

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-08-18 (11:55)

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]	0.645 ± 0.367	18934933	0.995	0.580	0.810	0.0	1.000
cloud fraction [1]	0.596 ± 0.344	18934933	0.995	0.719	0.614	6.544×10^{-3}	1.000
cloud top height [m]	$(0.381 \pm 0.268) \times 10^4$	18934933	1.425×10^3	3.571×10^3	3.185×10^3	0.0	2.000×10^4
cloud optical thickness [1]	23.7 ± 41.3	18934933	9.77	13.4	10.8	1.000	250
cloud fraction crb [1]	0.595 ± 0.344	18934933	0.995	0.720	0.611	8.194×10^{-3}	1.000
cloud height crb [m]	$(0.302 \pm 0.228) \times 10^4$	18934933	975	3.157×10^3	2.498×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.569 ± 0.192	18934933	0.995	0.225	0.554	0.0	1.000
surface albedo fitted [1]	0.166 ± 0.210	18934933	2.500×10^{-2}	0.228	5.014×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.158 ± 0.205	18934933	1.500×10^{-2}	0.231	3.879×10^{-2}	0.0	1.000
fitted root mean square [1]	$(6.273 \pm 9.425) \times 10^{-4}$	18934933	5.000×10^{-5}	7.133×10^{-4}	3.251×10^{-4}	1.054×10^{-6}	0.555
fitted root mean square crb [1]	$(5.583 \pm 8.602) \times 10^{-4}$	18934933	5.000×10^{-5}	6.640×10^{-4}	2.499×10^{-4}	9.956×10^{-7}	0.815
wavelength shift [nm]	$(7.487 \pm 6.796) \times 10^{-3}$	18934933	-3.000×10^{-4}	9.559×10^{-3}	6.899×10^{-3}	-4.446×10^{-2}	0.532
cloud fraction apriori [1]	0.598 ± 0.350	18934933	0.995	0.739	0.619	0.0	1.000
reflectance blue ocra [1]	0.524 ± 0.202	18934933	0.265	0.313	0.504	0.127	1.91
reflectance green ocra [1]	0.469 ± 0.226	18934933	0.185	0.373	0.450	7.770×10^{-2}	2.03
reflectance continuum aband [1]	0.428 ± 0.252	18934933	3.500×10^{-2}	0.378	0.416	1.131×10^{-2}	6.96

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	6.000×10^{-2}	0.370	0.950	1.000	1.000	1.000	1.000
cloud fraction [1]	2.670×10^{-2}	6.940×10^{-2}	0.109	0.164	0.269	0.988	1.000	1.000	1.000	1.000
cloud top height [m]	166	624	976	1.309×10^3	1.743×10^3	5.314×10^3	6.560×10^3	7.648×10^3	9.000×10^3	1.155×10^4
cloud optical thickness [1]	1.11	3.08	4.23	5.21	6.68	20.0	31.1	48.2	90.7	250
cloud fraction crb [1]	2.608×10^{-2}	6.831×10^{-2}	0.108	0.162	0.267	0.987	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	250	542	822	1.199×10^3	4.356×10^3	5.452×10^3	6.407×10^3	7.515×10^3	9.389×10^3
cloud albedo crb [1]	7.013×10^{-2}	0.249	0.343	0.406	0.457	0.682	0.759	0.831	0.927	1.000
surface albedo fitted [1]	0.0	8.360×10^{-3}	1.309×10^{-2}	1.749×10^{-2}	2.394×10^{-2}	0.251	0.359	0.494	0.621	0.904
surface albedo fitted crb [1]	0.0	5.794×10^{-3}	9.098×10^{-3}	1.243×10^{-2}	1.735×10^{-2}	0.248	0.354	0.482	0.593	0.860
fitted root mean square [1]	1.244×10^{-5}	2.589×10^{-5}	4.194×10^{-5}	6.519×10^{-5}	1.101×10^{-4}	8.234×10^{-4}	1.225×10^{-3}	1.650×10^{-3}	2.239×10^{-3}	3.537×10^{-3}
fitted root mean square crb [1]	6.632×10^{-6}	1.568×10^{-5}	2.742×10^{-5}	4.261×10^{-5}	7.348×10^{-5}	7.375×10^{-4}	1.154×10^{-3}	1.577×10^{-3}	2.148×10^{-3}	3.315×10^{-3}
wavelength shift [nm]	-7.356×10^{-3}	-8.393×10^{-4}	-6.672×10^{-5}	7.756×10^{-4}	2.298×10^{-3}	1.186×10^{-2}	1.424×10^{-2}	1.633×10^{-2}	1.917×10^{-2}	2.551×10^{-2}
cloud fraction apriori [1]	2.798×10^{-2}	6.531×10^{-2}	0.101	0.154	0.261	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.231	0.256	0.279	0.306	0.352	0.665	0.737	0.797	0.871	1.04
reflectance green ocra [1]	0.149	0.171	0.191	0.216	0.263	0.636	0.714	0.777	0.858	1.01
reflectance continuum aband [1]	2.898×10^{-2}	5.360×10^{-2}	8.990×10^{-2}	0.140	0.228	0.605	0.691	0.764	0.853	1.01

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]	0.641 ± 0.363	11873669	0.600	0.800	0.0	1.000	0.350	0.950
cloud fraction [1]	0.624 ± 0.347	11873669	0.709	0.675	8.218×10^{-3}	1.000	0.291	1.000
cloud top height [m]	$(0.372 \pm 0.254) \times 10^4$	11873669	3.455×10^3	3.257×10^3	0.0	2.000×10^4	1.728×10^3	5.184×10^3
cloud optical thickness [1]	20.6 ± 36.8	11873669	11.5	10.1	1.000	250	6.28	17.8
cloud fraction crb [1]	0.623 ± 0.348	11873669	0.710	0.673	8.194×10^{-3}	1.000	0.290	1.000
cloud height crb [m]	$(0.293 \pm 0.219) \times 10^4$	11873669	3.030×10^3	2.557×10^3	0.0	2.000×10^4	1.165×10^3	4.196×10^3
cloud albedo crb [1]	0.556 ± 0.197	11873669	0.233	0.546	0.0	1.000	0.442	0.675
surface albedo fitted [1]	0.196 ± 0.216	11873669	0.264	0.121	0.0	1.000	2.640×10^{-2}	0.290
surface albedo fitted crb [1]	0.190 ± 0.212	11873669	0.267	0.118	0.0	1.000	2.063×10^{-2}	0.288
fitted root mean square [1]	$(7.329 \pm 10.779) \times 10^{-4}$	11873669	8.780×10^{-4}	4.128×10^{-4}	1.054×10^{-6}	0.555	1.275×10^{-4}	1.006×10^{-3}
fitted root mean square crb [1]	$(6.715 \pm 9.847) \times 10^{-4}$	11873669	8.630×10^{-4}	3.441×10^{-4}	9.956×10^{-7}	0.815	9.387×10^{-5}	9.569×10^{-4}
wavelength shift [nm]	$(7.840 \pm 6.719) \times 10^{-3}$	11873669	9.504×10^{-3}	7.493×10^{-3}	-4.446×10^{-2}	0.532	2.718×10^{-3}	1.222×10^{-2}
cloud fraction apriori [1]	0.627 ± 0.352	11873669	0.714	0.684	0.0	1.000	0.286	1.000
reflectance blue ocr [1]	0.521 ± 0.200	11873669	0.317	0.509	0.127	1.90	0.347	0.664
reflectance green ocr [1]	0.470 ± 0.224	11873669	0.374	0.459	7.770×10^{-2}	2.03	0.263	0.637
reflectance continuum aband [1]	0.443 ± 0.245	11873669	0.353	0.434	1.131×10^{-2}	6.96	0.260	0.613

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]	0.651 ± 0.374	7061264	0.580	0.850	0.0	1.000	0.400	0.980
cloud fraction [1]	0.550 ± 0.334	7061264	0.654	0.533	6.544×10^{-3}	1.000	0.242	0.896
cloud top height [m]	$(0.396 \pm 0.288) \times 10^4$	7061264	3.844×10^3	3.059×10^3	0.0	2.000×10^4	1.760×10^3	5.604×10^3
cloud optical thickness [1]	28.9 ± 47.5	7061264	17.8	12.0	1.000	250	7.40	25.2
cloud fraction crb [1]	0.548 ± 0.334	7061264	0.653	0.530	8.285×10^{-3}	1.000	0.240	0.893
cloud height crb [m]	$(0.317 \pm 0.242) \times 10^4$	7061264	3.504×10^3	2.390×10^3	0.0	2.000×10^4	1.236×10^3	4.740×10^3
cloud albedo crb [1]	0.591 ± 0.182	7061264	0.214	0.568	0.0	1.000	0.480	0.693
surface albedo fitted [1]	0.117 ± 0.189	7061264	5.024×10^{-2}	3.627×10^{-2}	0.0	1.000	2.149×10^{-2}	7.173×10^{-2}
surface albedo fitted crb [1]	0.105 ± 0.179	7061264	4.201×10^{-2}	2.547×10^{-2}	0.0	1.000	1.453×10^{-2}	5.654×10^{-2}
fitted root mean square [1]	$(4.497 \pm 6.147) \times 10^{-4}$	7061264	4.700×10^{-4}	2.297×10^{-4}	1.323×10^{-6}	0.108	9.114×10^{-5}	5.612×10^{-4}
fitted root mean square crb [1]	$(3.680 \pm 5.439) \times 10^{-4}$	7061264	3.749×10^{-4}	1.537×10^{-4}	1.818×10^{-6}	2.600×10^{-2}	5.873×10^{-5}	4.337×10^{-4}
wavelength shift [nm]	$(6.893 \pm 6.883) \times 10^{-3}$	7061264	9.284×10^{-3}	5.865×10^{-3}	-4.101×10^{-2}	6.337×10^{-2}	1.823×10^{-3}	1.111×10^{-2}
cloud fraction apriori [1]	0.549 ± 0.341	7061264	0.685	0.532	0.0	1.000	0.230	0.915
reflectance blue ocra [1]	0.528 ± 0.204	7061264	0.307	0.496	0.148	1.91	0.360	0.667
reflectance green ocra [1]	0.466 ± 0.230	7061264	0.371	0.435	8.802×10^{-2}	1.90	0.263	0.634
reflectance continuum aband [1]	0.402 ± 0.263	7061264	0.417	0.380	1.216×10^{-2}	4.77	0.175	0.592

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]	0.639 ± 0.363	13561412	0.570	0.800	0.0	1.000	0.380	0.950
cloud fraction [1]	0.591 ± 0.342	13561412	0.711	0.606	6.544×10^{-3}	1.000	0.265	0.976
cloud top height [m]	$(0.372 \pm 0.271) \times 10^4$	13561412	3.573×10^3	3.015×10^3	0.0	2.000×10^4	1.644×10^3	5.217×10^3
cloud optical thickness [1]	26.7 ± 45.2	13561412	14.9	11.7	1.000	250	7.52	22.4
cloud fraction crb [1]	0.589 ± 0.343	13561412	0.712	0.603	8.506×10^{-3}	1.000	0.263	0.975
cloud height crb [m]	$(0.296 \pm 0.234) \times 10^4$	13561412	3.201×10^3	2.357×10^3	0.0	2.000×10^4	1.100×10^3	4.301×10^3
cloud albedo crb [1]	0.562 ± 0.185	13561412	0.212	0.546	0.0	1.000	0.455	0.667
surface albedo fitted [1]	0.112 ± 0.184	13561412	4.226×10^{-2}	3.292×10^{-2}	0.0	1.000	1.909×10^{-2}	6.135×10^{-2}
surface albedo fitted crb [1]	0.102 ± 0.179	13561412	3.510×10^{-2}	2.432×10^{-2}	0.0	1.000	1.361×10^{-2}	4.871×10^{-2}
fitted root mean square [1]	$(5.052 \pm 8.924) \times 10^{-4}$	13561412	5.176×10^{-4}	2.371×10^{-4}	1.323×10^{-6}	0.555	8.759×10^{-5}	6.052×10^{-4}
fitted root mean square crb [1]	$(4.334 \pm 8.192) \times 10^{-4}$	13561412	4.313×10^{-4}	1.757×10^{-4}	9.956×10^{-7}	0.815	6.169×10^{-5}	4.930×10^{-4}
wavelength shift [nm]	$(7.178 \pm 6.828) \times 10^{-3}$	13561412	9.415×10^{-3}	6.403×10^{-3}	-4.232×10^{-2}	0.532	2.069×10^{-3}	1.148×10^{-2}
cloud fraction apriori [1]	0.591 ± 0.348	13561412	0.744	0.607	0.0	1.000	0.256	1.000
reflectance blue ocra [1]	0.523 ± 0.190	13561412	0.298	0.512	0.142	1.85	0.360	0.658
reflectance green ocra [1]	0.465 ± 0.216	13561412	0.362	0.459	9.985×10^{-2}	2.03	0.266	0.628
reflectance continuum aband [1]	0.398 ± 0.252	13561412	0.418	0.396	1.160×10^{-2}	6.96	0.167	0.585

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]	0.659 ± 0.374	3503879	0.570	0.840	0.0	1.000	0.380	0.950
cloud fraction [1]	0.590 ± 0.347	3503879	0.730	0.590	8.195×10^{-3}	1.000	0.263	0.993
cloud top height [m]	$(0.432 \pm 0.270) \times 10^4$	3503879	3.659×10^3	3.873×10^3	0.0	2.000×10^4	2.267×10^3	5.926×10^3
cloud optical thickness [1]	15.4 ± 27.6	3503879	8.81	8.31	1.000	250	5.28	14.1
cloud fraction crb [1]	0.590 ± 0.347	3503879	0.732	0.590	8.194×10^{-3}	1.000	0.262	0.994
cloud height crb [m]	$(0.334 \pm 0.220) \times 10^4$	3503879	3.131×10^3	2.915×10^3	0.0	2.000×10^4	1.603×10^3	4.733×10^3
cloud albedo crb [1]	0.606 ± 0.212	3503879	0.270	0.596	0.0	1.000	0.482	0.752
surface albedo fitted [1]	0.358 ± 0.225	3503879	0.156	0.273	0.0	1.000	0.218	0.374
surface albedo fitted crb [1]	0.350 ± 0.214	3503879	0.158	0.269	4.744×10^{-3}	1.000	0.215	0.373
fitted root mean square [1]	$(1.051 \pm 1.028) \times 10^{-3}$	3503879	1.096×10^{-3}	8.030×10^{-4}	2.366×10^{-6}	0.278	3.851×10^{-4}	1.481×10^{-3}
fitted root mean square crb [1]	$(9.796 \pm 9.106) \times 10^{-4}$	3503879	1.130×10^{-3}	7.504×10^{-4}	1.450×10^{-6}	0.119	3.030×10^{-4}	1.433×10^{-3}
wavelength shift [nm]	$(8.421 \pm 6.451) \times 10^{-3}$	3503879	8.975×10^{-3}	8.283×10^{-3}	-3.183×10^{-2}	5.522×10^{-2}	3.657×10^{-3}	1.263×10^{-2}
cloud fraction apriori [1]	0.600 ± 0.355	3503879	0.743	0.613	0.0	1.000	0.257	1.000
reflectance blue ocra [1]	0.536 ± 0.245	3503879	0.401	0.477	0.127	1.91	0.328	0.729
reflectance green ocra [1]	0.491 ± 0.266	3503879	0.455	0.427	7.770×10^{-2}	2.03	0.255	0.710
reflectance continuum aband [1]	0.527 ± 0.239	3503879	0.369	0.476	1.509×10^{-2}	6.53	0.334	0.703

3 Granule outlines

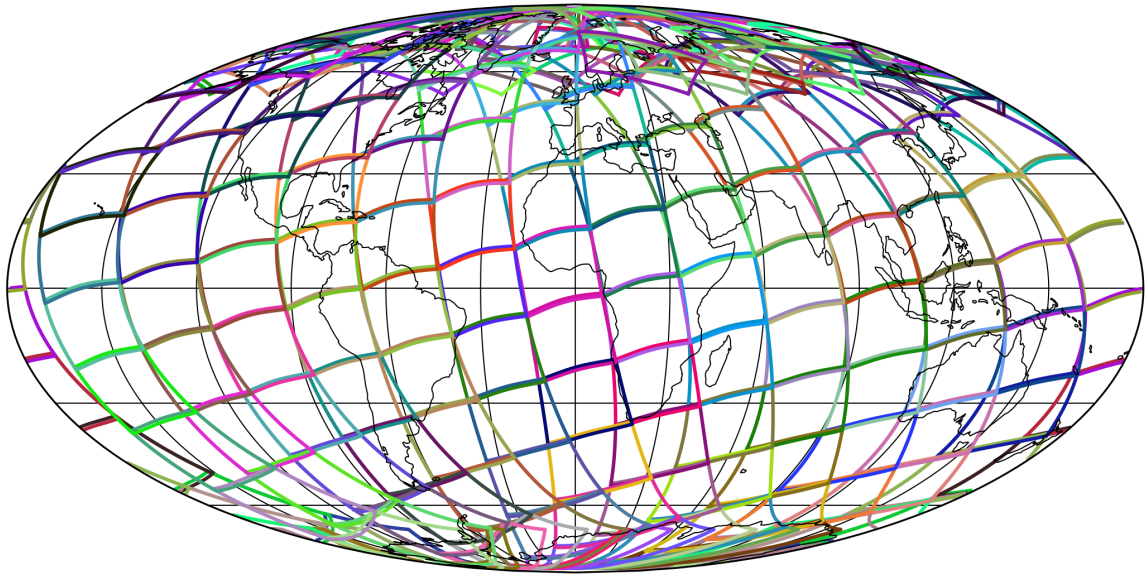


Figure 1: Outline of the granules.

4 Input data monitoring

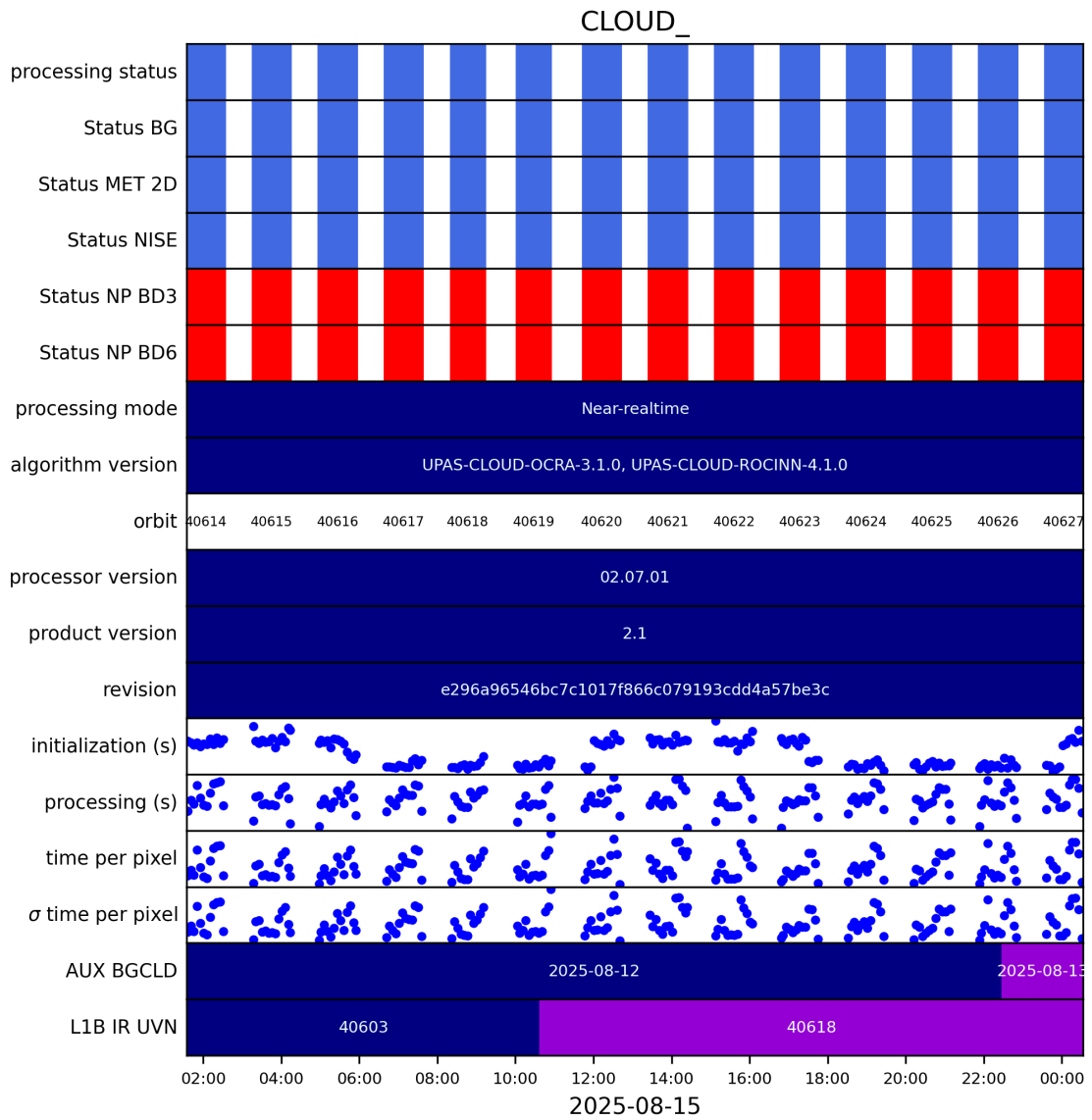


Figure 2: Input data per granule

5 Warnings and errors

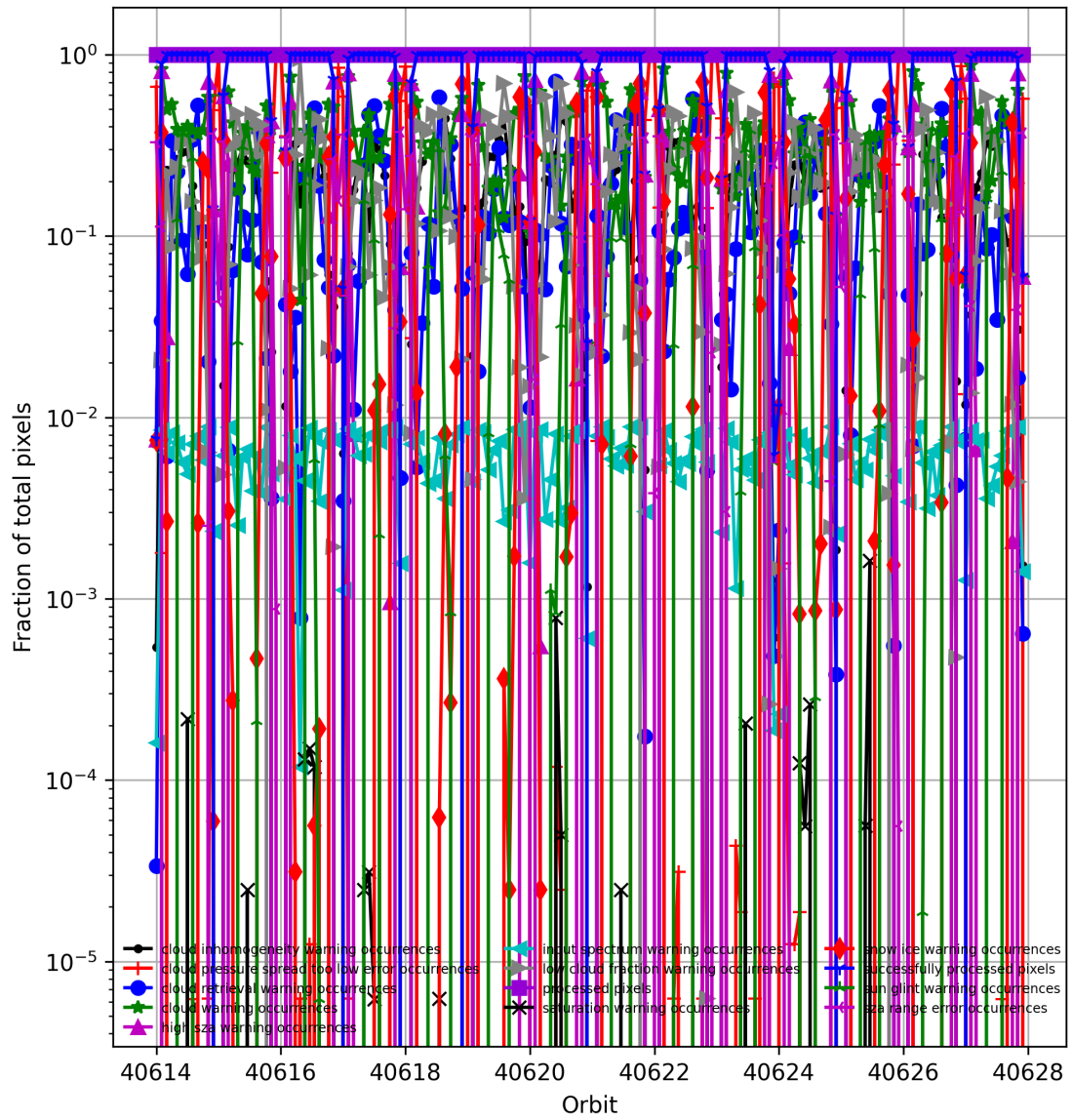


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

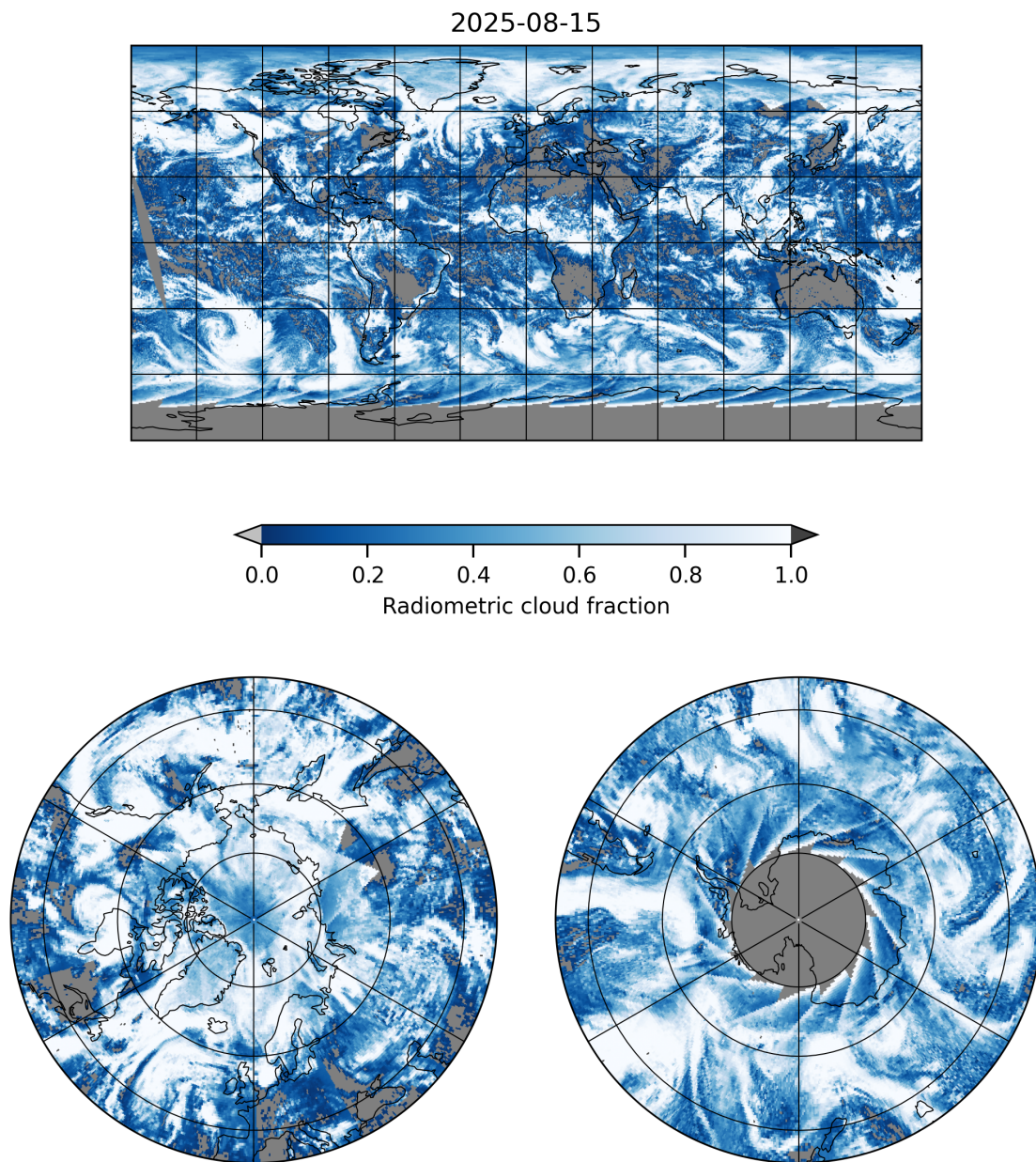


Figure 4: Map of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16

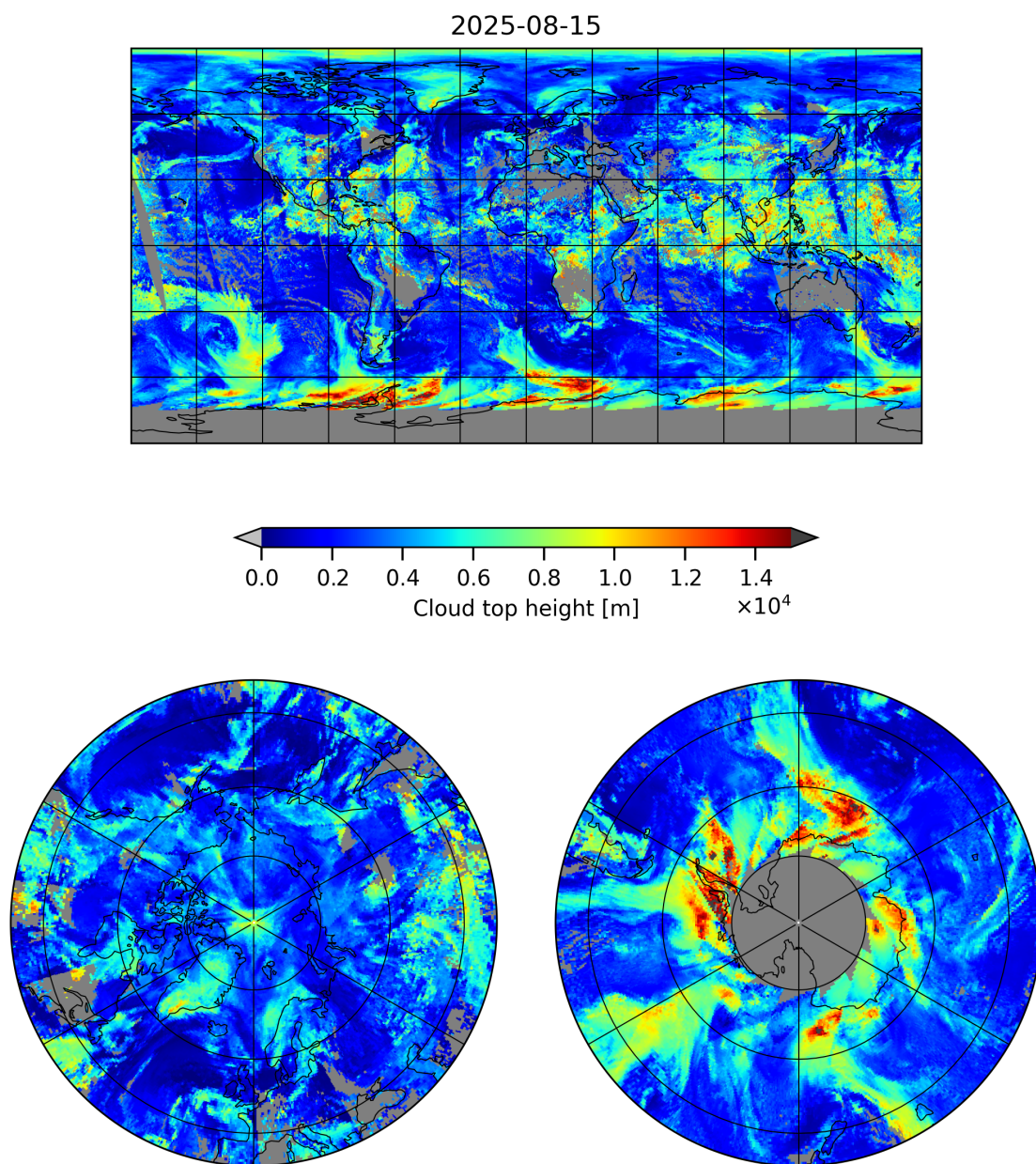


Figure 5: Map of “Cloud top height” for 2025-08-15 to 2025-08-16

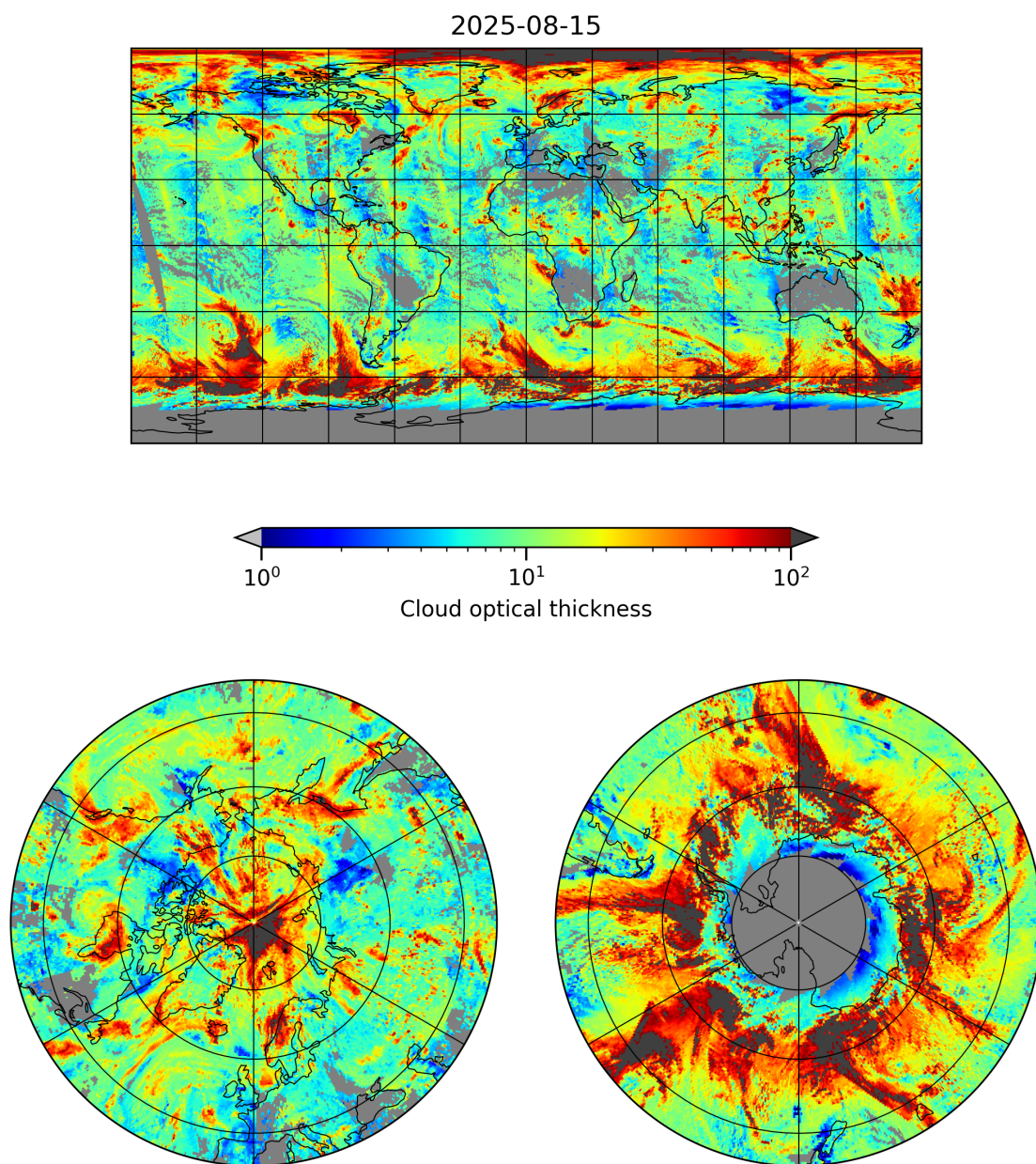


Figure 6: Map of “Cloud optical thickness” for 2025-08-15 to 2025-08-16

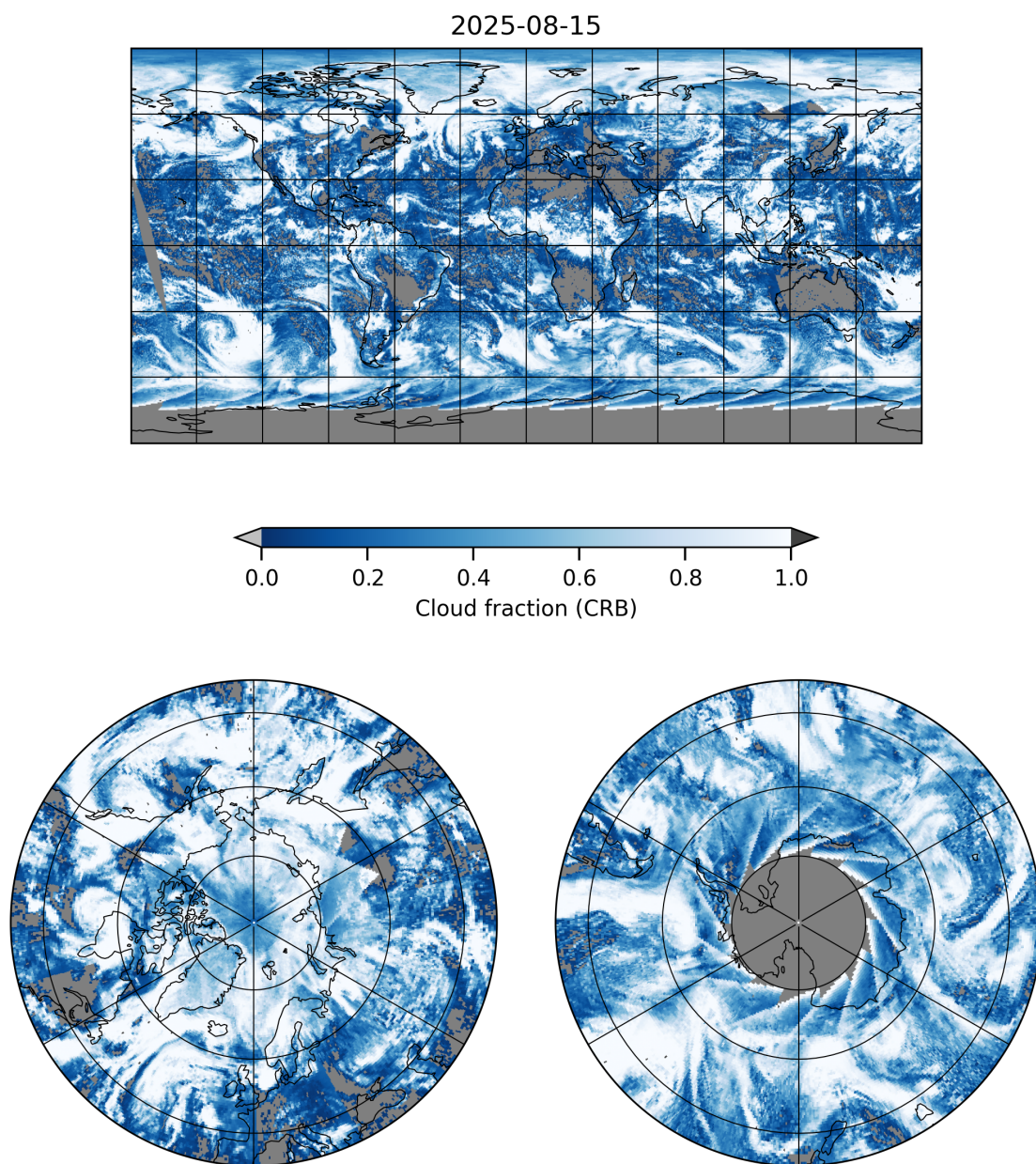


Figure 7: Map of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16

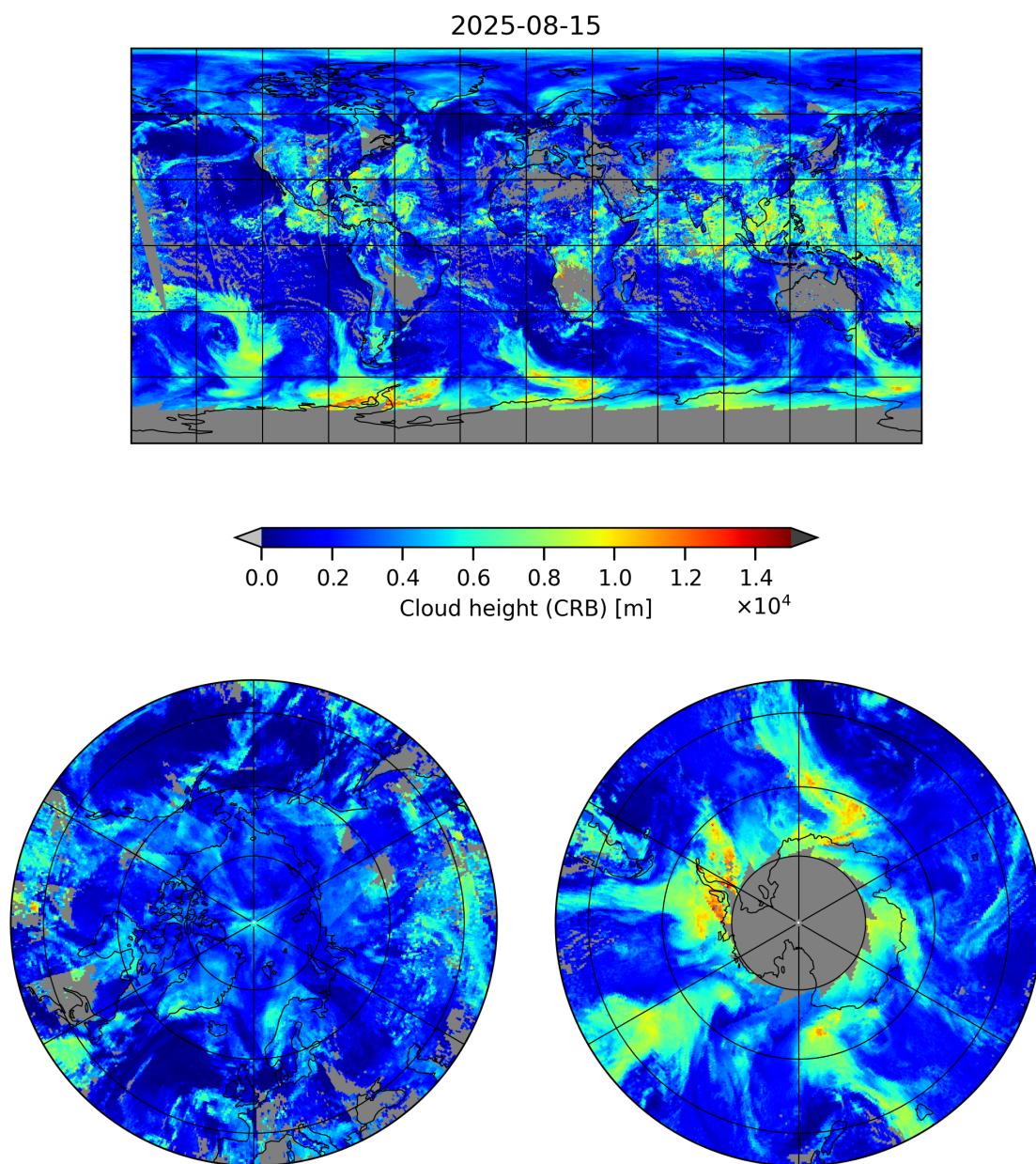


Figure 8: Map of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16

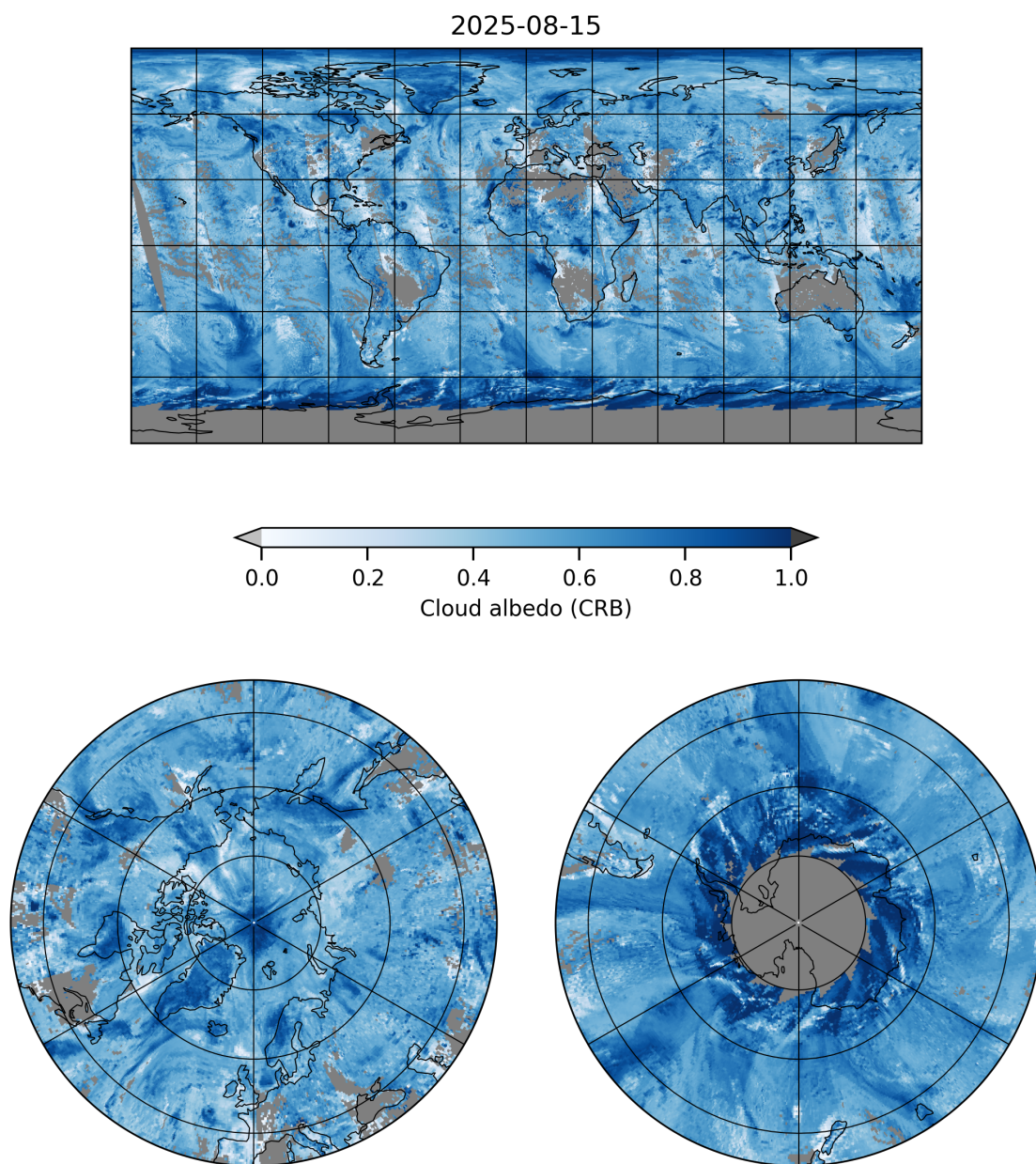


Figure 9: Map of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16

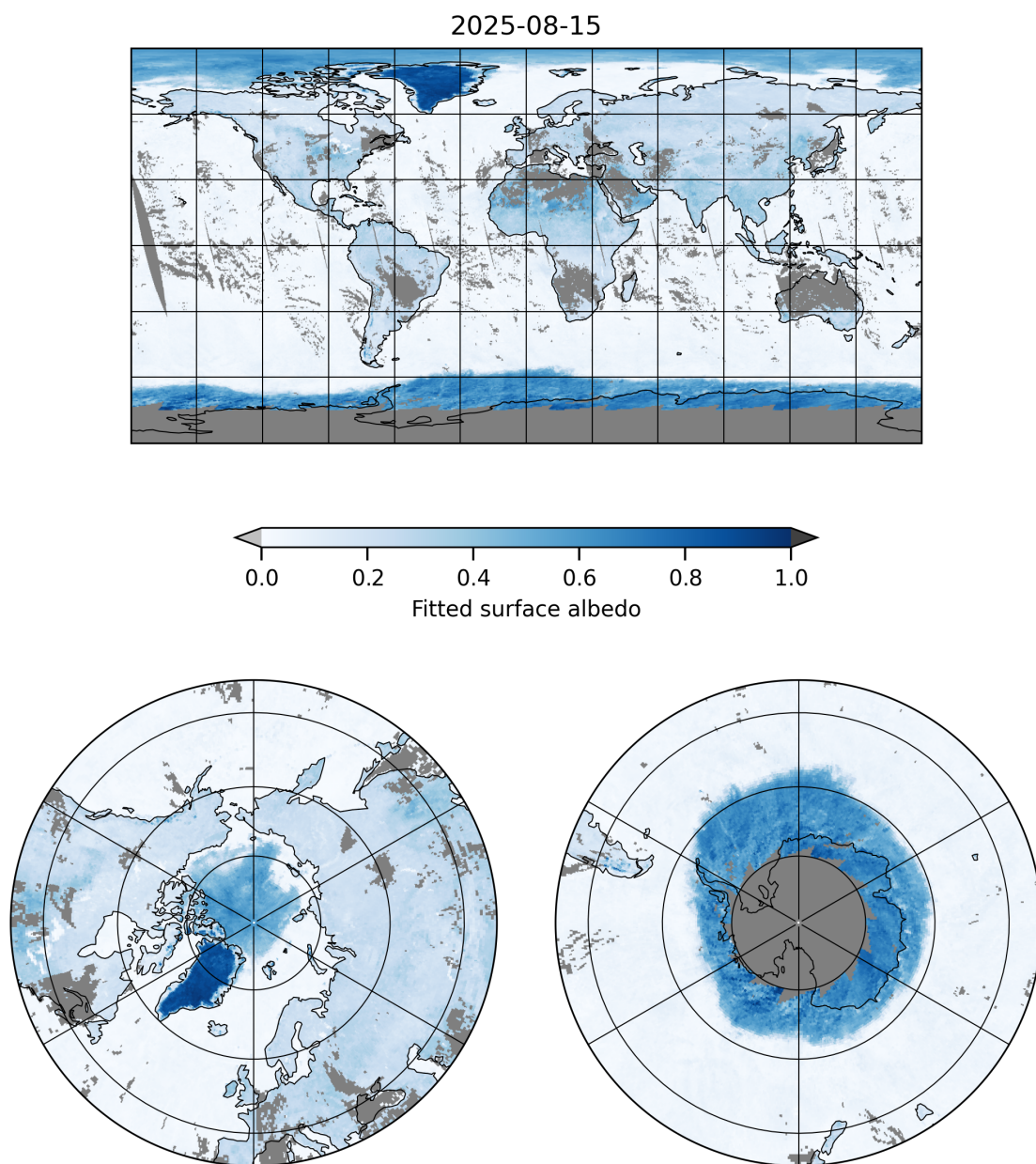


Figure 10: Map of “Fitted surface albedo” for 2025-08-15 to 2025-08-16

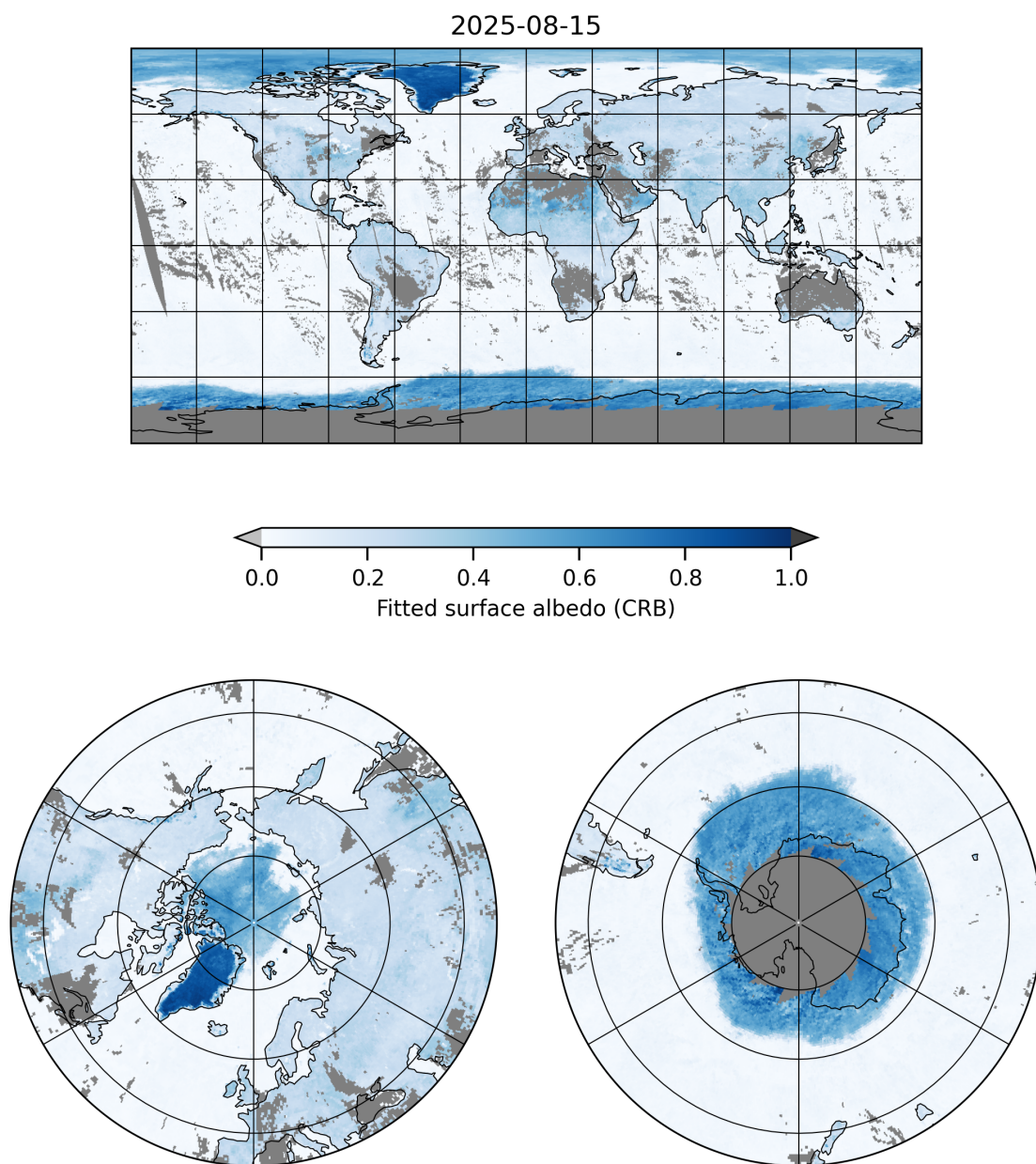


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16

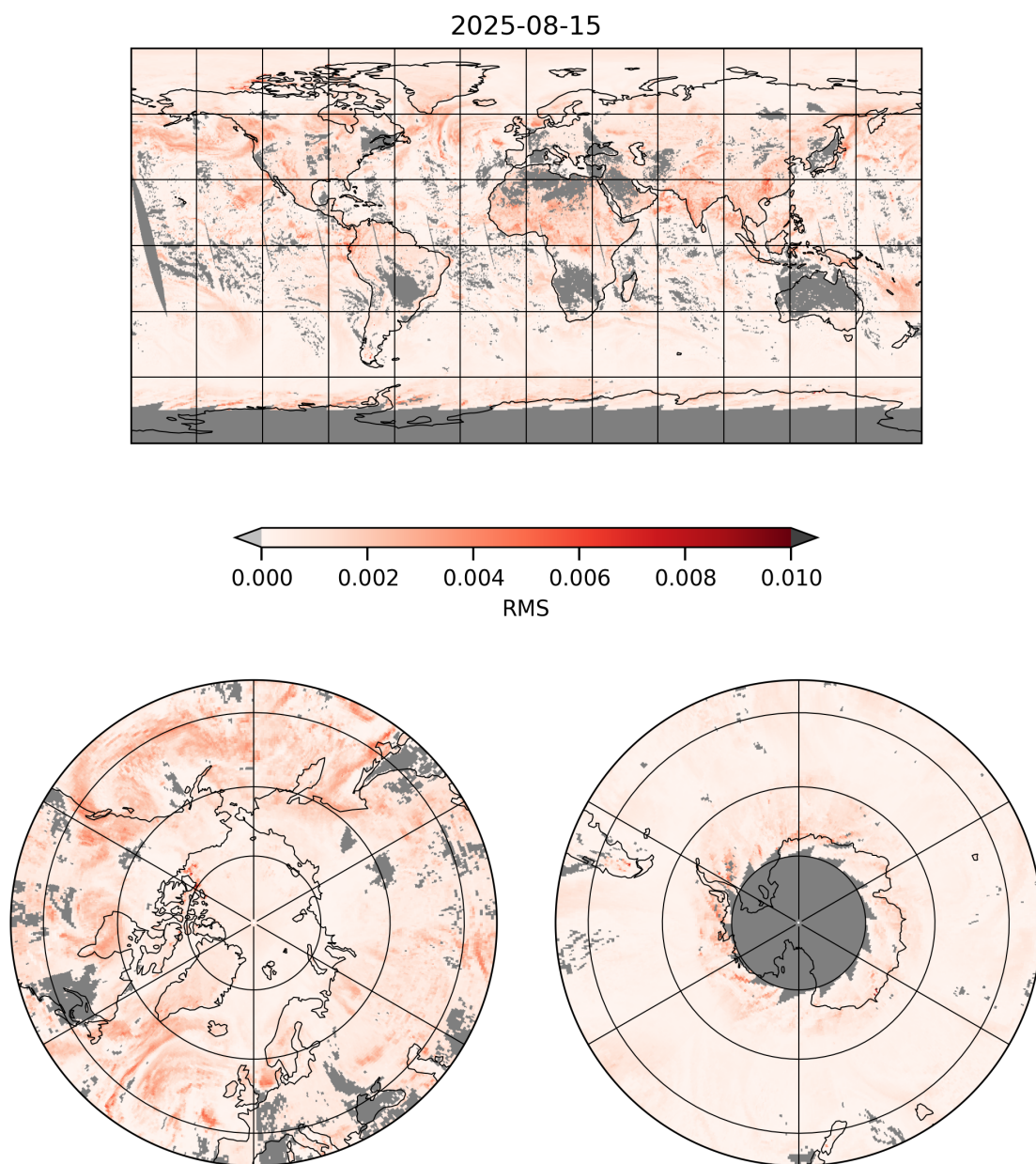


Figure 12: Map of “RMS” for 2025-08-15 to 2025-08-16

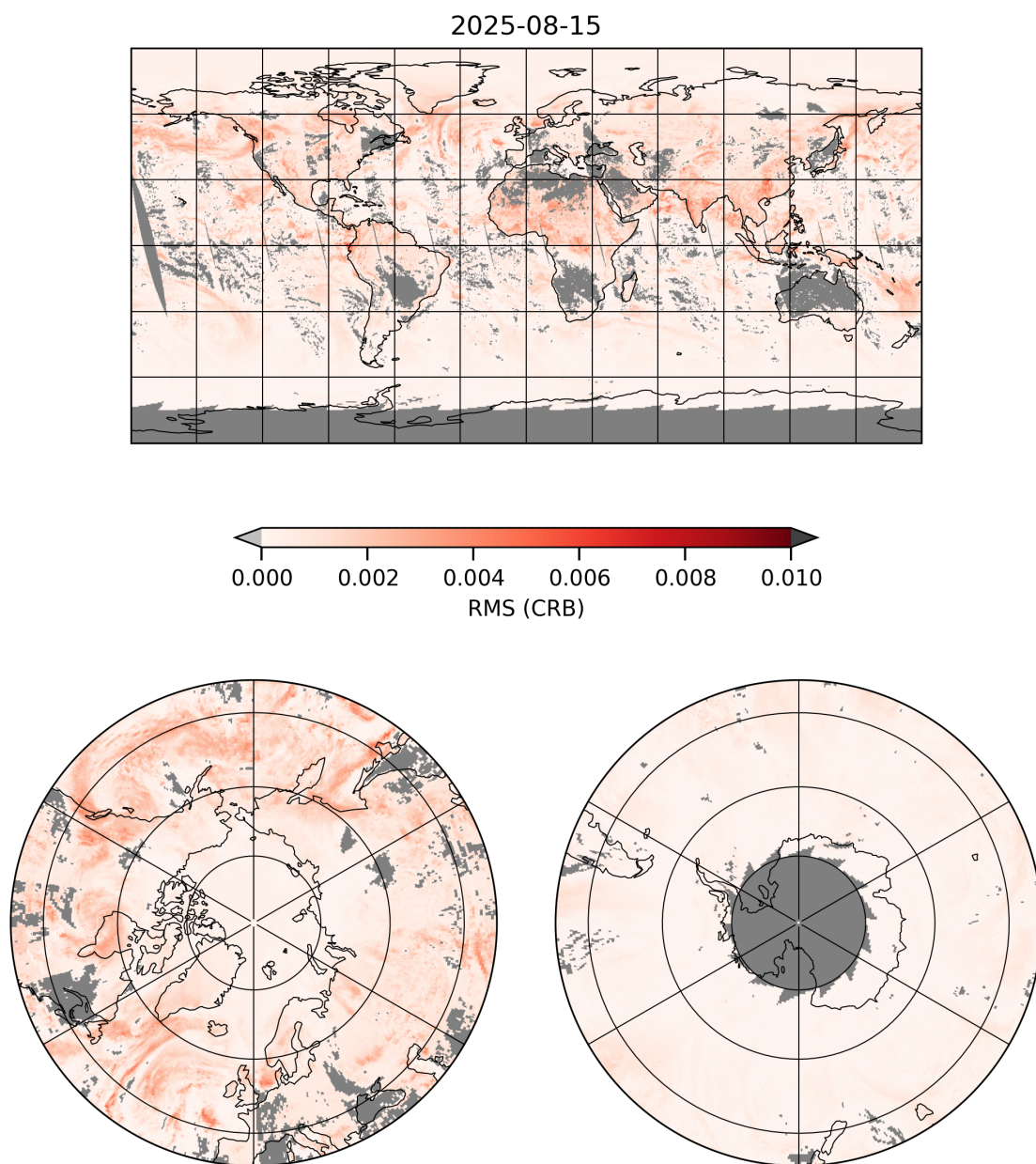


Figure 13: Map of “RMS (CRB)” for 2025-08-15 to 2025-08-16

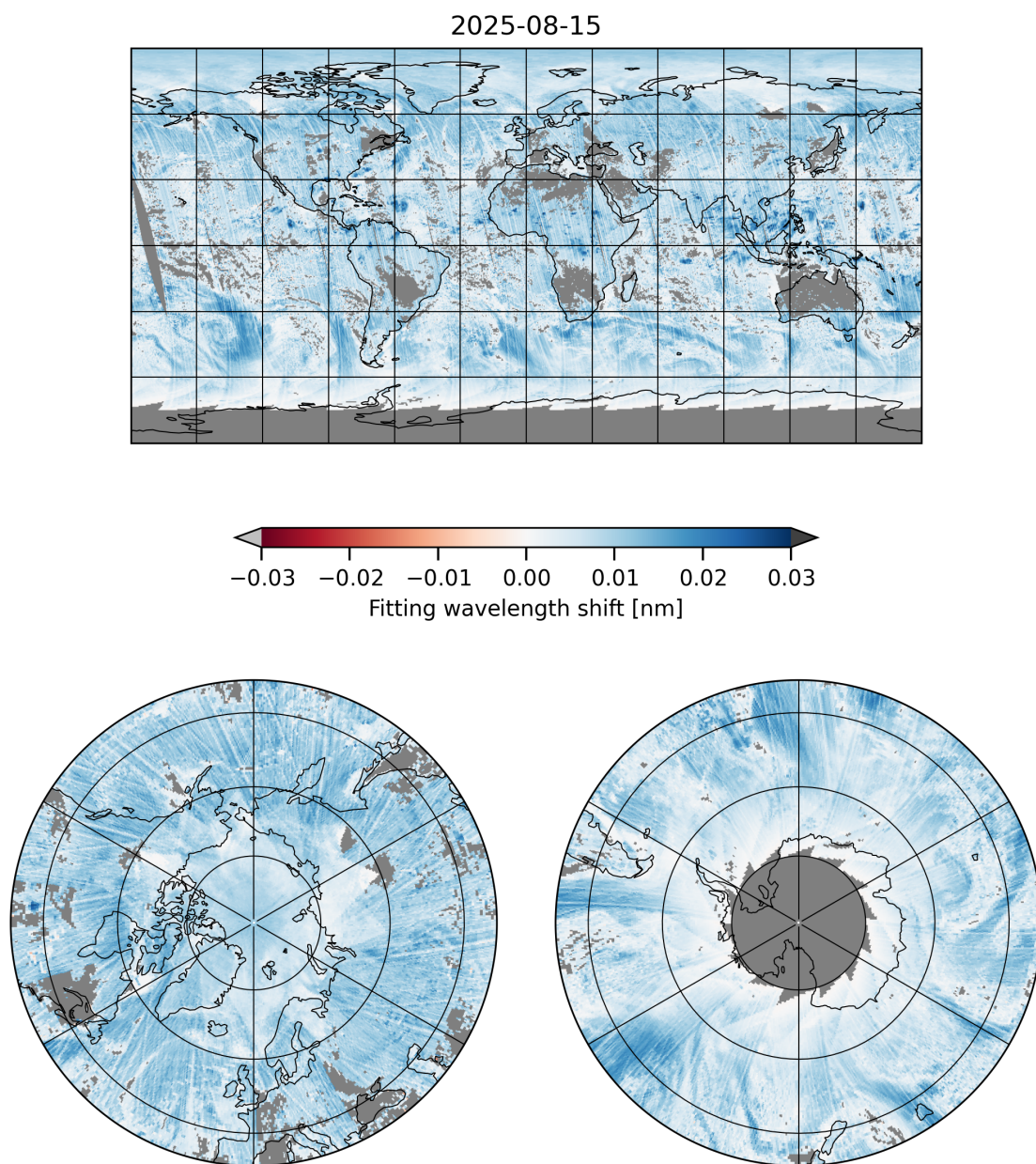


Figure 14: Map of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16

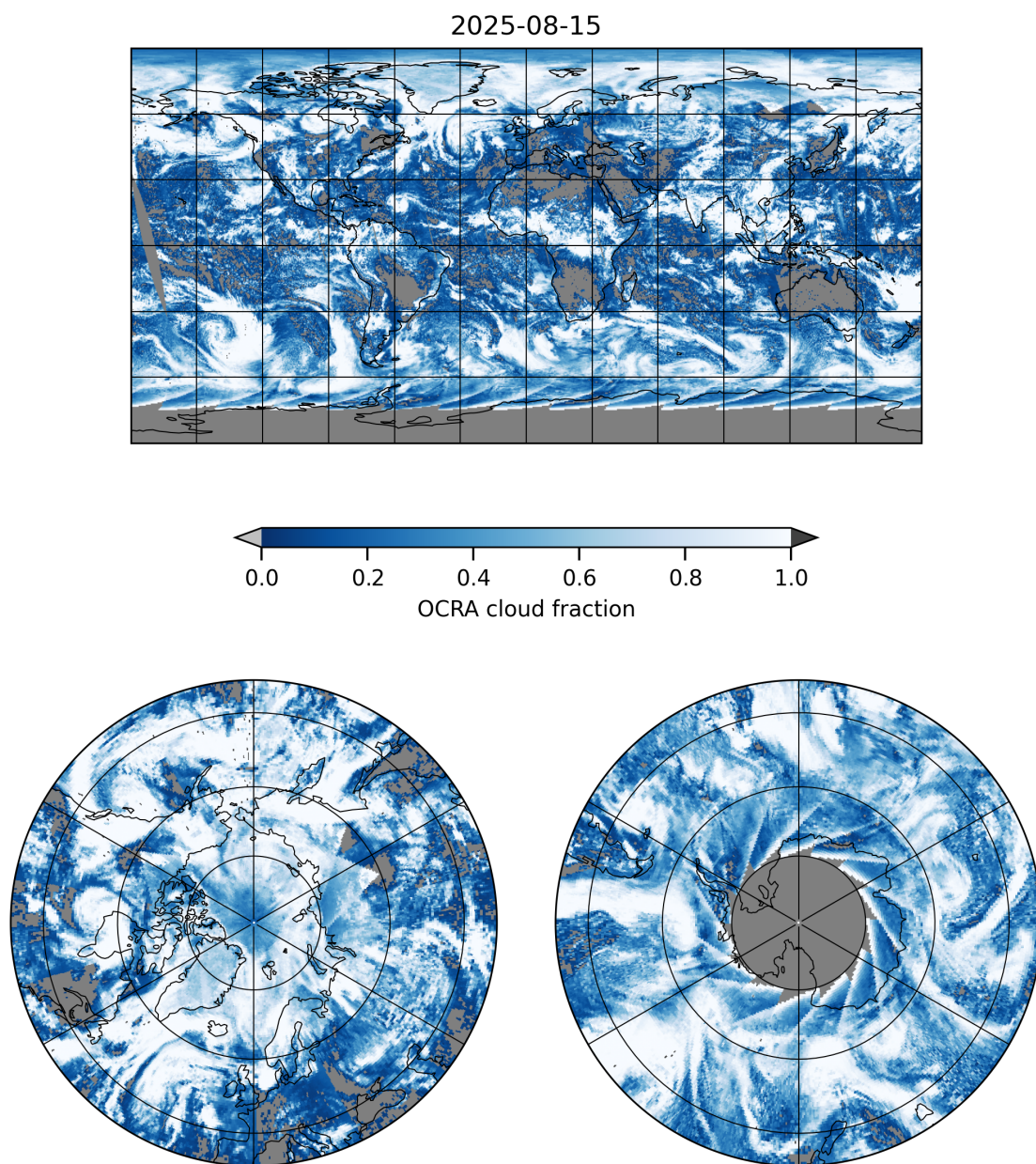
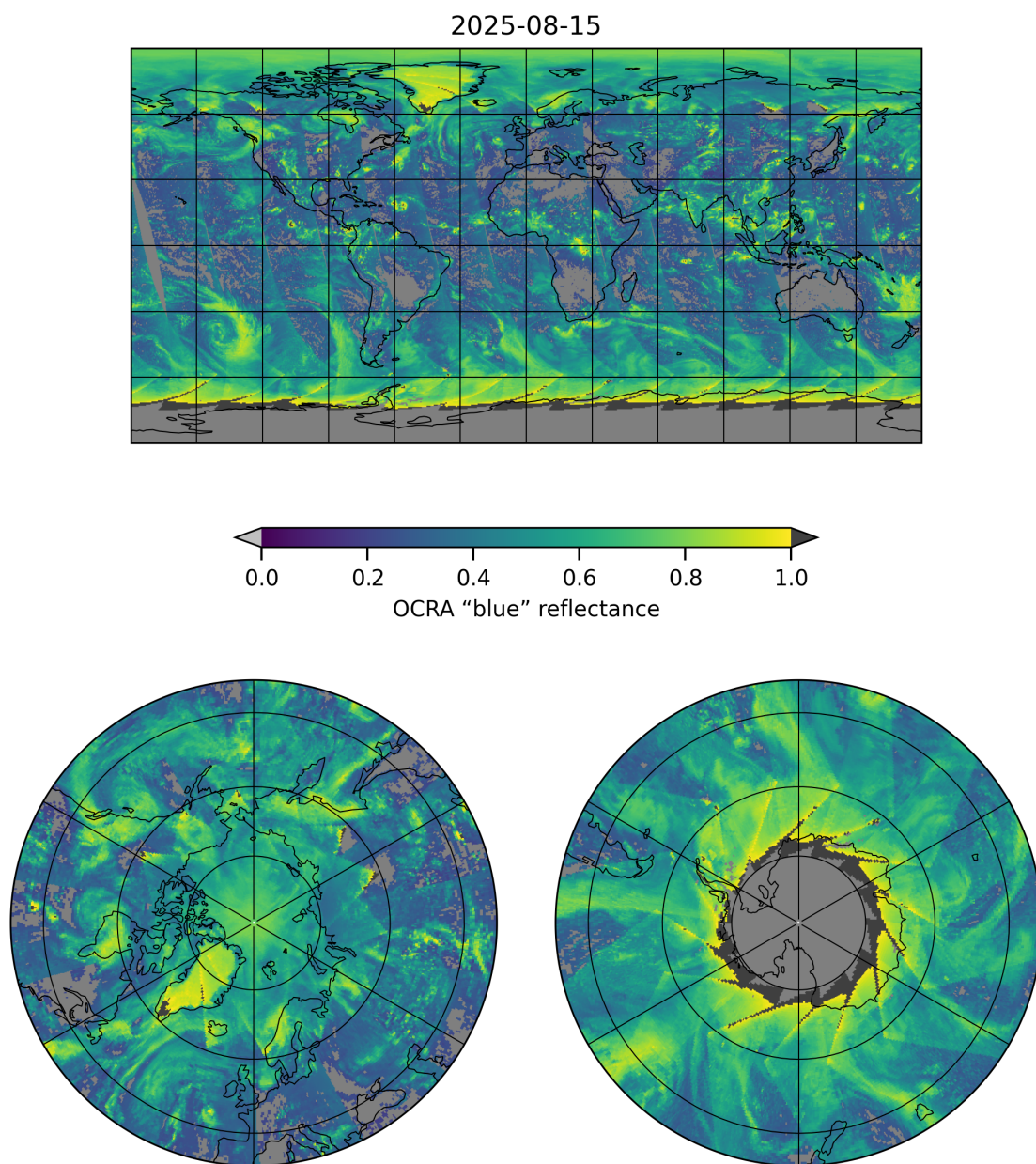


Figure 15: Map of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16



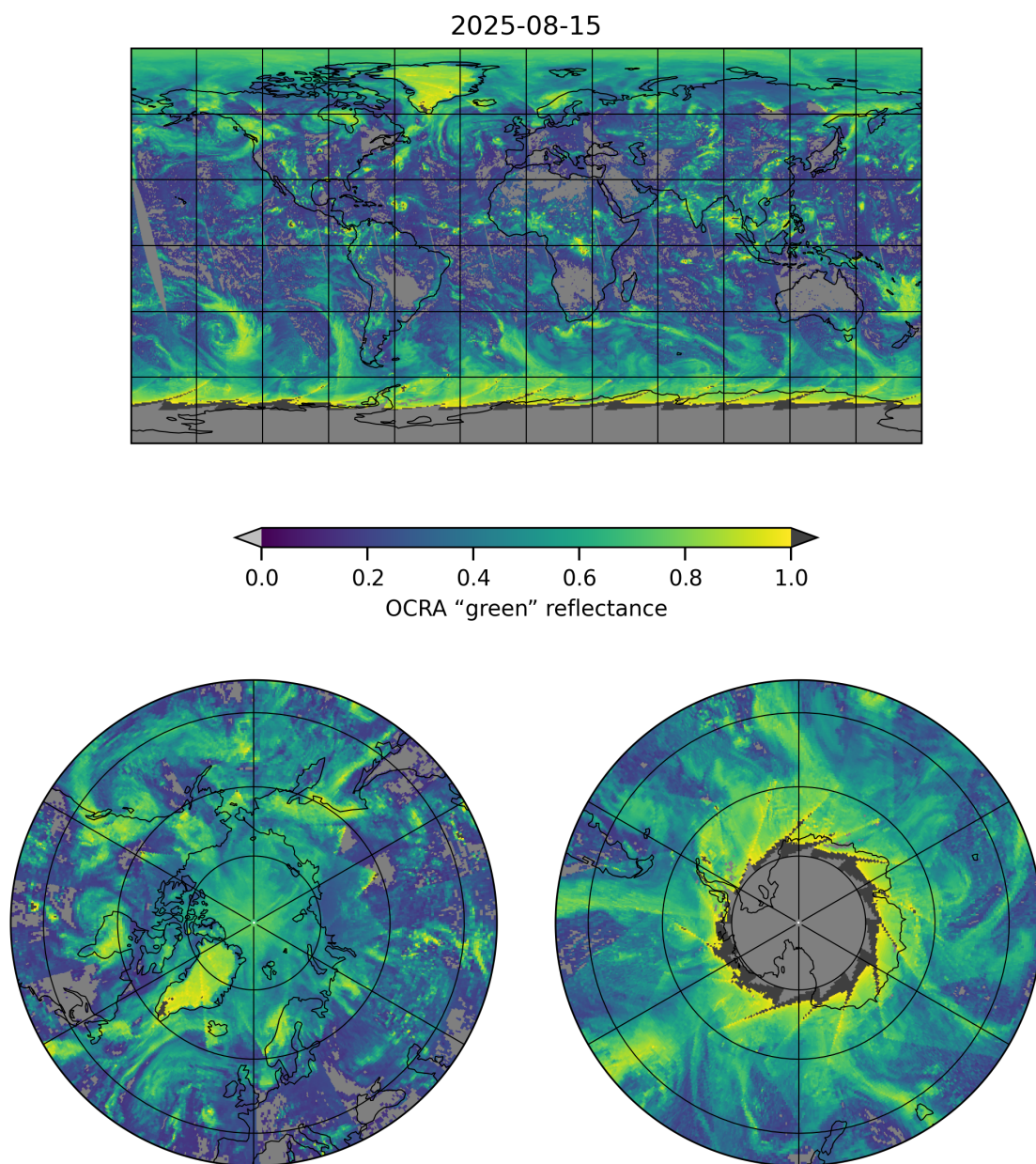


Figure 17: Map of "OCRA "green" reflectance" for 2025-08-15 to 2025-08-16

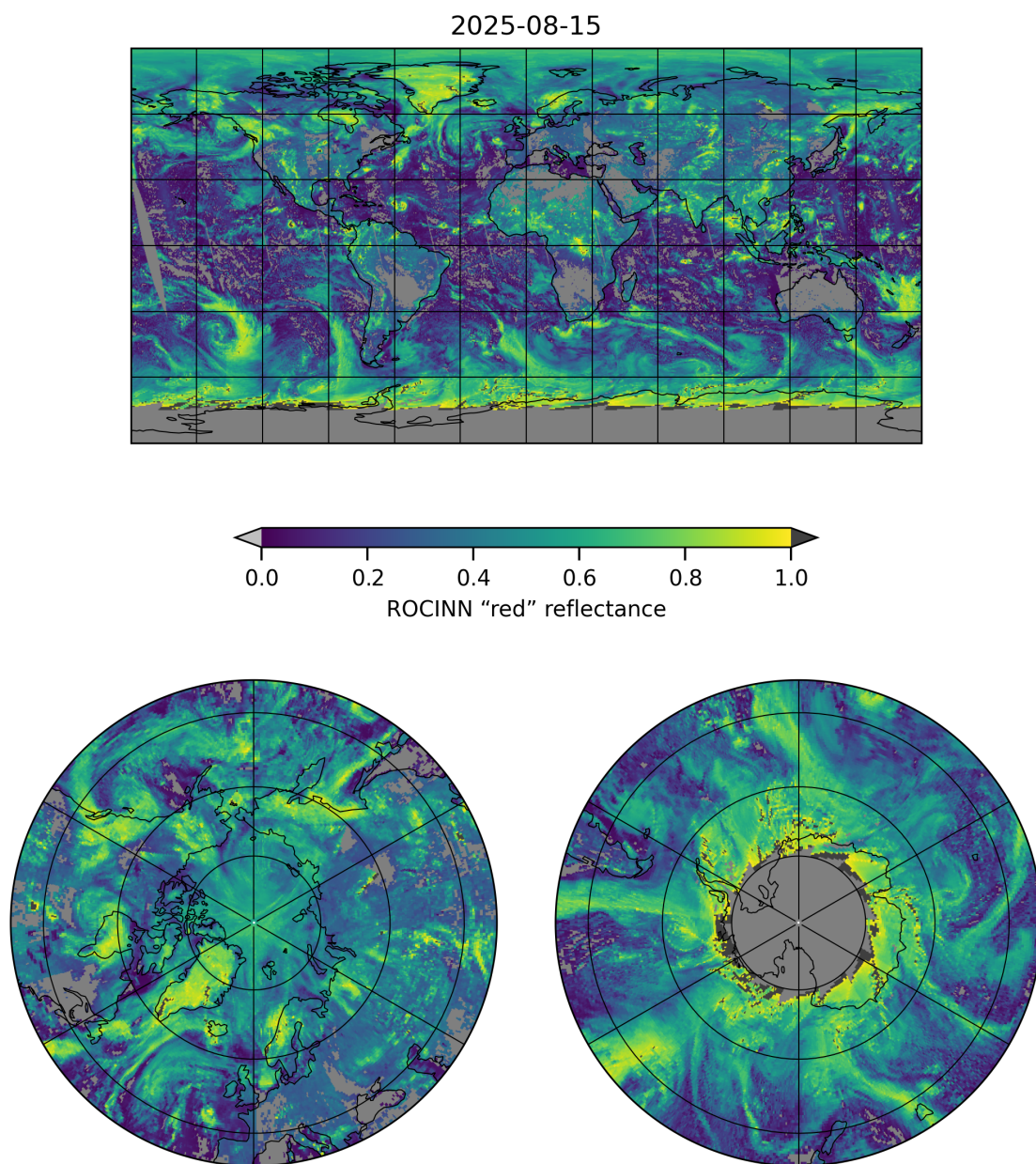


Figure 18: Map of "ROCINN "red" reflectance" for 2025-08-15 to 2025-08-16

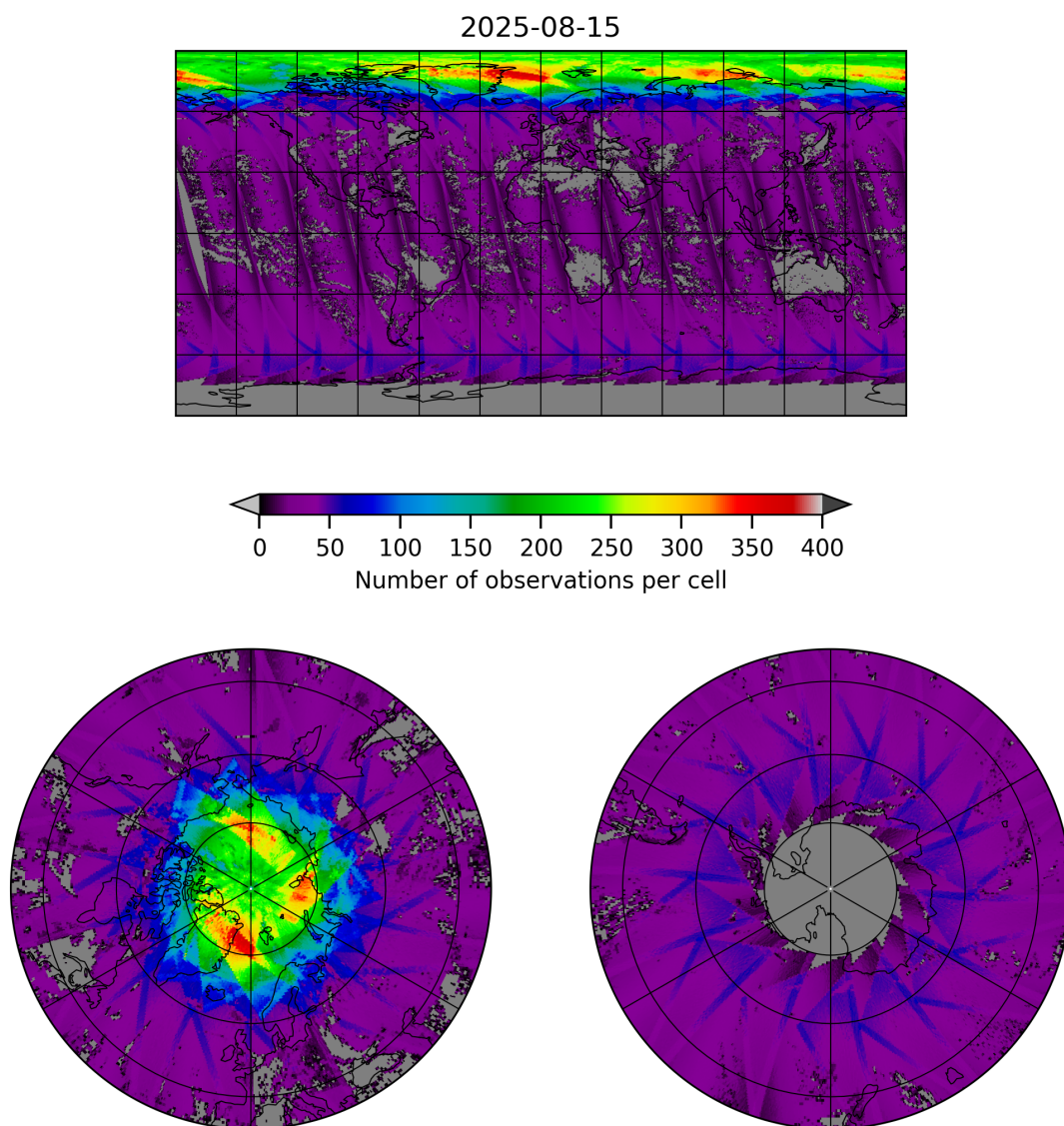


Figure 19: Map of the number of observations for 2025-08-15 to 2025-08-16

7 Zonal average

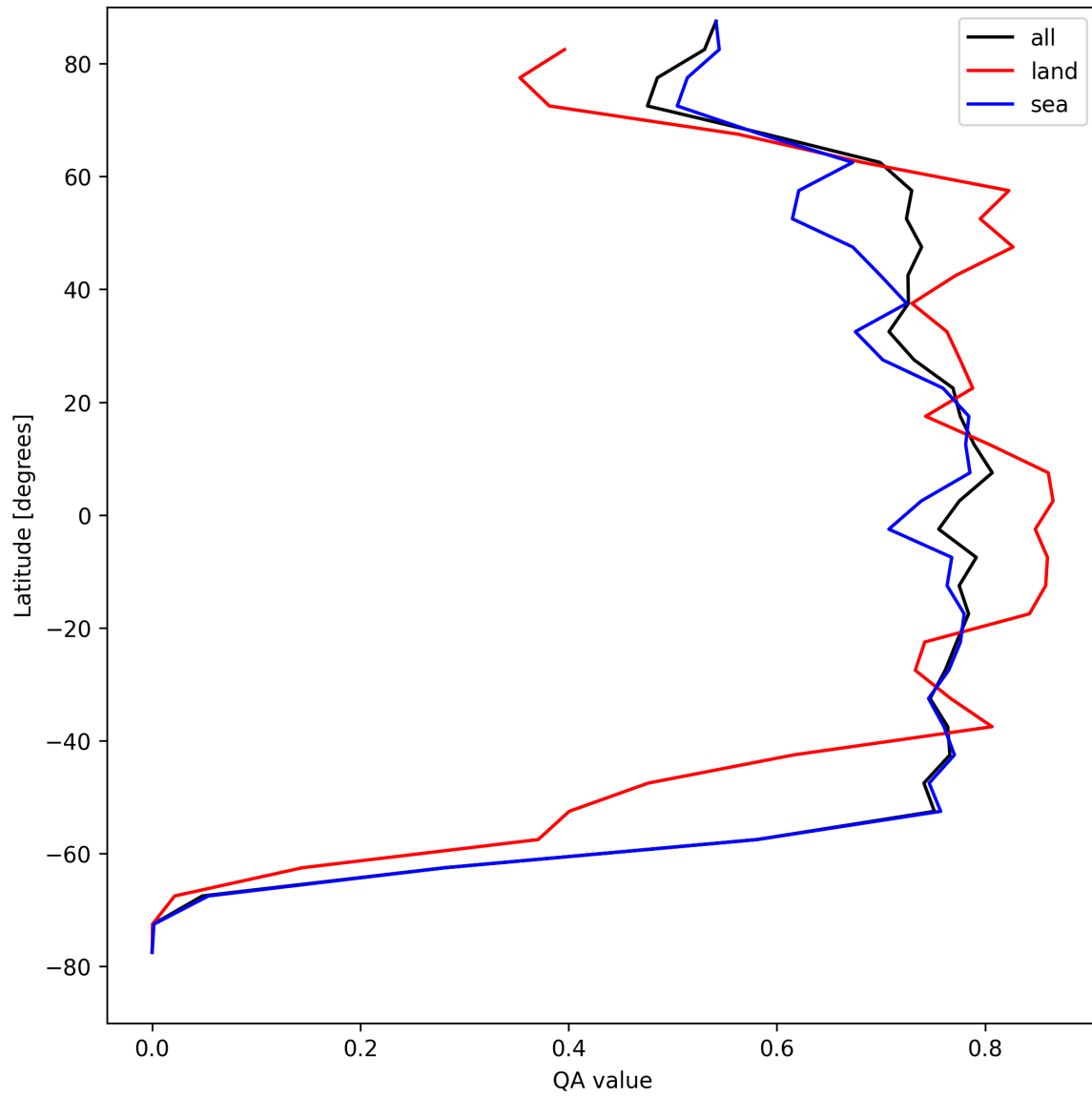


Figure 20: Zonal average of “QA value” for 2025-08-15 to 2025-08-16.

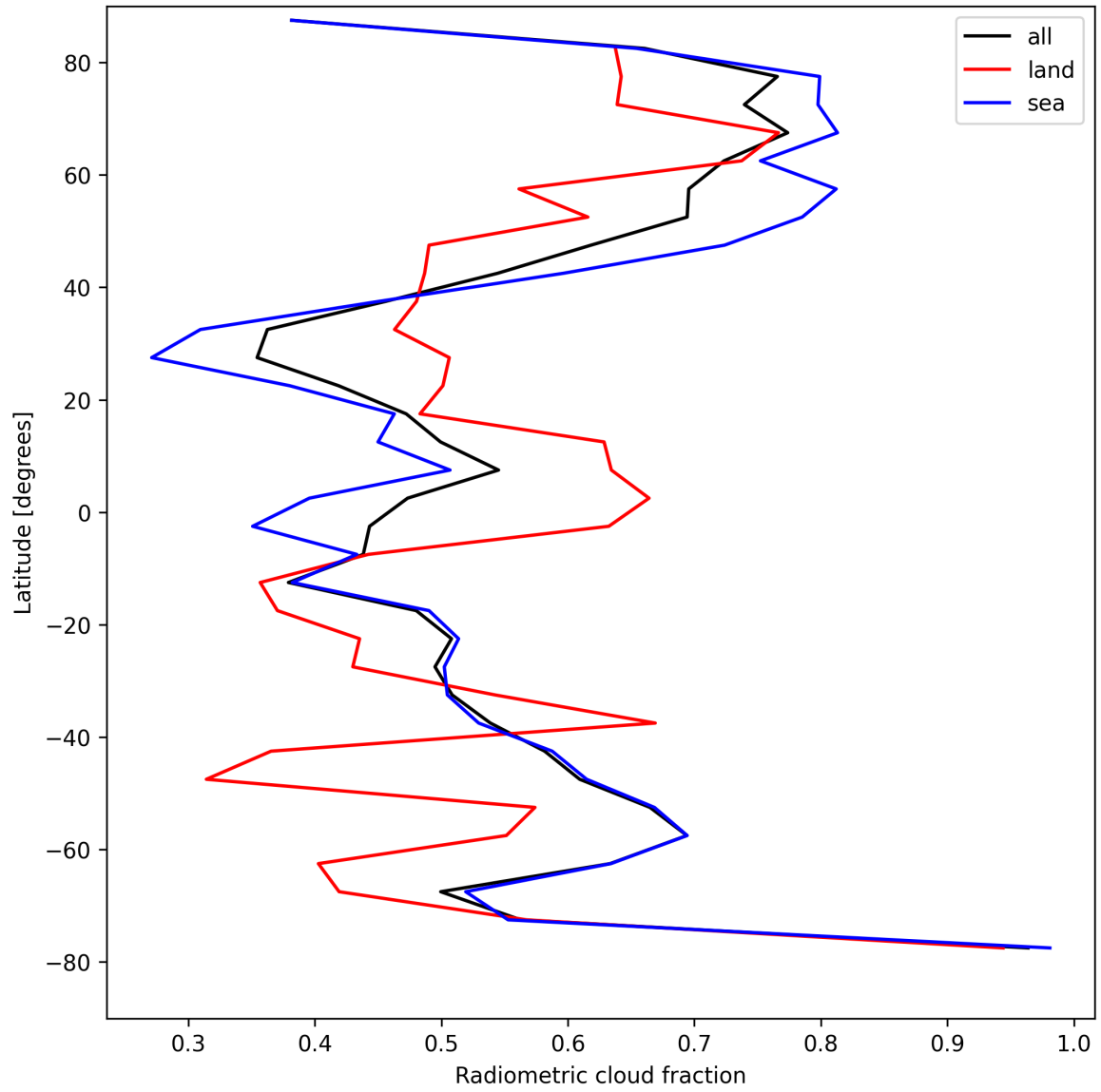


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16.

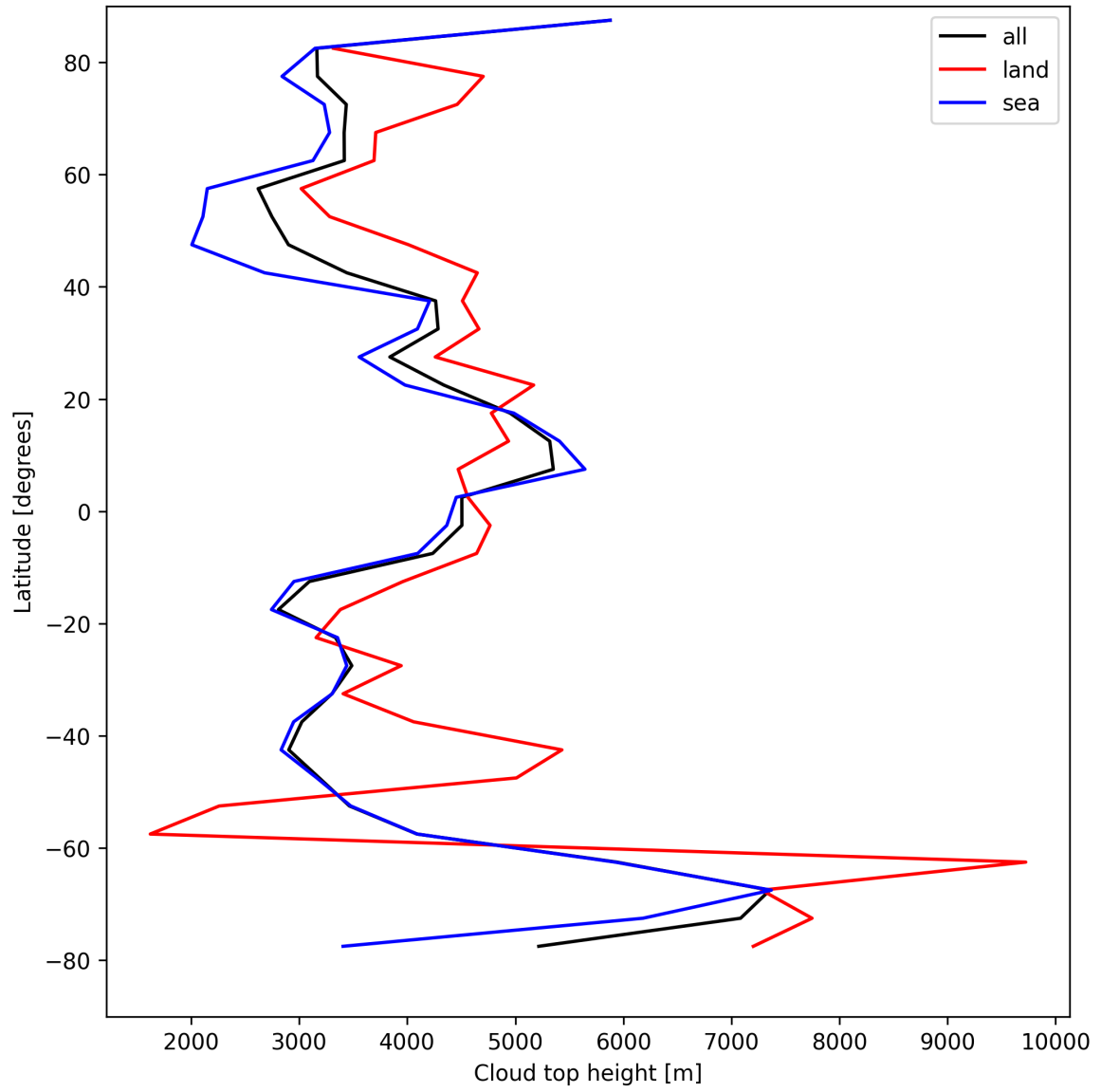


Figure 22: Zonal average of “Cloud top height” for 2025-08-15 to 2025-08-16.

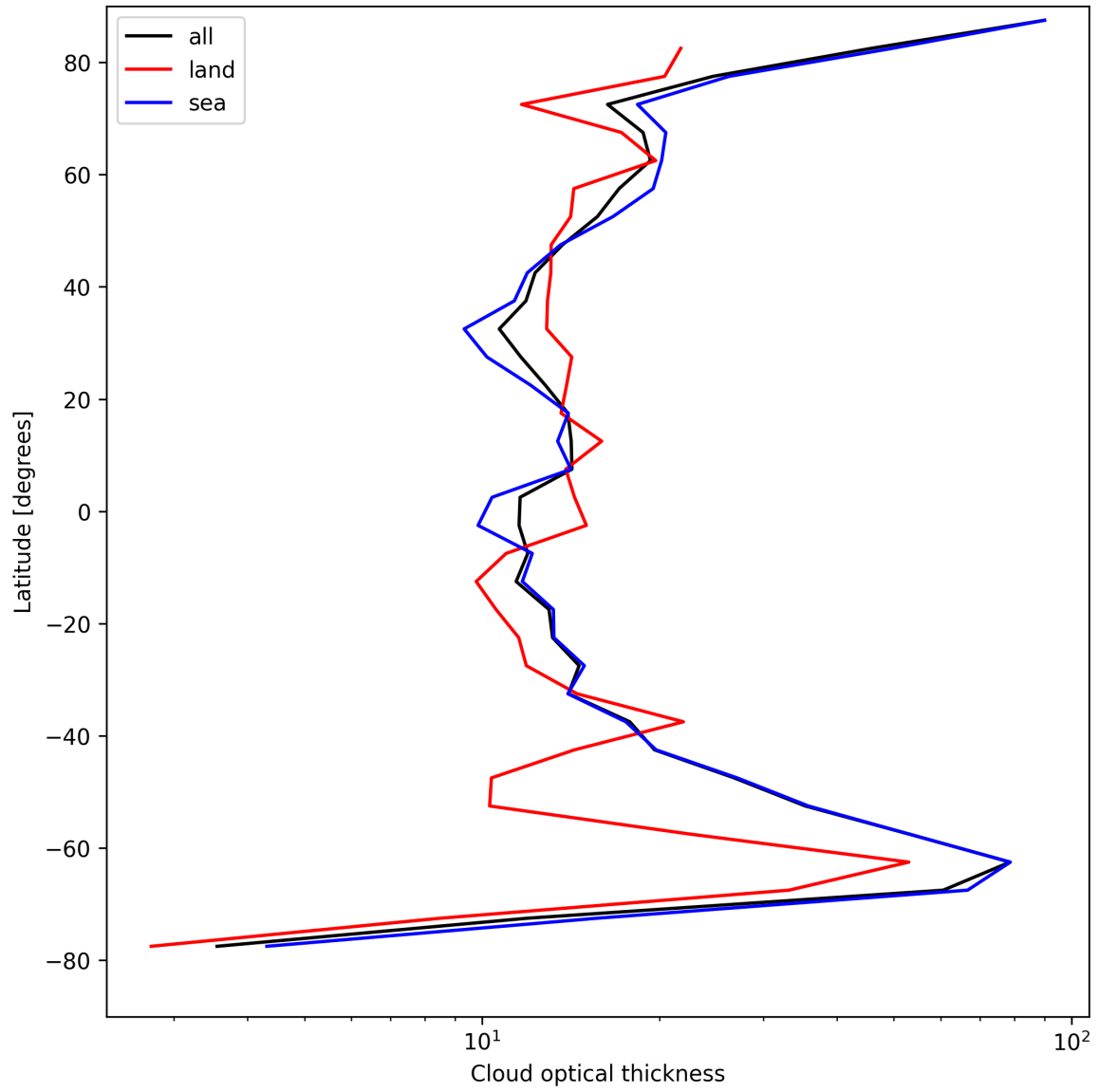


Figure 23: Zonal average of “Cloud optical thickness” for 2025-08-15 to 2025-08-16.

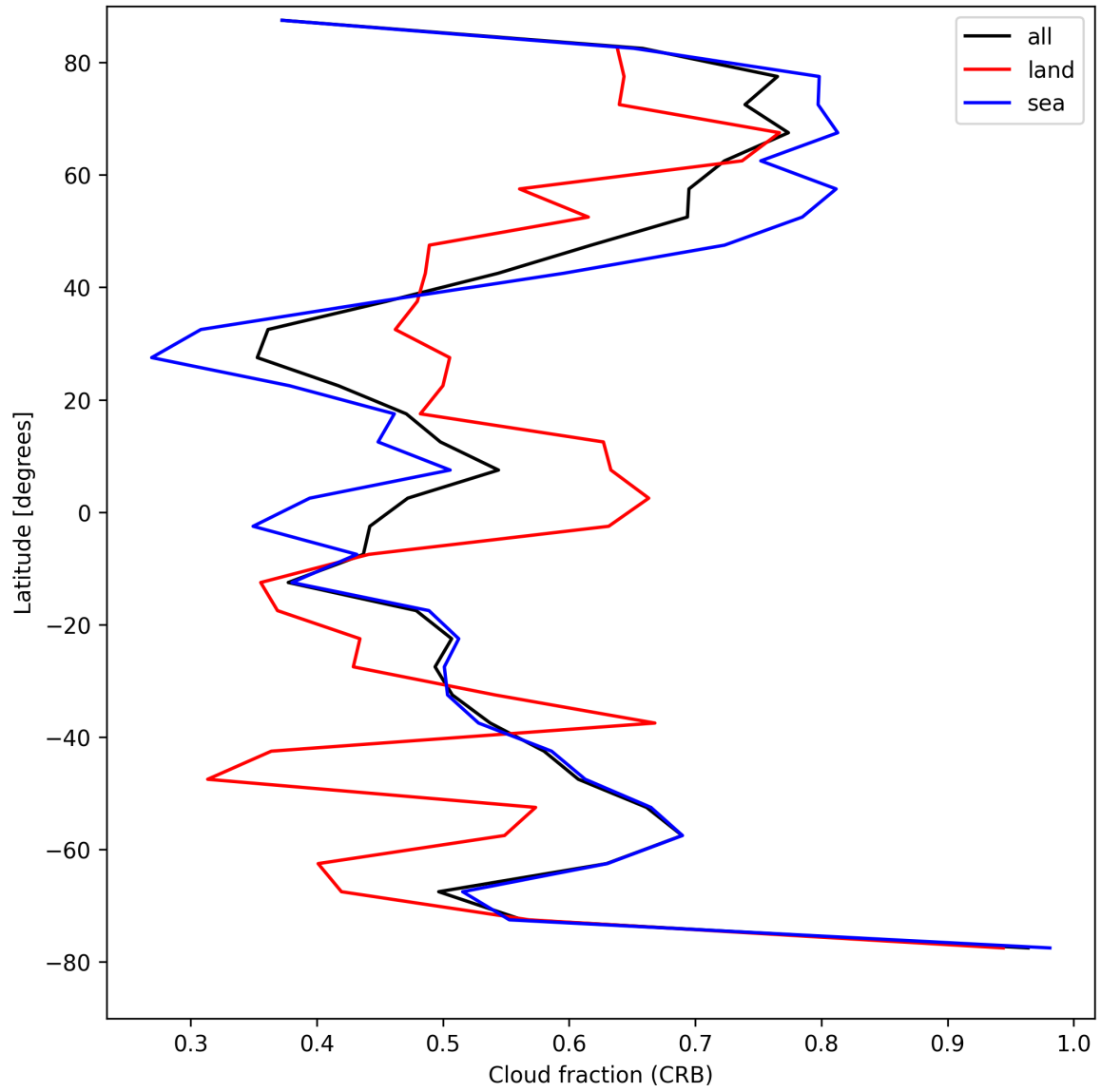


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16.

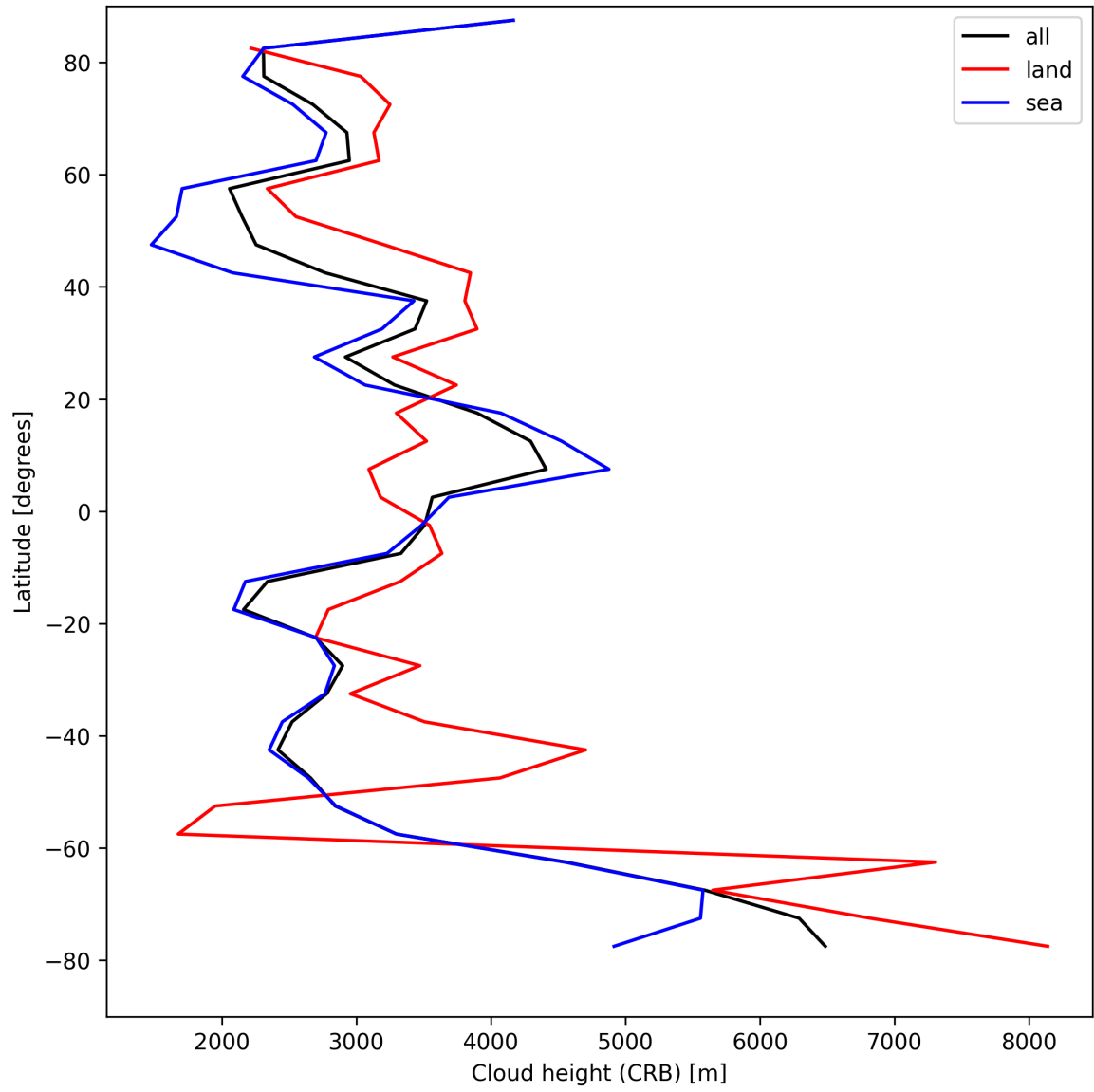


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16.

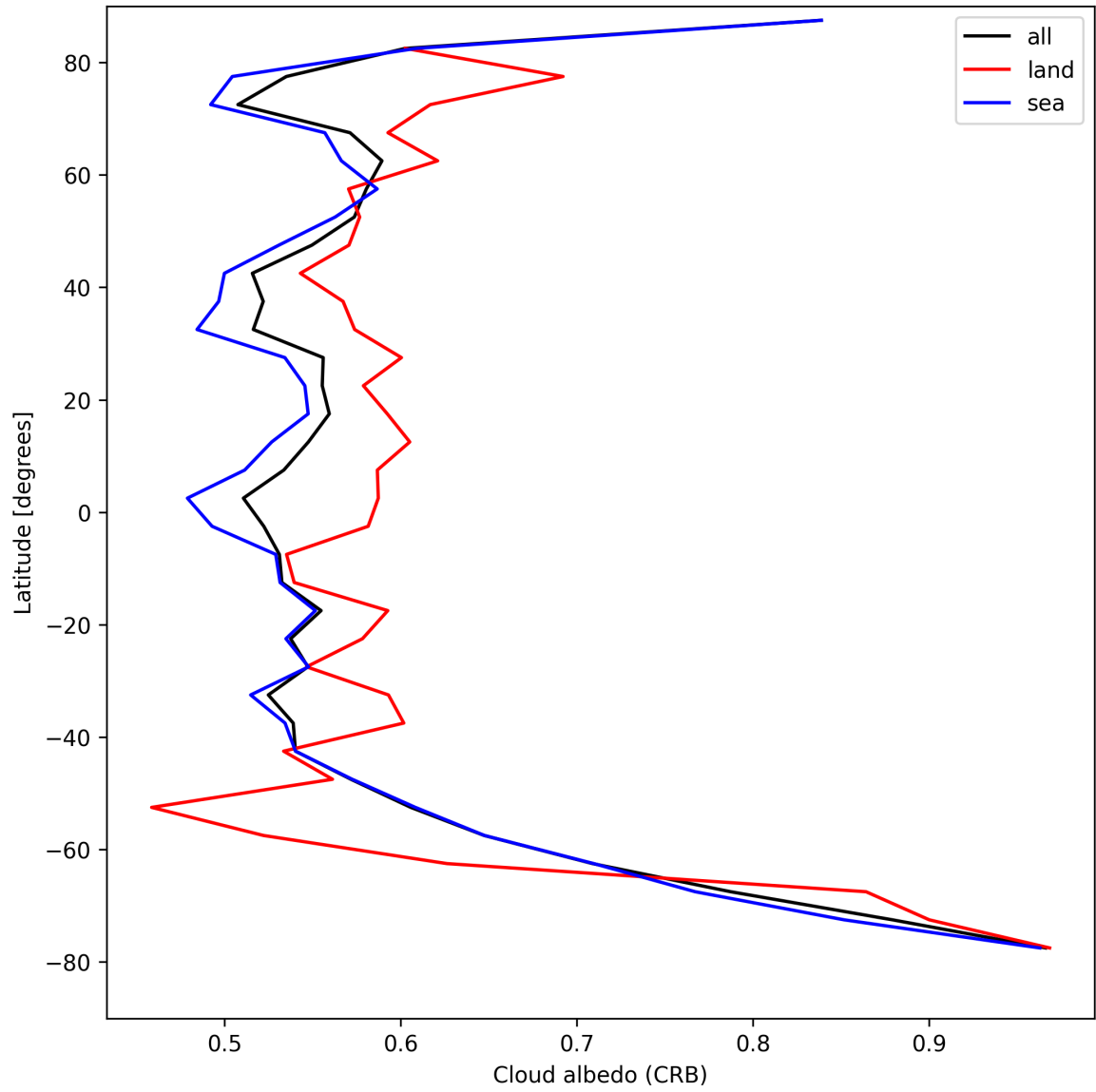


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16.

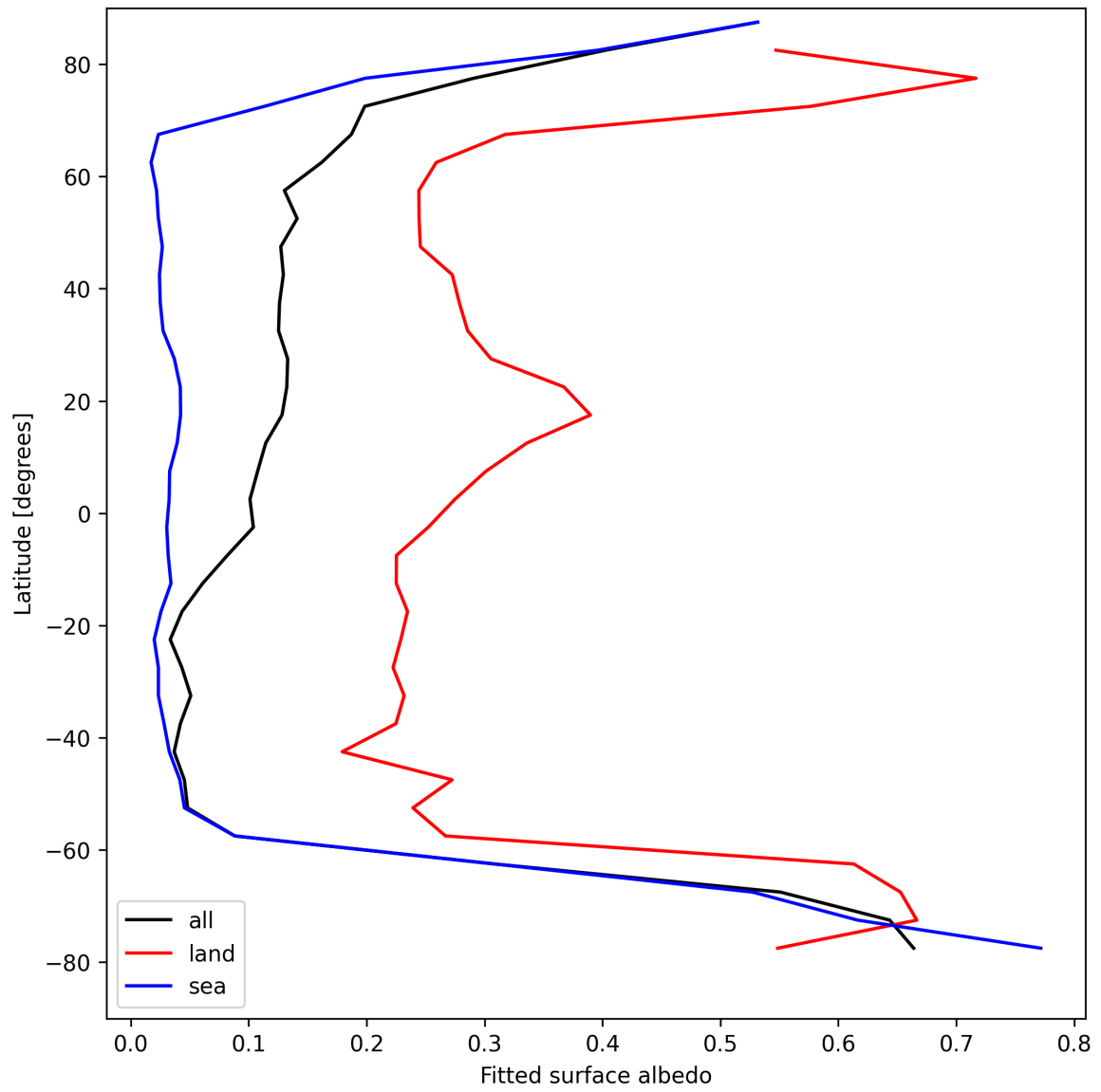


Figure 27: Zonal average of “Fitted surface albedo” for 2025-08-15 to 2025-08-16.

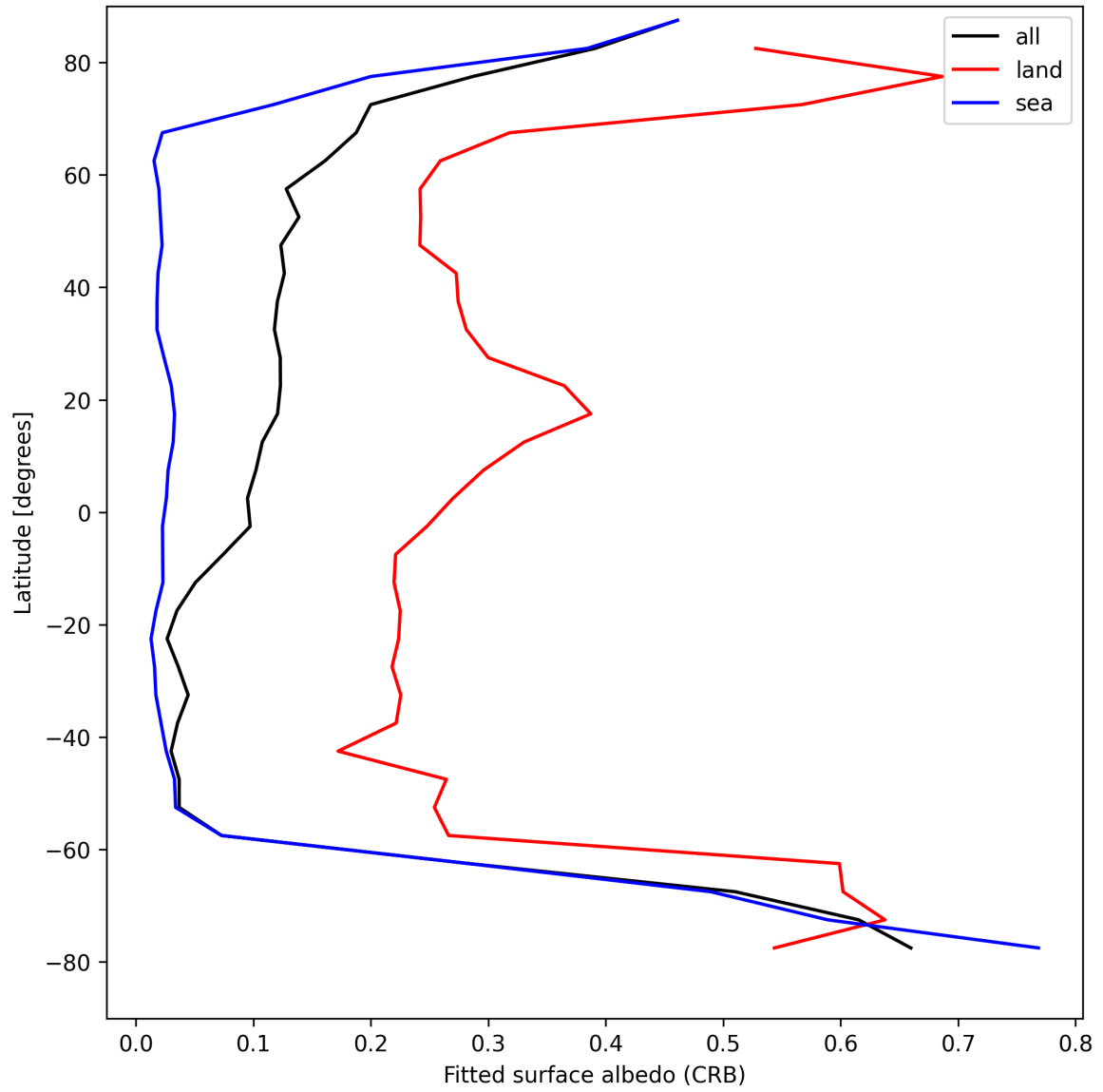


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16.

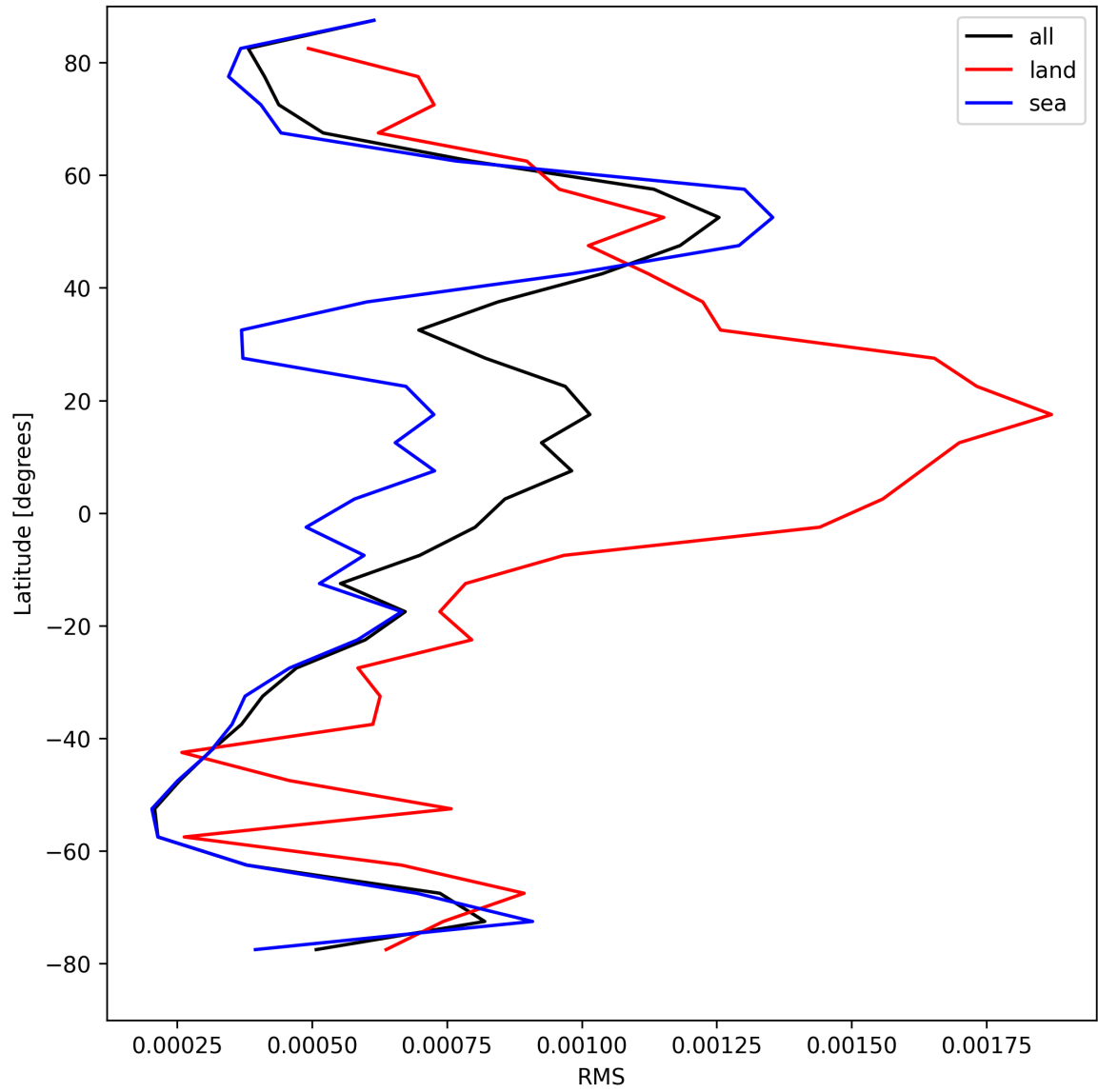


Figure 29: Zonal average of “RMS” for 2025-08-15 to 2025-08-16.

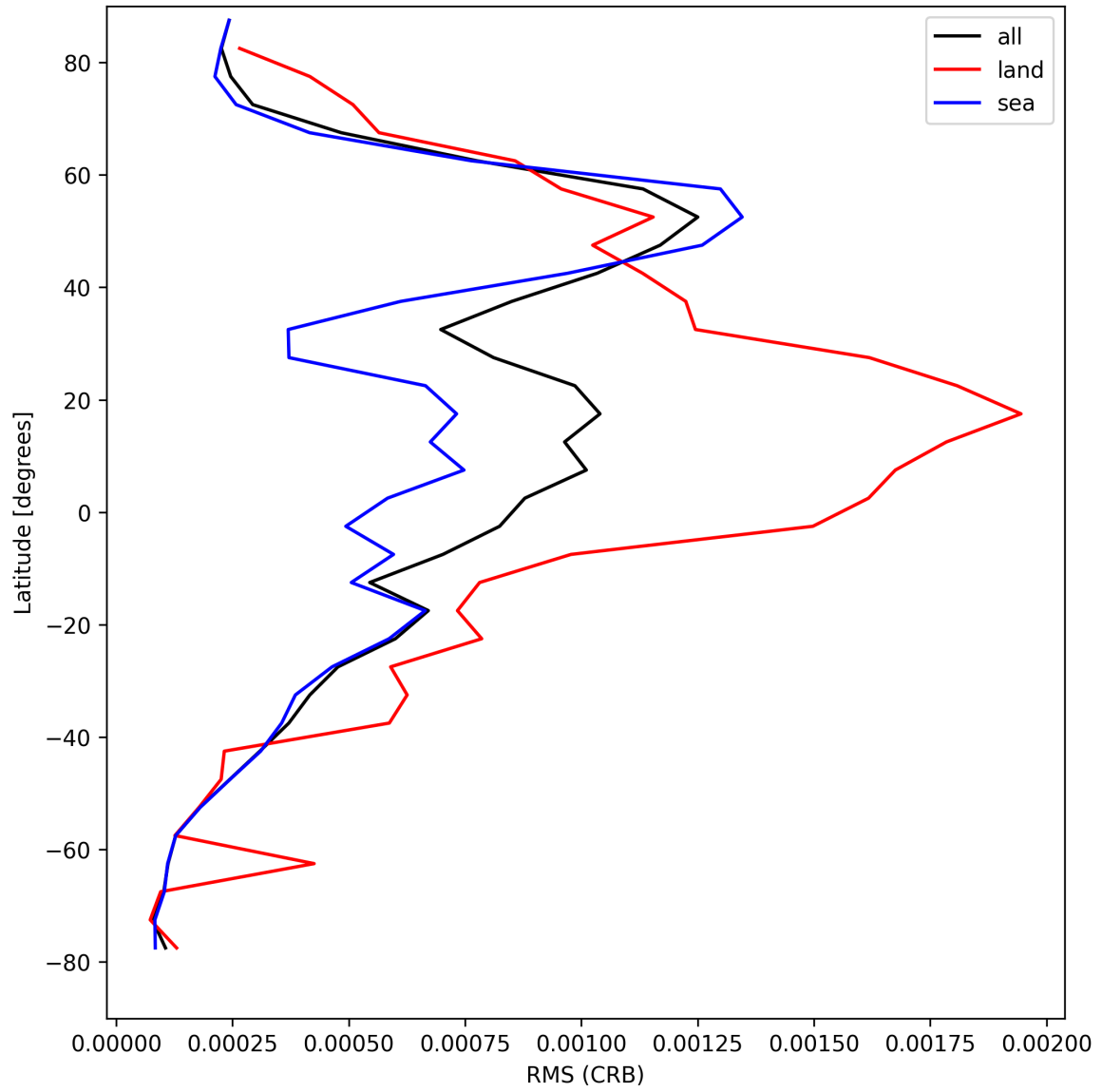


Figure 30: Zonal average of “RMS (CRB)” for 2025-08-15 to 2025-08-16.

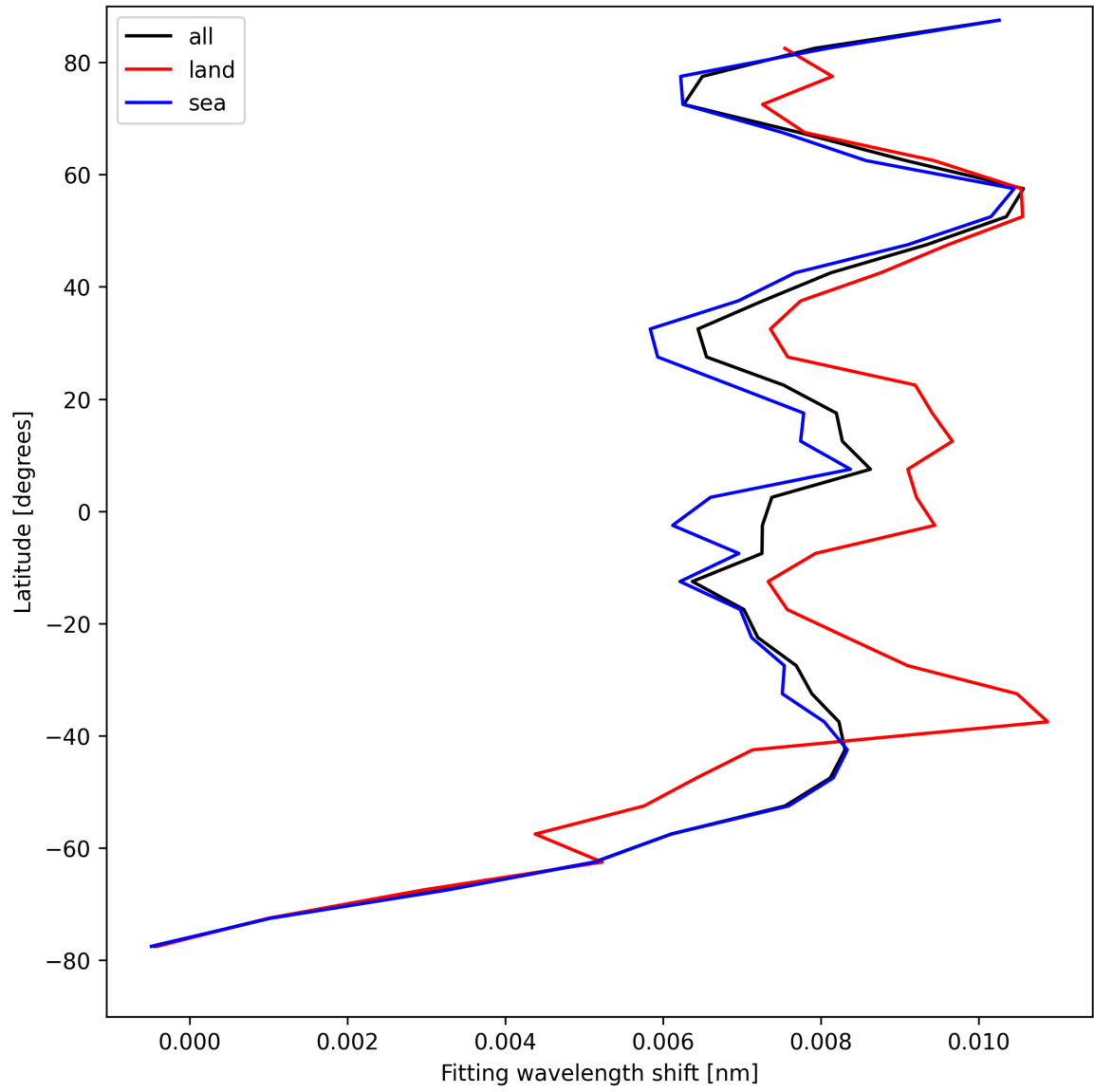


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16.

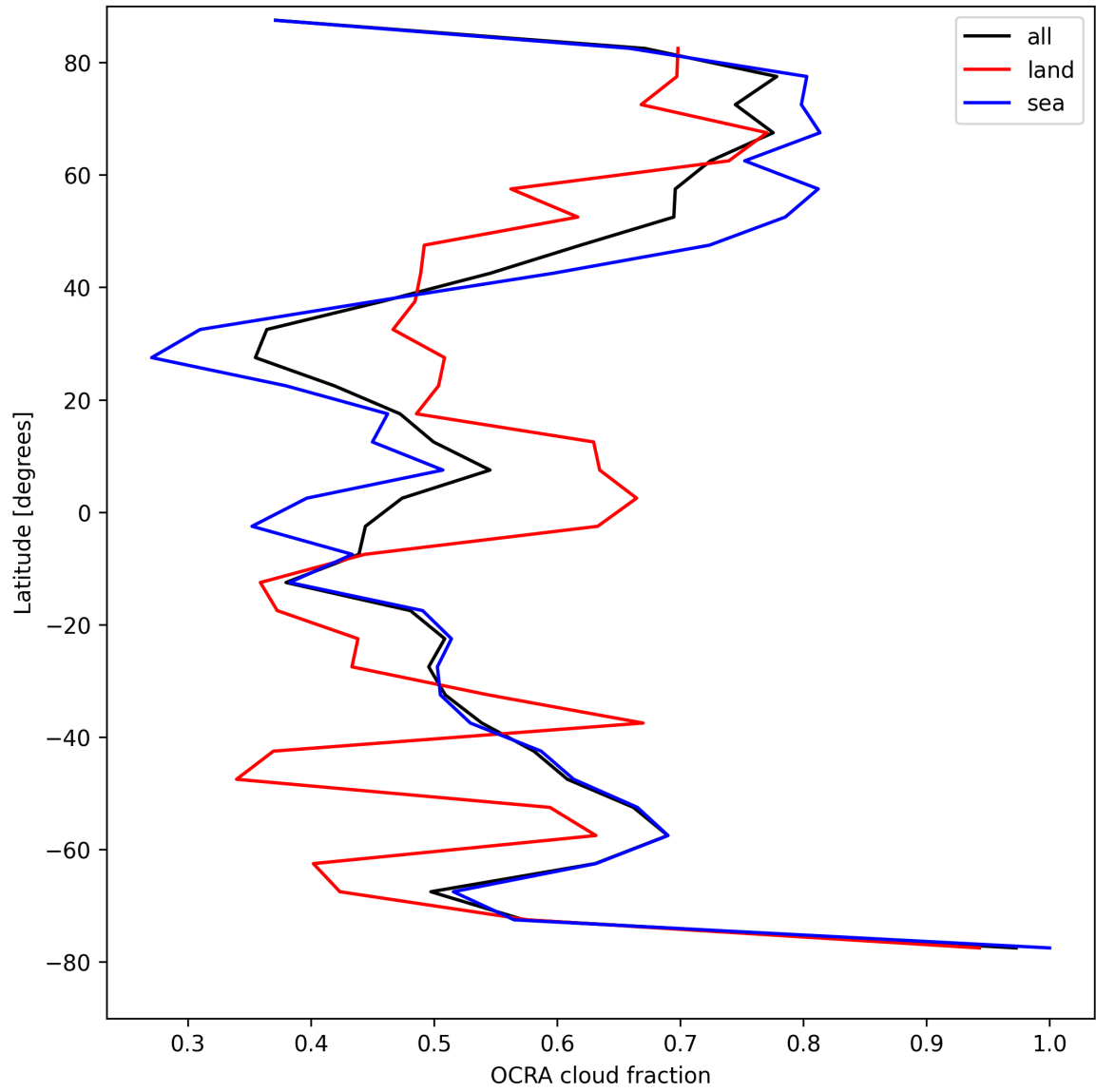


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16.

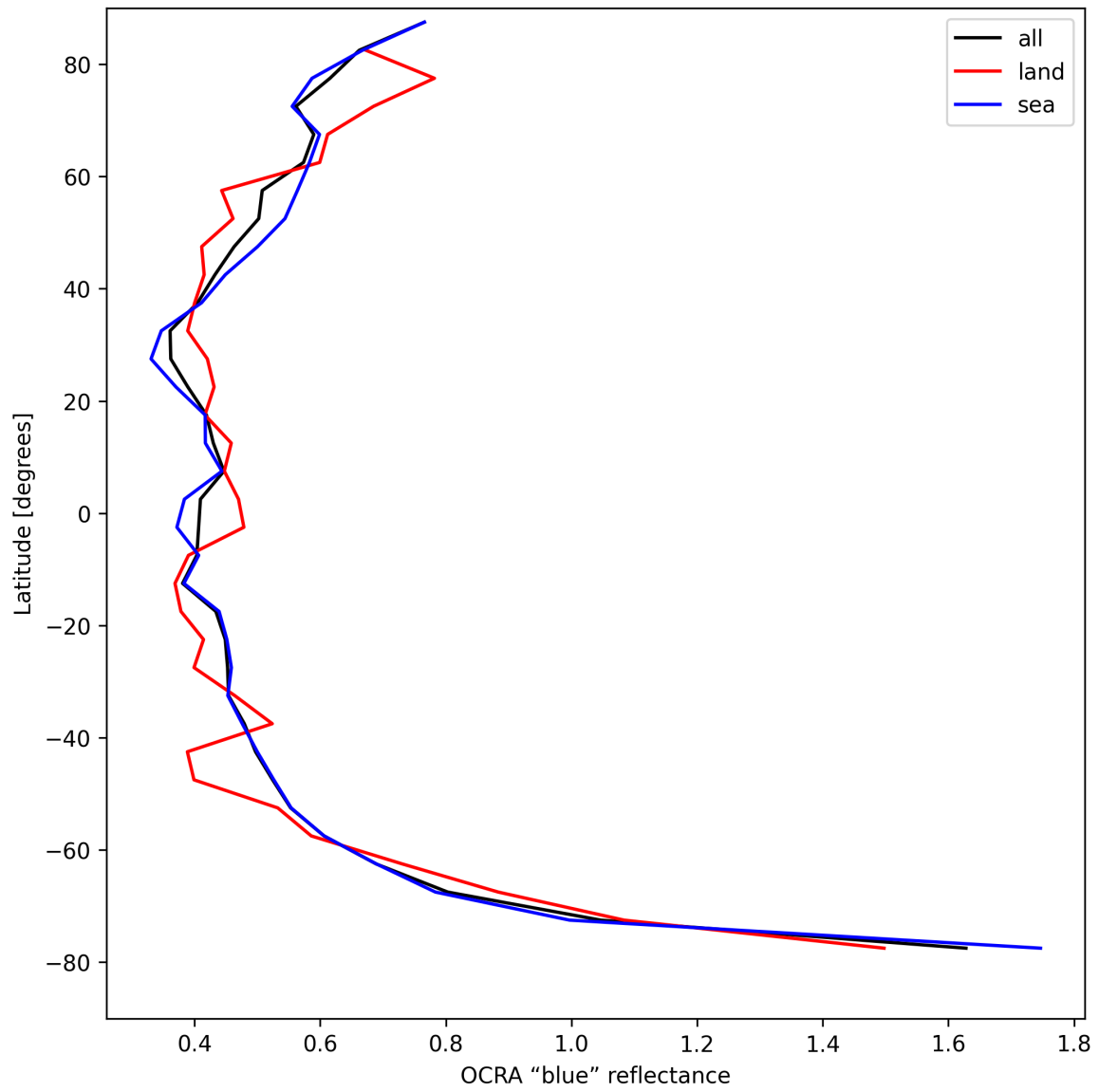


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16.

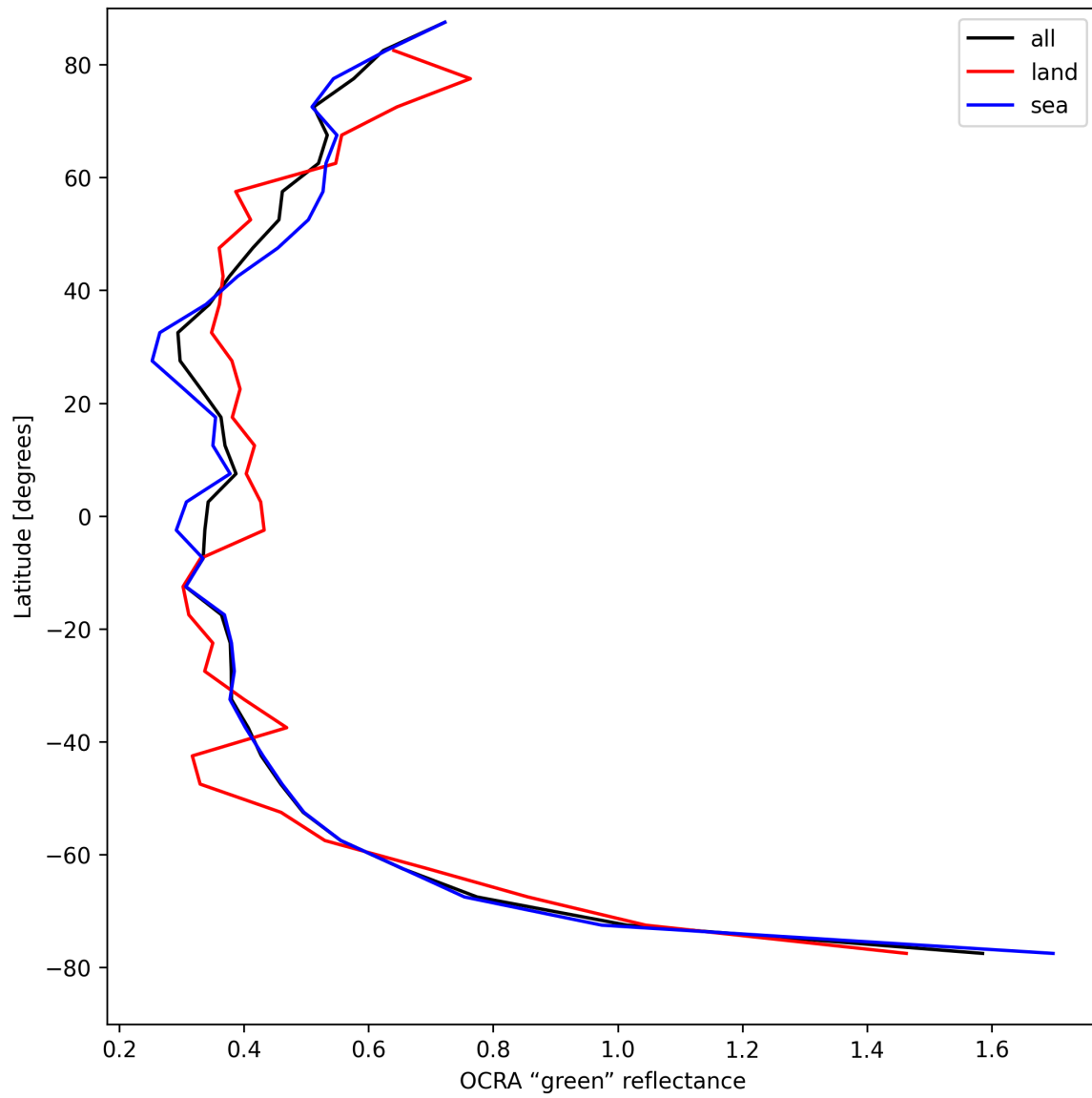


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16.

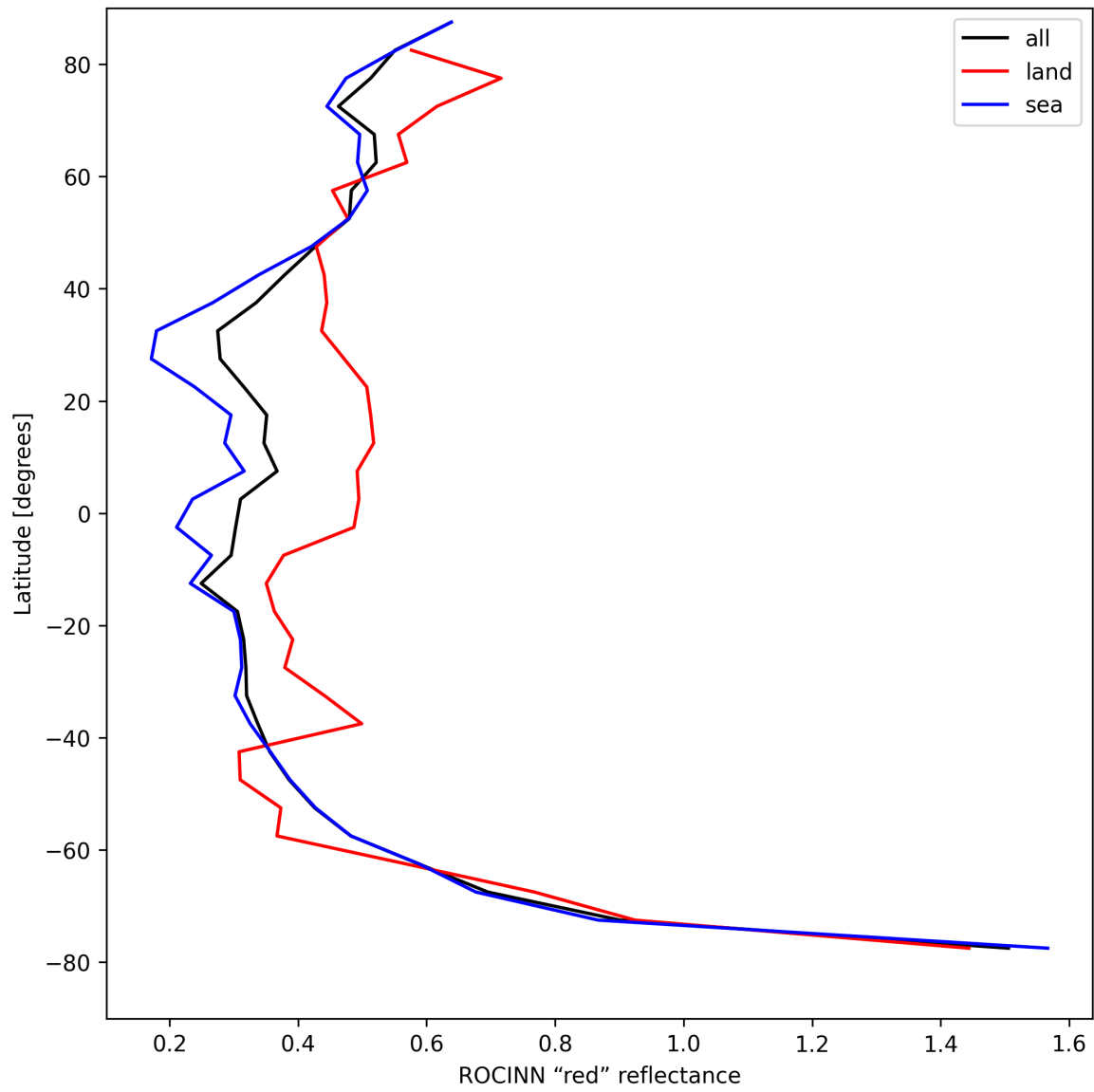


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-08-15 to 2025-08-16.

8 Histograms

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

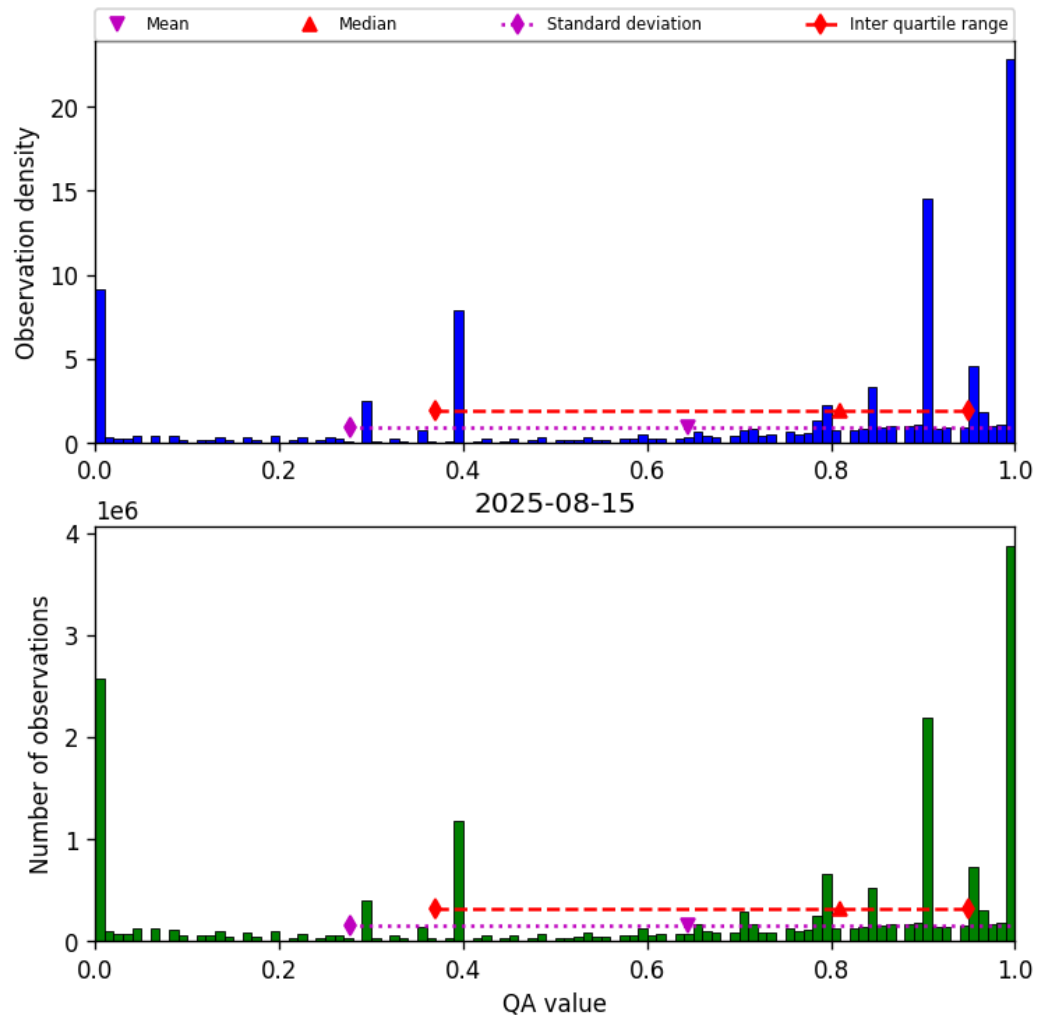


Figure 36: Histogram of “QA value” for 2025-08-15 to 2025-08-16

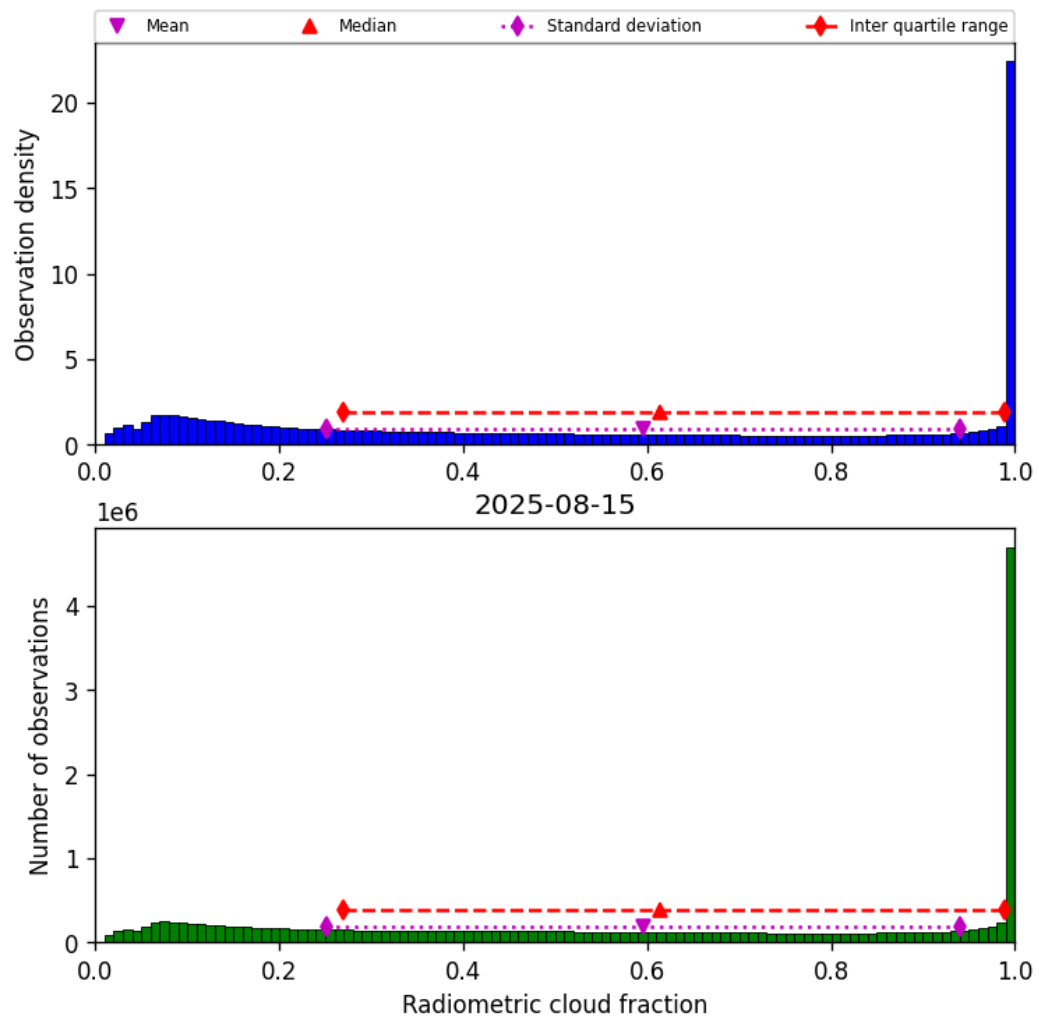


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16

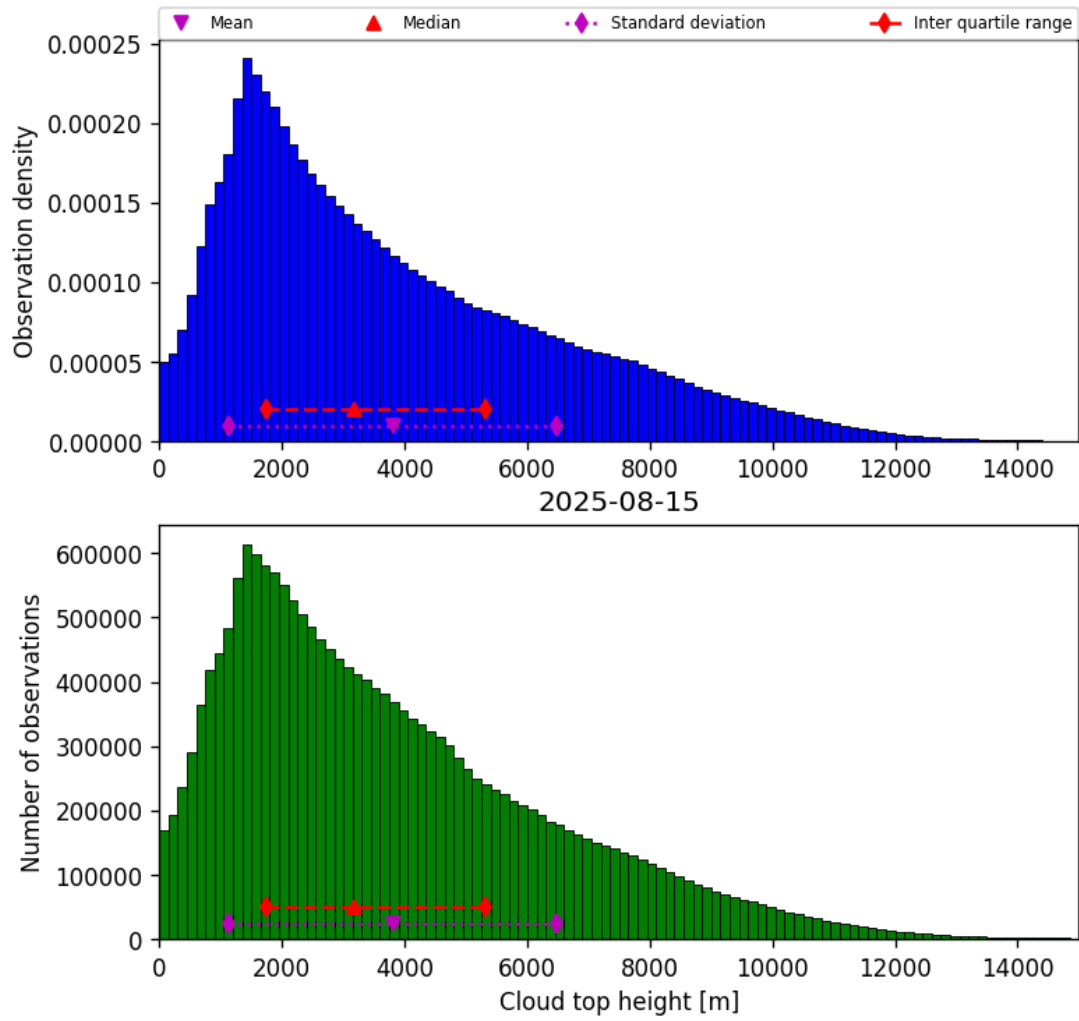


Figure 38: Histogram of “Cloud top height” for 2025-08-15 to 2025-08-16

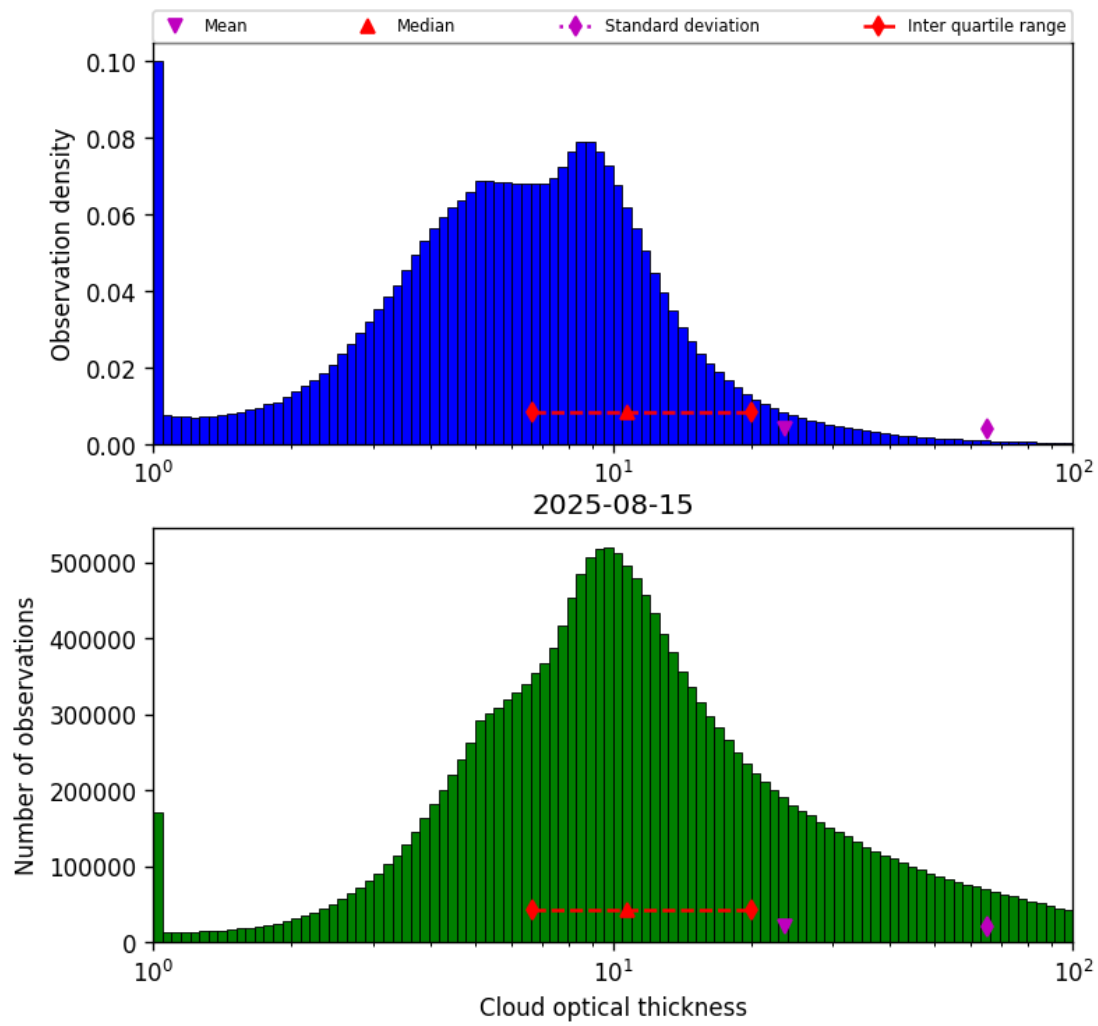


Figure 39: Histogram of “Cloud optical thickness” for 2025-08-15 to 2025-08-16

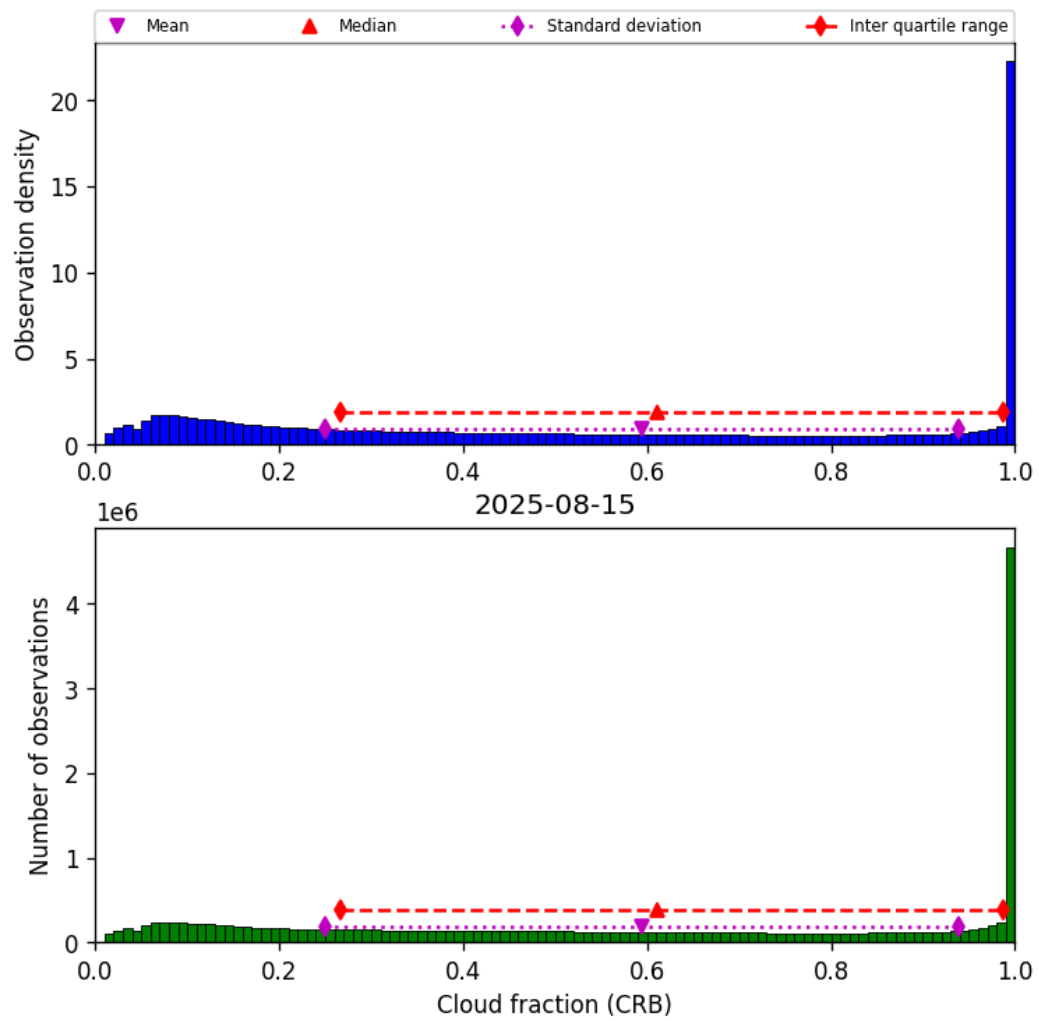


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16

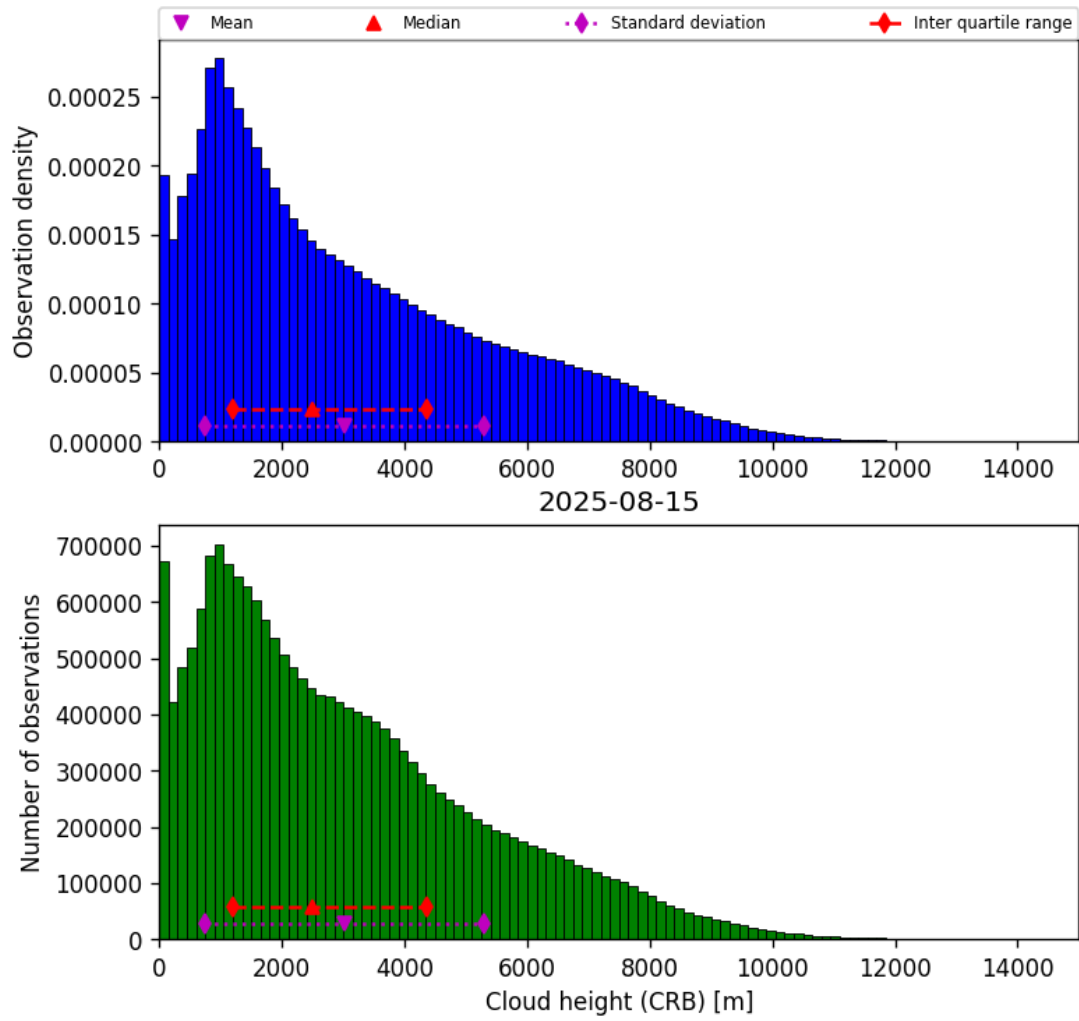


Figure 41: Histogram of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16

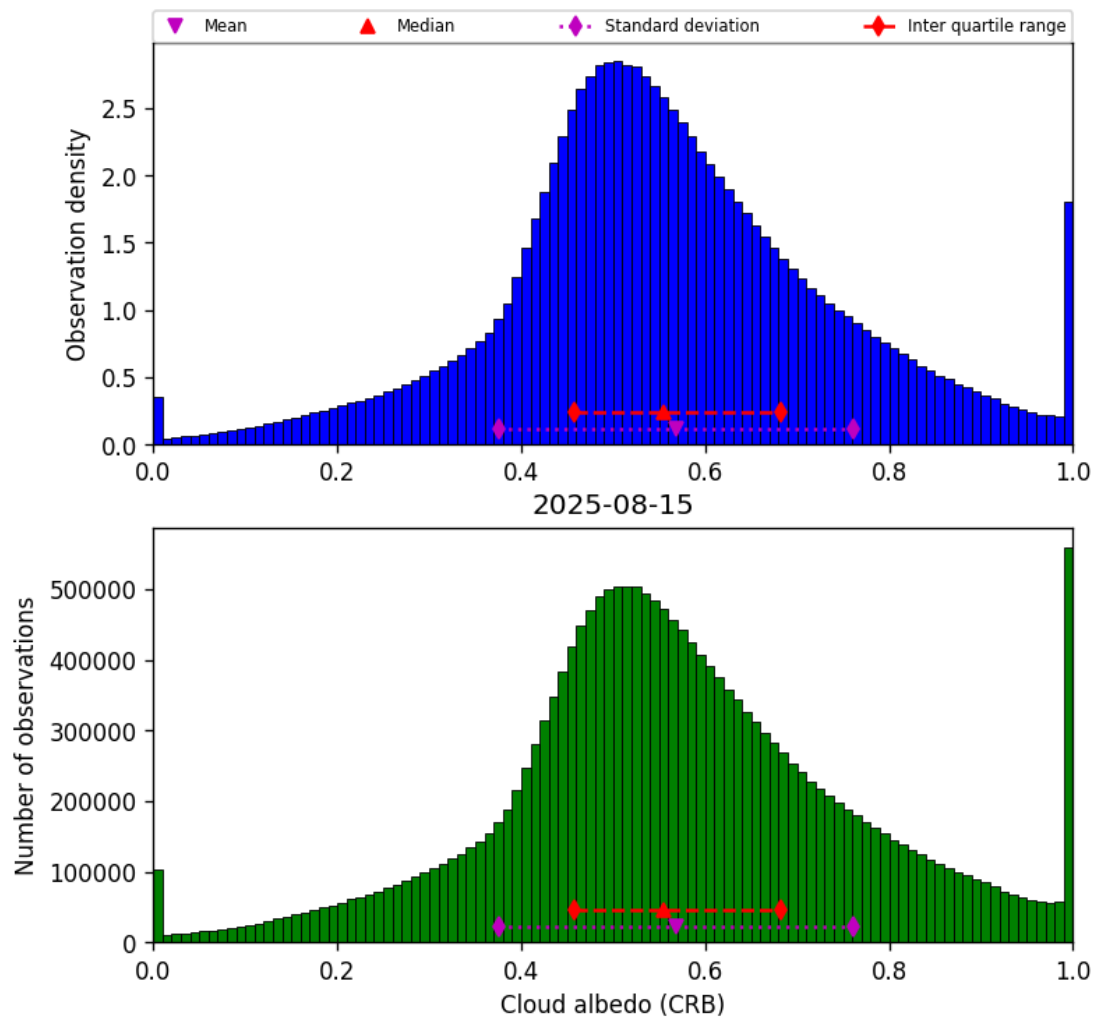


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16

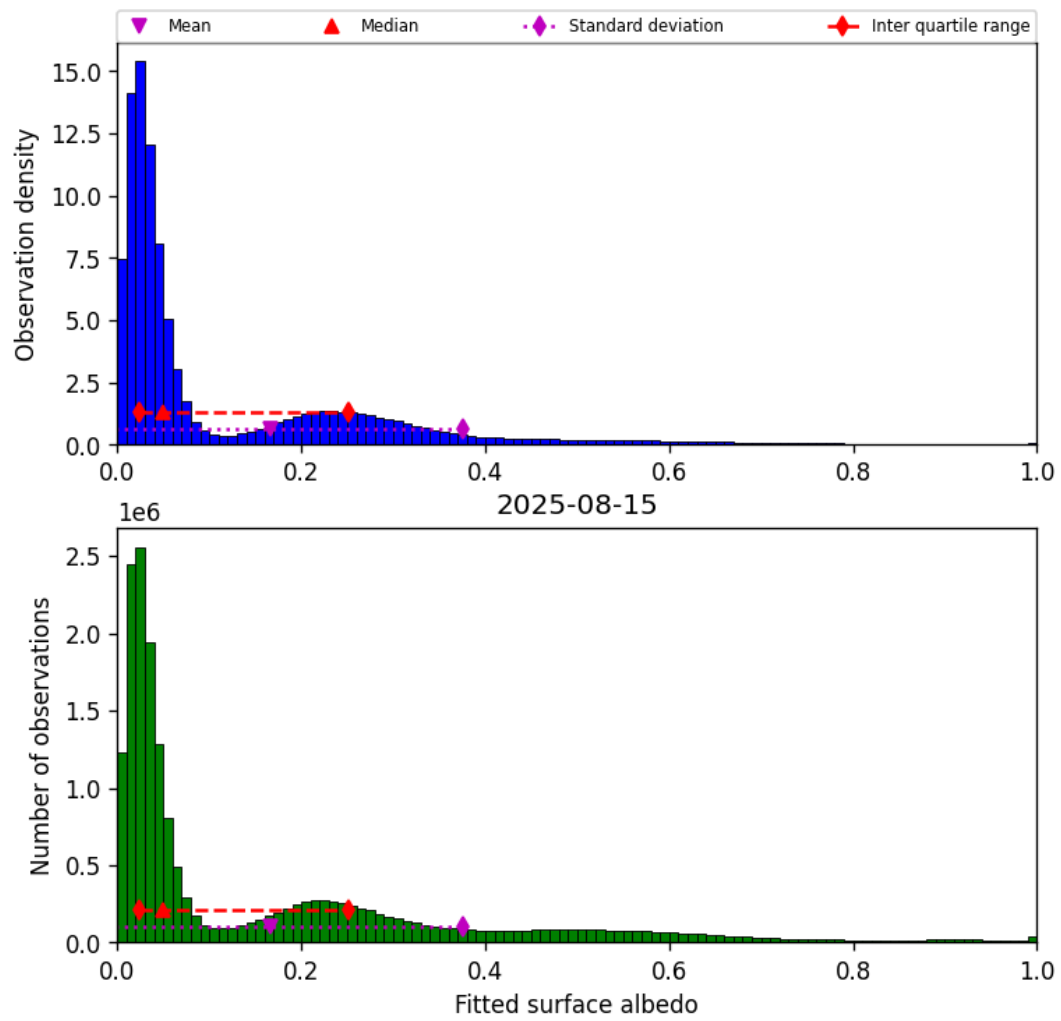


Figure 43: Histogram of “Fitted surface albedo” for 2025-08-15 to 2025-08-16

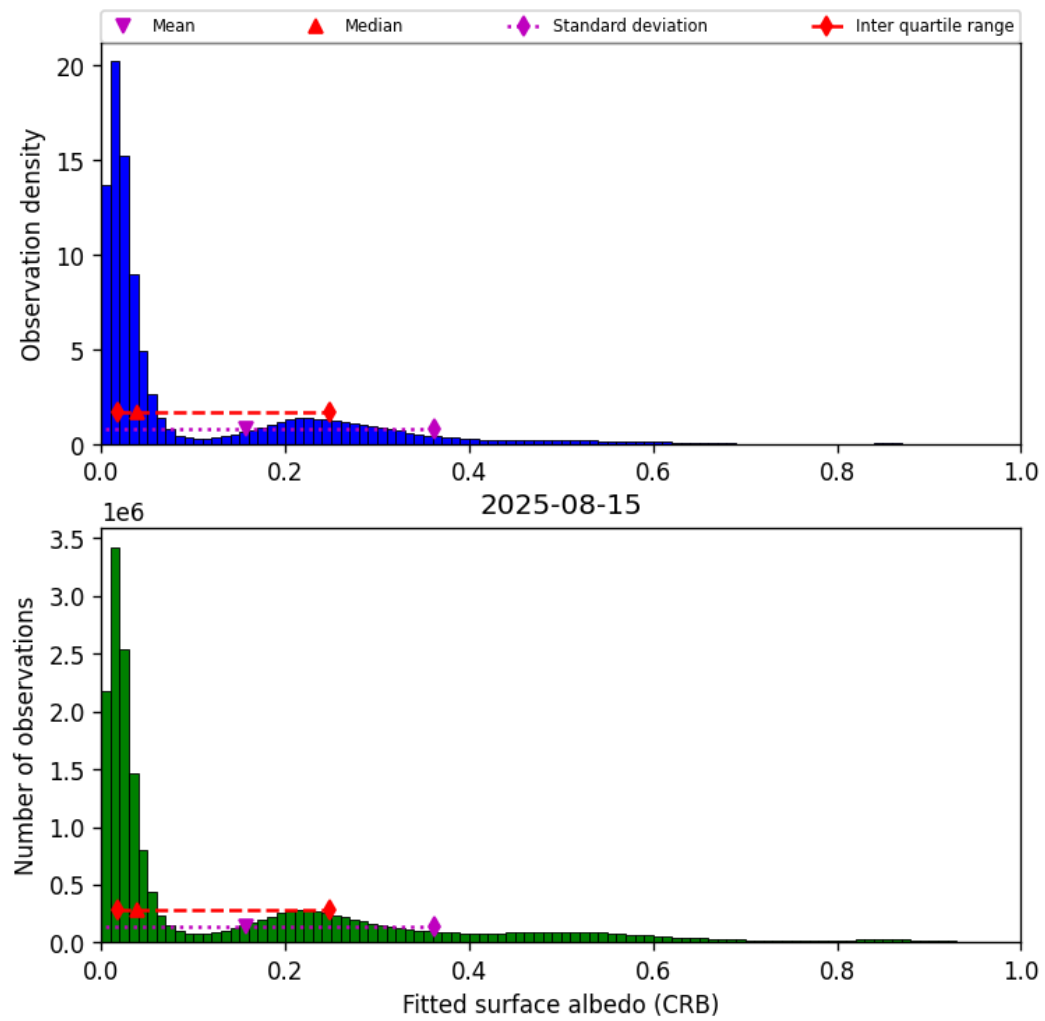


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16

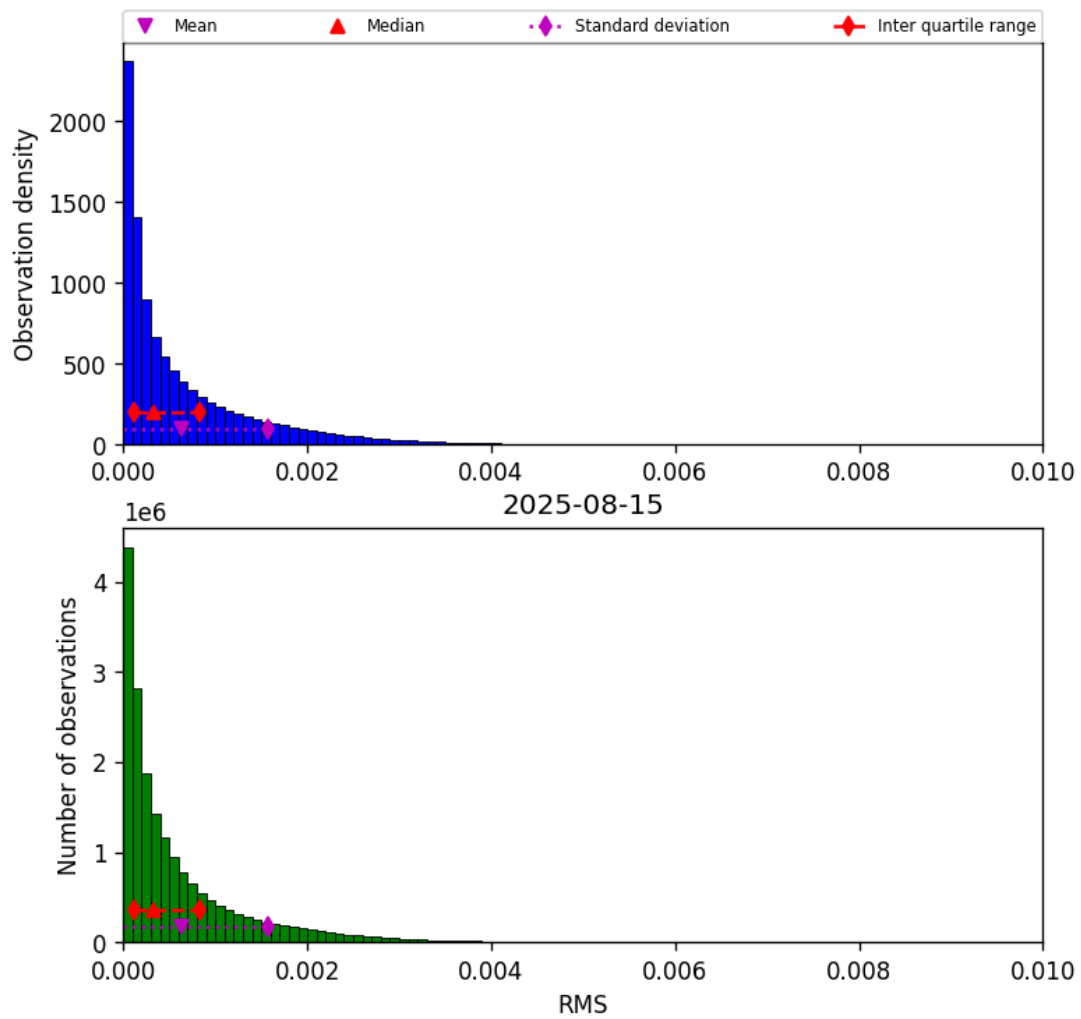


Figure 45: Histogram of “RMS” for 2025-08-15 to 2025-08-16

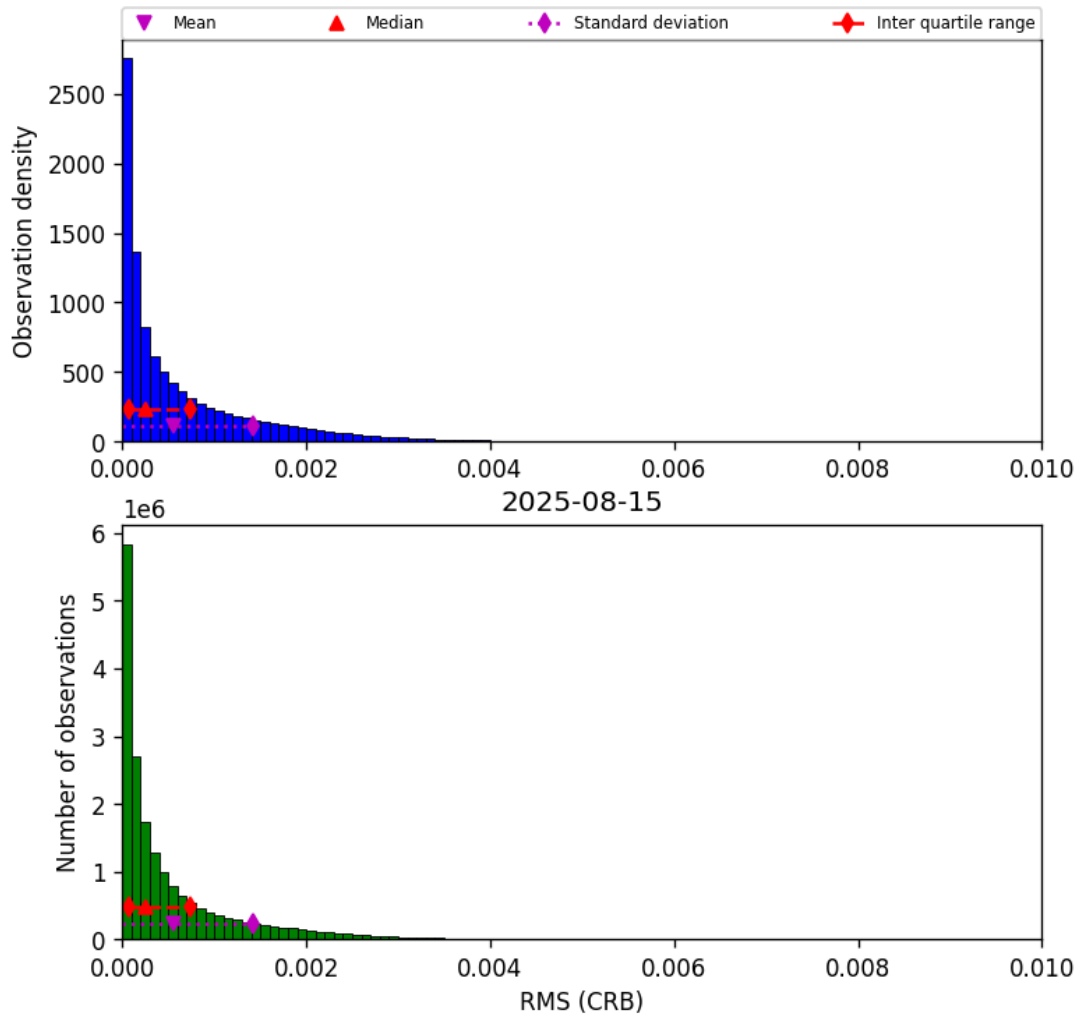


Figure 46: Histogram of “RMS (CRB)” for 2025-08-15 to 2025-08-16

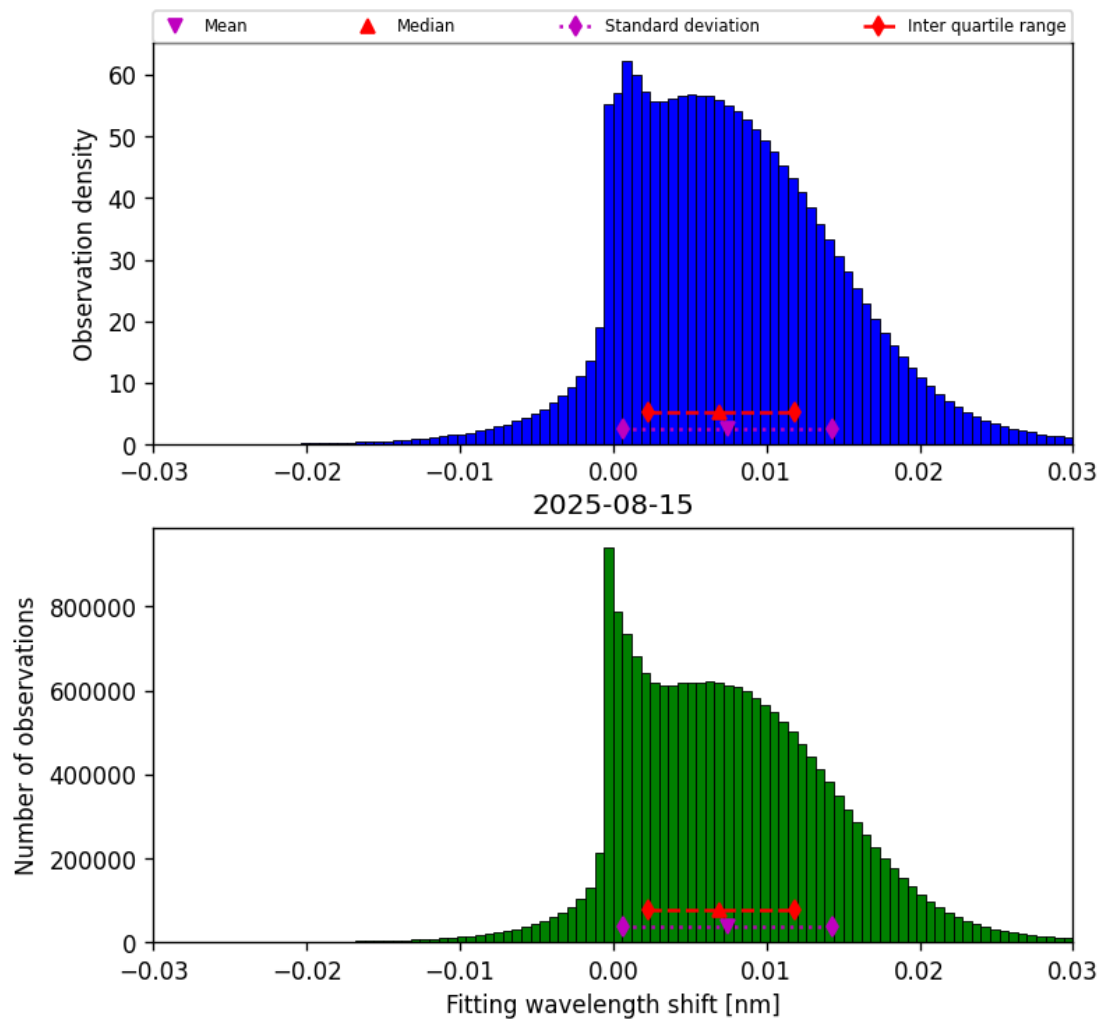


Figure 47: Histogram of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16

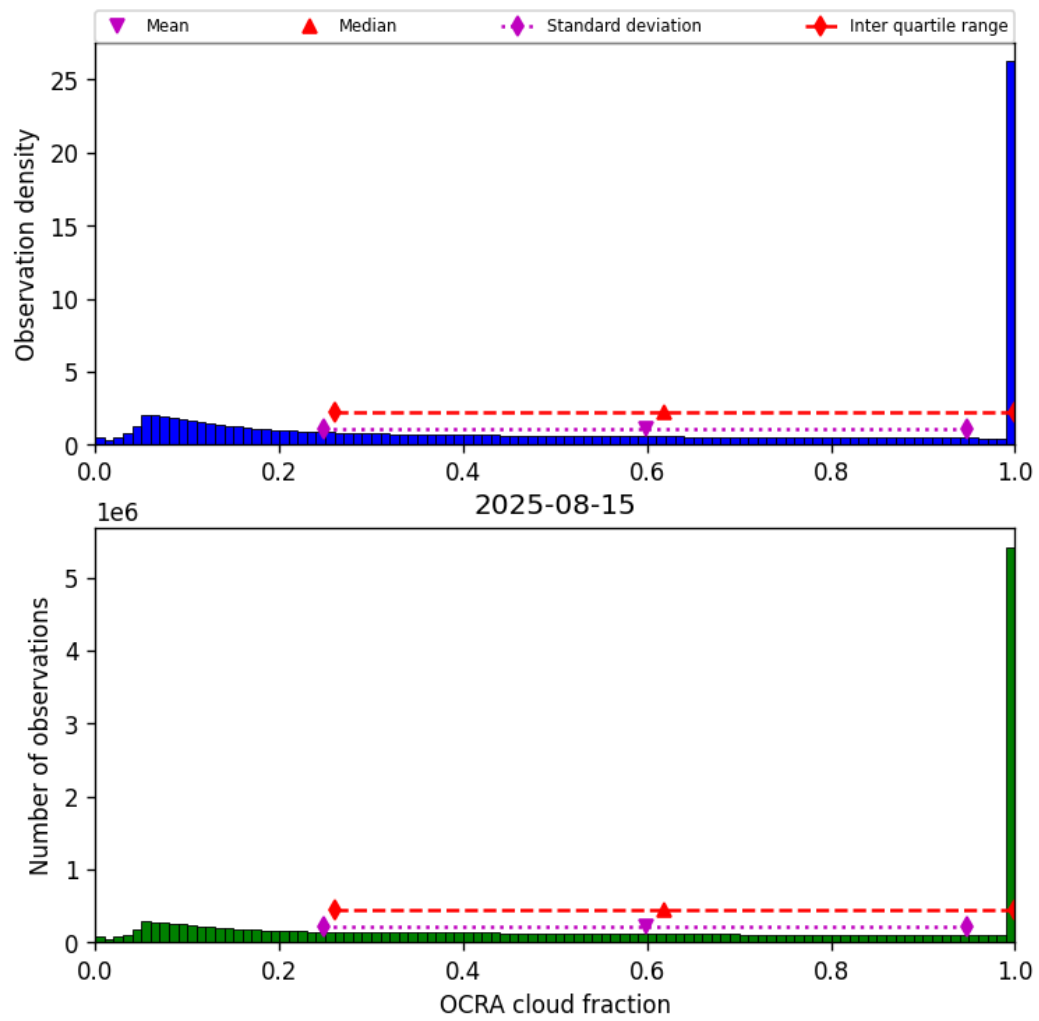


Figure 48: Histogram of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16

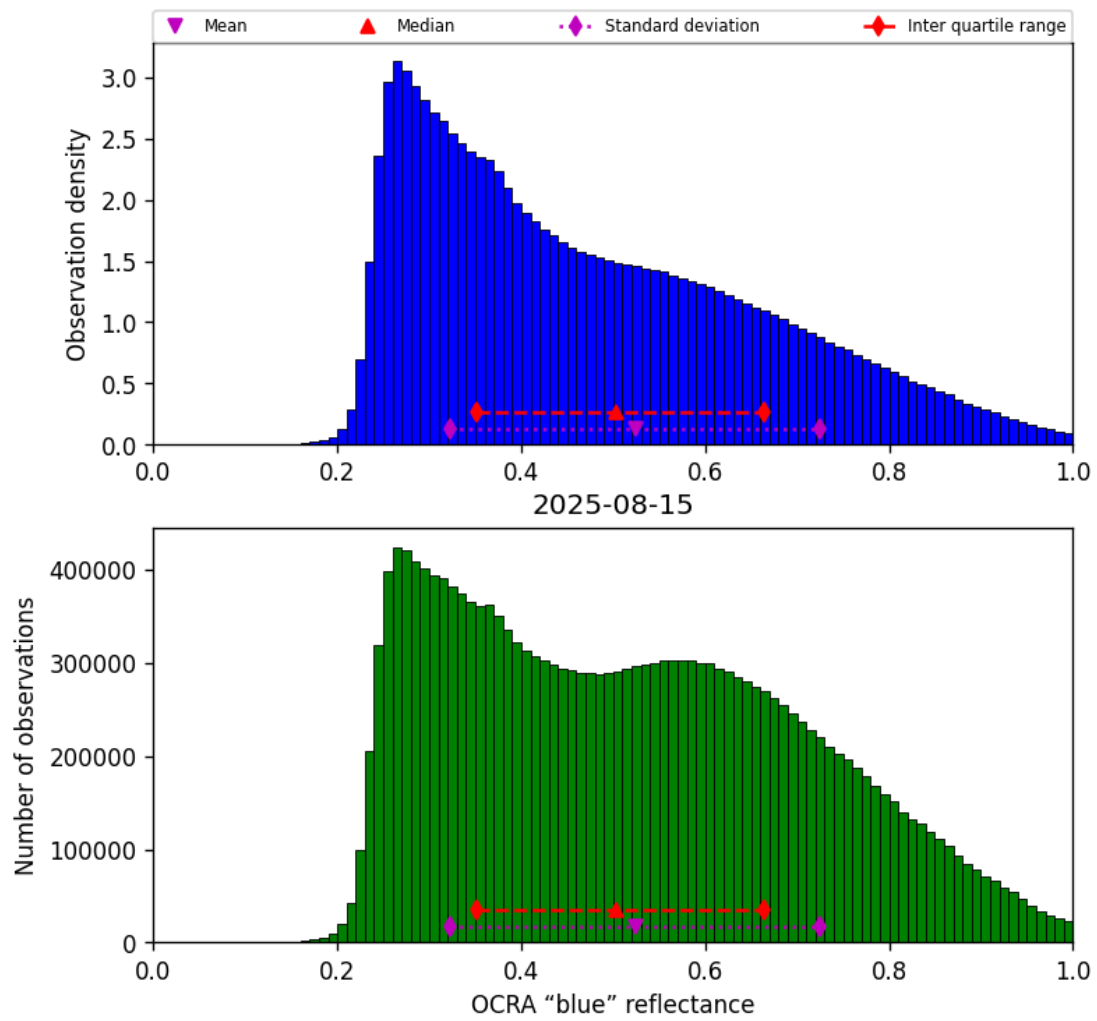


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16

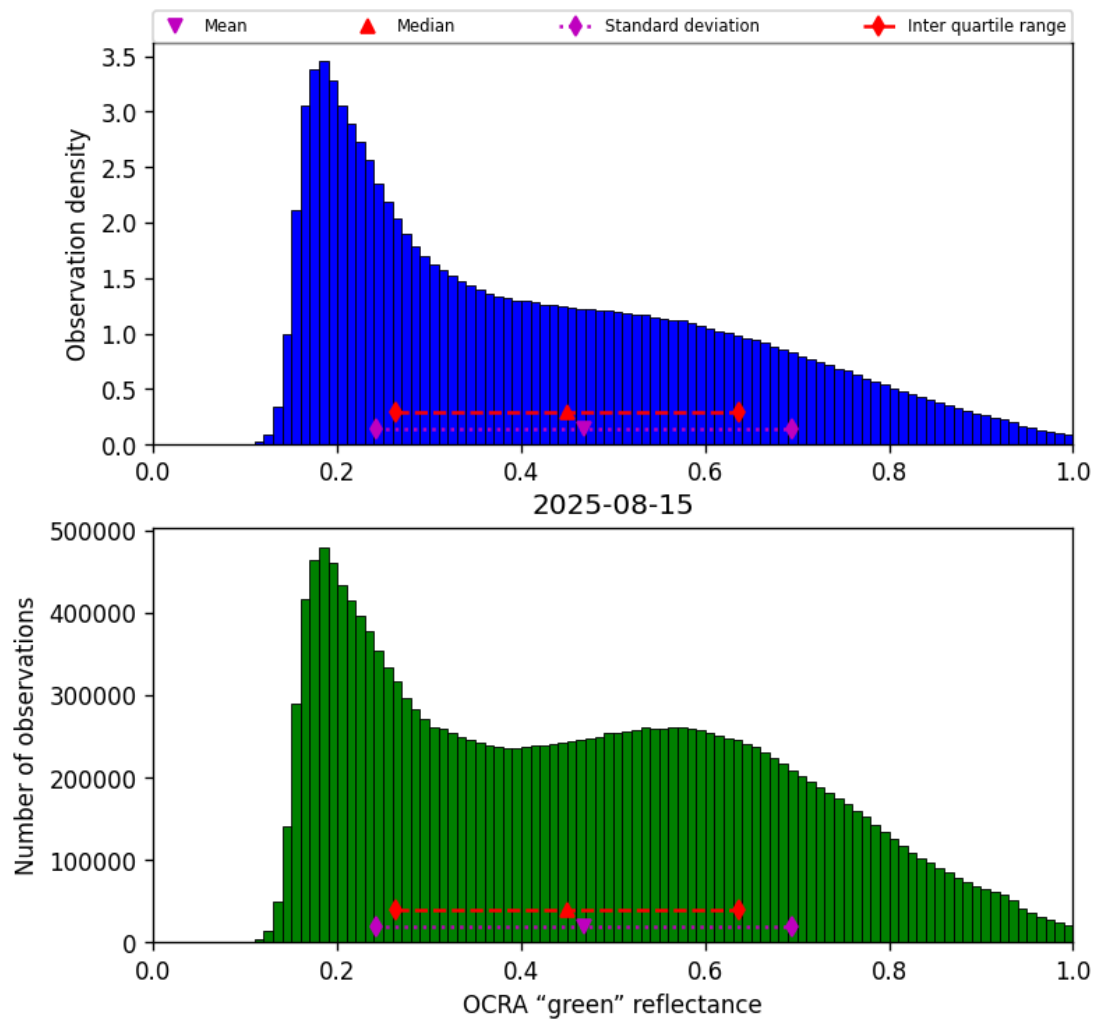


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16

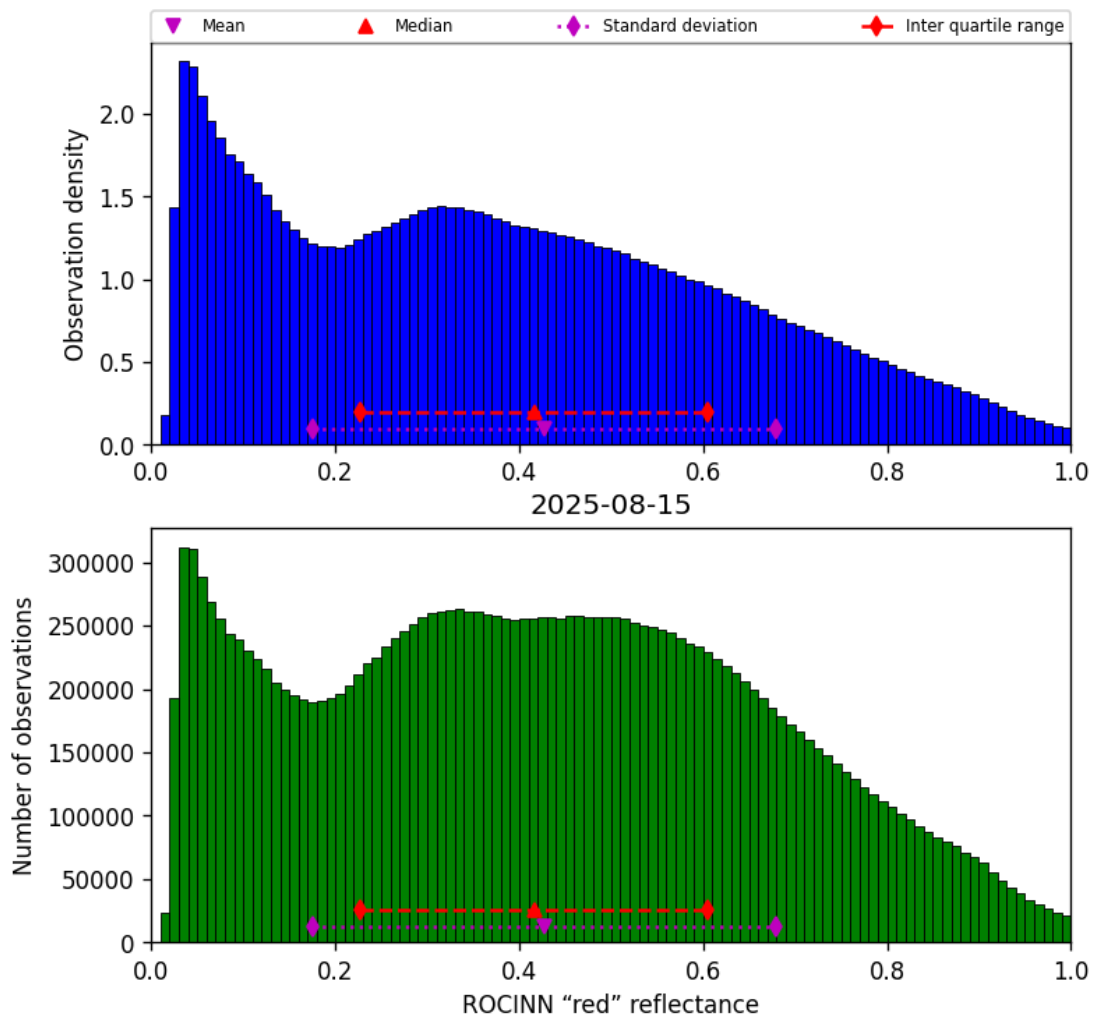


Figure 51: Histogram of "ROCINN "red" reflectance" for 2025-08-15 to 2025-08-16

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.

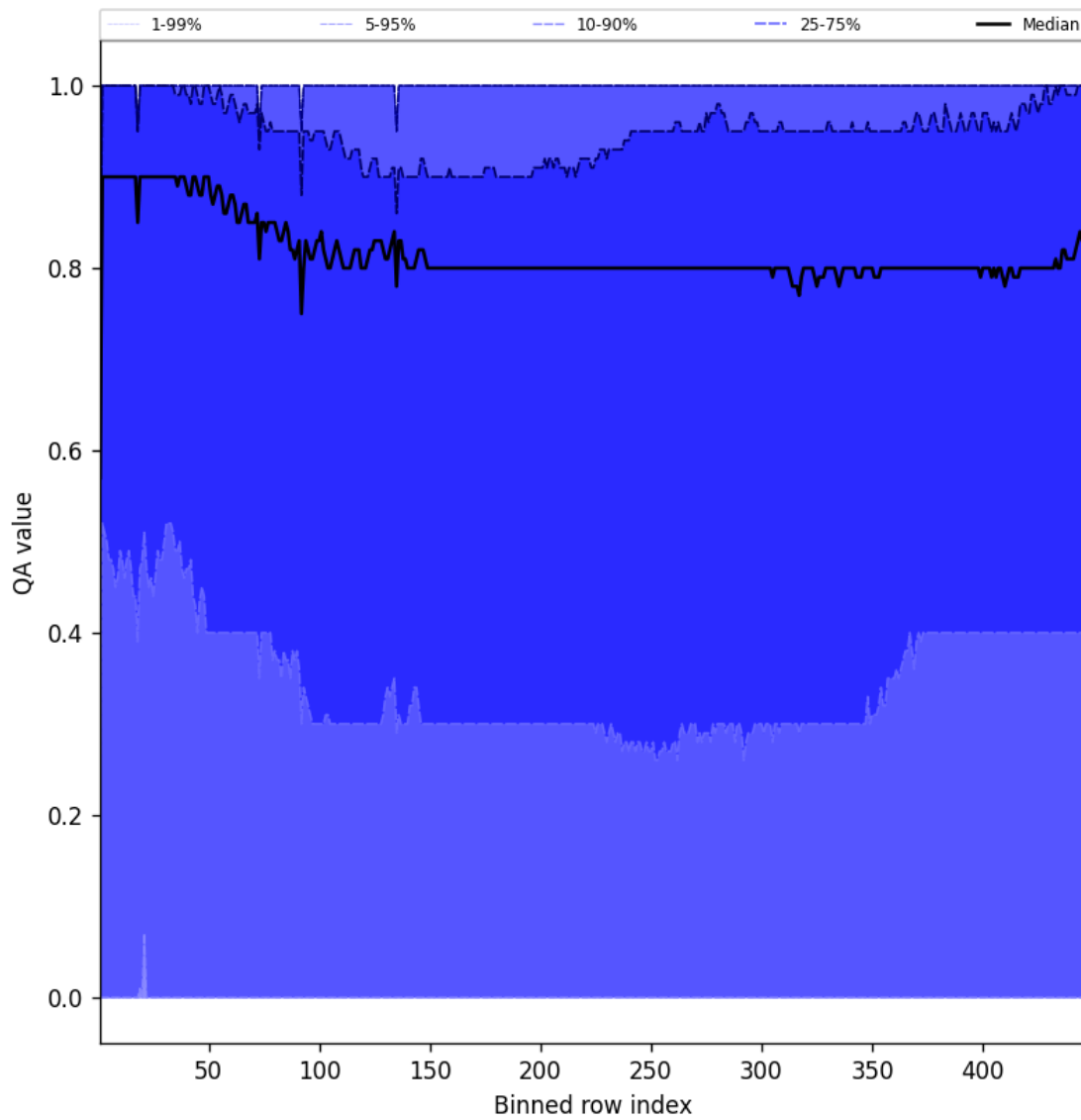


Figure 52: Along track statistics of “QA value” for 2025-08-15 to 2025-08-16

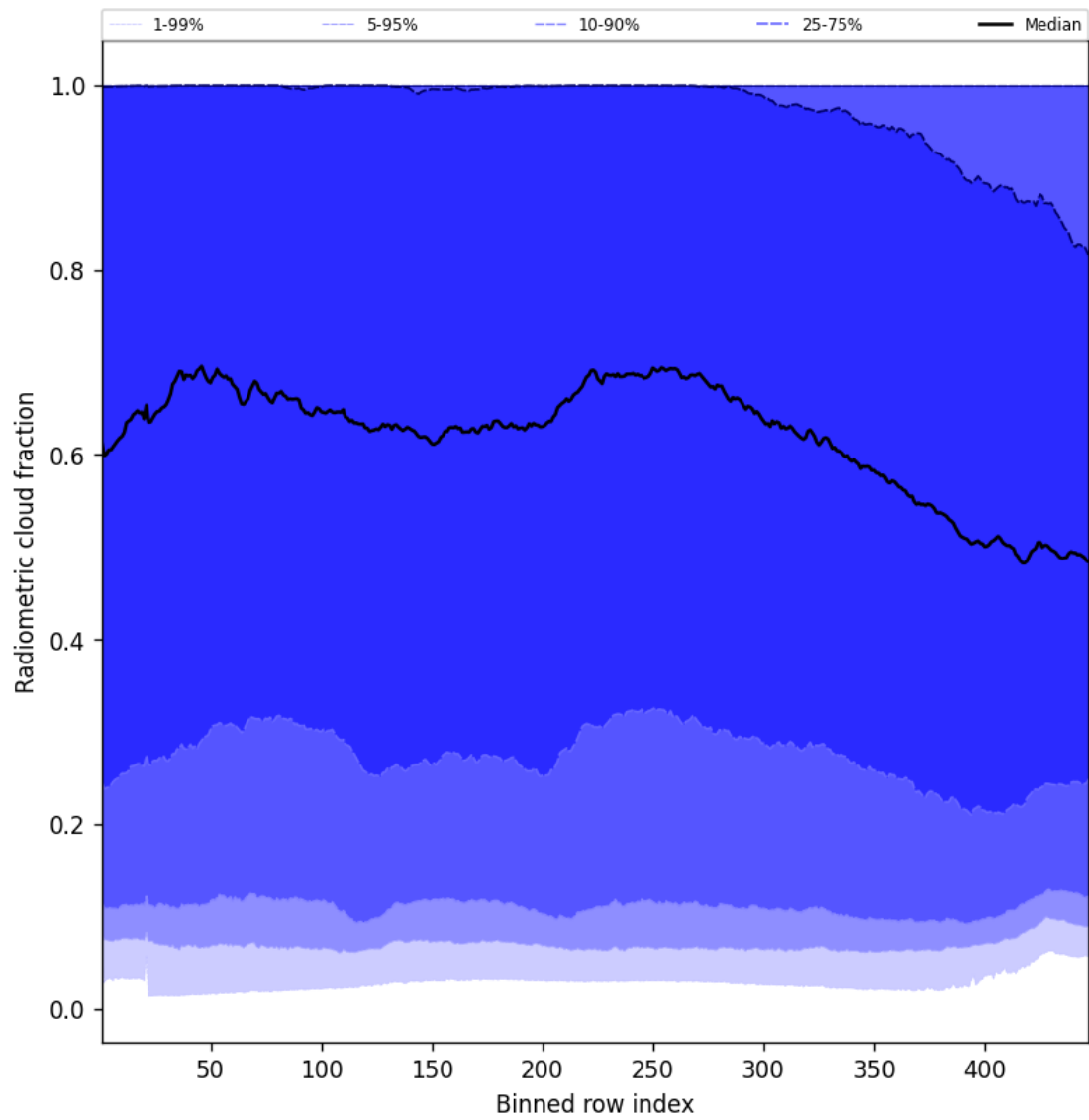


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16

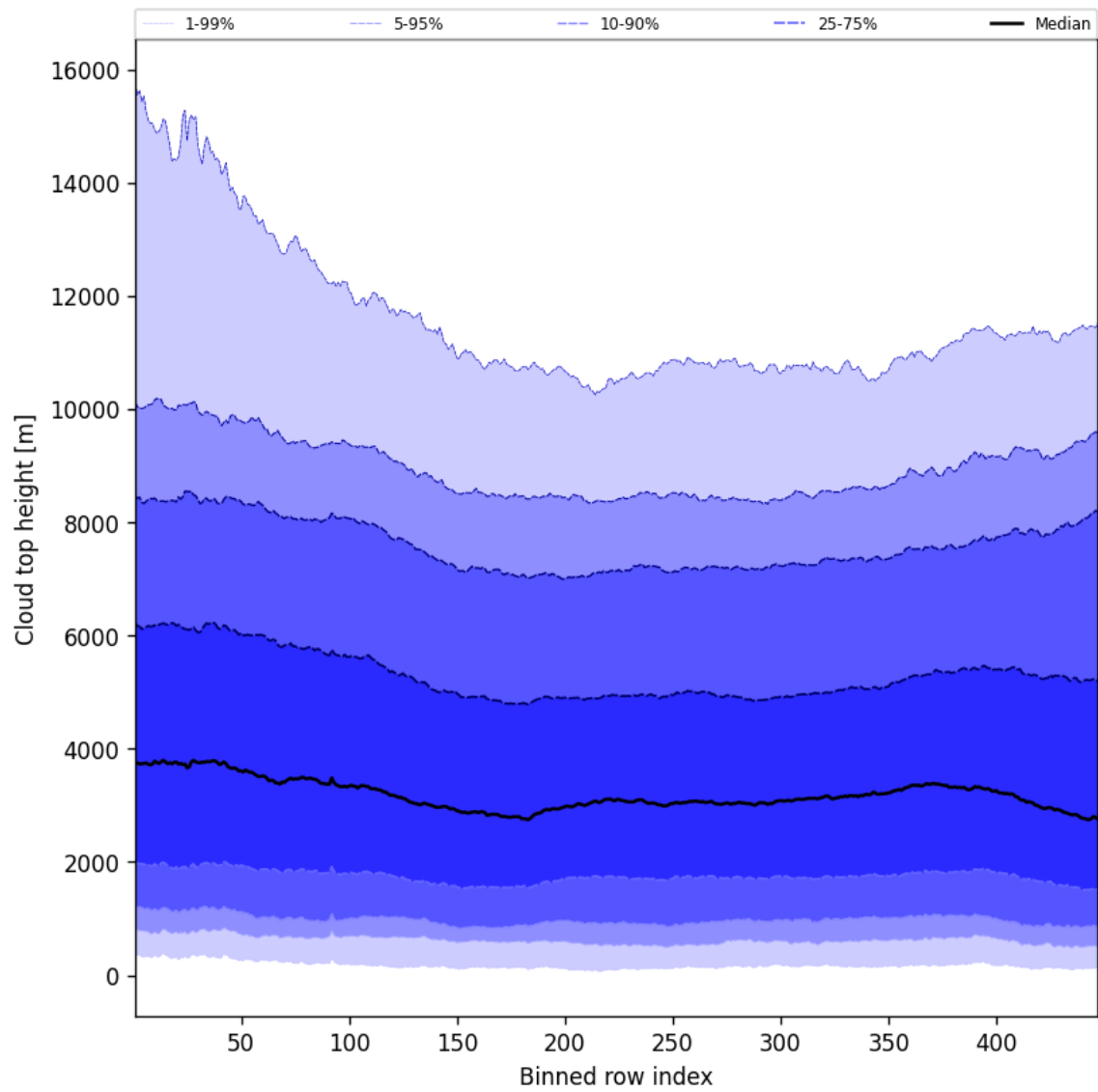


Figure 54: Along track statistics of “Cloud top height” for 2025-08-15 to 2025-08-16

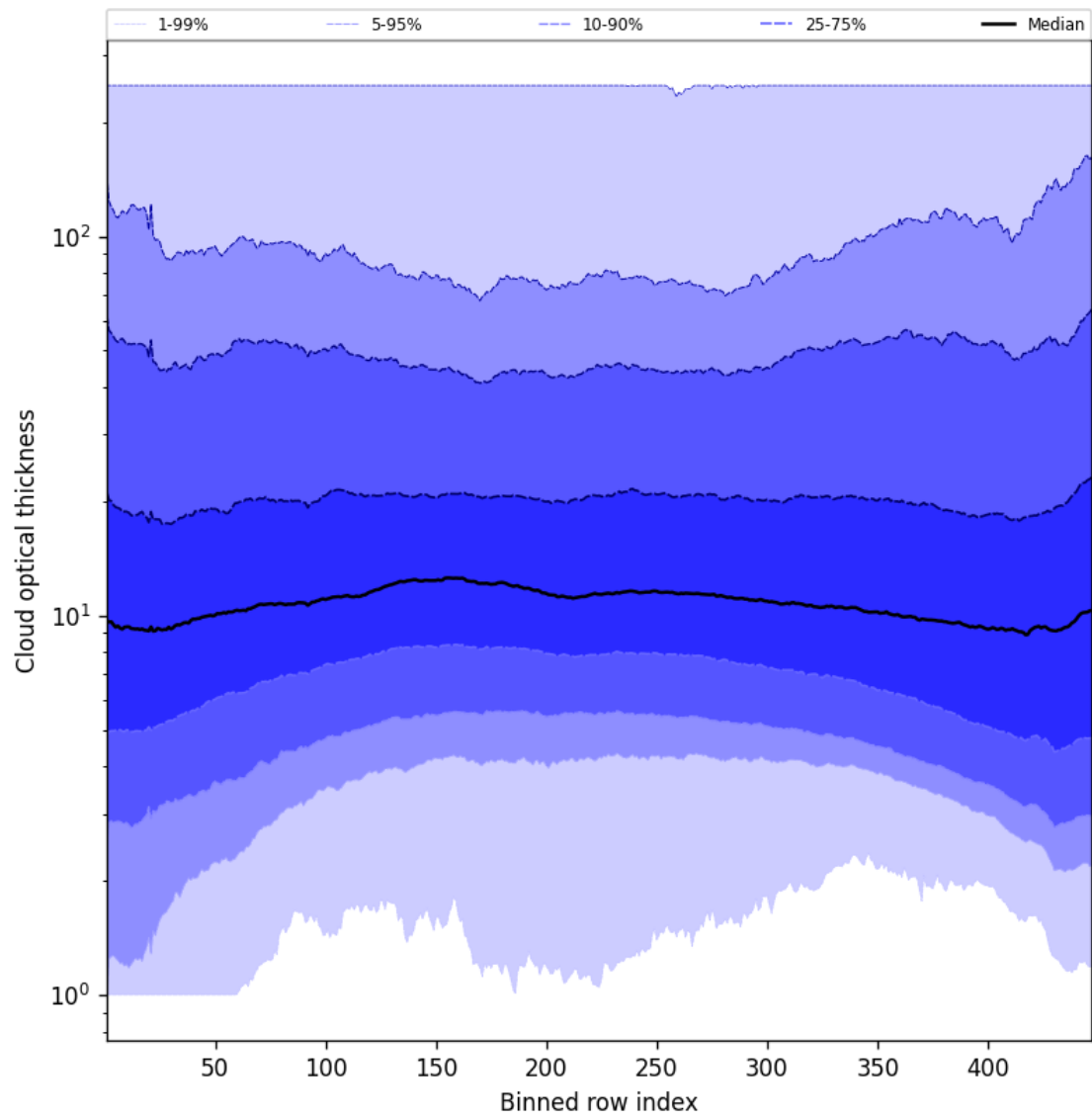


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-08-15 to 2025-08-16

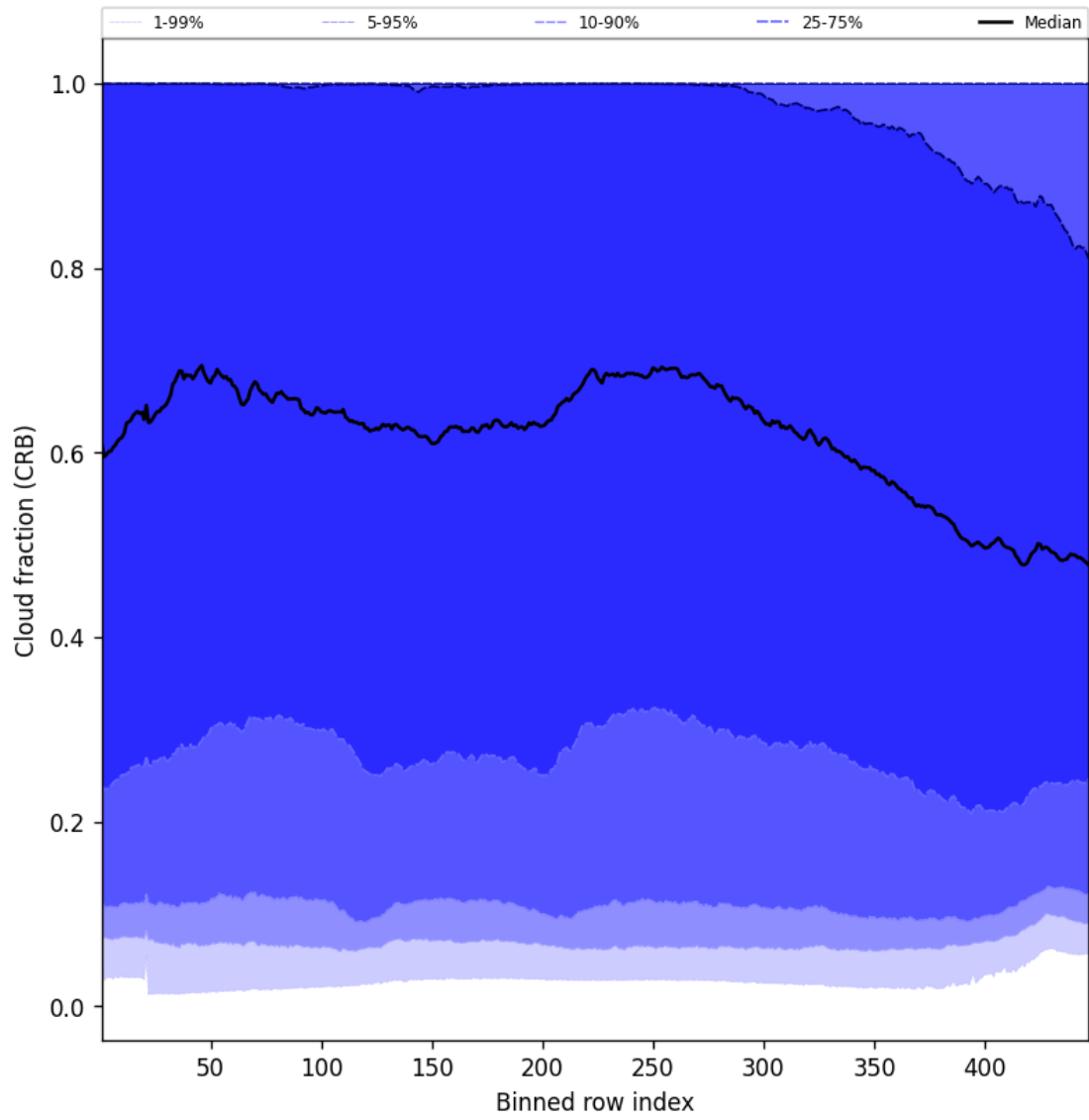


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16

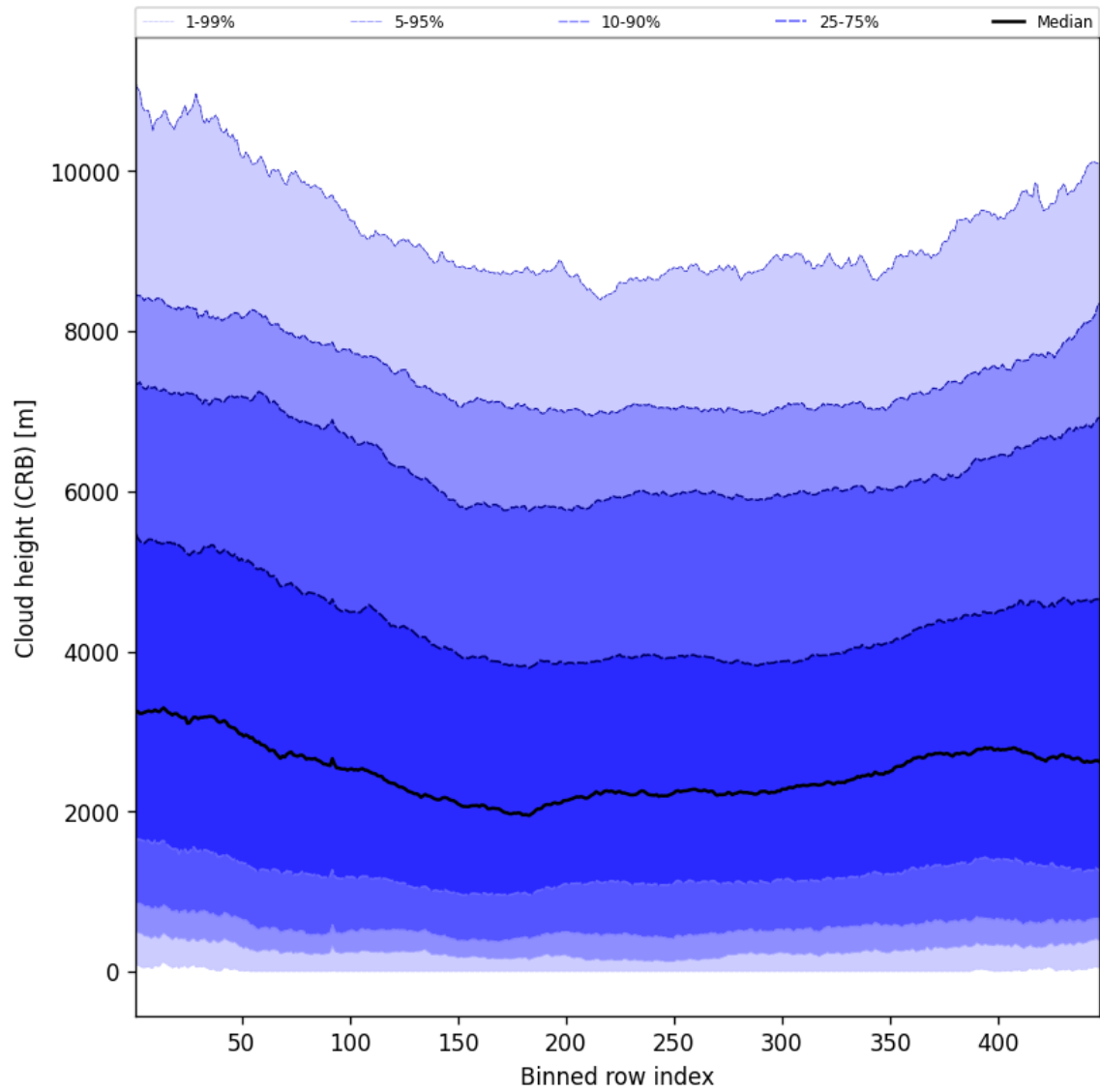


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16

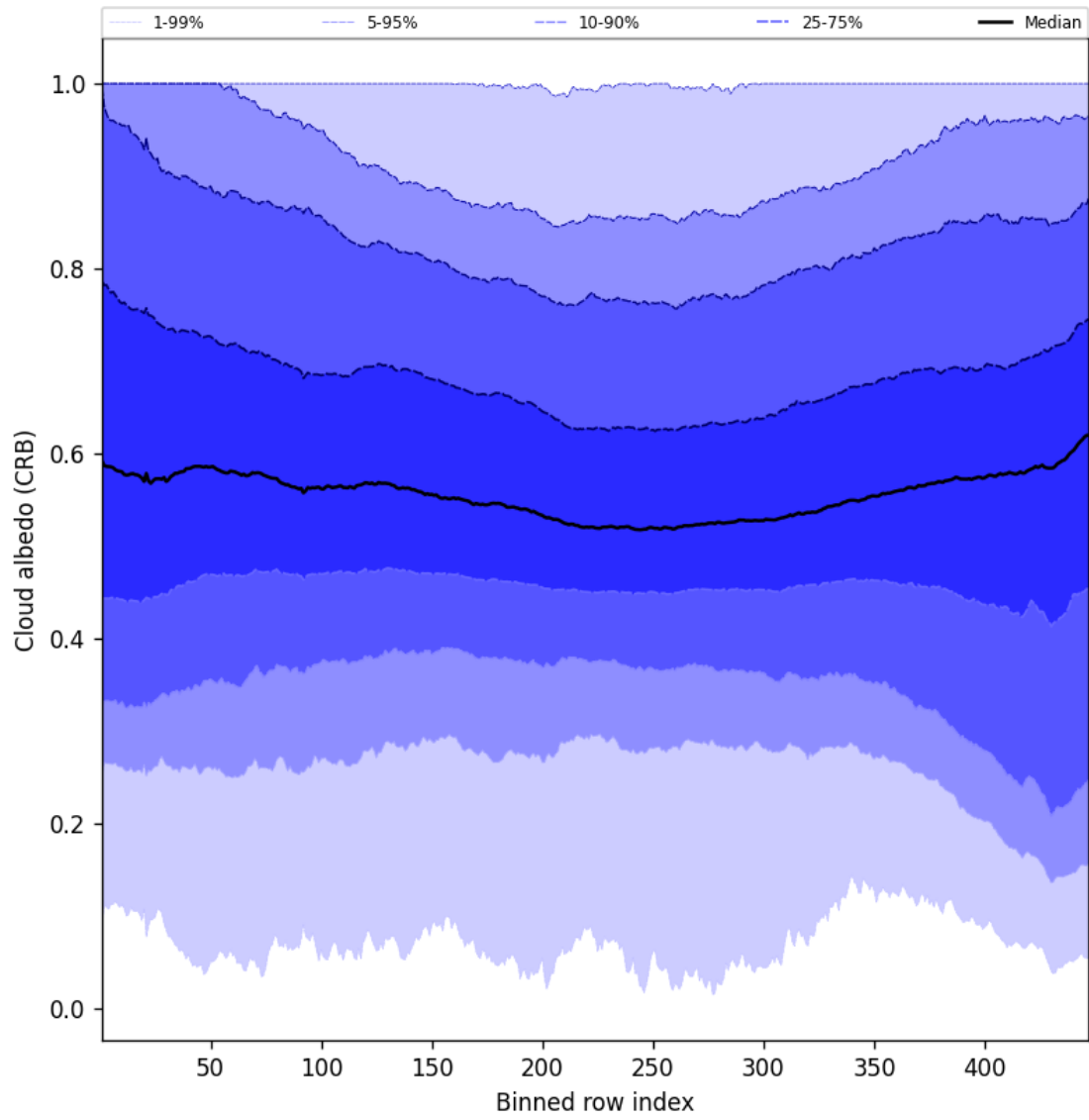


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16

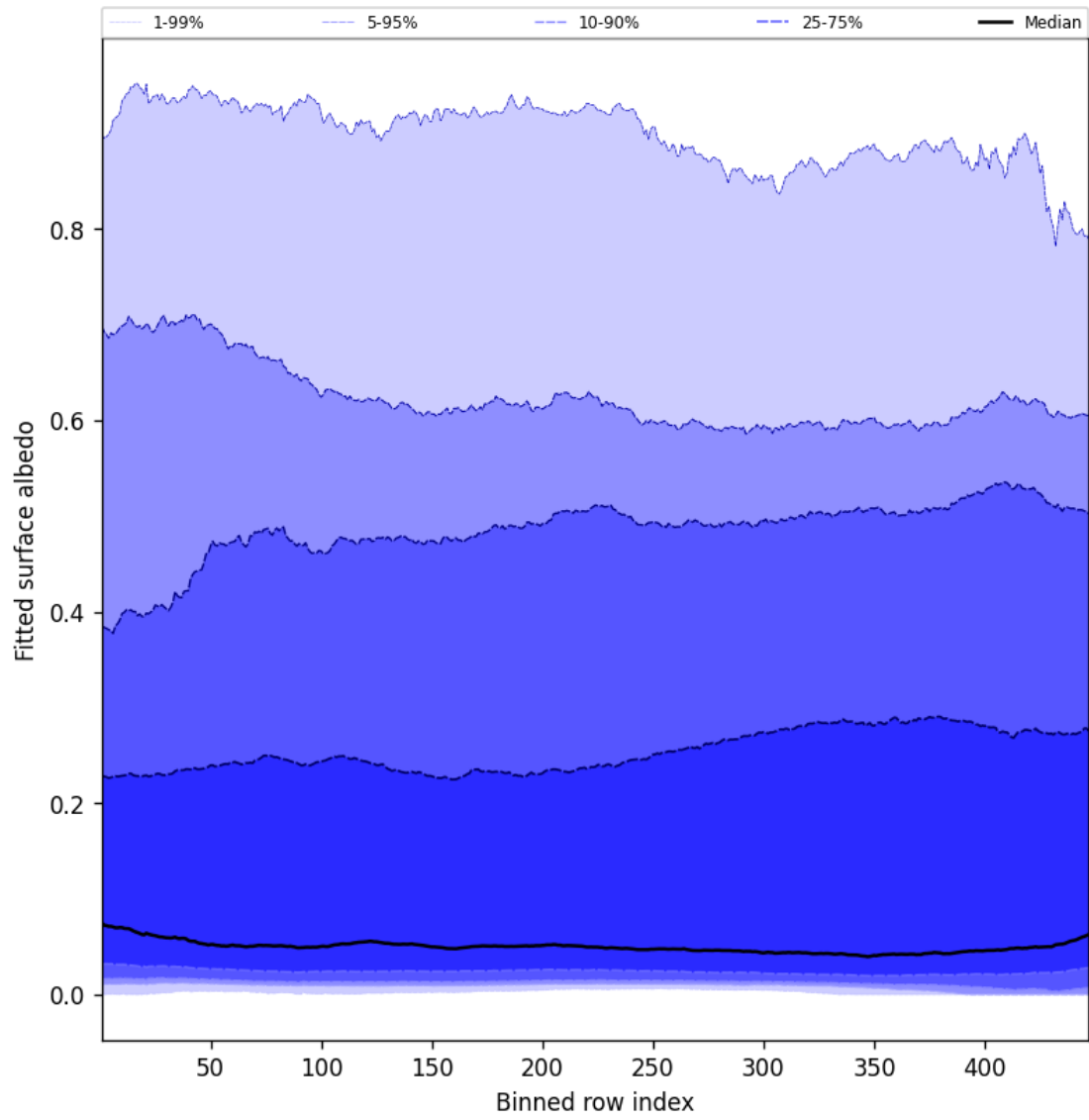


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-08-15 to 2025-08-16

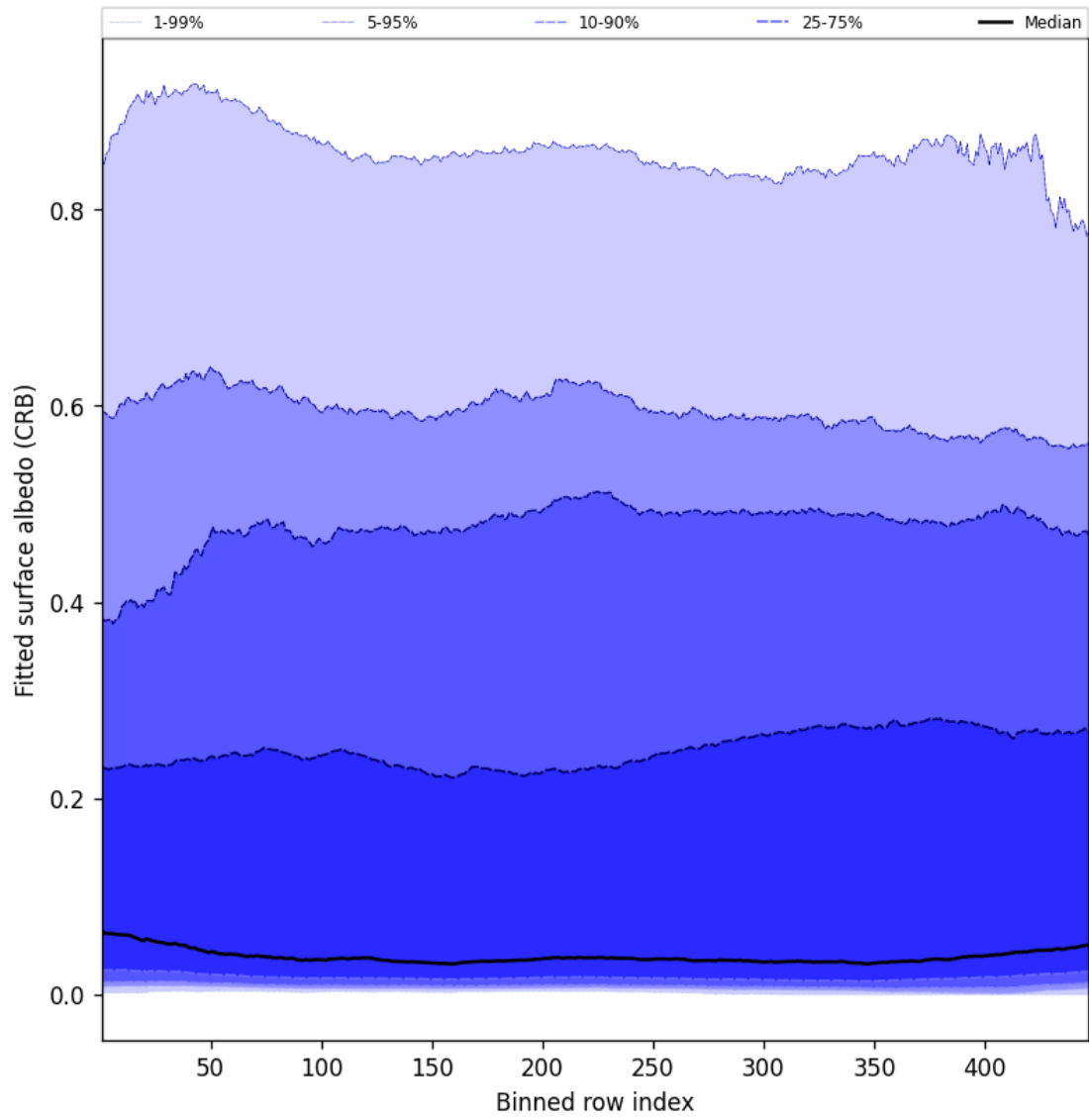


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16

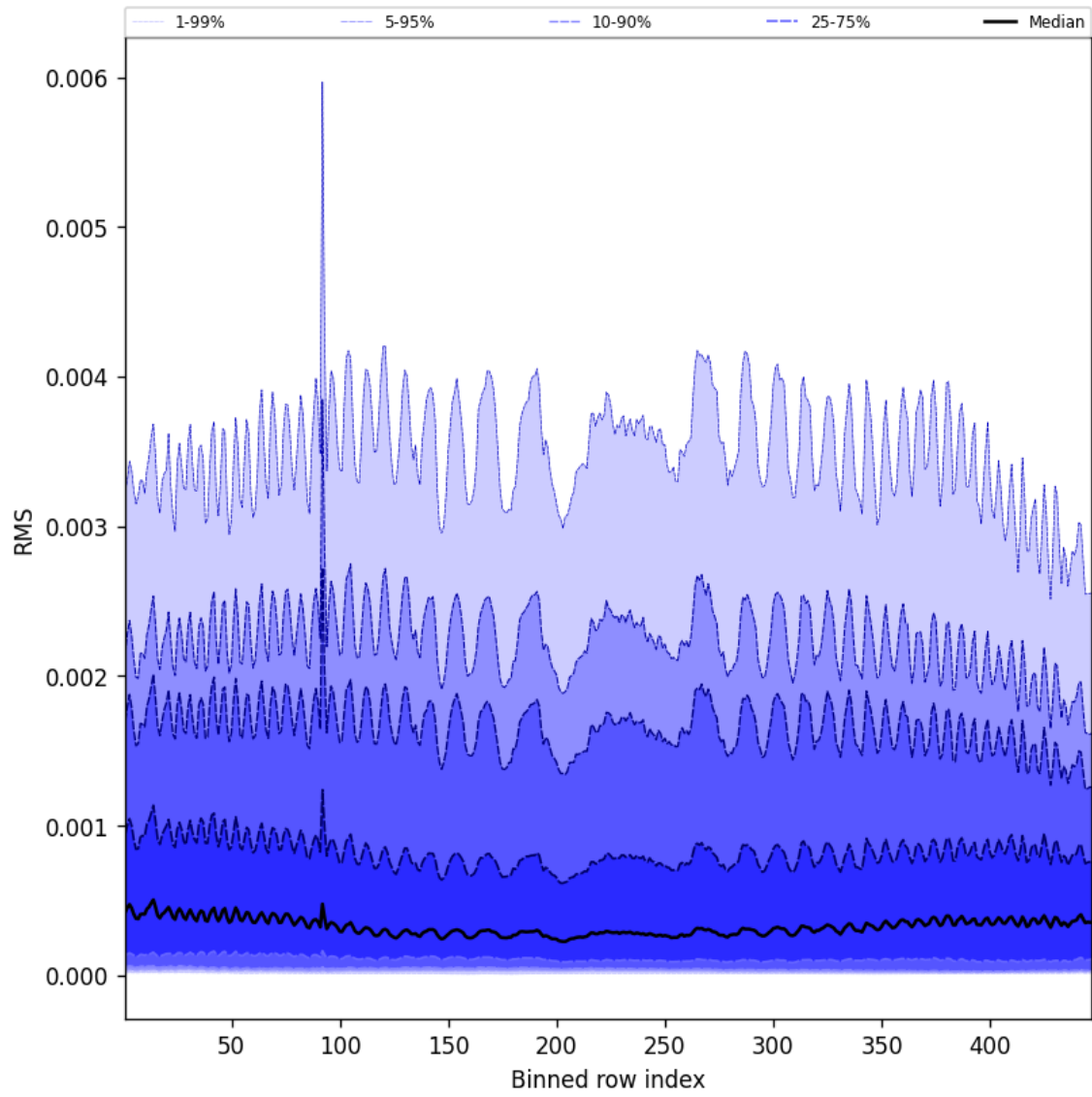


Figure 61: Along track statistics of “RMS” for 2025-08-15 to 2025-08-16

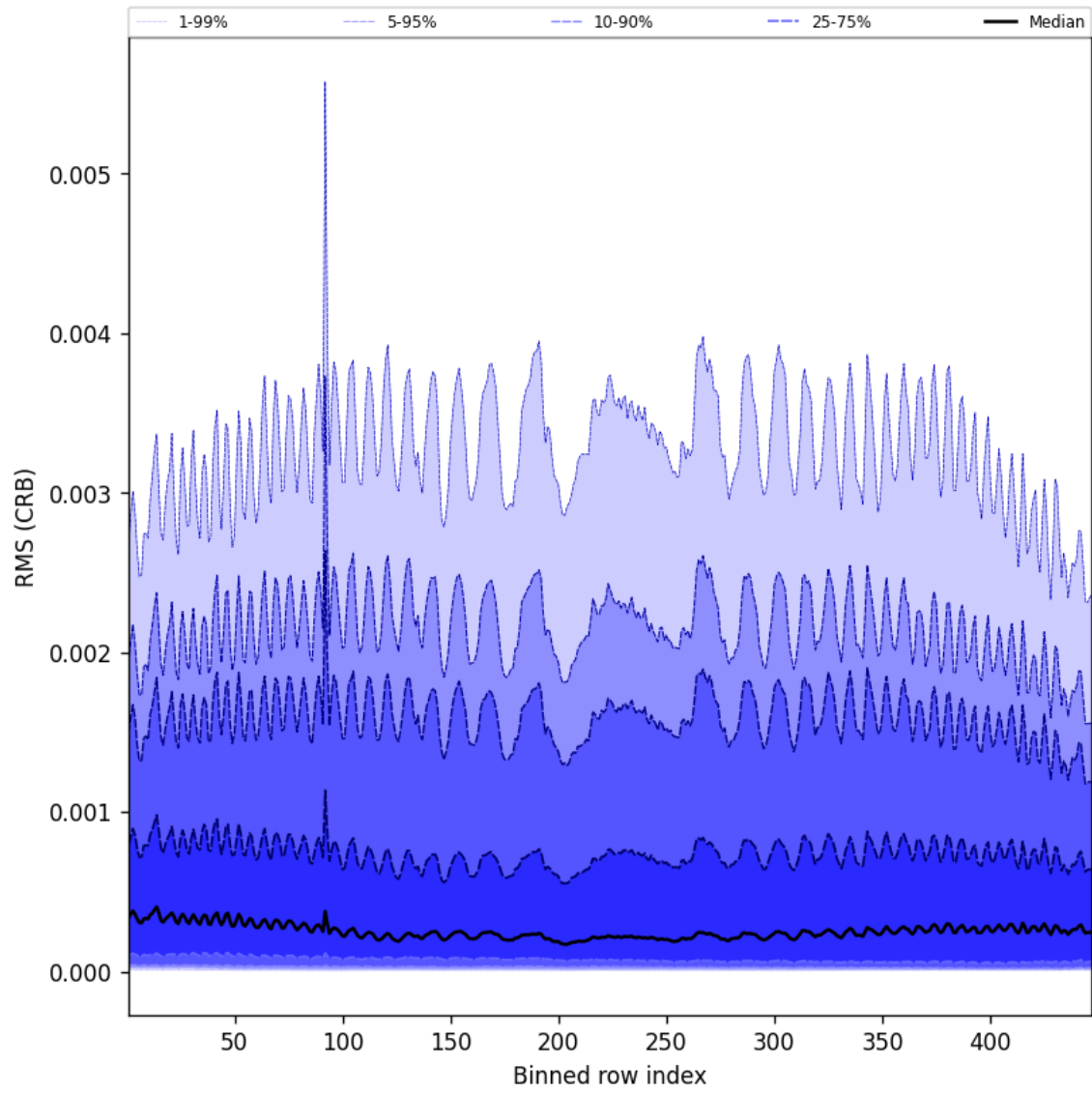


Figure 62: Along track statistics of “RMS (CRB)” for 2025-08-15 to 2025-08-16

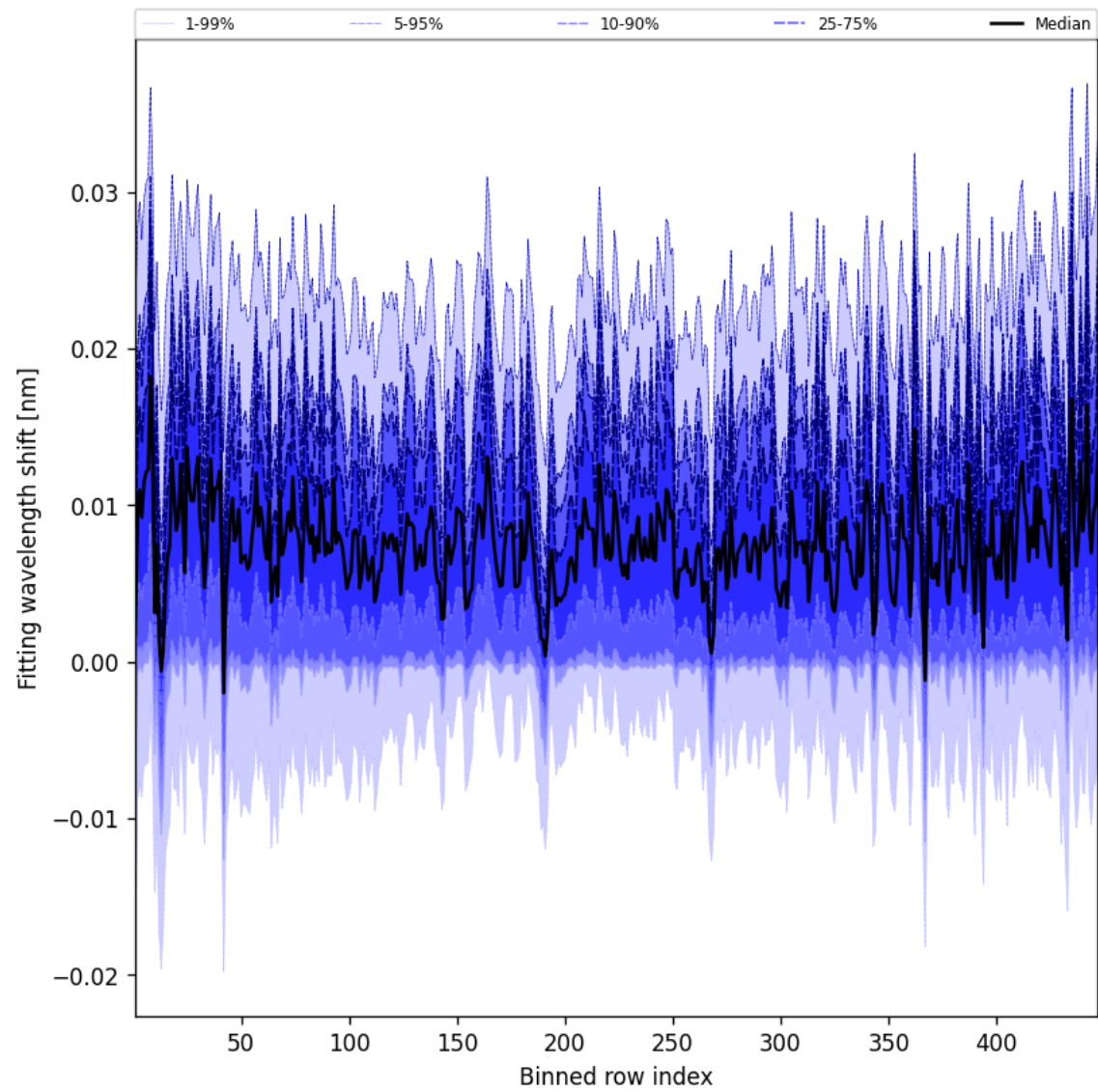


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16

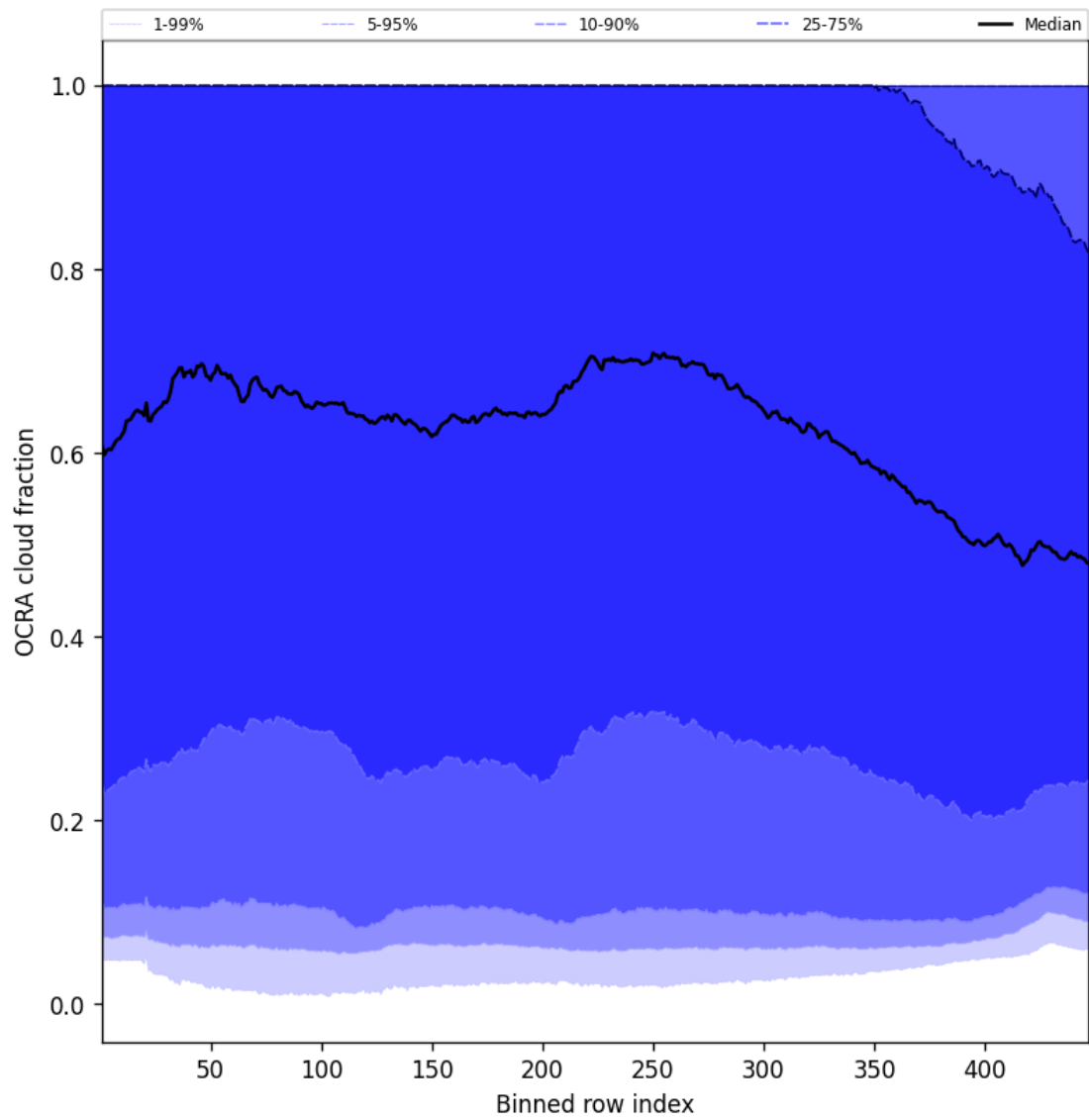


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16

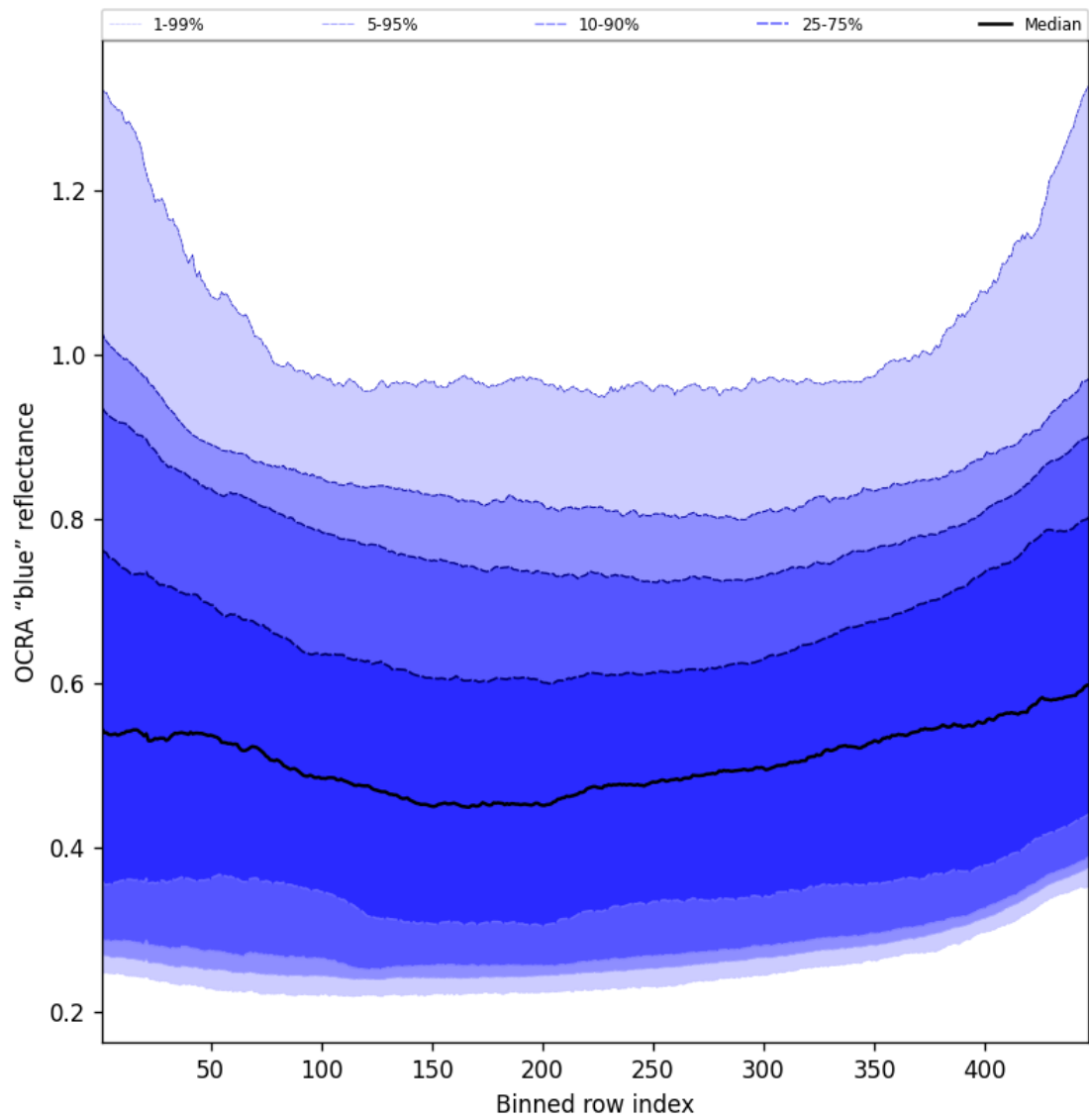


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16

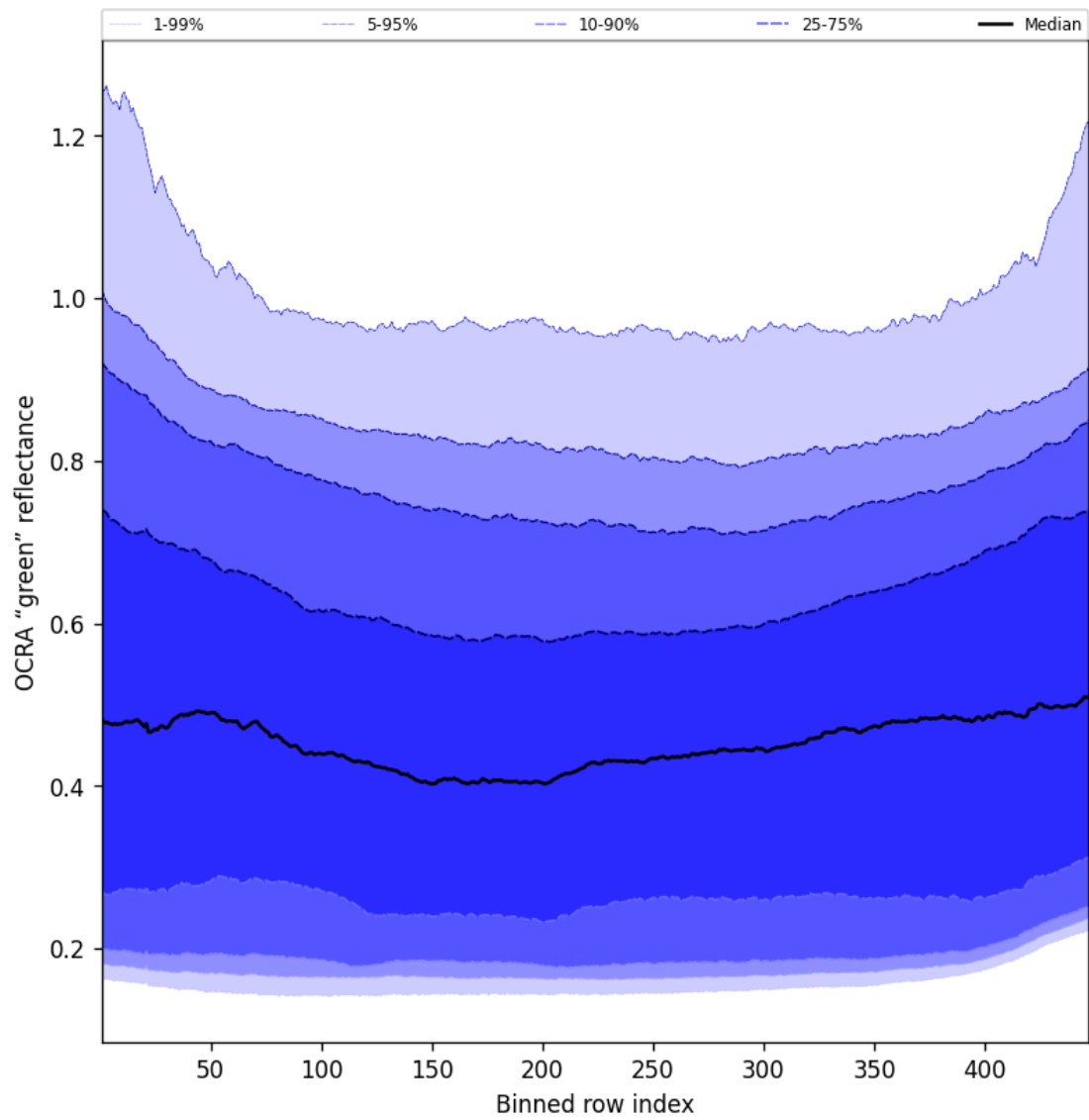


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16

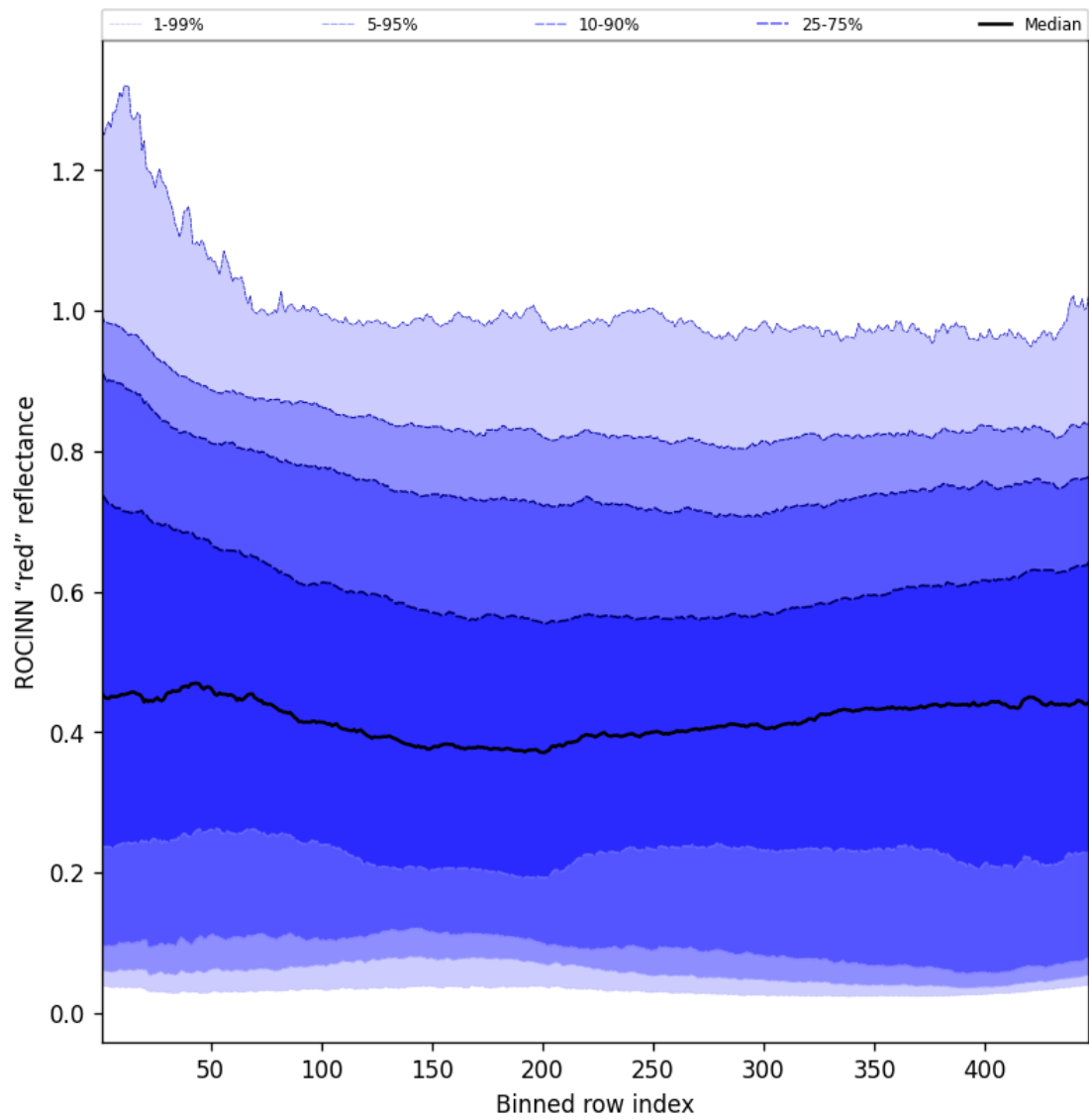


Figure 67: Along track statistics of “ROCINN “red” reflectance” for 2025-08-15 to 2025-08-16

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.

Contents

1	Short Introduction	1
1.1	The list of parameters	1
2	Definitions	1
3	Granule outlines	8
4	Input data monitoring	9
5	Warnings and errors	10
6	World maps	11
7	Zonal average	27
8	Histograms	43
9	Along track statistics	59
10	Coincidence density	75
11	Copyright information of ‘PyCAMA’	75

List of Figures

1	Outline of the granules.	8
2	Input data per granule	9
3	Fraction of pixels with specific warnings and errors during processing	10
4	Map of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16	11
5	Map of “Cloud top height” for 2025-08-15 to 2025-08-16	12
6	Map of “Cloud optical thickness” for 2025-08-15 to 2025-08-16	13
7	Map of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16	14
8	Map of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16	15
9	Map of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16	16
10	Map of “Fitted surface albedo” for 2025-08-15 to 2025-08-16	17
11	Map of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16	18
12	Map of “RMS” for 2025-08-15 to 2025-08-16	19
13	Map of “RMS (CRB)” for 2025-08-15 to 2025-08-16	20
14	Map of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16	21
15	Map of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16	22
16	Map of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16	23
17	Map of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16	24
18	Map of “ROCINN “red” reflectance” for 2025-08-15 to 2025-08-16	25
19	Map of the number of observations for 2025-08-15 to 2025-08-16	26
20	Zonal average of “QA value” for 2025-08-15 to 2025-08-16.	27
21	Zonal average of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16.	28
22	Zonal average of “Cloud top height” for 2025-08-15 to 2025-08-16.	29
23	Zonal average of “Cloud optical thickness” for 2025-08-15 to 2025-08-16.	30
24	Zonal average of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16.	31
25	Zonal average of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16.	32
26	Zonal average of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16.	33
27	Zonal average of “Fitted surface albedo” for 2025-08-15 to 2025-08-16.	34
28	Zonal average of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16.	35
29	Zonal average of “RMS” for 2025-08-15 to 2025-08-16.	36

30	Zonal average of “RMS (CRB)” for 2025-08-15 to 2025-08-16	37
31	Zonal average of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16	38
32	Zonal average of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16	39
33	Zonal average of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16	40
34	Zonal average of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16	41
35	Zonal average of “ROCINN “red” reflectance” for 2025-08-15 to 2025-08-16	42
36	Histogram of “QA value” for 2025-08-15 to 2025-08-16	43
37	Histogram of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16	44
38	Histogram of “Cloud top height” for 2025-08-15 to 2025-08-16	45
39	Histogram of “Cloud optical thickness” for 2025-08-15 to 2025-08-16	46
40	Histogram of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16	47
41	Histogram of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16	48
42	Histogram of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16	49
43	Histogram of “Fitted surface albedo” for 2025-08-15 to 2025-08-16	50
44	Histogram of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16	51
45	Histogram of “RMS” for 2025-08-15 to 2025-08-16	52
46	Histogram of “RMS (CRB)” for 2025-08-15 to 2025-08-16	53
47	Histogram of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16	54
48	Histogram of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16	55
49	Histogram of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16	56
50	Histogram of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16	57
51	Histogram of “ROCINN “red” reflectance” for 2025-08-15 to 2025-08-16	58
52	Along track statistics of “QA value” for 2025-08-15 to 2025-08-16	59
53	Along track statistics of “Radiometric cloud fraction” for 2025-08-15 to 2025-08-16	60
54	Along track statistics of “Cloud top height” for 2025-08-15 to 2025-08-16	61
55	Along track statistics of “Cloud optical thickness” for 2025-08-15 to 2025-08-16	62
56	Along track statistics of “Cloud fraction (CRB)” for 2025-08-15 to 2025-08-16	63
57	Along track statistics of “Cloud height (CRB)” for 2025-08-15 to 2025-08-16	64
58	Along track statistics of “Cloud albedo (CRB)” for 2025-08-15 to 2025-08-16	65
59	Along track statistics of “Fitted surface albedo” for 2025-08-15 to 2025-08-16	66
60	Along track statistics of “Fitted surface albedo (CRB)” for 2025-08-15 to 2025-08-16	67
61	Along track statistics of “RMS” for 2025-08-15 to 2025-08-16	68
62	Along track statistics of “RMS (CRB)” for 2025-08-15 to 2025-08-16	69
63	Along track statistics of “Fitting wavelength shift” for 2025-08-15 to 2025-08-16	70
64	Along track statistics of “OCRA cloud fraction” for 2025-08-15 to 2025-08-16	71
65	Along track statistics of “OCRA “blue” reflectance” for 2025-08-15 to 2025-08-16	72
66	Along track statistics of “OCRA “green” reflectance” for 2025-08-15 to 2025-08-16	73
67	Along track statistics of “ROCINN “red” reflectance” for 2025-08-15 to 2025-08-16	74

List of Tables

1	Parameterlist and basic statistics for the analysis	2
2	Percentile ranges	3
3	Parameterlist and basic statistics for the analysis for observations in the northern hemisphere	4
4	Parameterlist and basic statistics for the analysis for observations in the southern hemisphere	5
5	Parameterlist and basic statistics for the analysis for observations over water	6
6	Parameterlist and basic statistics for the analysis for observations over land	7

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