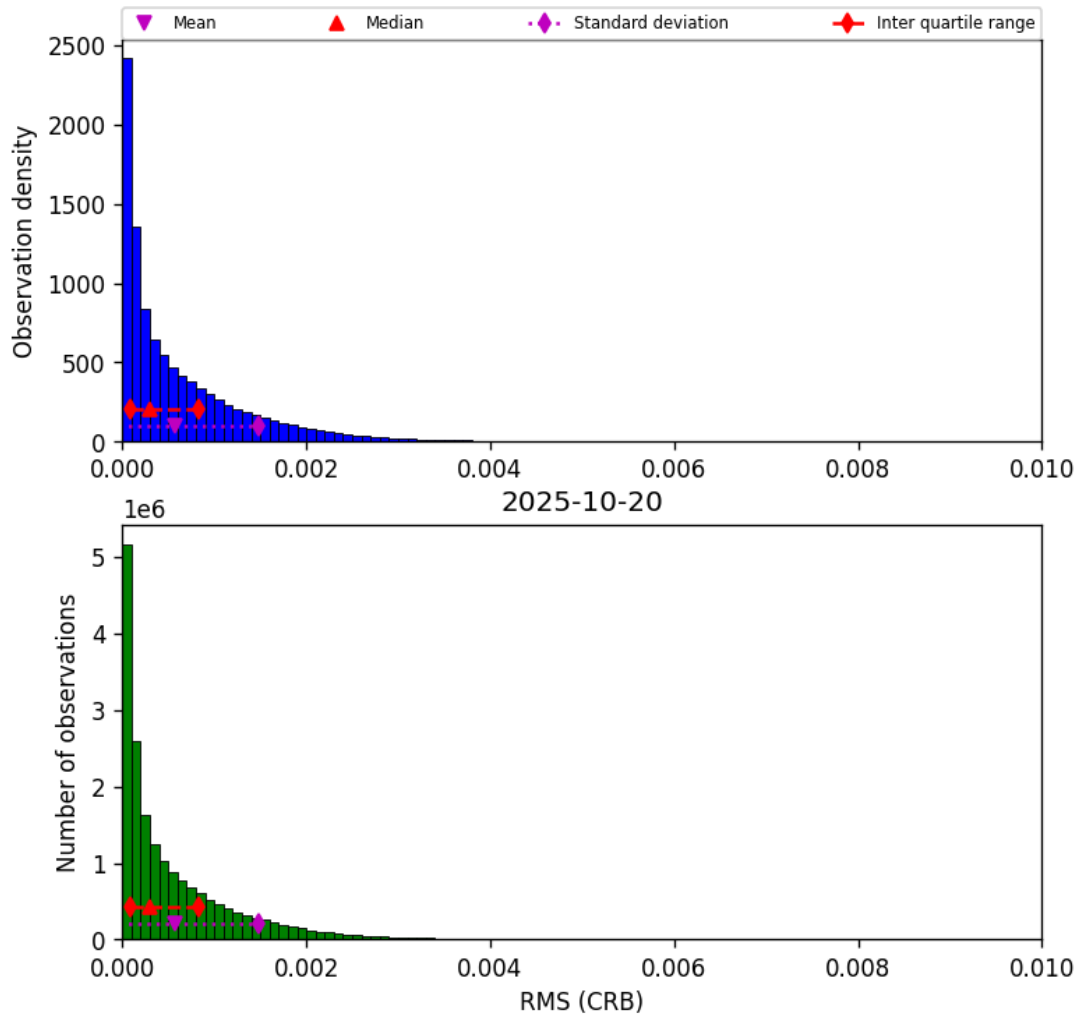


Figure 46: Histogram of “RMS (CRB)” for 2025-10-20 to 2025-10-20

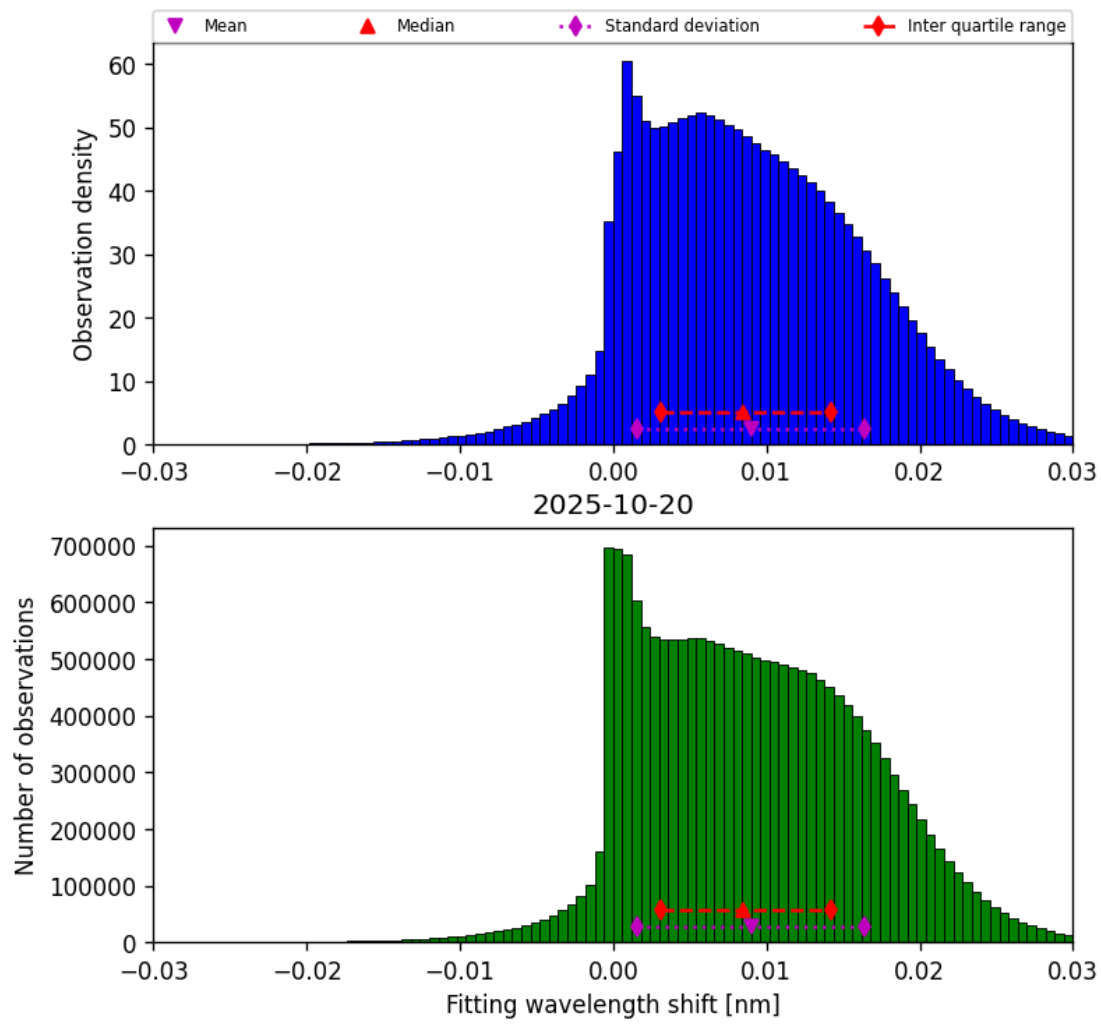


Figure 47: Histogram of “Fitting wavelength shift” for 2025-10-20 to 2025-10-20

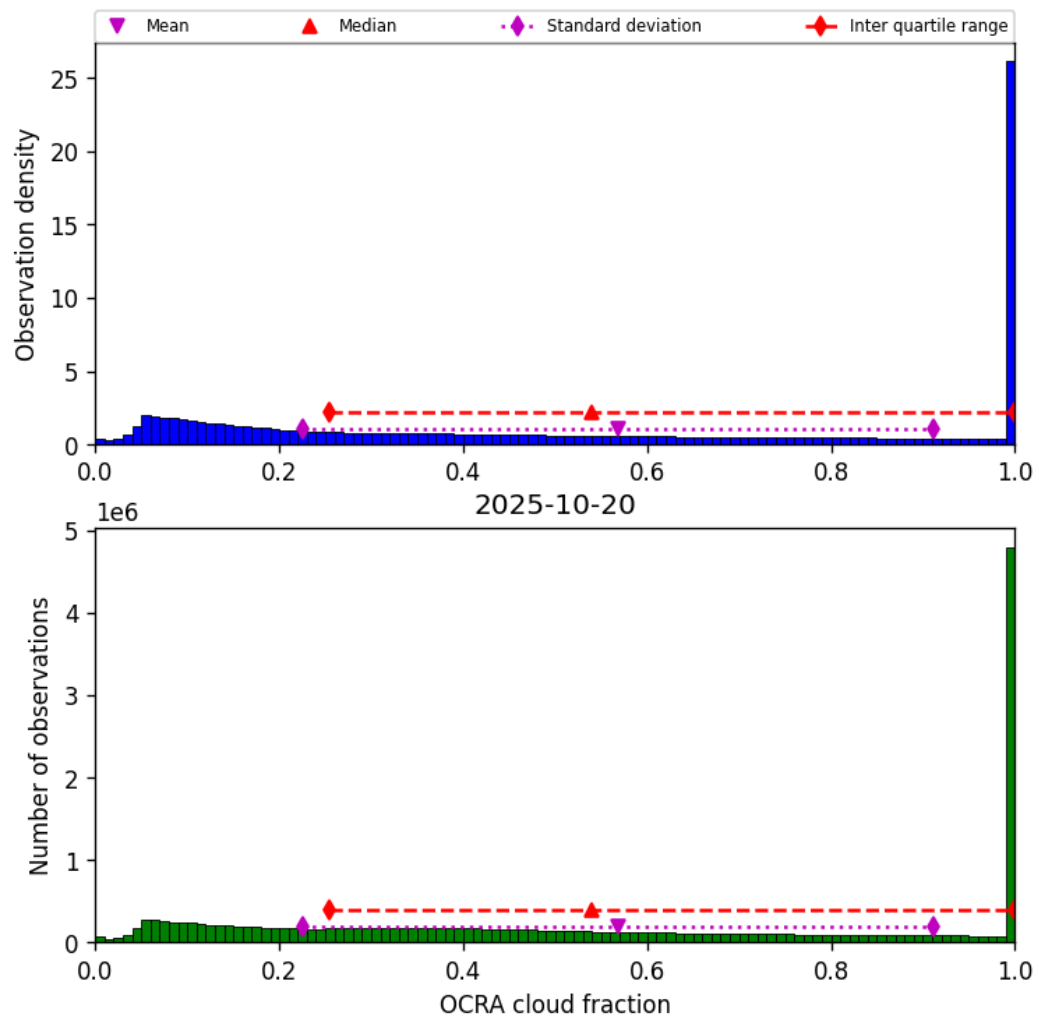


Figure 48: Histogram of “OCRA cloud fraction” for 2025-10-20 to 2025-10-20

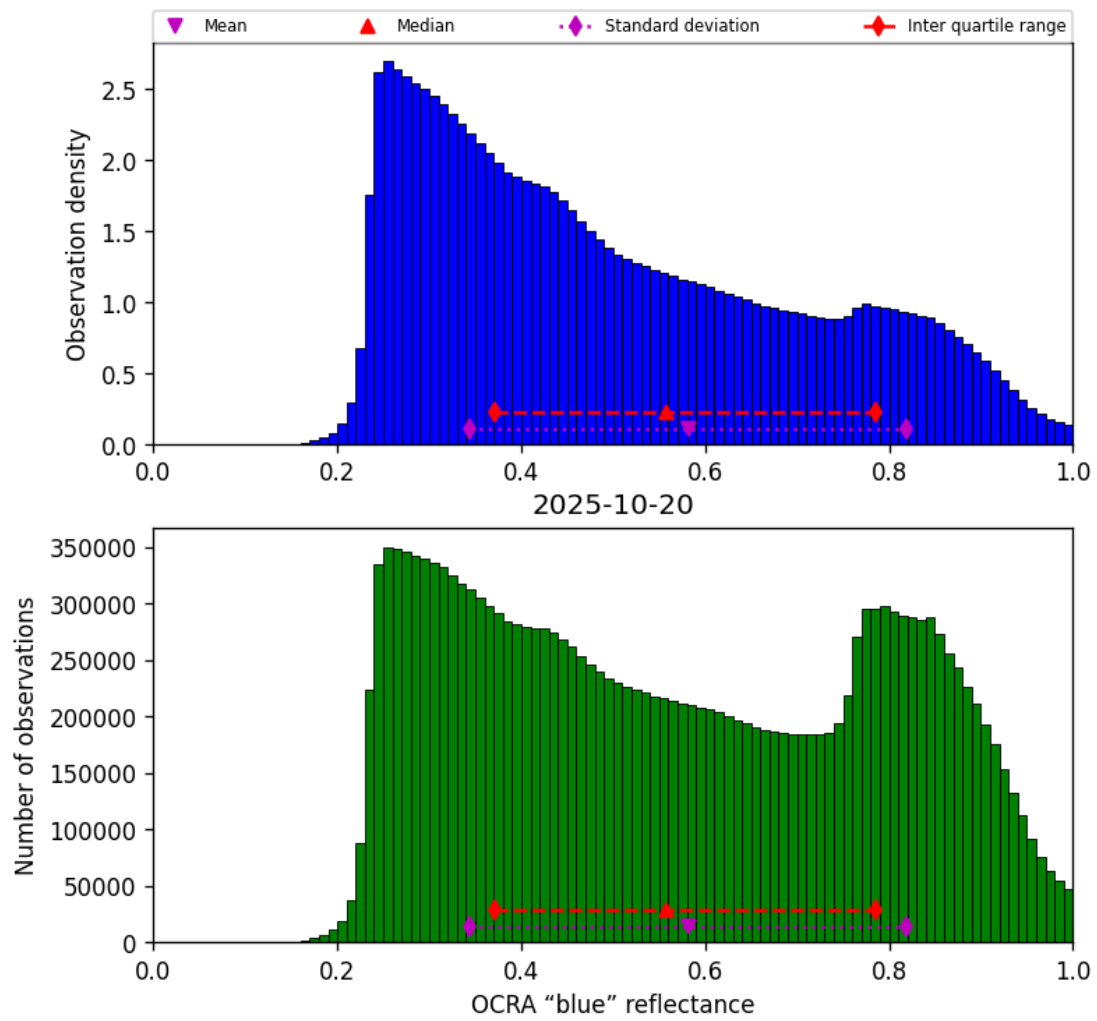


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-10-20 to 2025-10-20

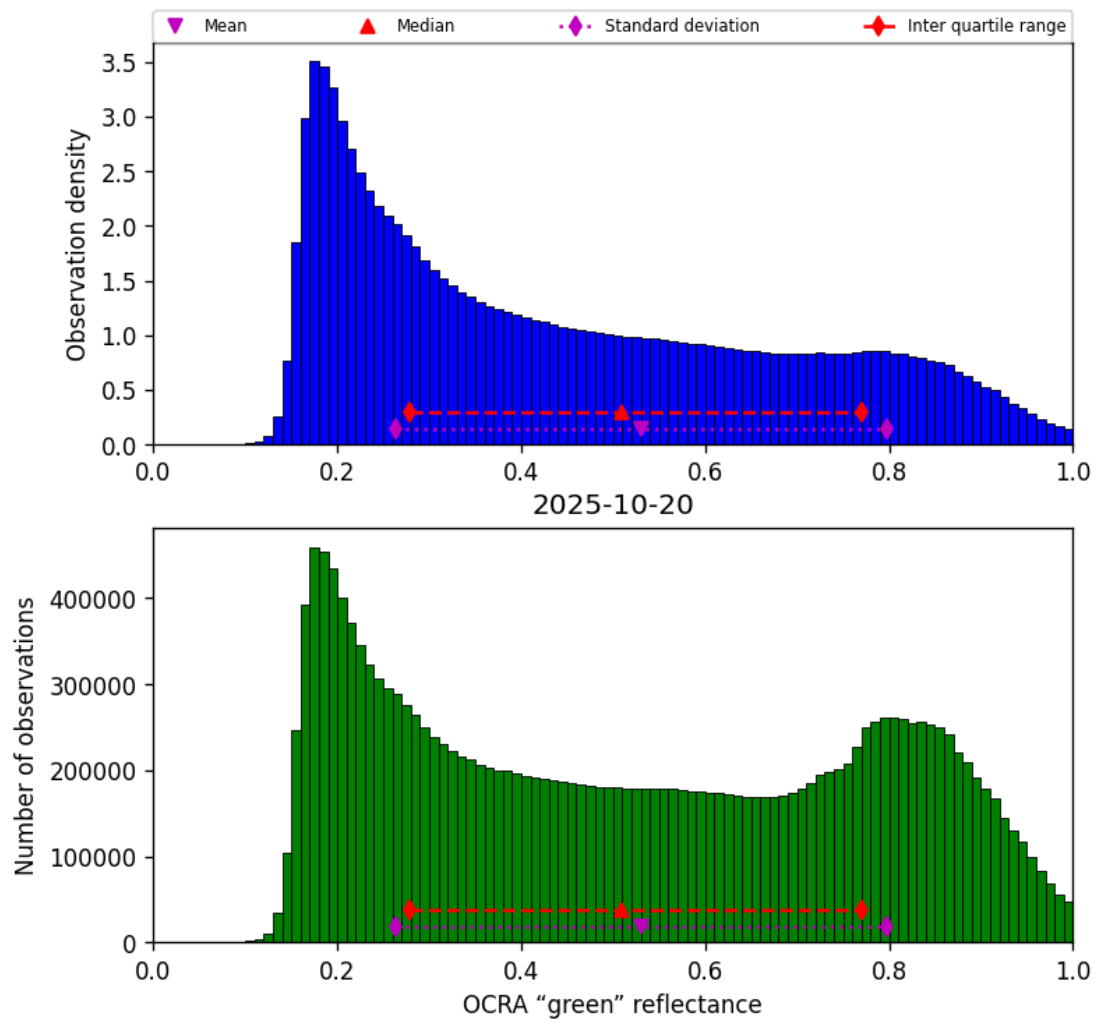


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-10-20 to 2025-10-20

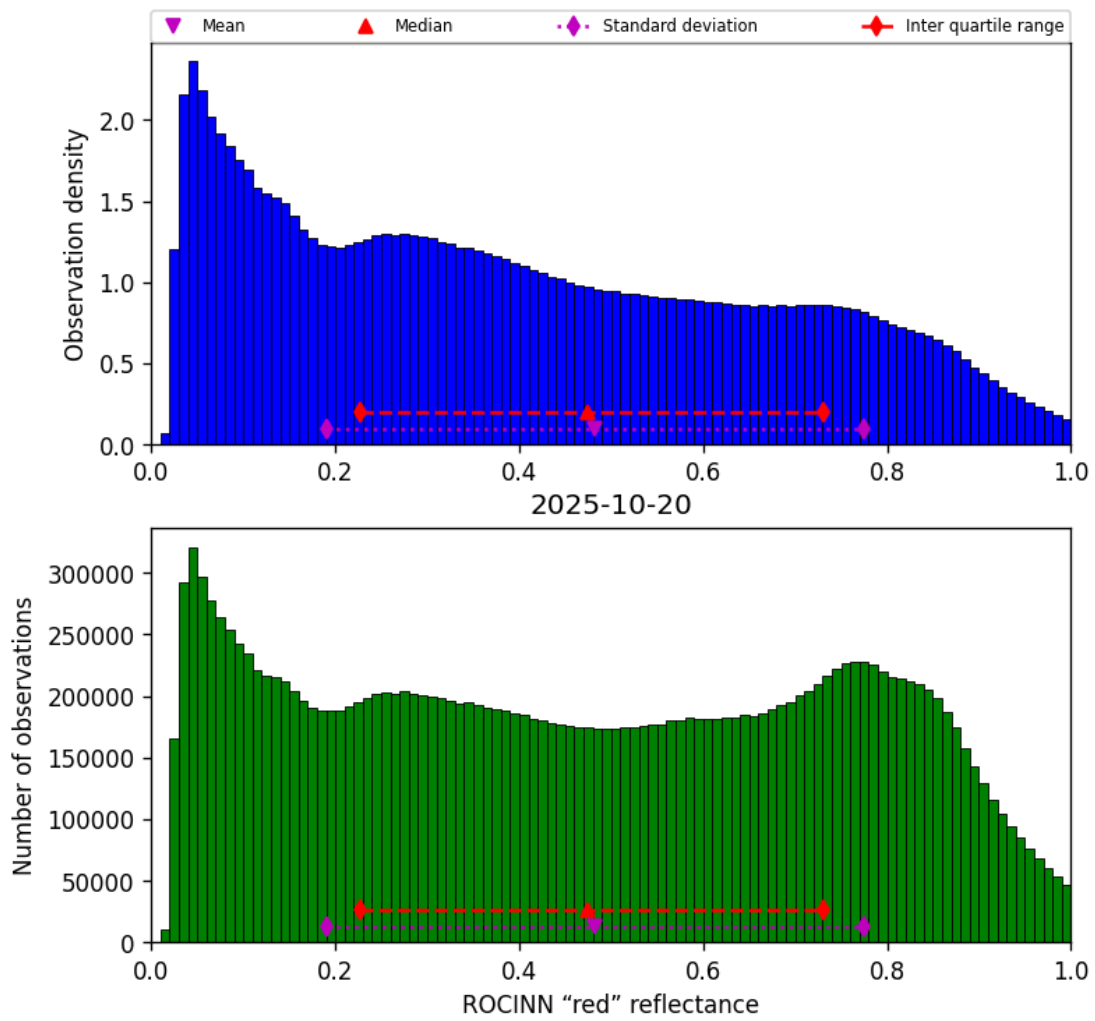


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-10-20 to 2025-10-20

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.

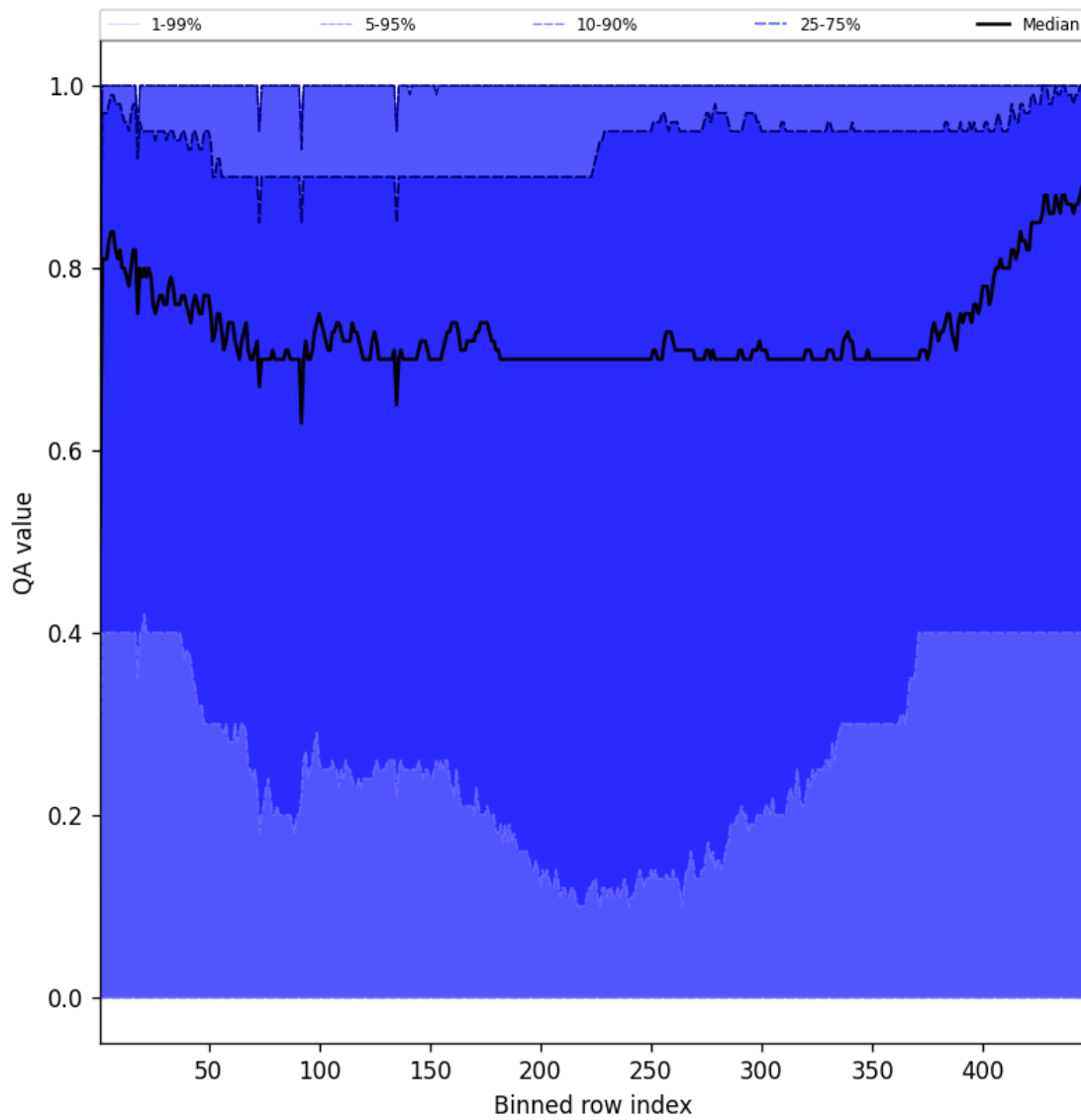


Figure 52: Along track statistics of "QA value" for 2025-10-20 to 2025-10-20

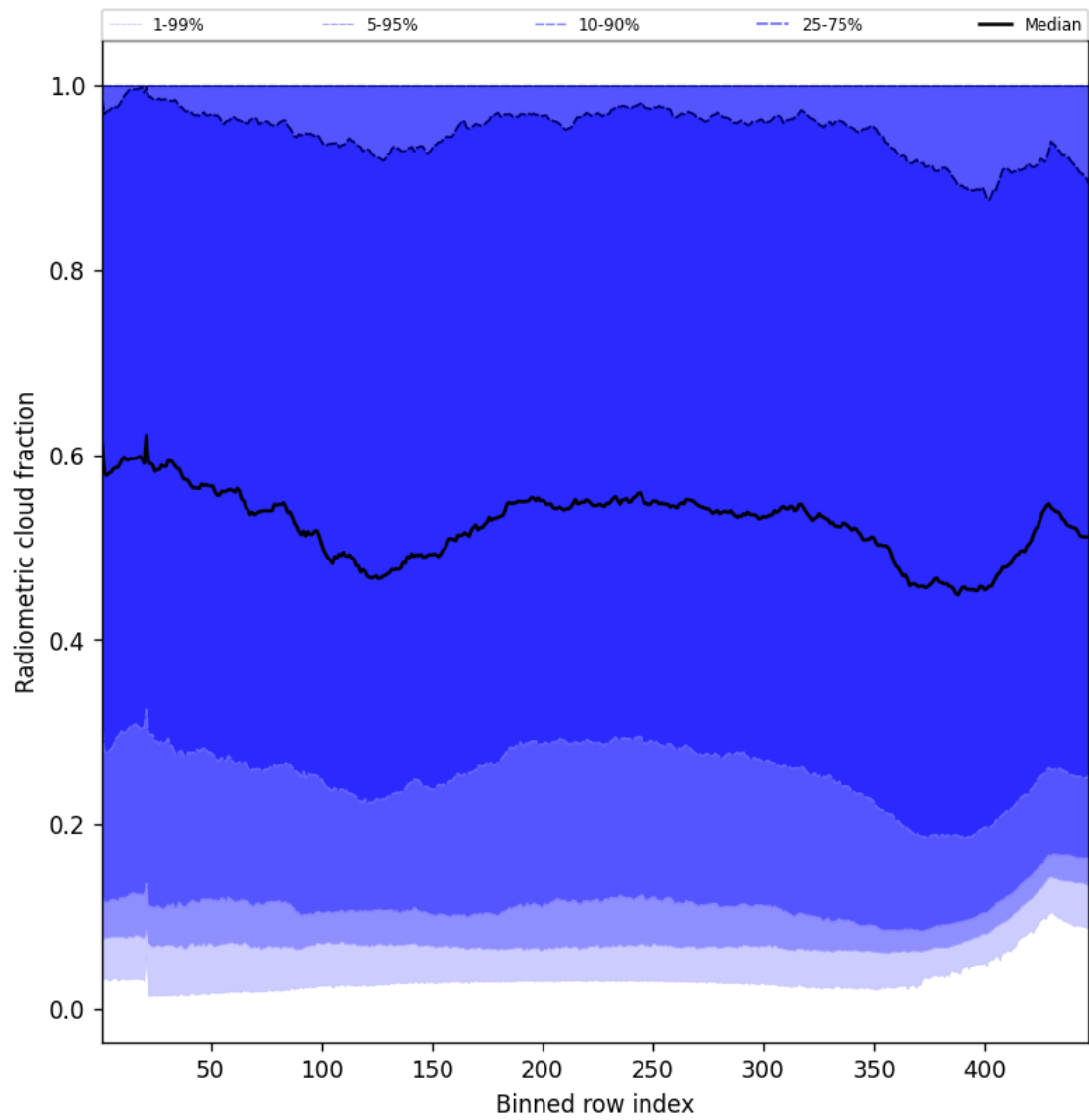


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-10-20 to 2025-10-20

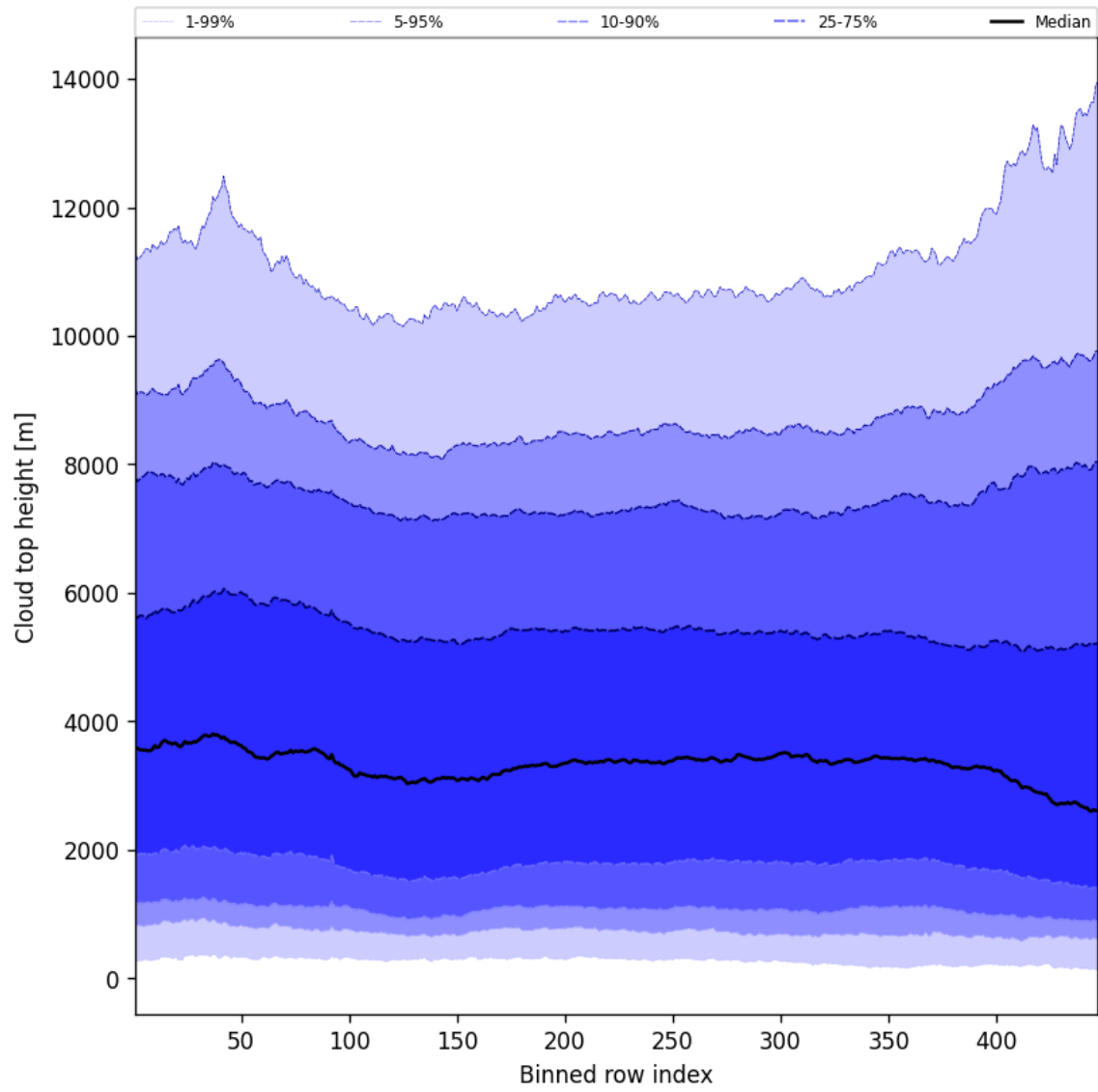


Figure 54: Along track statistics of “Cloud top height” for 2025-10-20 to 2025-10-20

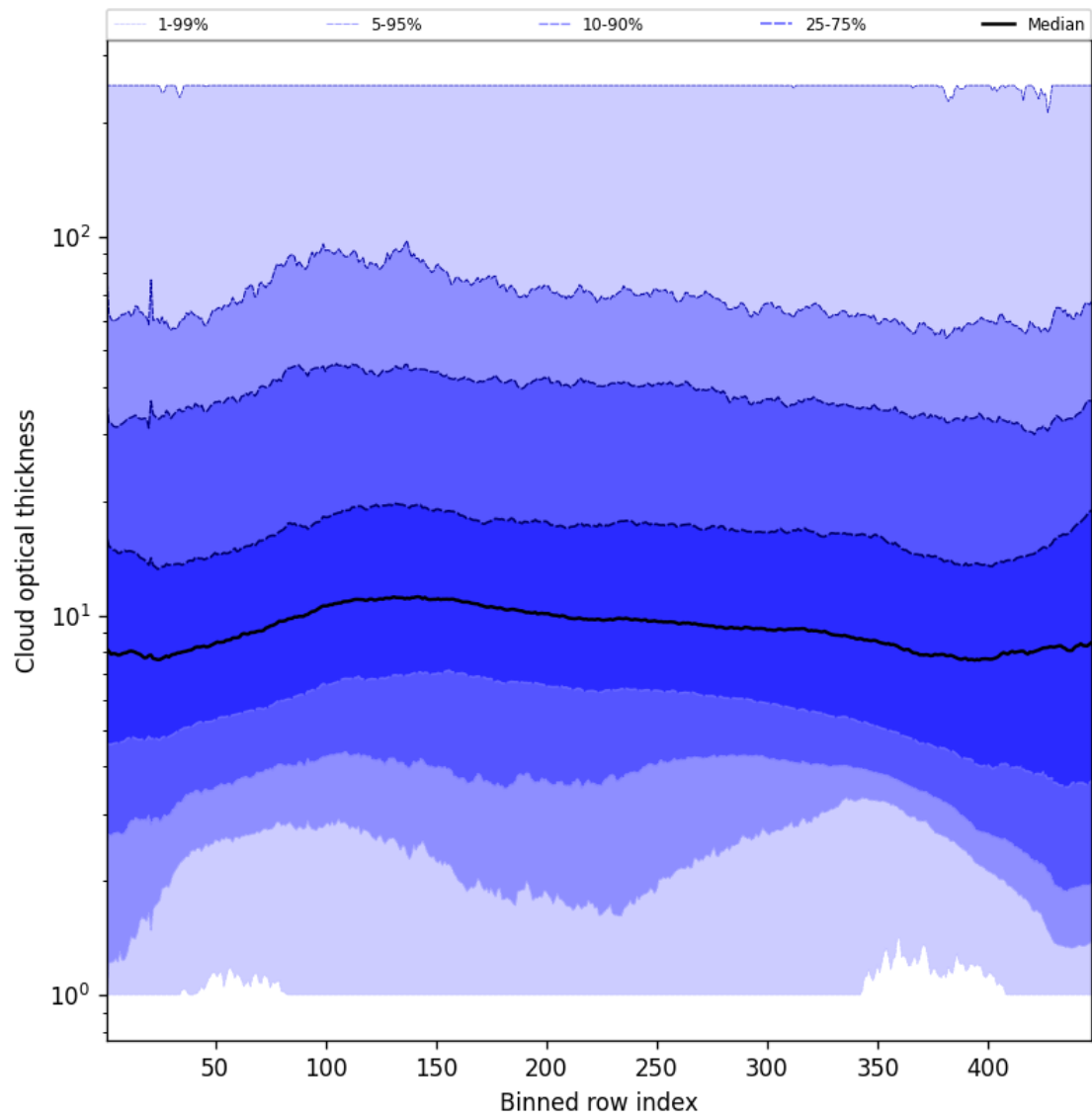


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-10-20 to 2025-10-20

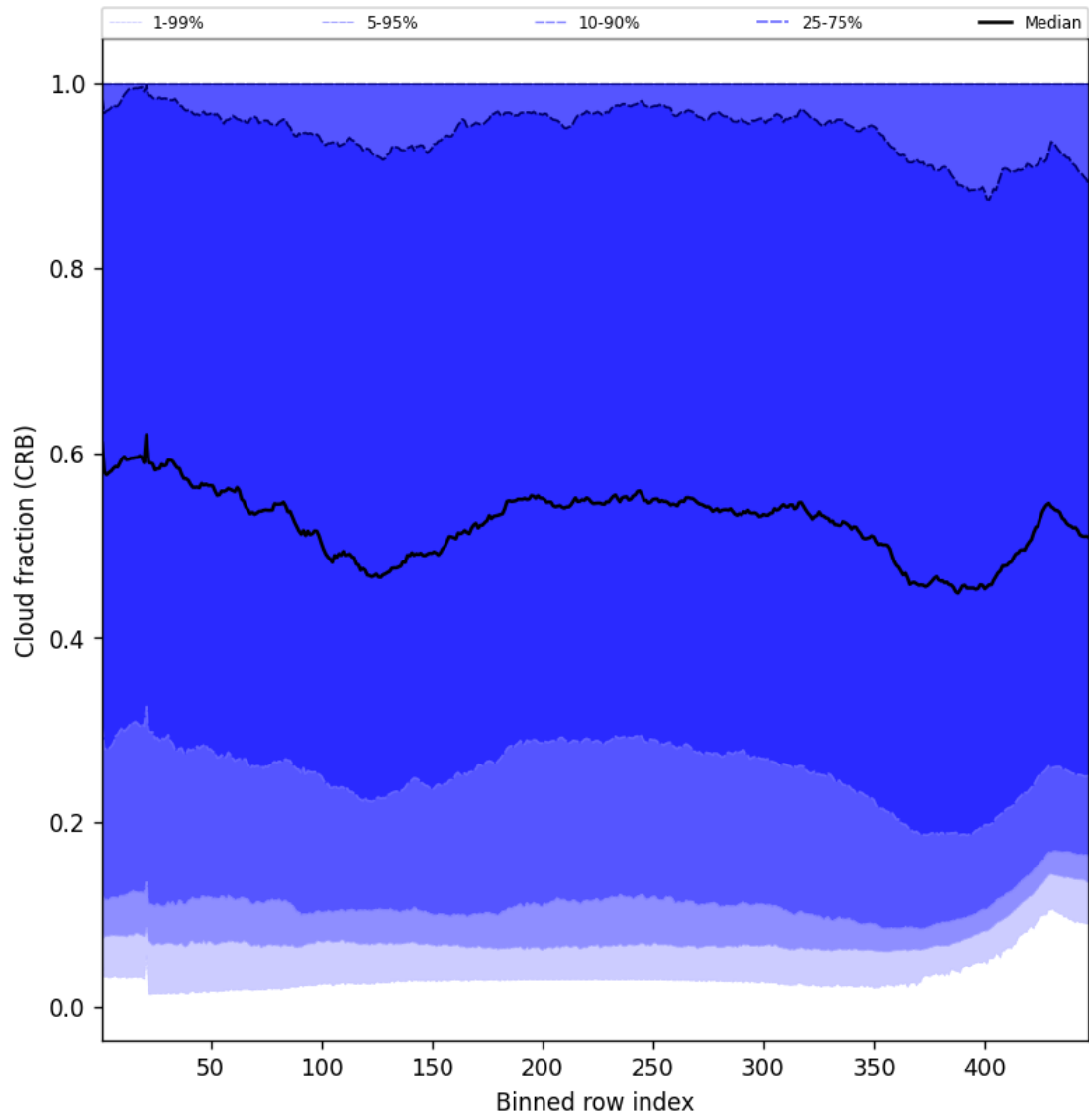


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-10-20 to 2025-10-20

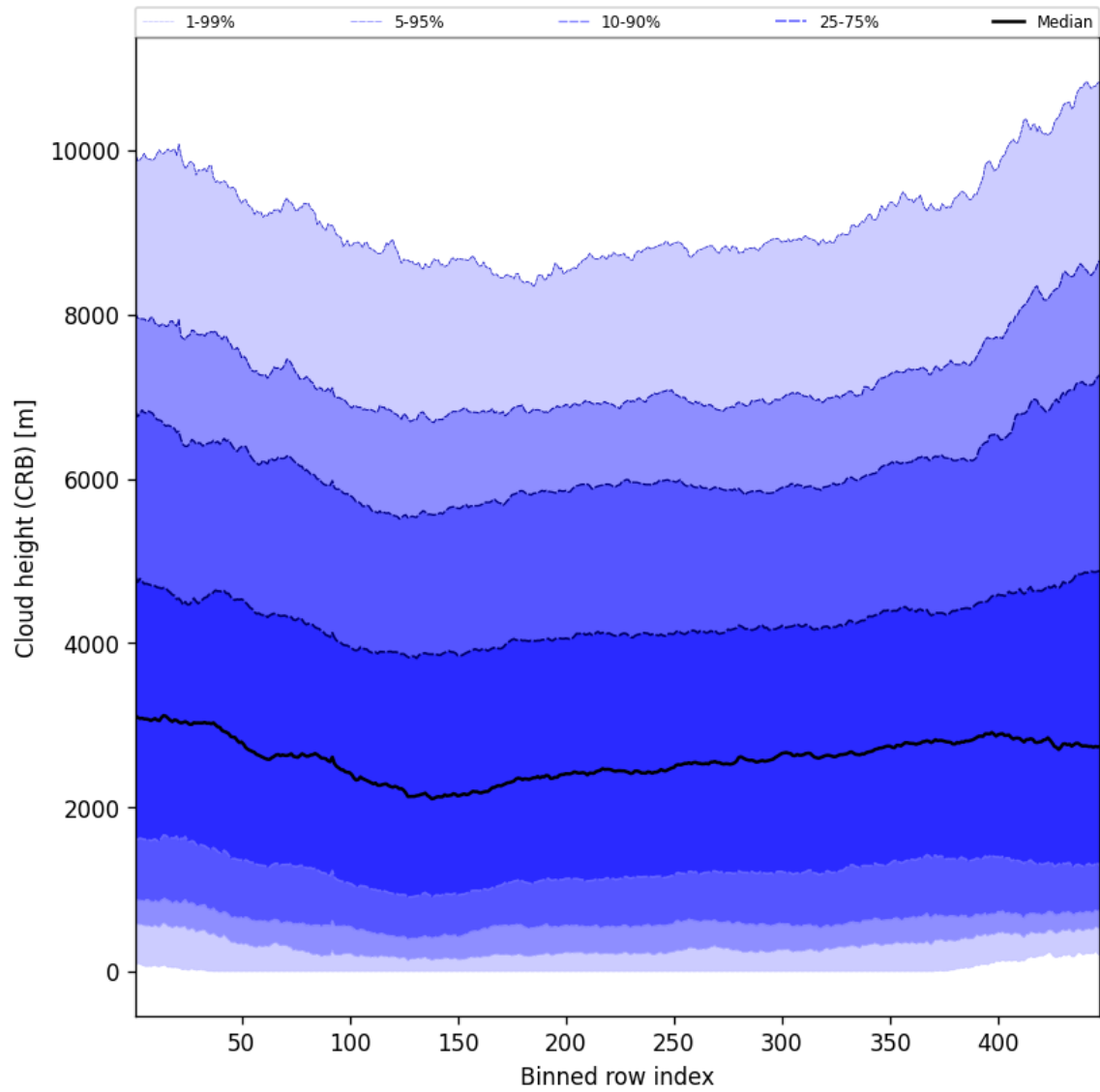


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-10-20 to 2025-10-20

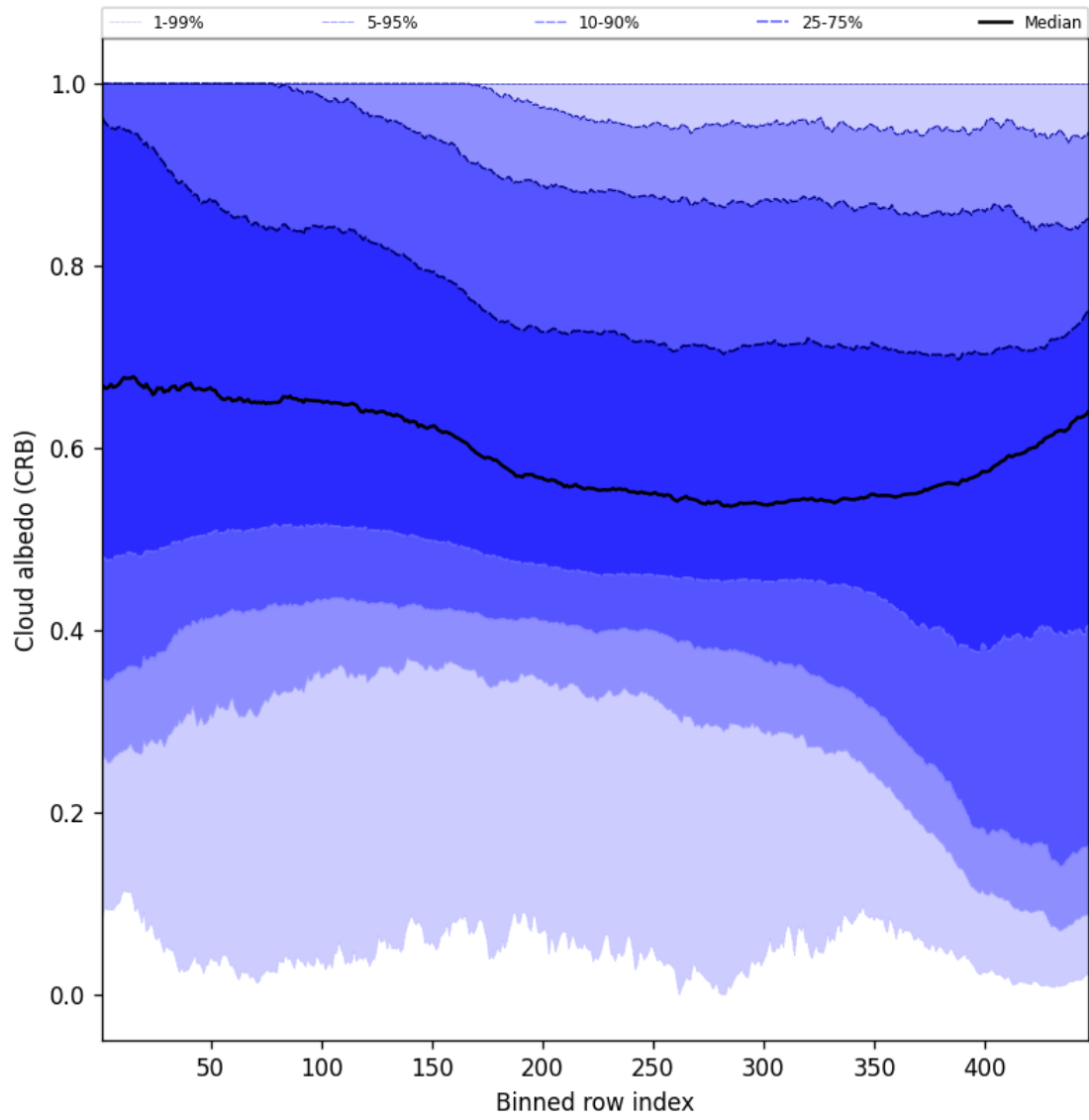


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-10-20 to 2025-10-20

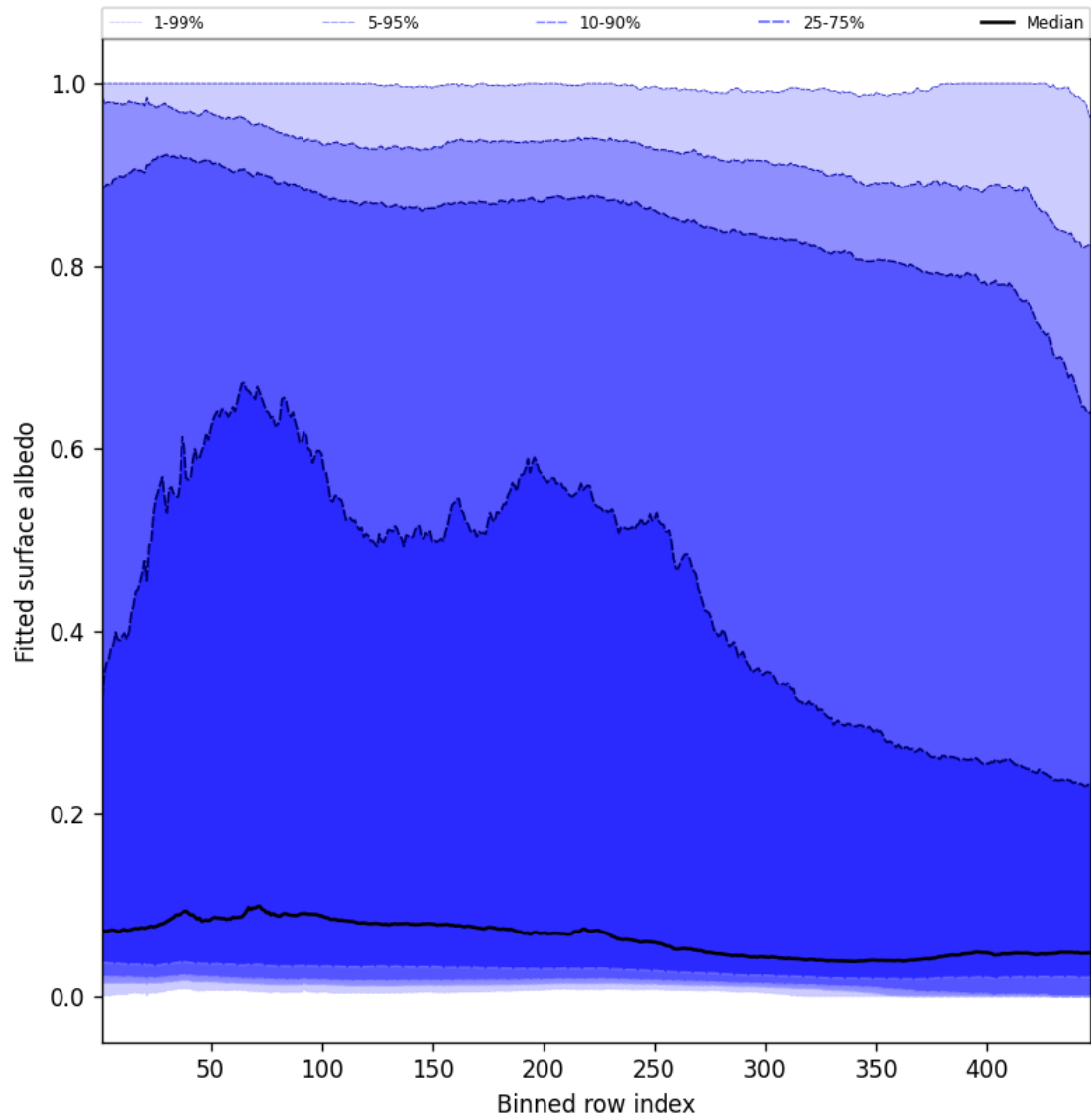


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-10-20 to 2025-10-20

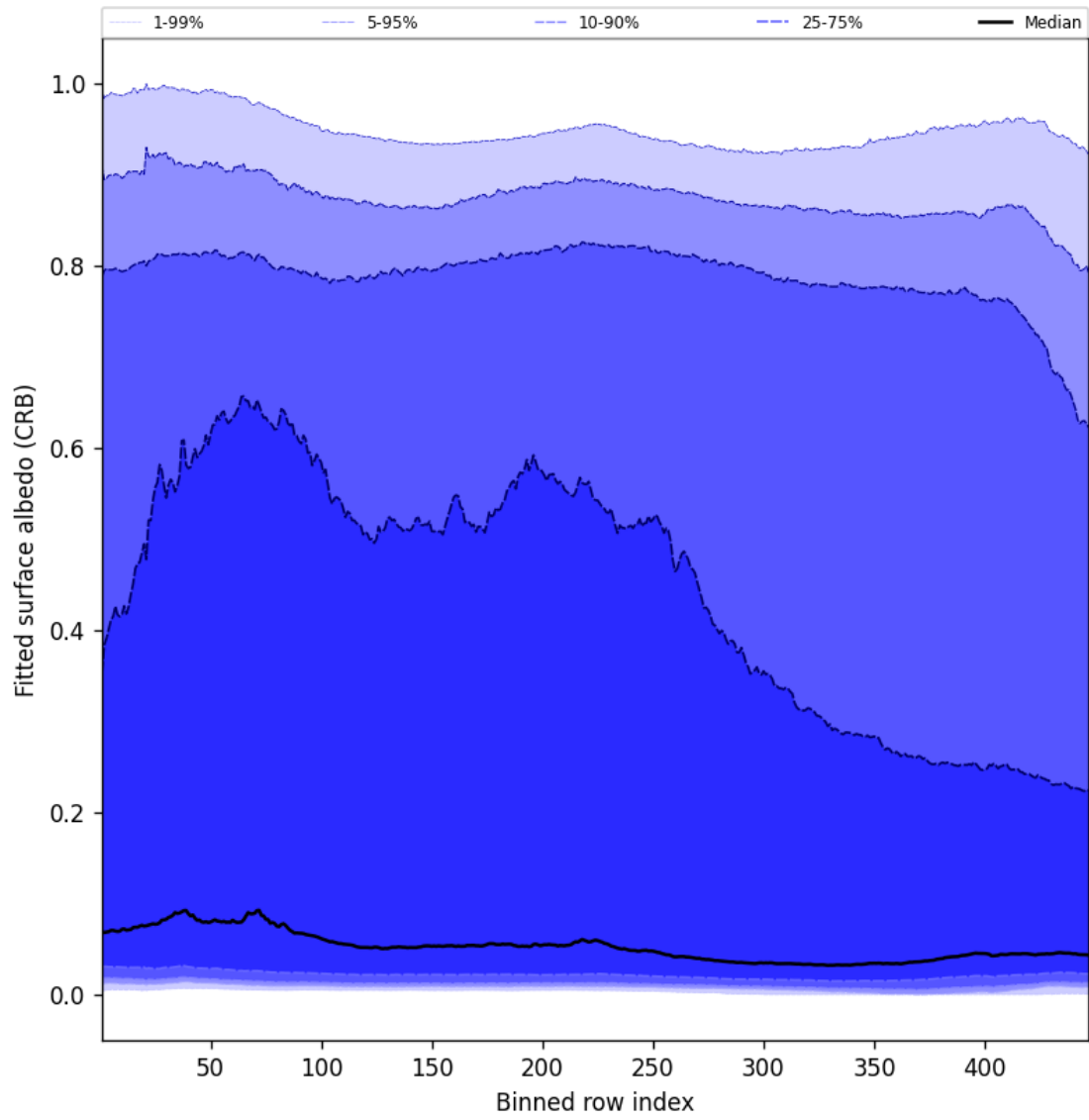


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-10-20 to 2025-10-20

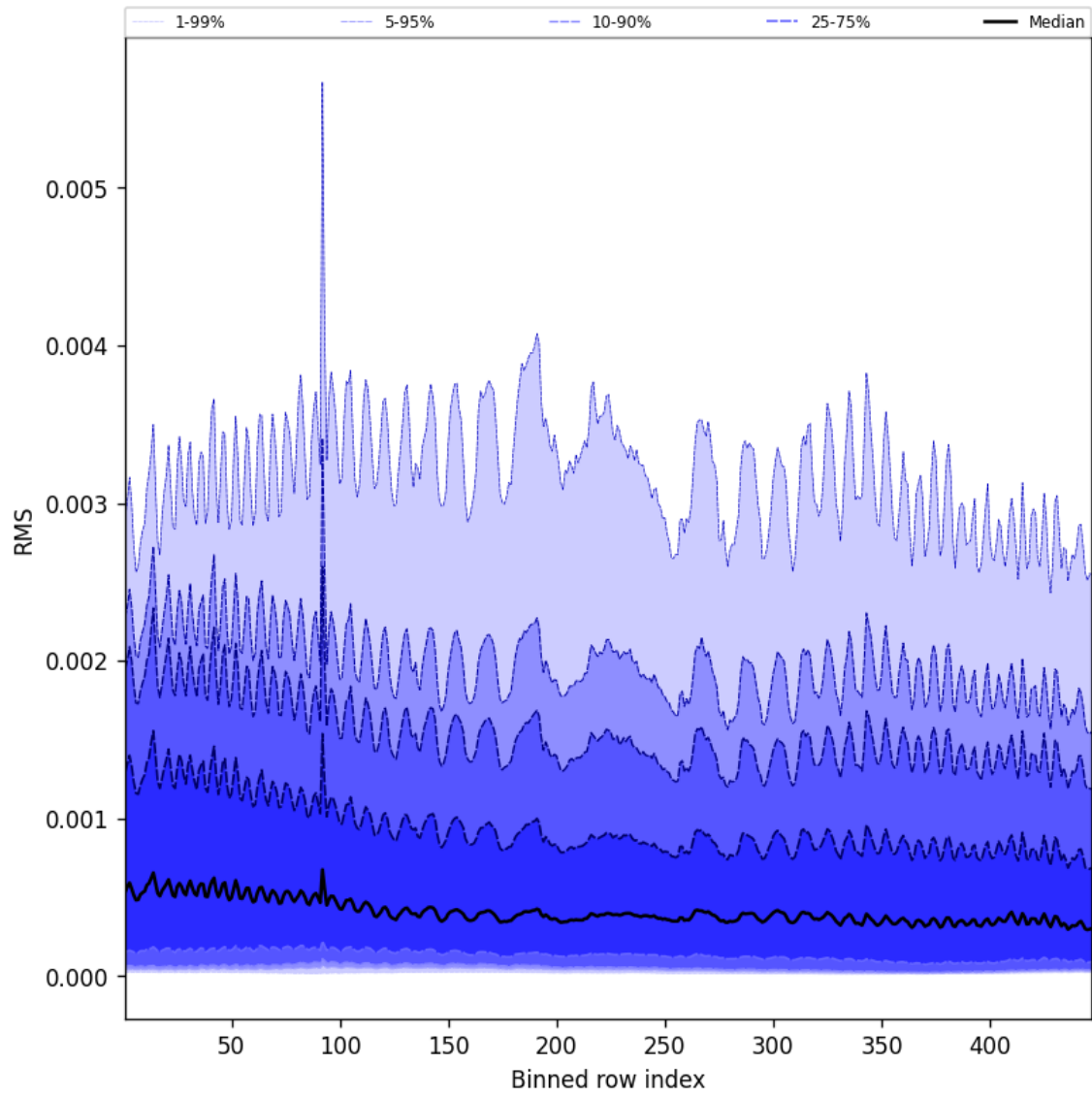


Figure 61: Along track statistics of “RMS” for 2025-10-20 to 2025-10-20

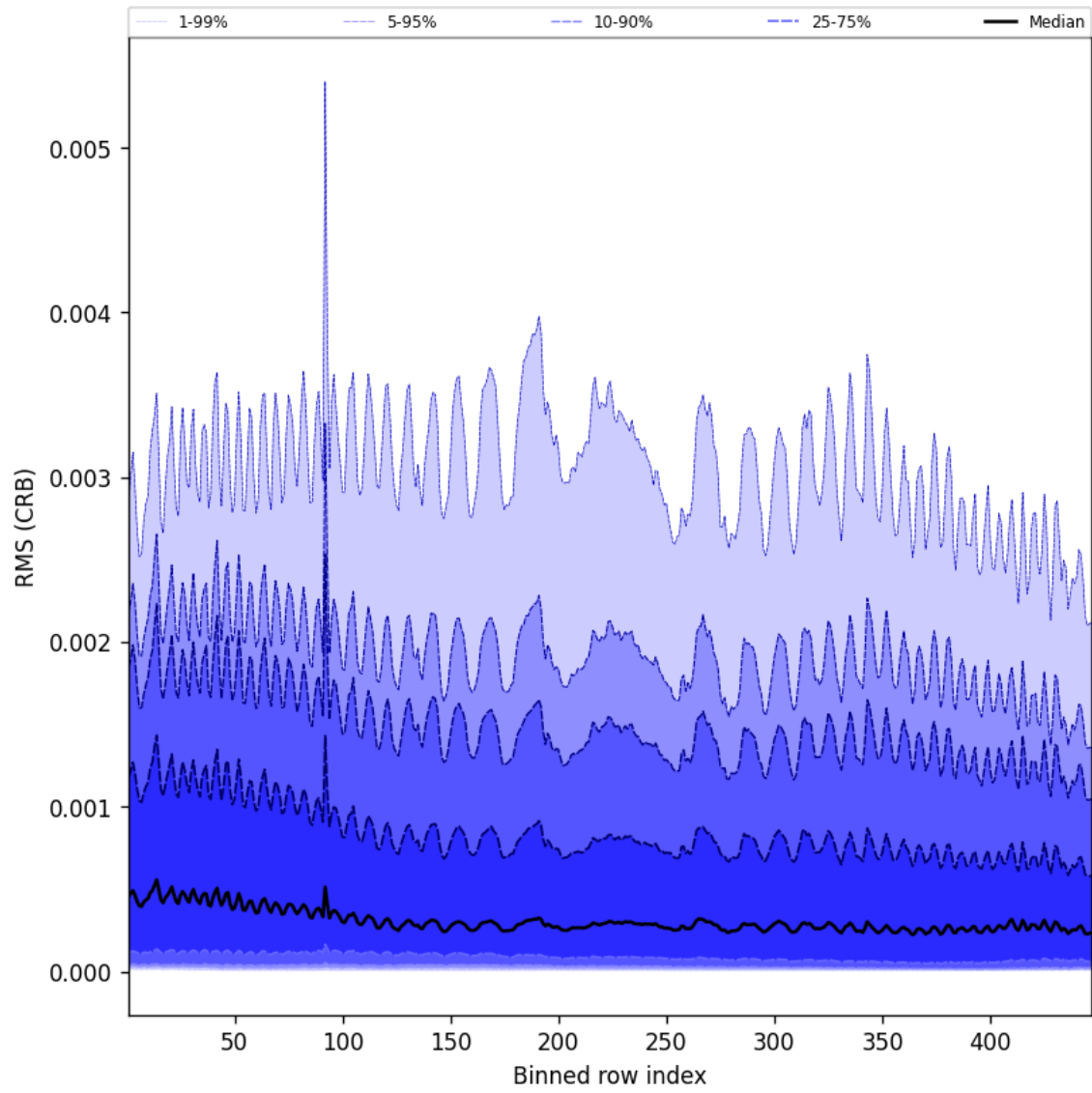


Figure 62: Along track statistics of “RMS (CRB)” for 2025-10-20 to 2025-10-20

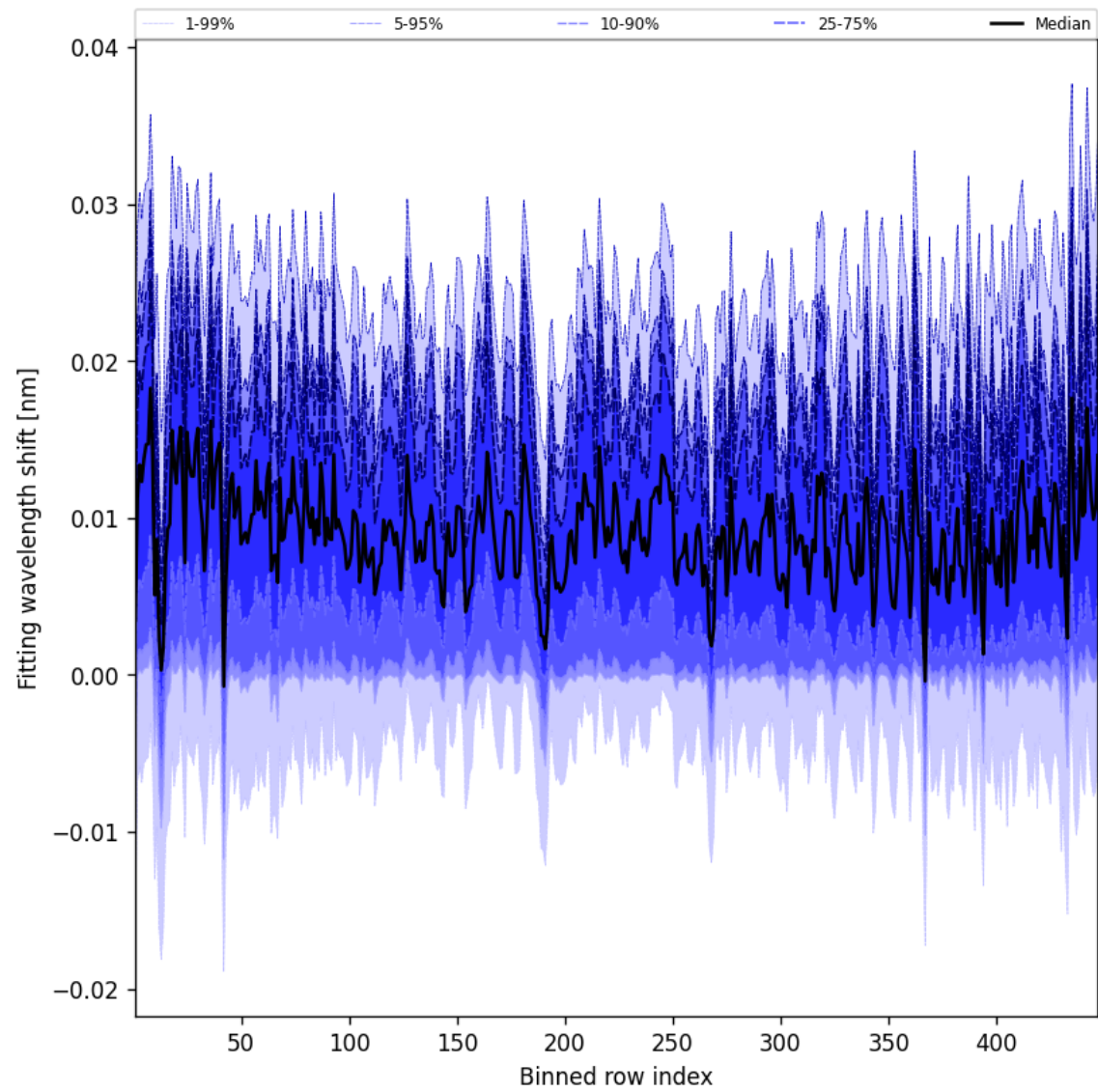


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-10-20 to 2025-10-20

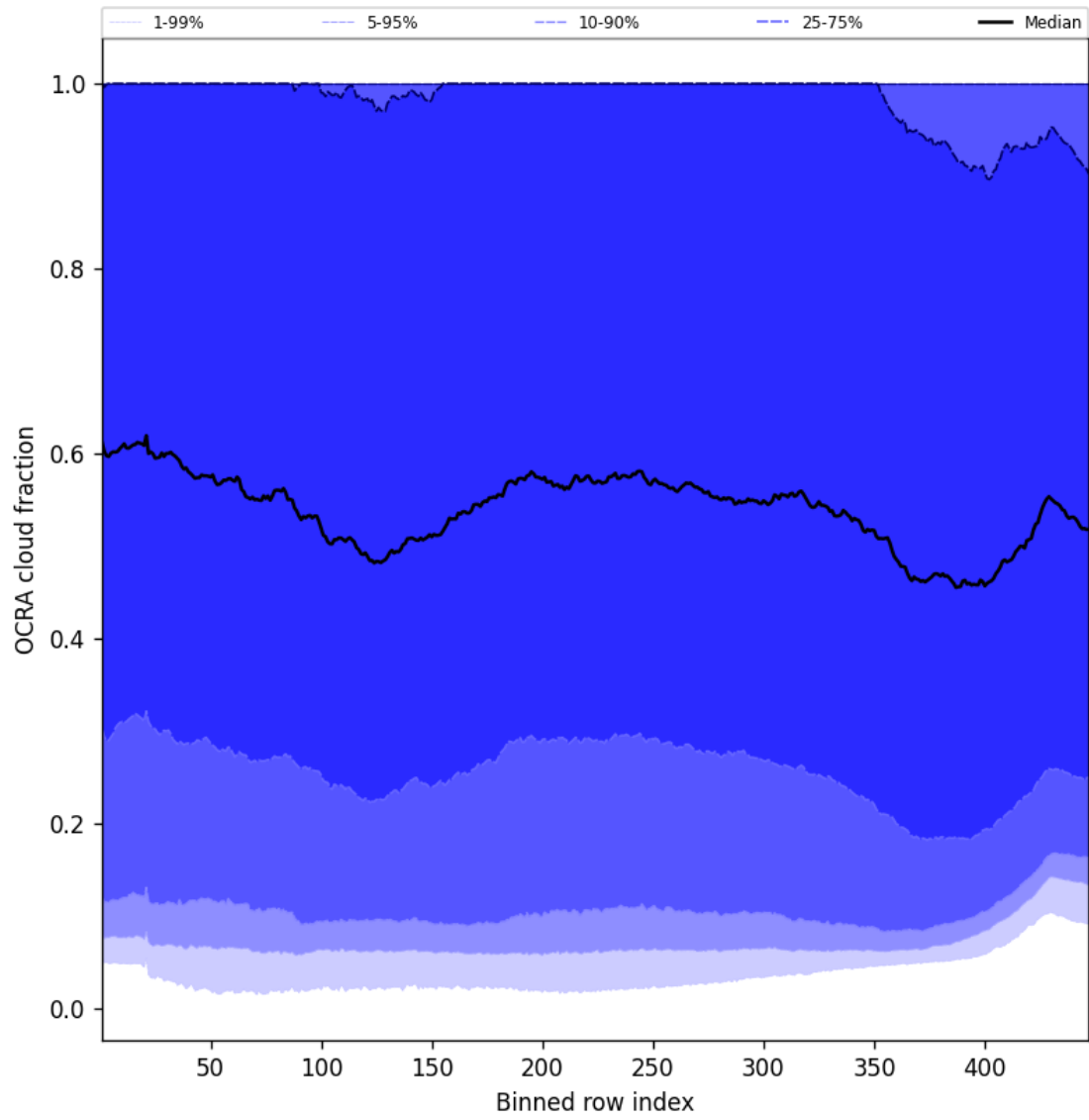


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-10-20 to 2025-10-20

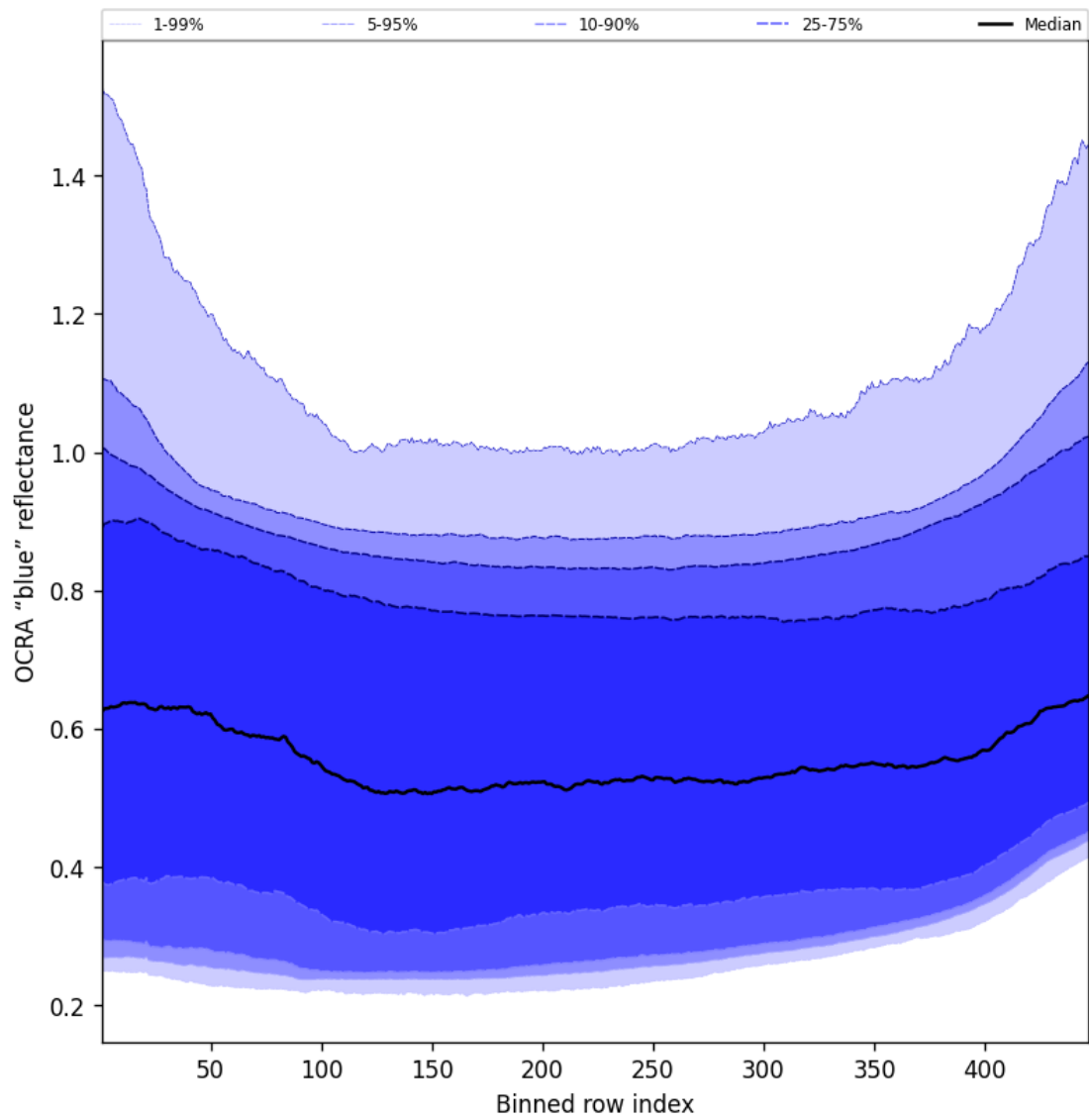


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-10-20 to 2025-10-20

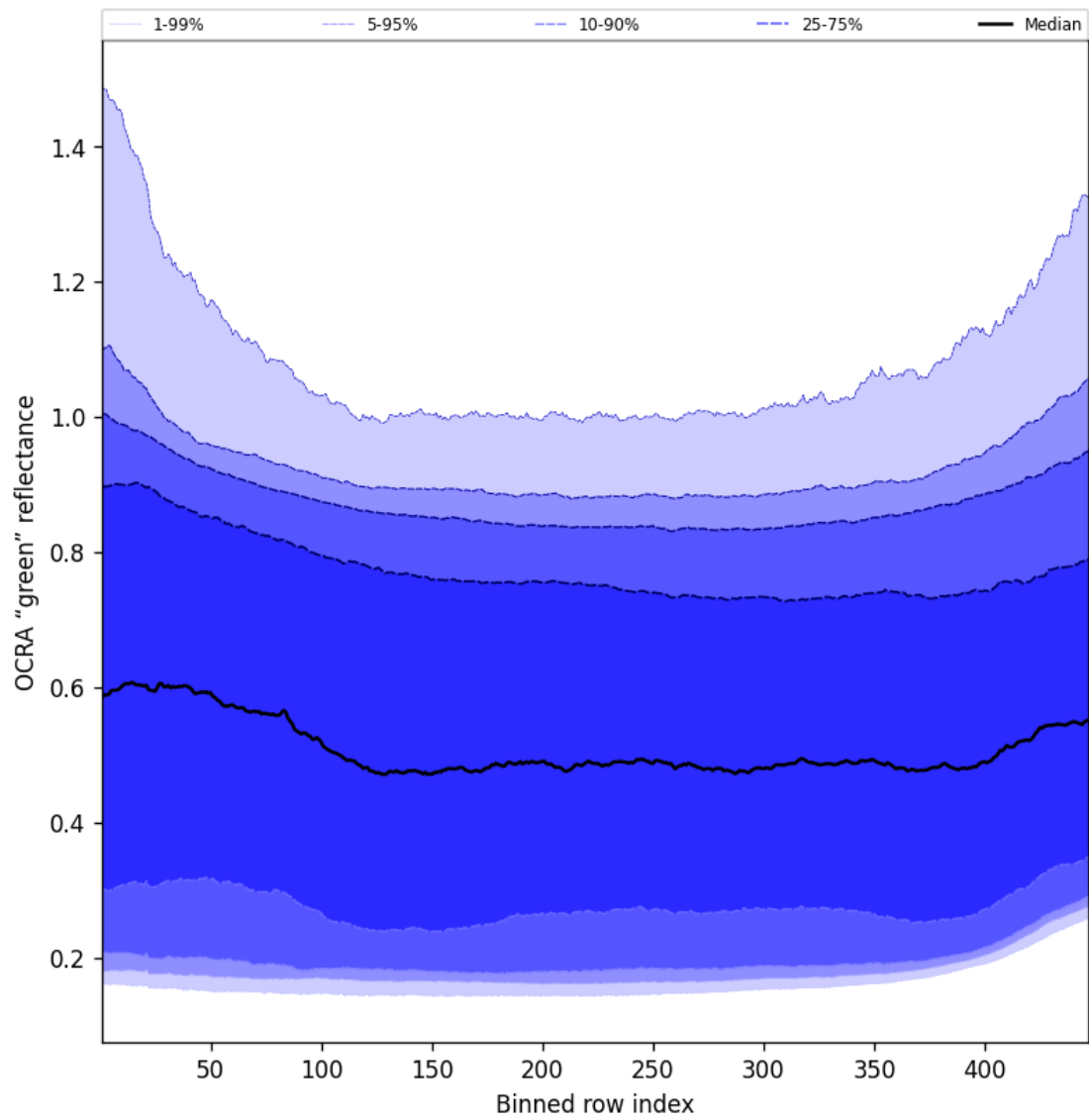


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-10-20 to 2025-10-20

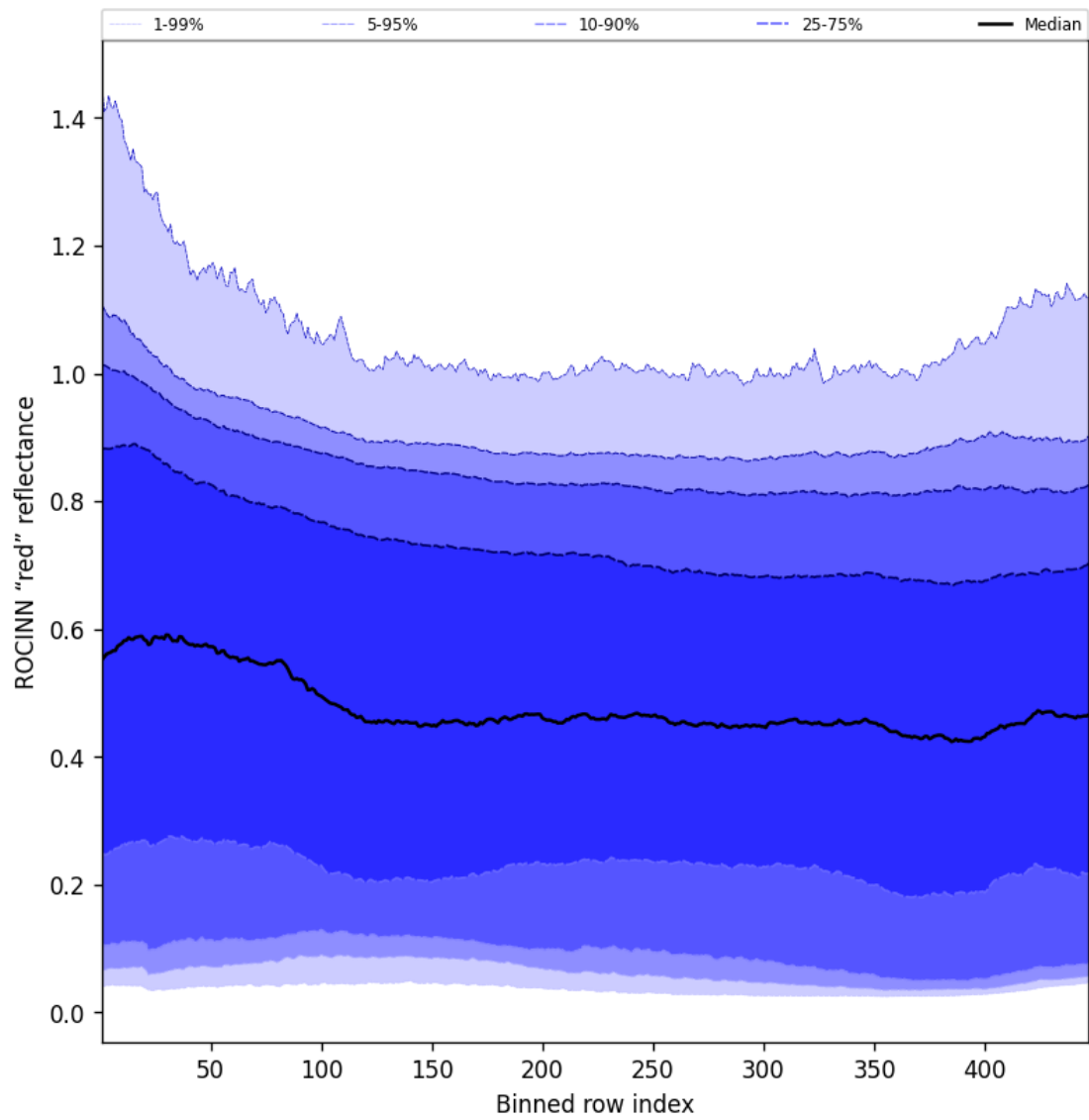


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-10-20 to 2025-10-20

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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