

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-10-08 (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 $\frac{1}{2}$ 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]	0.649 ± 0.368	17970483	0.995	0.550	0.820	0.0	1.000
cloud fraction [1]	0.581 ± 0.345	17970483	0.995	0.732	0.571	7.163×10^{-3}	1.000
cloud top height [m]	$(0.387 \pm 0.264) \times 10^4$	17970483	1.425×10^3	3.758×10^3	3.253×10^3	0.0	2.000×10^4
cloud optical thickness [1]	22.3 ± 40.8	17970483	9.77	12.2	9.99	1.000	250
cloud fraction crb [1]	0.580 ± 0.345	17970483	0.995	0.731	0.569	1.355×10^{-3}	1.000
cloud height crb [m]	$(0.306 \pm 0.225) \times 10^4$	17970483	975	3.239×10^3	2.580×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.606 ± 0.211	17970483	0.995	0.276	0.582	0.0	1.000
surface albedo fitted [1]	0.221 ± 0.290	17970483	2.500×10^{-2}	0.261	5.501×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.209 ± 0.276	17970483	1.500×10^{-2}	0.262	4.576×10^{-2}	0.0	1.000
fitted root mean square [1]	$(6.377 \pm 12.504) \times 10^{-4}$	17970483	5.000×10^{-5}	7.490×10^{-4}	4.135×10^{-4}	1.070×10^{-6}	0.946
fitted root mean square crb [1]	$(5.618 \pm 13.050) \times 10^{-4}$	17970483	5.000×10^{-5}	6.815×10^{-4}	3.198×10^{-4}	8.707×10^{-7}	0.788
wavelength shift [nm]	$(9.013 \pm 7.247) \times 10^{-3}$	17970483	9.000×10^{-4}	1.053×10^{-2}	8.650×10^{-3}	-6.157×10^{-2}	0.689
cloud fraction apriori [1]	0.587 ± 0.351	17970483	0.995	0.748	0.582	0.0	1.000
reflectance blue ocra [1]	0.571 ± 0.231	17970483	0.265	0.397	0.550	0.130	2.08
reflectance green ocra [1]	0.520 ± 0.259	17970483	0.175	0.466	0.505	6.956×10^{-2}	2.06
reflectance continuum aband [1]	0.475 ± 0.281	17970483	4.500×10^{-2}	0.467	0.472	9.815×10^{-3}	3.95

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	2.000×10^{-2}	0.400	0.950	1.000	1.000	1.000	1.000
cloud fraction [1]	2.795×10^{-2}	7.173×10^{-2}	0.113	0.164	0.255	0.987	1.000	1.000	1.000	1.000
cloud top height [m]	261	756	1.086×10^3	1.357×10^3	1.749×10^3	5.508×10^3	6.667×10^3	7.658×10^3	8.977×10^3	1.120×10^4
cloud optical thickness [1]	1.000	2.66	3.85	4.85	6.16	18.4	28.9	44.1	80.9	250
cloud fraction crb [1]	2.738×10^{-2}	7.086×10^{-2}	0.112	0.163	0.255	0.986	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	331	614	856	1.212×10^3	4.451×10^3	5.479×10^3	6.377×10^3	7.449×10^3	9.205×10^3
cloud albedo crb [1]	6.161×10^{-2}	0.262	0.373	0.427	0.472	0.748	0.839	0.922	1.000	1.000
surface albedo fitted [1]	0.0	9.075×10^{-3}	1.464×10^{-2}	1.938×10^{-2}	2.618×10^{-2}	0.287	0.652	0.764	0.860	0.982
surface albedo fitted crb [1]	3.573×10^{-4}	7.519×10^{-3}	1.143×10^{-2}	1.511×10^{-2}	2.067×10^{-2}	0.283	0.621	0.714	0.805	0.926
fitted root mean square [1]	1.671×10^{-5}	3.208×10^{-5}	5.191×10^{-5}	8.249×10^{-5}	1.417×10^{-4}	8.907×10^{-4}	1.185×10^{-3}	1.483×10^{-3}	1.945×10^{-3}	3.125×10^{-3}
fitted root mean square crb [1]	8.887×10^{-6}	2.070×10^{-5}	3.510×10^{-5}	5.588×10^{-5}	9.971×10^{-5}	7.812×10^{-4}	1.094×10^{-3}	1.409×10^{-3}	1.882×10^{-3}	2.979×10^{-3}
wavelength shift [nm]	-6.732×10^{-3}	-4.122×10^{-4}	4.809×10^{-4}	1.539×10^{-3}	3.426×10^{-3}	1.396×10^{-2}	1.634×10^{-2}	1.837×10^{-2}	2.107×10^{-2}	2.690×10^{-2}
cloud fraction apriori [1]	3.192×10^{-2}	6.768×10^{-2}	0.106	0.157	0.252	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.232	0.257	0.283	0.313	0.366	0.763	0.822	0.866	0.931	1.14
reflectance green ocra [1]	0.153	0.173	0.193	0.221	0.275	0.741	0.811	0.860	0.923	1.10
reflectance continuum aband [1]	3.097×10^{-2}	5.588×10^{-2}	9.091×10^{-2}	0.140	0.234	0.701	0.783	0.839	0.908	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]	0.654 ± 0.368	8849649	0.560	0.850	0.0	1.000	0.400	0.960
cloud fraction [1]	0.605 ± 0.354	8849649	0.749	0.647	7.163×10^{-3}	1.000	0.251	1.000
cloud top height [m]	$(0.396 \pm 0.256) \times 10^4$	8849649	3.558×10^3	3.415×10^3	0.0	2.000×10^4	1.915×10^3	5.473×10^3
cloud optical thickness [1]	23.0 ± 38.0	8849649	14.9	10.6	1.000	250	6.57	21.5
cloud fraction crb [1]	0.604 ± 0.355	8849649	0.750	0.645	5.112×10^{-3}	1.000	0.249	0.999
cloud height crb [m]	$(0.327 \pm 0.224) \times 10^4$	8849649	3.160×10^3	2.832×10^3	0.0	2.000×10^4	1.446×10^3	4.606×10^3
cloud albedo crb [1]	0.582 ± 0.197	8849649	0.244	0.570	0.0	1.000	0.464	0.709
surface albedo fitted [1]	0.155 ± 0.197	8849649	0.183	6.273×10^{-2}	0.0	1.000	2.736×10^{-2}	0.210
surface albedo fitted crb [1]	0.149 ± 0.197	8849649	0.183	5.079×10^{-2}	0.0	1.000	2.143×10^{-2}	0.204
fitted root mean square [1]	$(5.293 \pm 8.569) \times 10^{-4}$	8849649	5.868×10^{-4}	2.849×10^{-4}	1.070×10^{-6}	0.277	1.097×10^{-4}	6.965×10^{-4}
fitted root mean square crb [1]	$(4.866 \pm 9.157) \times 10^{-4}$	8849649	5.849×10^{-4}	2.313×10^{-4}	8.707×10^{-7}	0.605	7.087×10^{-5}	6.558×10^{-4}
wavelength shift [nm]	$(7.870 \pm 6.913) \times 10^{-3}$	8849649	9.829×10^{-3}	7.157×10^{-3}	-4.382×10^{-2}	0.117	2.523×10^{-3}	1.235×10^{-2}
cloud fraction apriori [1]	0.610 ± 0.360	8849649	0.756	0.659	0.0	1.000	0.244	1.000
reflectance blue ocra [1]	0.537 ± 0.219	8849649	0.347	0.510	0.130	2.03	0.349	0.696
reflectance green ocra [1]	0.482 ± 0.244	8849649	0.411	0.455	6.956×10^{-2}	2.06	0.258	0.669
reflectance continuum aband [1]	0.440 ± 0.270	8849649	0.417	0.424	9.815×10^{-3}	3.95	0.216	0.634

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]	0.644 ± 0.368	9120834	0.550	0.800	0.0	1.000	0.400	0.950
cloud fraction [1]	0.558 ± 0.335	9120834	0.688	0.513	8.044×10^{-3}	1.000	0.258	0.946
cloud top height [m]	$(0.379 \pm 0.272) \times 10^4$	9120834	3.936×10^3	3.072×10^3	0.0	2.000×10^4	1.608×10^3	5.544×10^3
cloud optical thickness [1]	21.6 ± 43.4	9120834	9.85	9.57	1.000	250	5.80	15.7
cloud fraction crb [1]	0.557 ± 0.335	9120834	0.687	0.511	1.355×10^{-3}	1.000	0.259	0.945
cloud height crb [m]	$(0.286 \pm 0.224) \times 10^4$	9120834	3.274×10^3	2.301×10^3	0.0	2.000×10^4	1.020×10^3	4.294×10^3
cloud albedo crb [1]	0.629 ± 0.222	9120834	0.316	0.596	0.0	1.000	0.479	0.795
surface albedo fitted [1]	0.286 ± 0.345	9120834	0.651	4.947×10^{-2}	0.0	1.000	2.522×10^{-2}	0.677
surface albedo fitted crb [1]	0.266 ± 0.324	9120834	0.615	4.201×10^{-2}	0.0	1.000	2.001×10^{-2}	0.635
fitted root mean square [1]	$(7.429 \pm 15.316) \times 10^{-4}$	9120834	8.172×10^{-4}	5.614×10^{-4}	3.337×10^{-6}	0.946	2.145×10^{-4}	1.032×10^{-3}
fitted root mean square crb [1]	$(6.347 \pm 15.909) \times 10^{-4}$	9120834	7.386×10^{-4}	4.146×10^{-4}	2.788×10^{-6}	0.788	1.448×10^{-4}	8.834×10^{-4}
wavelength shift [nm]	$(1.012 \pm 0.739) \times 10^{-2}$	9120834	1.057×10^{-2}	1.021×10^{-2}	-6.157×10^{-2}	0.689	4.628×10^{-3}	1.520×10^{-2}
cloud fraction apriori [1]	0.564 ± 0.340	9120834	0.730	0.526	0.0	1.000	0.258	0.988
reflectance blue ocra [1]	0.603 ± 0.238	9120834	0.417	0.601	0.151	2.08	0.386	0.803
reflectance green ocra [1]	0.557 ± 0.268	9120834	0.493	0.564	7.979×10^{-2}	2.01	0.299	0.792
reflectance continuum aband [1]	0.508 ± 0.288	9120834	0.495	0.535	1.385×10^{-2}	3.61	0.256	0.751

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]	0.695 ± 0.342	11788226	0.580	0.880	0.0	1.000	0.400	0.980
cloud fraction [1]	0.584 ± 0.349	11788226	0.744	0.596	7.821×10^{-3}	1.000	0.242	0.986
cloud top height [m]	$(0.359 \pm 0.253) \times 10^4$	11788226	3.378×10^3	2.904×10^3	0.0	2.000×10^4	1.619×10^3	4.997×10^3
cloud optical thickness [1]	20.2 ± 33.9	11788226	10.8	10.3	1.000	250	6.97	17.8
cloud fraction crb [1]	0.583 ± 0.349	11788226	0.744	0.594	1.355×10^{-3}	1.000	0.240	0.985
cloud height crb [m]	$(0.289 \pm 0.227) \times 10^4$	11788226	3.130×10^3	2.280×10^3	0.0	2.000×10^4	1.070×10^3	4.200×10^3
cloud albedo crb [1]	0.564 ± 0.186	11788226	0.223	0.545	0.0	1.000	0.456	0.679
surface albedo fitted [1]	0.115 ± 0.226	11788226	3.466×10^{-2}	3.264×10^{-2}	0.0	1.000	1.990×10^{-2}	5.456×10^{-2}
surface albedo fitted crb [1]	0.107 ± 0.219	11788226	2.978×10^{-2}	2.615×10^{-2}	0.0	1.000	1.551×10^{-2}	4.529×10^{-2}
fitted root mean square [1]	$(5.708 \pm 14.206) \times 10^{-4}$	11788226	7.107×10^{-4}	3.155×10^{-4}	1.070×10^{-6}	0.946	9.893×10^{-5}	8.096×10^{-4}
fitted root mean square crb [1]	$(5.363 \pm 15.301) \times 10^{-4}$	11788226	6.891×10^{-4}	2.750×10^{-4}	8.707×10^{-7}	0.788	7.647×10^{-5}	7.656×10^{-4}
wavelength shift [nm]	$(8.693 \pm 7.583) \times 10^{-3}$	11788226	1.116×10^{-2}	8.079×10^{-3}	-4.382×10^{-2}	0.689	2.771×10^{-3}	1.393×10^{-2}
cloud fraction apriori [1]	0.588 ± 0.354	11788226	0.764	0.604	0.0	1.000	0.236	1.000
reflectance blue oca [1]	0.532 ± 0.211	11788226	0.345	0.501	0.152	2.05	0.349	0.694
reflectance green oca [1]	0.473 ± 0.238	11788226	0.413	0.444	8.430×10^{-2}	1.95	0.252	0.665
reflectance continuum aband [1]	0.406 ± 0.271	11788226	0.475	0.390	9.815×10^{-3}	3.66	0.150	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]	0.516 ± 0.406	4633740	0.900	0.660	0.0	1.000	0.0	0.900
cloud fraction [1]	0.531 ± 0.330	4633740	0.664	0.445	7.163×10^{-3}	1.000	0.253	0.917
cloud top height [m]	$(0.480 \pm 0.282) \times 10^4$	4633740	4.132×10^3	4.605×10^3	0.0	2.000×10^4	2.494×10^3	6.627×10^3
cloud optical thickness [1]	24.1 ± 51.3	4633740	11.4	7.90	1.000	250	4.85	16.3
cloud fraction crb [1]	0.532 ± 0.329	4633740	0.661	0.444	8.345×10^{-3}	1.000	0.255	0.916
cloud height crb [m]	$(0.364 \pm 0.219) \times 10^4$	4633740	3.264×10^3	3.404×10^3	0.0	2.000×10^4	1.855×10^3	5.120×10^3
cloud albedo crb [1]	0.706 ± 0.241	4633740	0.396	0.715	0.0	1.000	0.540	0.936
surface albedo fitted [1]	0.489 ± 0.291	4633740	0.544	0.359	0.0	1.000	0.221	0.766
surface albedo fitted crb [1]	0.462 ± 0.265	4633740	0.490	0.363	7.718×10^{-3}	1.000	0.216	0.706
fitted root mean square [1]	$(8.308 \pm 8.368) \times 10^{-4}$	4633740	7.360×10^{-4}	6.453×10^{-4}	4.573×10^{-6}	0.173	3.386×10^{-4}	1.075×10^{-3}
fitted root mean square crb [1]	$(6.436 \pm 7.123) \times 10^{-4}$	4633740	6.742×10^{-4}	4.200×10^{-4}	2.799×10^{-6}	0.215	1.776×10^{-4}	8.519×10^{-4}
wavelength shift [nm]	$(9.701 \pm 6.497) \times 10^{-3}$	4633740	9.266×10^{-3}	9.536×10^{-3}	-3.729×10^{-2}	0.120	4.877×10^{-3}	1.414×10^{-2}
cloud fraction apriori [1]	0.541 ± 0.335	4633740	0.717	0.457	0.0	1.000	0.255	0.972
reflectance blue ocra [1]	0.663 ± 0.257	4633740	0.431	0.745	0.130	2.08	0.417	0.848
reflectance green ocra [1]	0.631 ± 0.282	4633740	0.498	0.719	6.956×10^{-2}	2.06	0.349	0.847
reflectance continuum aband [1]	0.630 ± 0.251	4633740	0.413	0.662	1.403×10^{-2}	3.95	0.407	0.820

3 Granule outlines

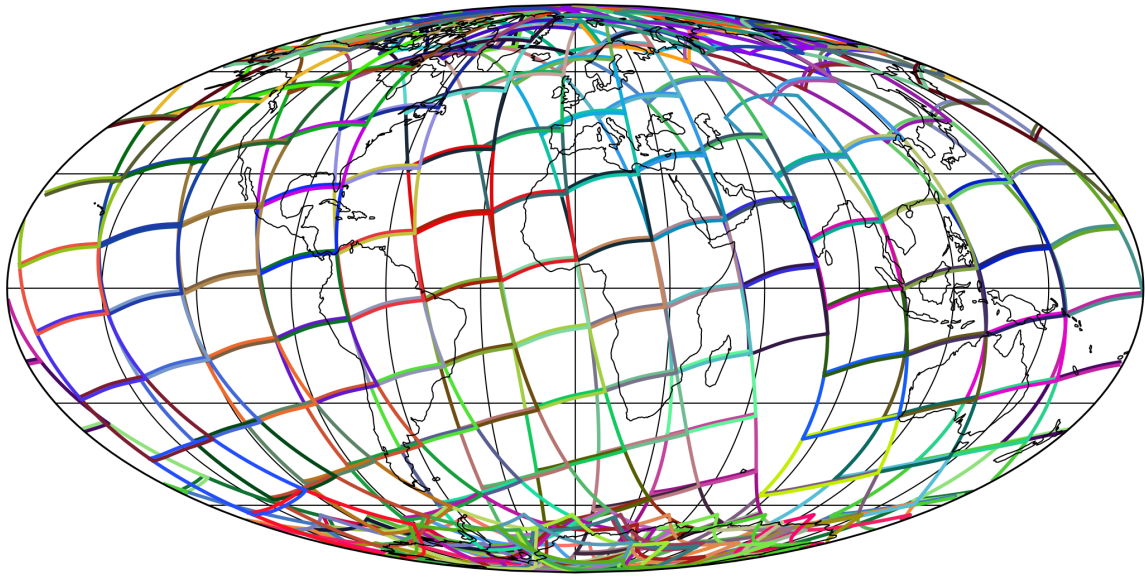


Figure 1: Outline of the granules.

4 Input data monitoring

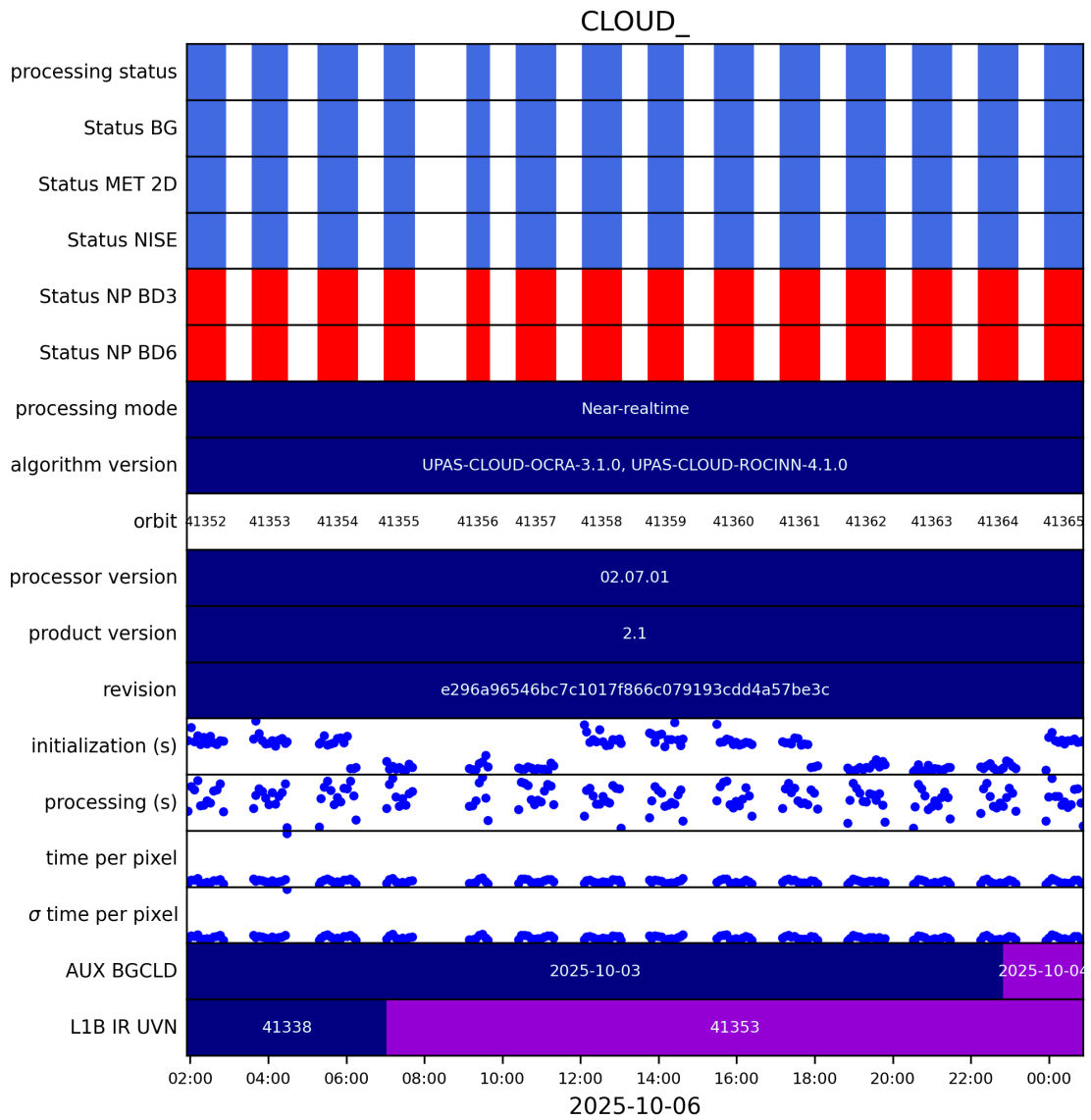


Figure 2: Input data per granule

5 Warnings and errors

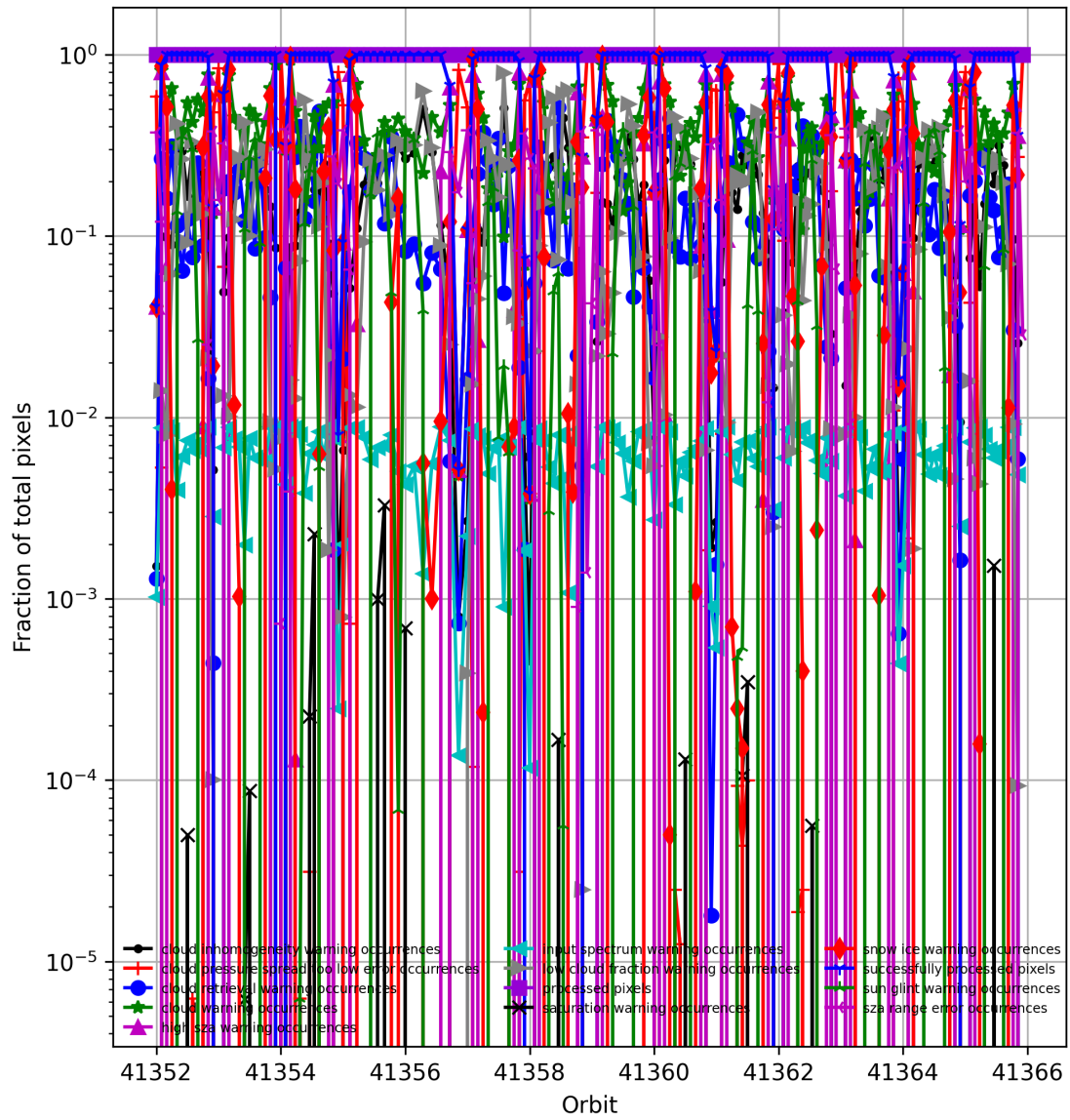


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

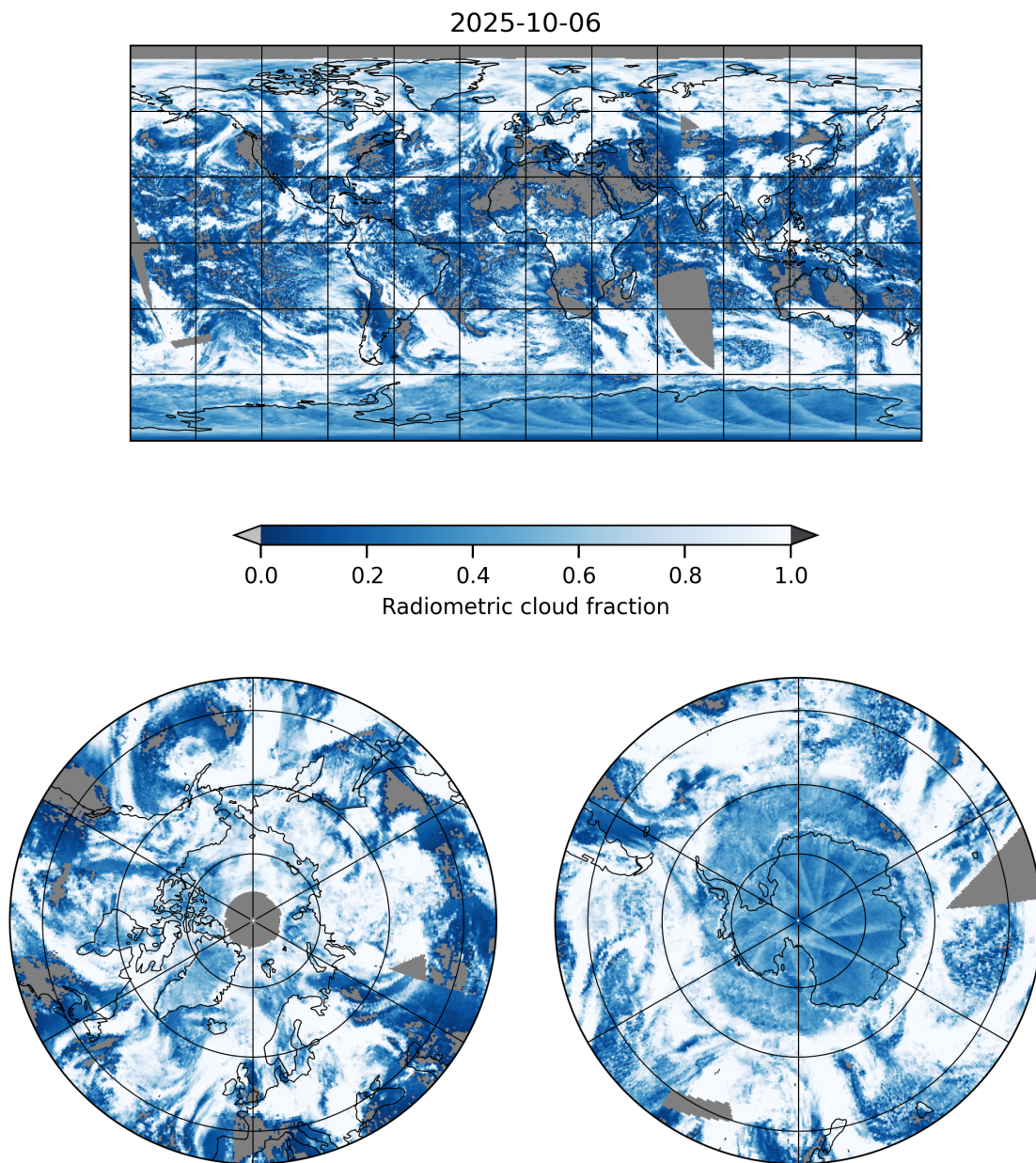


Figure 4: Map of “Radiometric cloud fraction” for 2025-10-06 to 2025-10-07

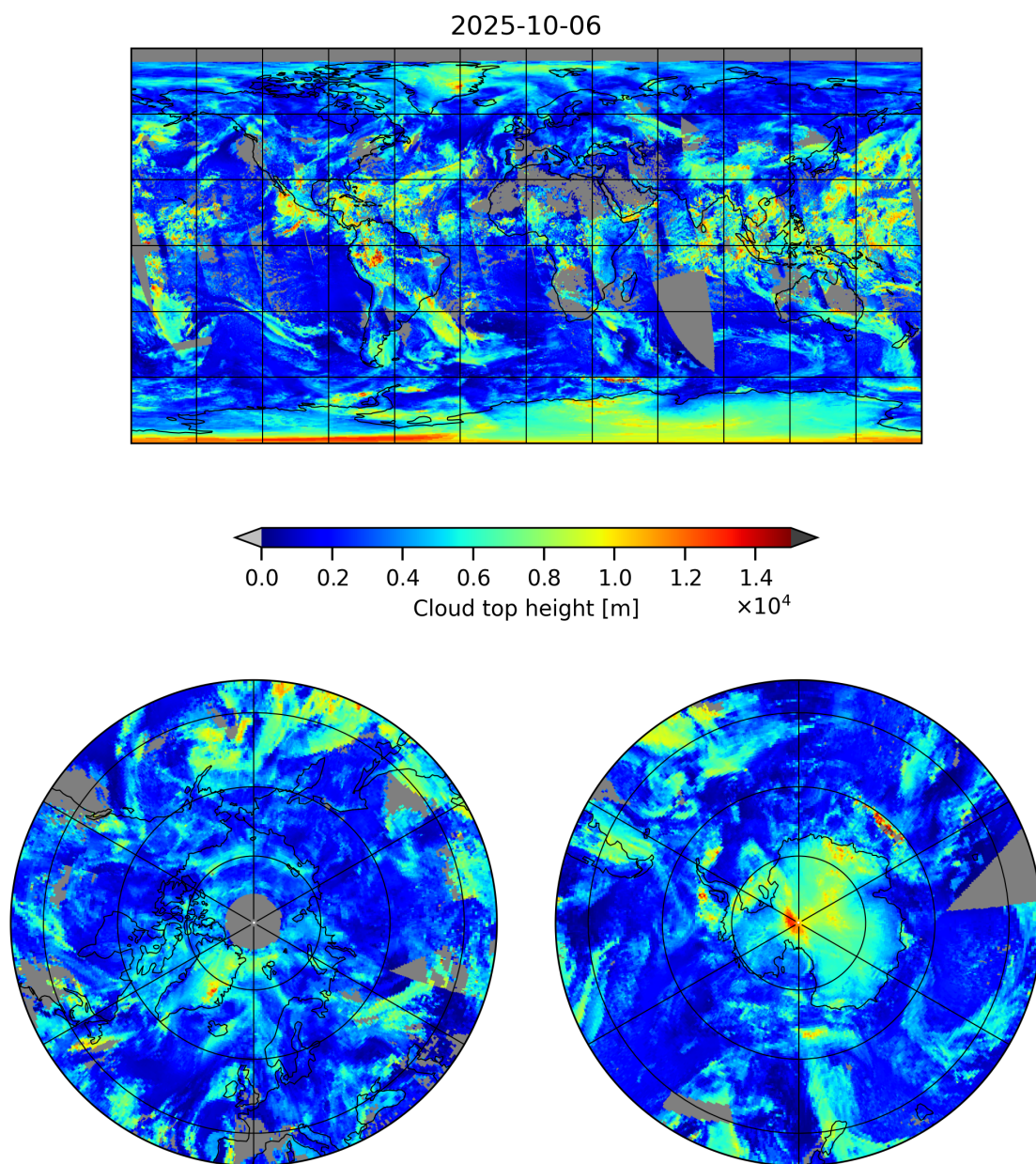


Figure 5: Map of “Cloud top height” for 2025-10-06 to 2025-10-07

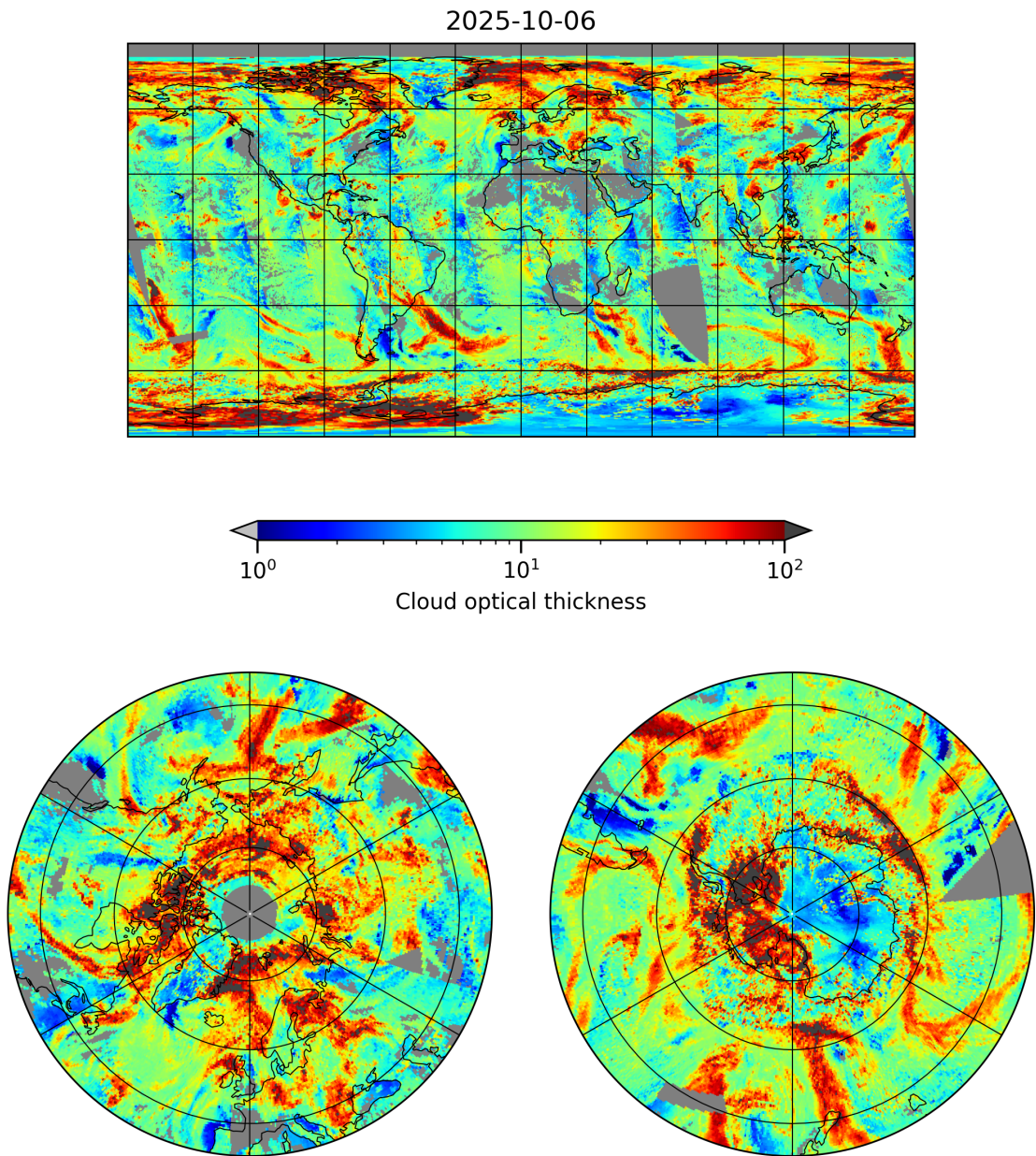


Figure 6: Map of “Cloud optical thickness” for 2025-10-06 to 2025-10-07

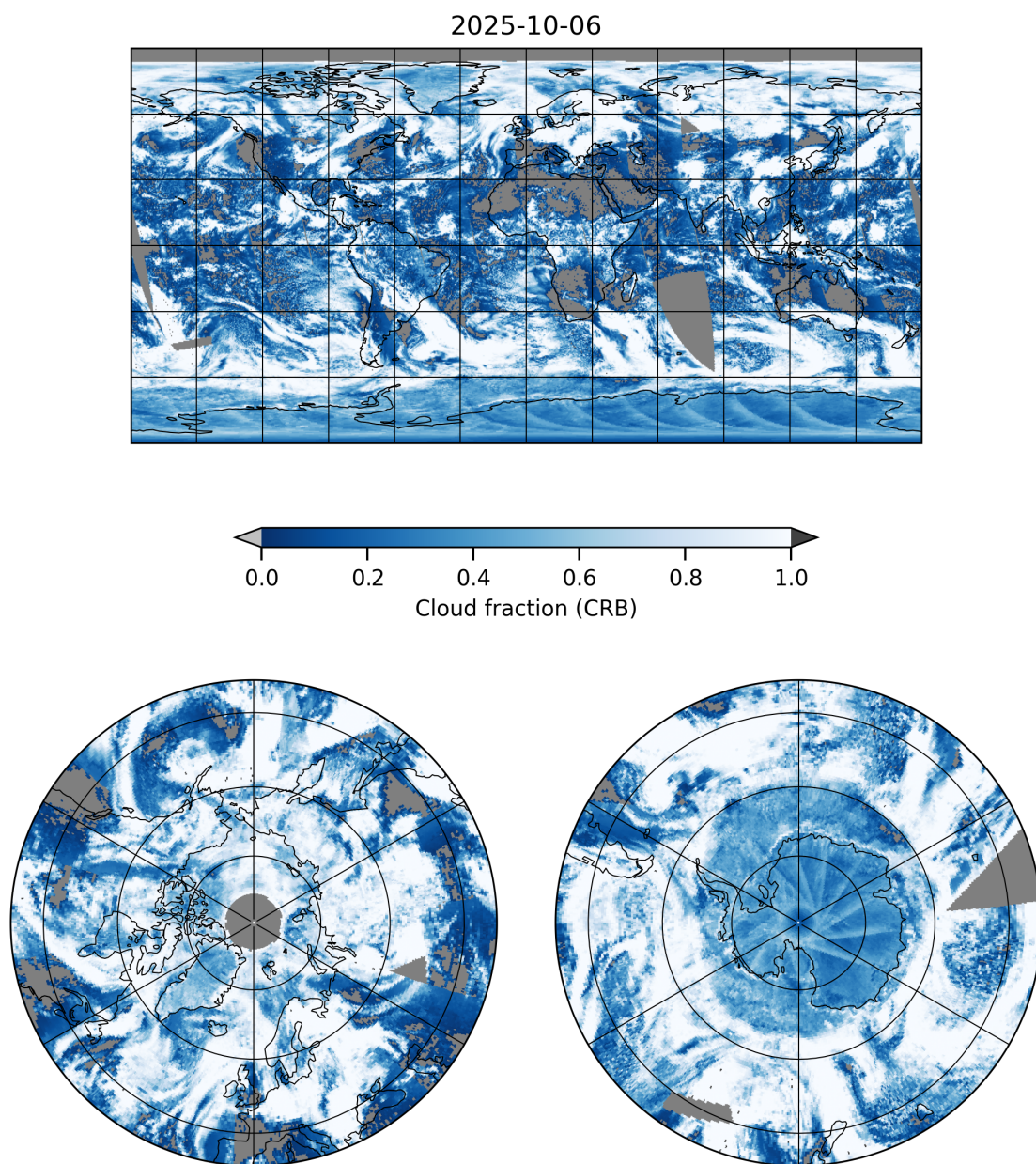


Figure 7: Map of “Cloud fraction (CRB)” for 2025-10-06 to 2025-10-07

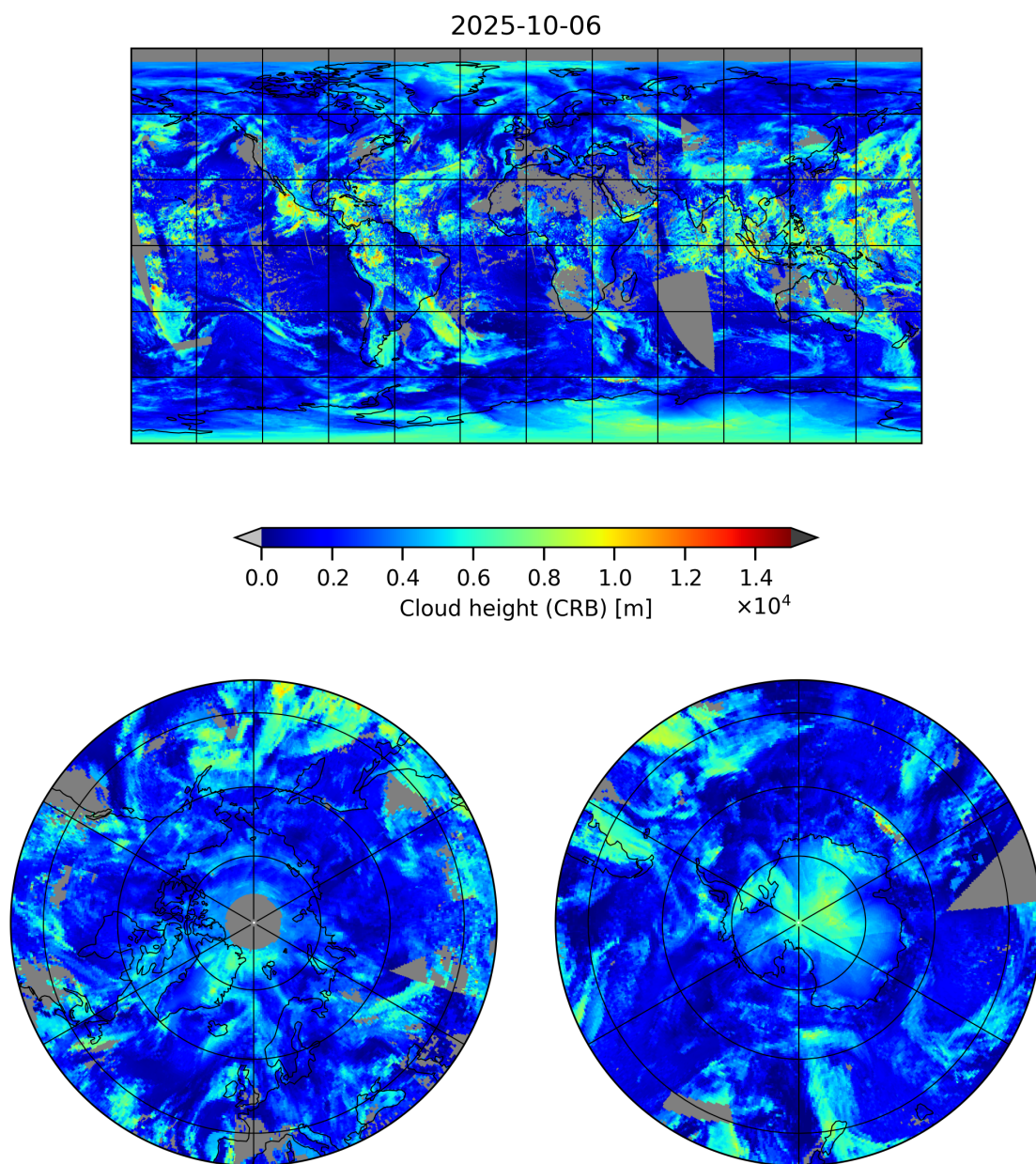


Figure 8: Map of “Cloud height (CRB)” for 2025-10-06 to 2025-10-07

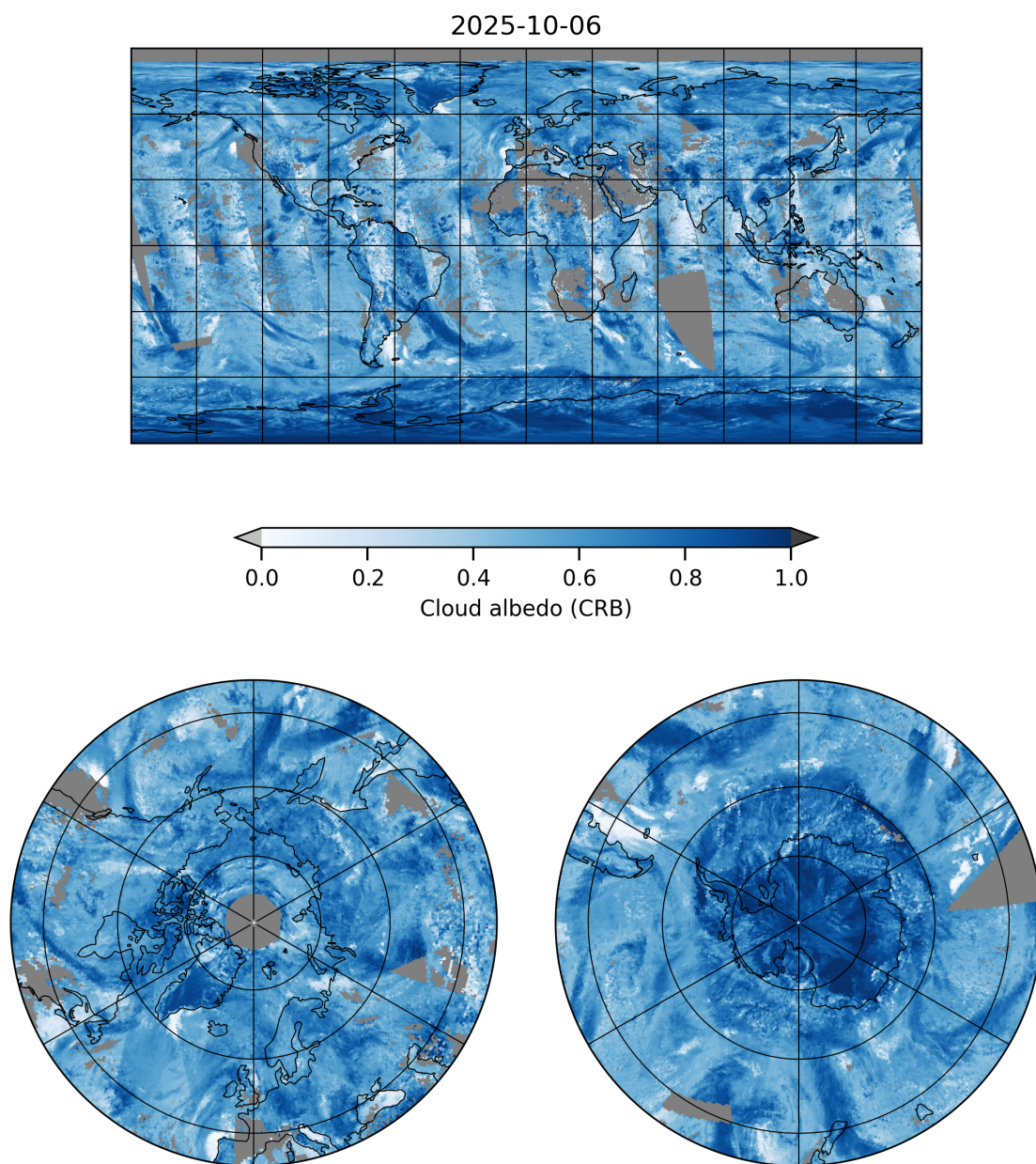


Figure 9: Map of “Cloud albedo (CRB)” for 2025-10-06 to 2025-10-07

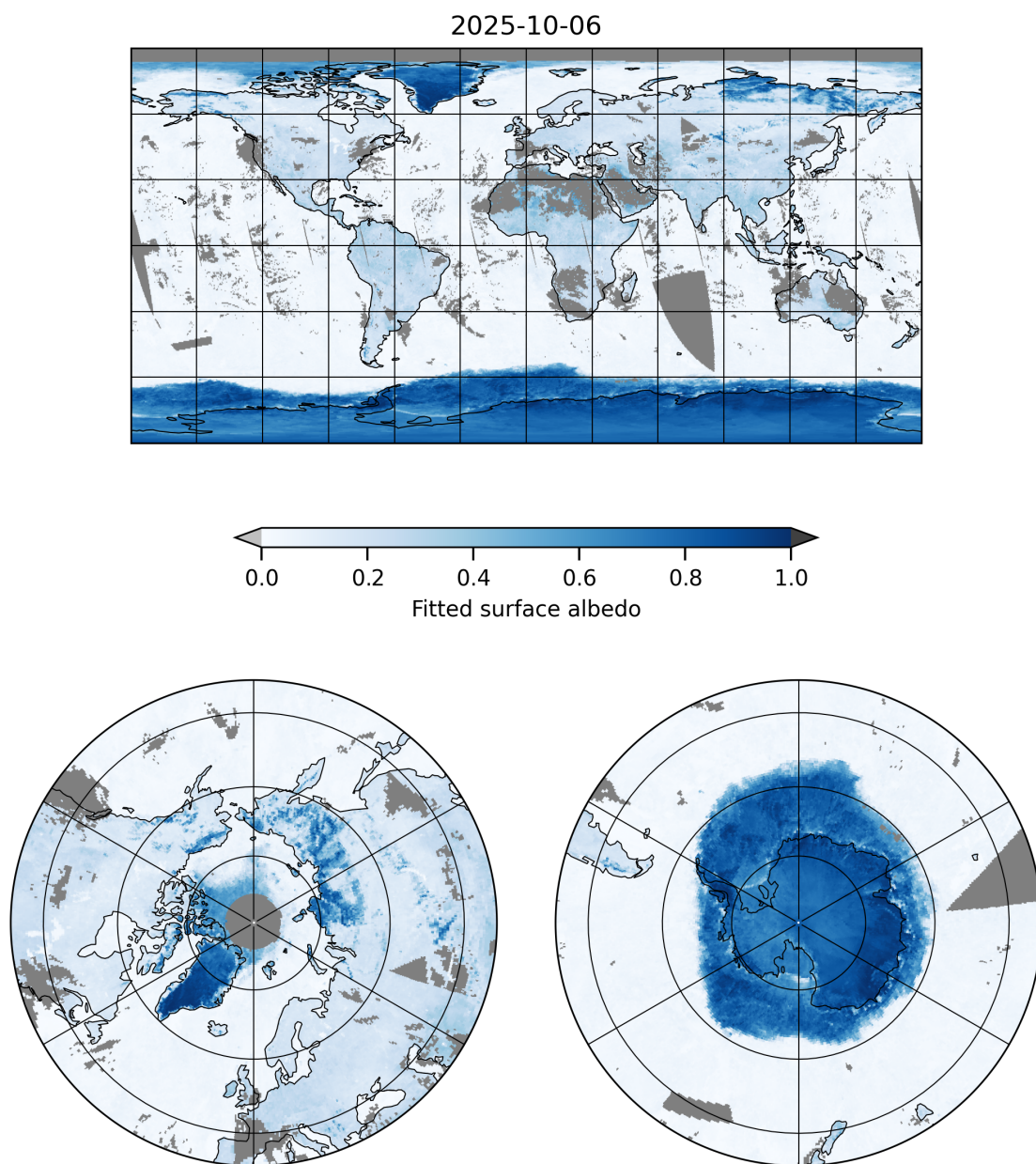


Figure 10: Map of “Fitted surface albedo” for 2025-10-06 to 2025-10-07

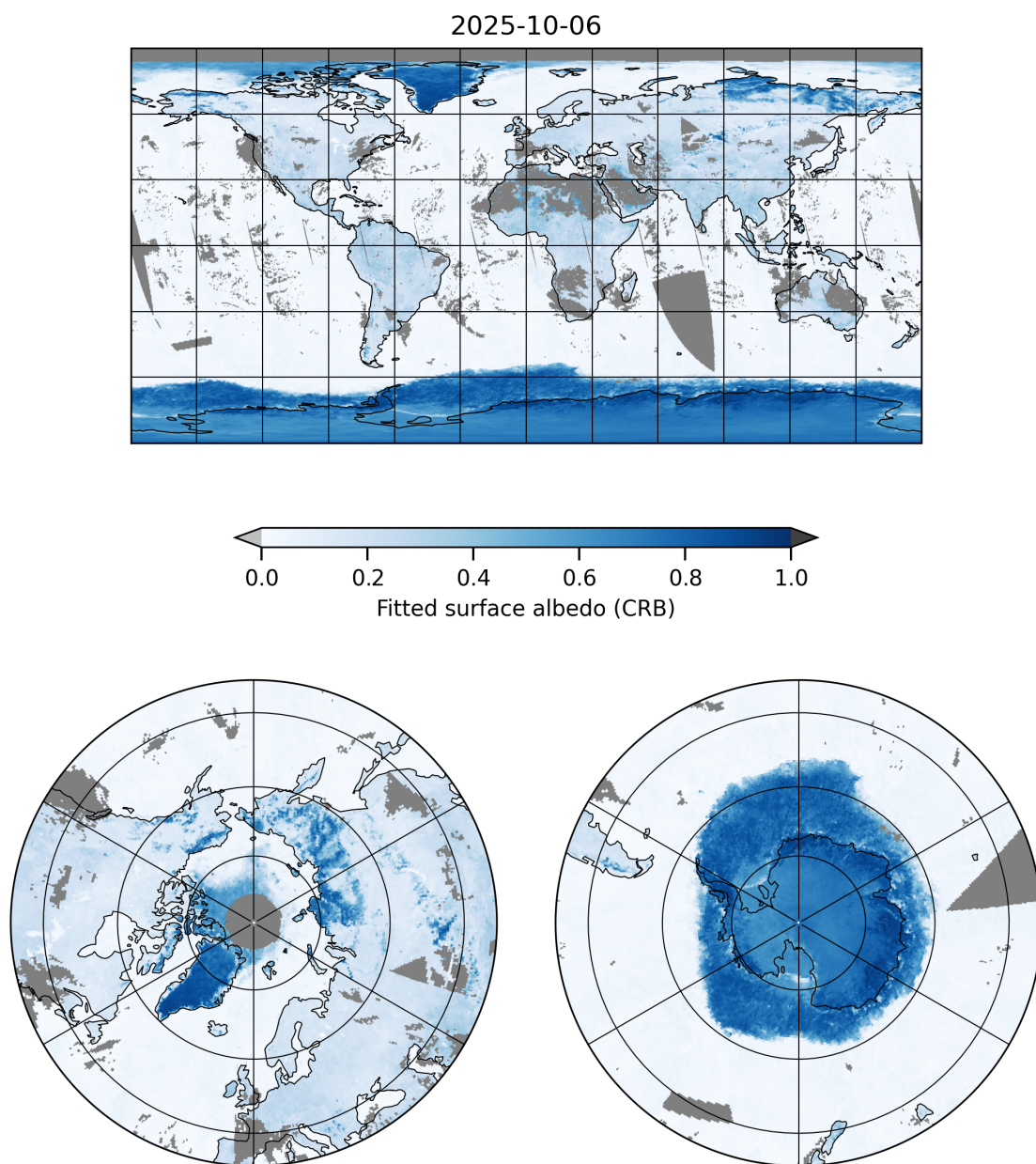


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-10-06 to 2025-10-07

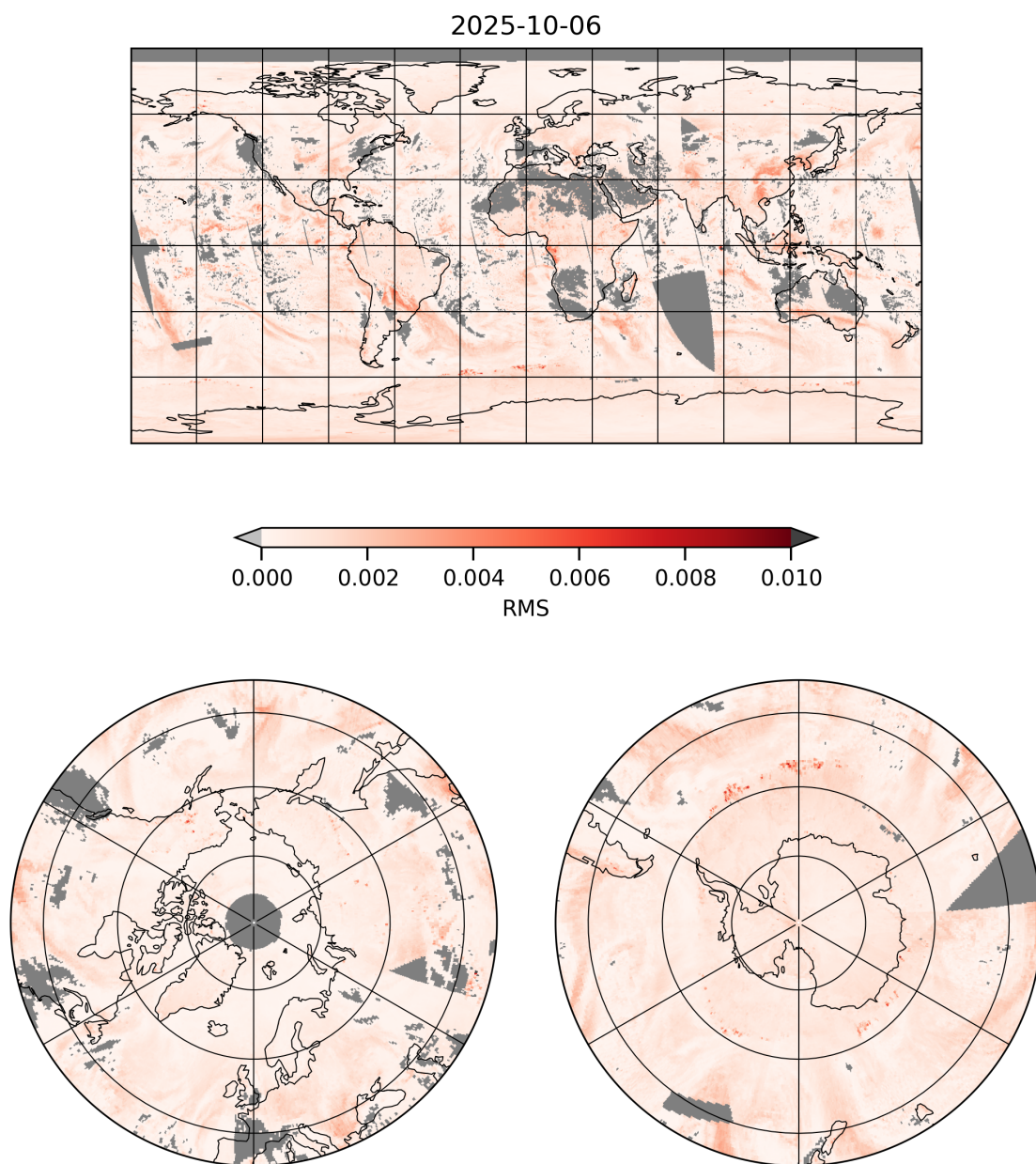


Figure 12: Map of “RMS” for 2025-10-06 to 2025-10-07

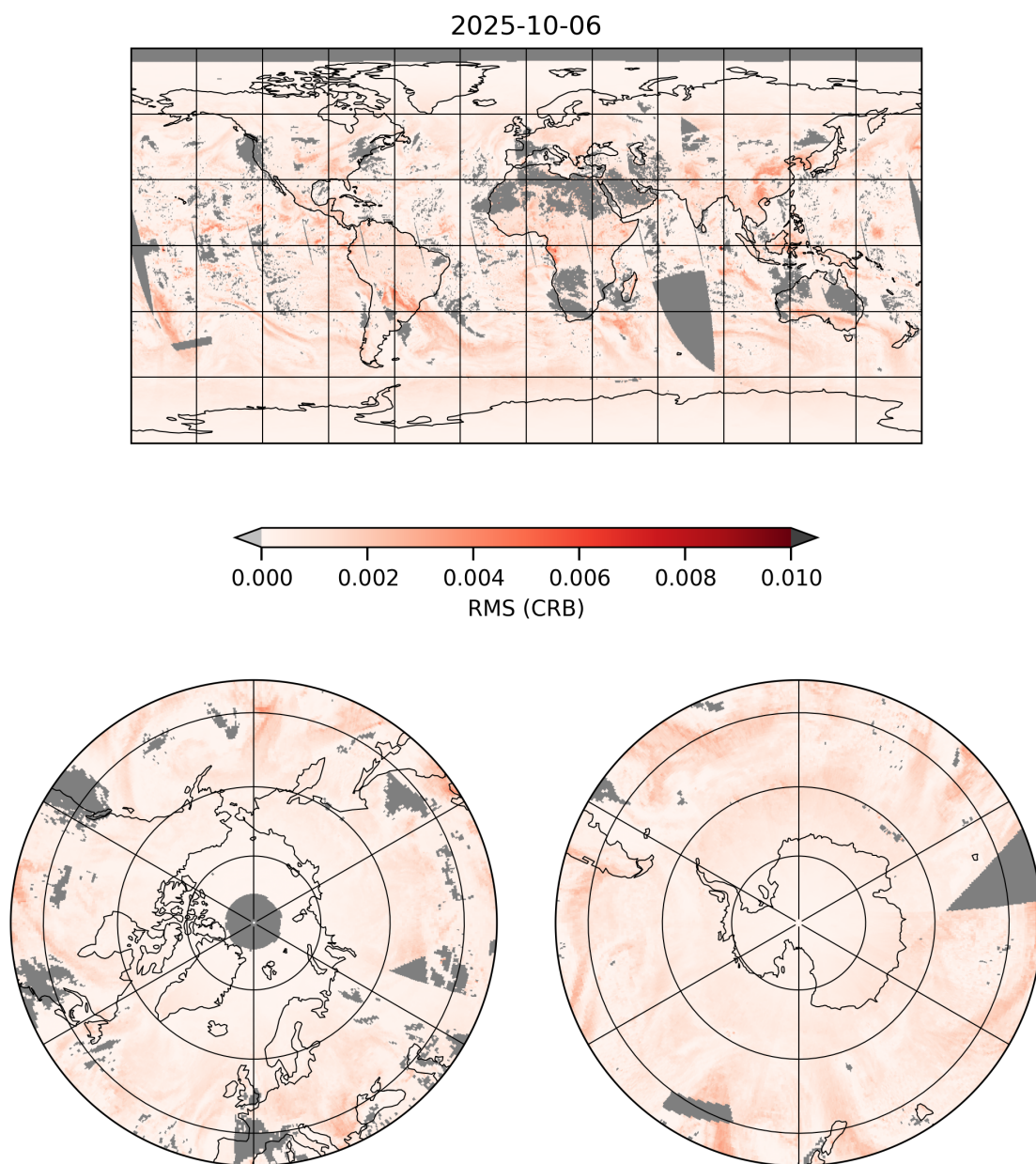


Figure 13: Map of “RMS (CRB)” for 2025-10-06 to 2025-10-07

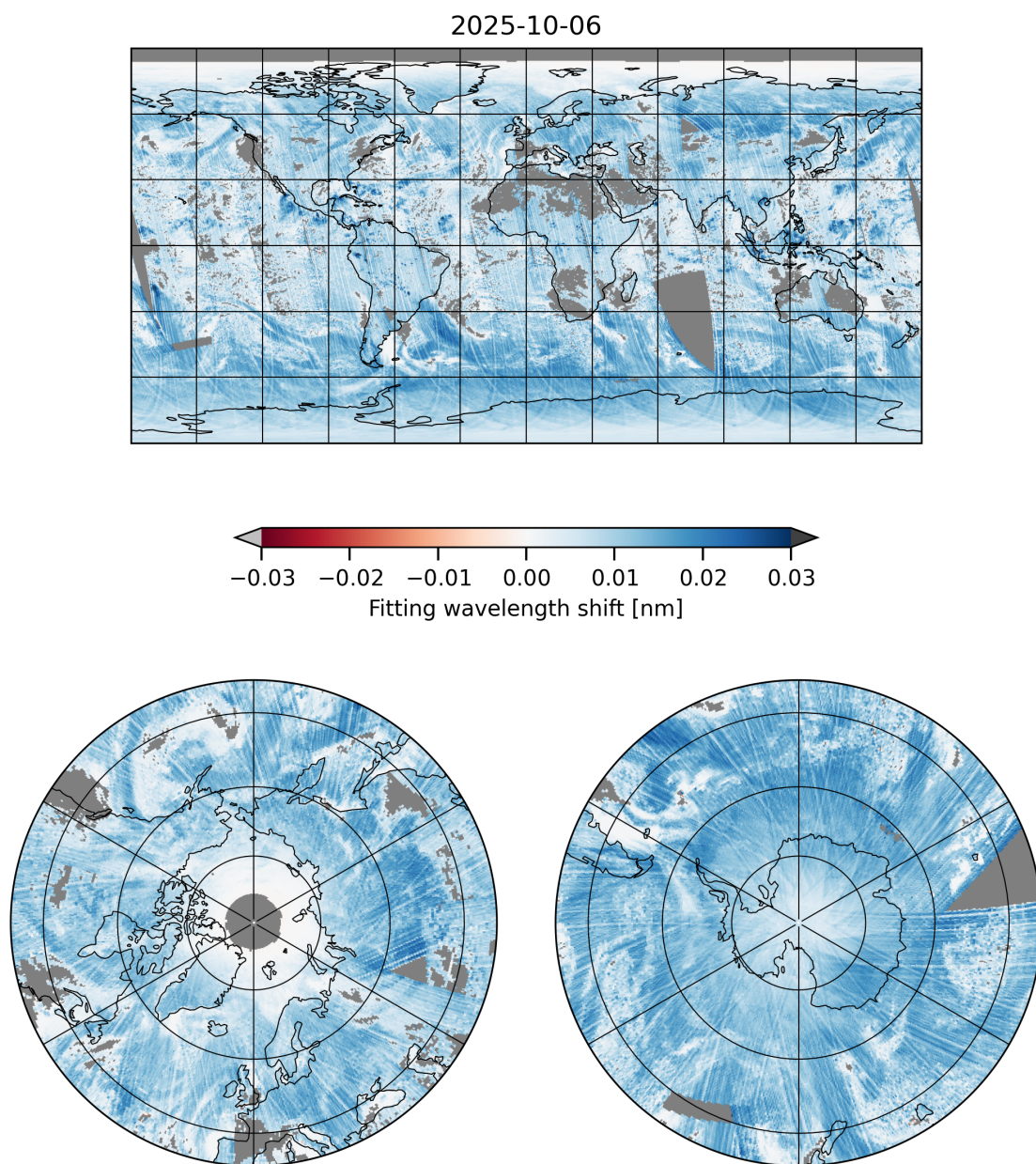


Figure 14: Map of “Fitting wavelength shift” for 2025-10-06 to 2025-10-07

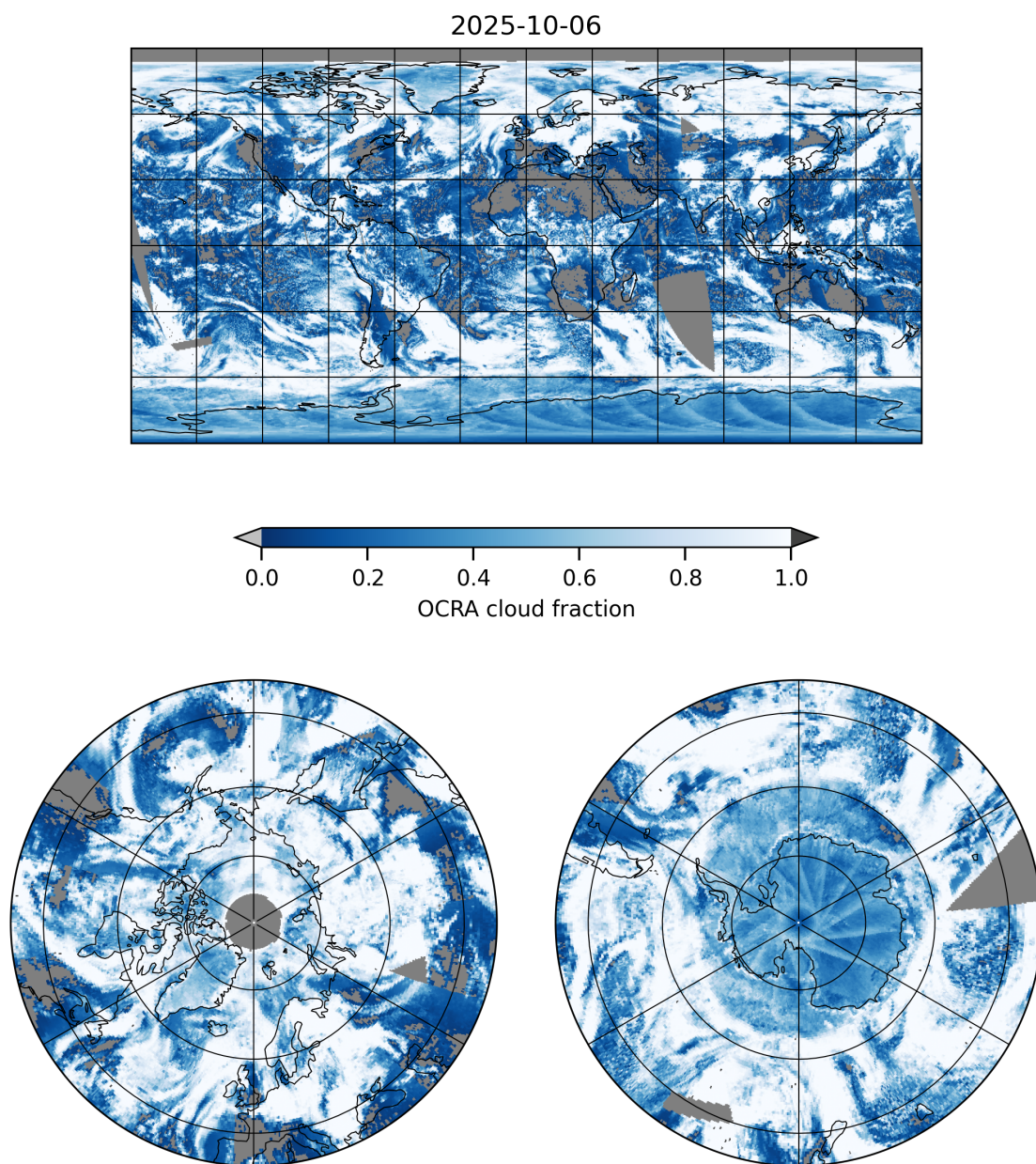


Figure 15: Map of “OCRA cloud fraction” for 2025-10-06 to 2025-10-07

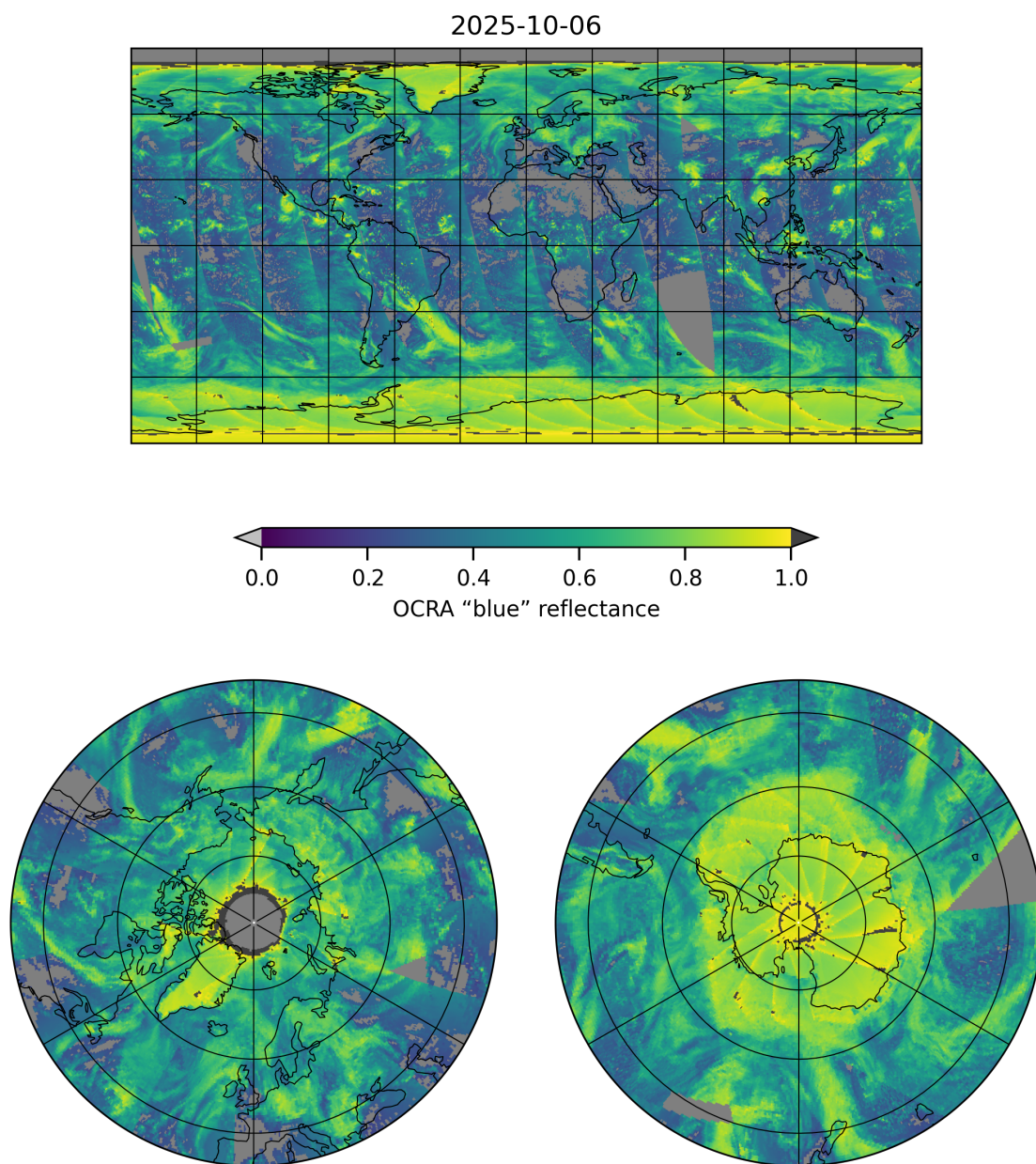


Figure 16: Map of "OCRA "blue" reflectance" for 2025-10-06 to 2025-10-07

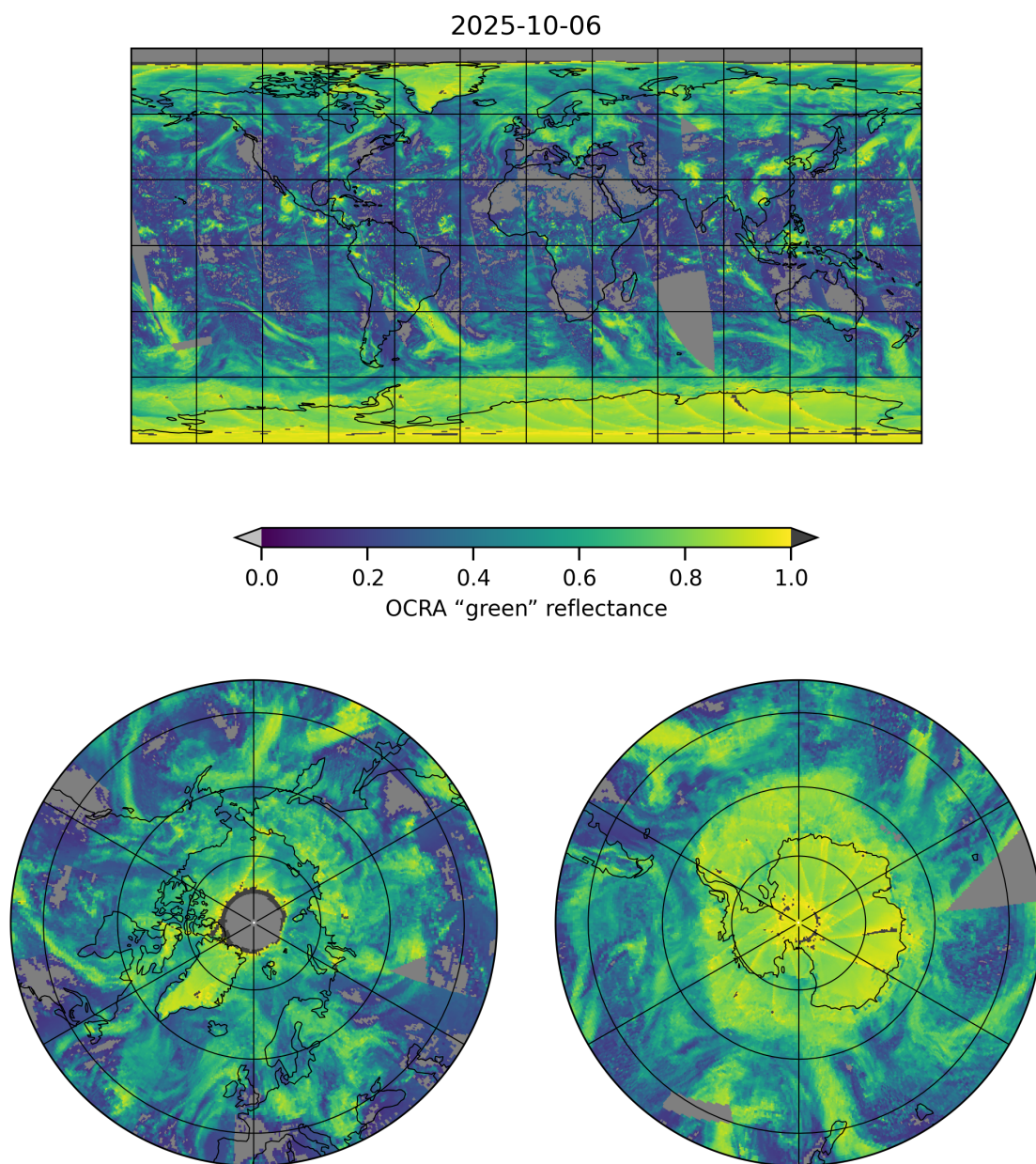


Figure 17: Map of "OCRA "green" reflectance" for 2025-10-06 to 2025-10-07

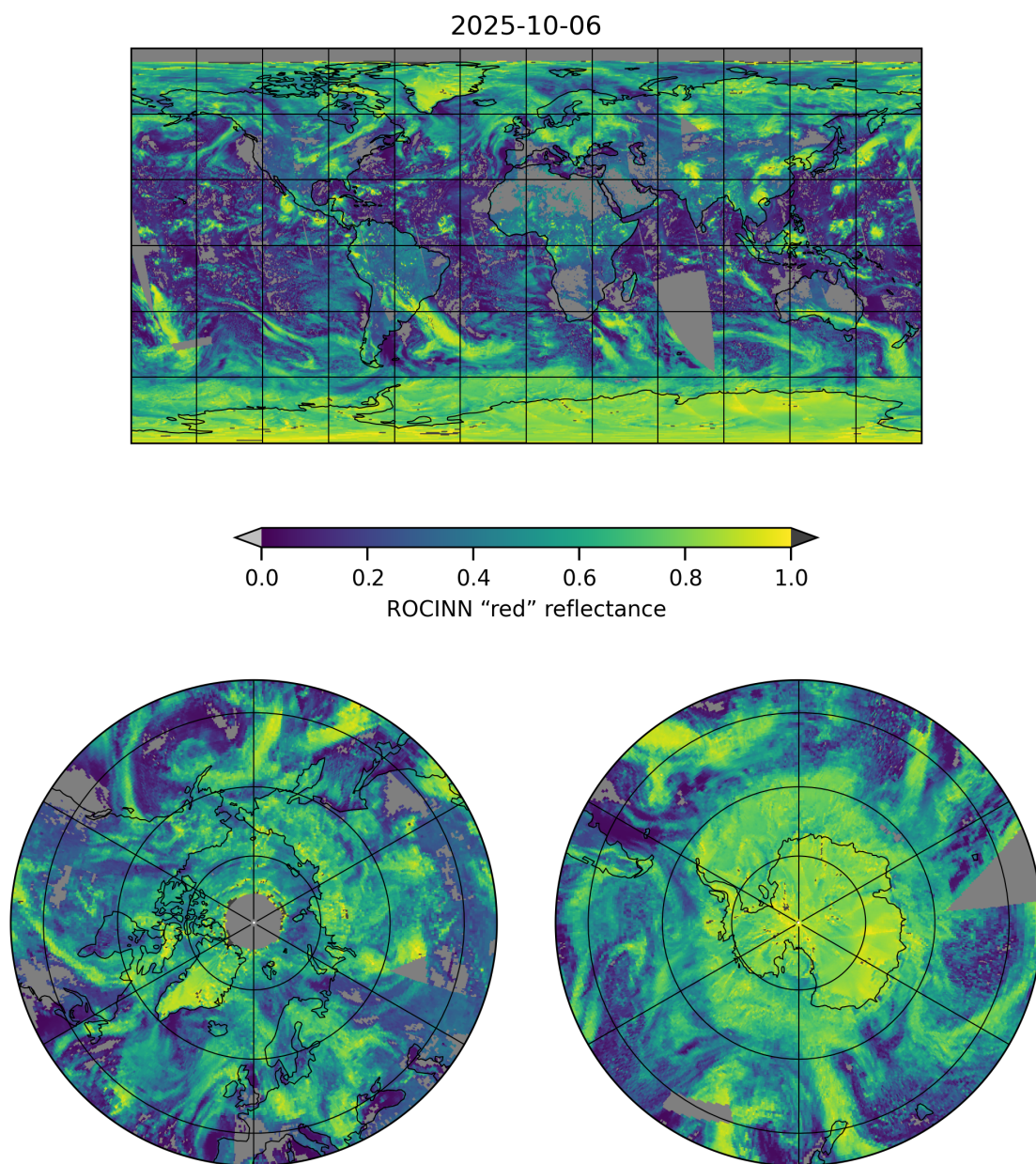


Figure 18: Map of "ROCINN "red" reflectance" for 2025-10-06 to 2025-10-07

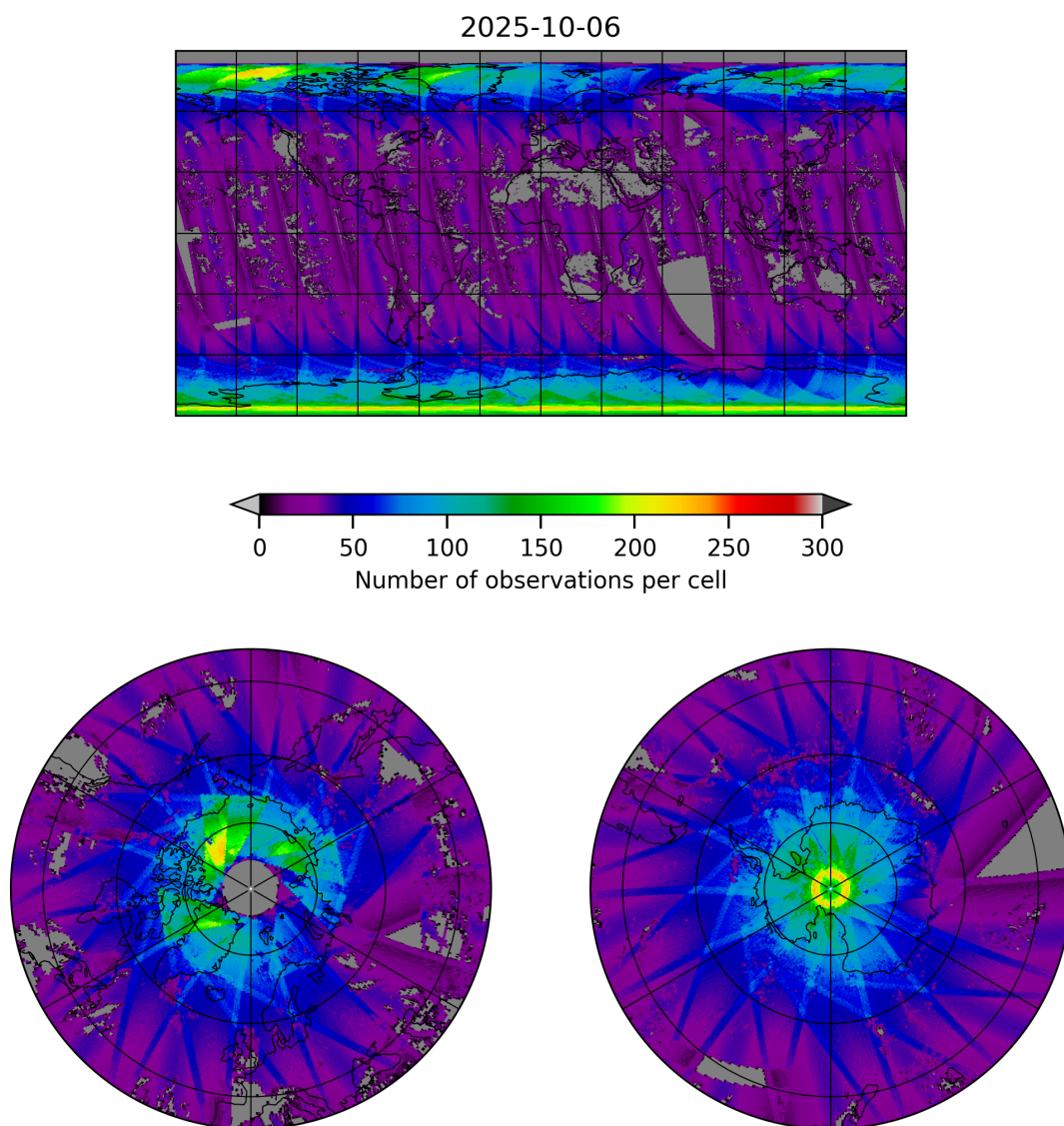


Figure 19: Map of the number of observations for 2025-10-06 to 2025-10-07

7 Zonal average

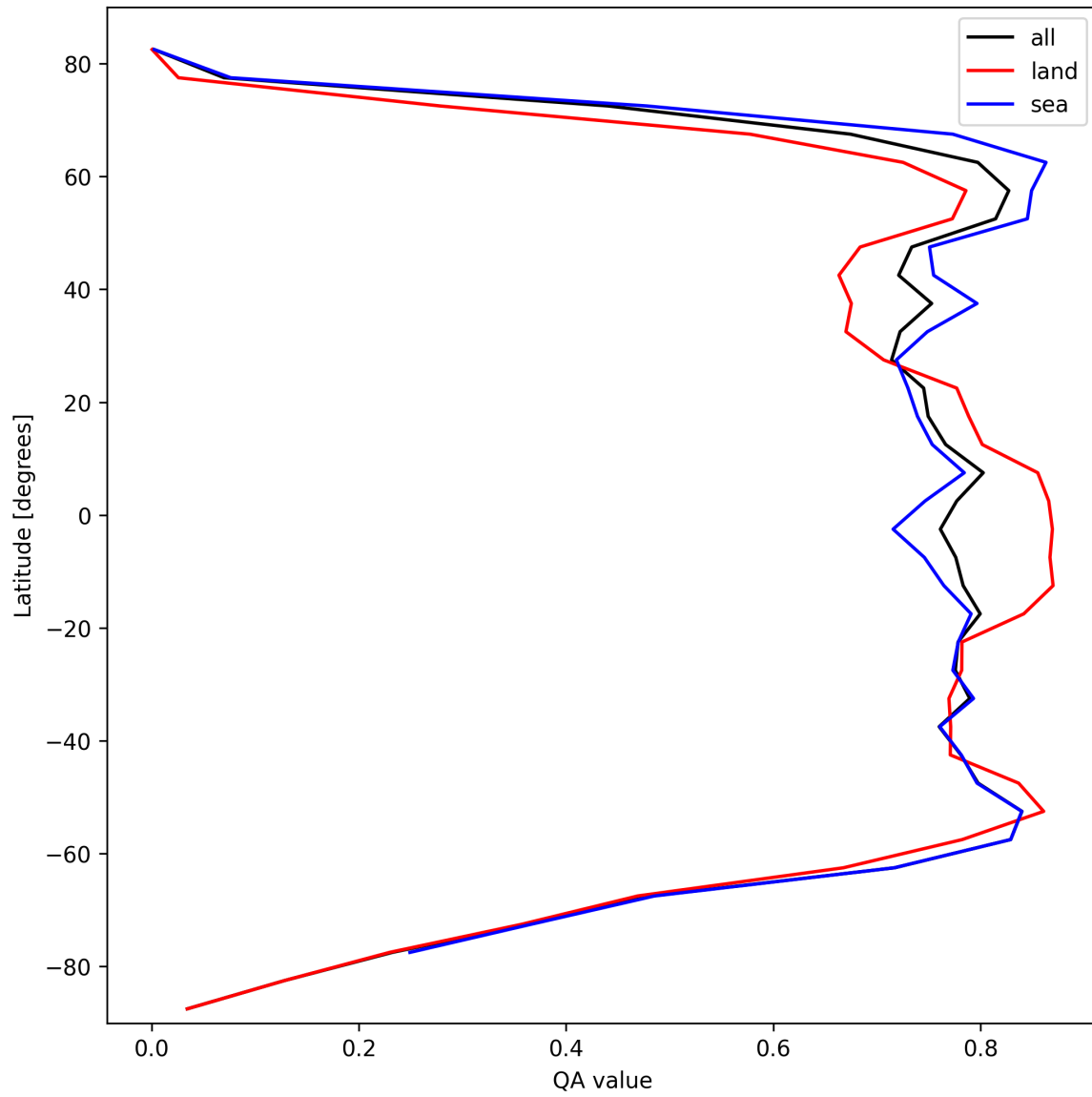


Figure 20: Zonal average of “QA value” for 2025-10-06 to 2025-10-07.

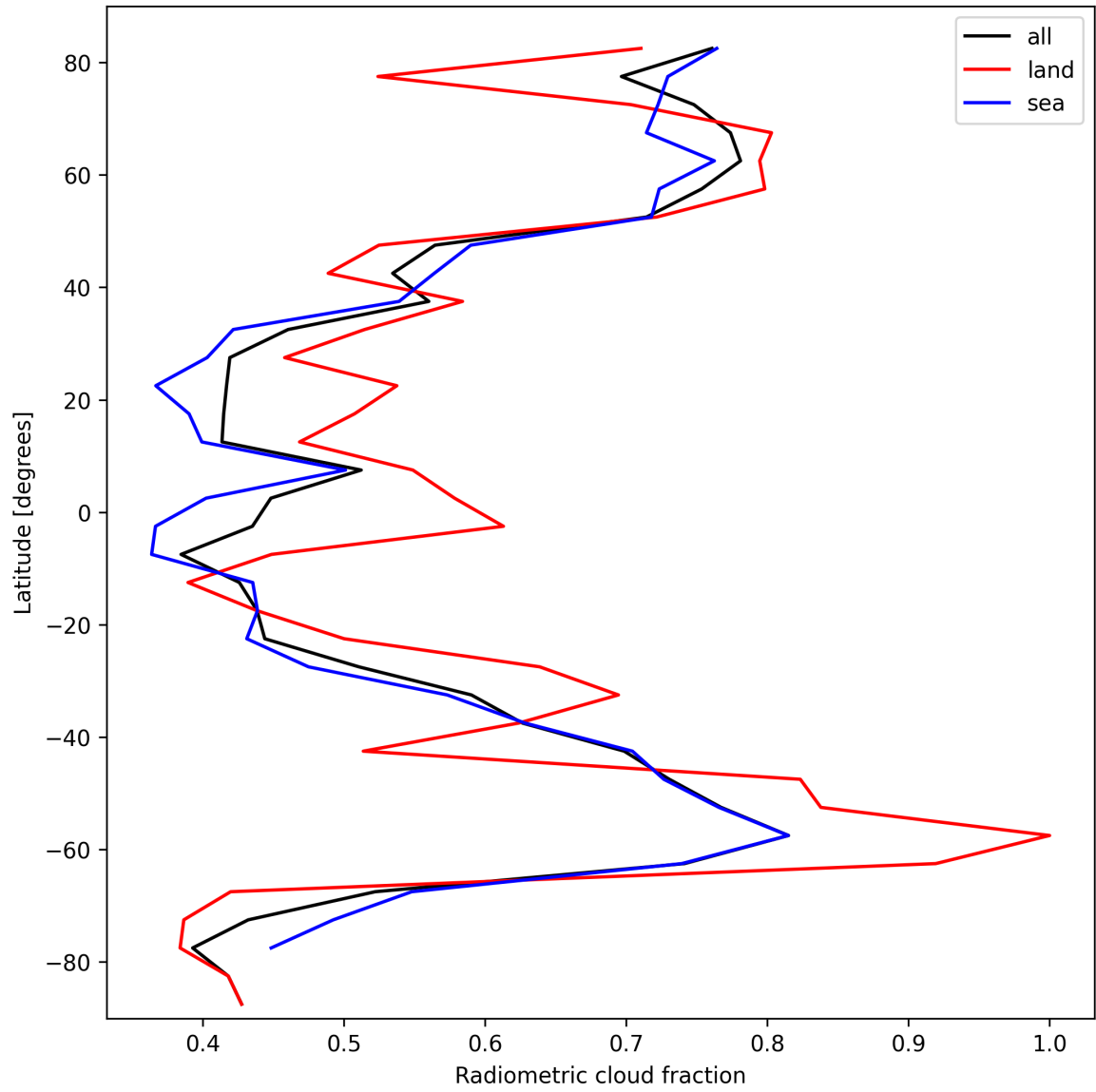


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-10-06 to 2025-10-07.

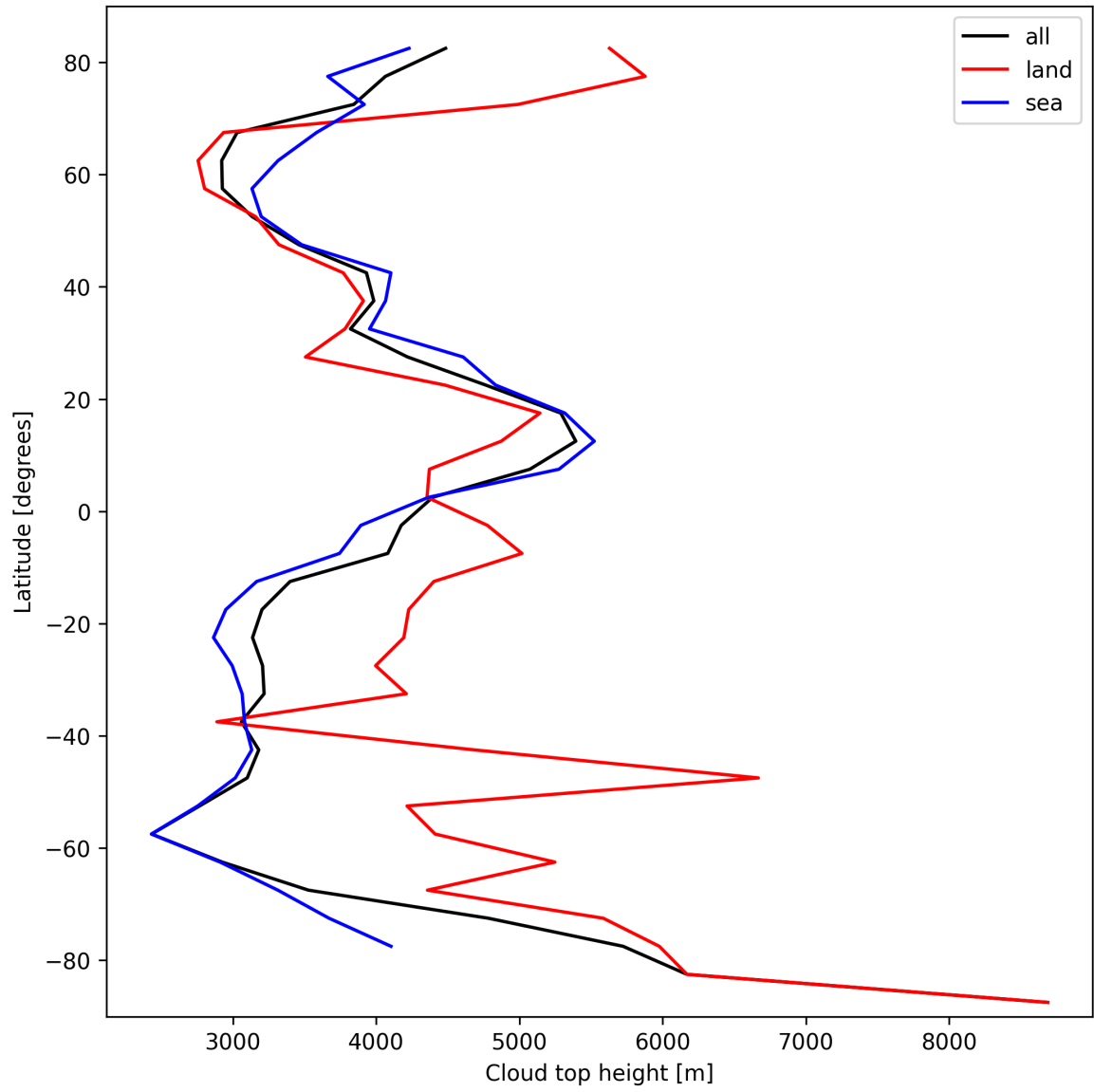


Figure 22: Zonal average of “Cloud top height” for 2025-10-06 to 2025-10-07.

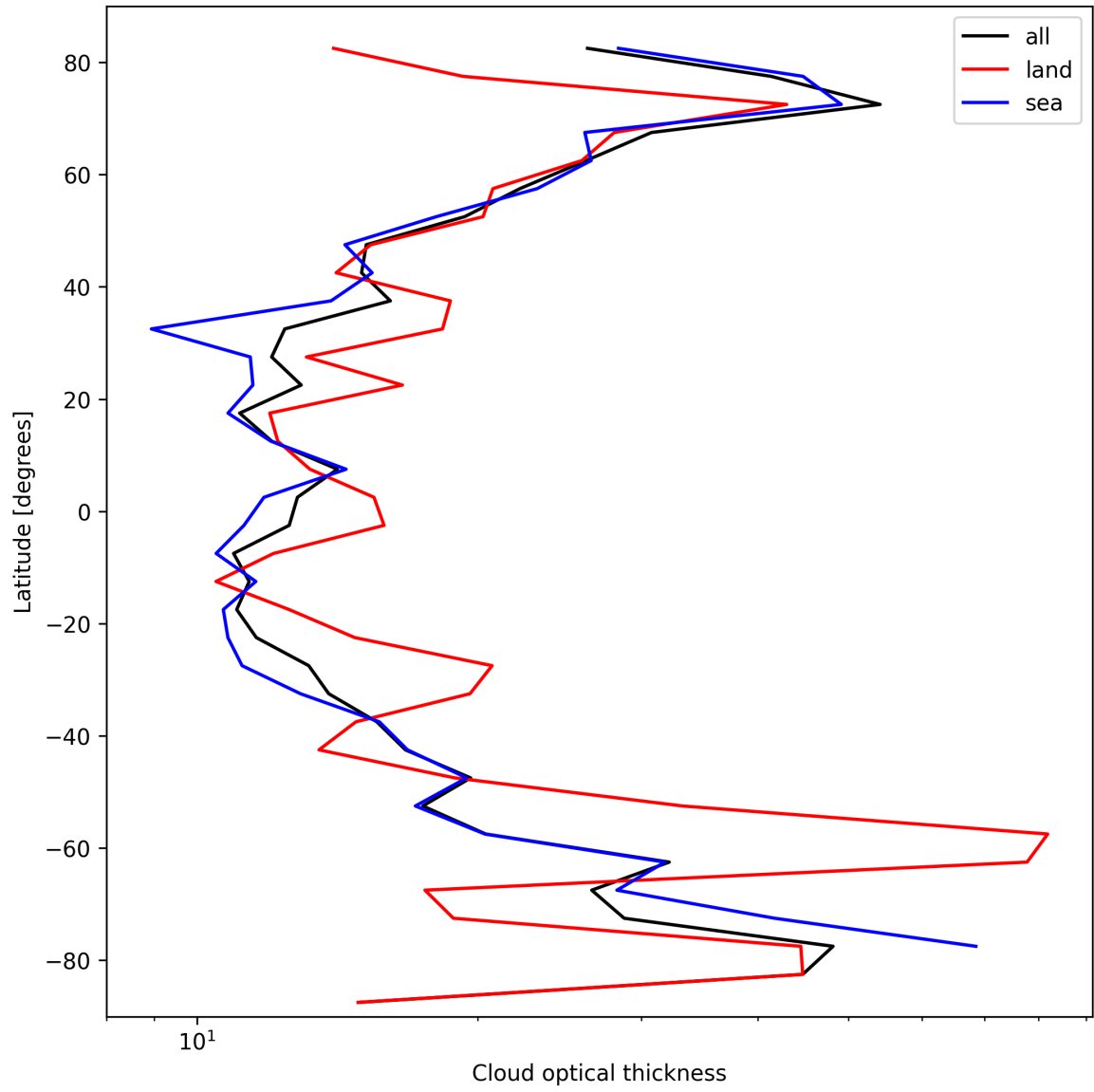


Figure 23: Zonal average of “Cloud optical thickness” for 2025-10-06 to 2025-10-07.

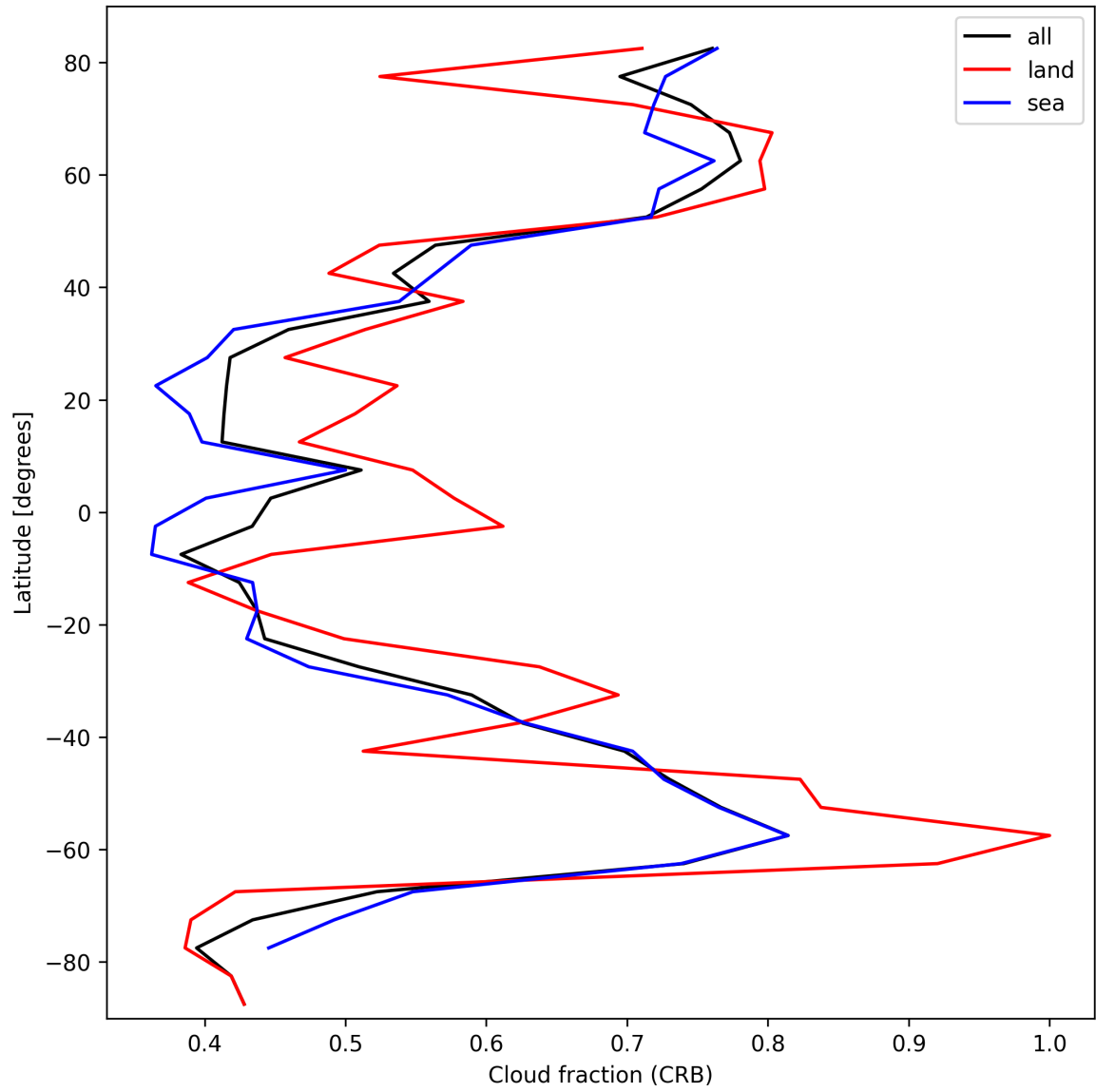


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-10-06 to 2025-10-07.

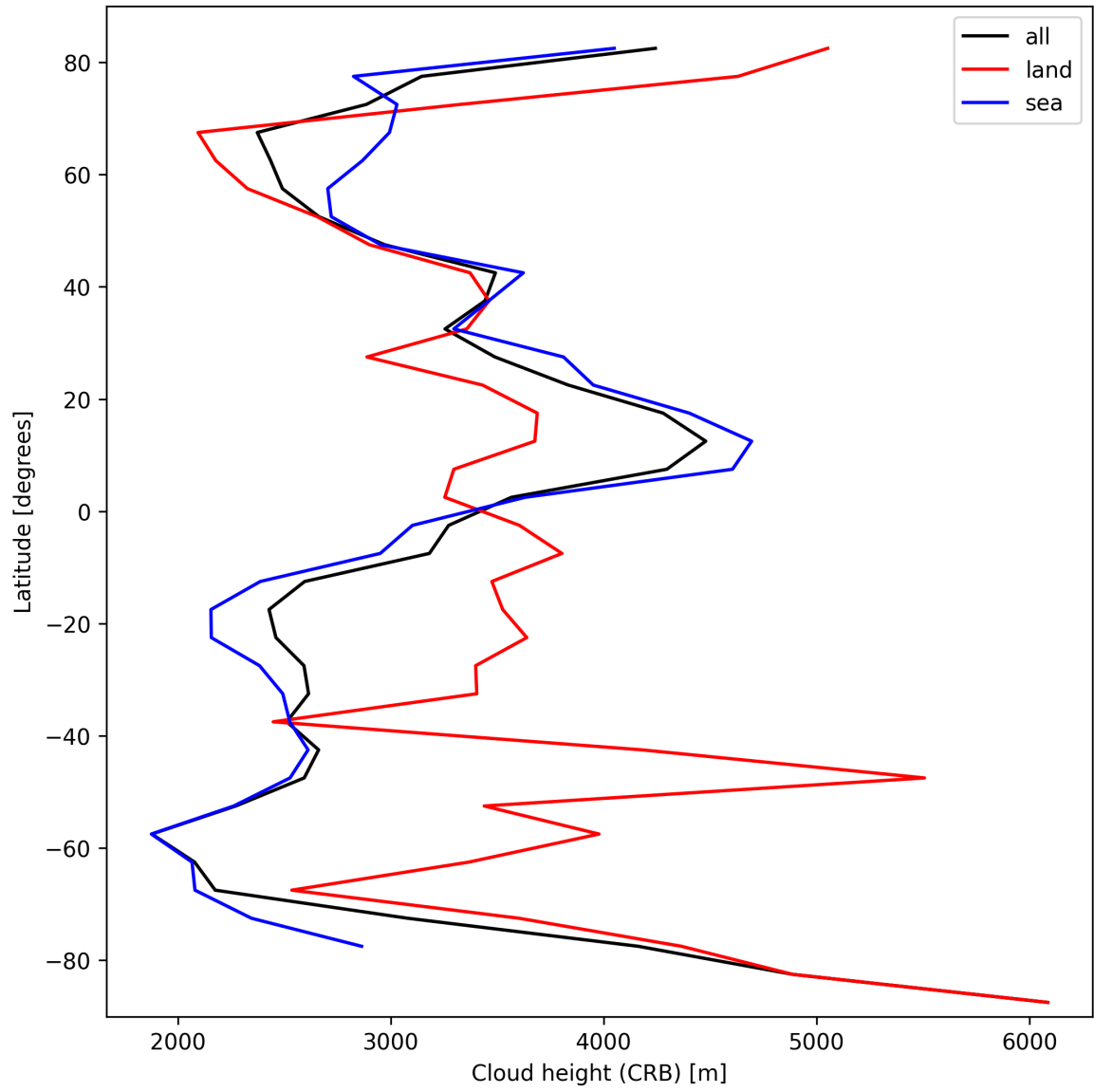


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-10-06 to 2025-10-07.

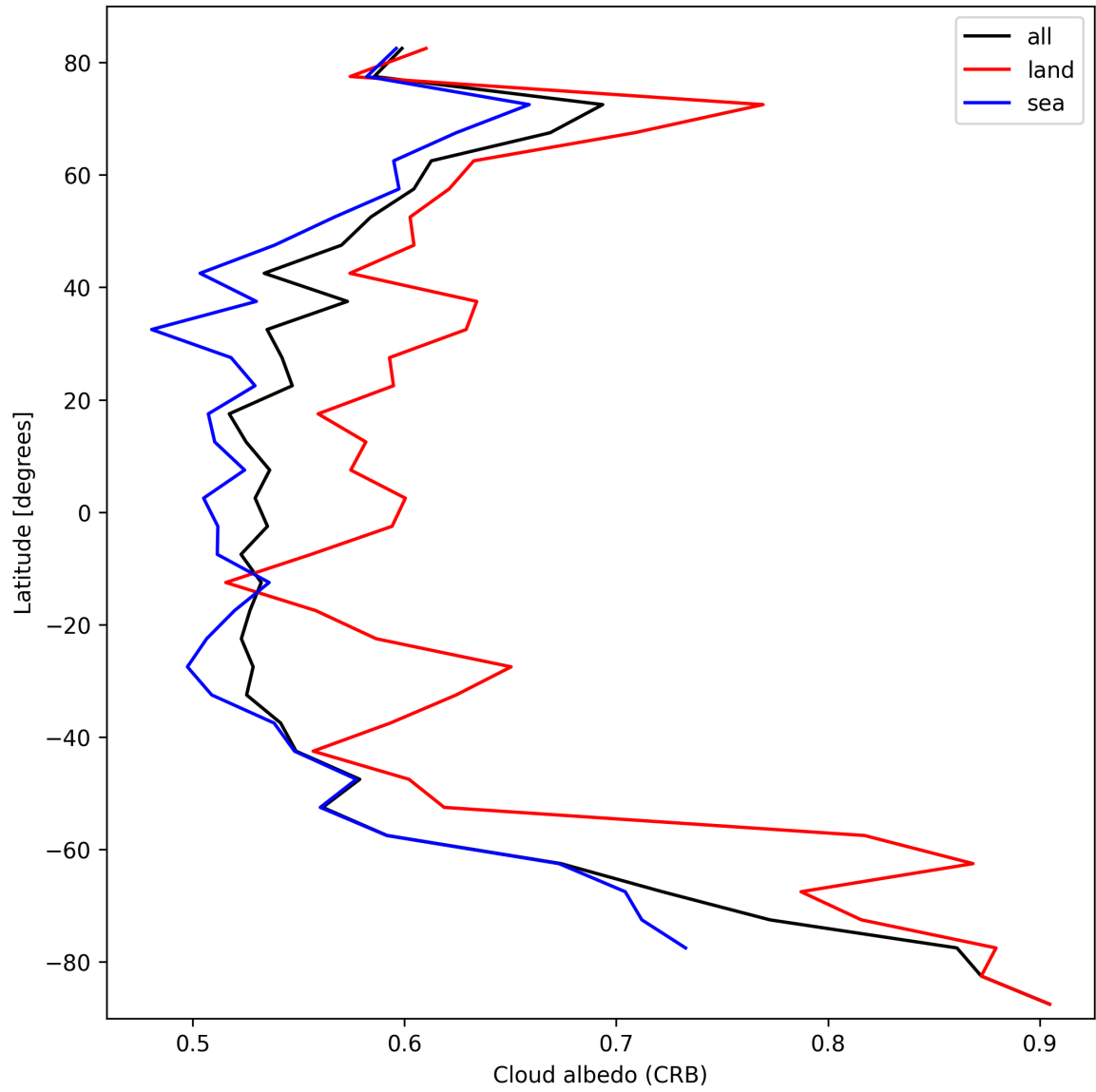


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-10-06 to 2025-10-07.

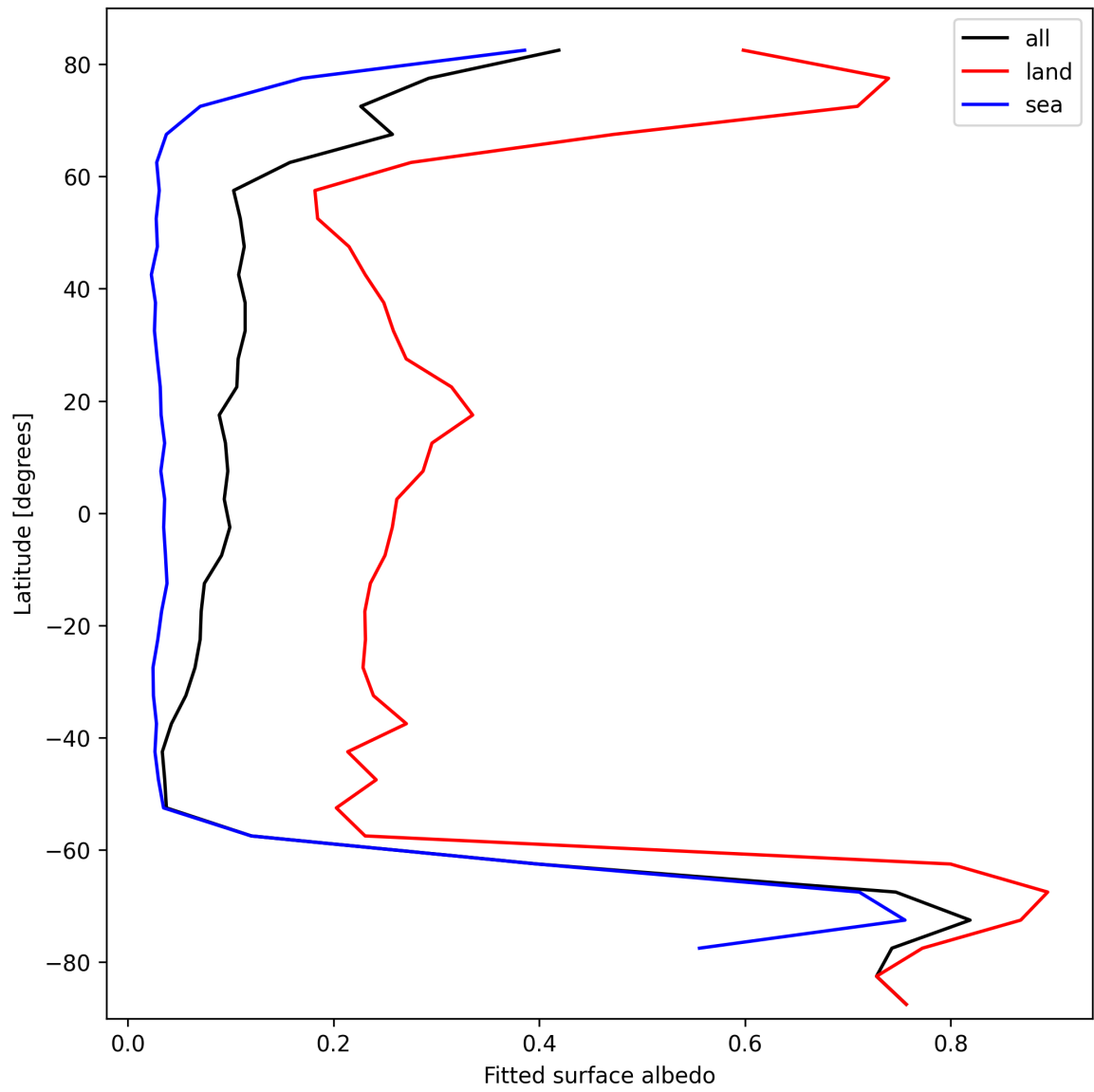


Figure 27: Zonal average of “Fitted surface albedo” for 2025-10-06 to 2025-10-07.

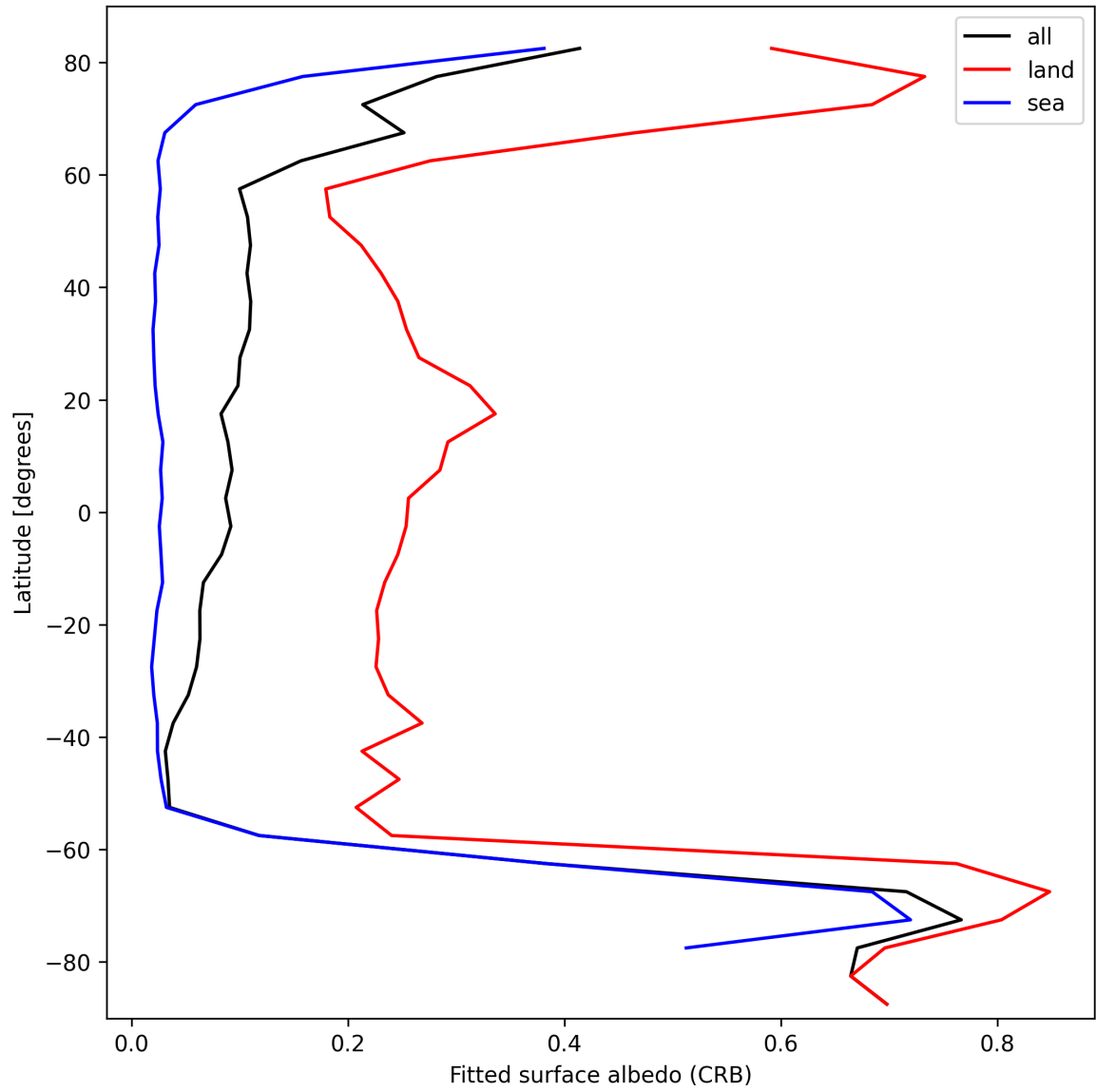


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-10-06 to 2025-10-07.

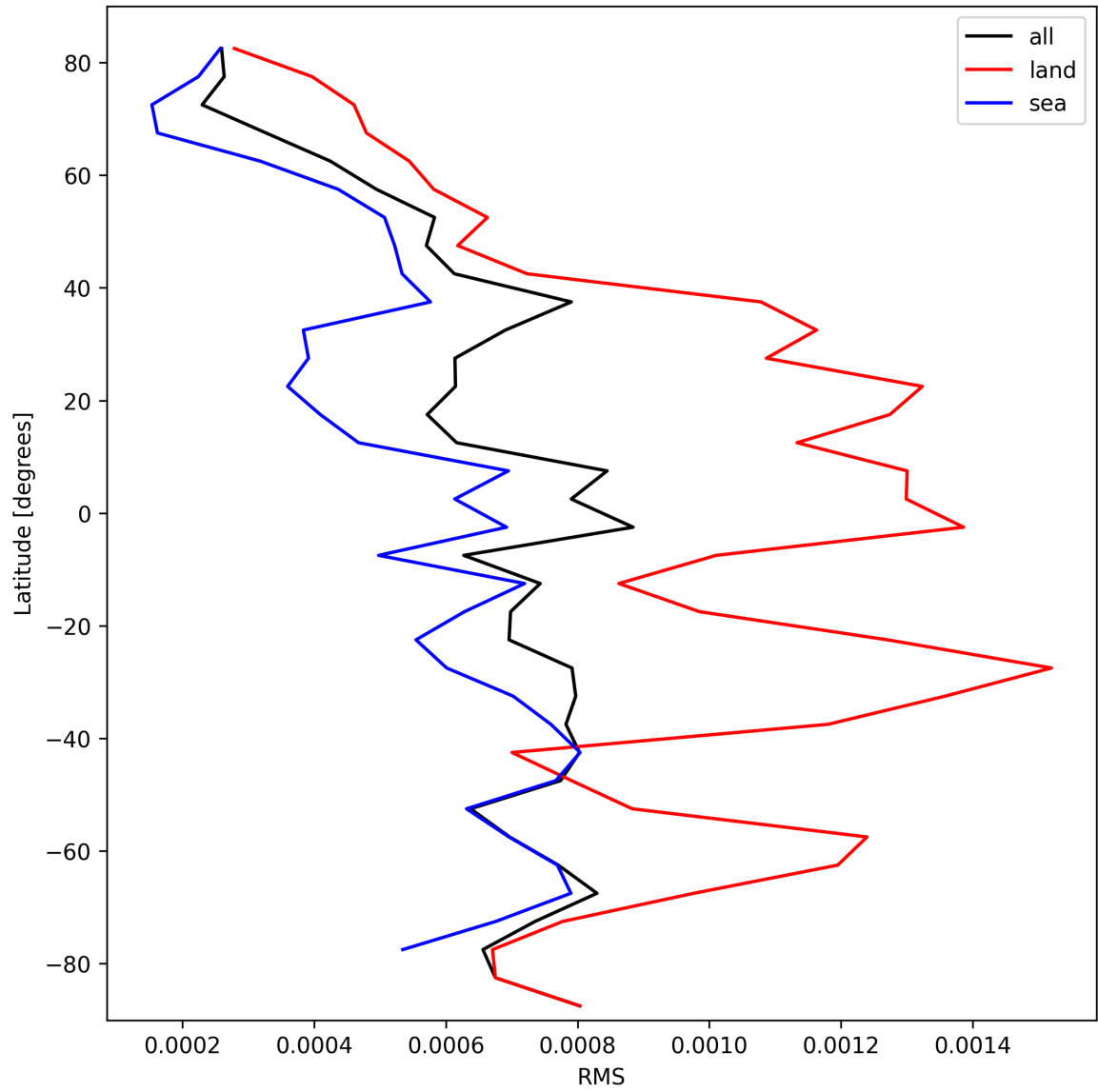


Figure 29: Zonal average of “RMS” for 2025-10-06 to 2025-10-07.

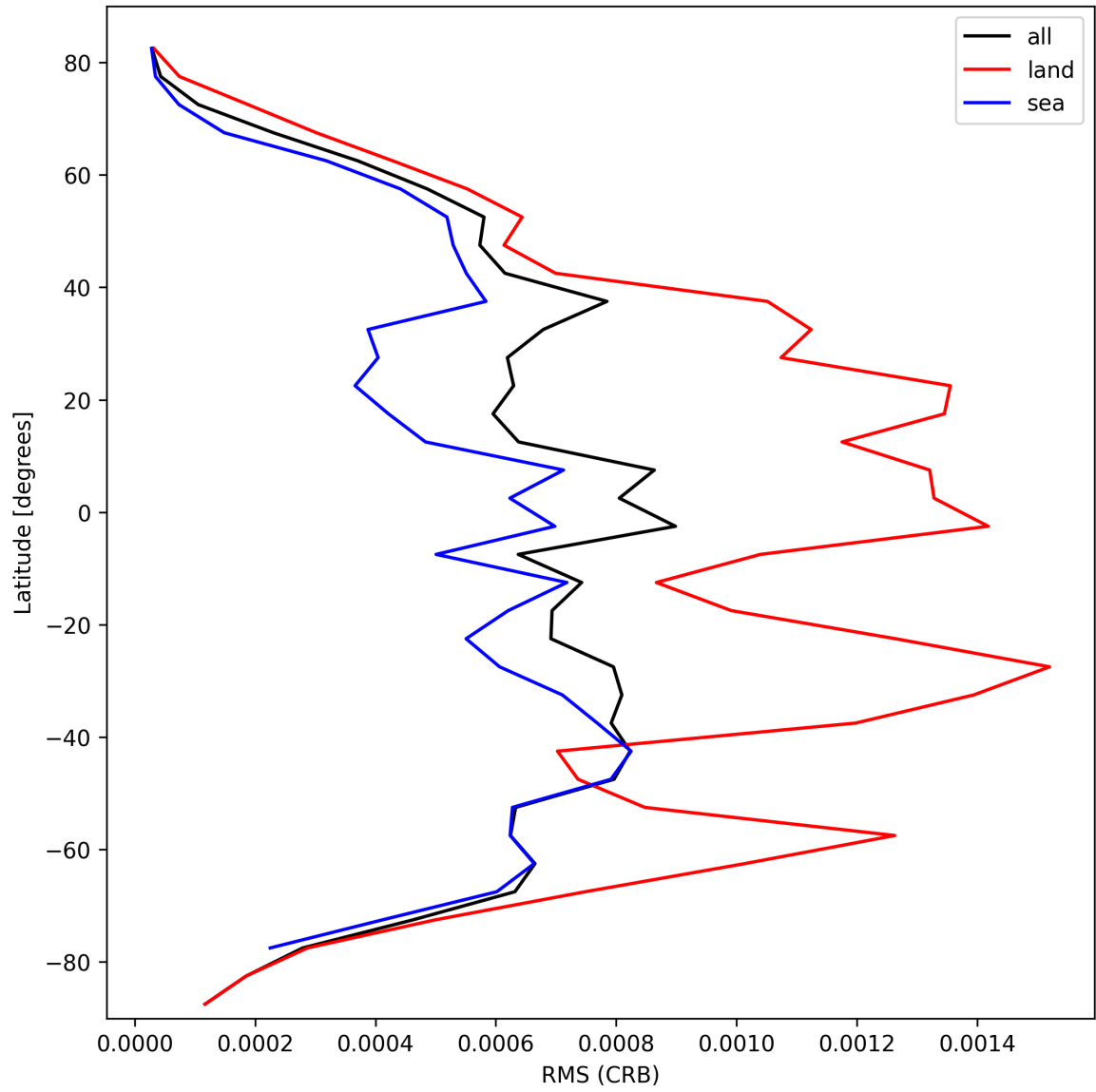


Figure 30: Zonal average of “RMS (CRB)” for 2025-10-06 to 2025-10-07.

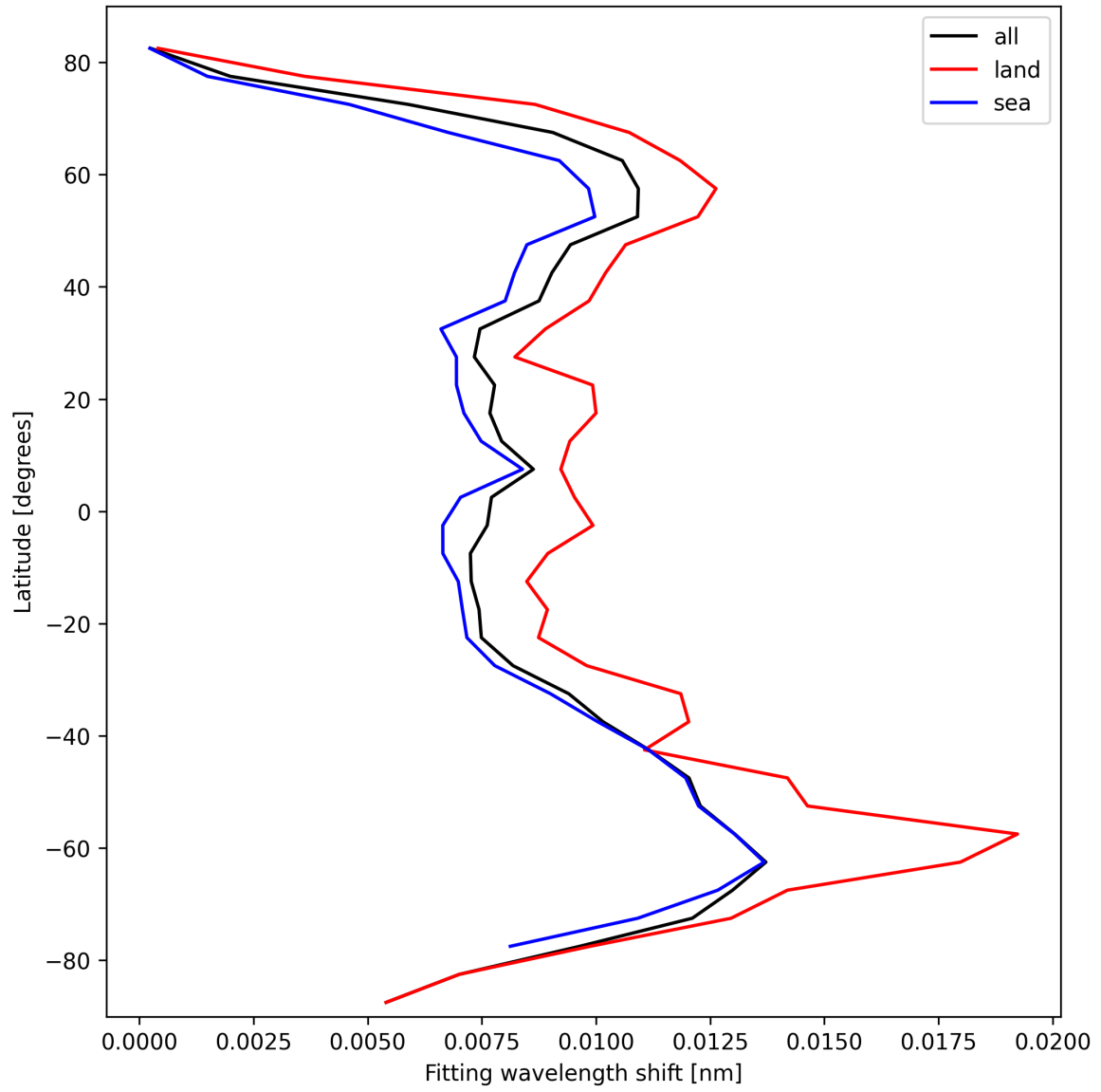


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-10-06 to 2025-10-07.

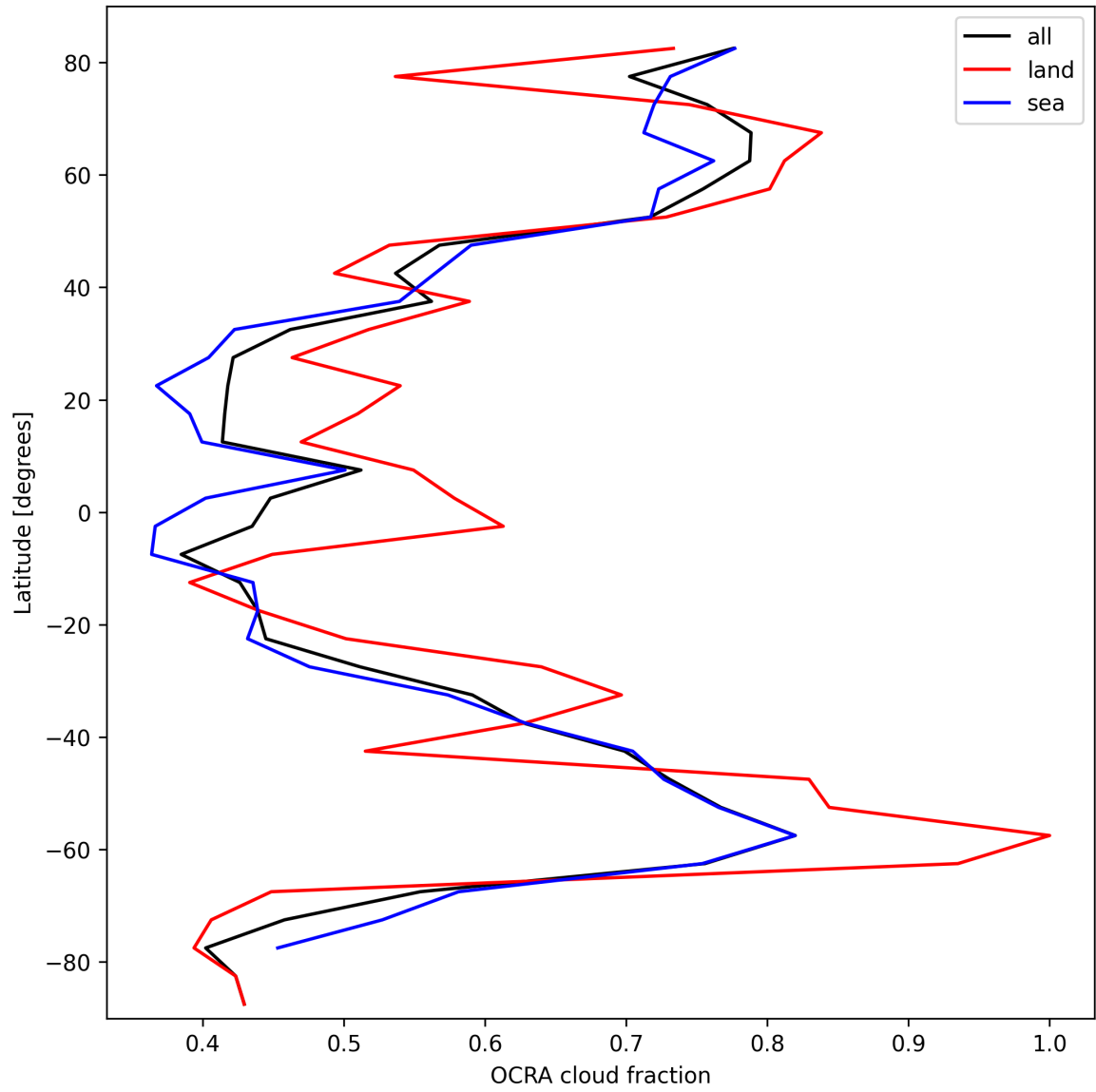


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-10-06 to 2025-10-07.

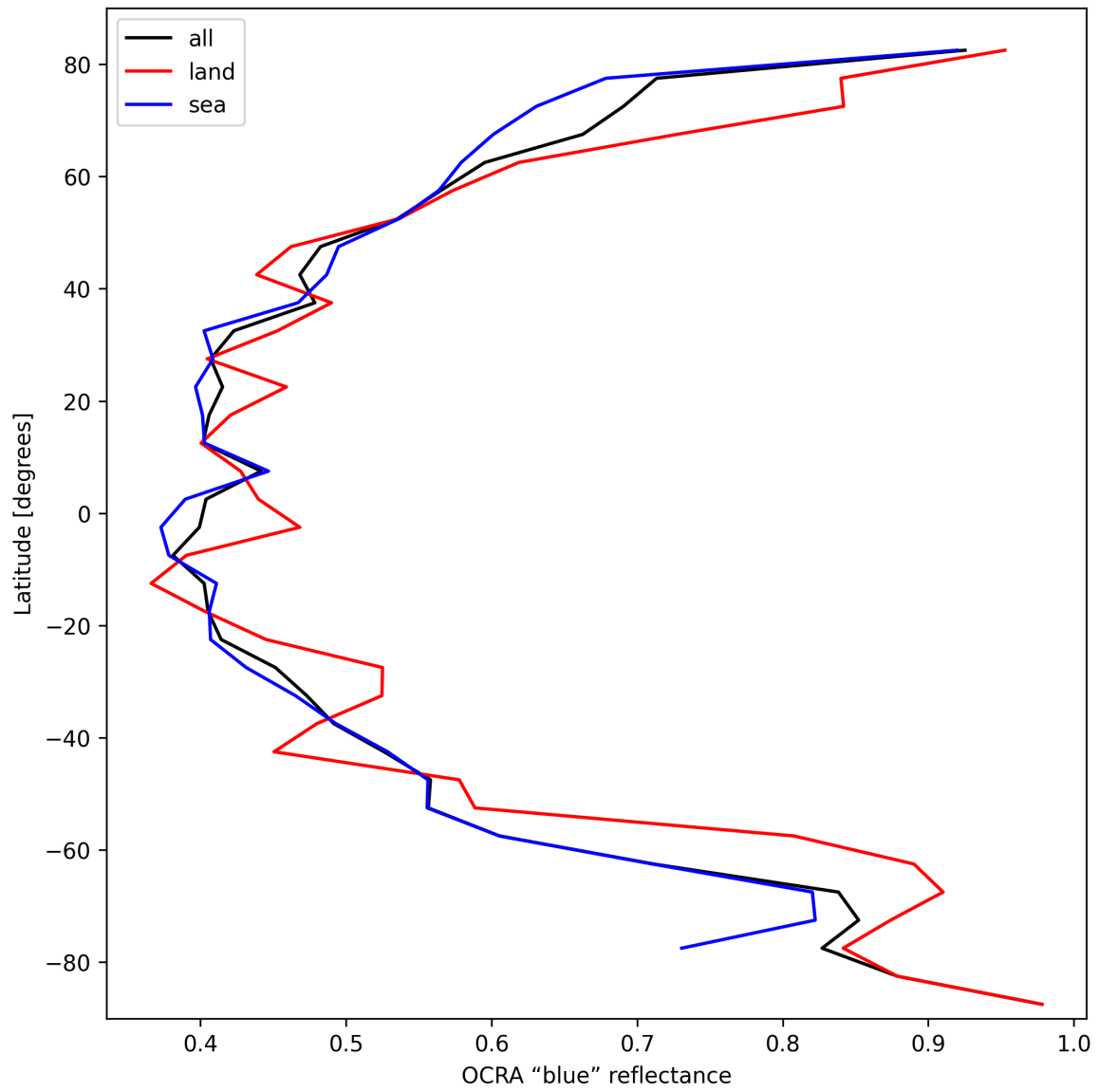


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-10-06 to 2025-10-07.

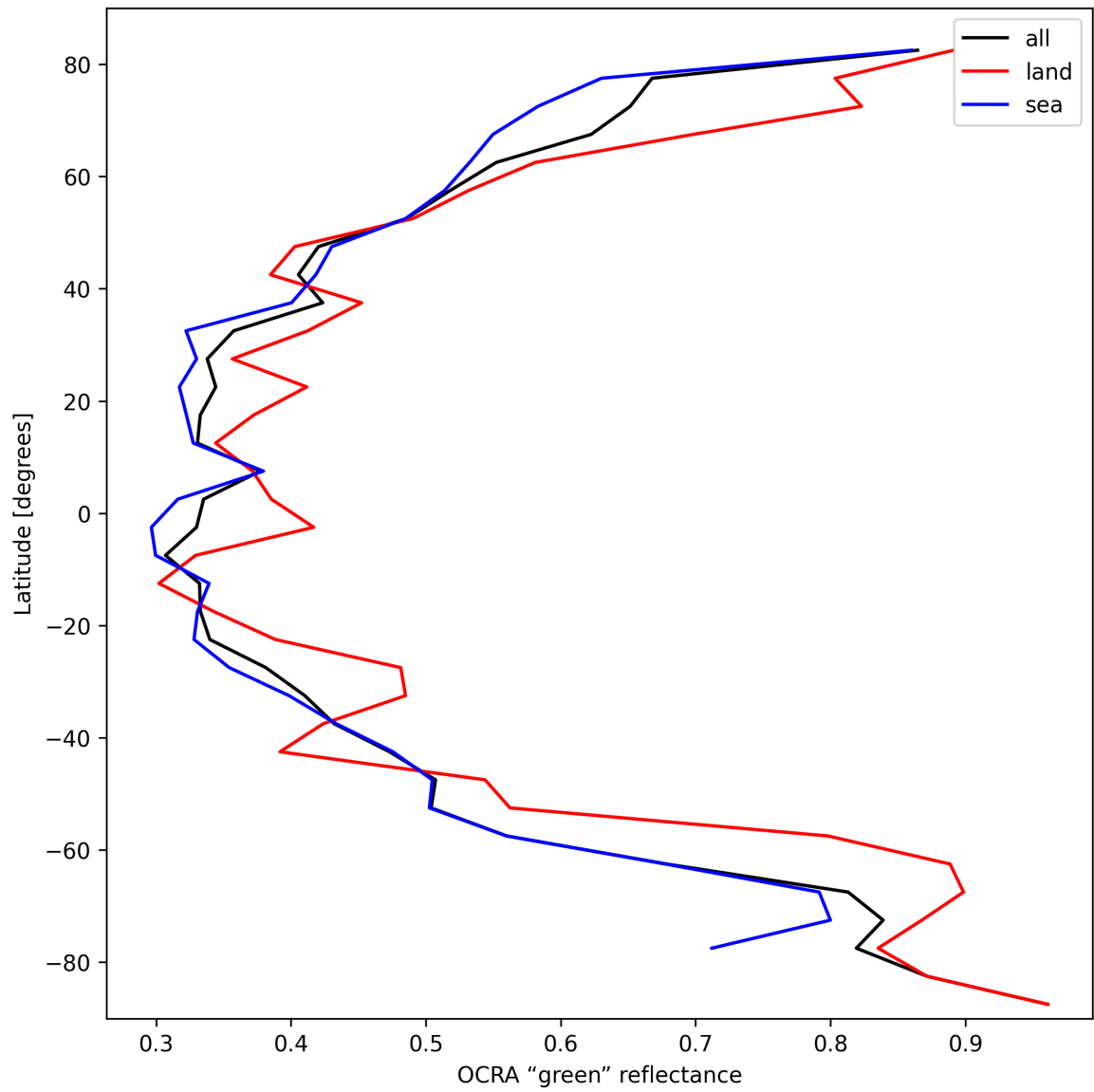


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-10-06 to 2025-10-07.

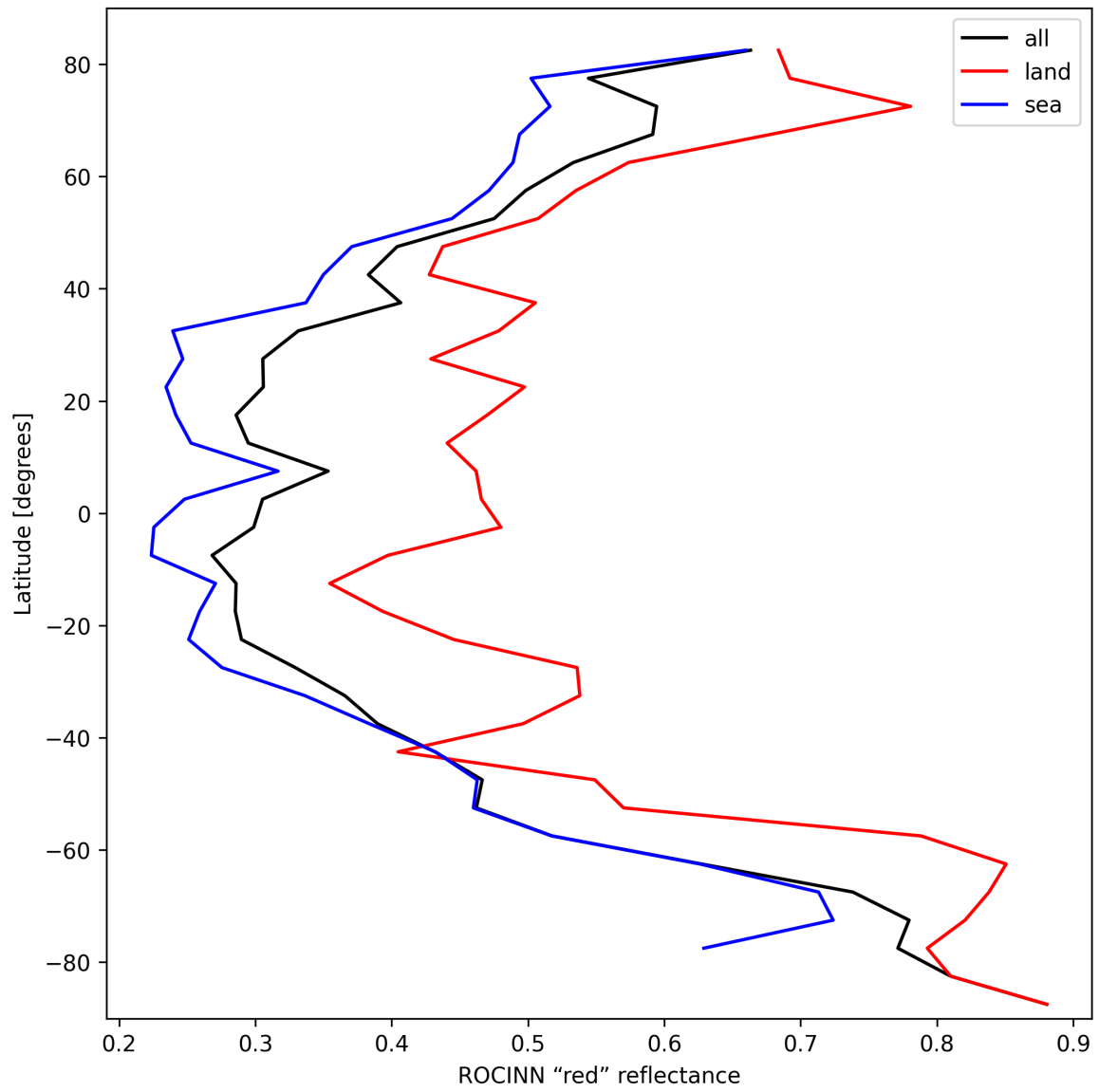


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-10-06 to 2025-10-07.

8 Histograms

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

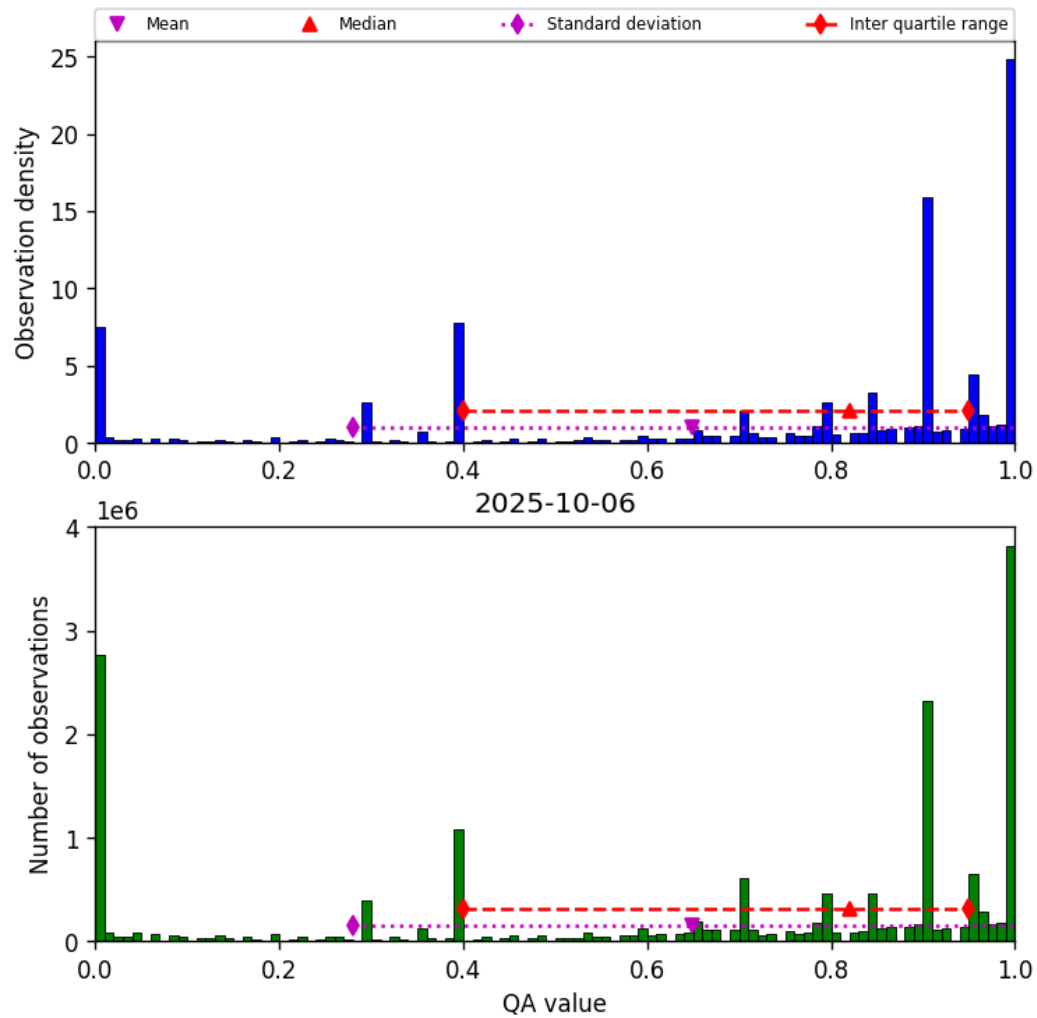


Figure 36: Histogram of “QA value” for 2025-10-06 to 2025-10-07

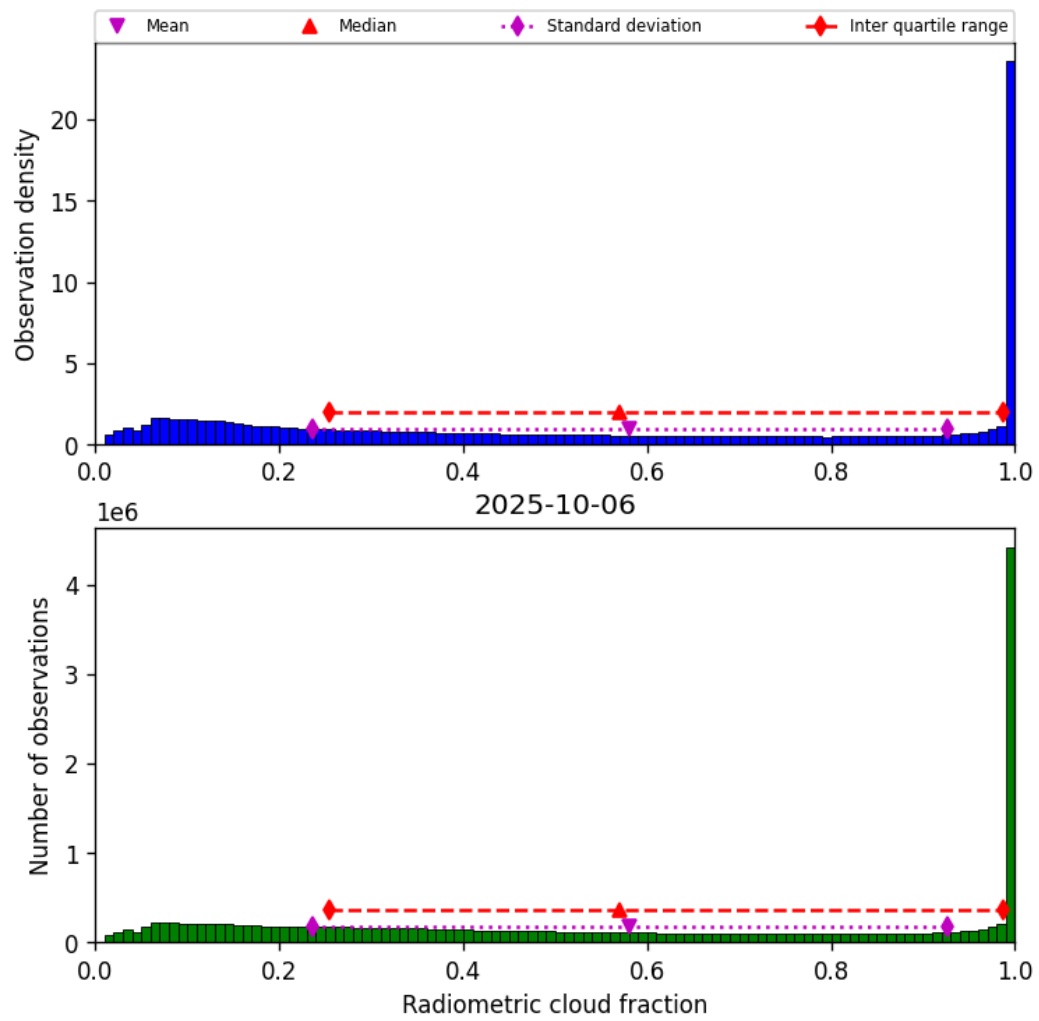


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-10-06 to 2025-10-07

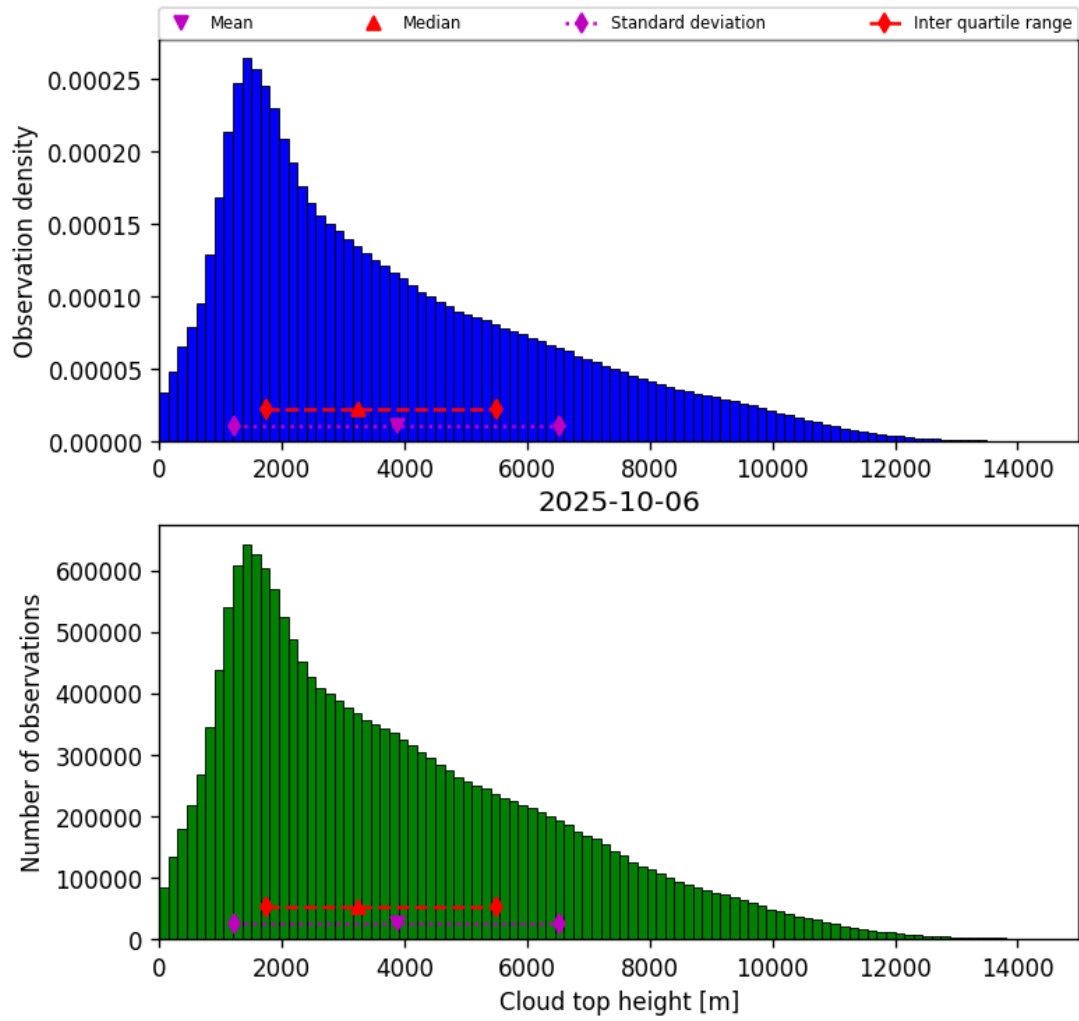


Figure 38: Histogram of “Cloud top height” for 2025-10-06 to 2025-10-07

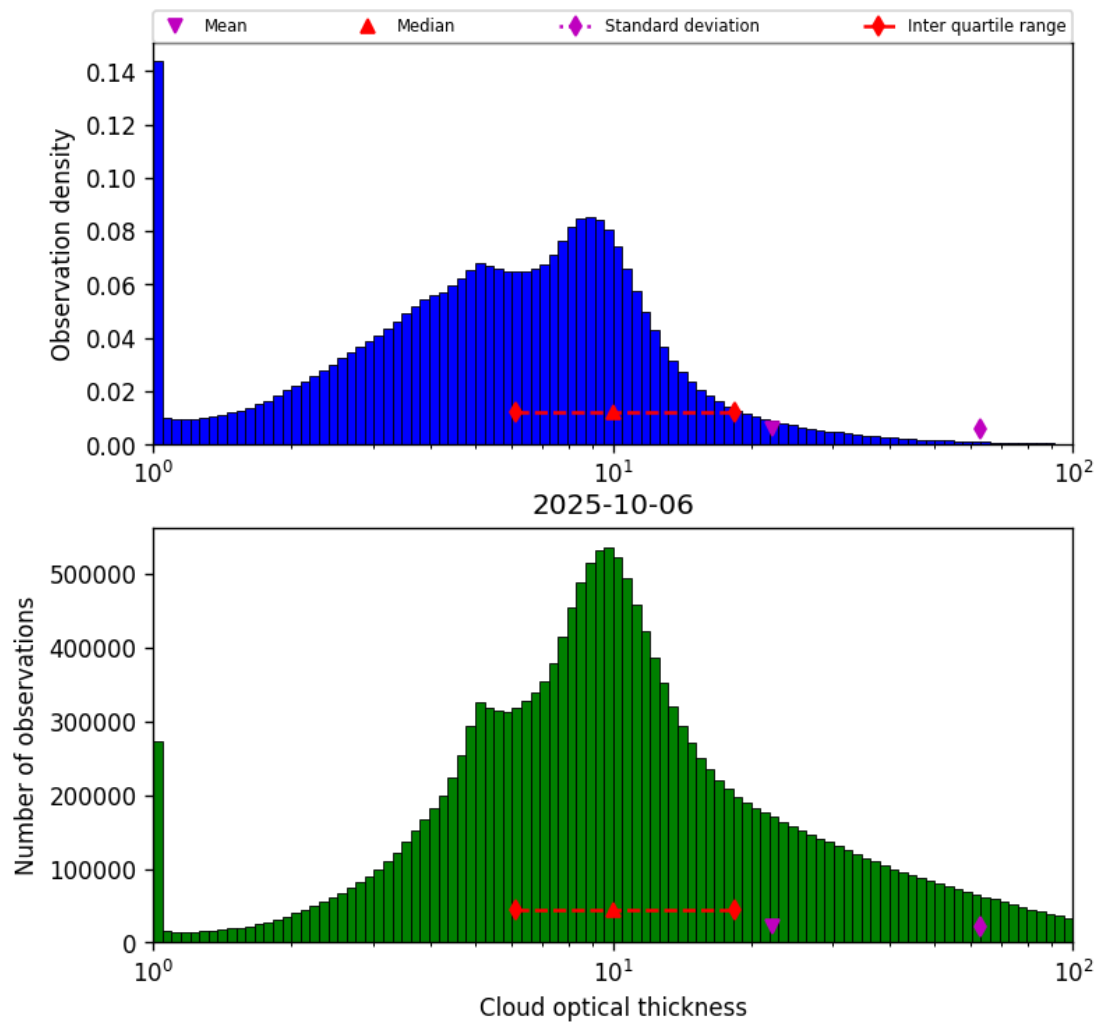


Figure 39: Histogram of “Cloud optical thickness” for 2025-10-06 to 2025-10-07

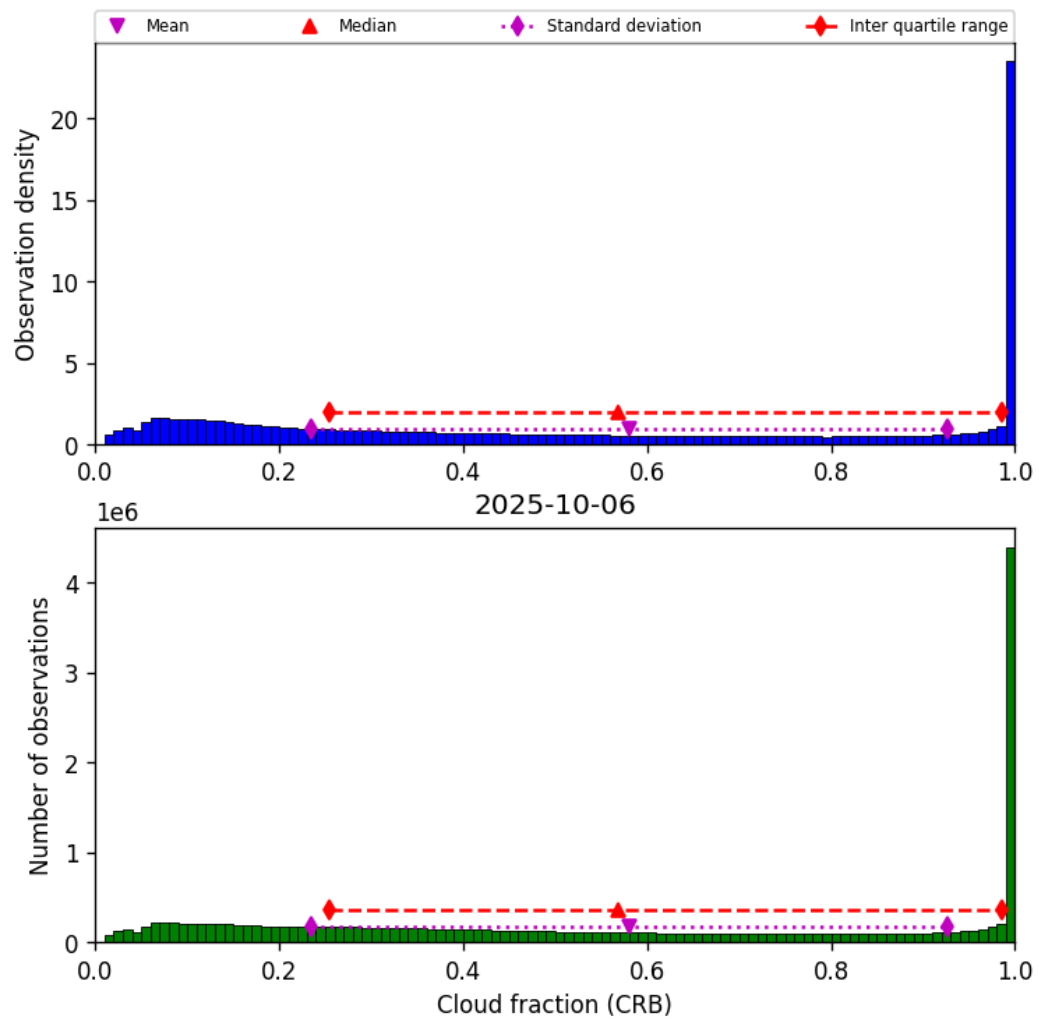


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-10-06 to 2025-10-07

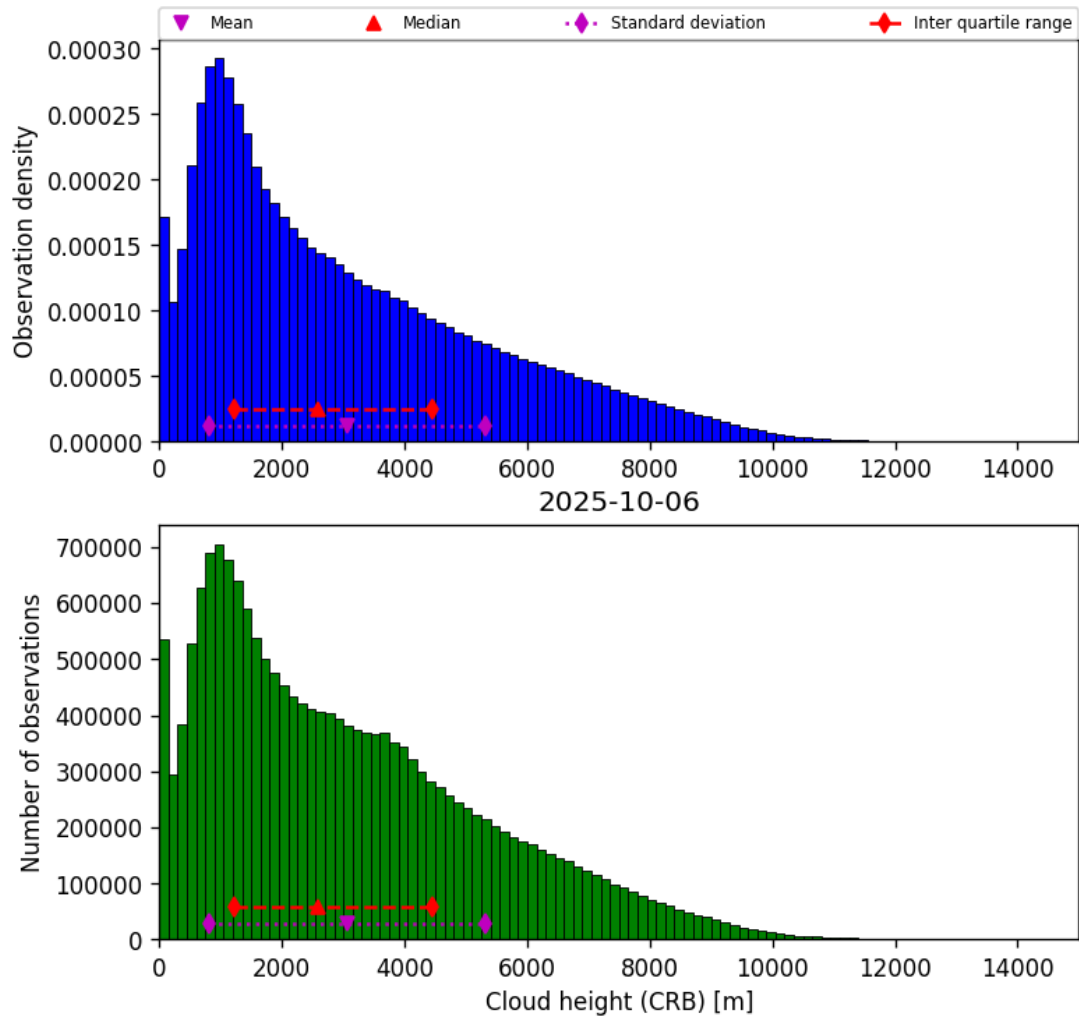


Figure 41: Histogram of “Cloud height (CRB)” for 2025-10-06 to 2025-10-07

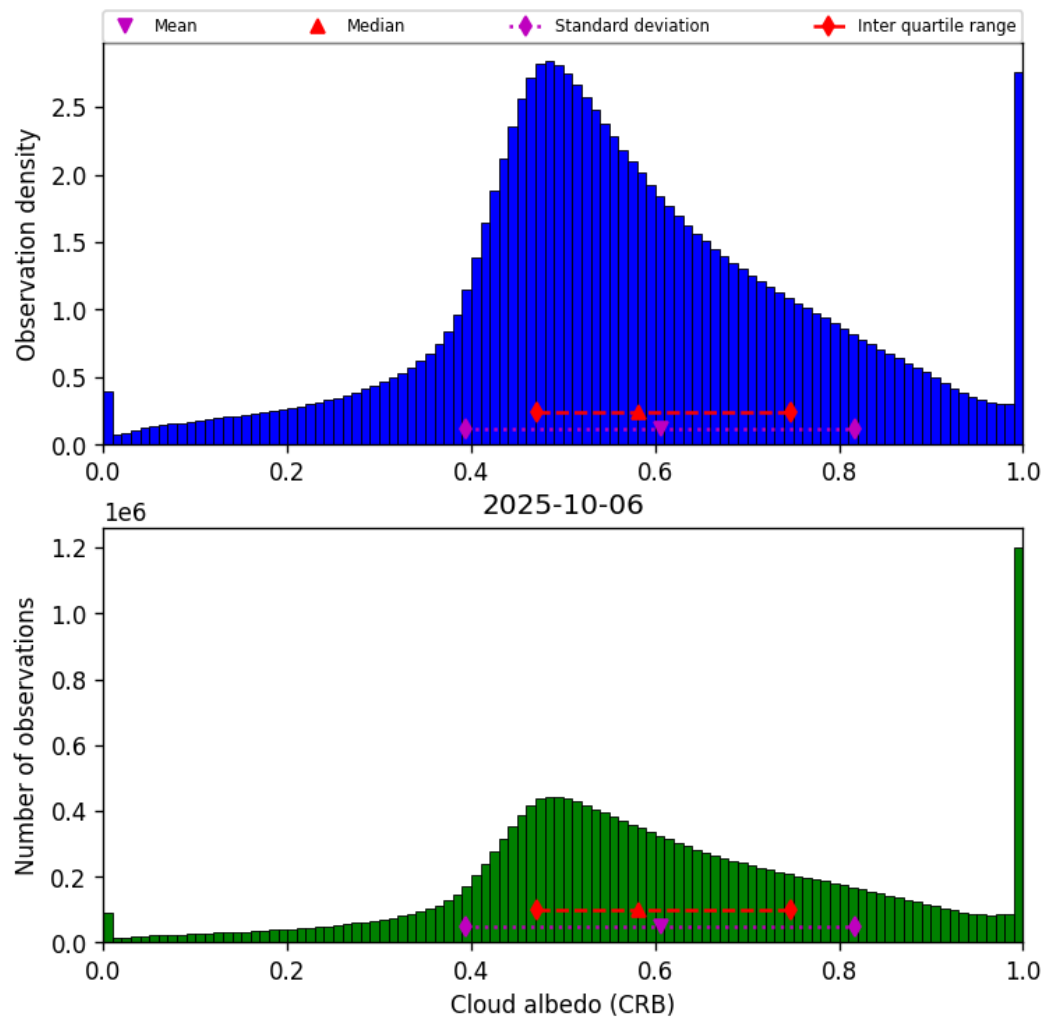


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-10-06 to 2025-10-07

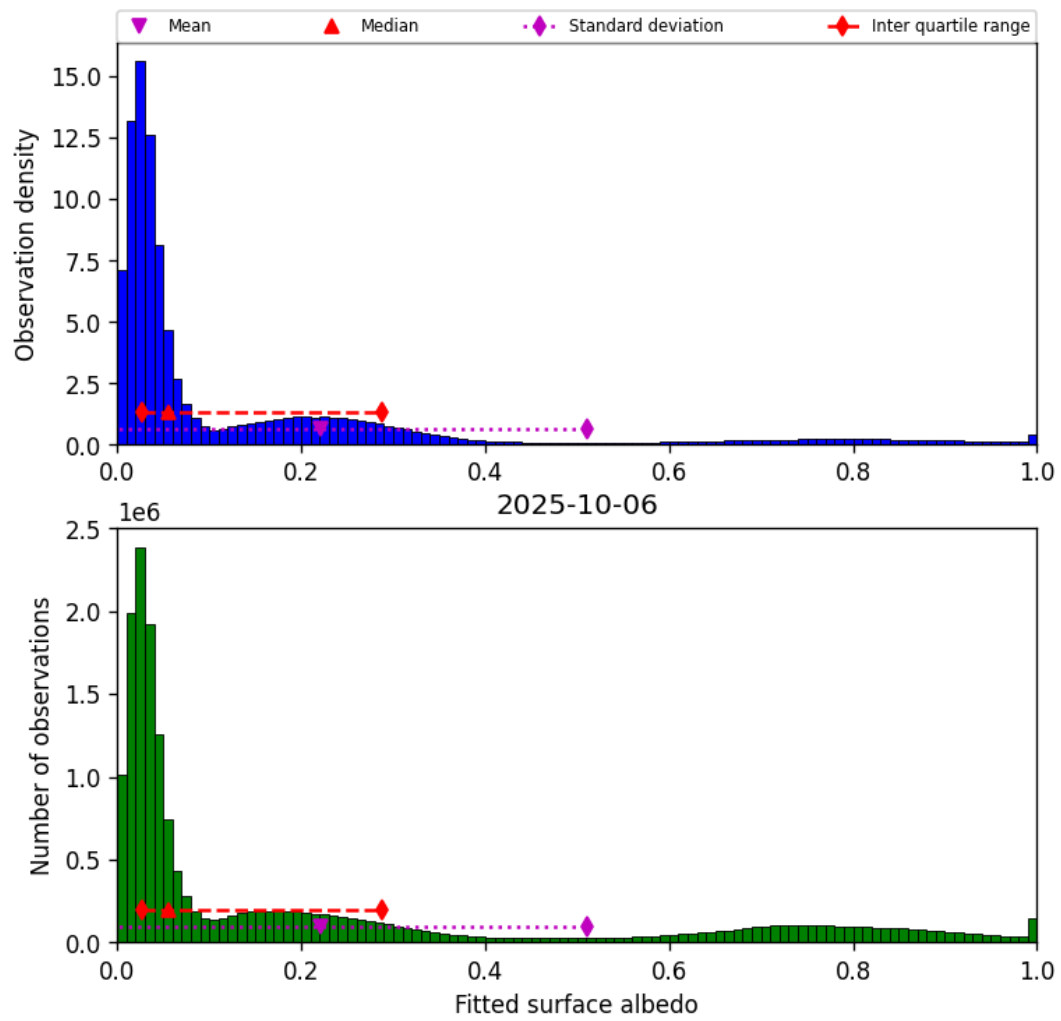


Figure 43: Histogram of “Fitted surface albedo” for 2025-10-06 to 2025-10-07

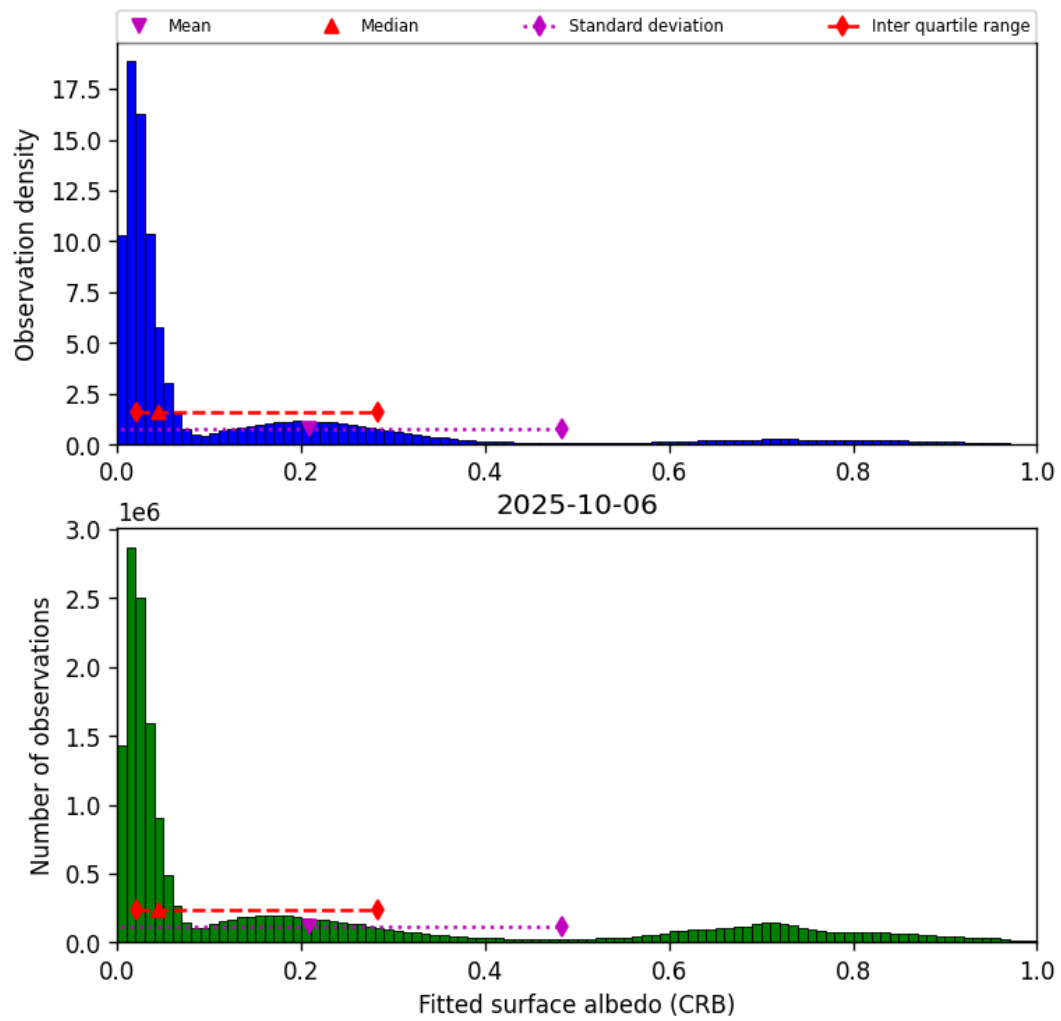


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-10-06 to 2025-10-07

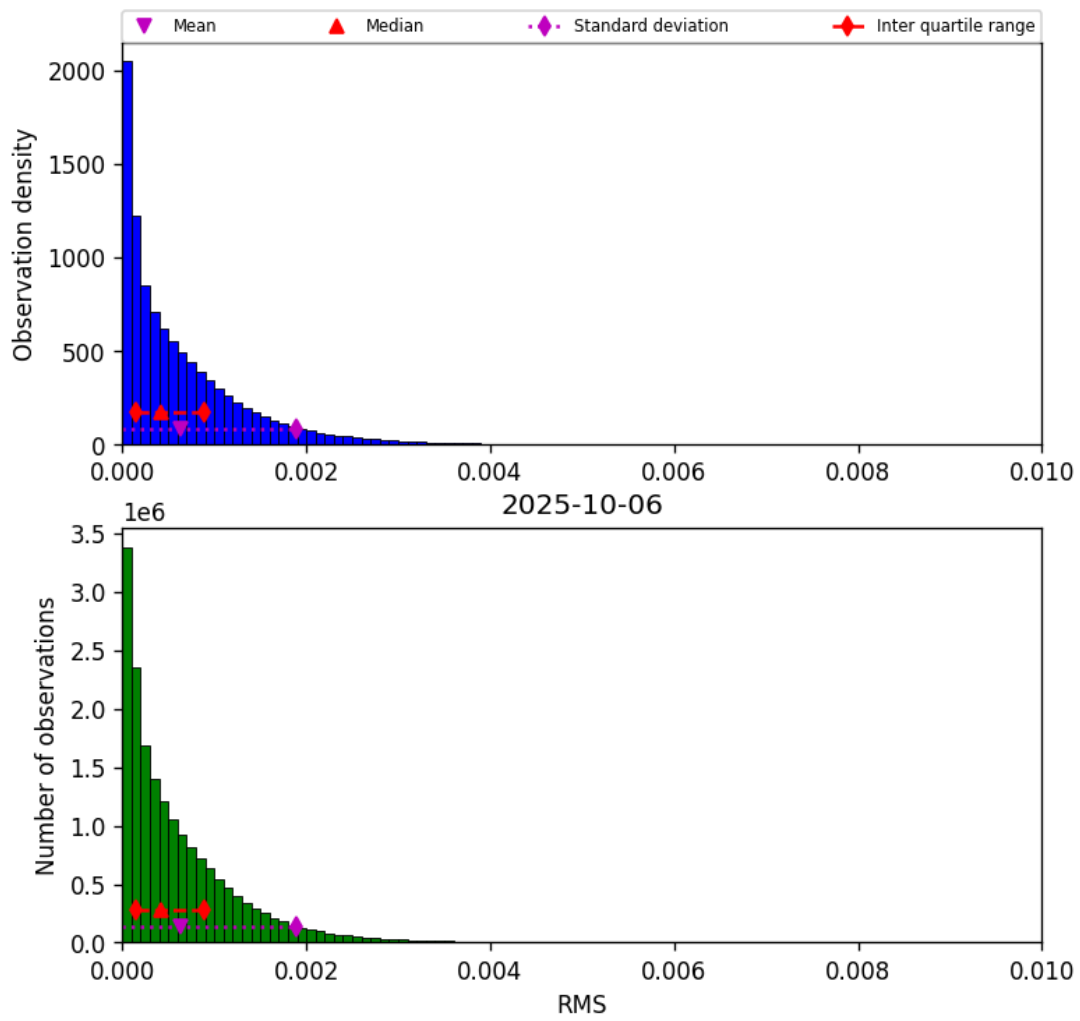


Figure 45: Histogram of “RMS” for 2025-10-06 to 2025-10-07

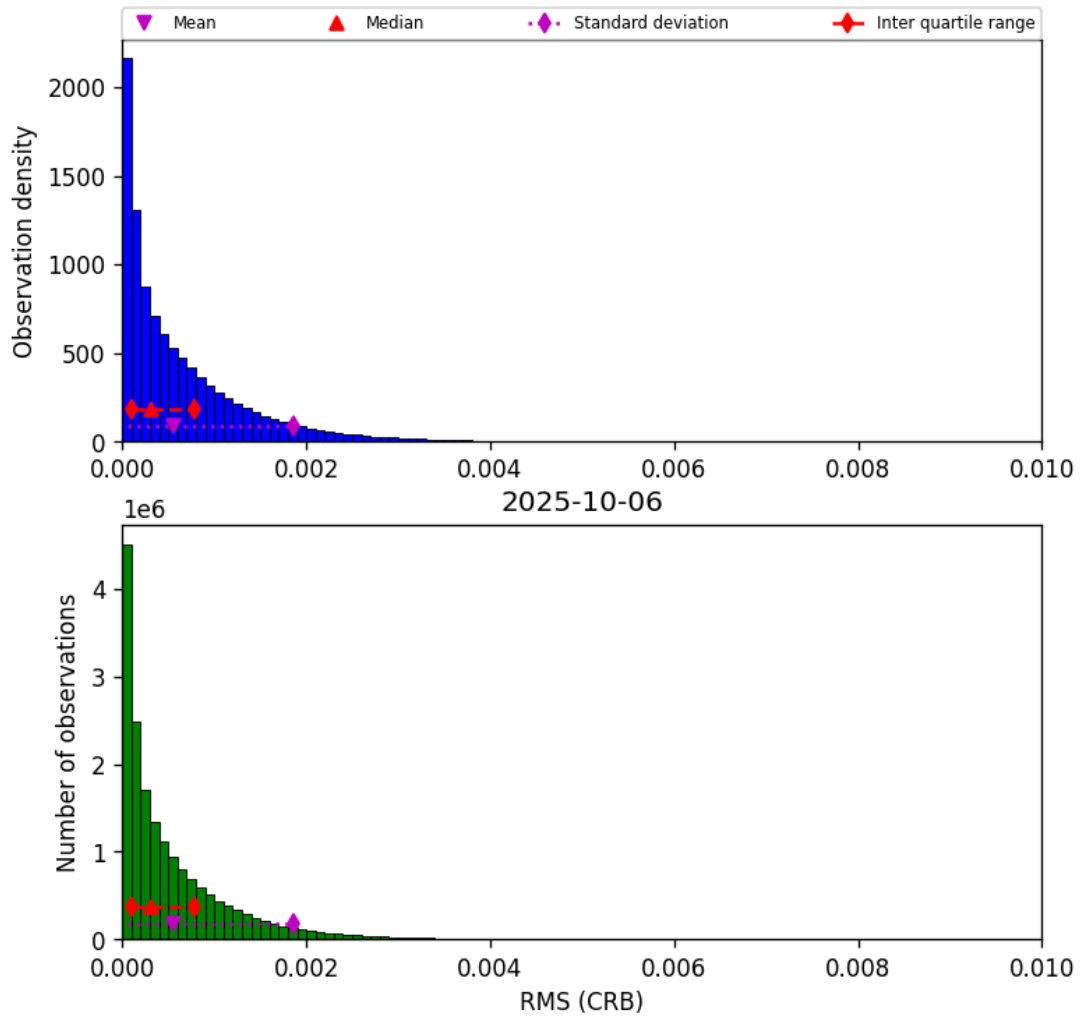


Figure 46: Histogram of “RMS (CRB)” for 2025-10-06 to 2025-10-07

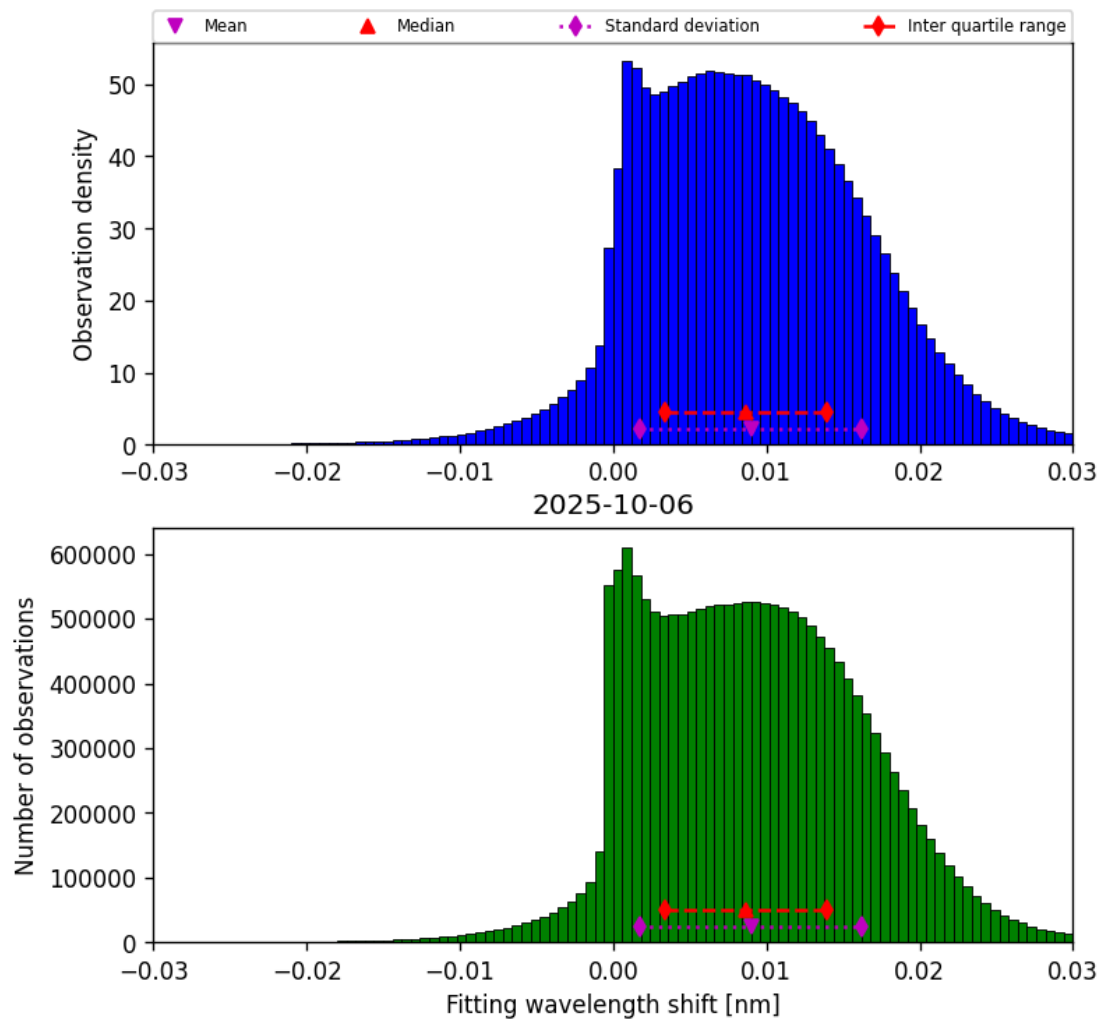


Figure 47: Histogram of “Fitting wavelength shift” for 2025-10-06 to 2025-10-07

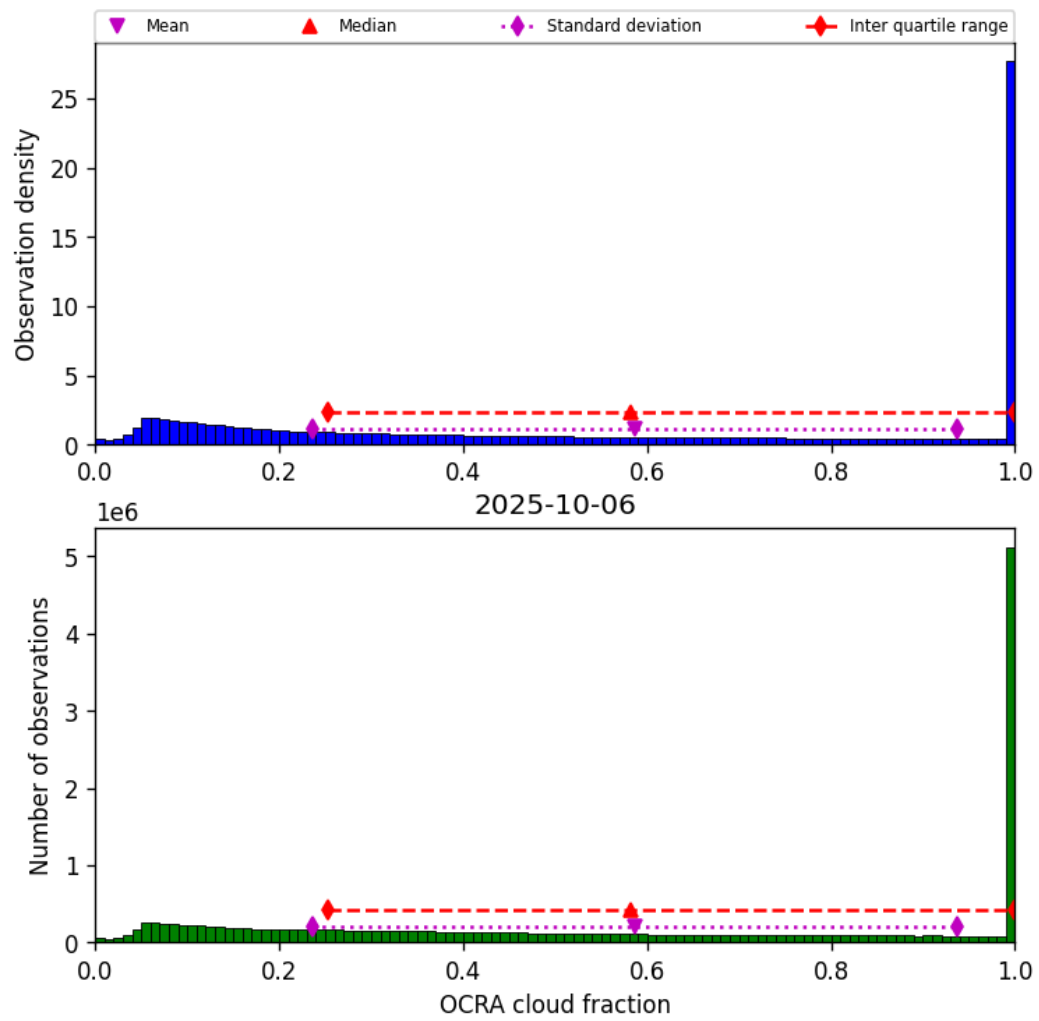


Figure 48: Histogram of “OCRA cloud fraction” for 2025-10-06 to 2025-10-07

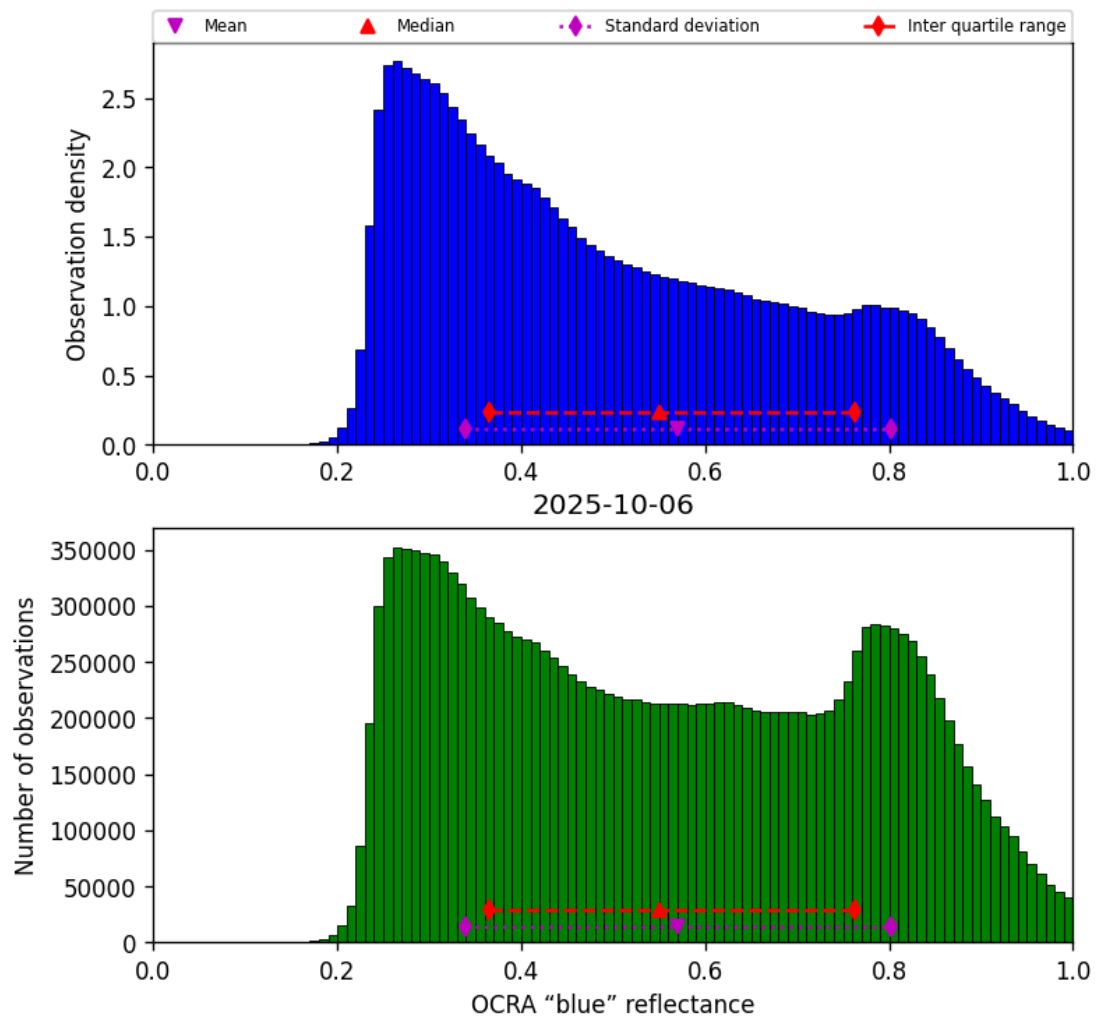


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-10-06 to 2025-10-07

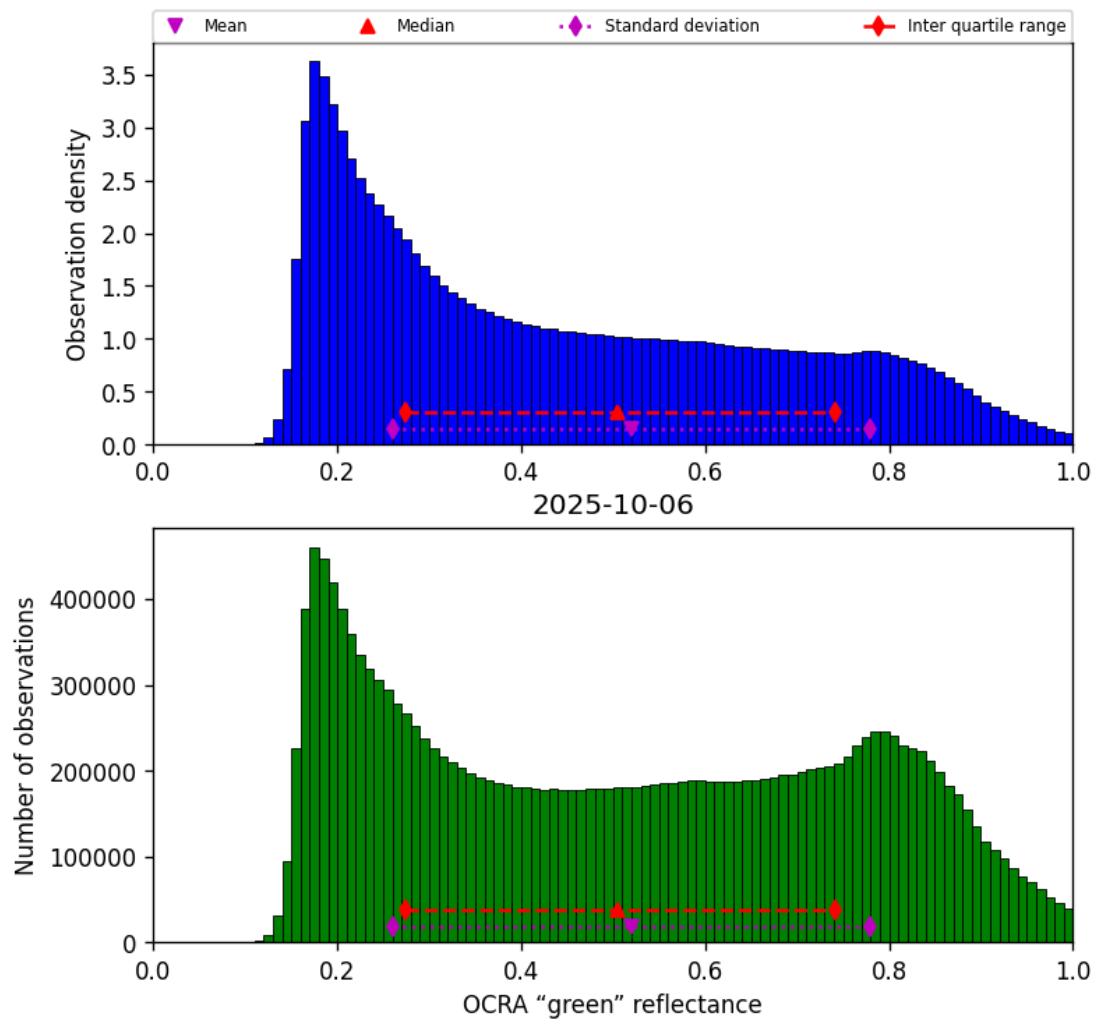


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-10-06 to 2025-10-07

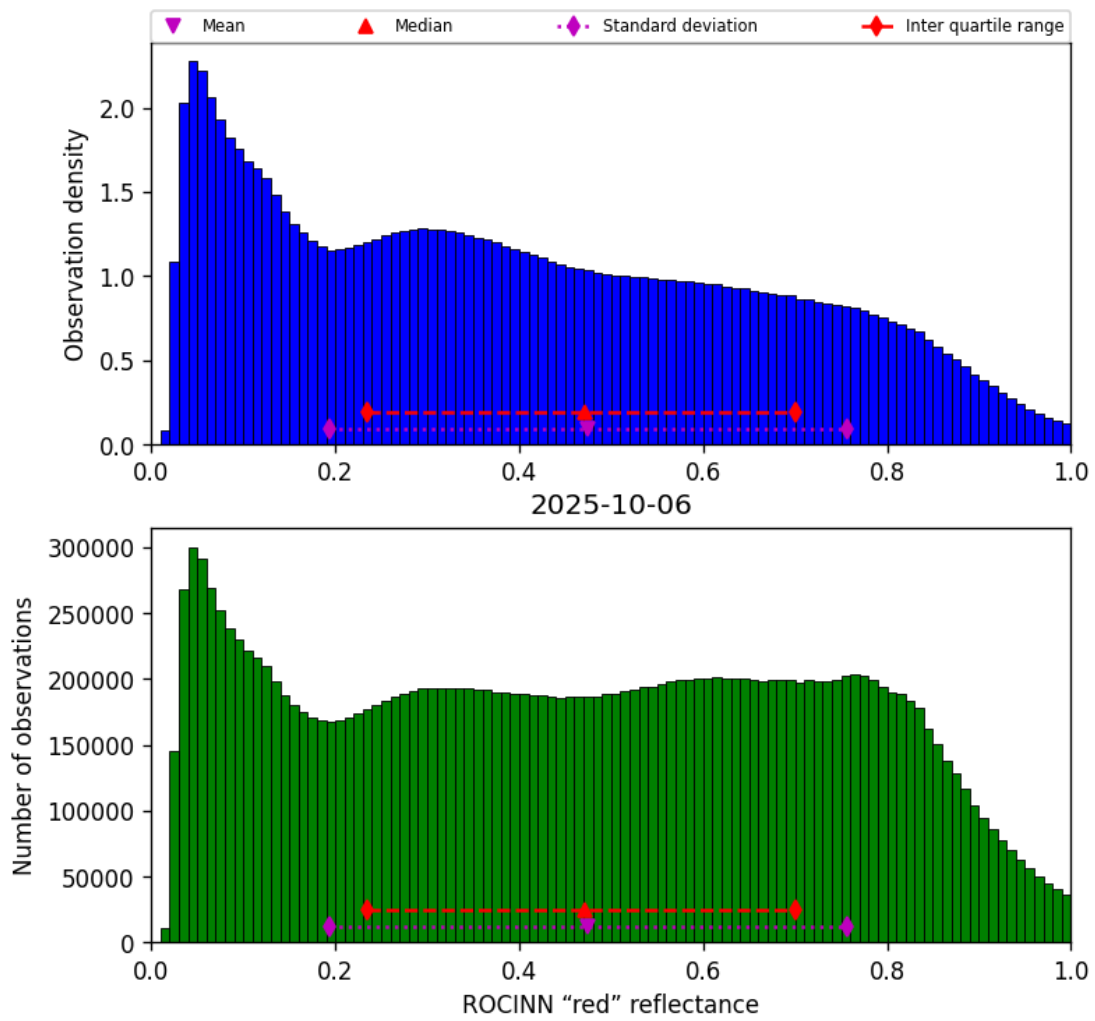


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-10-06 to 2025-10-07

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.

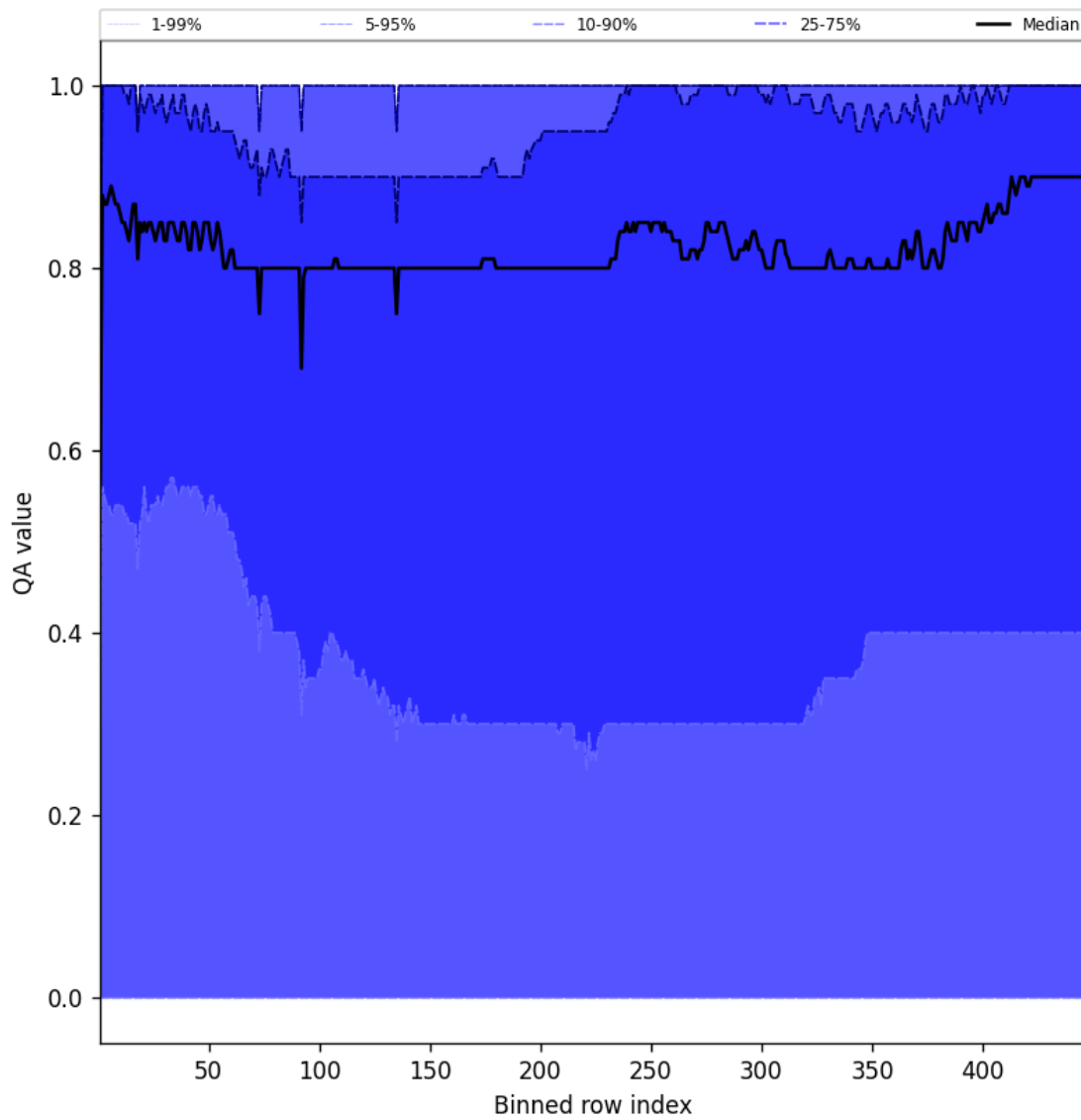


Figure 52: Along track statistics of “QA value” for 2025-10-06 to 2025-10-07

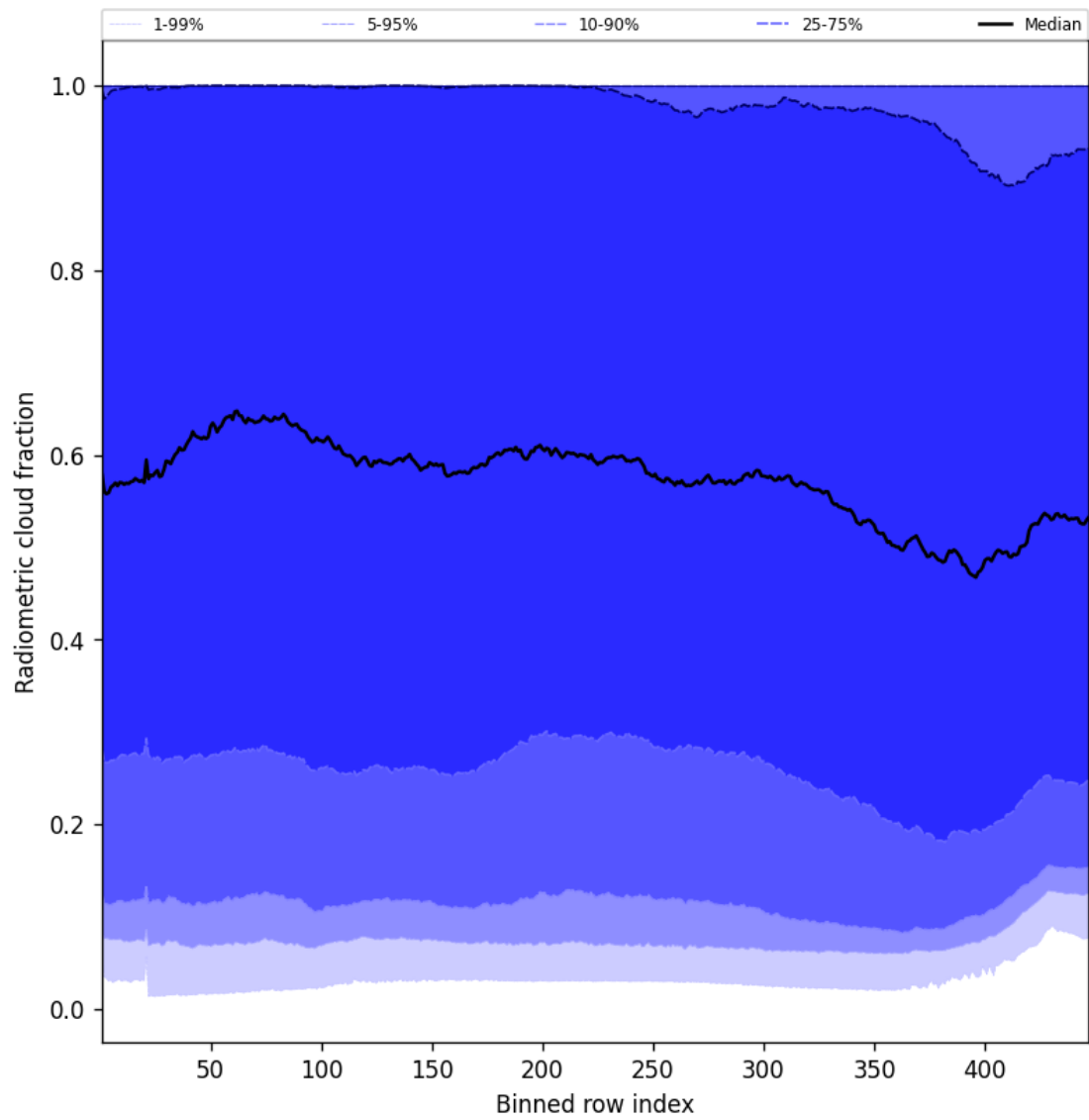


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-10-06 to 2025-10-07

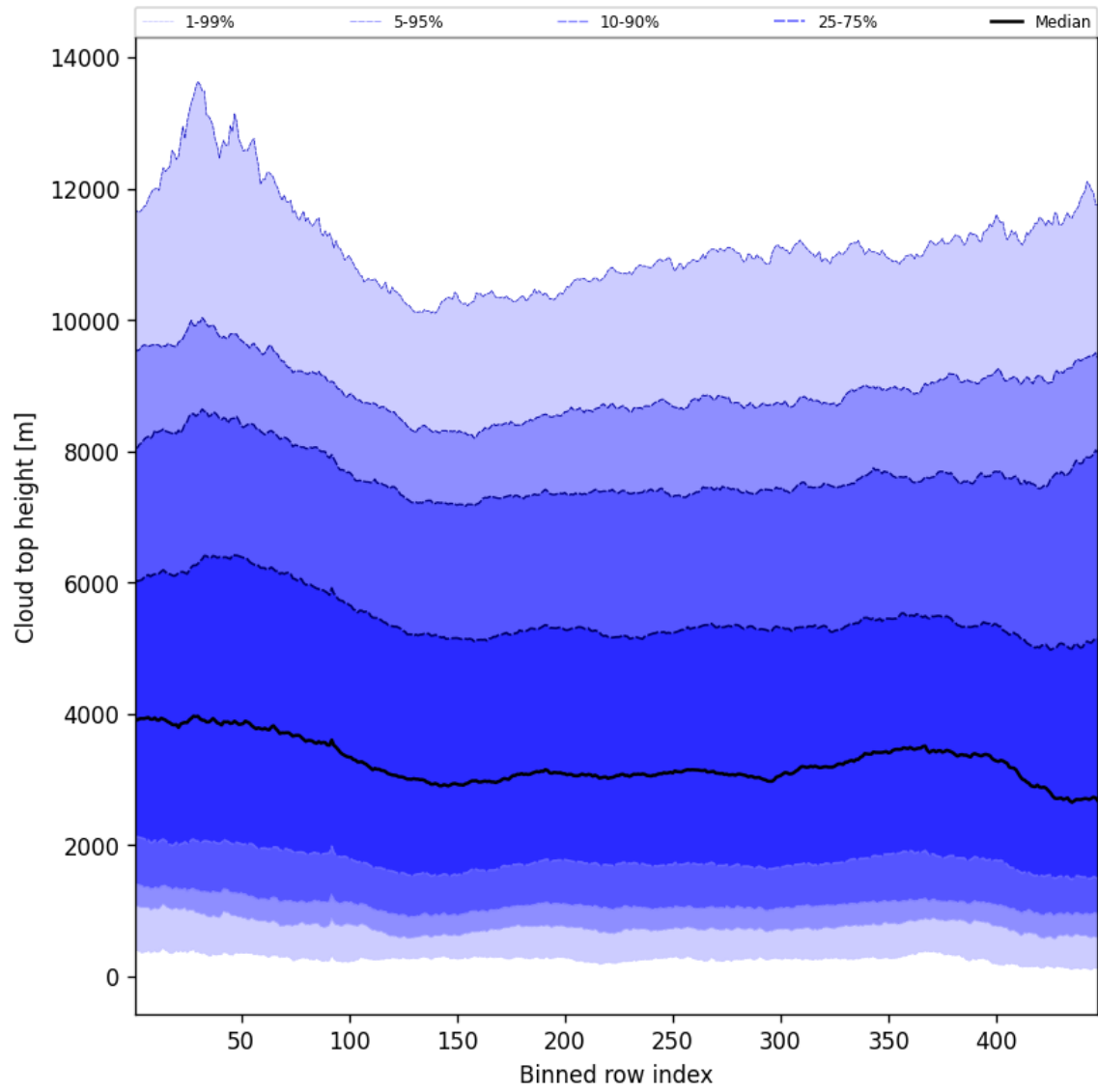


Figure 54: Along track statistics of “Cloud top height” for 2025-10-06 to 2025-10-07

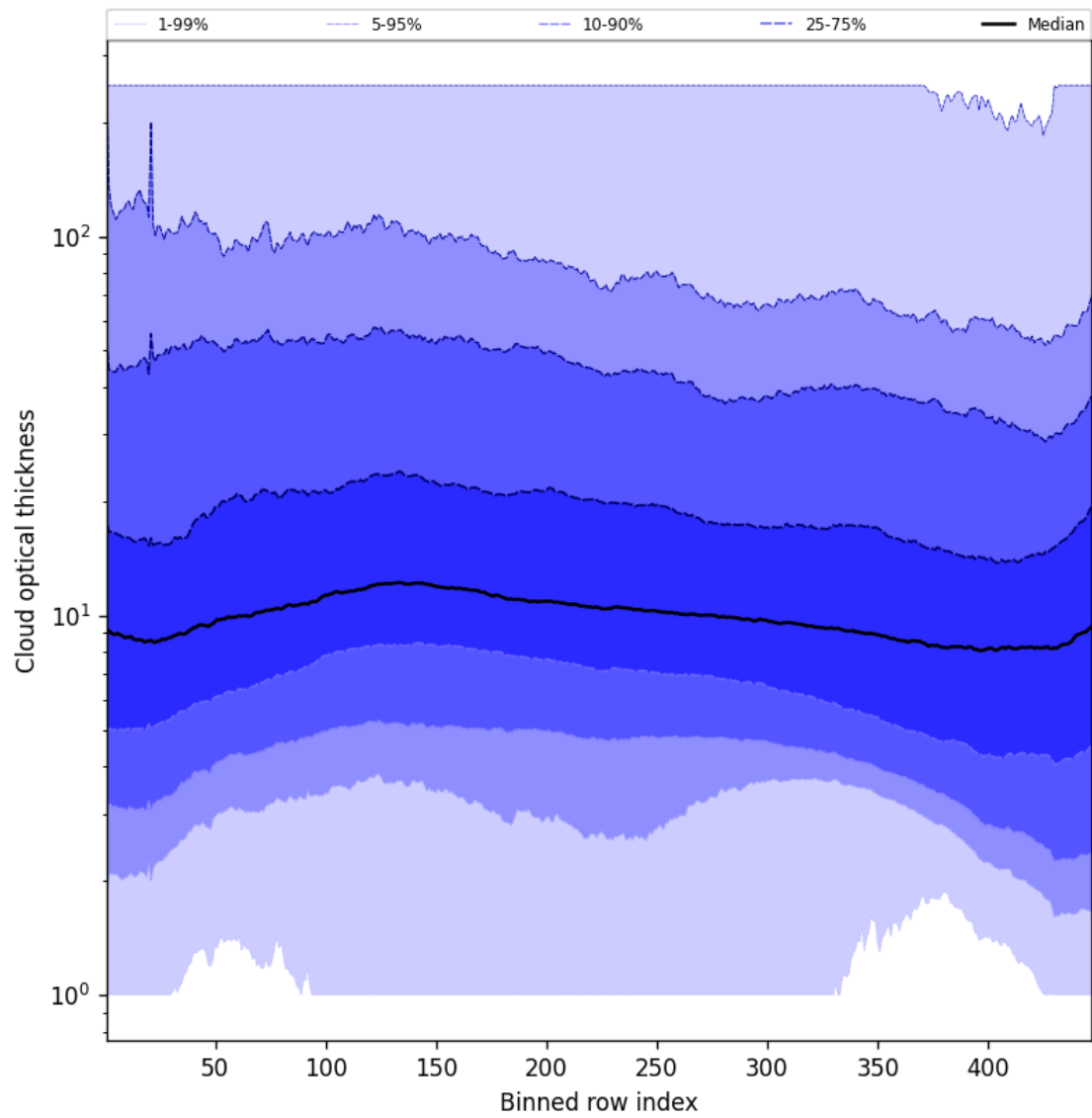


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-10-06 to 2025-10-07

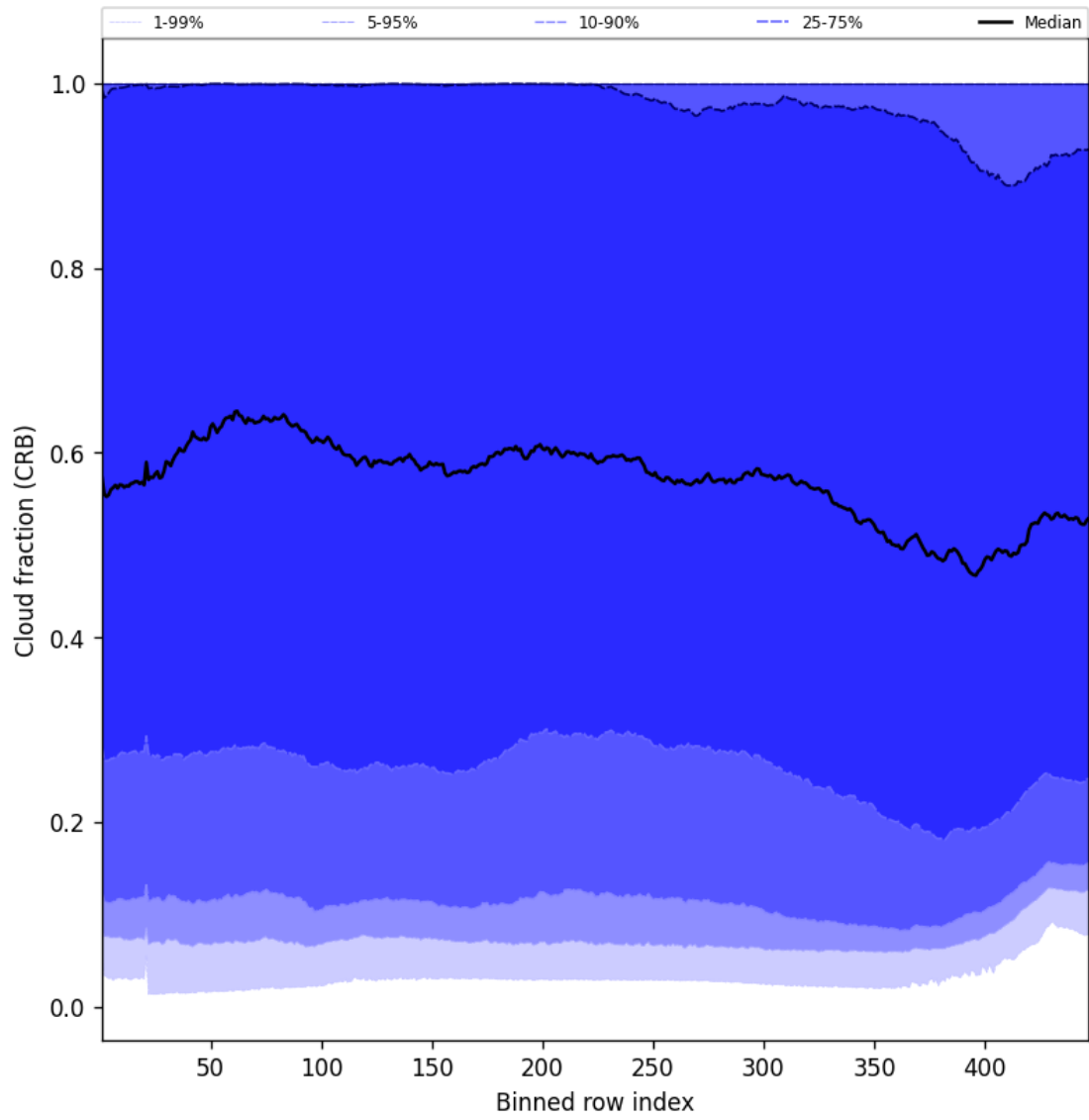


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-10-06 to 2025-10-07

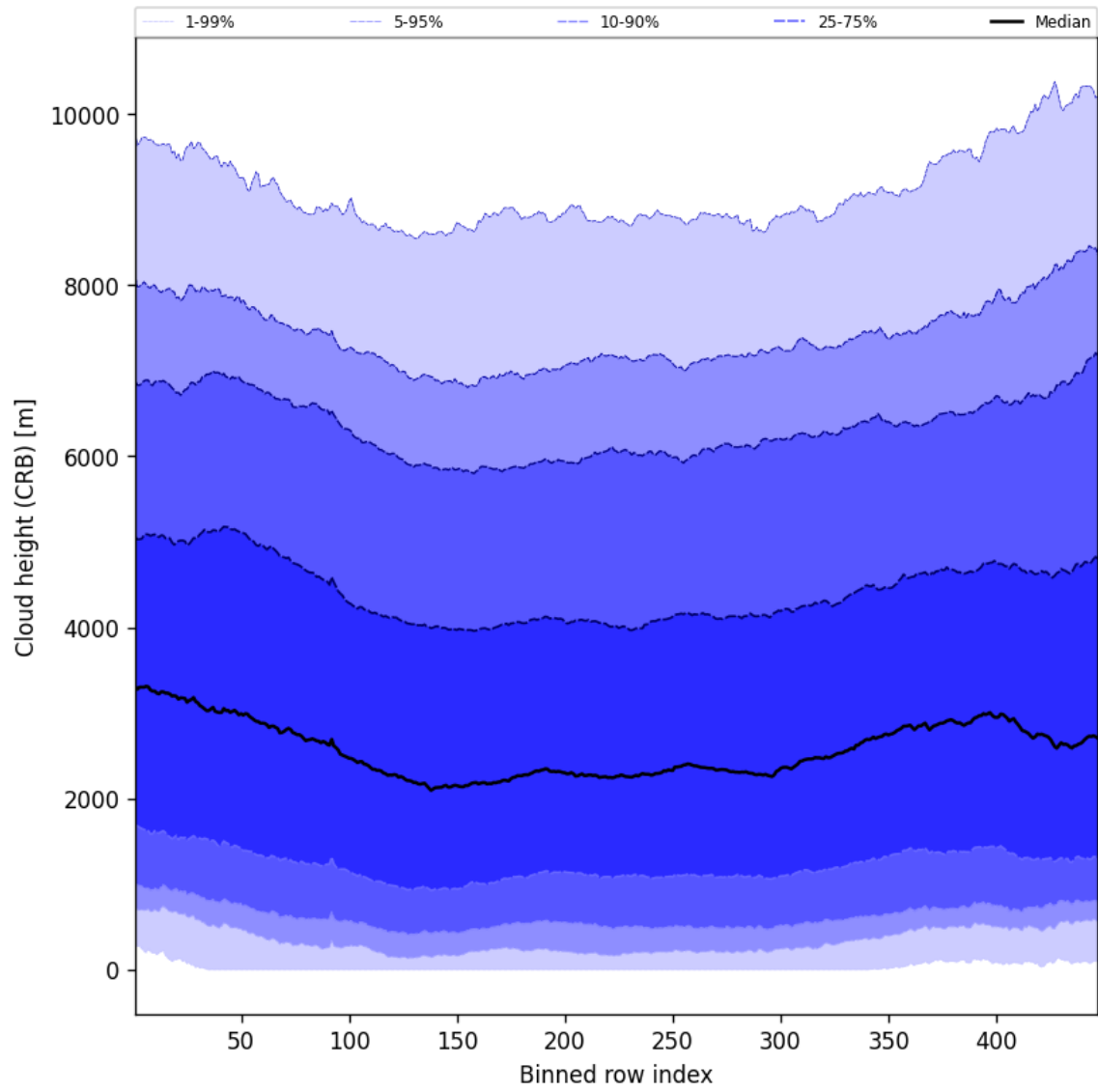


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-10-06 to 2025-10-07

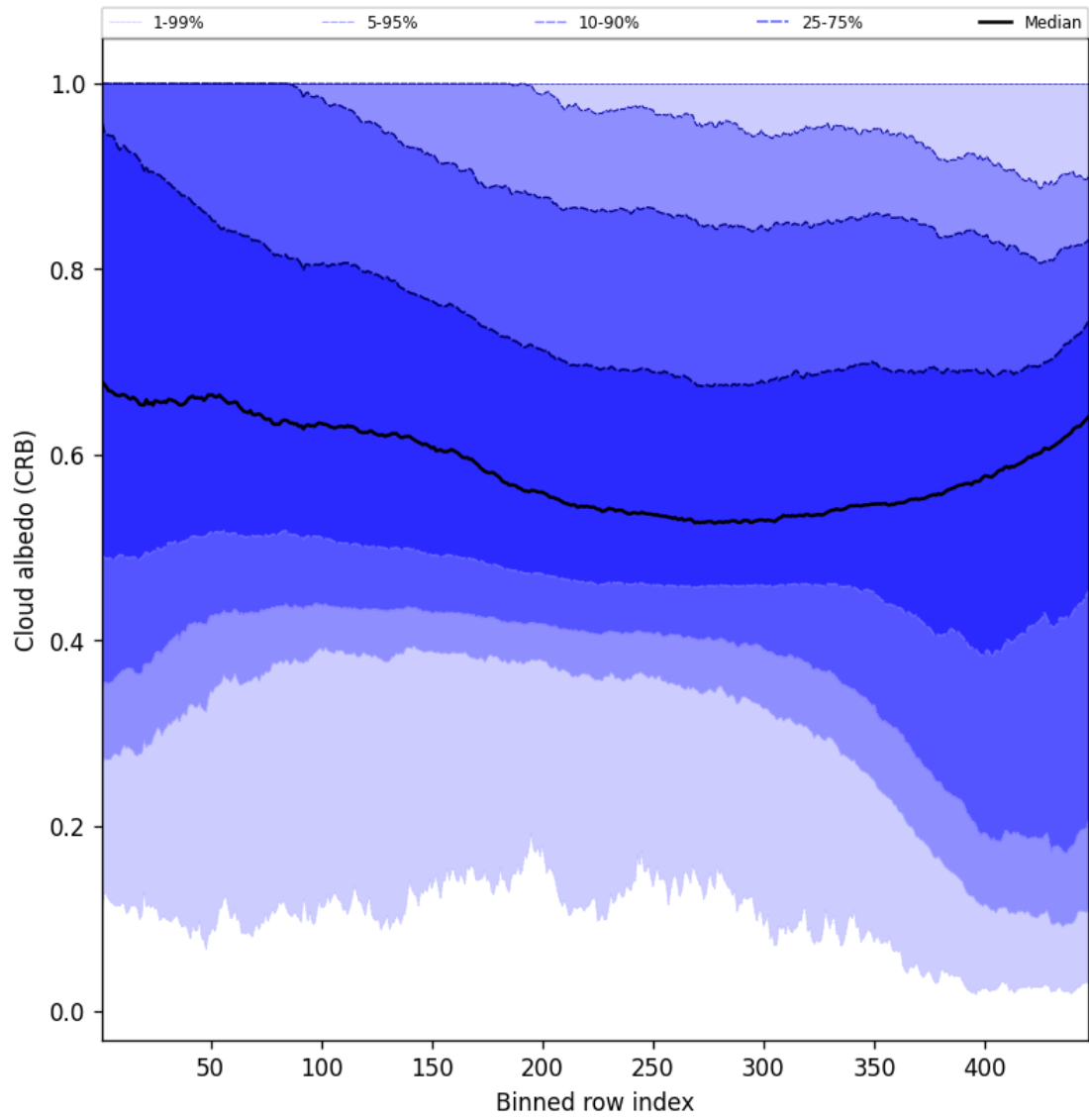


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-10-06 to 2025-10-07

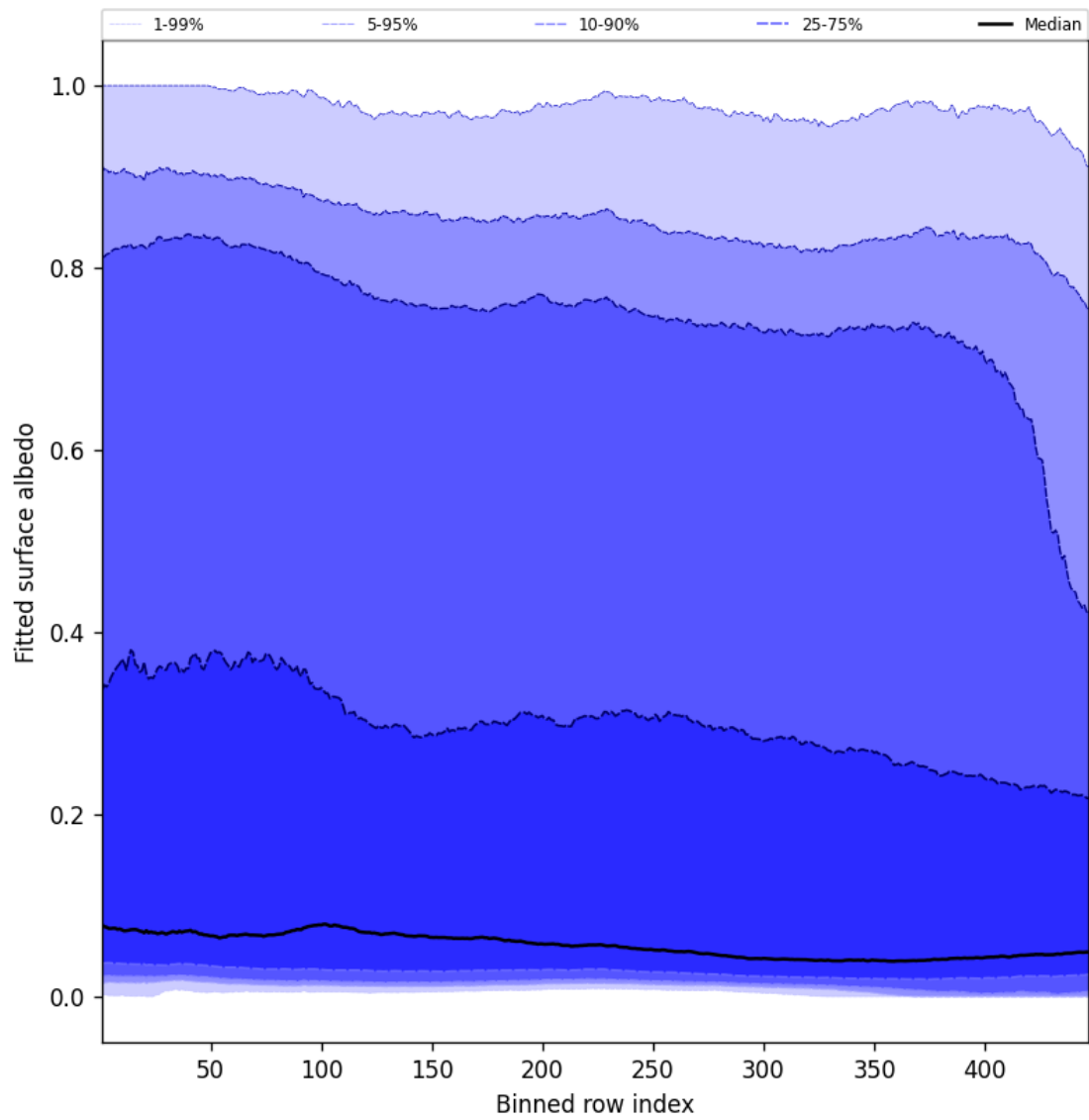


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-10-06 to 2025-10-07

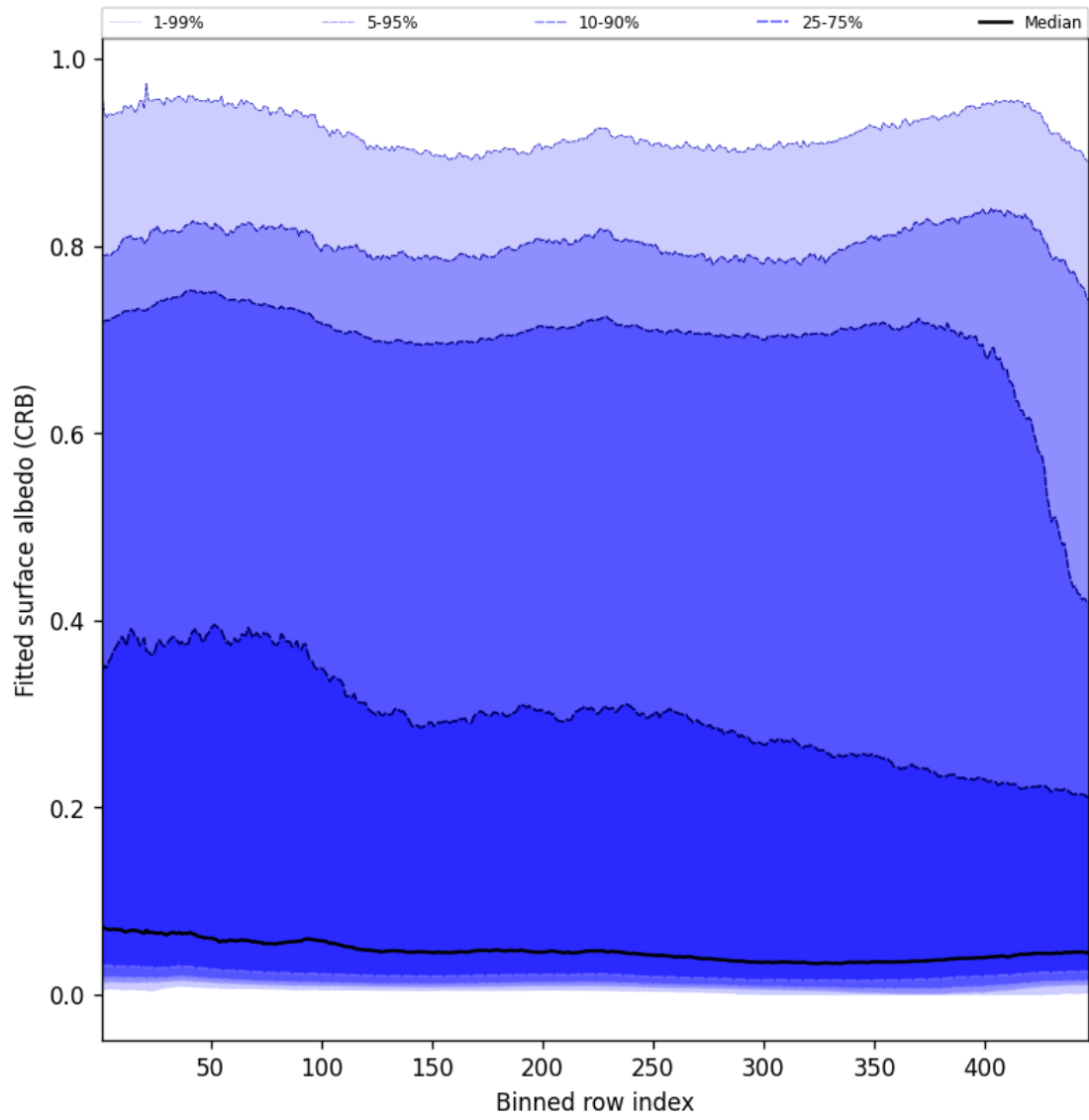


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-10-06 to 2025-10-07

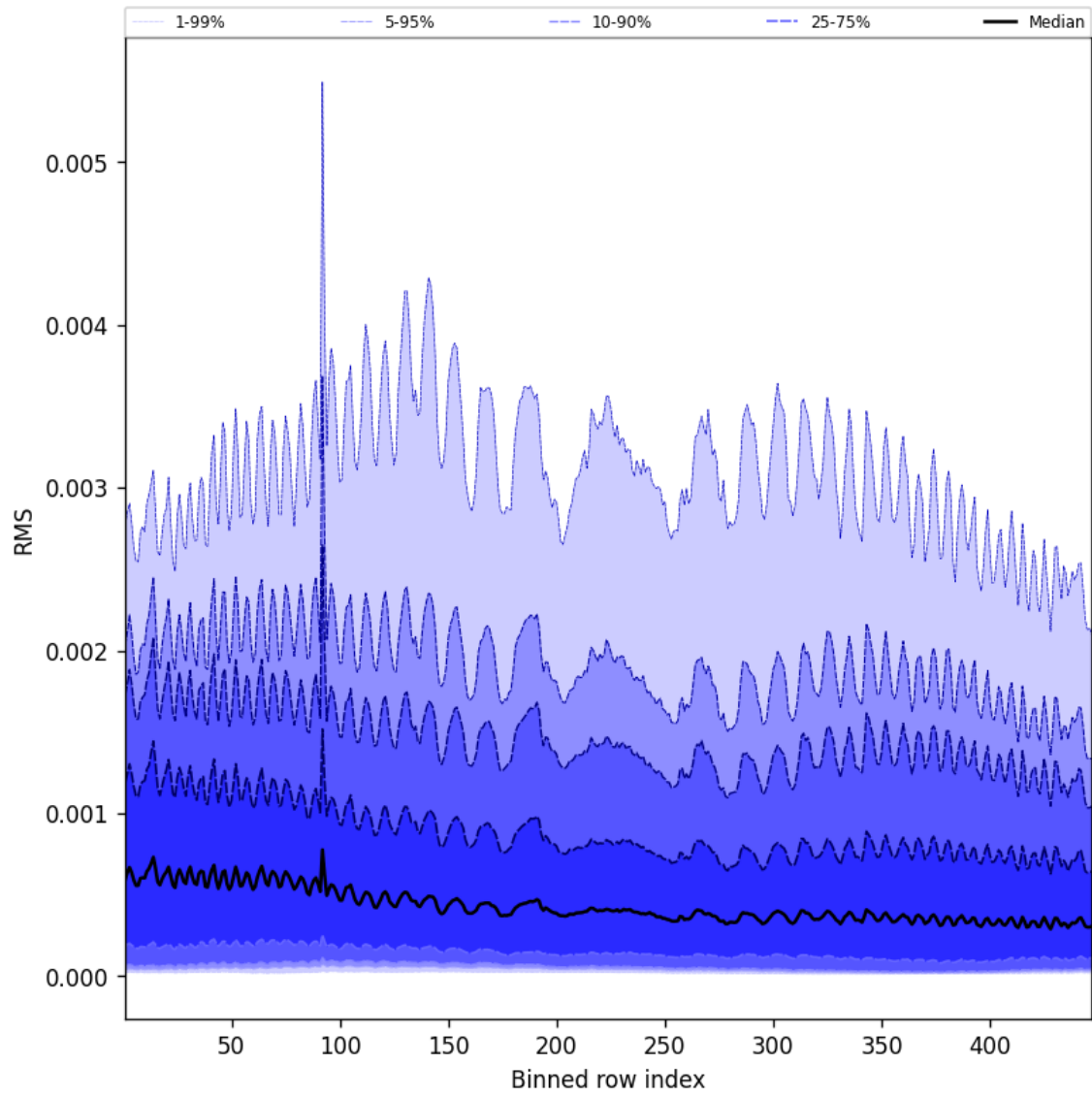


Figure 61: Along track statistics of “RMS” for 2025-10-06 to 2025-10-07

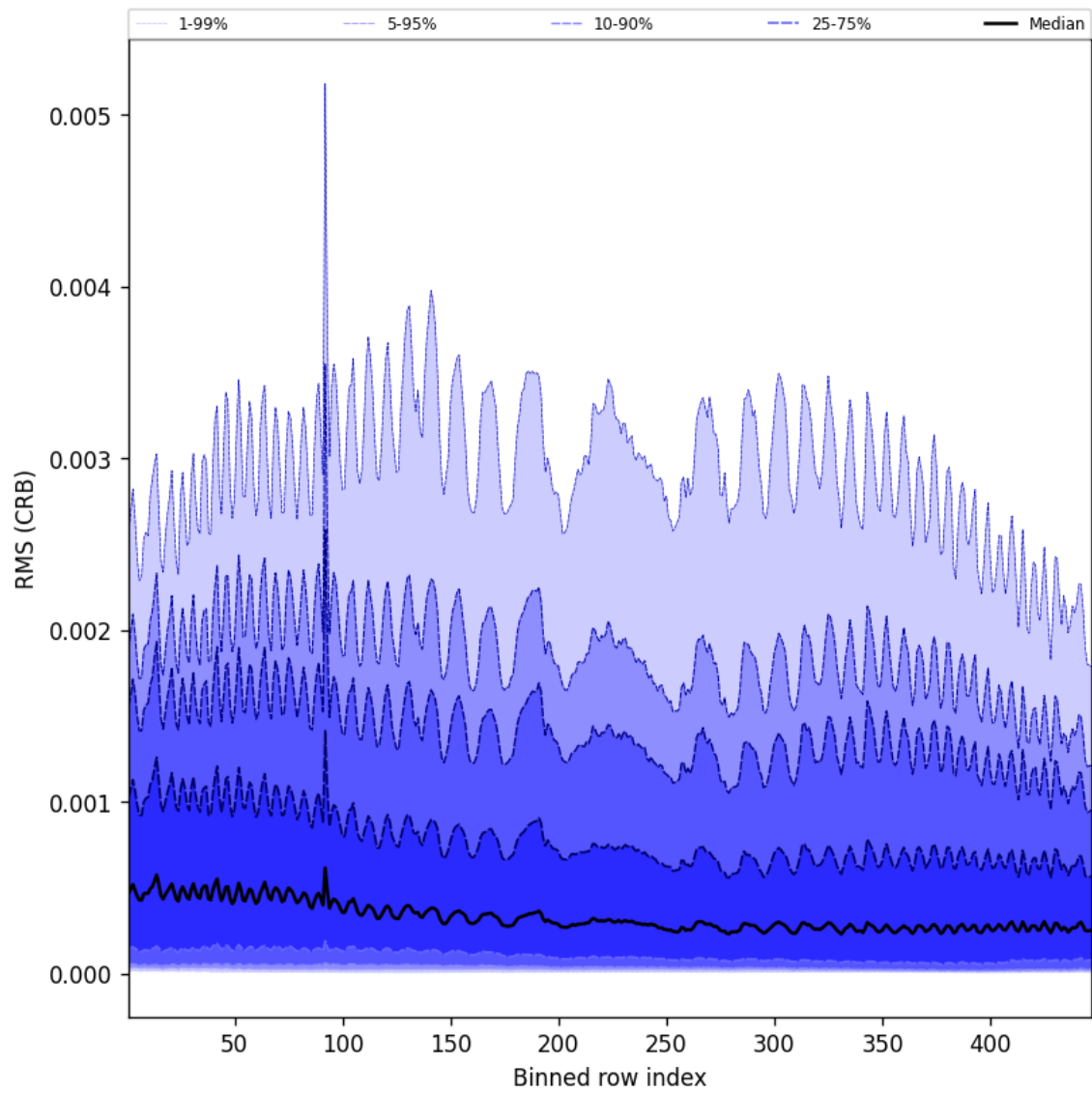


Figure 62: Along track statistics of “RMS (CRB)” for 2025-10-06 to 2025-10-07

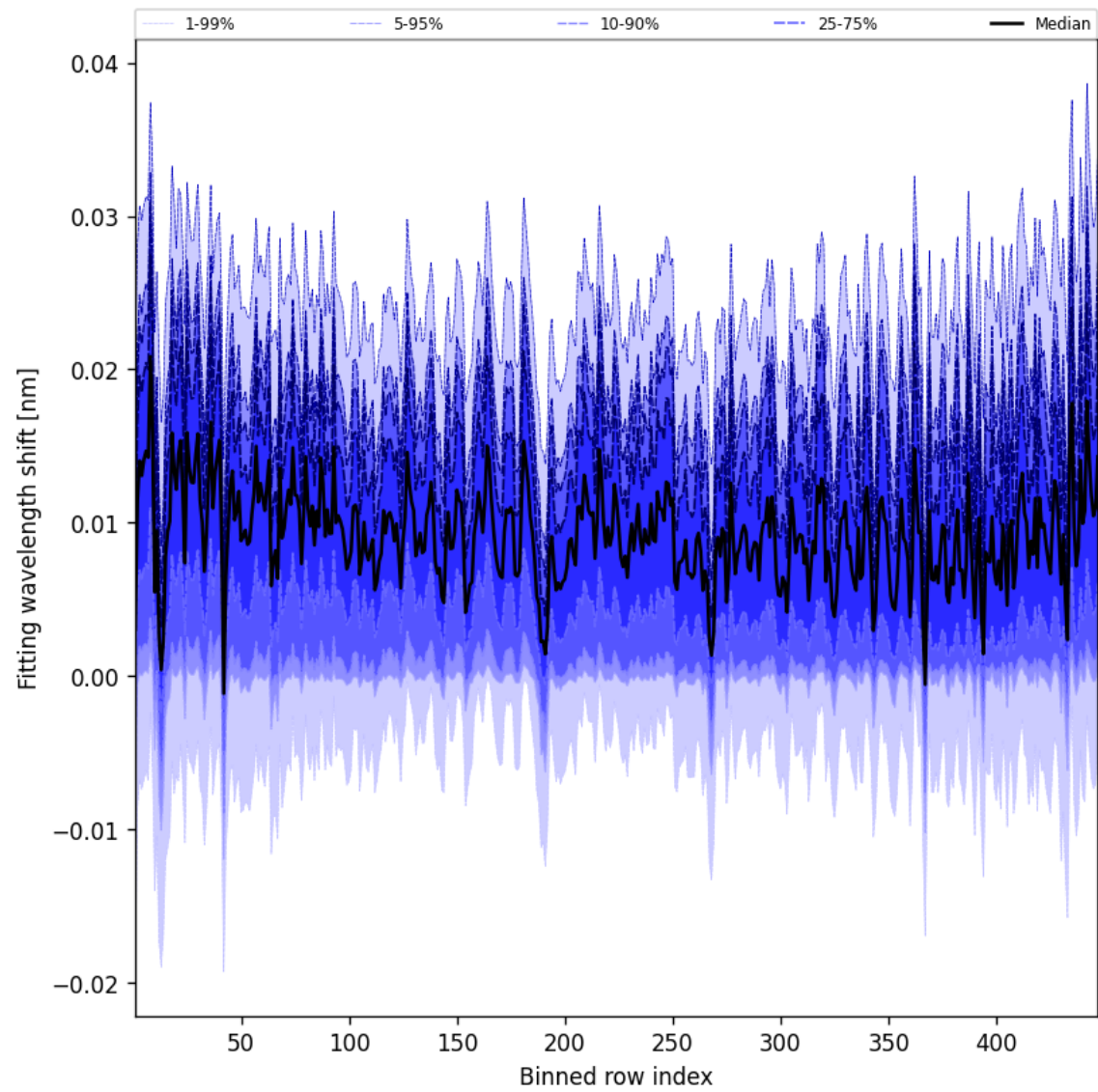


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-10-06 to 2025-10-07

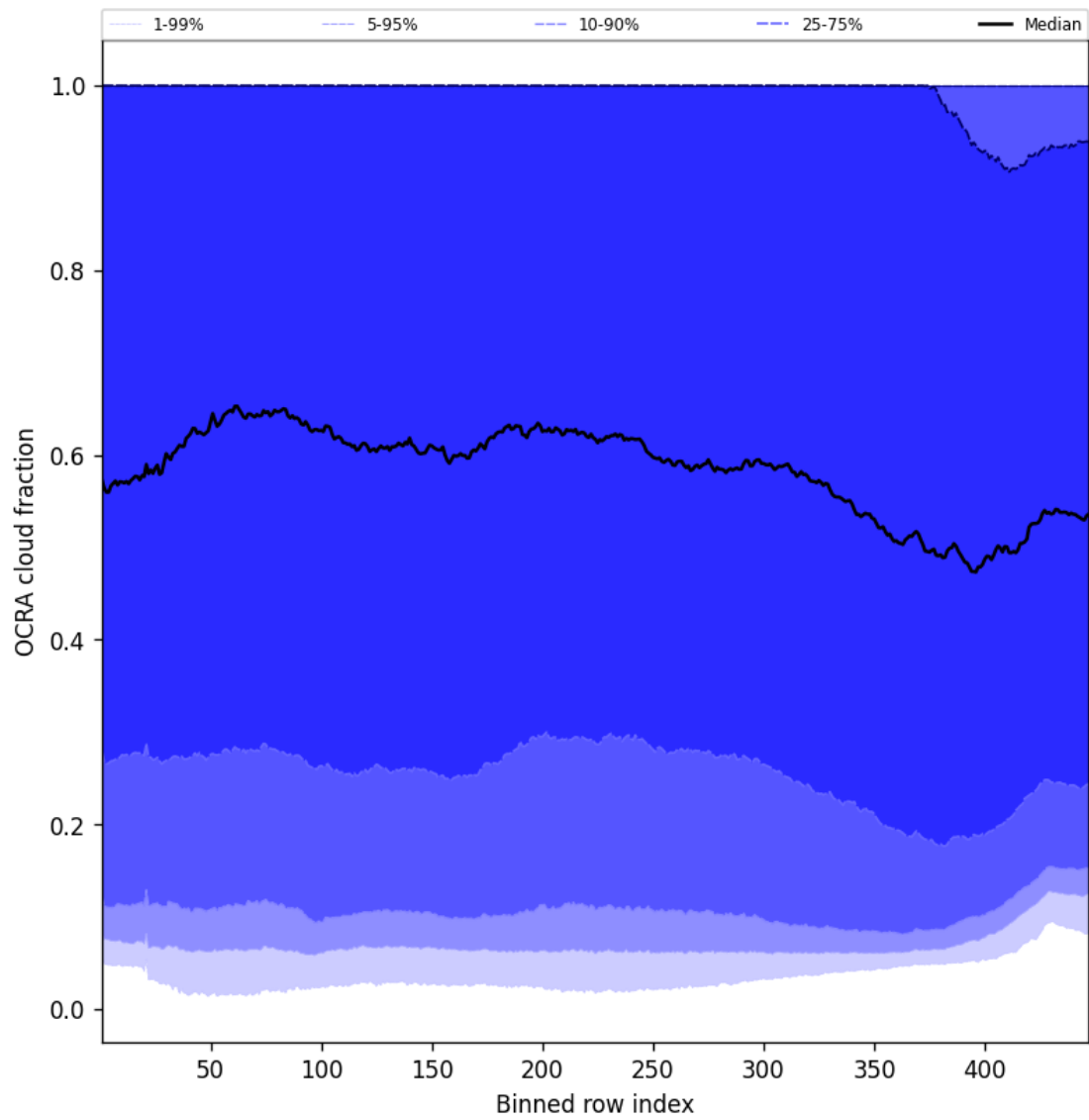


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-10-06 to 2025-10-07

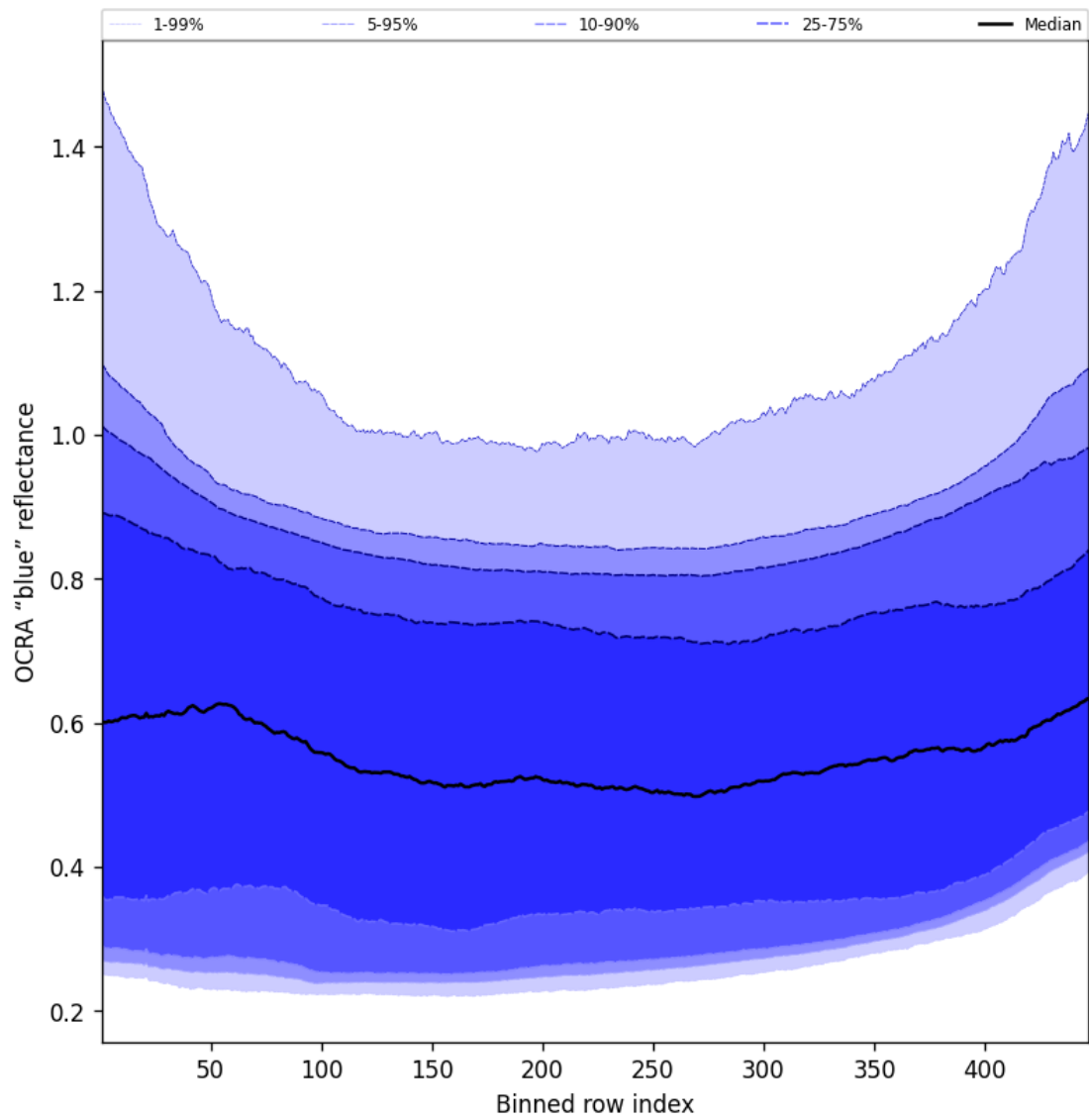


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-10-06 to 2025-10-07

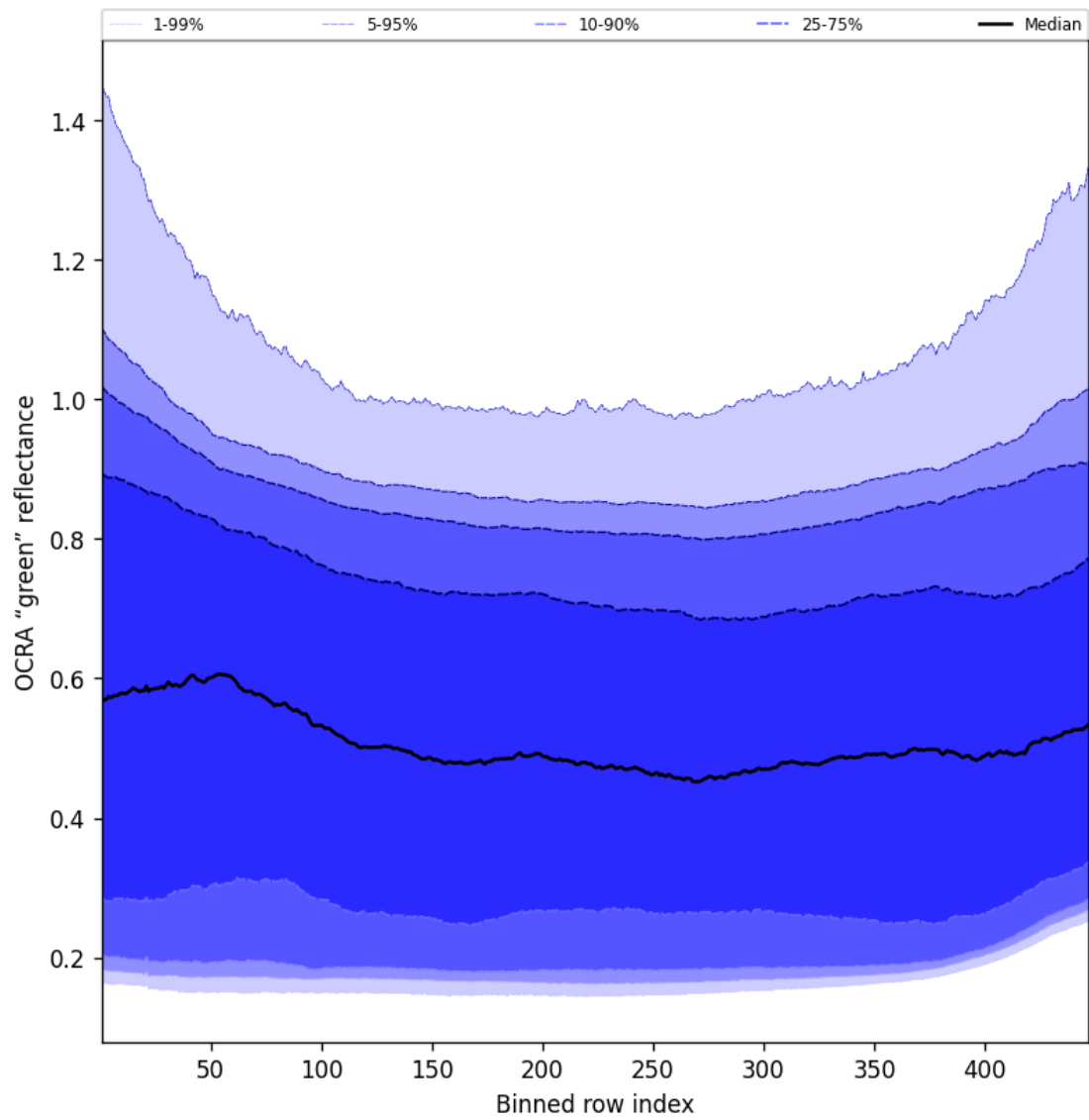


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-10-06 to 2025-10-07

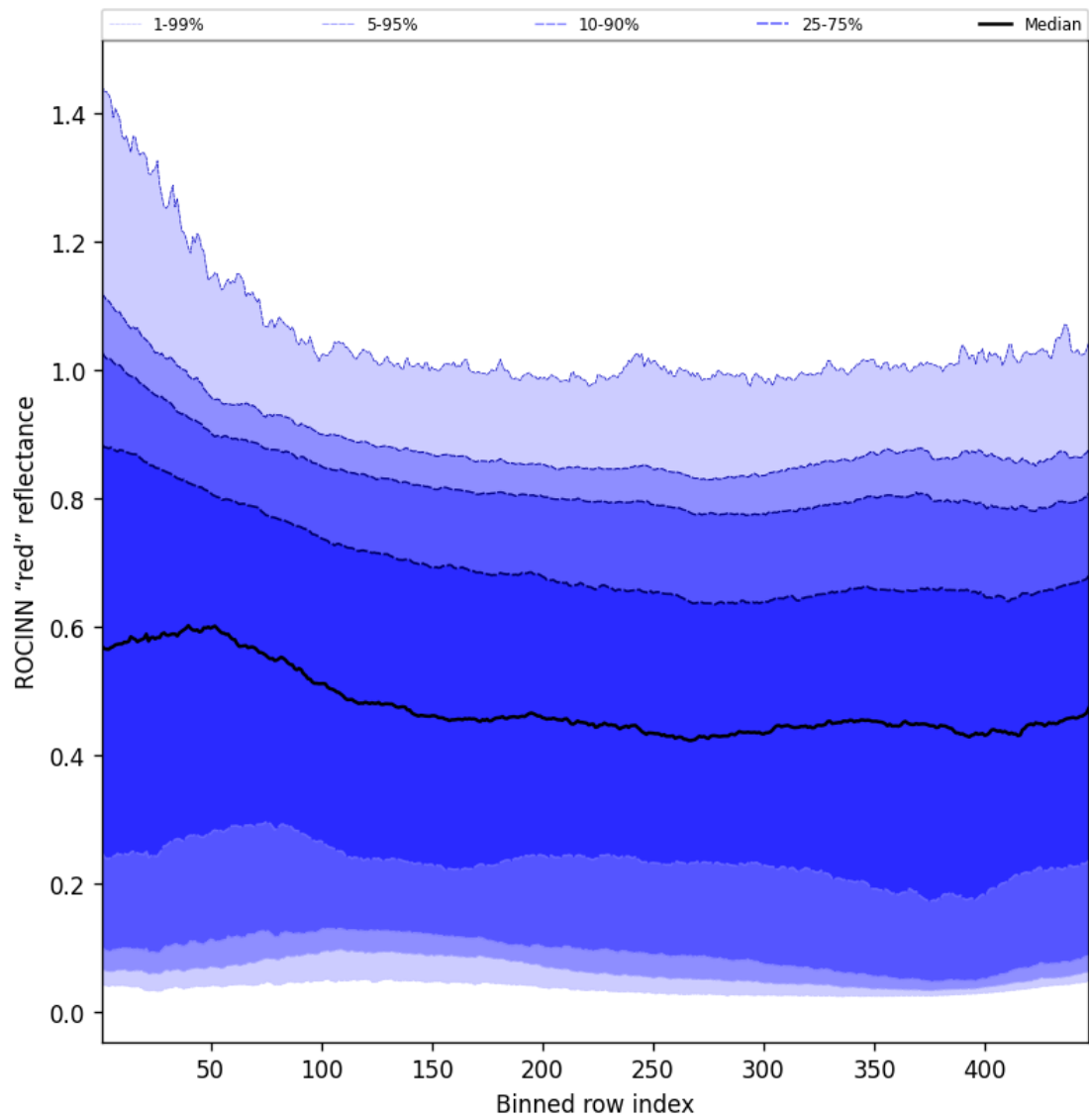


Figure 67: Along track statistics of “ROCINN “red” reflectance” for 2025-10-06 to 2025-10-07

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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Maarten Sneep (maarten.sneep@knmi.nl).