

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-10-11 (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]	0.621 ± 0.371	18665143	0.995	0.630	0.770	0.0	1.000
cloud fraction [1]	0.566 ± 0.344	18665143	0.995	0.728	0.540	6.054×10^{-3}	1.000
cloud top height [m]	$(0.398 \pm 0.275) \times 10^4$	18665143	1.425×10^3	3.908×10^3	3.407×10^3	0.0	2.000×10^4
cloud optical thickness [1]	22.8 ± 43.3	18665143	9.77	11.8	9.71	1.000	250
cloud fraction crb [1]	0.565 ± 0.344	18665143	0.995	0.727	0.538	8.226×10^{-3}	1.000
cloud height crb [m]	$(0.315 \pm 0.231) \times 10^4$	18665143	975	3.347×10^3	2.730×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.605 ± 0.217	18665143	0.995	0.280	0.583	0.0	1.000
surface albedo fitted [1]	0.234 ± 0.300	18665143	2.500×10^{-2}	0.284	5.844×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.221 ± 0.286	18665143	1.500×10^{-2}	0.289	4.841×10^{-2}	0.0	1.000
fitted root mean square [1]	$(6.141 \pm 7.401) \times 10^{-4}$	18665143	5.000×10^{-5}	7.395×10^{-4}	3.916×10^{-4}	1.020×10^{-6}	0.216
fitted root mean square crb [1]	$(5.320 \pm 6.448) \times 10^{-4}$	18665143	5.000×10^{-5}	6.639×10^{-4}	2.927×10^{-4}	9.047×10^{-7}	0.225
wavelength shift [nm]	$(8.813 \pm 7.255) \times 10^{-3}$	18665143	3.000×10^{-4}	1.072×10^{-2}	8.328×10^{-3}	-4.654×10^{-2}	0.113
cloud fraction apriori [1]	0.572 ± 0.349	18665143	0.995	0.760	0.551	0.0	1.000
reflectance blue ocra [1]	0.575 ± 0.236	18665143	0.285	0.405	0.548	0.120	2.08
reflectance green ocra [1]	0.523 ± 0.265	18665143	0.185	0.477	0.500	7.285×10^{-2}	2.01
reflectance continuum aband [1]	0.475 ± 0.290	18665143	4.500×10^{-2}	0.479	0.466	1.145×10^{-2}	5.32

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	0.310	0.940	1.000	1.000	1.000	1.000
cloud fraction [1]	2.742×10^{-2}	6.988×10^{-2}	0.108	0.157	0.242	0.970	1.000	1.000	1.000	1.000
cloud top height [m]	237	692	1.014×10^3	1.305×10^3	1.736×10^3	5.644×10^3	6.827×10^3	7.872×10^3	9.218×10^3	1.172×10^4
cloud optical thickness [1]	1.000	2.53	3.68	4.64	5.82	17.6	28.2	44.4	89.7	250
cloud fraction crb [1]	2.694×10^{-2}	6.916×10^{-2}	0.108	0.156	0.242	0.969	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	311	581	840	1.218×10^3	4.566×10^3	5.554×10^3	6.476×10^3	7.617×10^3	9.472×10^3
cloud albedo crb [1]	5.011×10^{-2}	0.242	0.358	0.421	0.470	0.750	0.844	0.931	1.000	1.000
surface albedo fitted [1]	0.0	9.055×10^{-3}	1.520×10^{-2}	2.025×10^{-2}	2.729×10^{-2}	0.311	0.689	0.785	0.879	0.993
surface albedo fitted crb [1]	0.0	7.896×10^{-3}	1.213×10^{-2}	1.605×10^{-2}	2.180×10^{-2}	0.311	0.657	0.735	0.826	0.937
fitted root mean square [1]	1.531×10^{-5}	3.019×10^{-5}	4.815×10^{-5}	7.626×10^{-5}	1.309×10^{-4}	8.704×10^{-4}	1.168×10^{-3}	1.459×10^{-3}	1.896×10^{-3}	2.998×10^{-3}
fitted root mean square crb [1]	7.869×10^{-6}	1.780×10^{-5}	3.105×10^{-5}	4.994×10^{-5}	8.871×10^{-5}	7.526×10^{-4}	1.065×10^{-3}	1.372×10^{-3}	1.821×10^{-3}	2.845×10^{-3}
wavelength shift [nm]	-6.550×10^{-3}	-4.537×10^{-4}	3.174×10^{-4}	1.287×10^{-3}	3.100×10^{-3}	1.382×10^{-2}	1.628×10^{-2}	1.835×10^{-2}	2.105×10^{-2}	2.680×10^{-2}
cloud fraction apriori [1]	3.086×10^{-2}	6.642×10^{-2}	0.102	0.150	0.240	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.231	0.257	0.283	0.314	0.366	0.771	0.831	0.878	0.944	1.16
reflectance green ocra [1]	0.152	0.174	0.194	0.220	0.274	0.750	0.820	0.871	0.936	1.12
reflectance continuum aband [1]	2.993×10^{-2}	5.459×10^{-2}	8.883×10^{-2}	0.137	0.227	0.706	0.788	0.847	0.923	1.11

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]	0.611 ± 0.376	9071219	0.630	0.780	0.0	1.000	0.300	0.930
cloud fraction [1]	0.599 ± 0.355	9071219	0.756	0.632	6.054×10^{-3}	1.000	0.243	0.999
cloud top height [m]	$(0.401 \pm 0.263) \times 10^4$	9071219	3.742×10^3	3.559×10^3	0.0	2.000×10^4	1.869×10^3	5.610×10^3
cloud optical thickness [1]	24.6 ± 42.6	9071219	15.3	10.3	1.000	250	6.18	21.4
cloud fraction crb [1]	0.598 ± 0.355	9071219	0.758	0.629	8.226×10^{-3}	1.000	0.242	0.999
cloud height crb [m]	$(0.333 \pm 0.227) \times 10^4$	9071219	3.298×10^3	3.012×10^3	0.0	2.000×10^4	1.444×10^3	4.742×10^3
cloud albedo crb [1]	0.581 ± 0.204	9071219	0.251	0.571	0.0	1.000	0.461	0.711
surface albedo fitted [1]	0.159 ± 0.205	9071219	0.185	6.298×10^{-2}	0.0	1.000	2.725×10^{-2}	0.212
surface albedo fitted crb [1]	0.154 ± 0.205	9071219	0.185	5.139×10^{-2}	0.0	1.000	2.193×10^{-2}	0.207
fitted root mean square [1]	$(4.986 \pm 6.836) \times 10^{-4}$	9071219	5.527×10^{-4}	2.664×10^{-4}	1.020×10^{-6}	0.216	1.034×10^{-4}	6.561×10^{-4}
fitted root mean square crb [1]	$(4.476 \pm 6.154) \times 10^{-4}$	9071219	5.397×10^{-4}	2.013×10^{-4}	9.047×10^{-7}	0.225	6.192×10^{-5}	6.016×10^{-4}
wavelength shift [nm]	$(7.565 \pm 6.952) \times 10^{-3}$	9071219	9.976×10^{-3}	6.696×10^{-3}	-4.654×10^{-2}	0.113	2.089×10^{-3}	1.206×10^{-2}
cloud fraction apriori [1]	0.604 ± 0.361	9071219	0.763	0.646	0.0	1.000	0.237	1.000
reflectance blue ocra [1]	0.546 ± 0.226	9071219	0.353	0.514	0.120	2.02	0.355	0.708
reflectance green ocra [1]	0.489 ± 0.252	9071219	0.420	0.458	7.285×10^{-2}	1.95	0.261	0.681
reflectance continuum aband [1]	0.445 ± 0.282	9071219	0.425	0.421	1.145×10^{-2}	5.32	0.217	0.642

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]	0.631 ± 0.366	9593924	0.540	0.760	0.0	1.000	0.400	0.940
cloud fraction [1]	0.535 ± 0.331	9593924	0.650	0.480	8.023×10^{-3}	1.000	0.242	0.892
cloud top height [m]	$(0.394 \pm 0.286) \times 10^4$	9593924	4.042×10^3	3.240×10^3	0.0	2.000×10^4	1.637×10^3	5.679×10^3
cloud optical thickness [1]	21.0 ± 44.0	9593924	9.29	9.25	1.000	250	5.54	14.8
cloud fraction crb [1]	0.534 ± 0.330	9593924	0.648	0.478	8.549×10^{-3}	1.000	0.242	0.891
cloud height crb [m]	$(0.297 \pm 0.233) \times 10^4$	9593924	3.331×10^3	2.429×10^3	0.0	2.000×10^4	1.052×10^3	4.383×10^3
cloud albedo crb [1]	0.627 ± 0.226	9593924	0.316	0.597	0.0	1.000	0.478	0.794
surface albedo fitted [1]	0.304 ± 0.354	9593924	0.676	5.461×10^{-2}	0.0	1.000	2.732×10^{-2}	0.703
surface albedo fitted crb [1]	0.284 ± 0.334	9593924	0.643	4.593×10^{-2}	0.0	1.000	2.168×10^{-2}	0.665
fitted root mean square [1]	$(7.233 \pm 7.742) \times 10^{-4}$	9593924	8.365×10^{-4}	5.453×10^{-4}	3.782×10^{-6}	9.128×10^{-2}	1.914×10^{-4}	1.028×10^{-3}
fitted root mean square crb [1]	$(6.119 \pm 6.615) \times 10^{-4}$	9593924	7.379×10^{-4}	3.956×10^{-4}	2.549×10^{-6}	9.264×10^{-2}	1.336×10^{-4}	8.716×10^{-4}
wavelength shift [nm]	$(9.993 \pm 7.337) \times 10^{-3}$	9593924	1.073×10^{-2}	9.986×10^{-3}	-4.217×10^{-2}	6.155×10^{-2}	4.398×10^{-3}	1.513×10^{-2}
cloud fraction apriori [1]	0.541 ± 0.336	9593924	0.678	0.490	0.0	1.000	0.241	0.920
reflectance blue ocrs [1]	0.602 ± 0.242	9593924	0.429	0.594	0.139	2.08	0.379	0.808
reflectance green ocrs [1]	0.554 ± 0.273	9593924	0.506	0.555	8.754×10^{-2}	2.01	0.289	0.795
reflectance continuum aband [1]	0.503 ± 0.294	9593924	0.510	0.525	1.167×10^{-2}	4.19	0.240	0.750

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]	0.676 ± 0.343	12007885	0.550	0.850	0.0	1.000	0.400	0.950
cloud fraction [1]	0.577 ± 0.351	12007885	0.755	0.580	8.077×10^{-3}	1.000	0.230	0.984
cloud top height [m]	$(0.365 \pm 0.262) \times 10^4$	12007885	3.490×10^3	2.993×10^3	0.0	2.000×10^4	1.581×10^3	5.071×10^3
cloud optical thickness [1]	20.5 ± 35.6	12007885	10.8	10.2	1.000	250	6.74	17.6
cloud fraction crb [1]	0.576 ± 0.351	12007885	0.755	0.578	8.549×10^{-3}	1.000	0.228	0.983
cloud height crb [m]	$(0.293 \pm 0.232) \times 10^4$	12007885	3.189×10^3	2.390×10^3	0.0	2.000×10^4	1.055×10^3	4.244×10^3
cloud albedo crb [1]	0.562 ± 0.190	12007885	0.226	0.545	0.0	1.000	0.453	0.679
surface albedo fitted [1]	0.116 ± 0.227	12007885	3.501×10^{-2}	3.351×10^{-2}	0.0	1.000	2.054×10^{-2}	5.555×10^{-2}
surface albedo fitted crb [1]	0.109 ± 0.222	12007885	2.955×10^{-2}	2.698×10^{-2}	0.0	1.000	1.627×10^{-2}	4.582×10^{-2}
fitted root mean square [1]	$(5.612 \pm 7.048) \times 10^{-4}$	12007885	7.242×10^{-4}	3.003×10^{-4}	1.020×10^{-6}	0.216	9.128×10^{-5}	8.155×10^{-4}
fitted root mean square crb [1]	$(5.248 \pm 6.530) \times 10^{-4}$	12007885	7.059×10^{-4}	2.590×10^{-4}	9.047×10^{-7}	0.225	6.862×10^{-5}	7.745×10^{-4}
wavelength shift [nm]	$(8.545 \pm 7.587) \times 10^{-3}$	12007885	1.138×10^{-2}	7.798×10^{-3}	-4.654×10^{-2}	0.113	2.495×10^{-3}	1.388×10^{-2}
cloud fraction apriori [1]	0.580 ± 0.356	12007885	0.777	0.588	0.0	1.000	0.223	1.000
reflectance blue ocra [1]	0.532 ± 0.214	12007885	0.347	0.496	0.143	2.08	0.348	0.695
reflectance green ocra [1]	0.471 ± 0.241	12007885	0.416	0.436	7.718×10^{-2}	1.95	0.250	0.666
reflectance continuum aband [1]	0.402 ± 0.276	12007885	0.481	0.377	1.145×10^{-2}	4.79	0.144	0.625

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]	0.487 ± 0.404	5044269	0.900	0.620	0.0	1.000	0.0	0.900
cloud fraction [1]	0.509 ± 0.319	5044269	0.573	0.430	6.487×10^{-3}	1.000	0.244	0.817
cloud top height [m]	$(0.494 \pm 0.295) \times 10^4$	5044269	4.094×10^3	4.727×10^3	0.0	2.000×10^4	2.626×10^3	6.720×10^3
cloud optical thickness [1]	24.1 ± 52.9	5044269	9.87	7.34	1.000	250	4.75	14.6
cloud fraction crb [1]	0.509 ± 0.318	5044269	0.570	0.430	8.226×10^{-3}	1.000	0.246	0.816
cloud height crb [m]	$(0.375 \pm 0.226) \times 10^4$	5044269	3.296×10^3	3.567×10^3	0.0	2.000×10^4	1.910×10^3	5.206×10^3
cloud albedo crb [1]	0.701 ± 0.245	5044269	0.398	0.710	0.0	1.000	0.536	0.934
surface albedo fitted [1]	0.513 ± 0.298	5044269	0.564	0.463	0.0	1.000	0.224	0.788
surface albedo fitted crb [1]	0.486 ± 0.273	5044269	0.503	0.474	2.822×10^{-3}	1.000	0.221	0.724
fitted root mean square [1]	$(7.731 \pm 8.103) \times 10^{-4}$	5044269	7.229×10^{-4}	5.960×10^{-4}	3.913×10^{-6}	0.170	3.024×10^{-4}	1.025×10^{-3}
fitted root mean square crb [1]	$(5.802 \pm 6.417) \times 10^{-4}$	5044269	6.184×10^{-4}	3.744×10^{-4}	2.615×10^{-6}	4.547×10^{-2}	1.557×10^{-4}	7.741×10^{-4}
wavelength shift [nm]	$(9.491 \pm 6.572) \times 10^{-3}$	5044269	9.481×10^{-3}	9.260×10^{-3}	-3.430×10^{-2}	5.399×10^{-2}	4.513×10^{-3}	1.399×10^{-2}
cloud fraction apriori [1]	0.520 ± 0.324	5044269	0.609	0.443	0.0	1.000	0.248	0.857
reflectance blue ocra [1]	0.673 ± 0.261	5044269	0.430	0.760	0.120	2.07	0.429	0.859
reflectance green ocra [1]	0.641 ± 0.286	5044269	0.499	0.735	7.285×10^{-2}	2.01	0.357	0.856
reflectance continuum aband [1]	0.634 ± 0.260	5044269	0.422	0.670	1.876×10^{-2}	4.19	0.404	0.826

3 Granule outlines

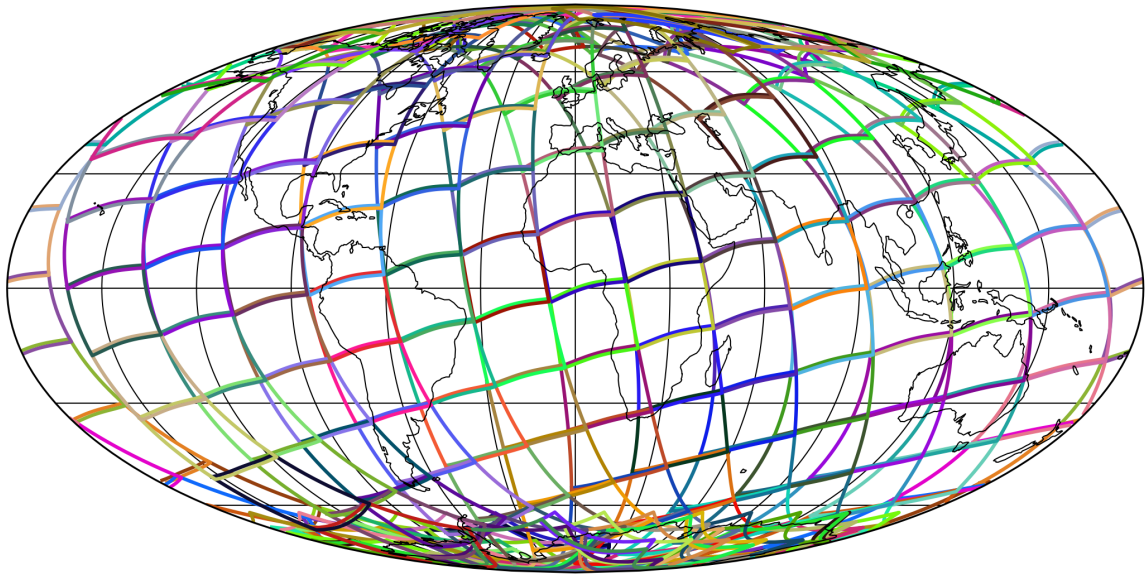


Figure 1: Outline of the granules.

4 Input data monitoring

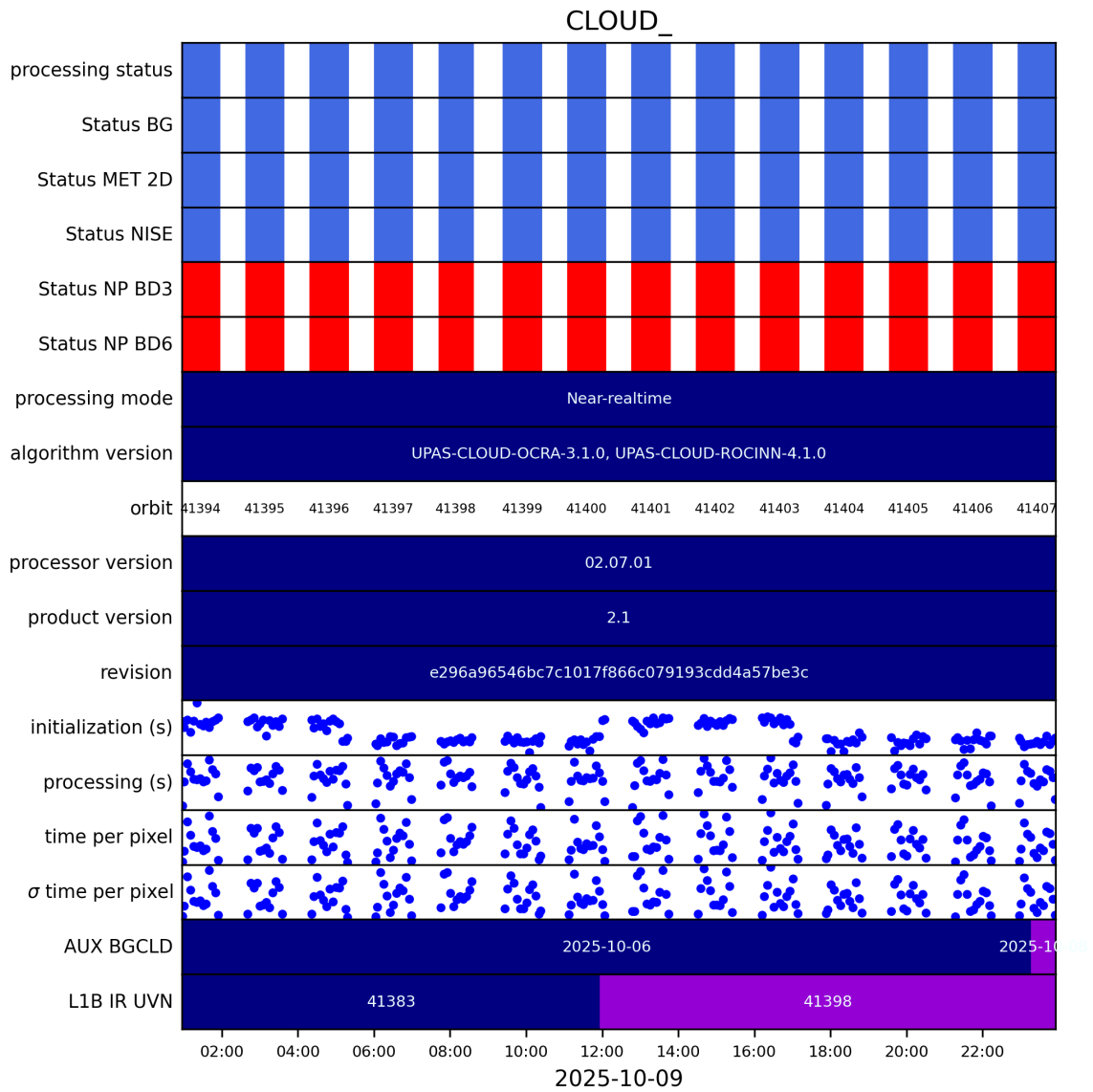


Figure 2: Input data per granule

5 Warnings and errors

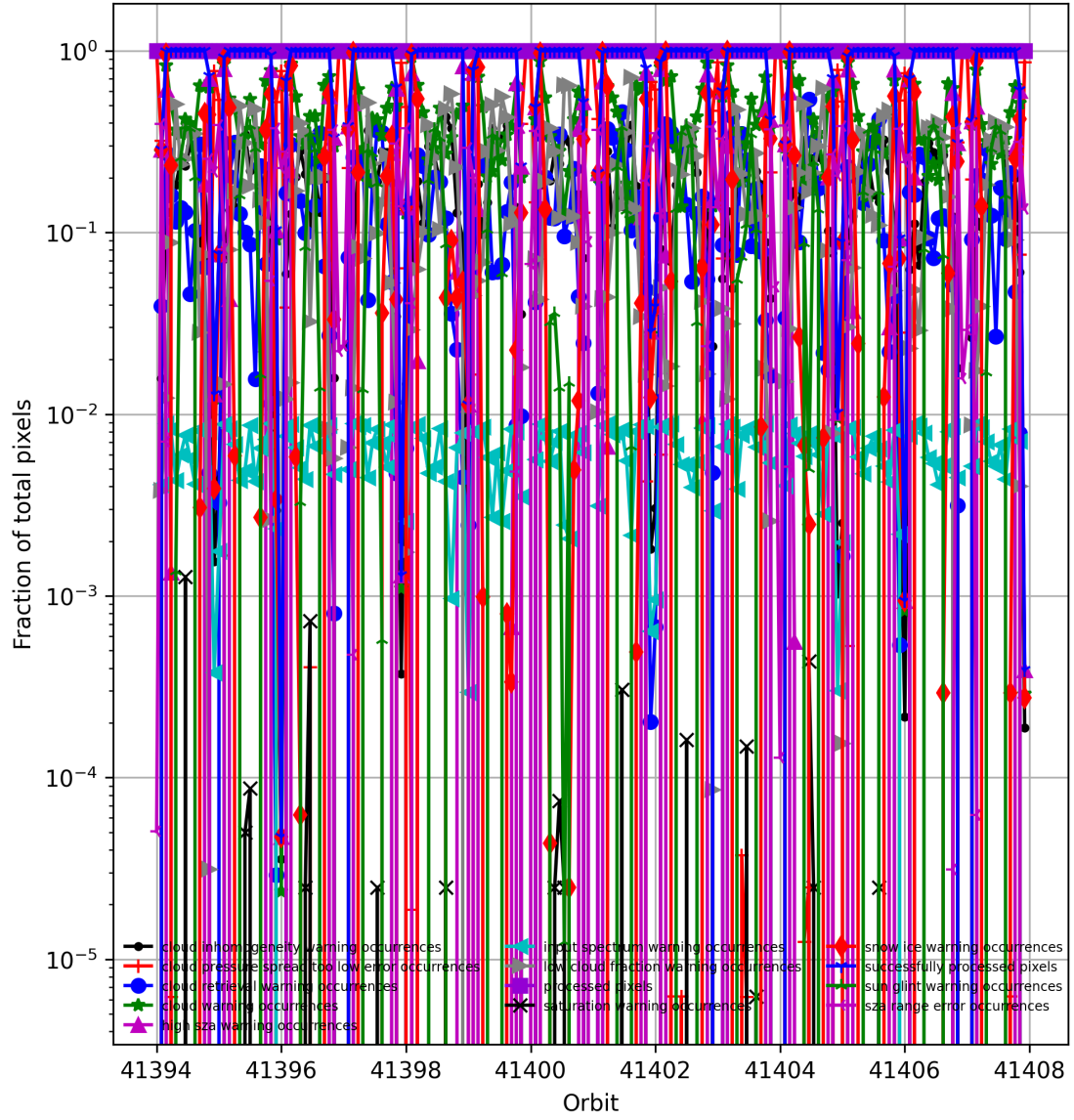


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

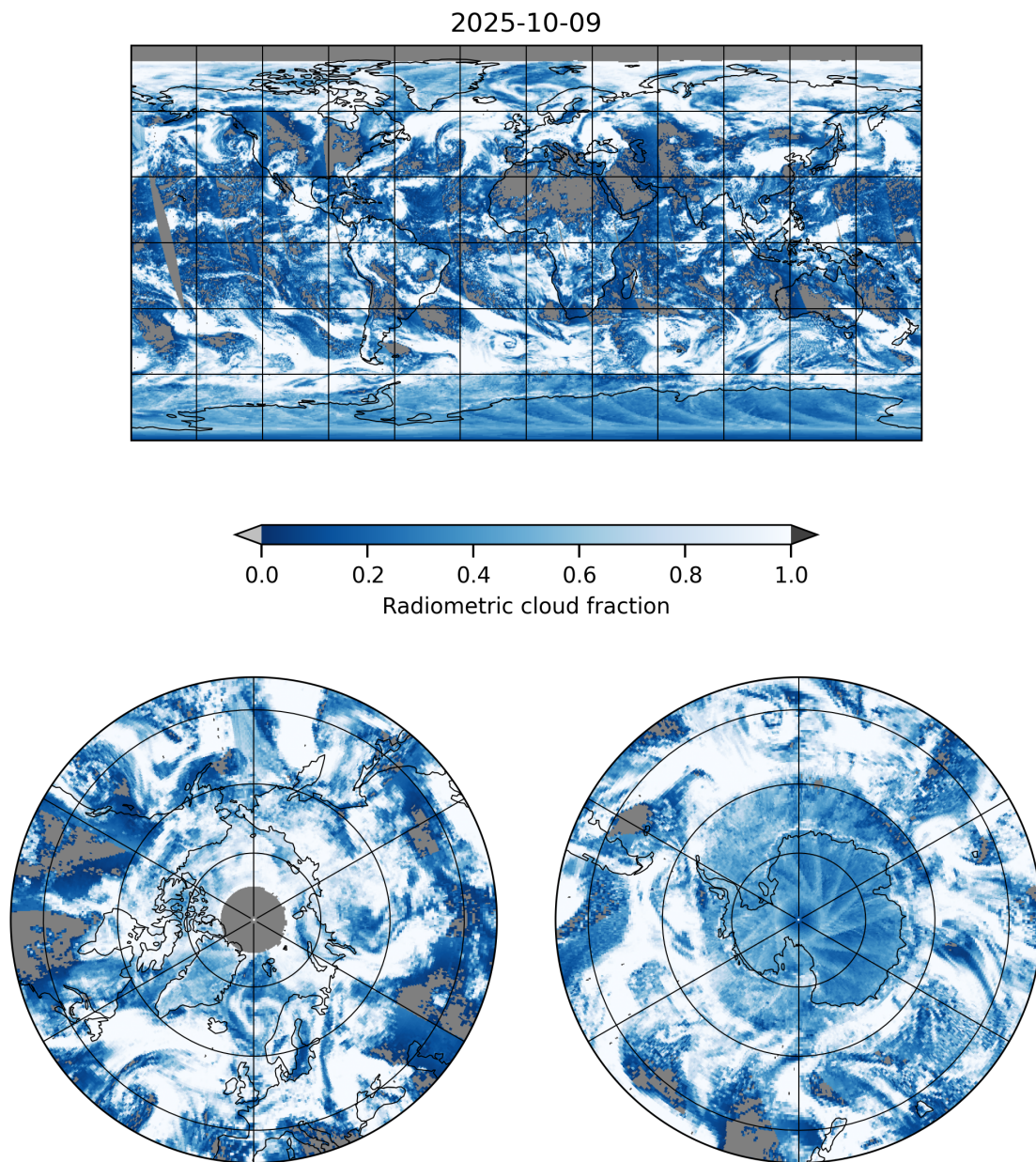


Figure 4: Map of “Radiometric cloud fraction” for 2025-10-09 to 2025-10-09

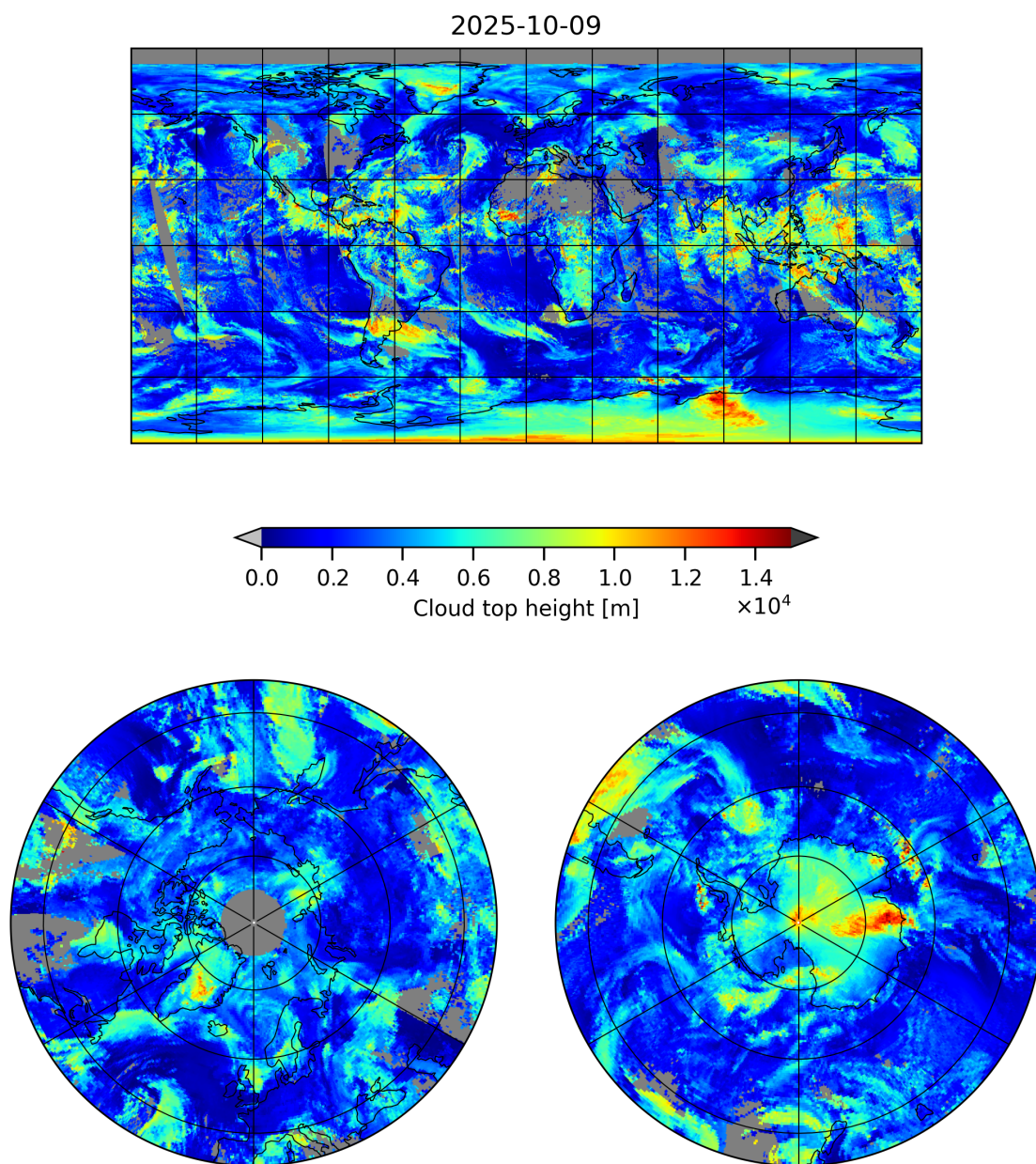


Figure 5: Map of “Cloud top height” for 2025-10-09 to 2025-10-09

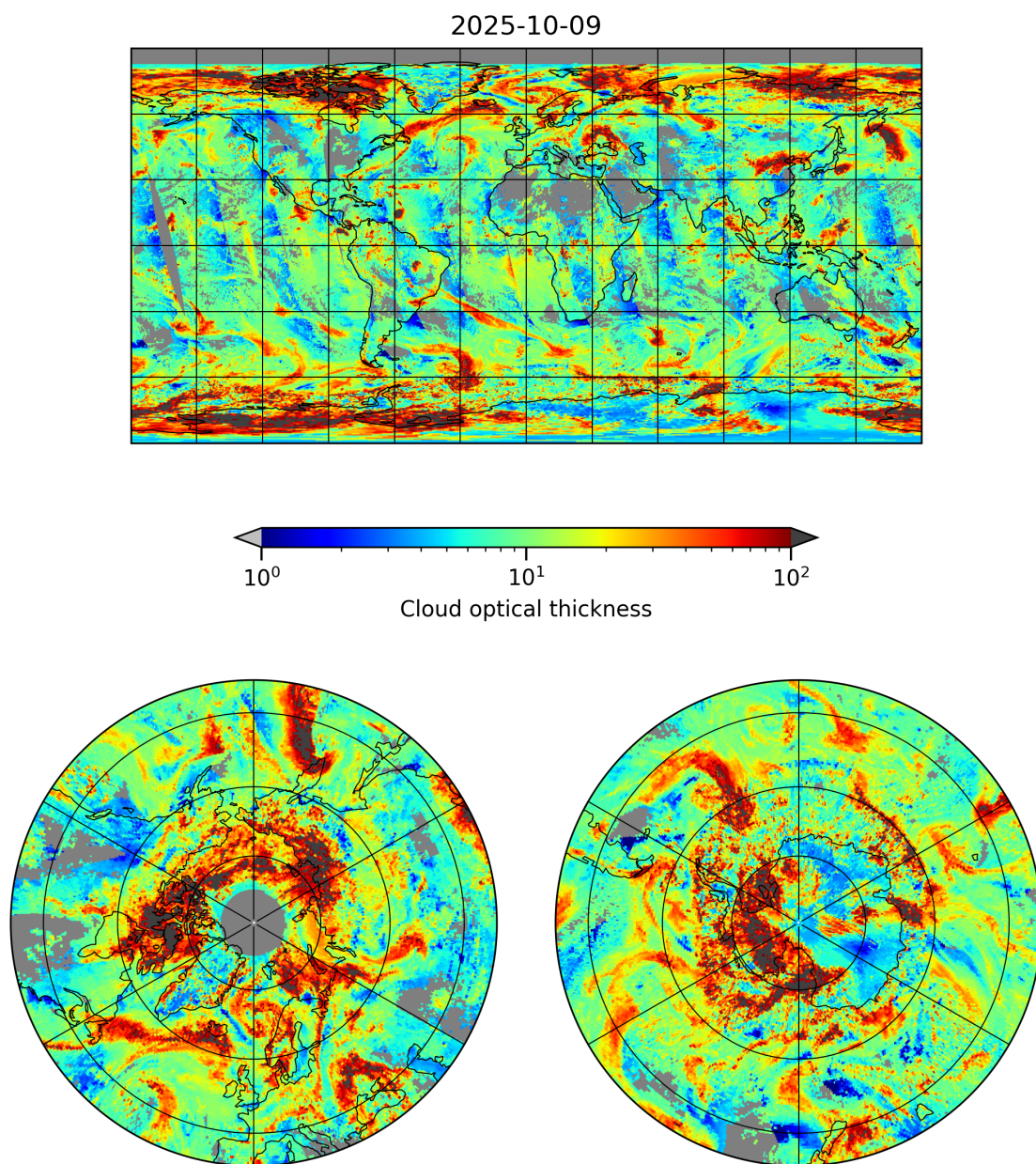


Figure 6: Map of “Cloud optical thickness” for 2025-10-09 to 2025-10-09

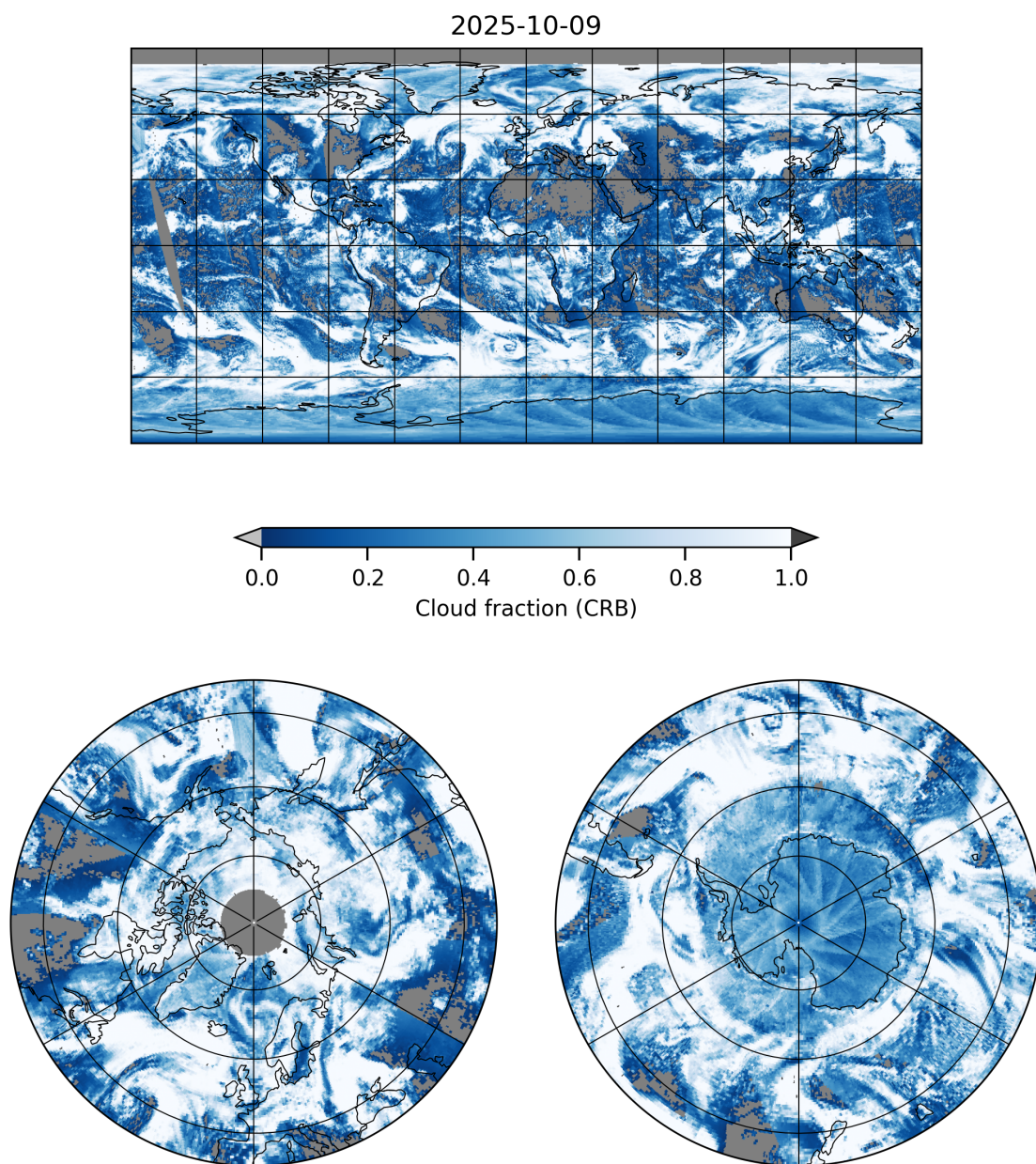


Figure 7: Map of “Cloud fraction (CRB)” for 2025-10-09 to 2025-10-09

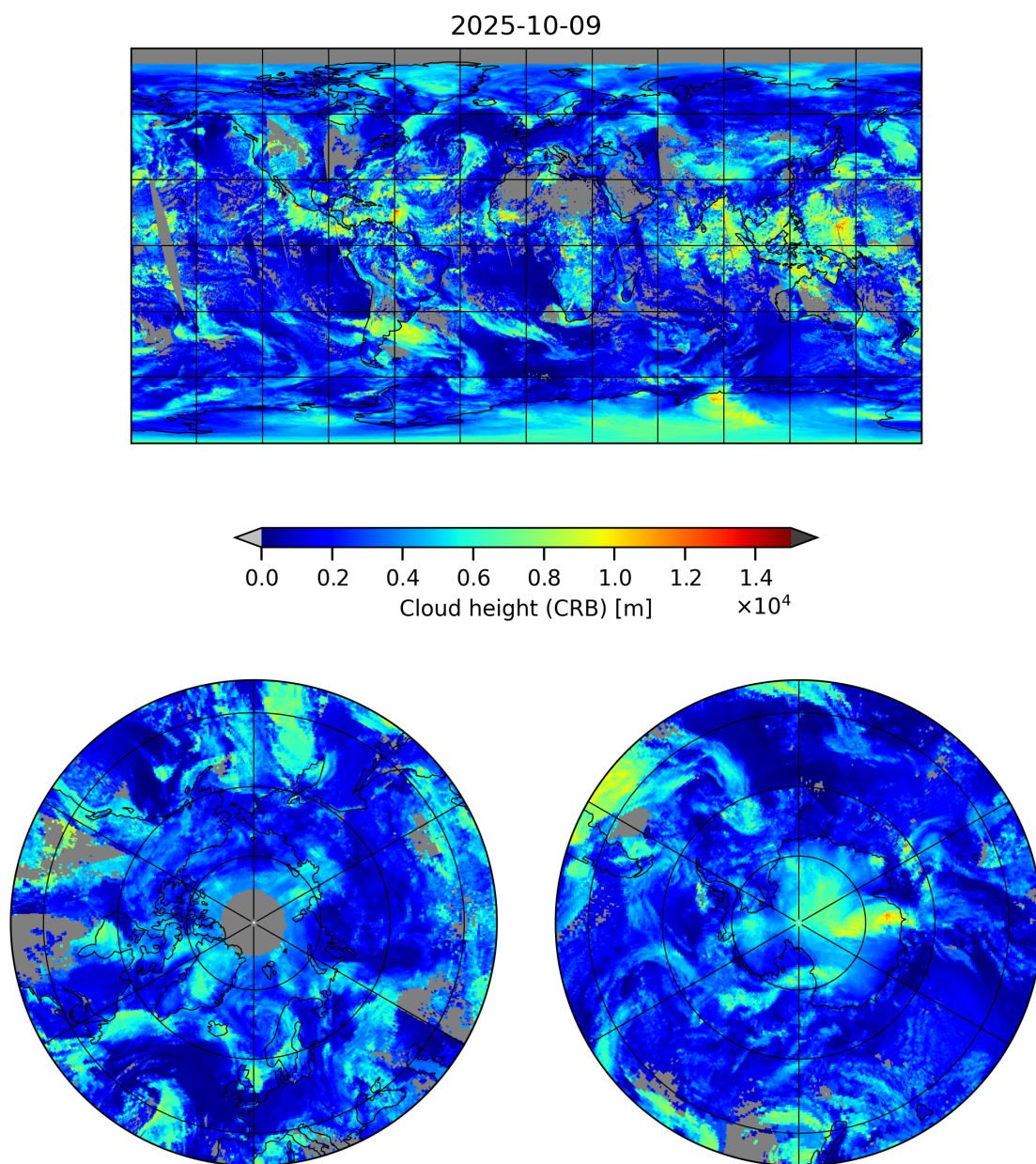


Figure 8: Map of “Cloud height (CRB)” for 2025-10-09 to 2025-10-09

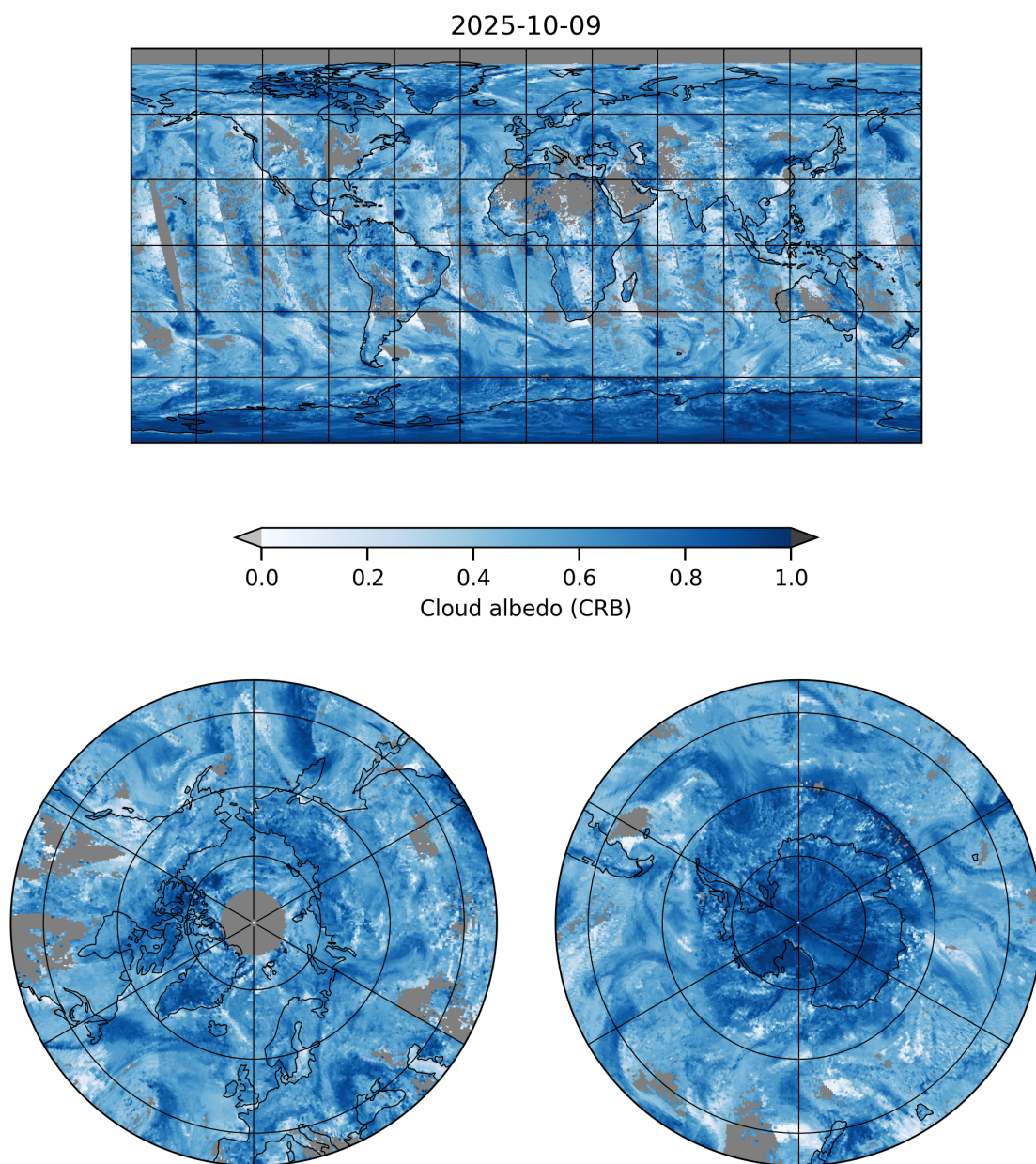


Figure 9: Map of “Cloud albedo (CRB)” for 2025-10-09 to 2025-10-09

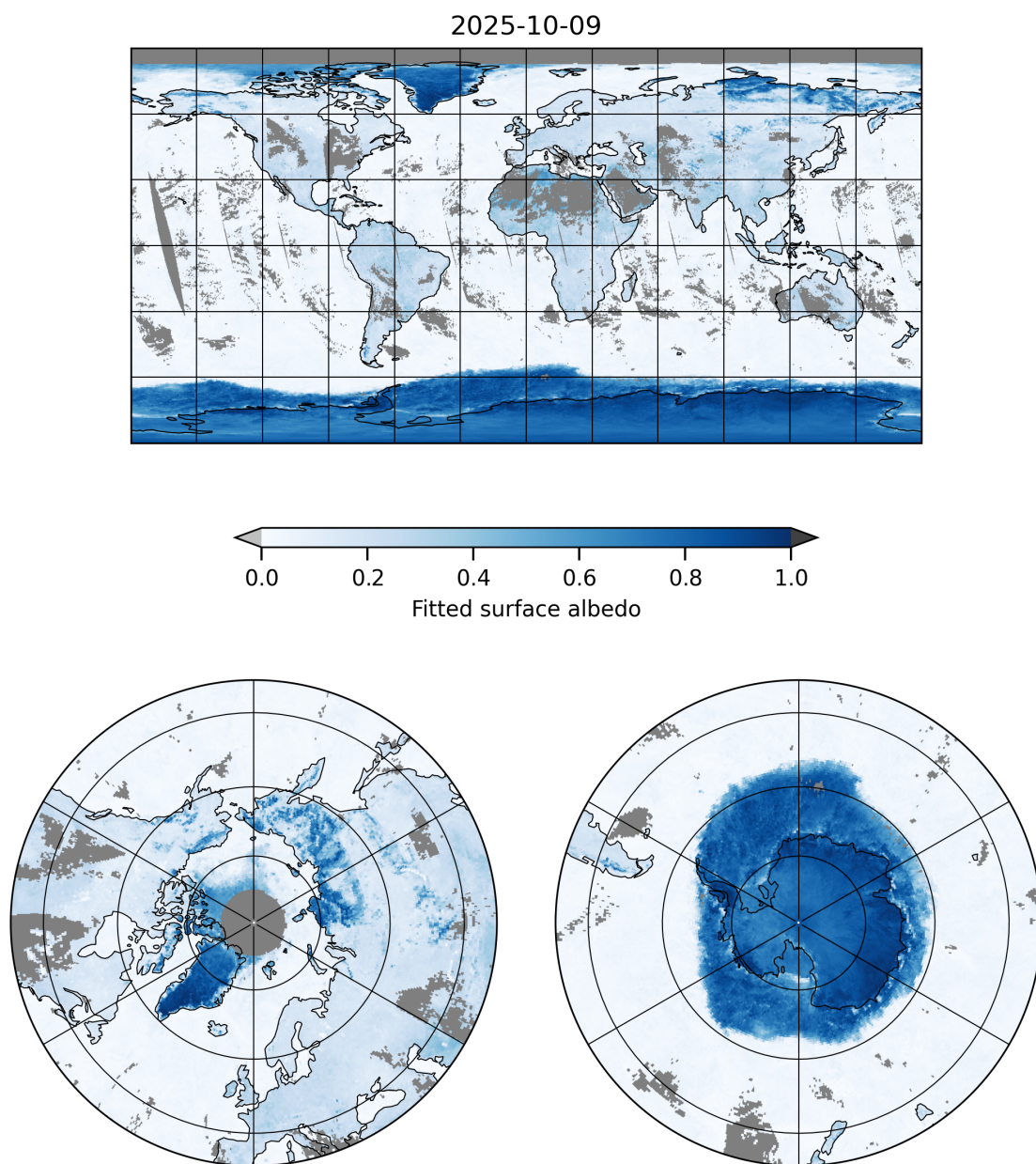


Figure 10: Map of “Fitted surface albedo” for 2025-10-09 to 2025-10-09

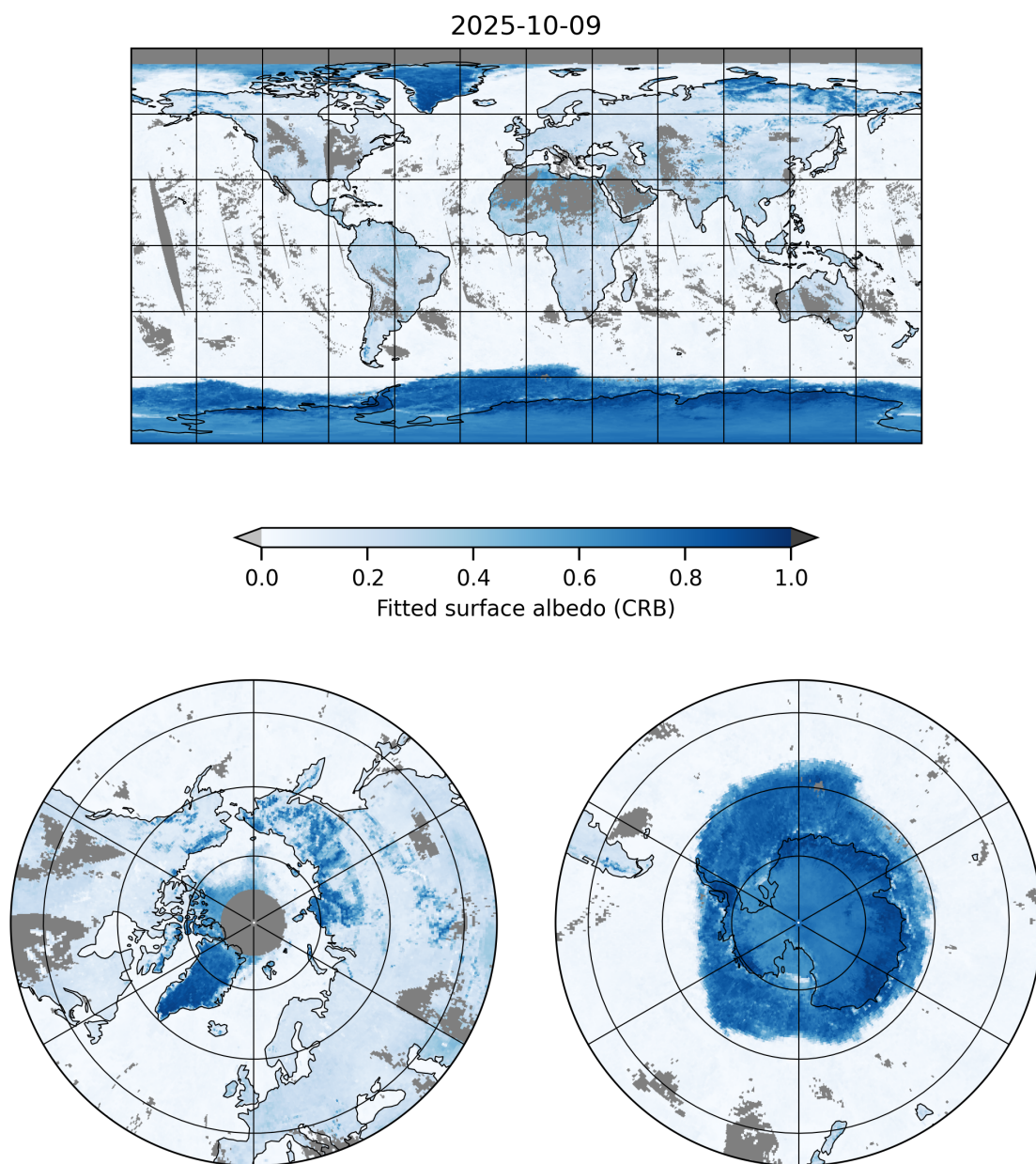


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-10-09 to 2025-10-09

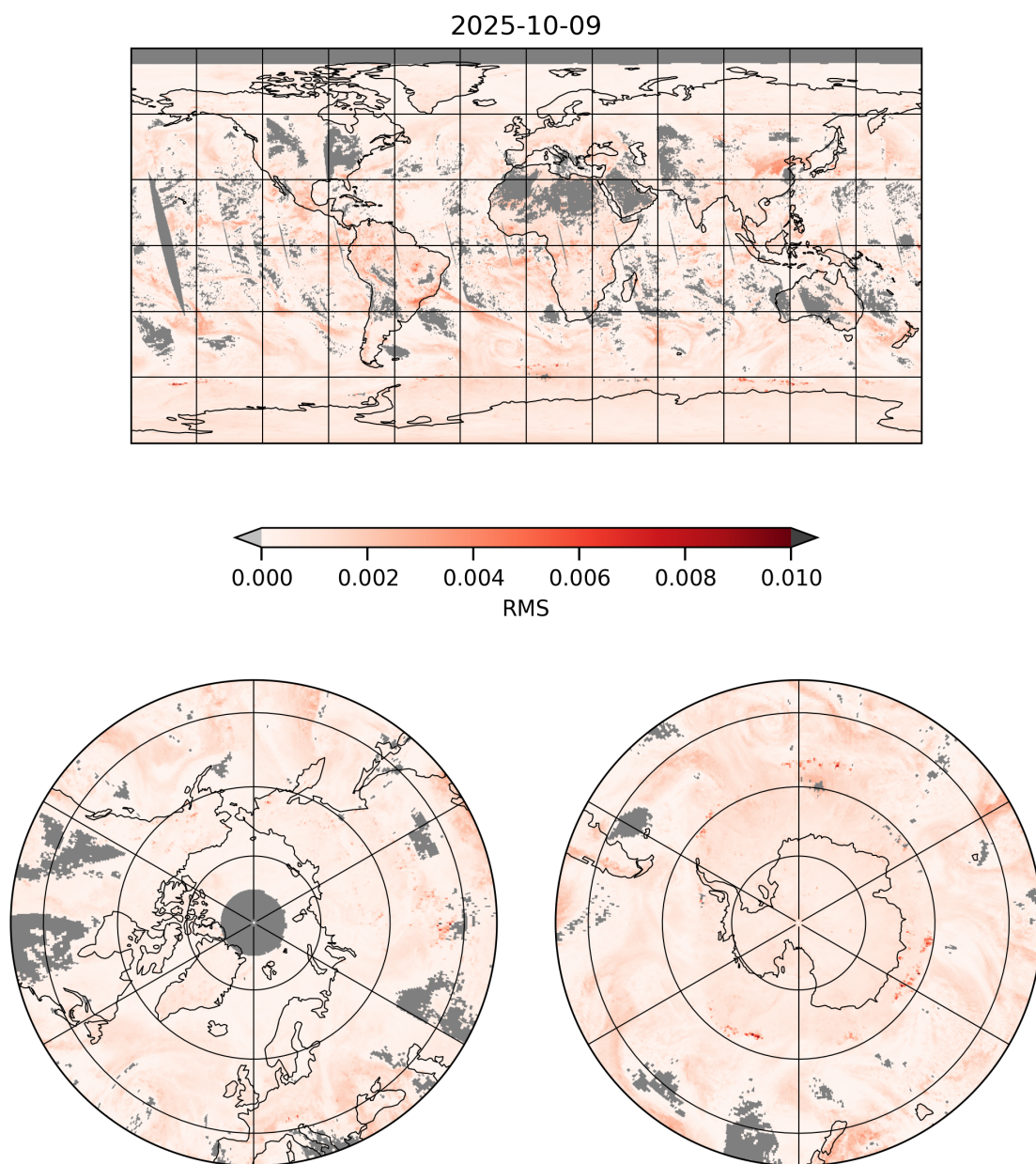


Figure 12: Map of “RMS” for 2025-10-09 to 2025-10-09

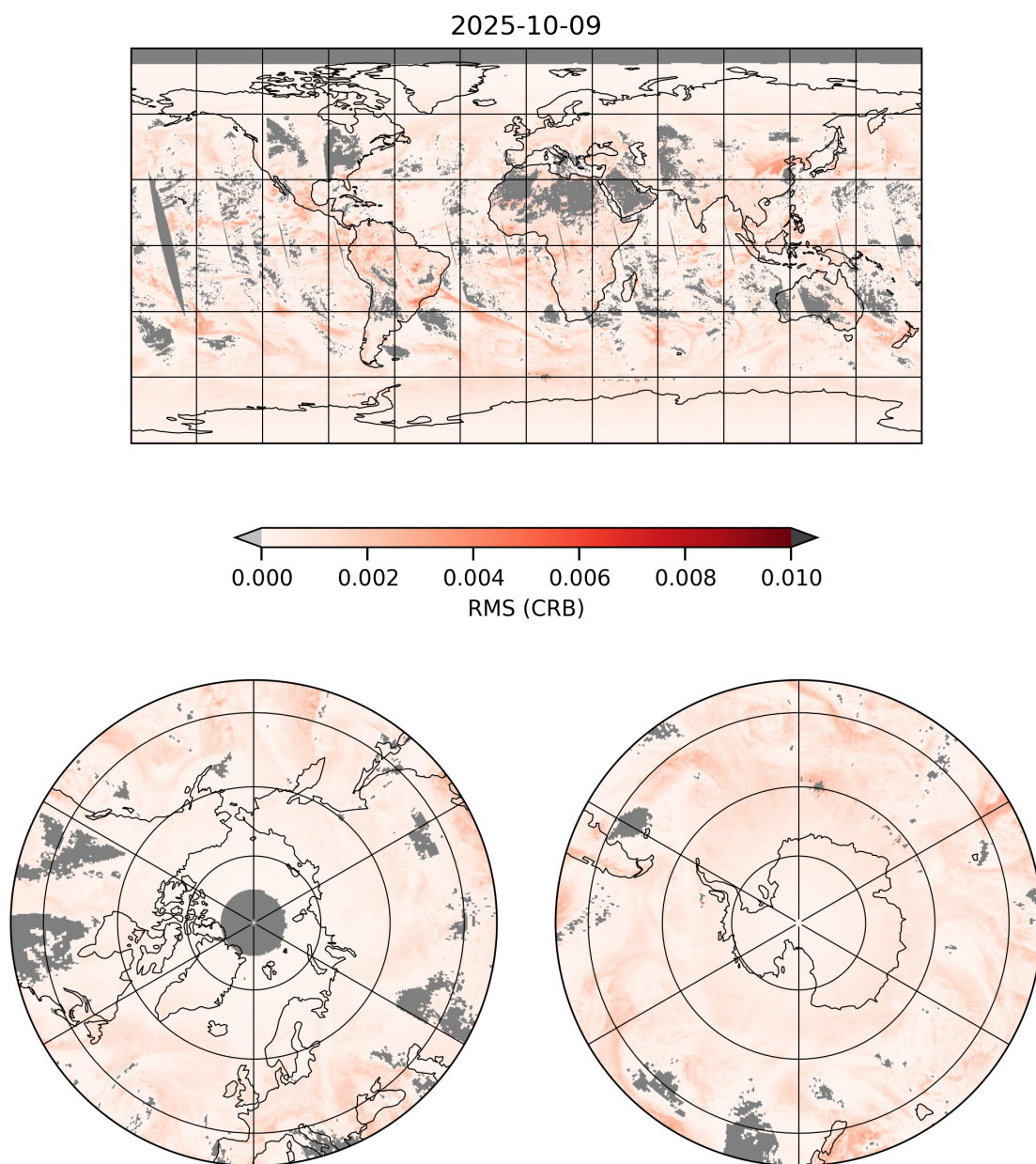


Figure 13: Map of “RMS (CRB)” for 2025-10-09 to 2025-10-09

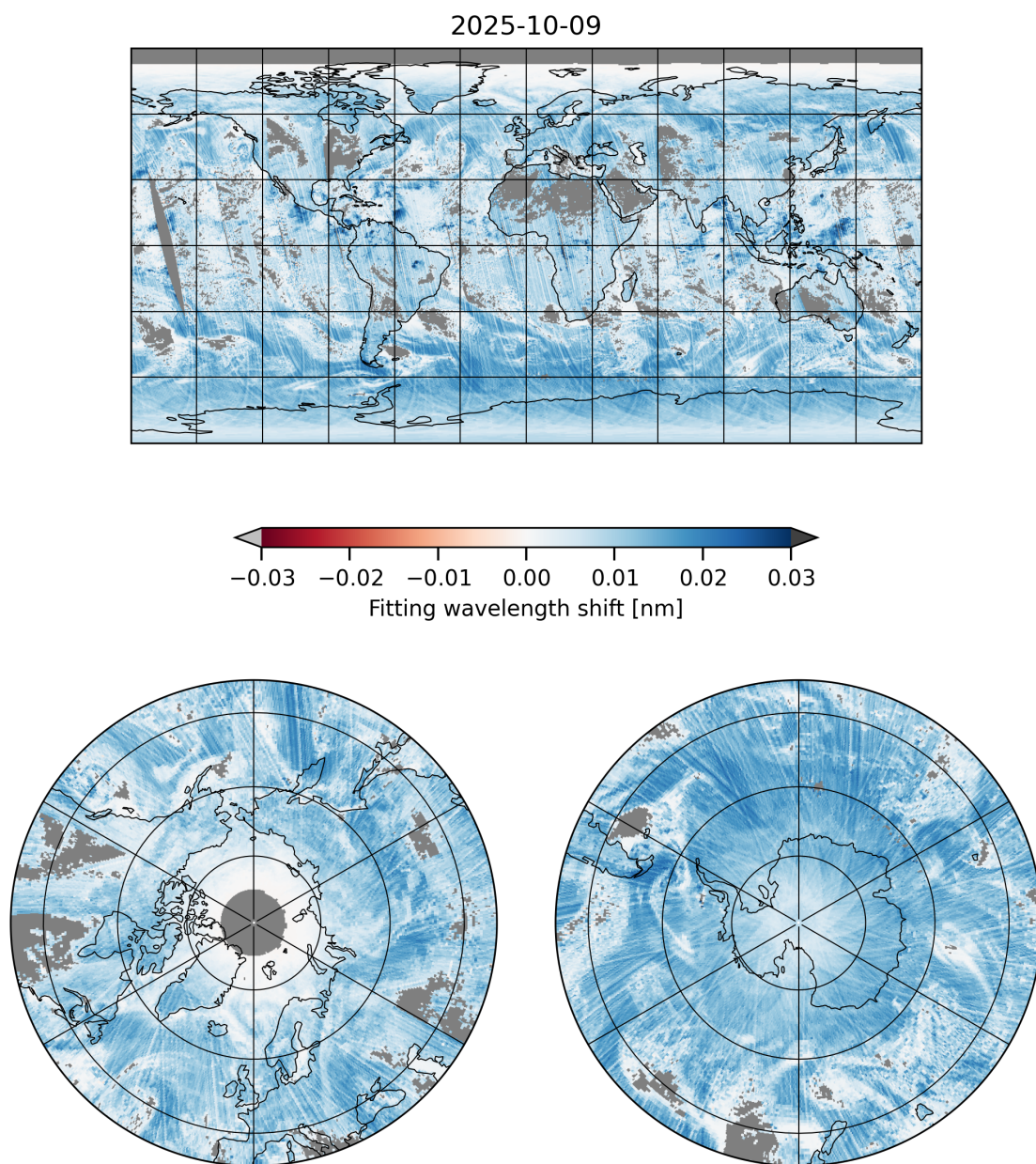


Figure 14: Map of “Fitting wavelength shift” for 2025-10-09 to 2025-10-09

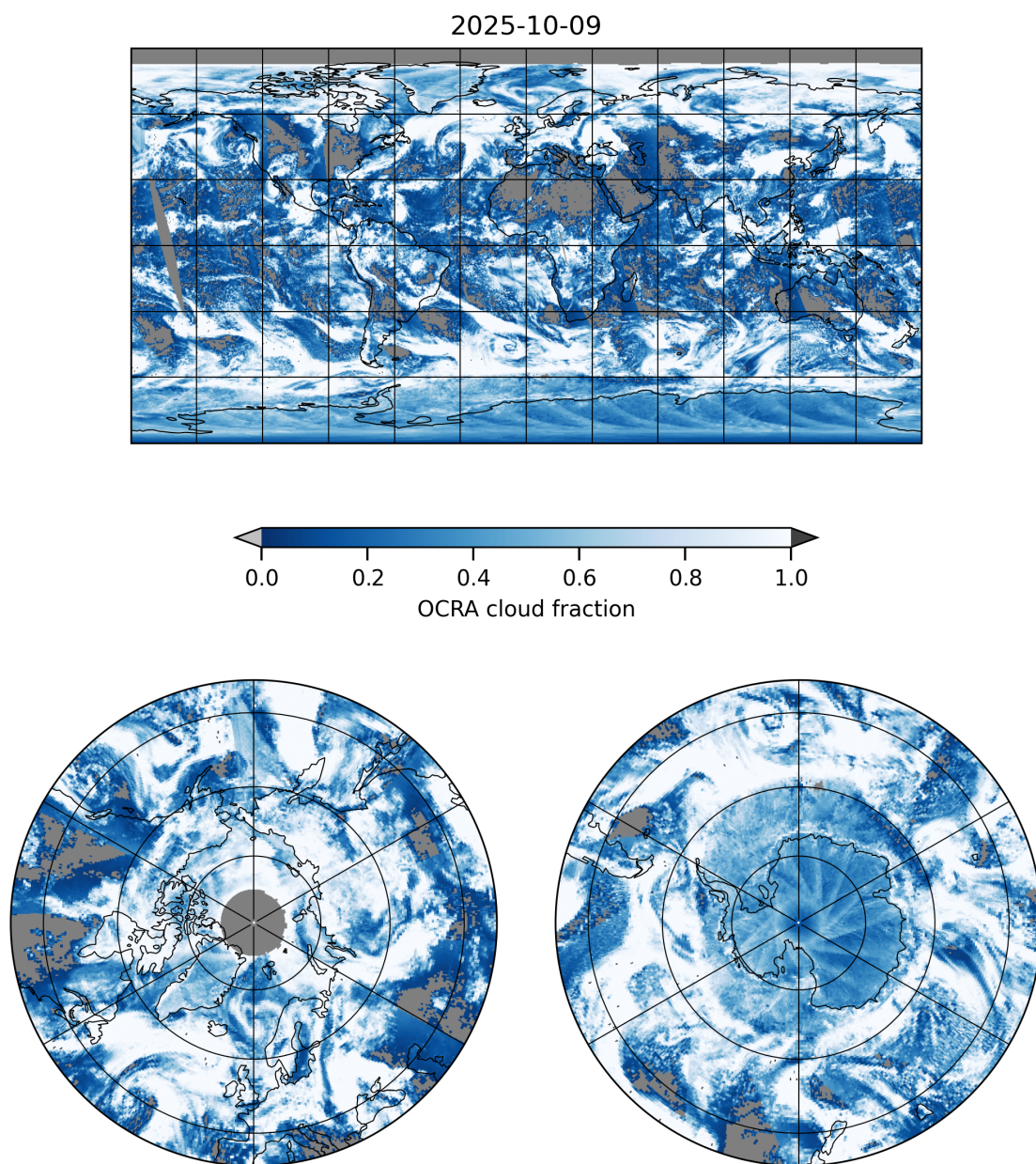


Figure 15: Map of “OCRA cloud fraction” for 2025-10-09 to 2025-10-09

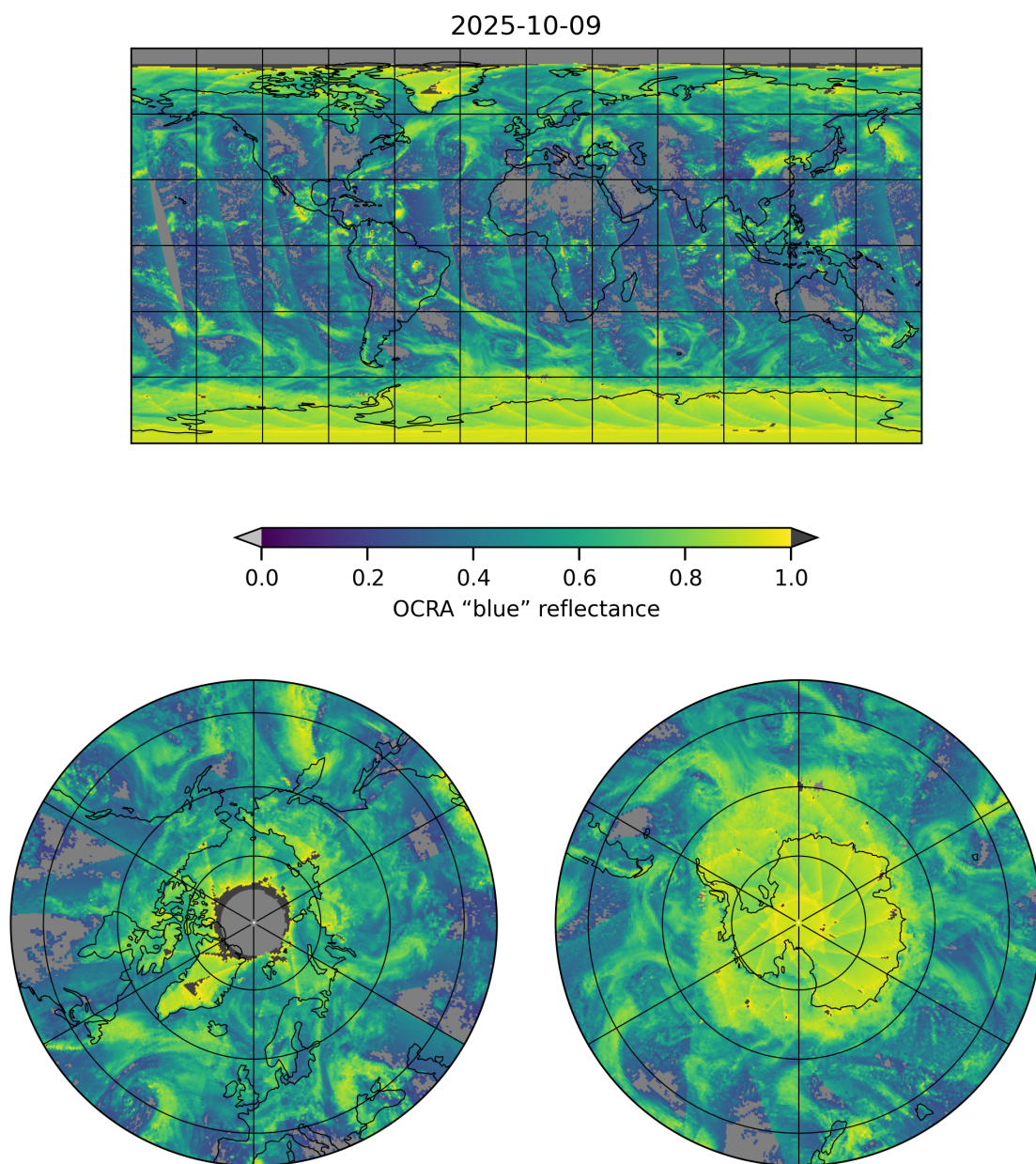


Figure 16: Map of "OCRA "blue" reflectance" for 2025-10-09 to 2025-10-09

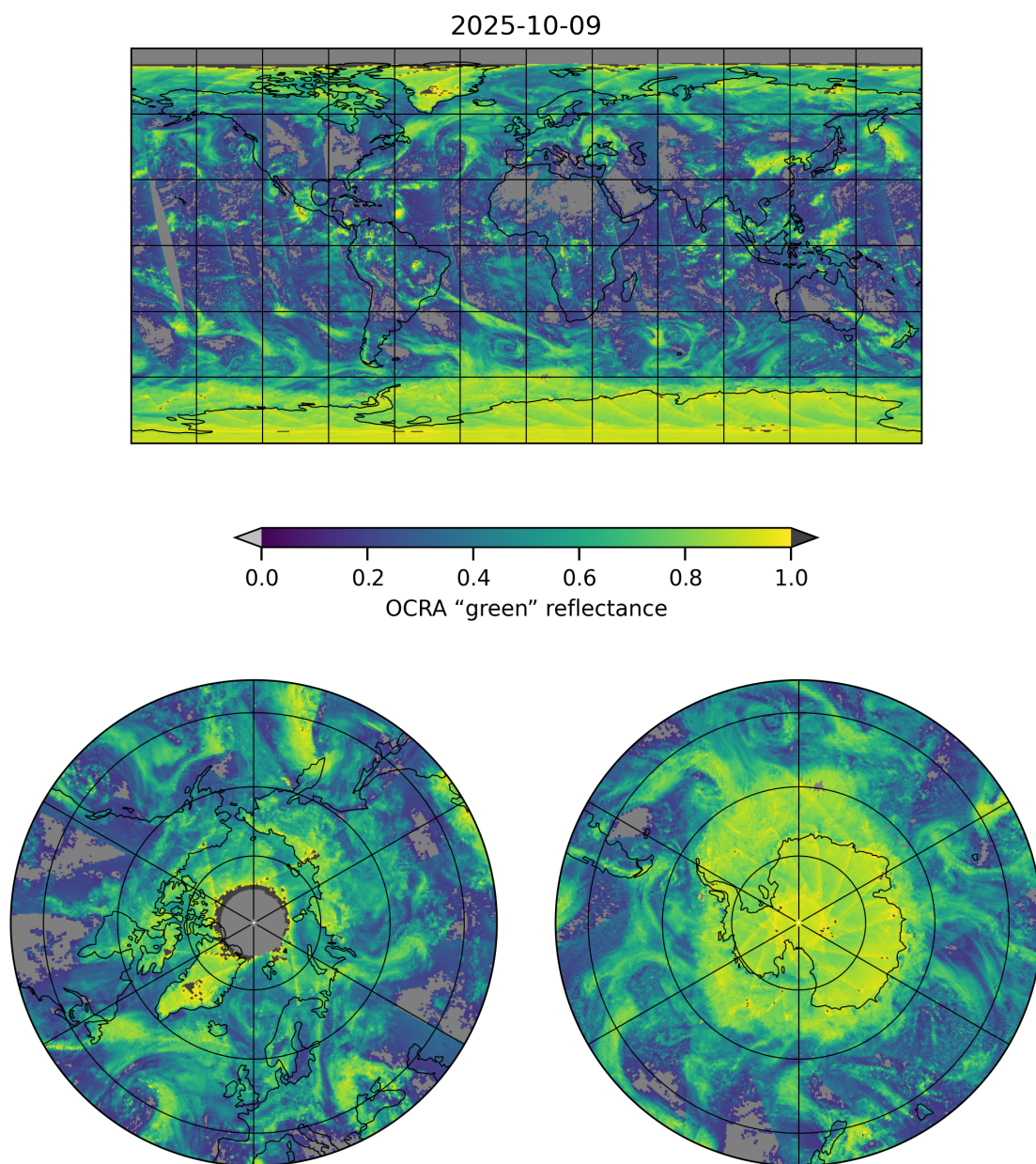


Figure 17: Map of "OCRA "green" reflectance" for 2025-10-09 to 2025-10-09

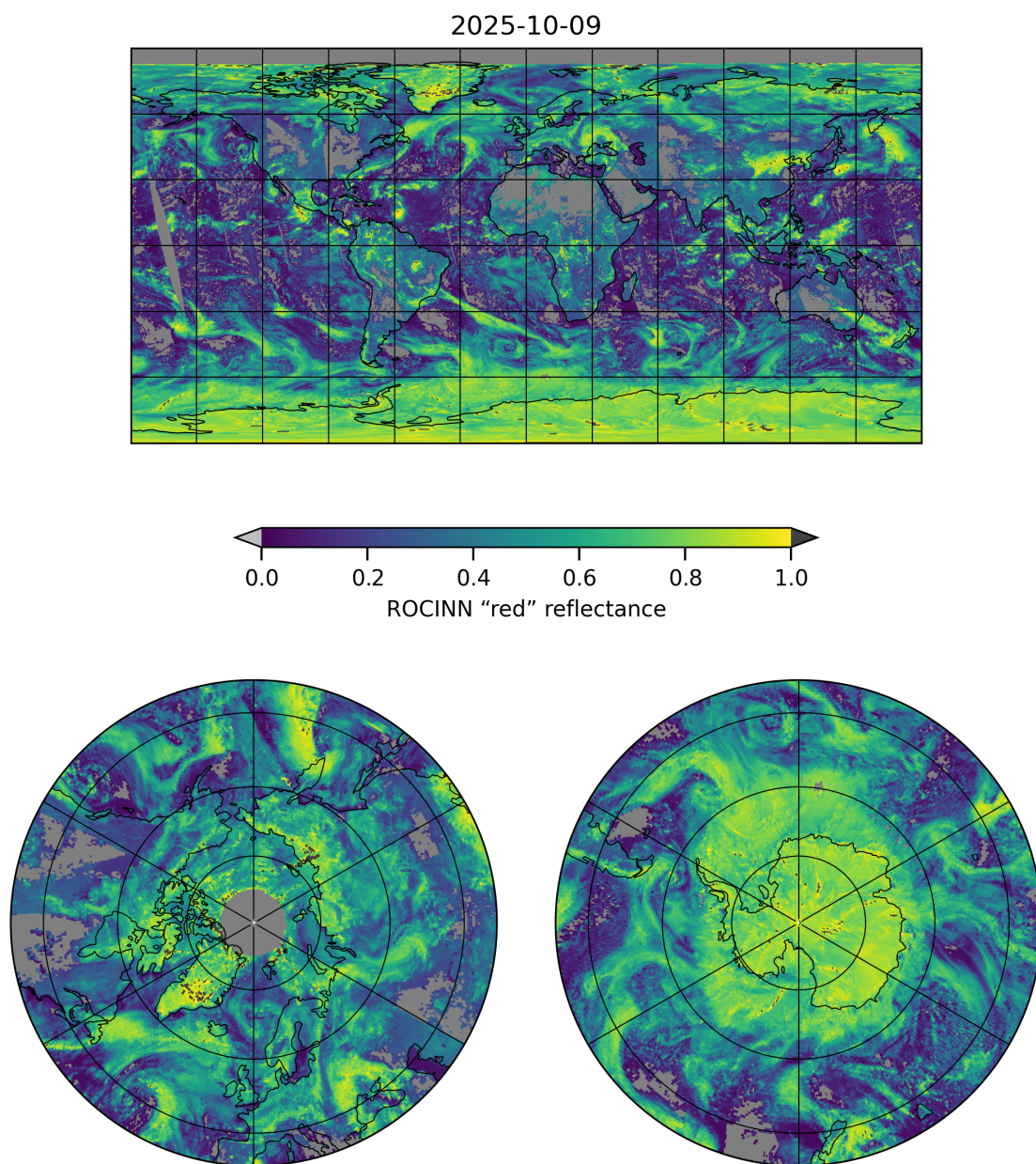


Figure 18: Map of "ROCINN "red" reflectance" for 2025-10-09 to 2025-10-09

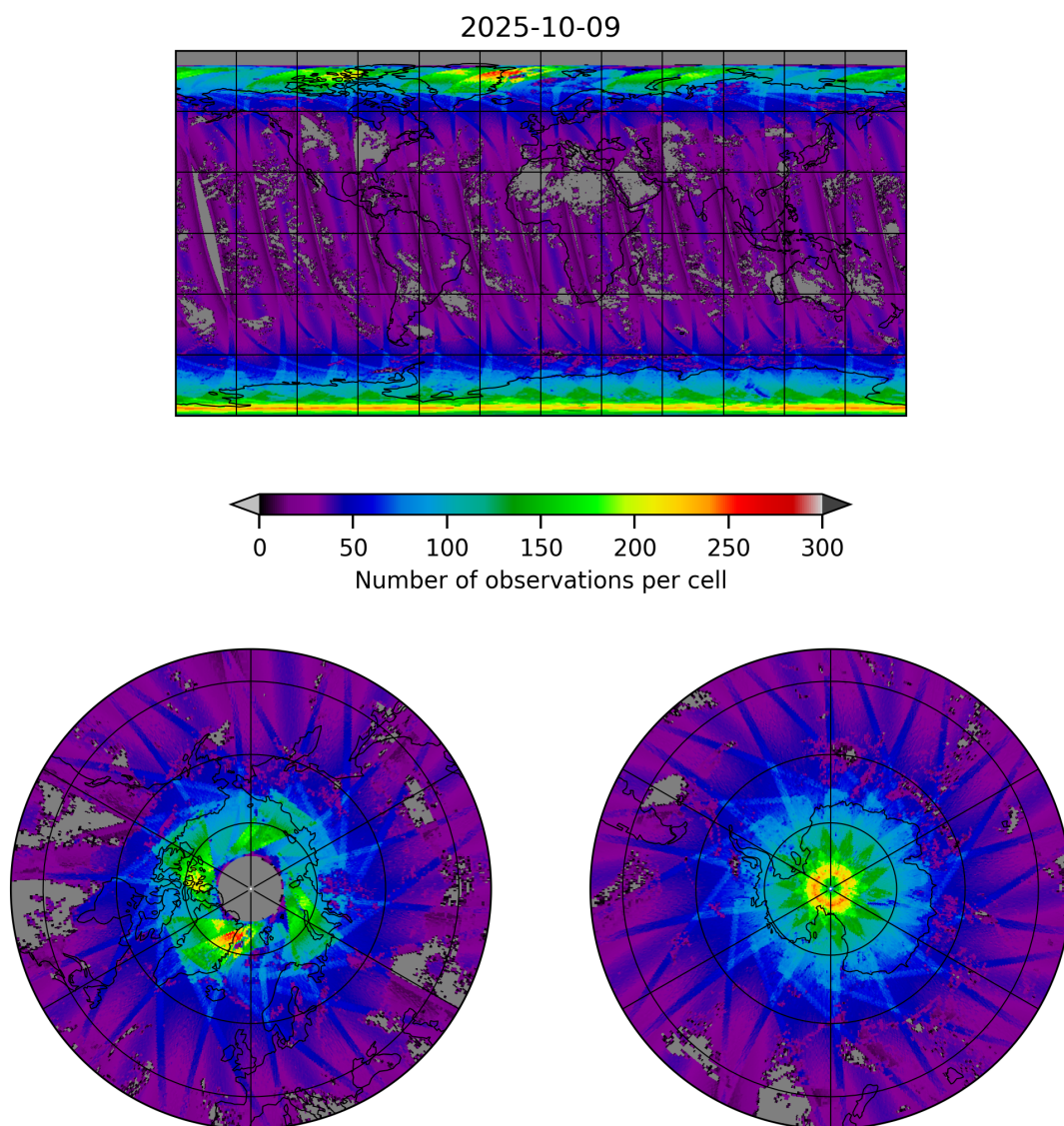


Figure 19: Map of the number of observations for 2025-10-09 to 2025-10-09

7 Zonal average

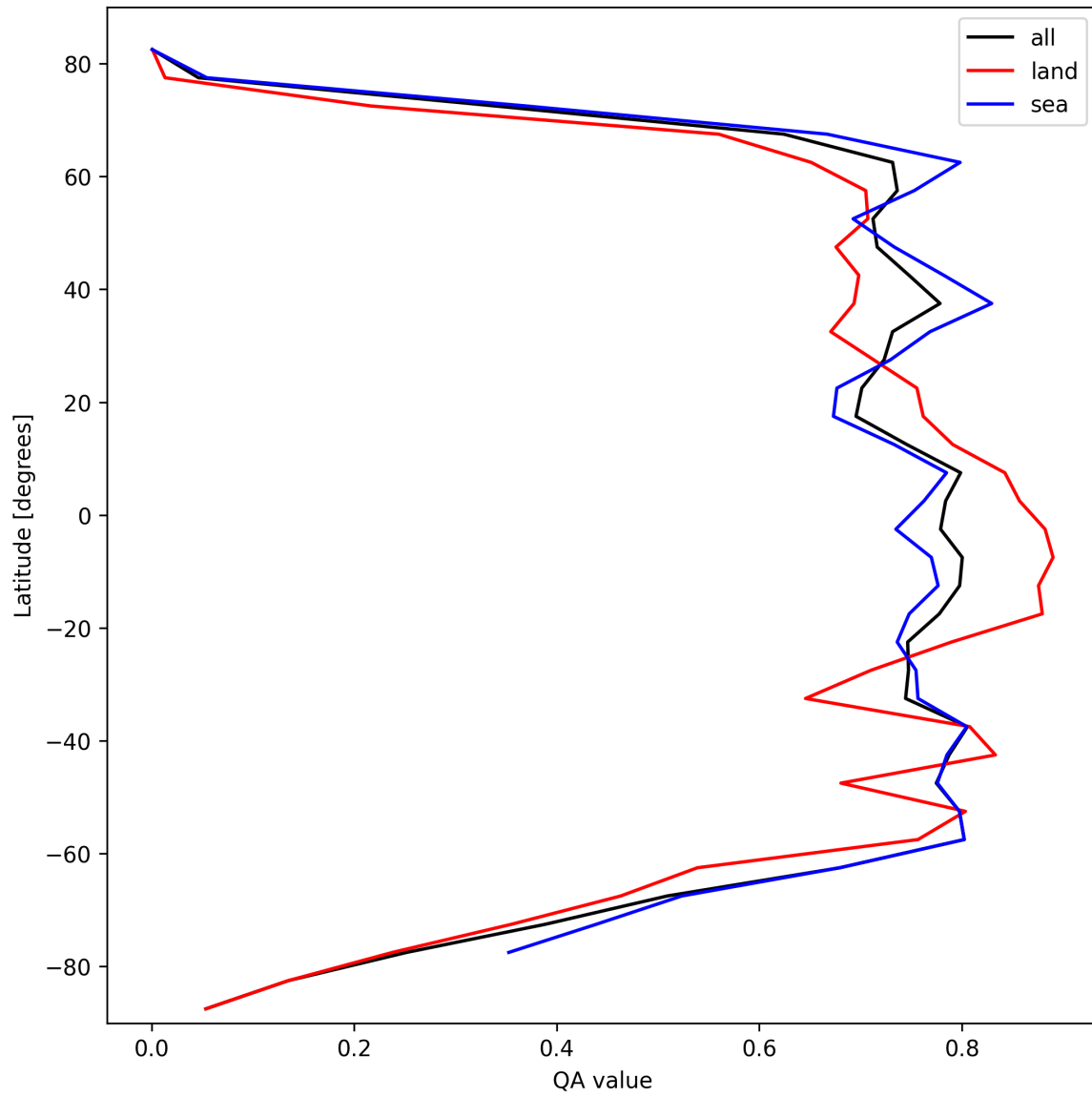


Figure 20: Zonal average of “QA value” for 2025-10-09 to 2025-10-09.

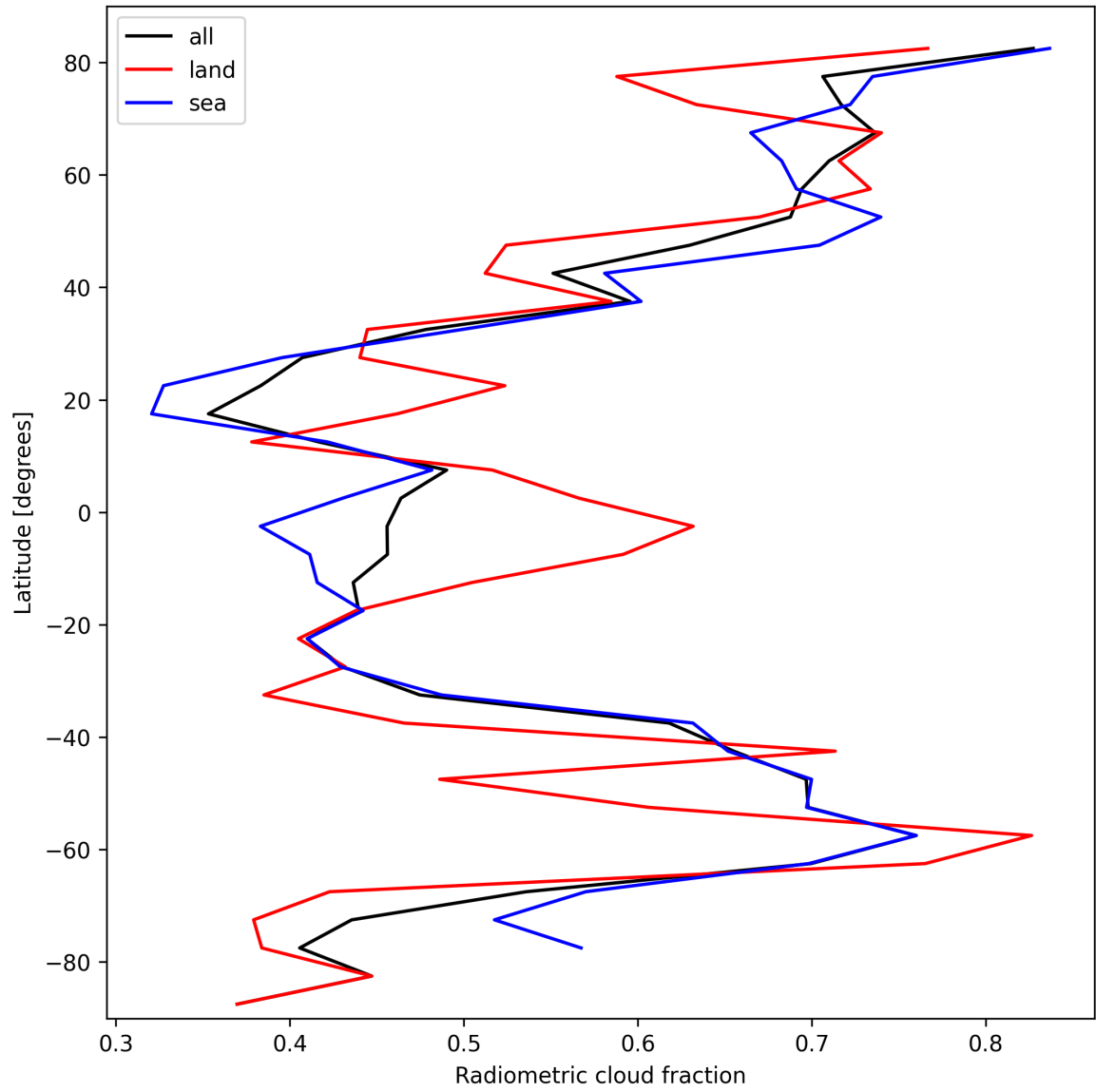


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-10-09 to 2025-10-09.

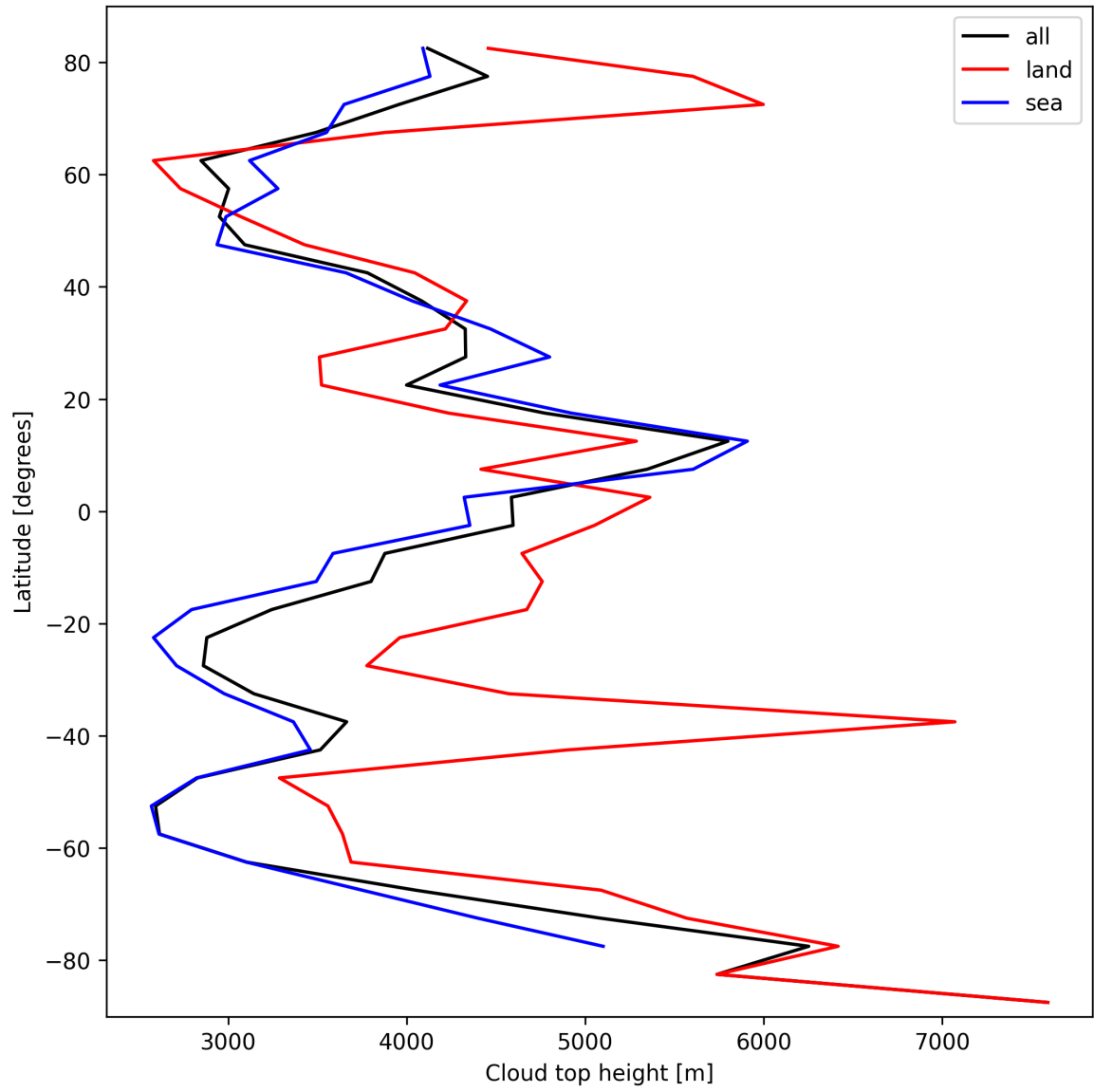


Figure 22: Zonal average of “Cloud top height” for 2025-10-09 to 2025-10-09.

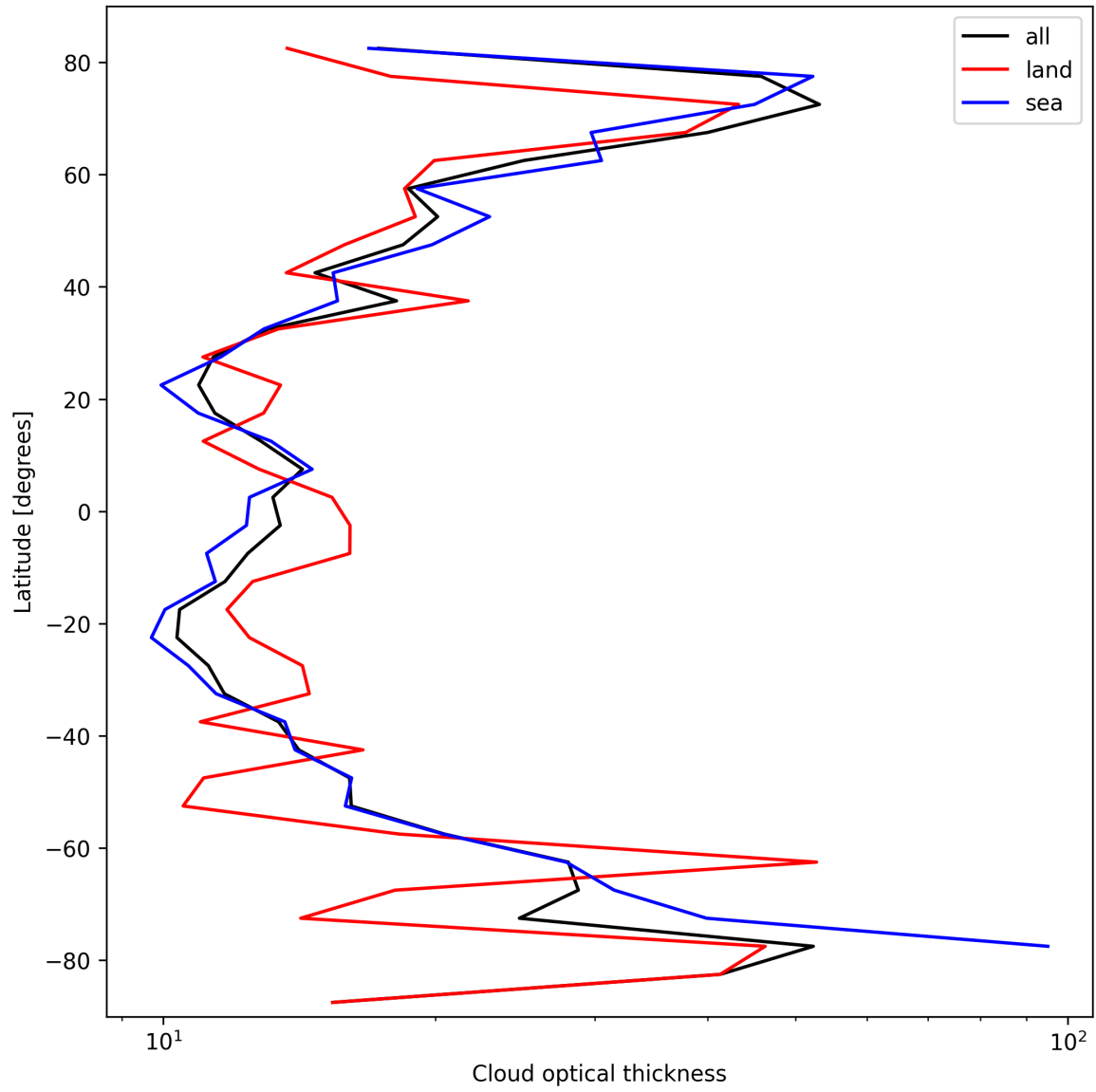


Figure 23: Zonal average of “Cloud optical thickness” for 2025-10-09 to 2025-10-09.

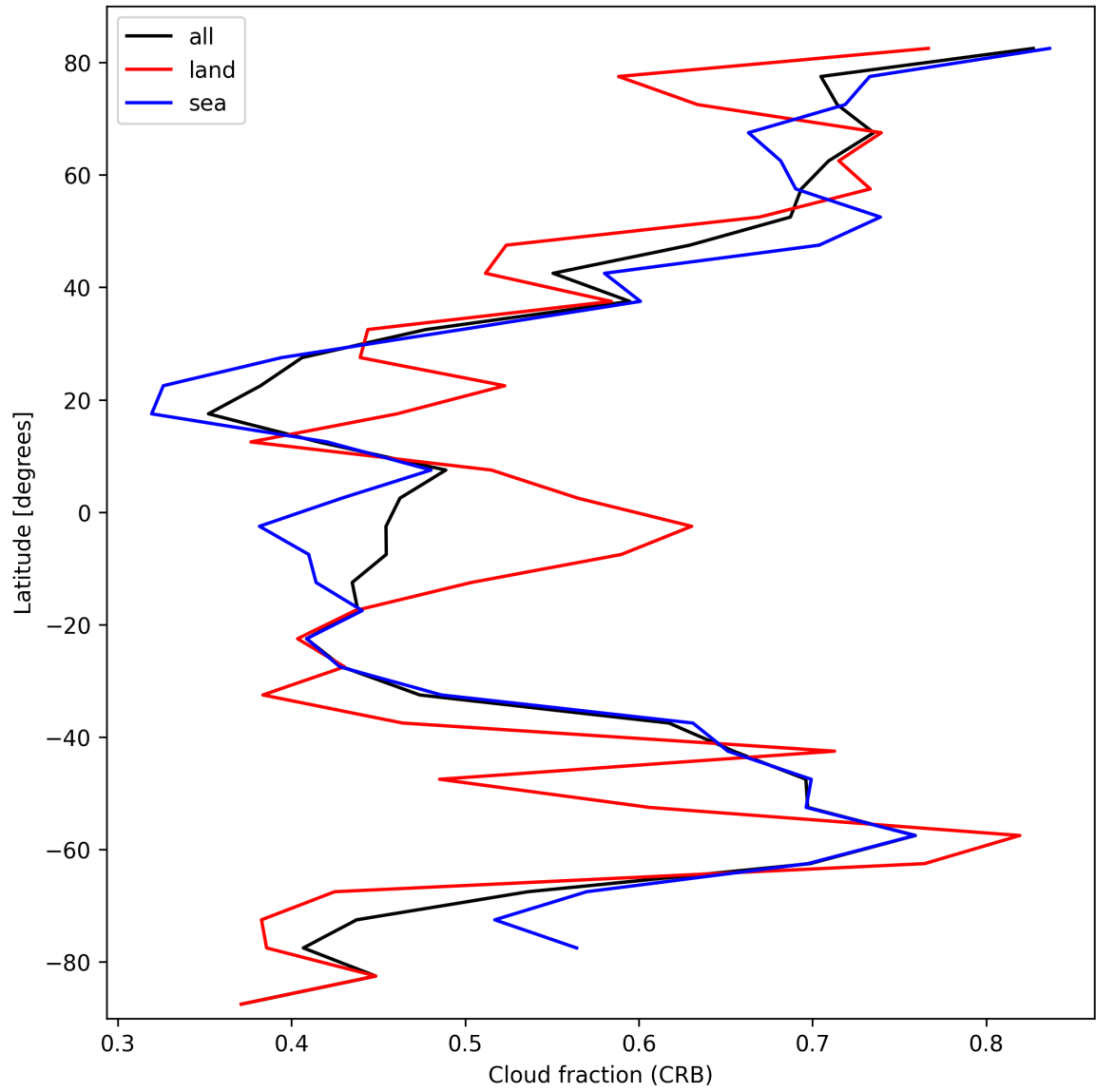


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-10-09 to 2025-10-09.

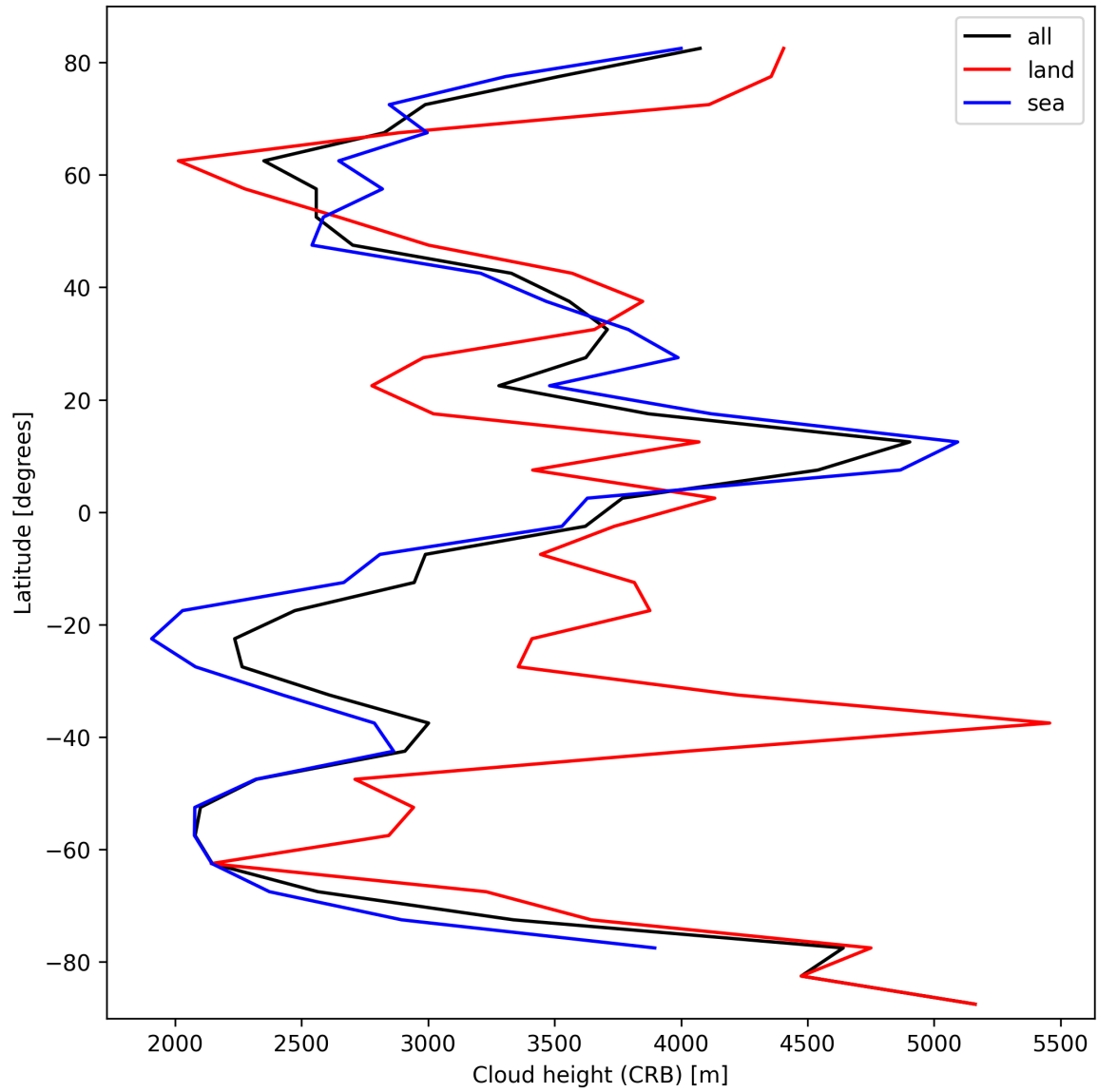


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-10-09 to 2025-10-09.

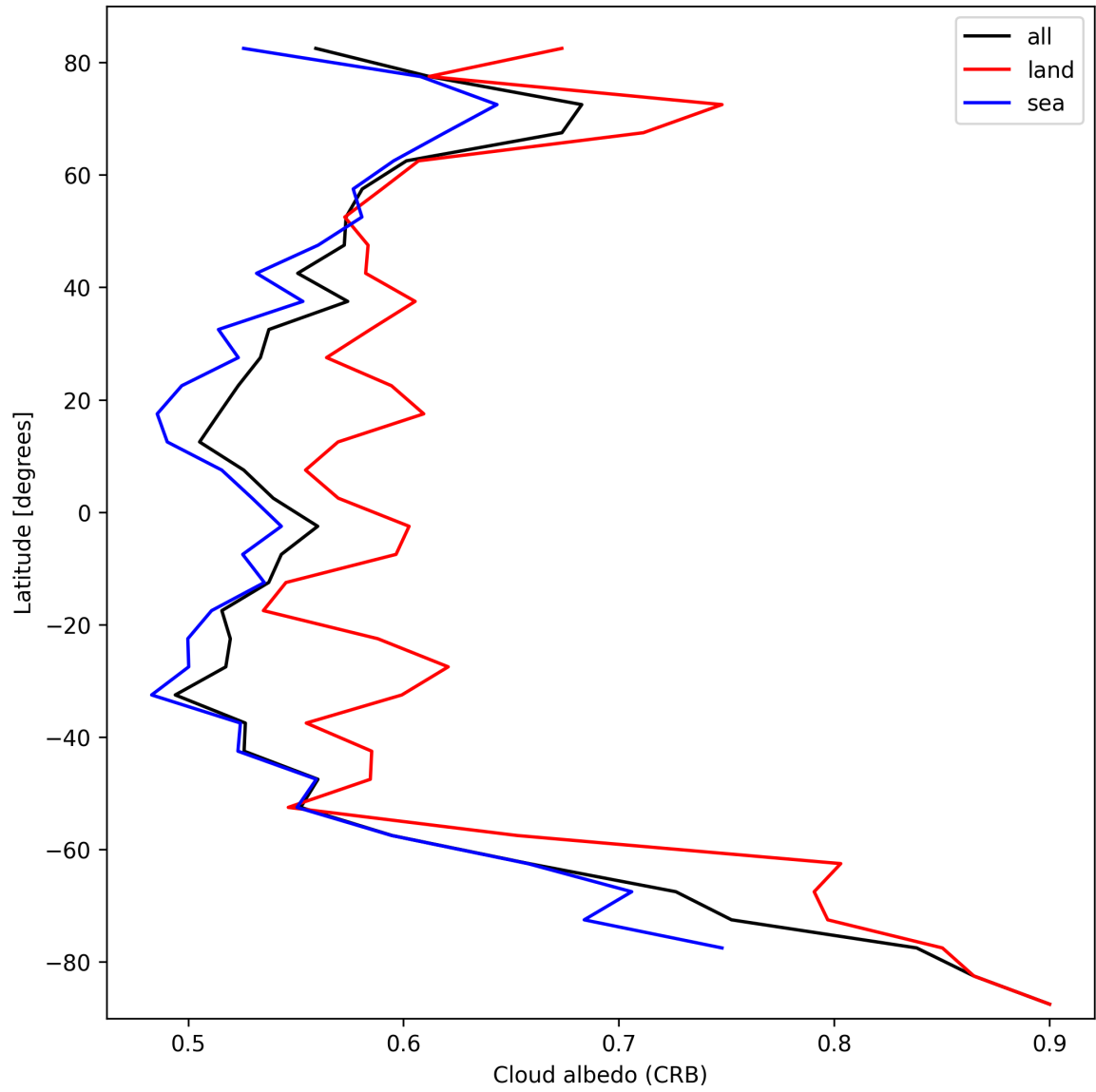


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-10-09 to 2025-10-09.

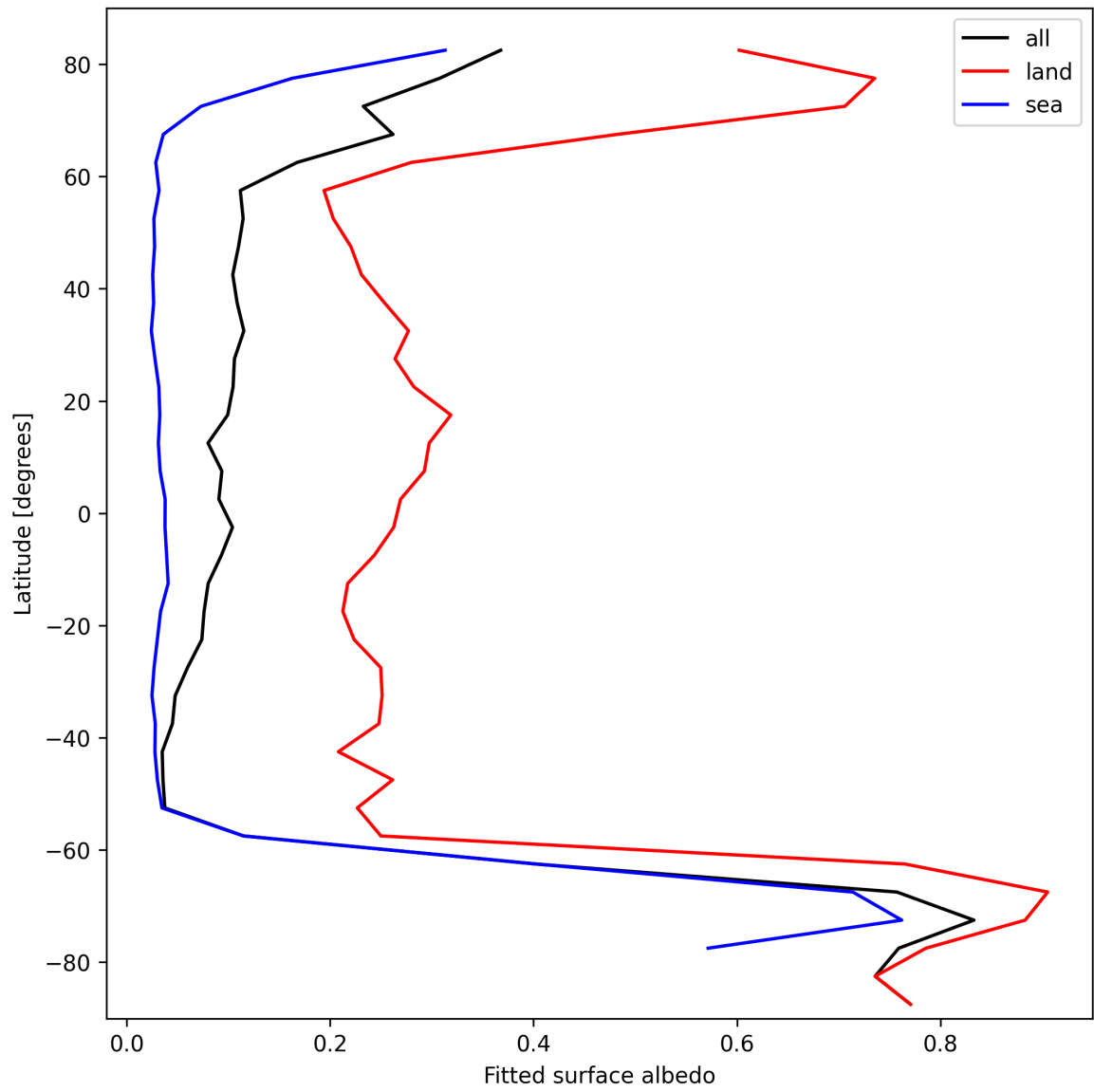


Figure 27: Zonal average of “Fitted surface albedo” for 2025-10-09 to 2025-10-09.

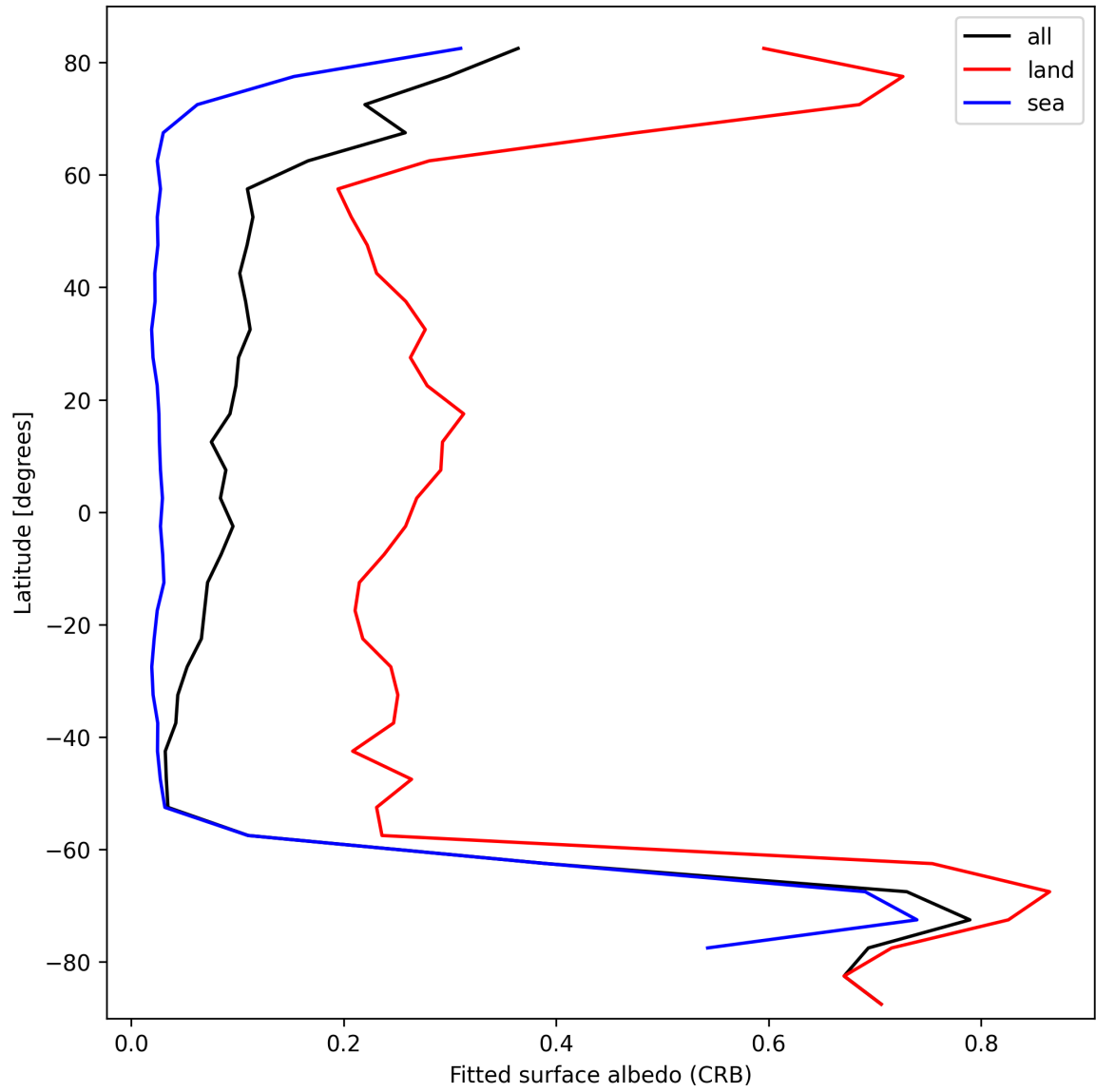


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-10-09 to 2025-10-09.

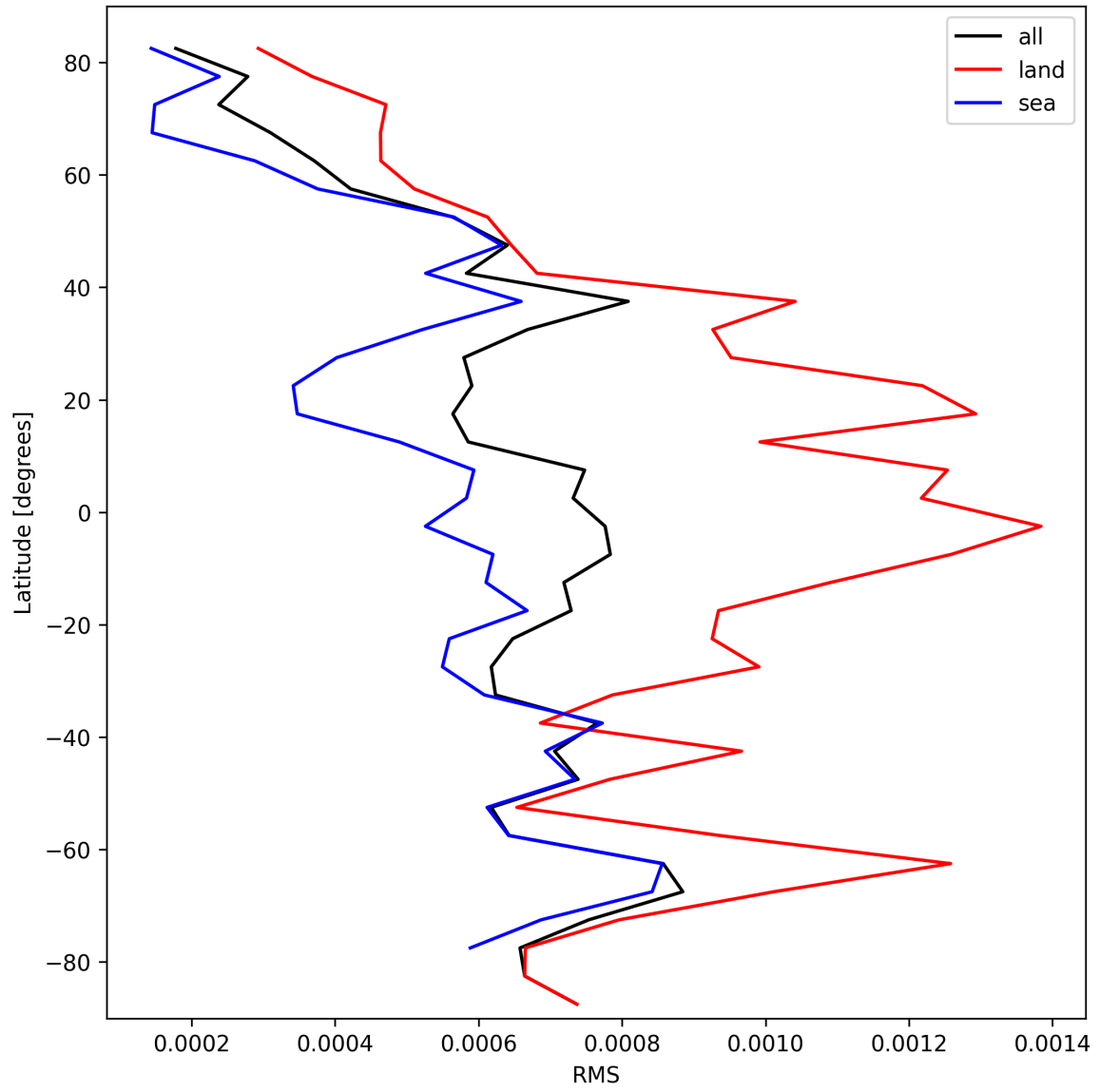


Figure 29: Zonal average of “RMS” for 2025-10-09 to 2025-10-09.

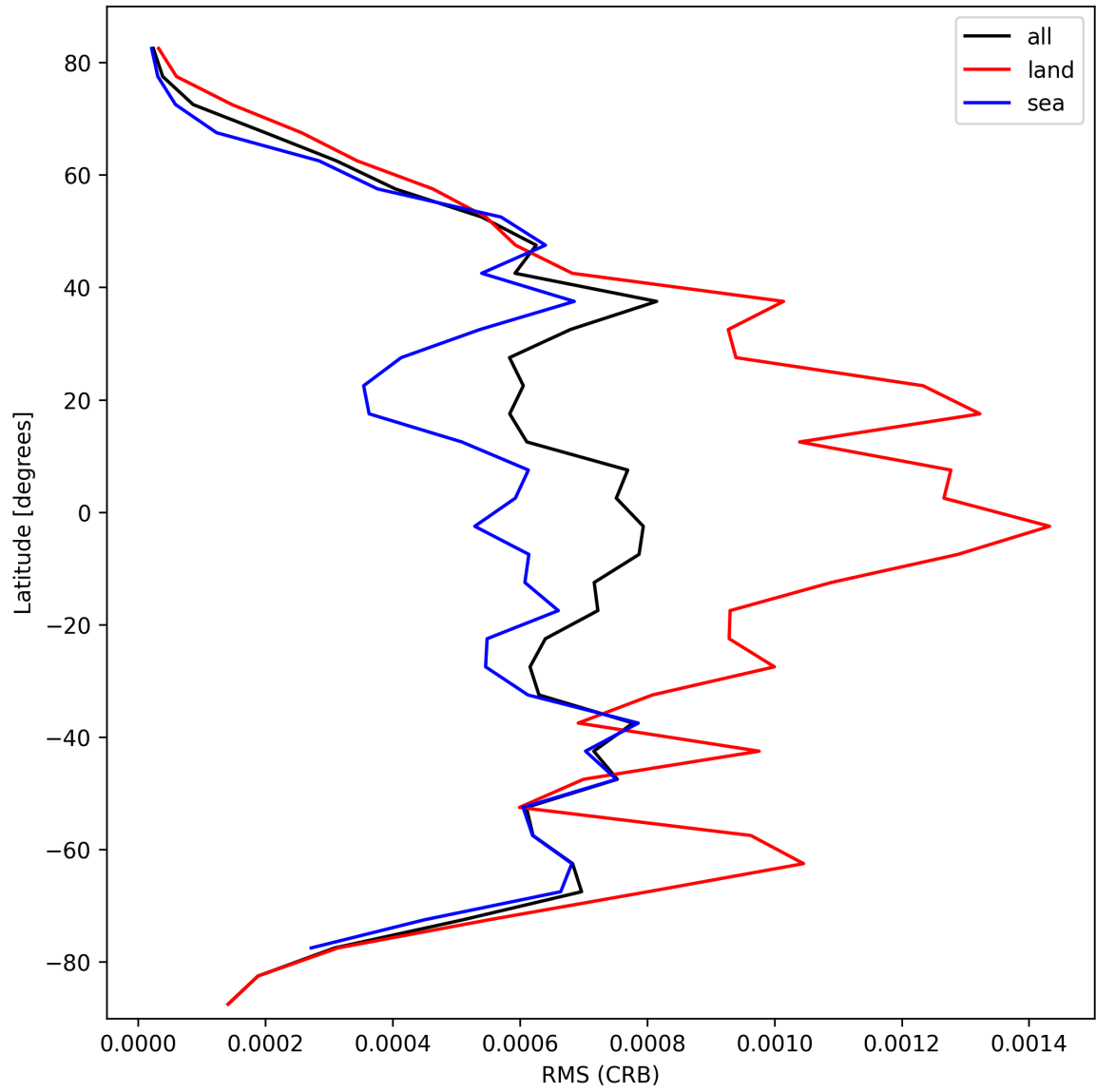


Figure 30: Zonal average of “RMS (CRB)” for 2025-10-09 to 2025-10-09.

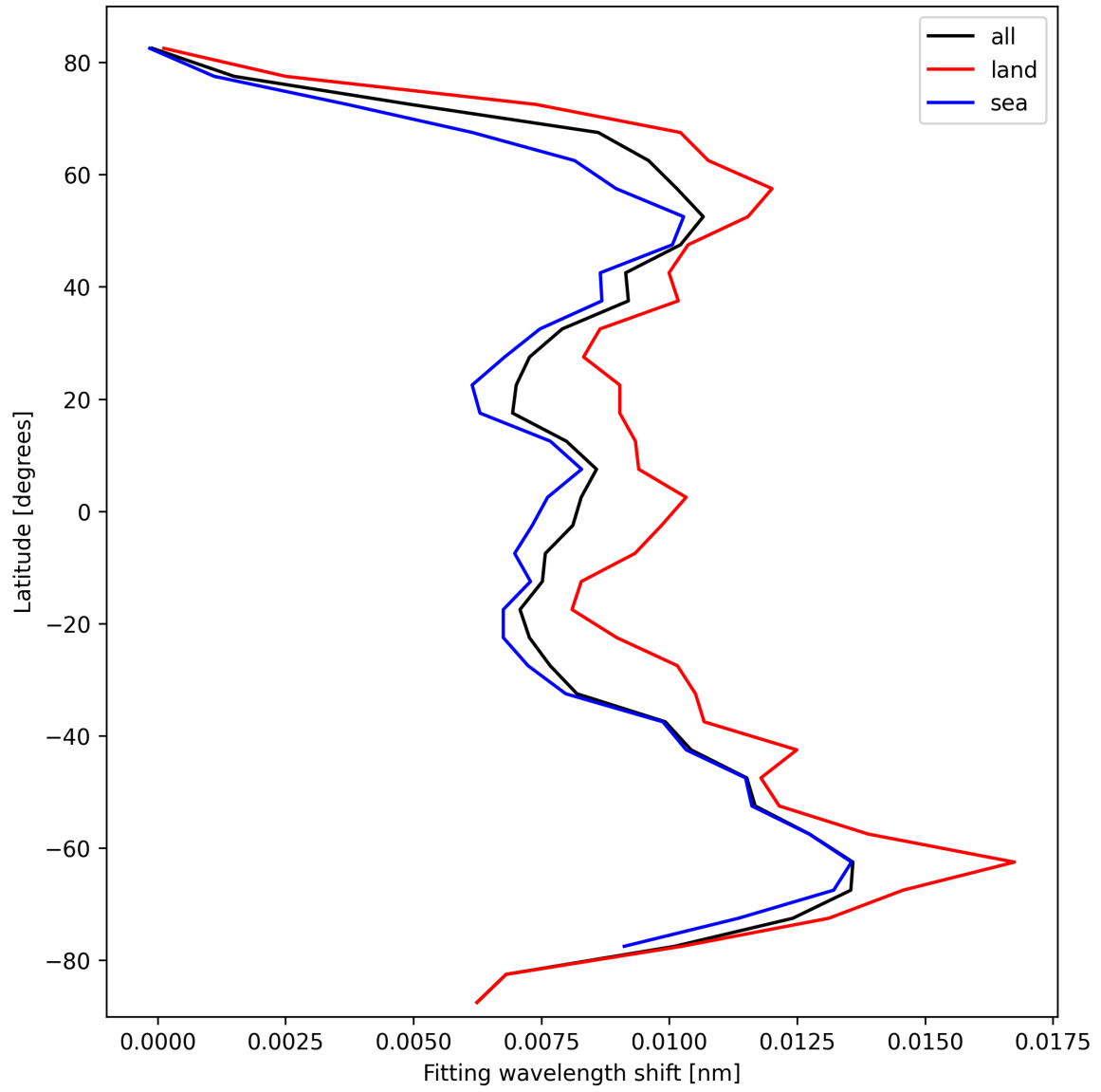


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-10-09 to 2025-10-09.

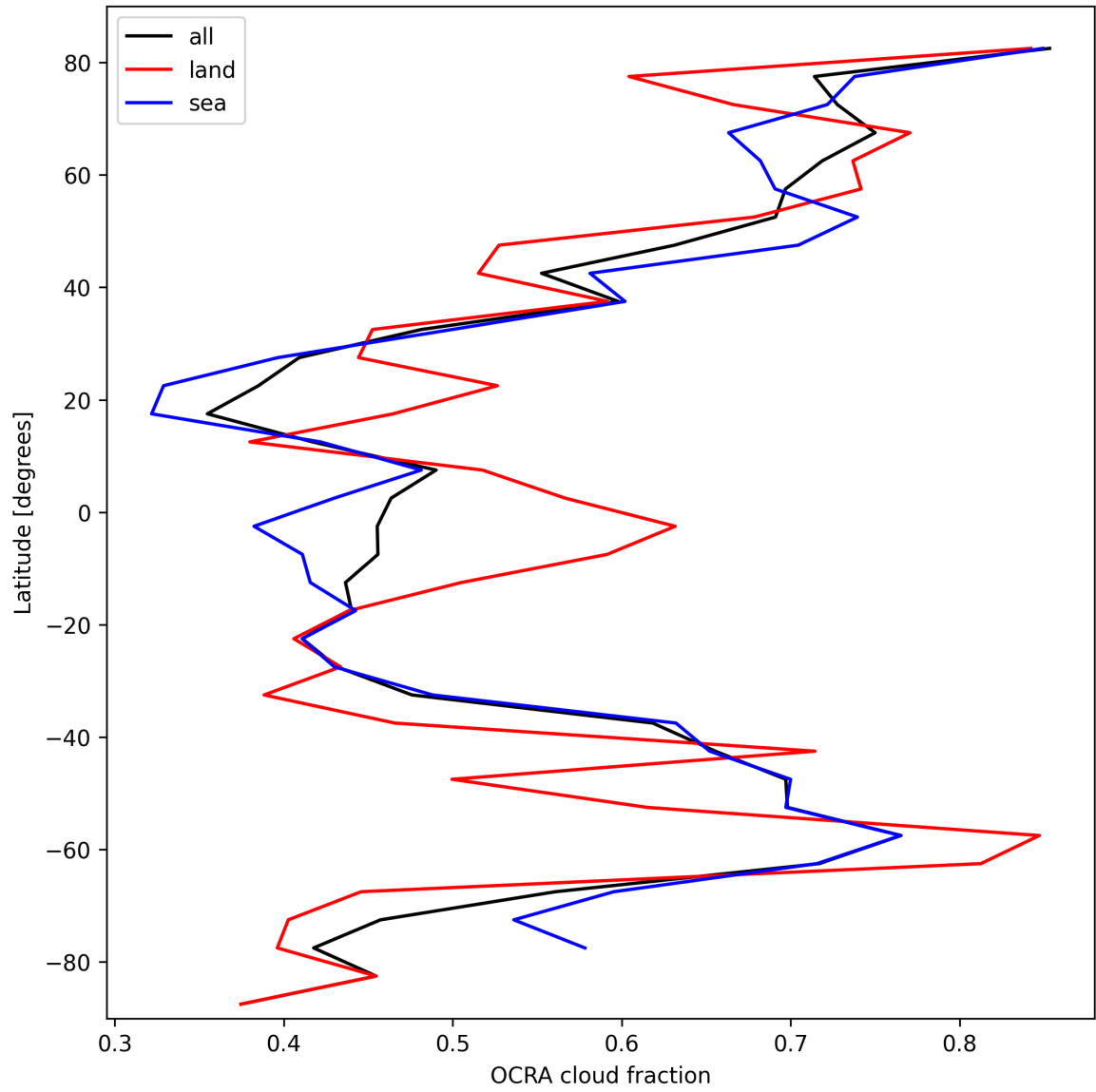


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-10-09 to 2025-10-09.

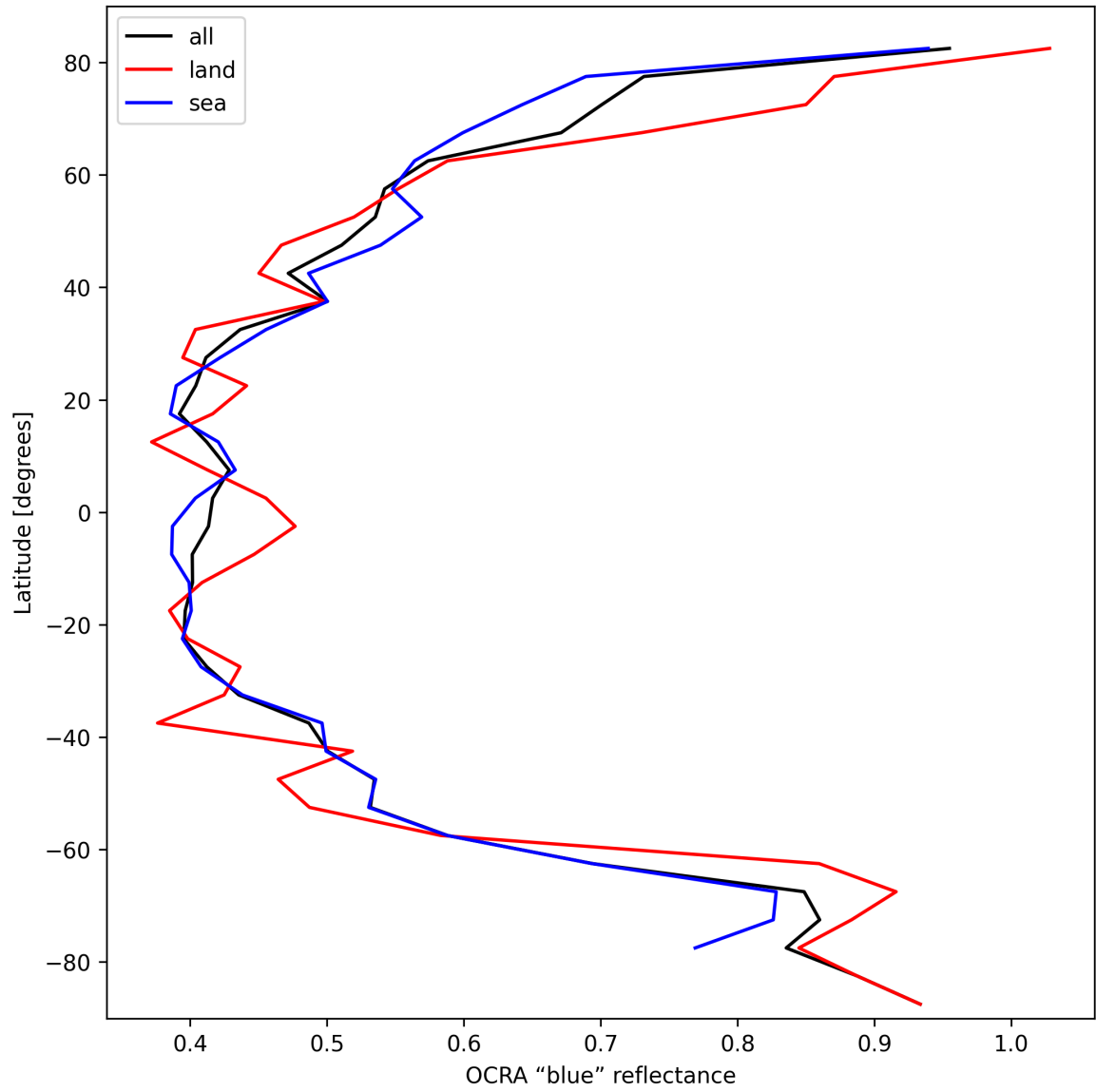


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-10-09 to 2025-10-09.

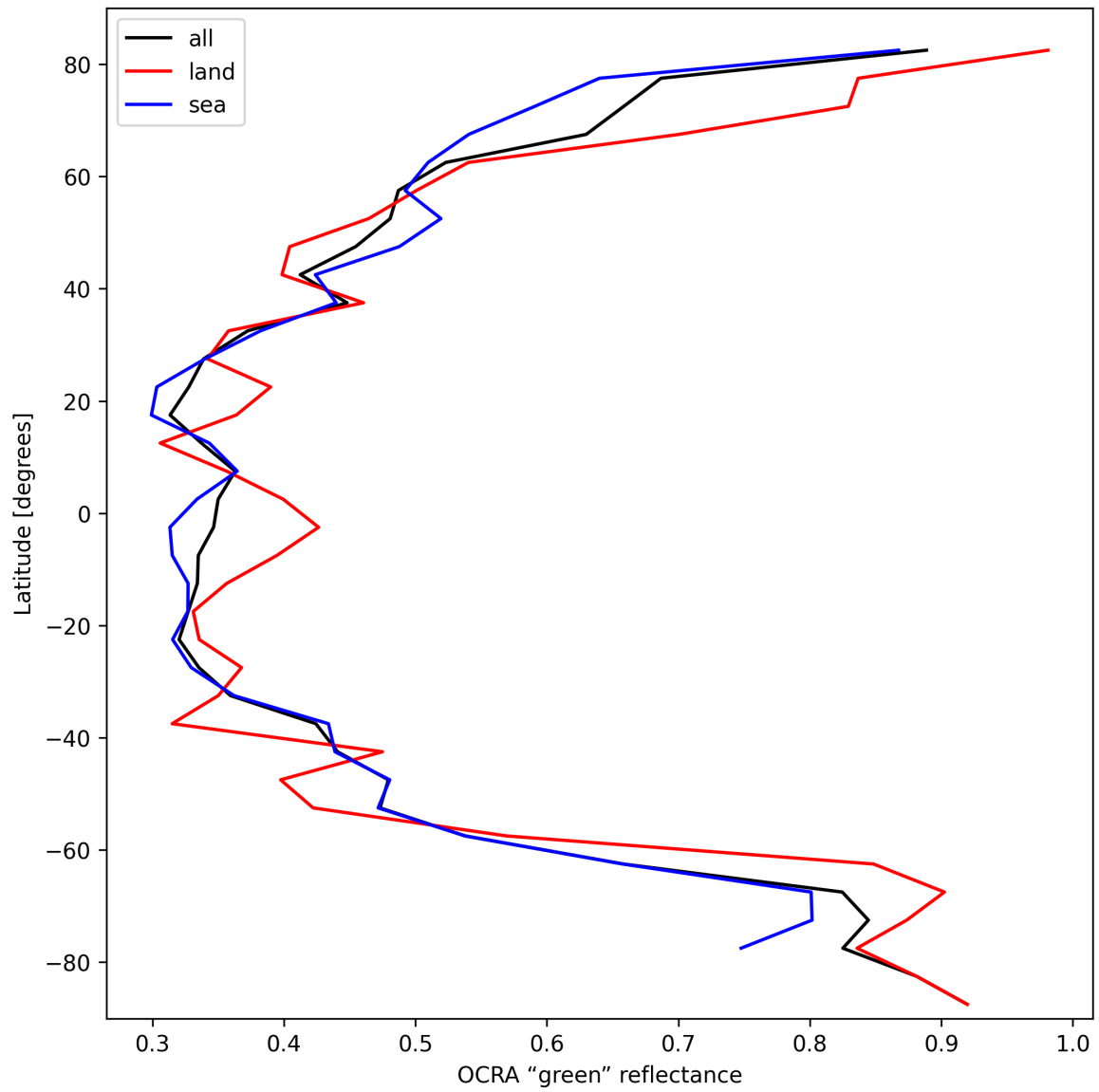


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-10-09 to 2025-10-09.

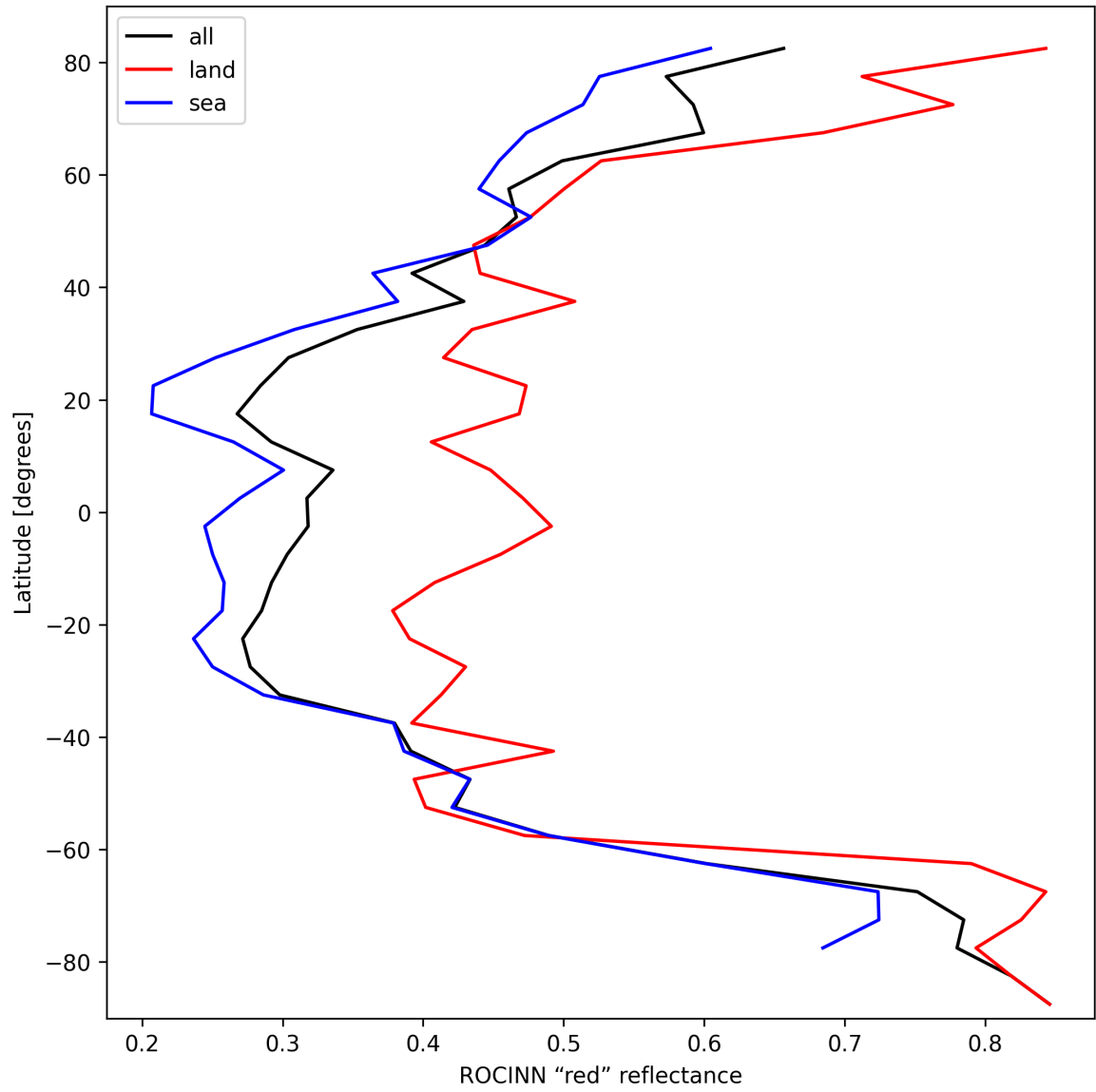


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-10-09 to 2025-10-09.

8 Histograms

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

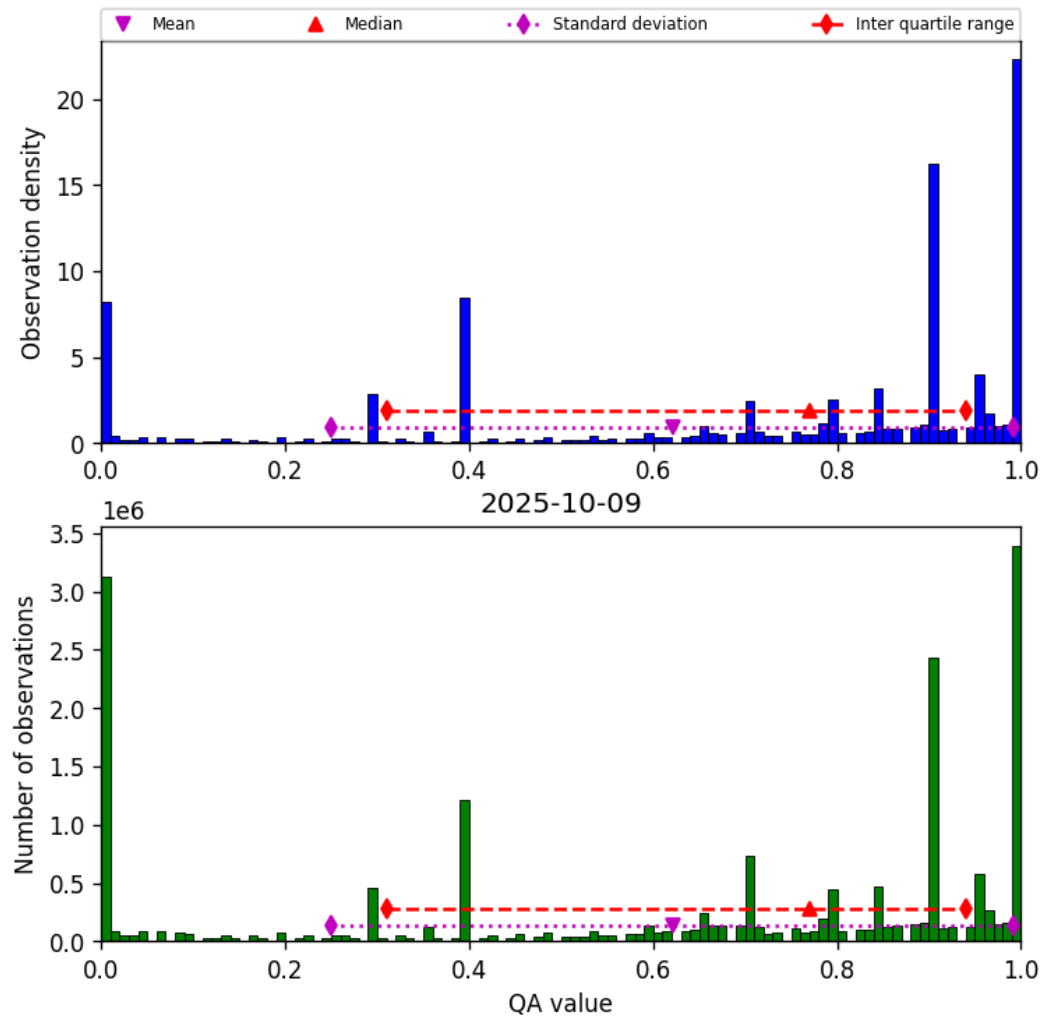


Figure 36: Histogram of “QA value” for 2025-10-09 to 2025-10-09

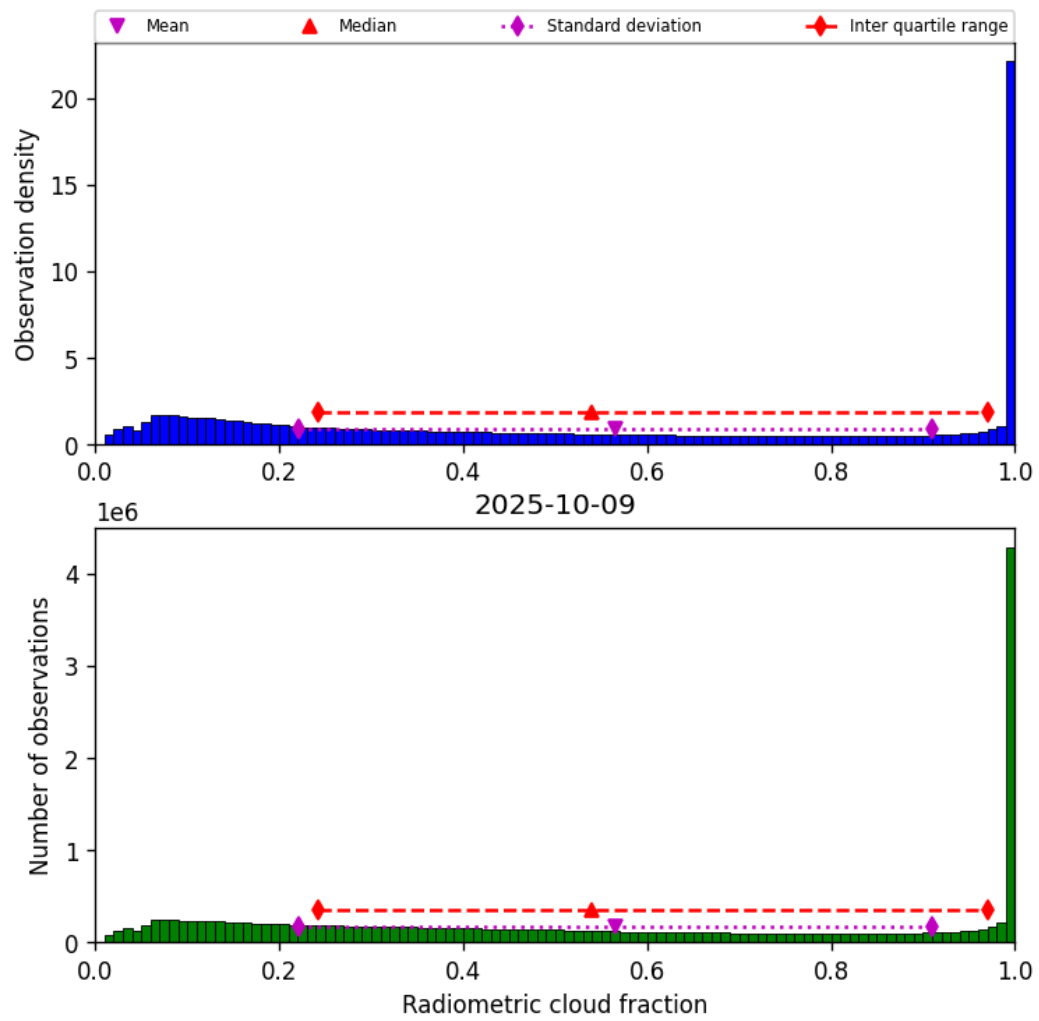


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-10-09 to 2025-10-09

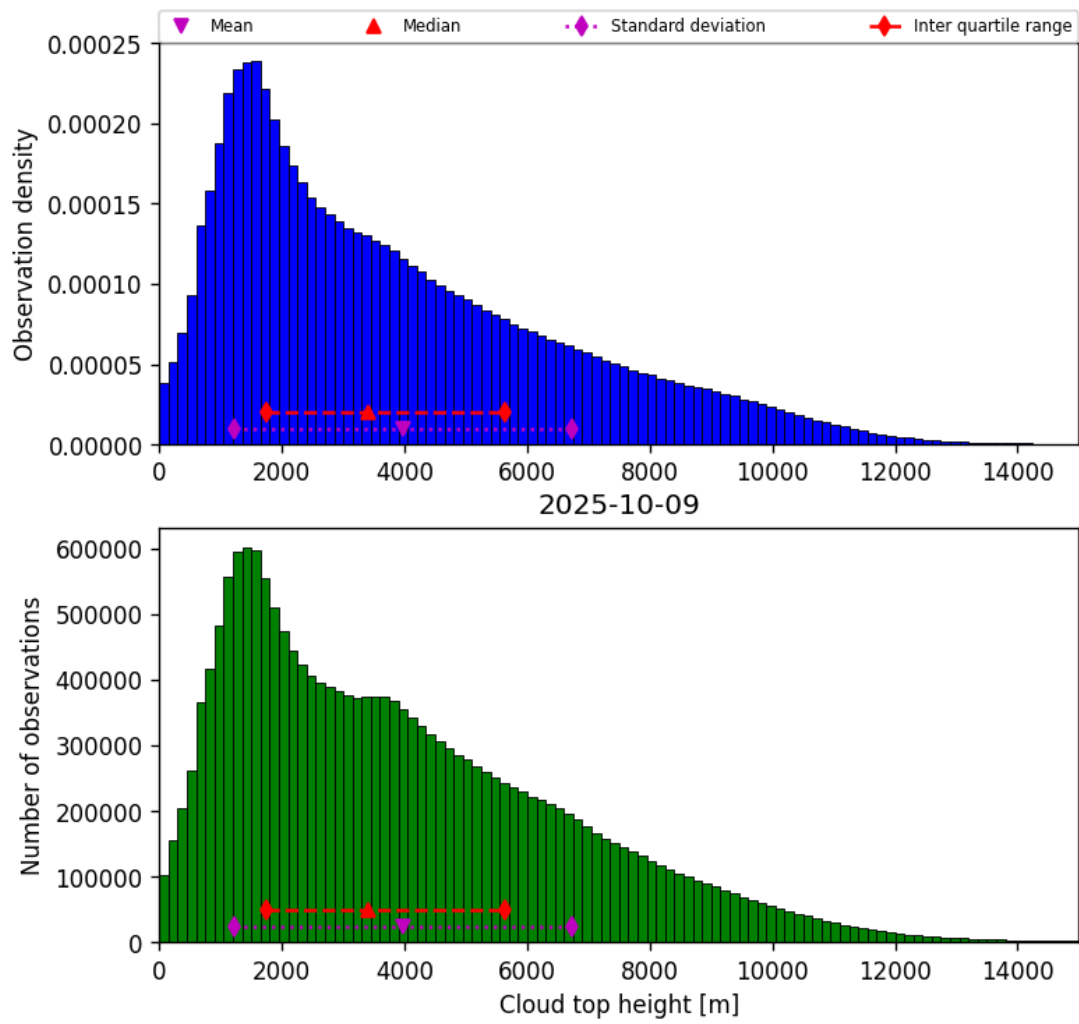


Figure 38: Histogram of “Cloud top height” for 2025-10-09 to 2025-10-09

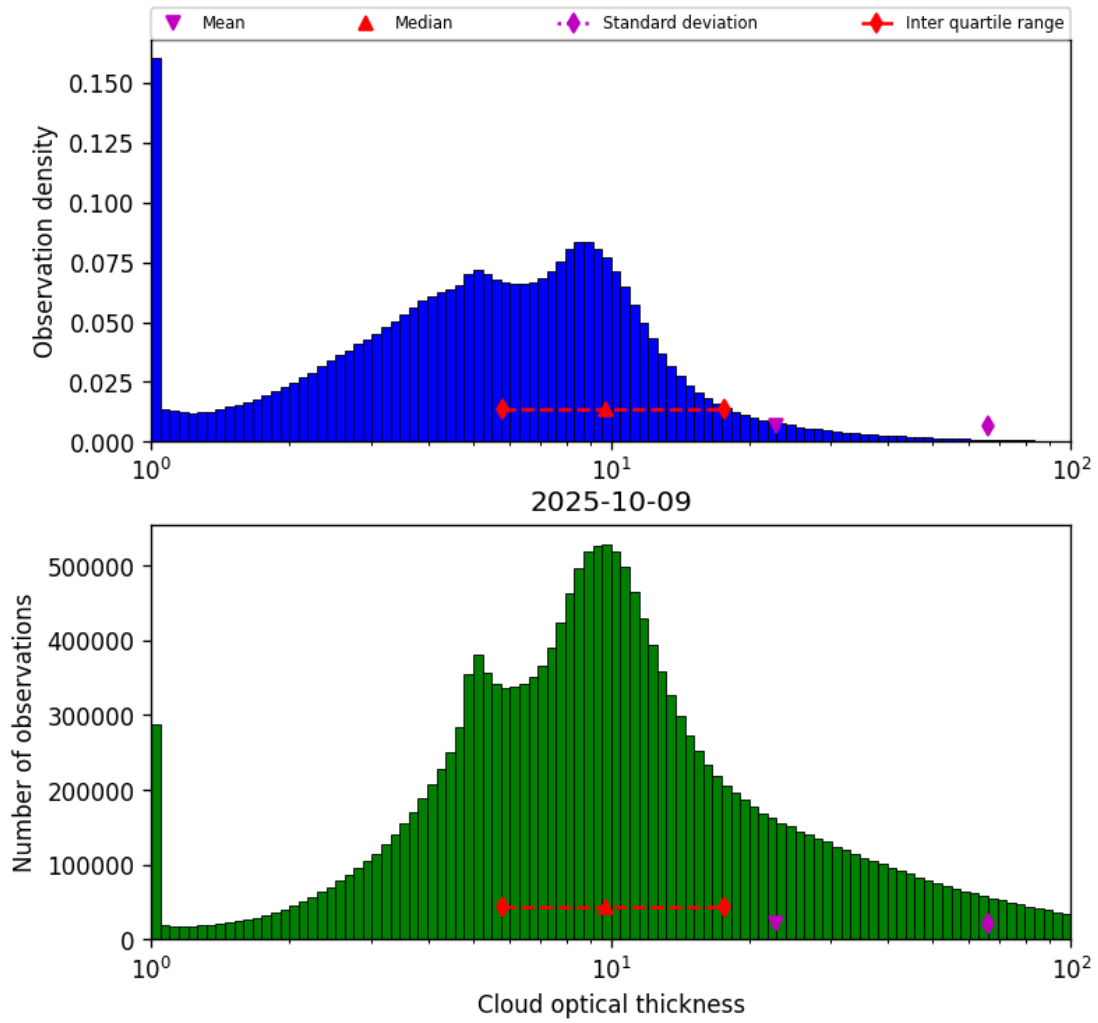


Figure 39: Histogram of “Cloud optical thickness” for 2025-10-09 to 2025-10-09

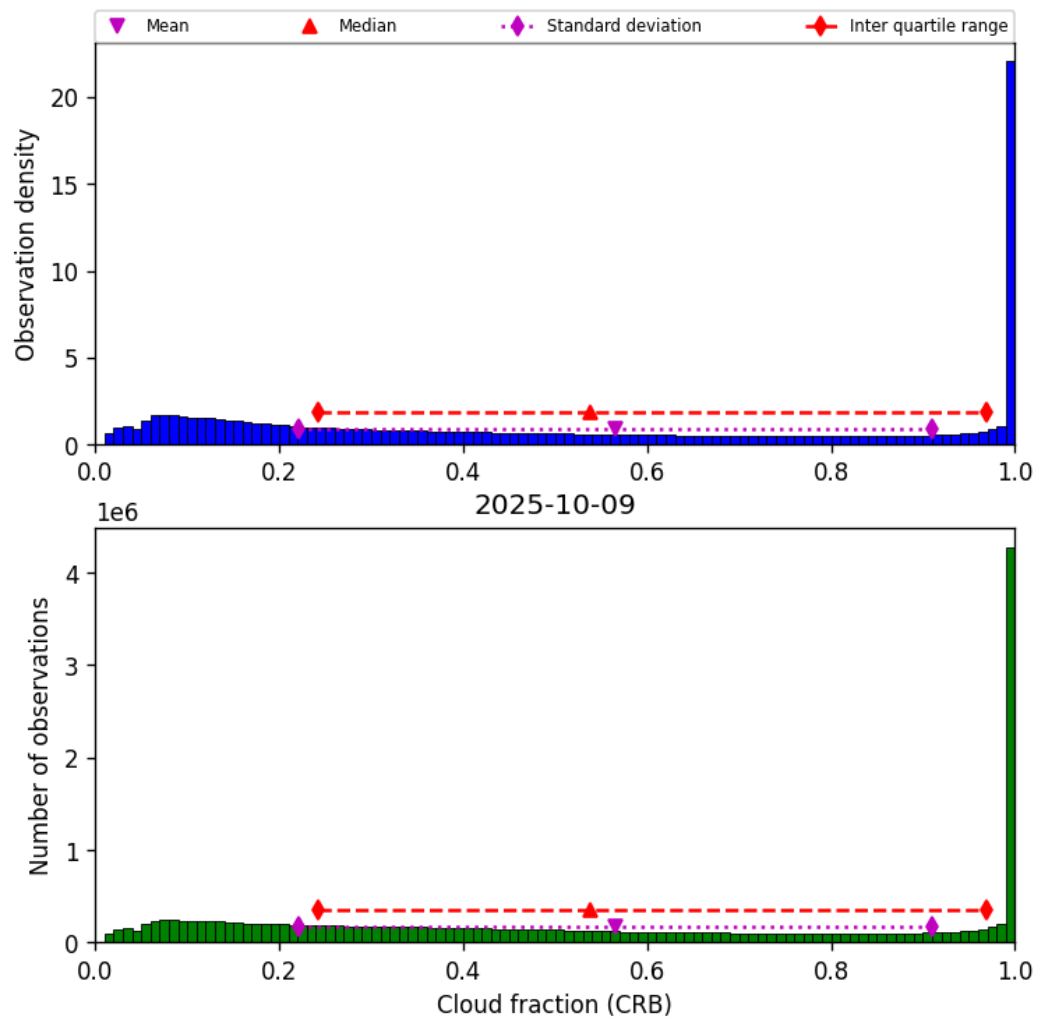


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-10-09 to 2025-10-09

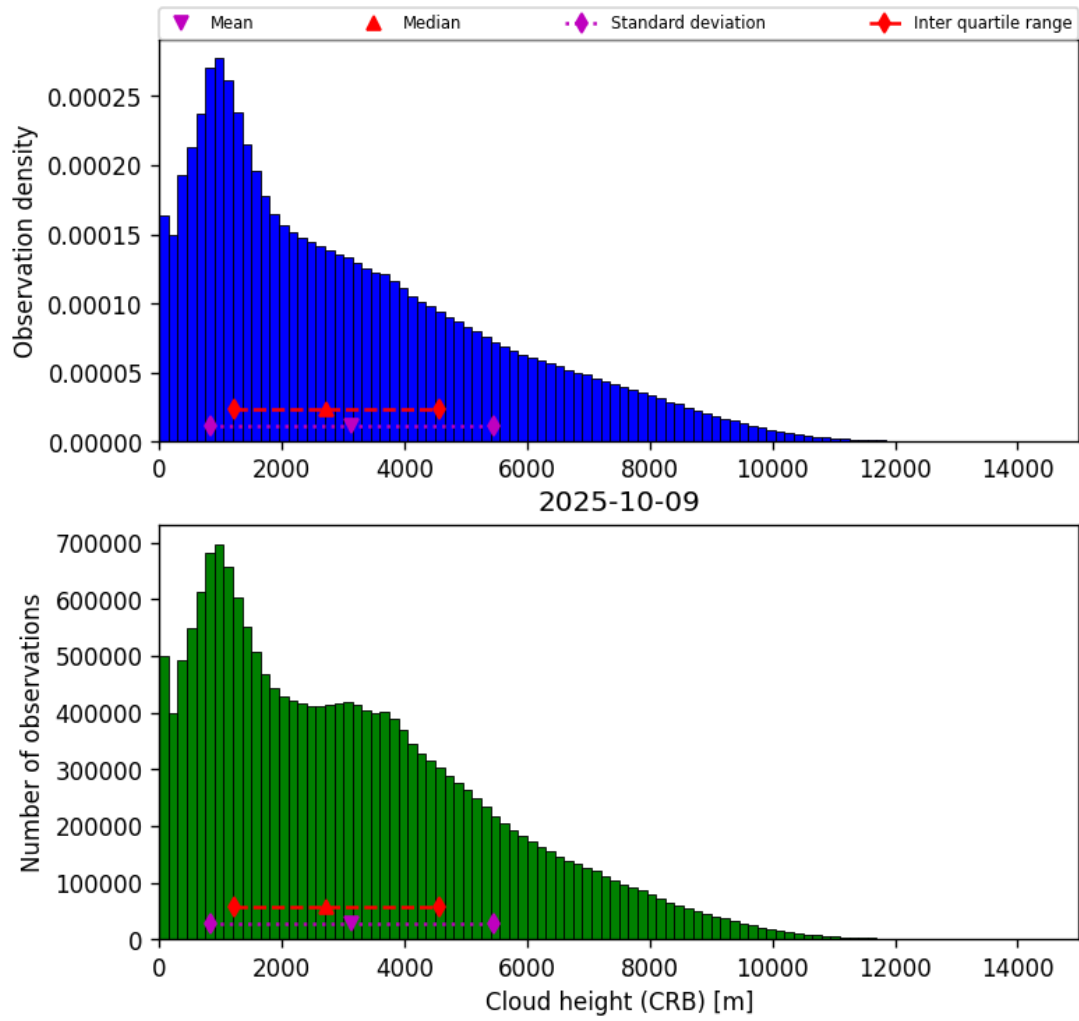


Figure 41: Histogram of “Cloud height (CRB)” for 2025-10-09 to 2025-10-09

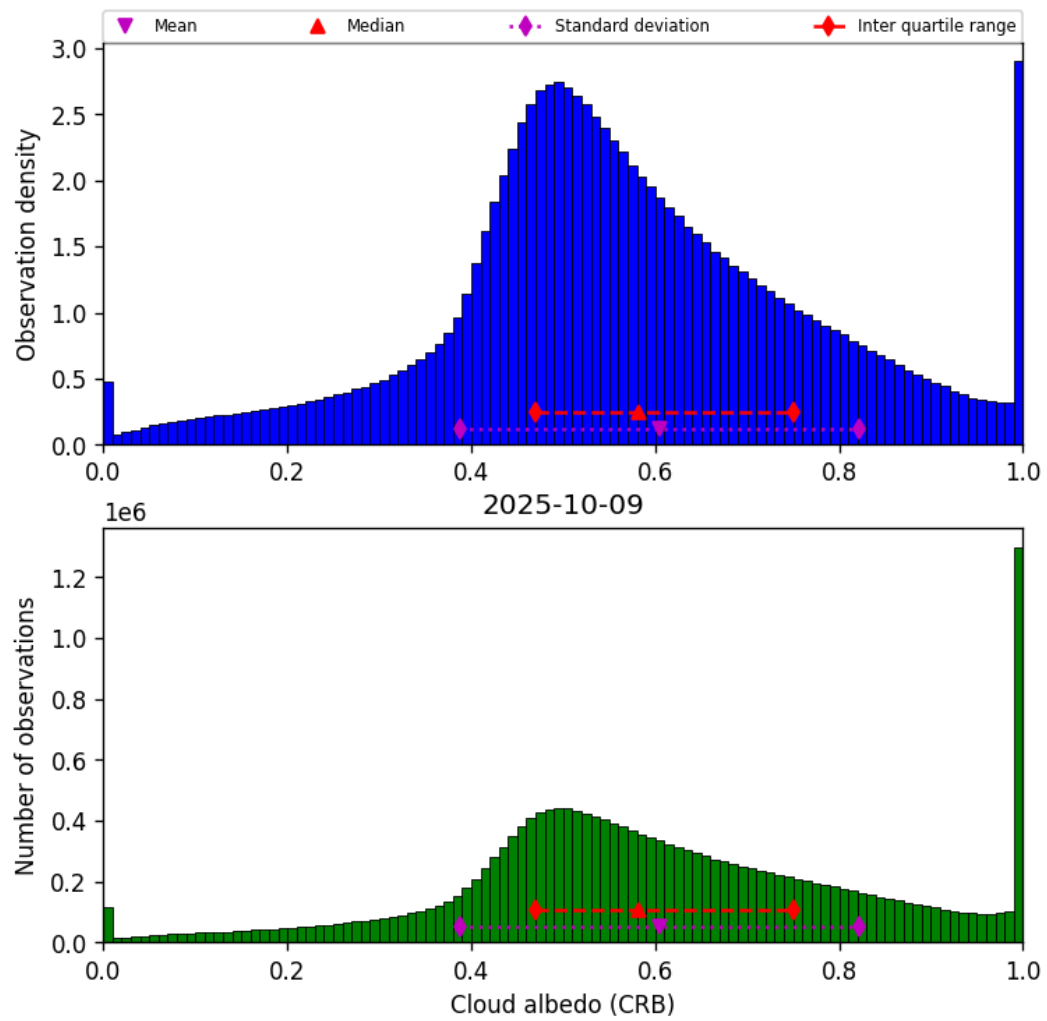


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-10-09 to 2025-10-09

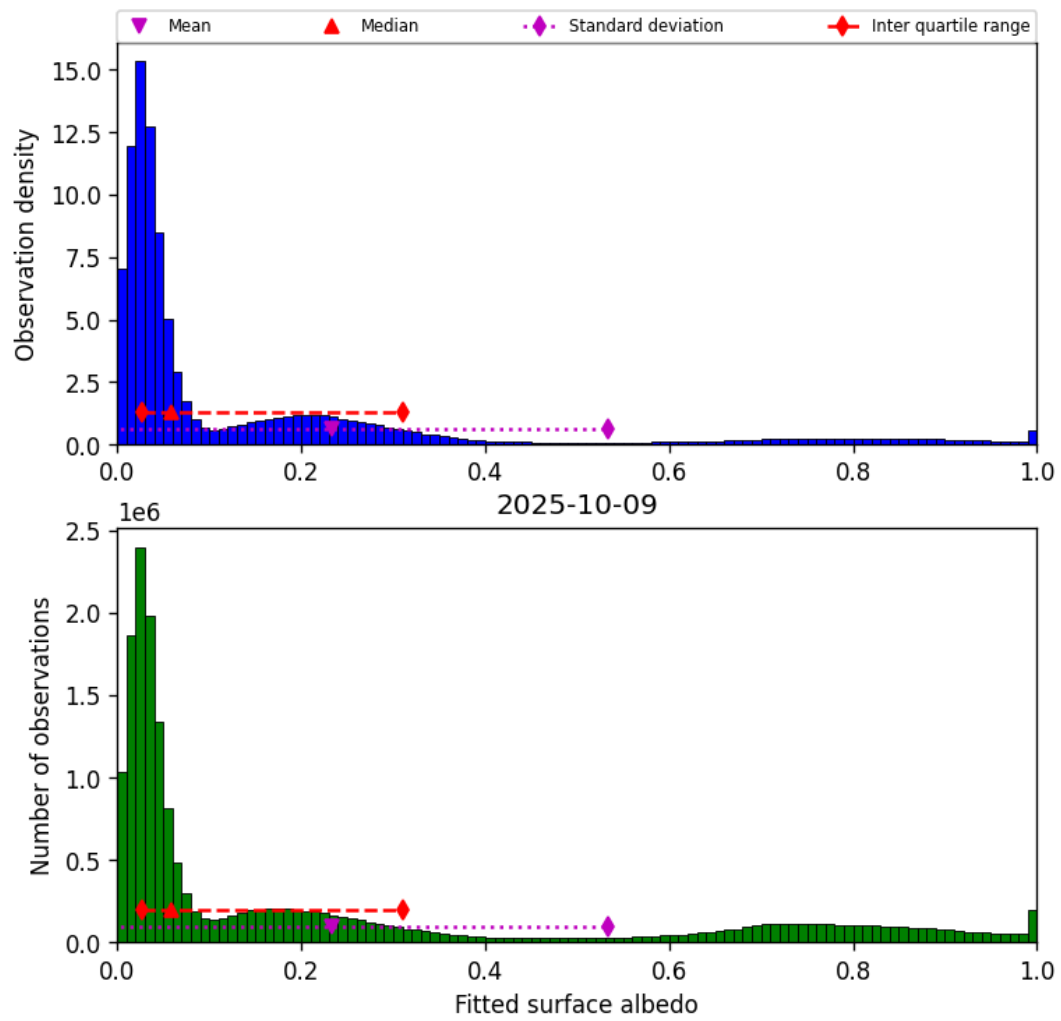


Figure 43: Histogram of “Fitted surface albedo” for 2025-10-09 to 2025-10-09

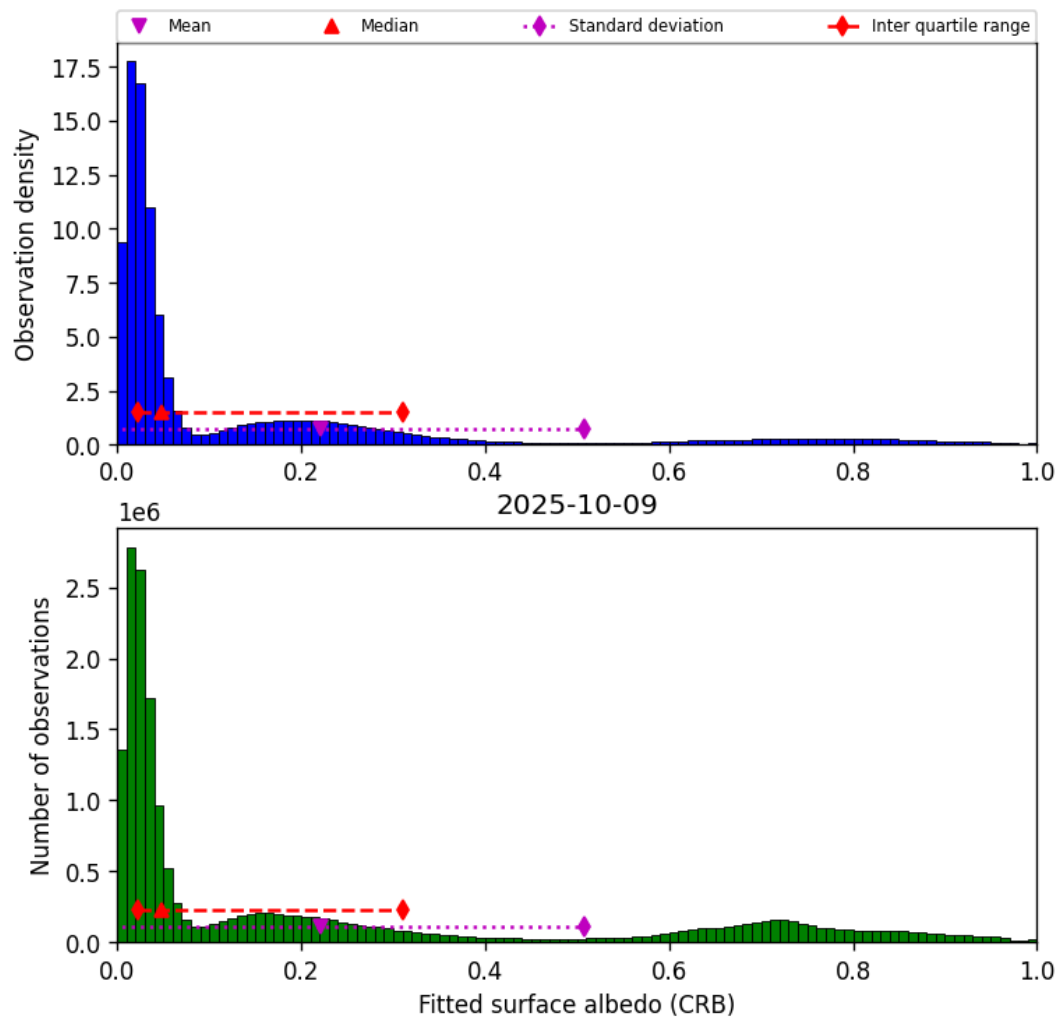


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-10-09 to 2025-10-09

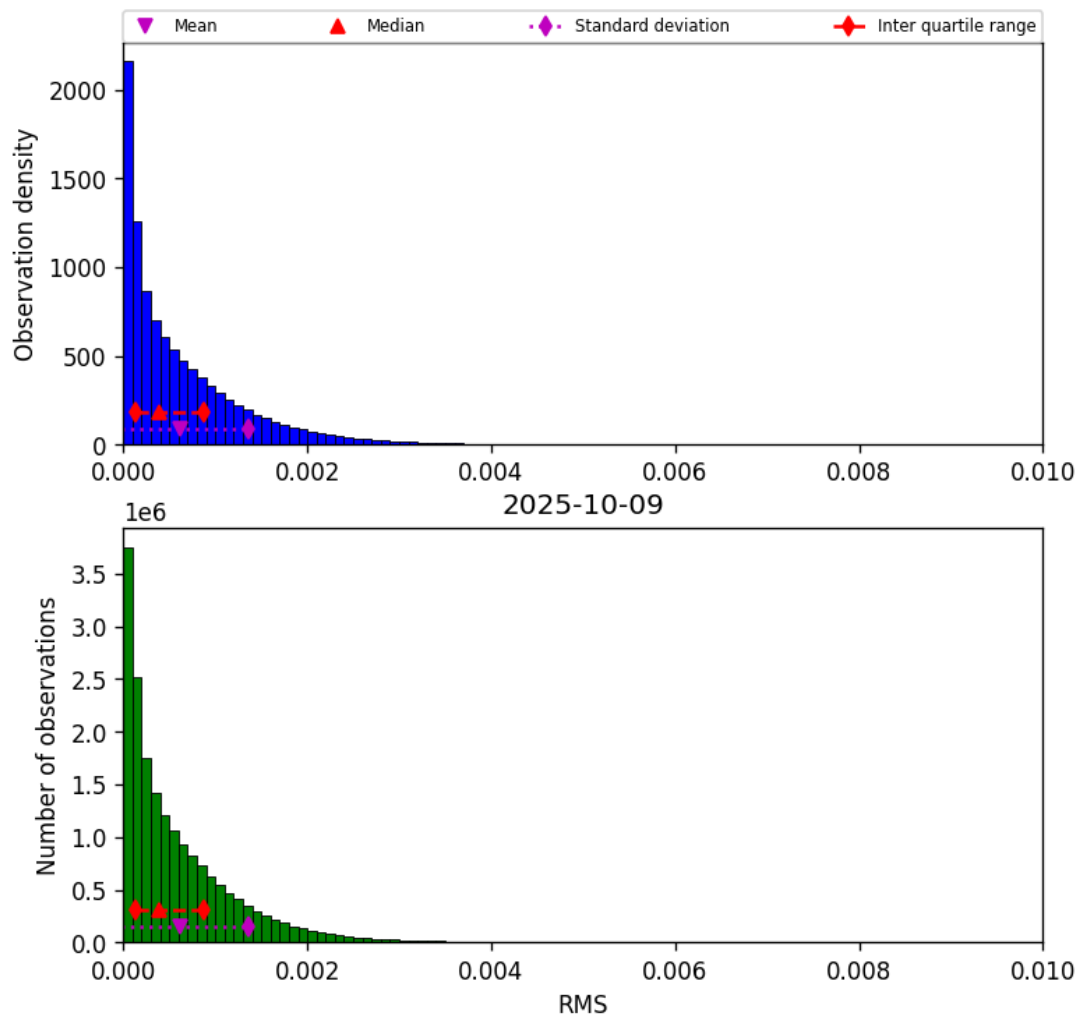


Figure 45: Histogram of “RMS” for 2025-10-09 to 2025-10-09

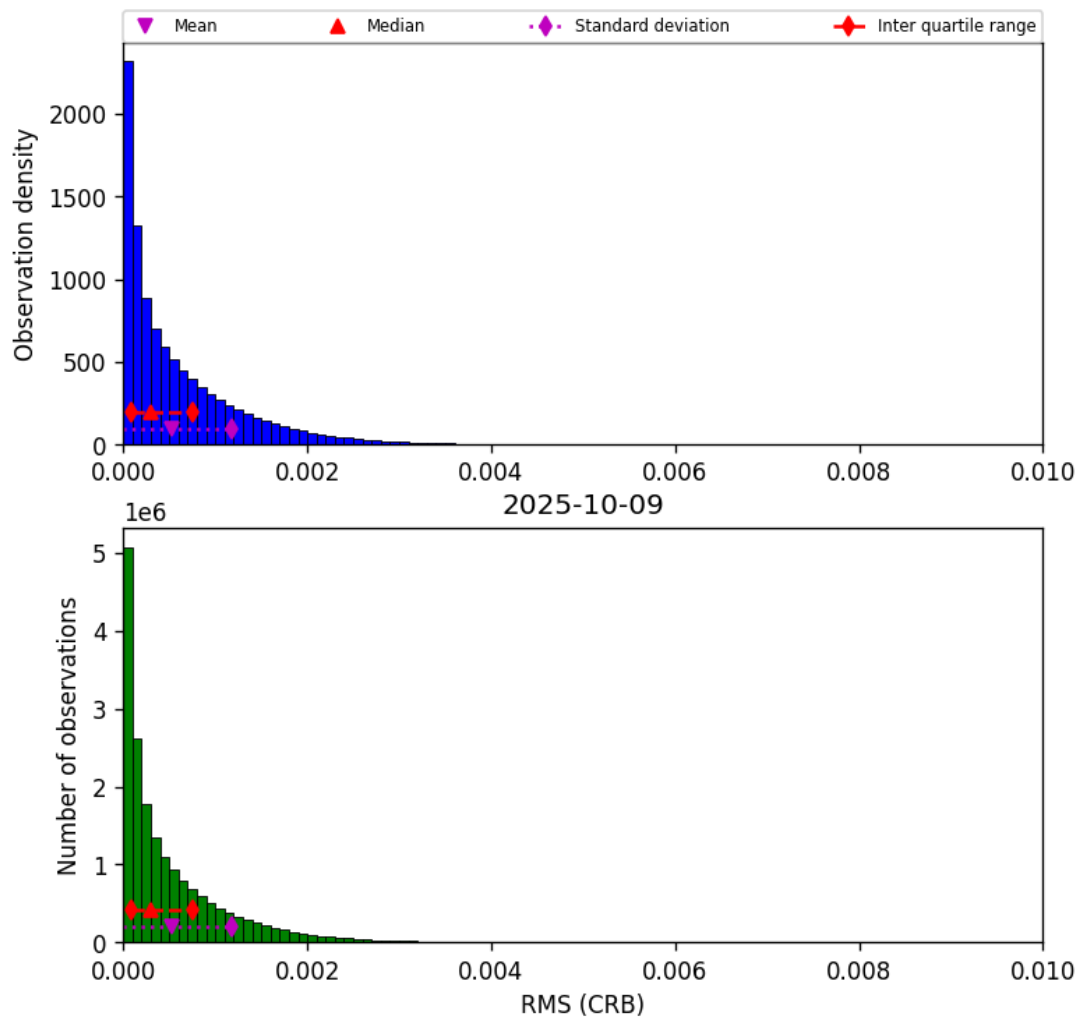


Figure 46: Histogram of “RMS (CRB)” for 2025-10-09 to 2025-10-09

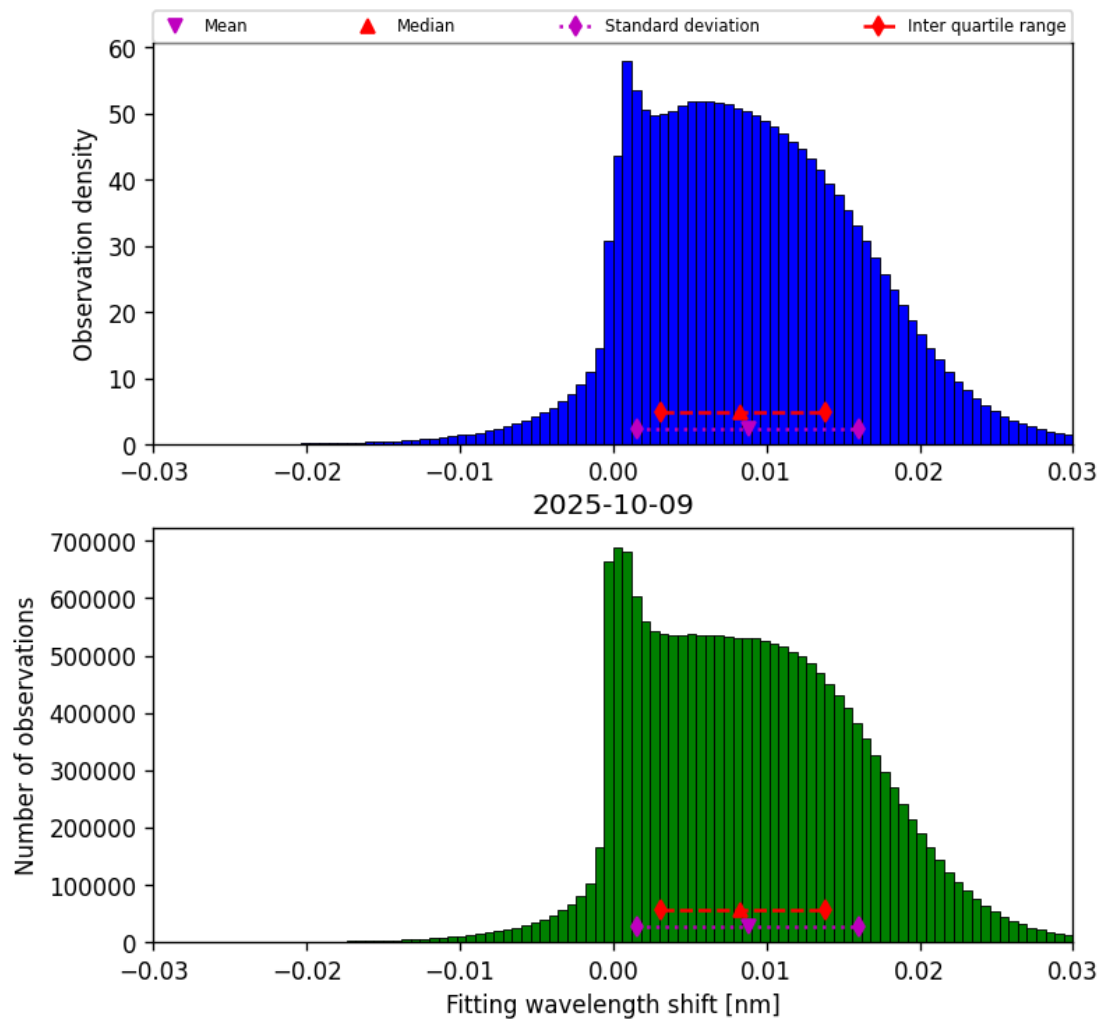


Figure 47: Histogram of “Fitting wavelength shift” for 2025-10-09 to 2025-10-09

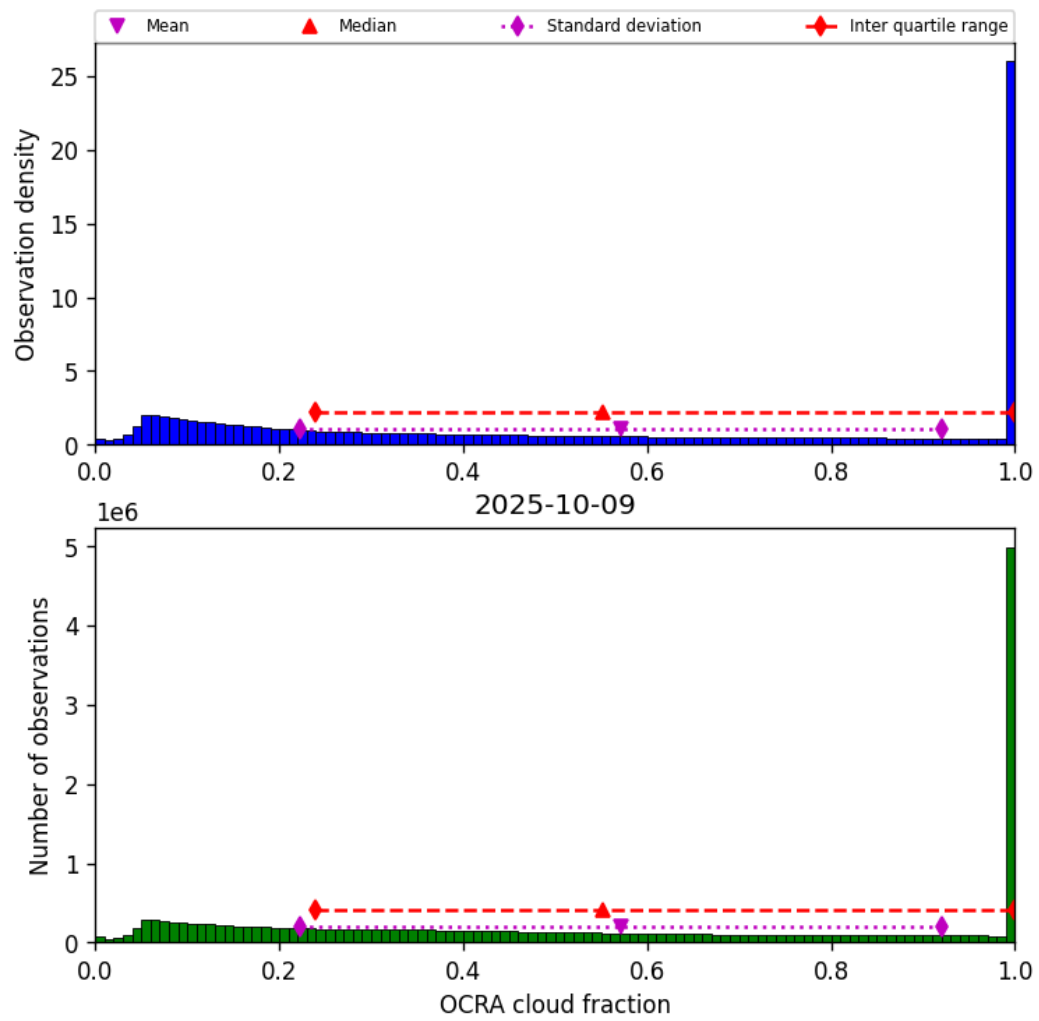


Figure 48: Histogram of “OCRA cloud fraction” for 2025-10-09 to 2025-10-09

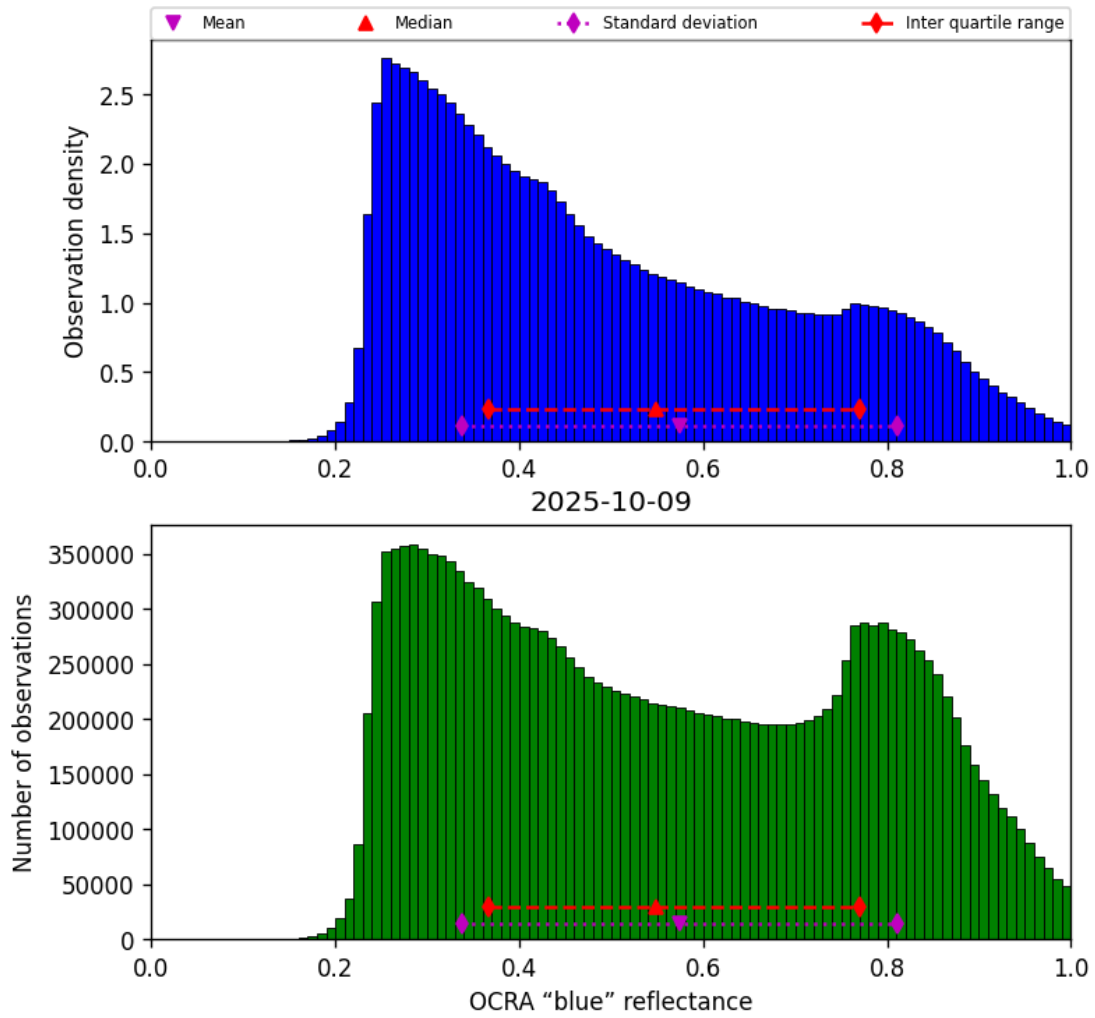


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-10-09 to 2025-10-09

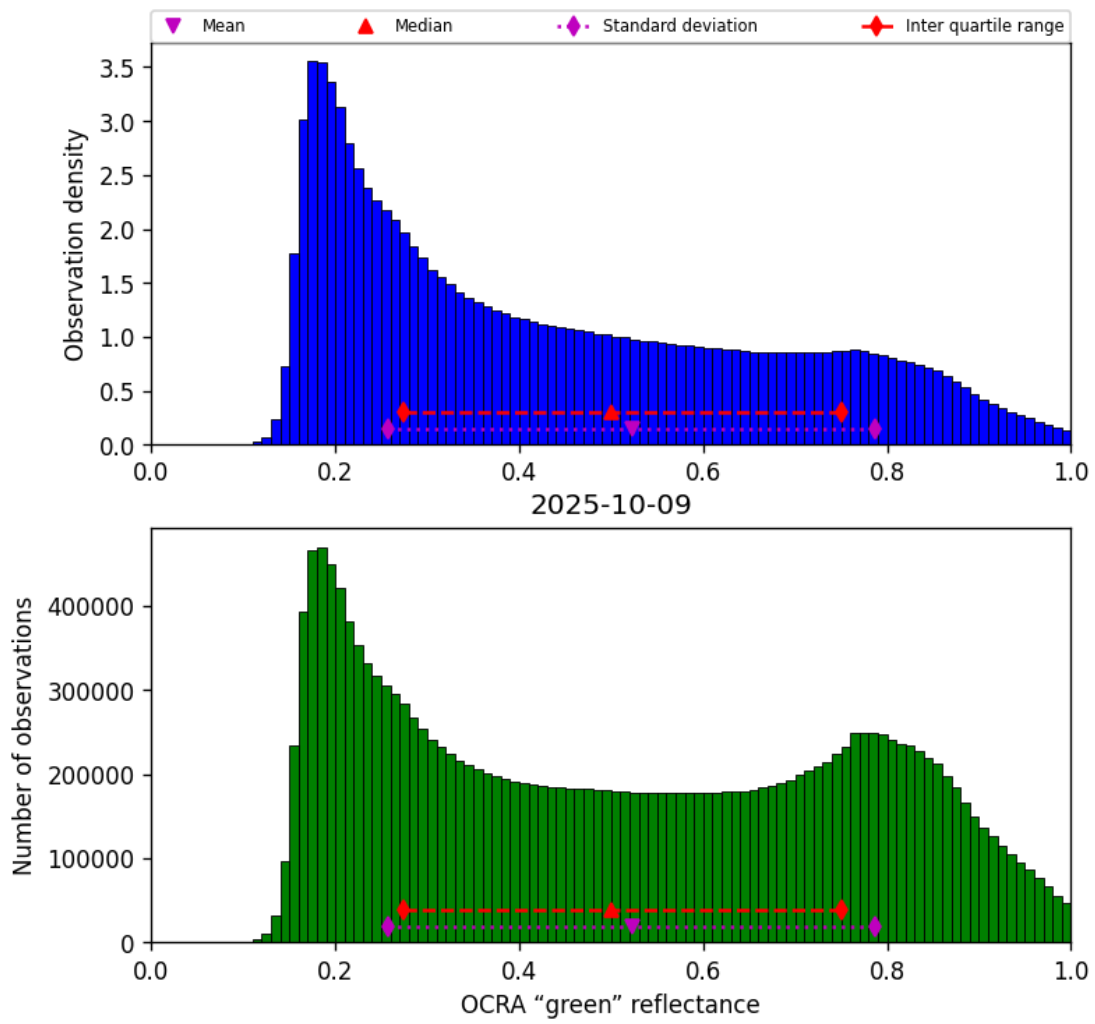


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-10-09 to 2025-10-09

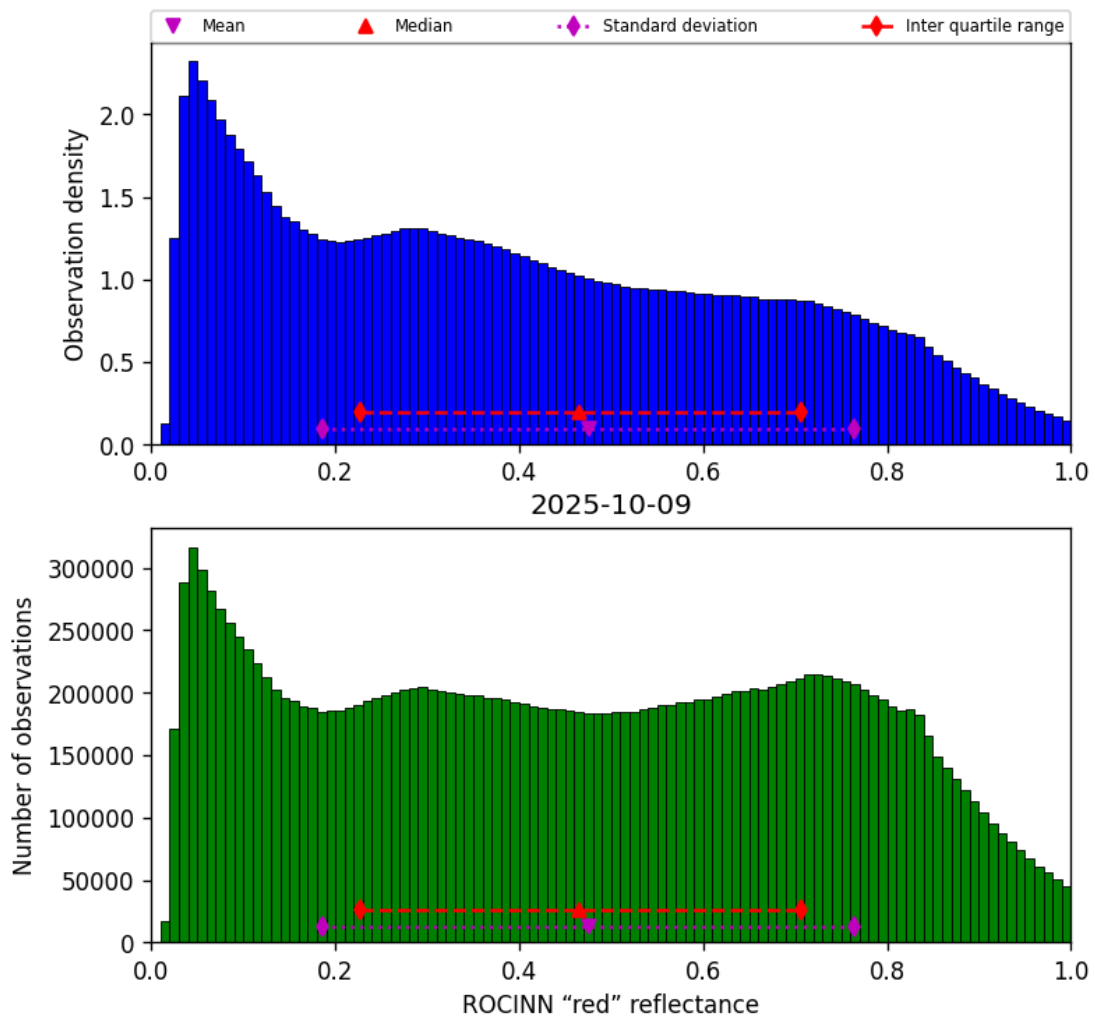


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-10-09 to 2025-10-09

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.

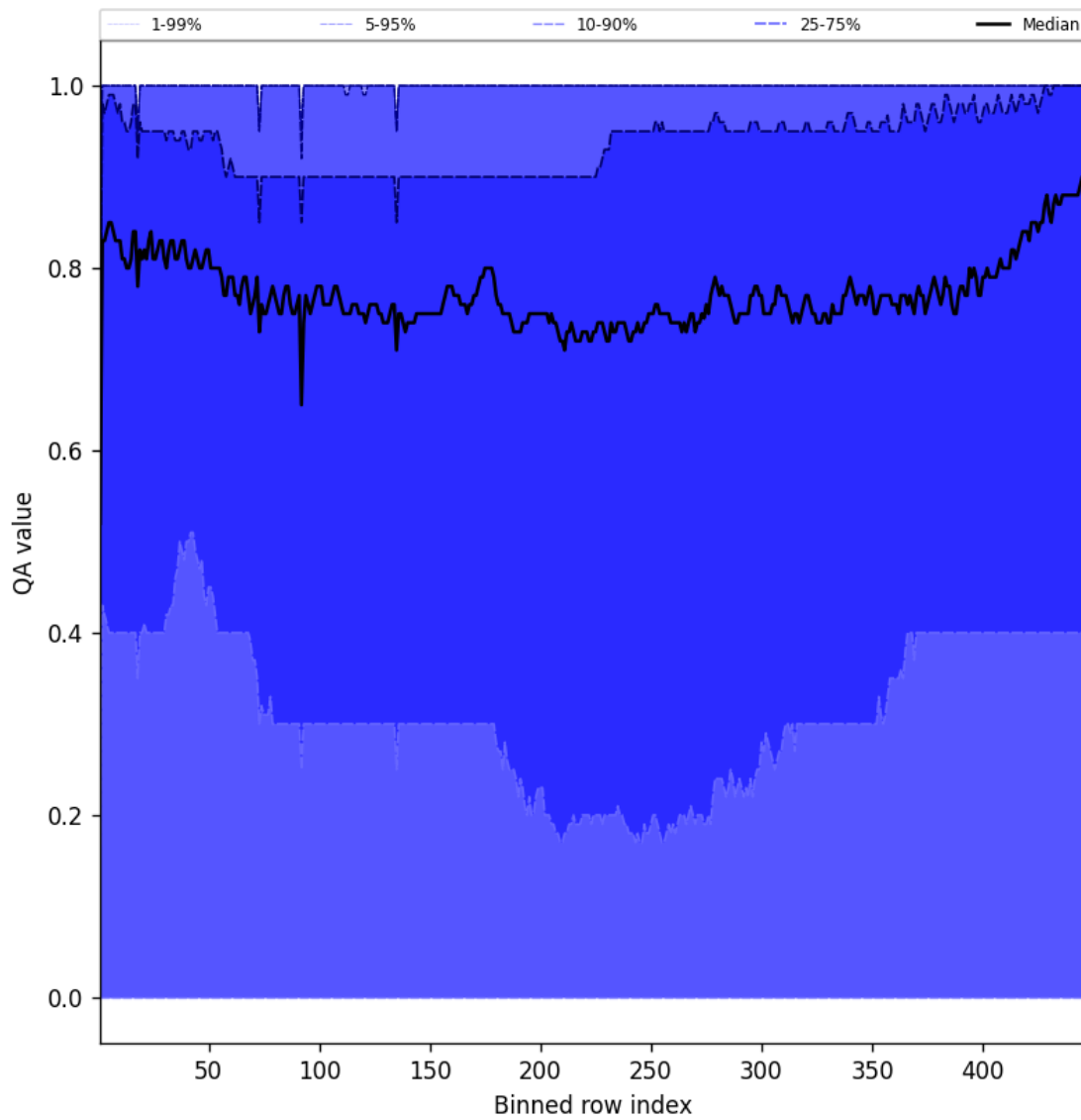


Figure 52: Along track statistics of “QA value” for 2025-10-09 to 2025-10-09

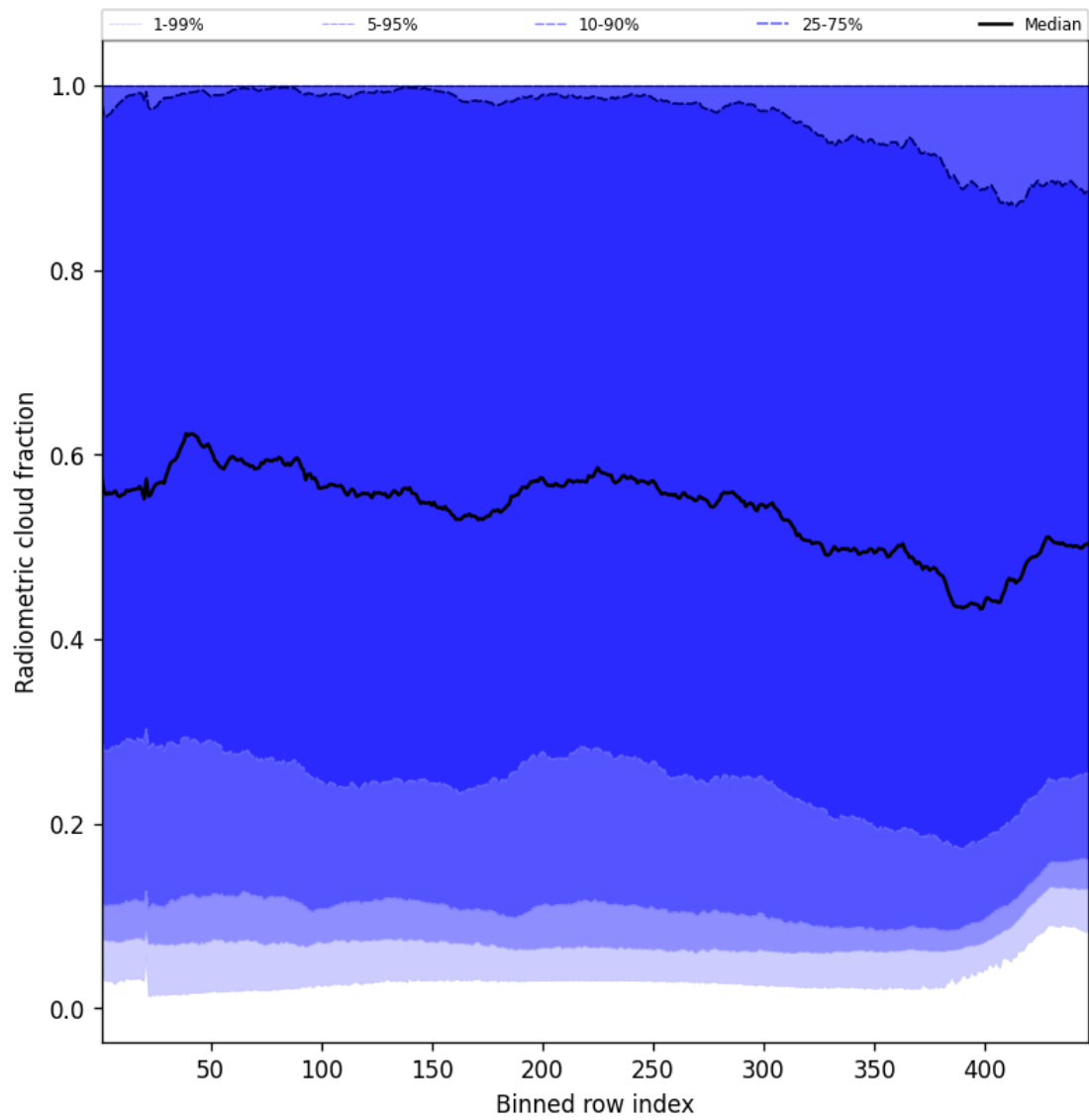


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-10-09 to 2025-10-09

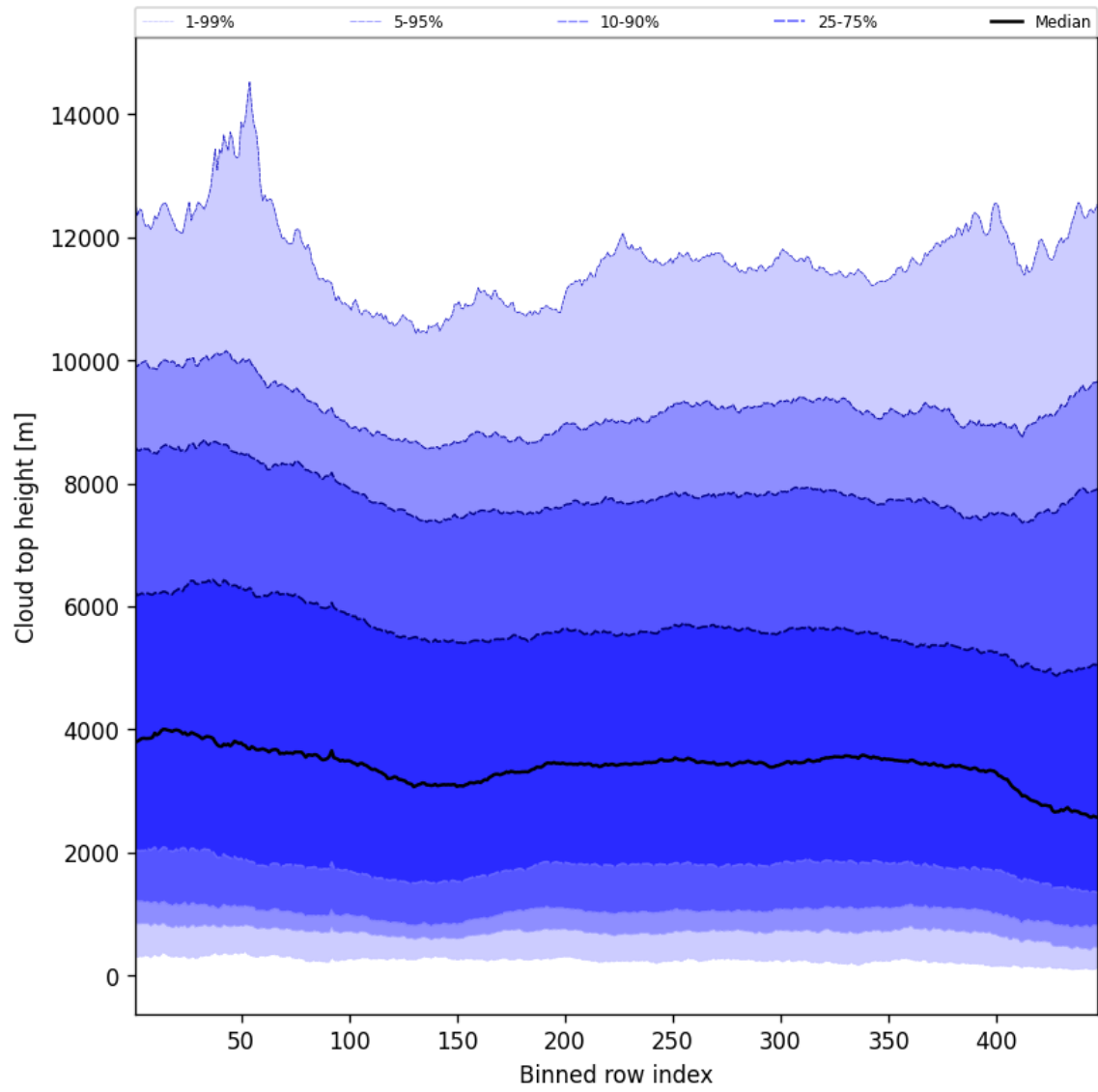


Figure 54: Along track statistics of “Cloud top height” for 2025-10-09 to 2025-10-09

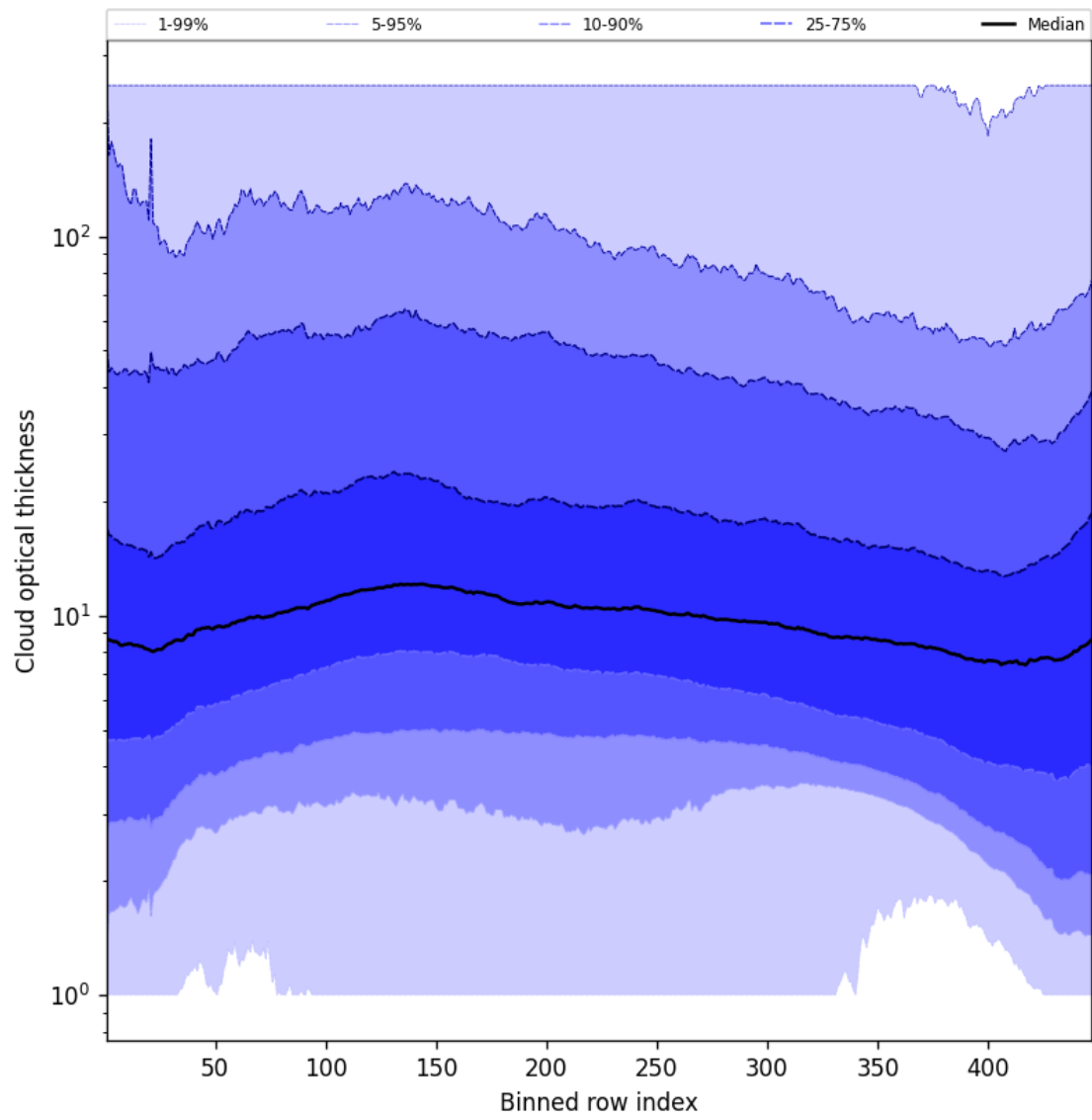


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-10-09 to 2025-10-09

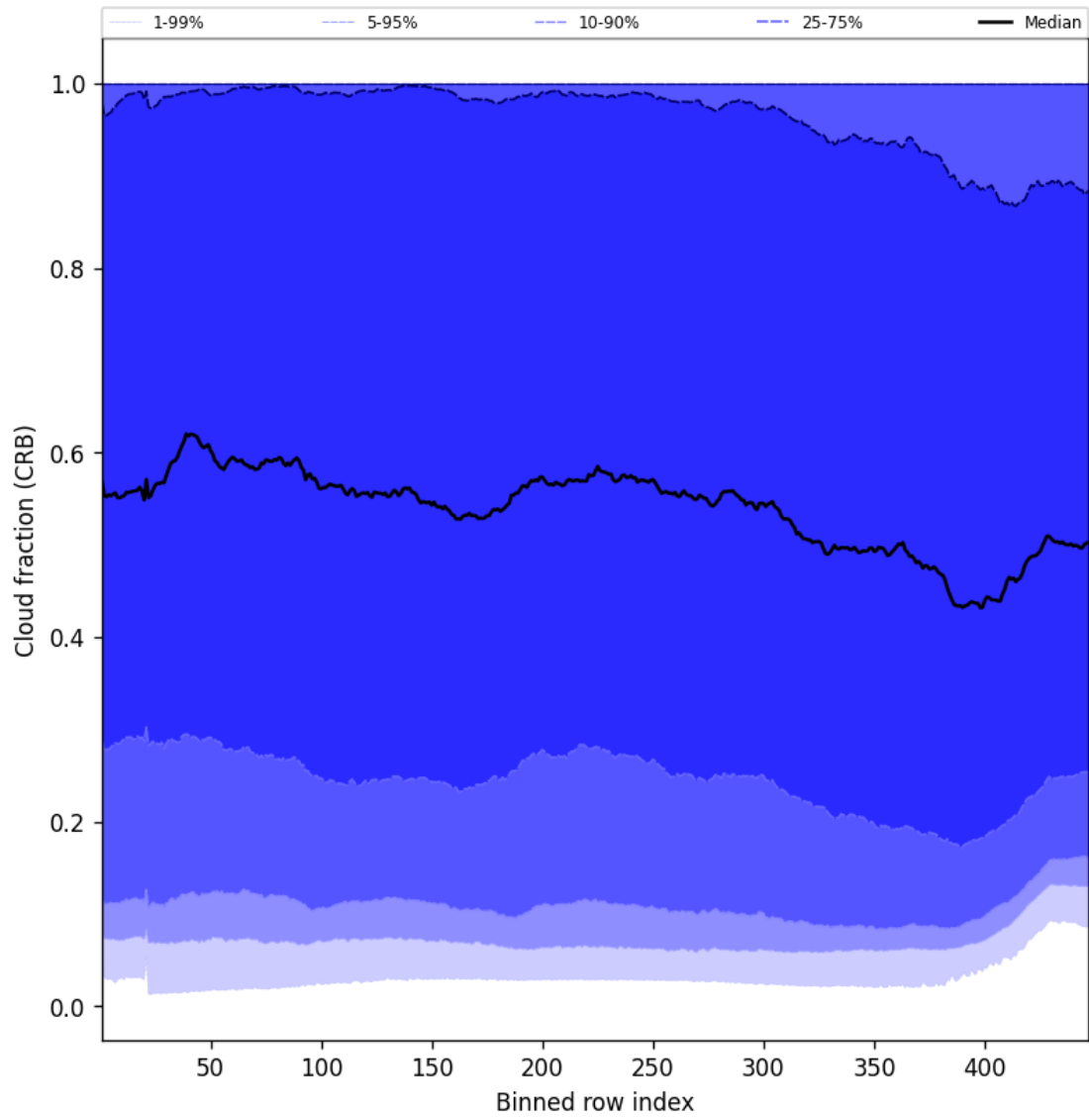


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-10-09 to 2025-10-09

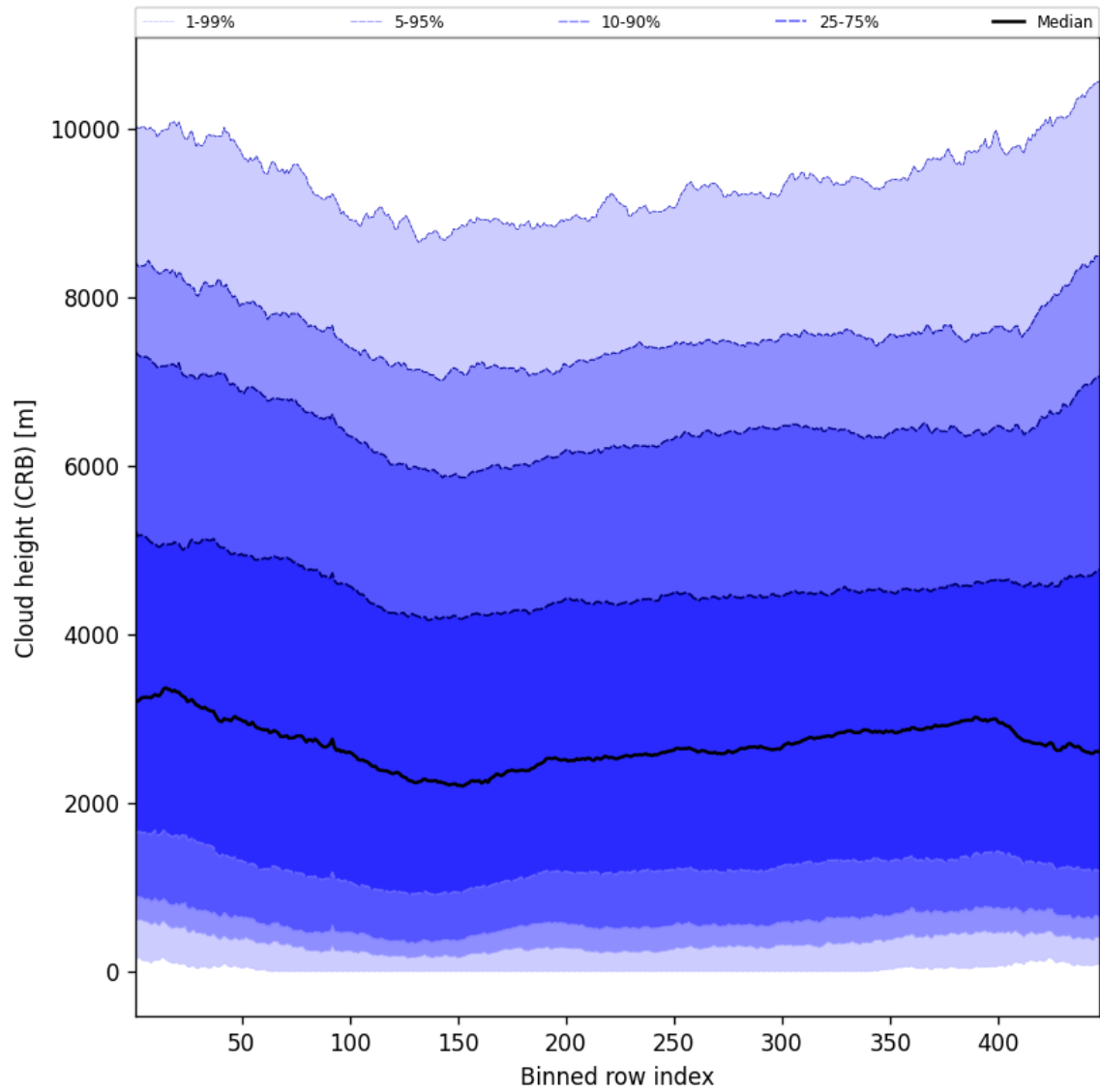


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-10-09 to 2025-10-09

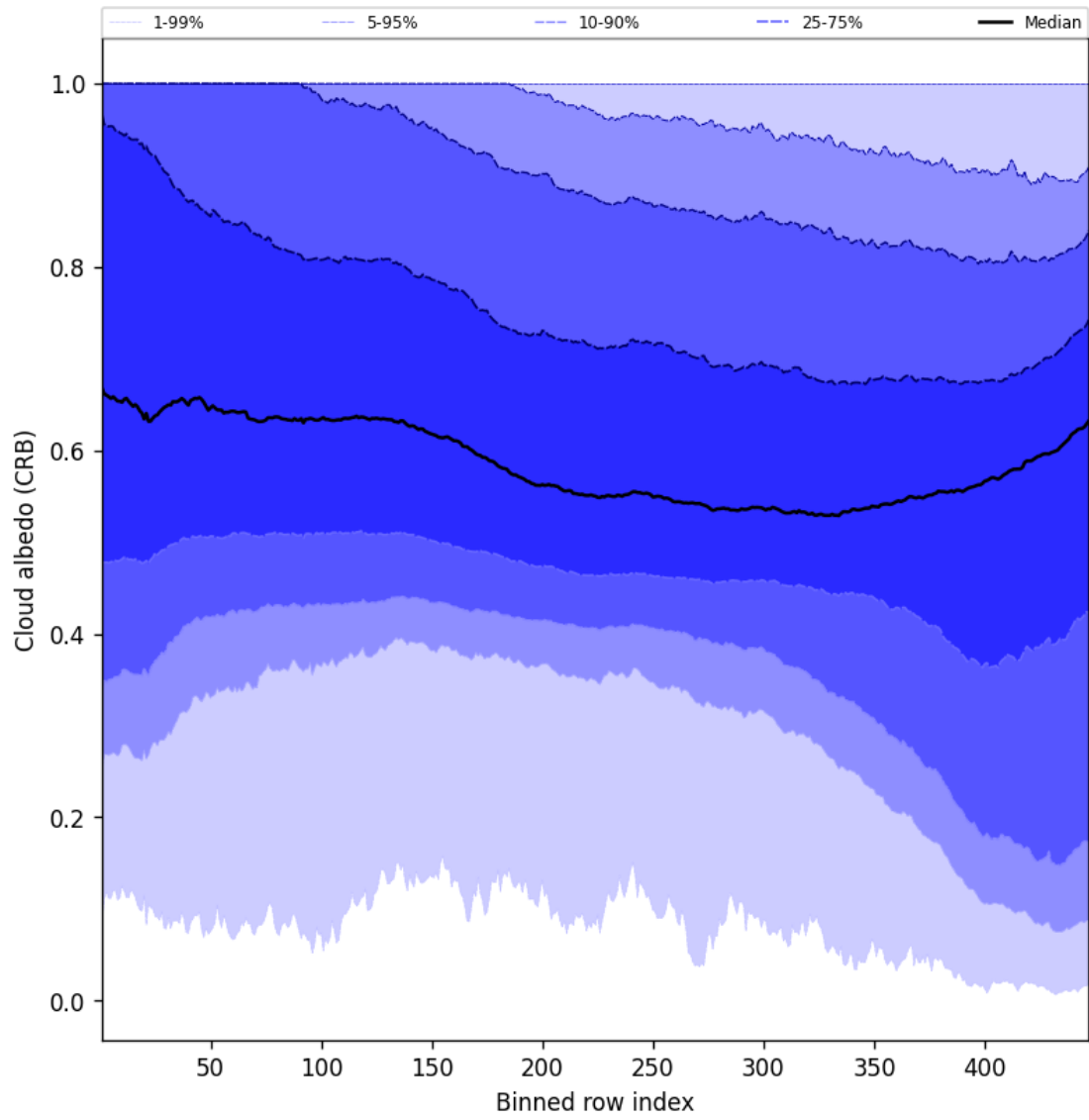


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-10-09 to 2025-10-09

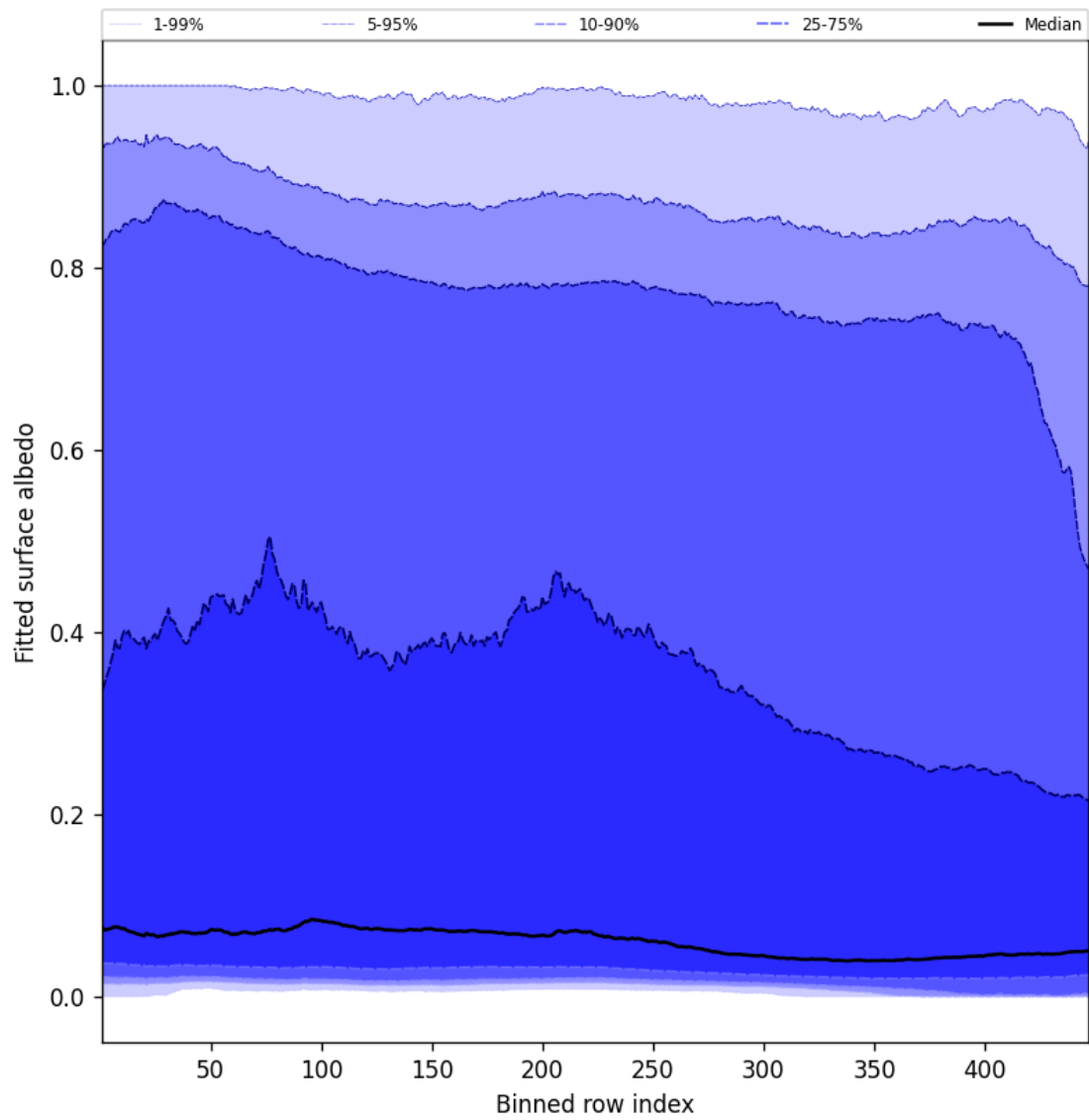


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-10-09 to 2025-10-09

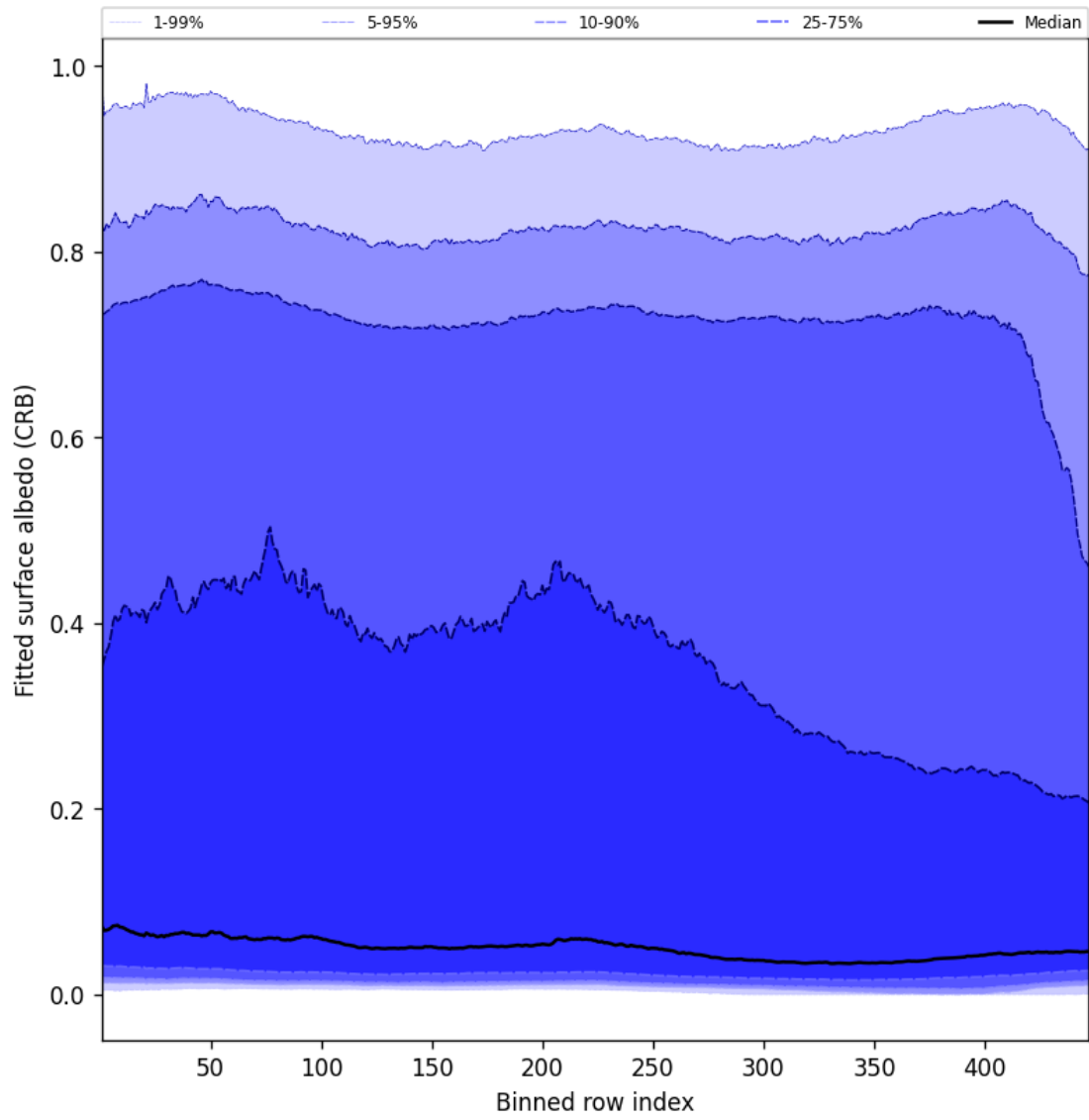


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-10-09 to 2025-10-09

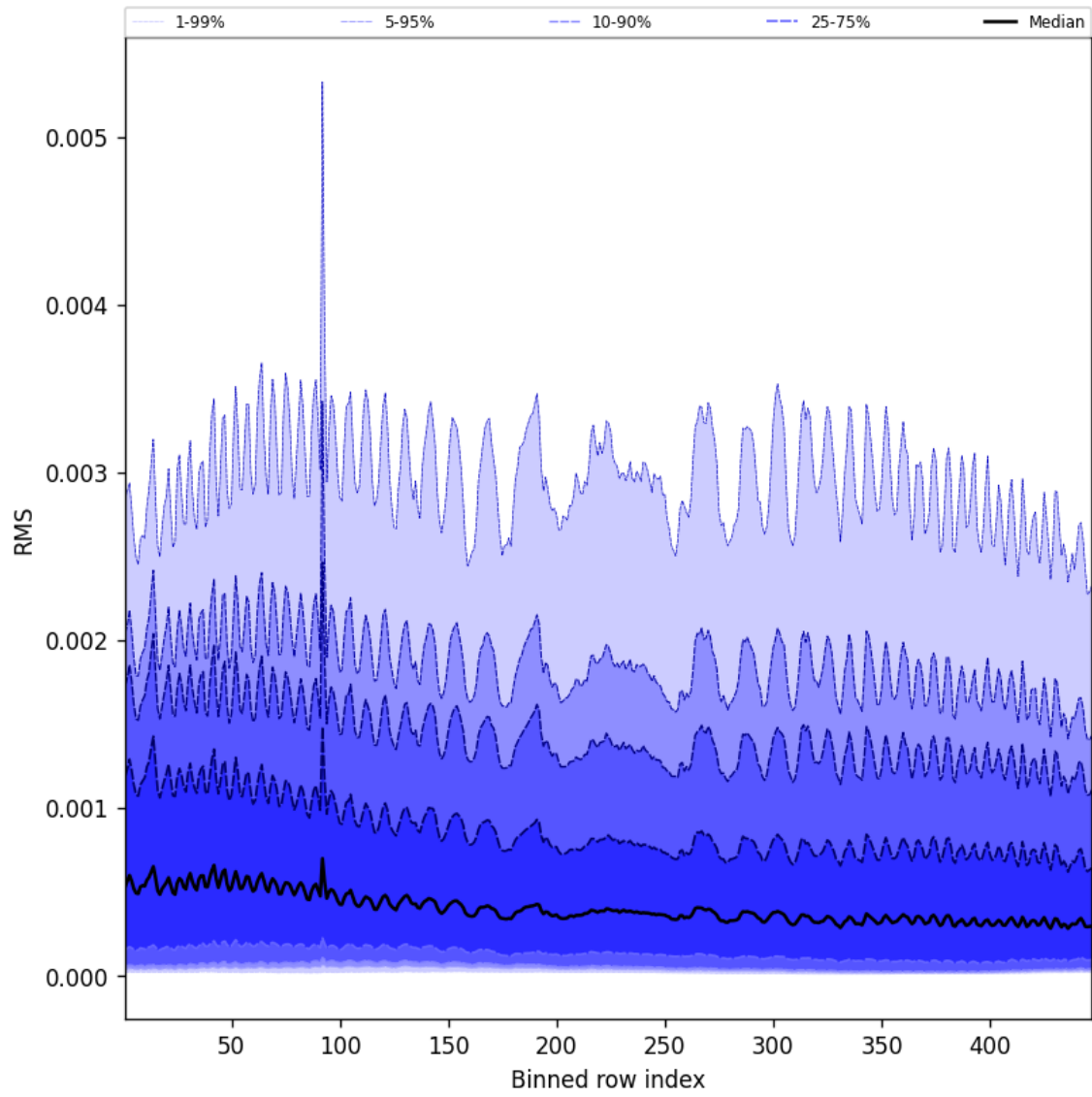


Figure 61: Along track statistics of “RMS” for 2025-10-09 to 2025-10-09

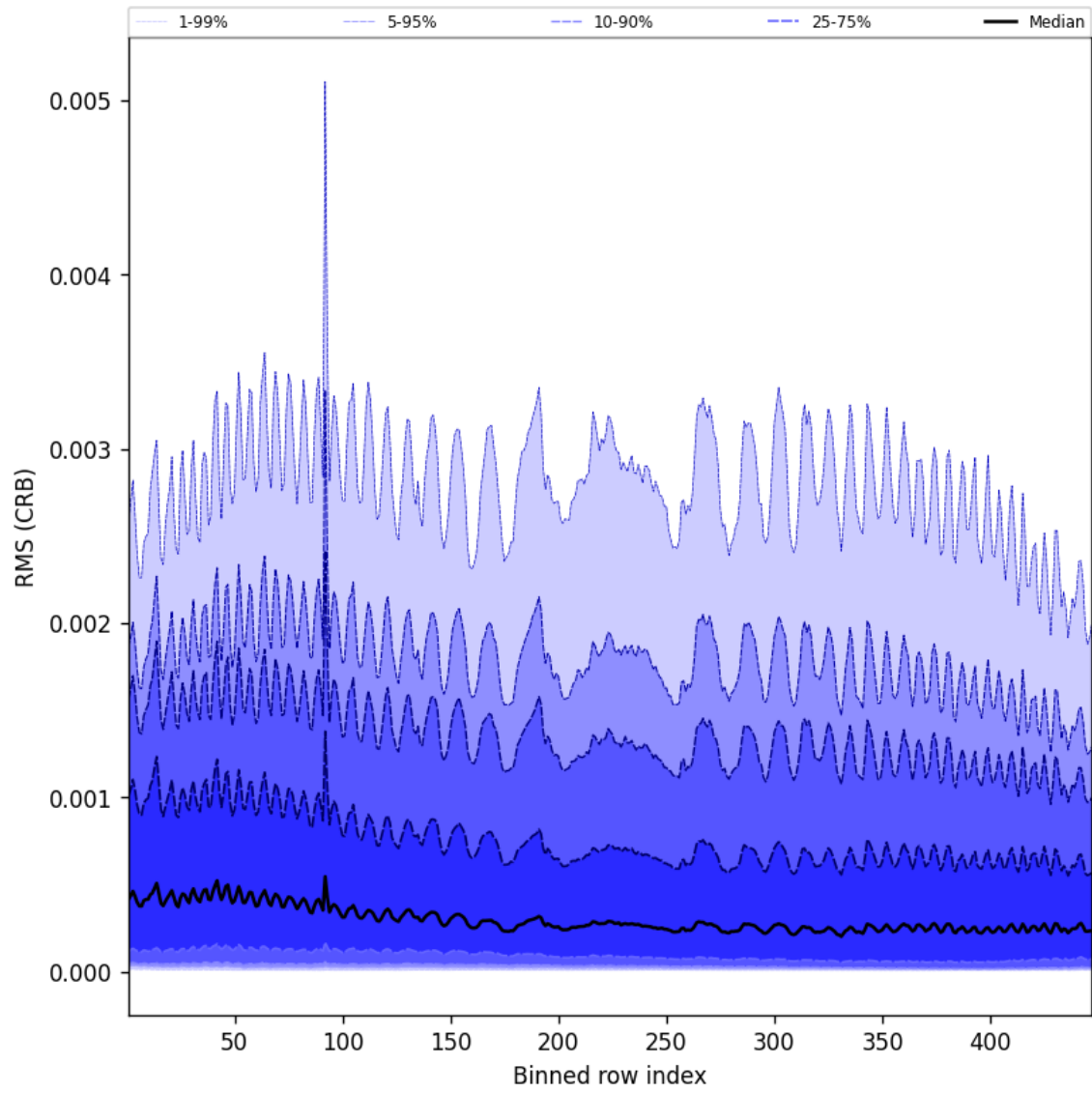


Figure 62: Along track statistics of “RMS (CRB)” for 2025-10-09 to 2025-10-09

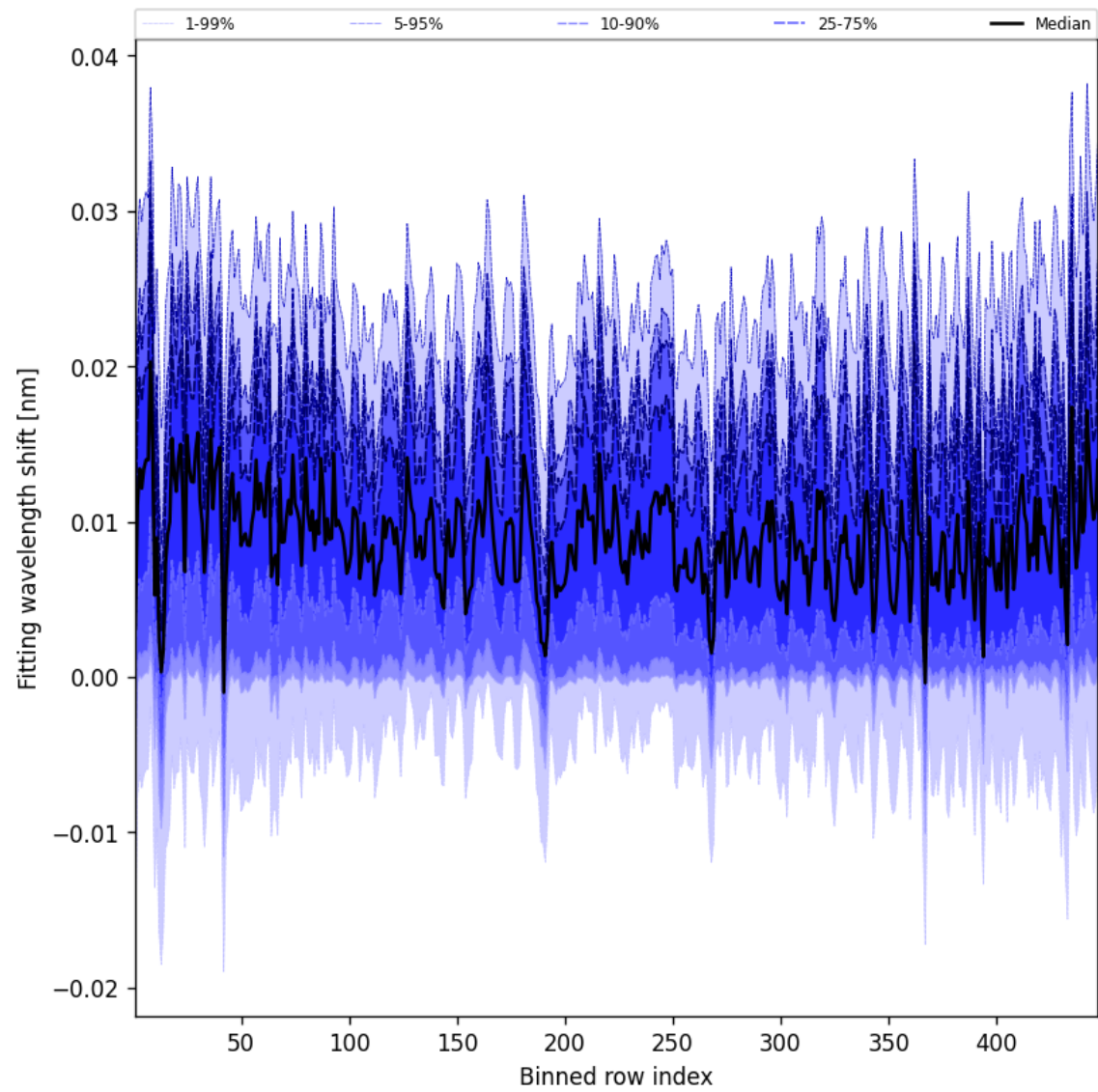


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-10-09 to 2025-10-09

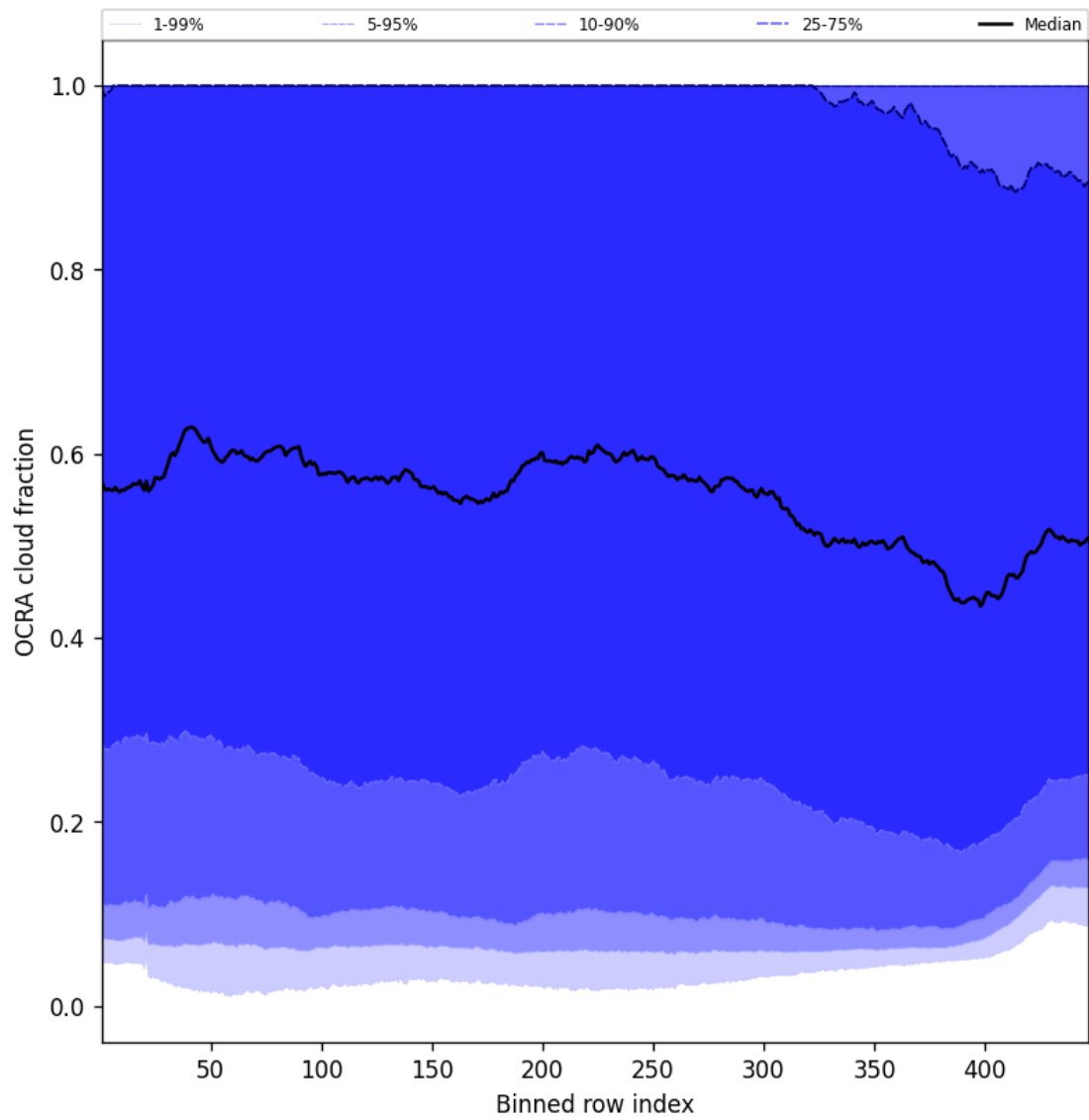


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-10-09 to 2025-10-09

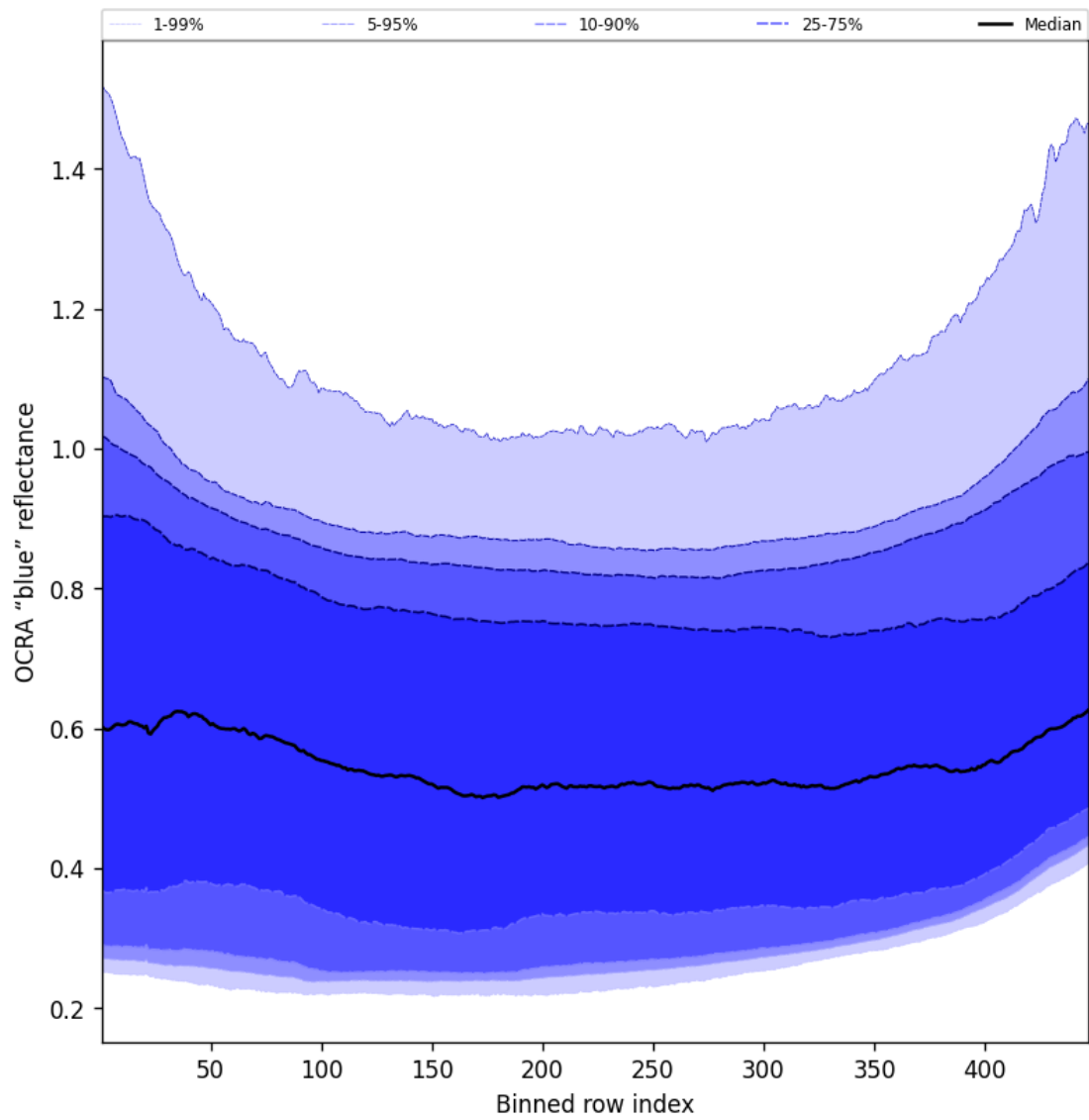


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-10-09 to 2025-10-09

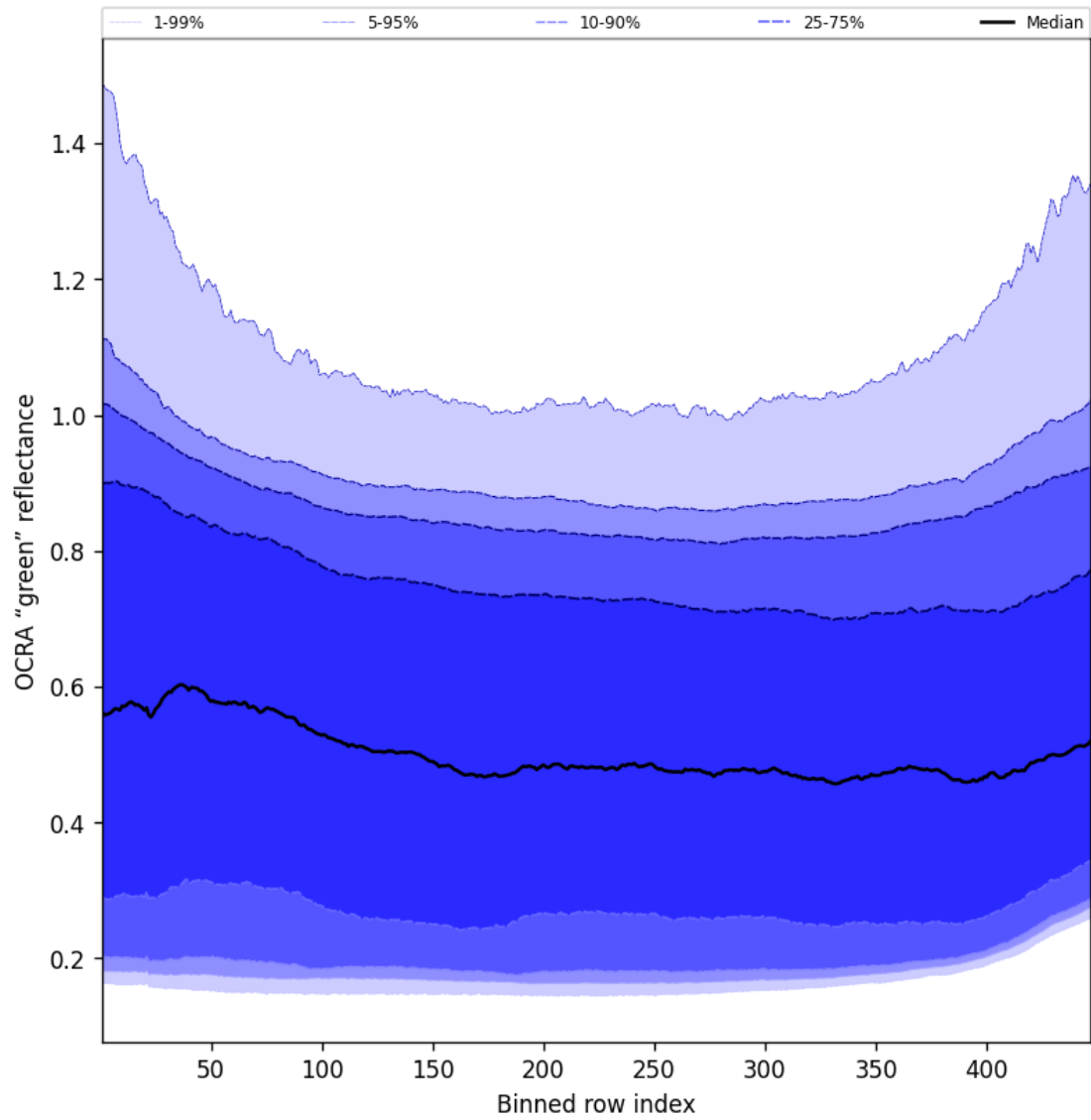


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-10-09 to 2025-10-09

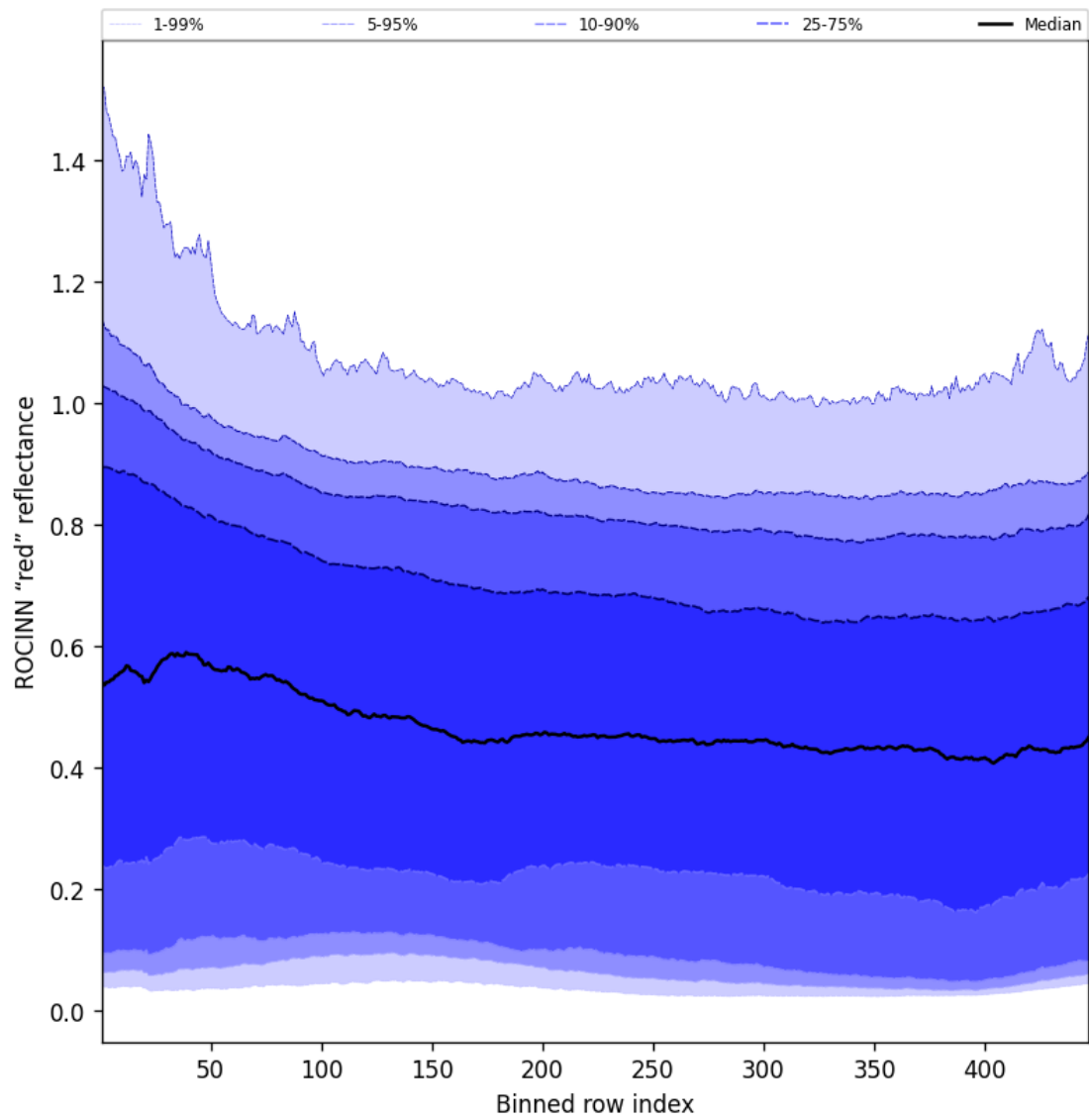


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-10-09 to 2025-10-09

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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