

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-09-18 (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]	0.641 ± 0.378	18653680	0.995	0.610	0.850	0.0	1.000
cloud fraction [1]	0.568 ± 0.344	18653680	0.995	0.725	0.550	6.109×10^{-3}	1.000
cloud top height [m]	$(0.387 \pm 0.269) \times 10^4$	18653680	1.575×10^3	3.591×10^3	3.200×10^3	0.0	2.000×10^4
cloud optical thickness [1]	23.1 ± 43.1	18653680	9.77	11.9	10.2	1.000	250
cloud fraction crb [1]	0.567 ± 0.344	18653680	0.995	0.724	0.548	8.211×10^{-3}	1.000
cloud height crb [m]	$(0.308 \pm 0.229) \times 10^4$	18653680	975	3.180×10^3	2.554×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.590 ± 0.205	18653680	0.995	0.248	0.567	0.0	1.000
surface albedo fitted [1]	0.194 ± 0.249	18653680	2.500×10^{-2}	0.236	5.500×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.182 ± 0.236	18653680	1.500×10^{-2}	0.238	4.494×10^{-2}	0.0	1.000
fitted root mean square [1]	$(5.847 \pm 7.922) \times 10^{-4}$	18653680	5.000×10^{-5}	6.921×10^{-4}	3.471×10^{-4}	1.001×10^{-6}	0.746
fitted root mean square crb [1]	$(5.007 \pm 7.358) \times 10^{-4}$	18653680	5.000×10^{-5}	5.926×10^{-4}	2.485×10^{-4}	1.017×10^{-6}	0.685
wavelength shift [nm]	$(8.242 \pm 7.064) \times 10^{-3}$	18653680	9.000×10^{-4}	9.985×10^{-3}	7.618×10^{-3}	-5.611×10^{-2}	6.668×10^{-2}
cloud fraction apriori [1]	0.573 ± 0.350	18653680	0.995	0.761	0.559	0.0	1.000
reflectance blue ocra [1]	0.547 ± 0.222	18653680	0.265	0.363	0.519	0.131	1.98
reflectance green ocra [1]	0.493 ± 0.248	18653680	0.175	0.431	0.468	7.216×10^{-2}	1.96
reflectance continuum aband [1]	0.446 ± 0.270	18653680	4.500×10^{-2}	0.433	0.435	8.656×10^{-3}	4.66

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	0.350	0.960	1.000	1.000	1.000	1.000
cloud fraction [1]	2.636×10^{-2}	6.827×10^{-2}	0.106	0.154	0.244	0.968	1.000	1.000	1.000	1.000
cloud top height [m]	241	738	1.071×10^3	1.373×10^3	1.776×10^3	5.367×10^3	6.662×10^3	7.788×10^3	9.202×10^3	1.166×10^4
cloud optical thickness [1]	1.05	2.90	4.03	5.00	6.37	18.3	28.0	43.8	86.9	250
cloud fraction crb [1]	2.582×10^{-2}	6.739×10^{-2}	0.105	0.154	0.243	0.967	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	342	626	886	1.236×10^3	4.416×10^3	5.493×10^3	6.465×10^3	7.653×10^3	9.542×10^3
cloud albedo crb [1]	6.491×10^{-2}	0.255	0.362	0.420	0.466	0.714	0.803	0.890	1.000	1.000
surface albedo fitted [1]	0.0	9.140×10^{-3}	1.451×10^{-2}	1.916×10^{-2}	2.605×10^{-2}	0.262	0.500	0.646	0.752	0.922
surface albedo fitted crb [1]	0.0	6.939×10^{-3}	1.079×10^{-2}	1.440×10^{-2}	1.994×10^{-2}	0.258	0.485	0.608	0.694	0.868
fitted root mean square [1]	1.485×10^{-5}	2.929×10^{-5}	4.687×10^{-5}	7.278×10^{-5}	1.212×10^{-4}	8.133×10^{-4}	1.118×10^{-3}	1.431×10^{-3}	1.910×10^{-3}	3.017×10^{-3}
fitted root mean square crb [1]	7.899×10^{-6}	1.792×10^{-5}	3.098×10^{-5}	4.856×10^{-5}	8.219×10^{-5}	6.748×10^{-4}	9.957×10^{-4}	1.332×10^{-3}	1.829×10^{-3}	2.899×10^{-3}
wavelength shift [nm]	-6.935×10^{-3}	-5.630×10^{-4}	2.393×10^{-4}	1.171×10^{-3}	2.861×10^{-3}	1.285×10^{-2}	1.534×10^{-2}	1.752×10^{-2}	2.045×10^{-2}	2.673×10^{-2}
cloud fraction apriori [1]	2.904×10^{-2}	6.475×10^{-2}	9.904×10^{-2}	0.147	0.239	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.230	0.254	0.279	0.308	0.356	0.719	0.787	0.840	0.914	1.11
reflectance green ocra [1]	0.150	0.170	0.190	0.215	0.263	0.694	0.772	0.827	0.901	1.07
reflectance continuum aband [1]	2.960×10^{-2}	5.209×10^{-2}	8.512×10^{-2}	0.132	0.220	0.652	0.739	0.803	0.883	1.06

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 ± 0.380	10125719	0.650	0.850	0.0	1.000	0.310	0.960
cloud fraction [1]	0.598 ± 0.350	10125719	0.741	0.618	6.150×10^{-3}	1.000	0.258	0.998
cloud top height [m]	$(0.396 \pm 0.257) \times 10^4$	10125719	3.501×10^3	3.433×10^3	0.0	2.000×10^4	1.939×10^3	5.440×10^3
cloud optical thickness [1]	19.9 ± 33.1	10125719	12.3	10.1	1.000	250	6.36	18.6
cloud fraction crb [1]	0.597 ± 0.350	10125719	0.742	0.616	8.211×10^{-3}	1.000	0.256	0.998
cloud height crb [m]	$(0.321 \pm 0.224) \times 10^4$	10125719	3.078×10^3	2.816×10^3	0.0	2.000×10^4	1.414×10^3	4.493×10^3
cloud albedo crb [1]	0.574 ± 0.196	10125719	0.241	0.561	0.0	1.000	0.457	0.698
surface albedo fitted [1]	0.175 ± 0.207	10125719	0.213	7.854×10^{-2}	0.0	1.000	2.802×10^{-2}	0.241
surface albedo fitted crb [1]	0.168 ± 0.204	10125719	0.216	6.497×10^{-2}	0.0	1.000	2.155×10^{-2}	0.238
fitted root mean square [1]	$(5.886 \pm 8.977) \times 10^{-4}$	10125719	6.913×10^{-4}	3.053×10^{-4}	1.001×10^{-6}	0.746	1.141×10^{-4}	8.053×10^{-4}
fitted root mean square crb [1]	$(5.330 \pm 8.590) \times 10^{-4}$	10125719	6.629×10^{-4}	2.346×10^{-4}	1.017×10^{-6}	0.685	7.236×10^{-5}	7.352×10^{-4}
wavelength shift [nm]	$(7.825 \pm 6.910) \times 10^{-3}$	10125719	9.729×10^{-3}	7.071×10^{-3}	-5.611×10^{-2}	6.668×10^{-2}	2.508×10^{-3}	1.224×10^{-2}
cloud fraction apriori [1]	0.603 ± 0.355	10125719	0.746	0.631	0.0	1.000	0.254	1.000
reflectance blue oca [1]	0.534 ± 0.215	10125719	0.338	0.508	0.131	1.91	0.351	0.689
reflectance green oca [1]	0.479 ± 0.238	10125719	0.402	0.456	7.216×10^{-2}	1.84	0.260	0.662
reflectance continuum aband [1]	0.441 ± 0.259	10125719	0.394	0.425	8.656×10^{-3}	3.37	0.233	0.628

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]	0.642 ± 0.375	8527961	0.590	0.840	0.0	1.000	0.370	0.960
cloud fraction [1]	0.533 ± 0.334	8527961	0.660	0.483	6.109×10^{-3}	1.000	0.231	0.891
cloud top height [m]	$(0.376 \pm 0.282) \times 10^4$	8527961	3.622×10^3	2.899×10^3	0.0	2.000×10^4	1.644×10^3	5.265×10^3
cloud optical thickness [1]	26.9 ± 52.3	8527961	11.4	10.3	1.000	250	6.38	17.8
cloud fraction crb [1]	0.532 ± 0.334	8527961	0.658	0.480	8.215×10^{-3}	1.000	0.231	0.890
cloud height crb [m]	$(0.292 \pm 0.234) \times 10^4$	8527961	3.196×10^3	2.216×10^3	0.0	1.847×10^4	1.094×10^3	4.290×10^3
cloud albedo crb [1]	0.608 ± 0.213	8527961	0.264	0.574	0.0	1.000	0.476	0.740
surface albedo fitted [1]	0.217 ± 0.289	8527961	0.359	4.422×10^{-2}	0.0	1.000	2.443×10^{-2}	0.383
surface albedo fitted crb [1]	0.199 ± 0.268	8527961	0.348	3.619×10^{-2}	0.0	1.000	1.850×10^{-2}	0.366
fitted root mean square [1]	$(5.800 \pm 6.448) \times 10^{-4}$	8527961	6.859×10^{-4}	3.960×10^{-4}	3.754×10^{-6}	6.510×10^{-2}	1.341×10^{-4}	8.200×10^{-4}
fitted root mean square crb [1]	$(4.623 \pm 5.525) \times 10^{-4}$	8527961	5.274×10^{-4}	2.621×10^{-4}	2.689×10^{-6}	9.256×10^{-3}	9.486×10^{-5}	6.223×10^{-4}
wavelength shift [nm]	$(8.737 \pm 7.212) \times 10^{-3}$	8527961	1.018×10^{-2}	8.313×10^{-3}	-4.175×10^{-2}	6.522×10^{-2}	3.316×10^{-3}	1.350×10^{-2}
cloud fraction apriori [1]	0.536 ± 0.340	8527961	0.690	0.488	0.0	1.000	0.226	0.916
reflectance blue ocrs [1]	0.563 ± 0.229	8527961	0.392	0.534	0.150	1.98	0.362	0.754
reflectance green ocrs [1]	0.509 ± 0.258	8527961	0.464	0.484	8.330×10^{-2}	1.96	0.267	0.731
reflectance continuum aband [1]	0.452 ± 0.283	8527961	0.479	0.451	1.316×10^{-2}	4.66	0.199	0.678

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]	0.655 ± 0.365	12983209	0.550	0.850	0.0	1.000	0.400	0.950
cloud fraction [1]	0.565 ± 0.343	12983209	0.715	0.554	6.109×10^{-3}	1.000	0.238	0.953
cloud top height [m]	$(0.357 \pm 0.248) \times 10^4$	12983209	3.214×10^3	2.923×10^3	0.0	2.000×10^4	1.659×10^3	4.873×10^3
cloud optical thickness [1]	23.5 ± 42.6	12983209	11.8	10.7	1.000	250	7.06	18.9
cloud fraction crb [1]	0.564 ± 0.343	12983209	0.715	0.552	8.516×10^{-3}	1.000	0.237	0.952
cloud height crb [m]	$(0.286 \pm 0.220) \times 10^4$	12983209	2.985×10^3	2.308×10^3	0.0	1.847×10^4	1.112×10^3	4.097×10^3
cloud albedo crb [1]	0.565 ± 0.191	12983209	0.219	0.545	0.0	1.000	0.455	0.675
surface albedo fitted [1]	0.125 ± 0.214	12983209	4.293×10^{-2}	3.474×10^{-2}	0.0	1.000	2.046×10^{-2}	6.338×10^{-2}
surface albedo fitted crb [1]	0.115 ± 0.205	12983209	3.679×10^{-2}	2.726×10^{-2}	0.0	1.000	1.540×10^{-2}	5.219×10^{-2}
fitted root mean square [1]	$(5.024 \pm 6.395) \times 10^{-4}$	12983209	5.952×10^{-4}	2.540×10^{-4}	1.001×10^{-6}	6.007×10^{-2}	8.977×10^{-5}	6.849×10^{-4}
fitted root mean square crb [1]	$(4.387 \pm 5.985) \times 10^{-4}$	12983209	4.987×10^{-4}	1.903×10^{-4}	1.017×10^{-6}	1.161×10^{-2}	6.580×10^{-5}	5.645×10^{-4}
wavelength shift [nm]	$(7.933 \pm 7.242) \times 10^{-3}$	12983209	1.023×10^{-2}	7.074×10^{-3}	-4.556×10^{-2}	6.522×10^{-2}	2.410×10^{-3}	1.264×10^{-2}
cloud fraction apriori [1]	0.568 ± 0.348	12983209	0.757	0.560	0.0	1.000	0.232	0.989
reflectance blue oca [1]	0.529 ± 0.207	12983209	0.331	0.502	0.154	1.98	0.353	0.684
reflectance green oca [1]	0.470 ± 0.233	12983209	0.399	0.446	8.279×10^{-2}	1.86	0.255	0.654
reflectance continuum aband [1]	0.399 ± 0.264	12983209	0.452	0.387	1.129×10^{-2}	3.41	0.152	0.604

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]	0.572 ± 0.415	3971064	0.950	0.750	0.0	1.000	0.0	0.950
cloud fraction [1]	0.529 ± 0.339	3971064	0.696	0.451	6.852×10^{-3}	1.000	0.231	0.927
cloud top height [m]	$(0.502 \pm 0.312) \times 10^4$	3971064	4.383×10^3	4.527×10^3	0.0	2.000×10^4	2.548×10^3	6.931×10^3
cloud optical thickness [1]	22.1 ± 47.2	3971064	9.79	8.13	1.000	250	5.09	14.9
cloud fraction crb [1]	0.529 ± 0.338	3971064	0.694	0.450	8.260×10^{-3}	1.000	0.232	0.926
cloud height crb [m]	$(0.391 \pm 0.248) \times 10^4$	3971064	3.707×10^3	3.442×10^3	0.0	2.000×10^4	1.877×10^3	5.585×10^3
cloud albedo crb [1]	0.671 ± 0.231	3971064	0.350	0.658	0.0	1.000	0.514	0.865
surface albedo fitted [1]	0.416 ± 0.258	3971064	0.465	0.291	0.0	1.000	0.208	0.673
surface albedo fitted crb [1]	0.395 ± 0.233	3971064	0.428	0.288	5.341×10^{-3}	1.000	0.204	0.631
fitted root mean square [1]	$(8.461 \pm 11.401) \times 10^{-4}$	3971064	7.906×10^{-4}	6.503×10^{-4}	3.116×10^{-6}	0.746	3.302×10^{-4}	1.121×10^{-3}
fitted root mean square crb [1]	$(6.797 \pm 10.800) \times 10^{-4}$	3971064	7.660×10^{-4}	4.418×10^{-4}	2.590×10^{-6}	0.685	1.718×10^{-4}	9.378×10^{-4}
wavelength shift [nm]	$(8.871 \pm 6.446) \times 10^{-3}$	3971064	8.903×10^{-3}	8.529×10^{-3}	-5.611×10^{-2}	6.443×10^{-2}	4.145×10^{-3}	1.305×10^{-2}
cloud fraction apriori [1]	0.538 ± 0.346	3971064	0.766	0.463	0.0	1.000	0.230	0.995
reflectance blue oca [1]	0.604 ± 0.263	3971064	0.456	0.599	0.131	1.96	0.356	0.813
reflectance green oca [1]	0.564 ± 0.287	3971064	0.525	0.570	7.216×10^{-2}	1.96	0.280	0.805
reflectance continuum aband [1]	0.575 ± 0.254	3971064	0.417	0.569	1.769×10^{-2}	4.66	0.353	0.770

3 Granule outlines

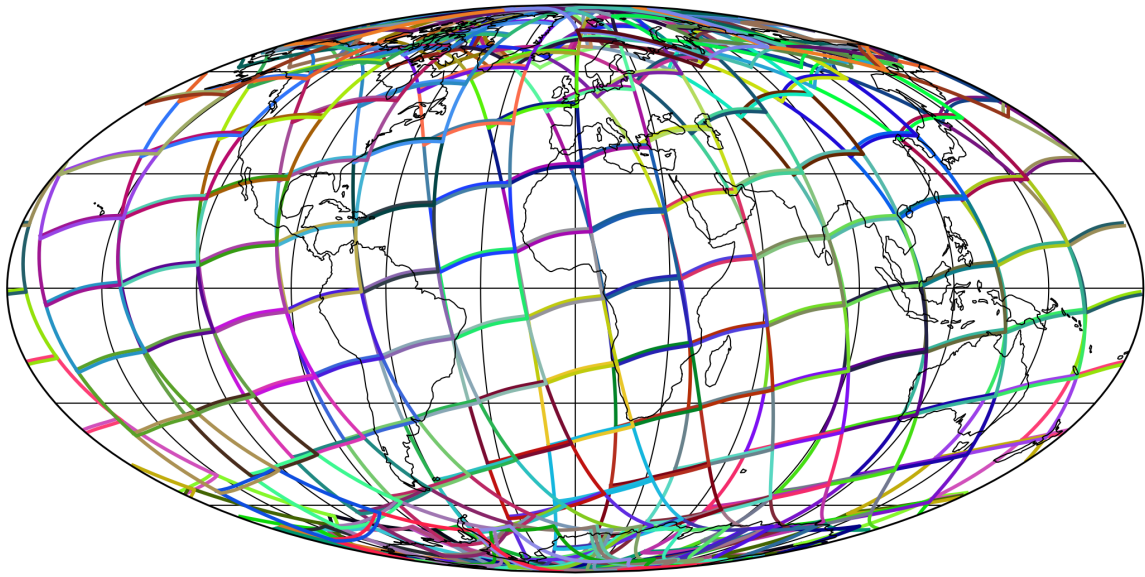


Figure 1: Outline of the granules.

4 Input data monitoring

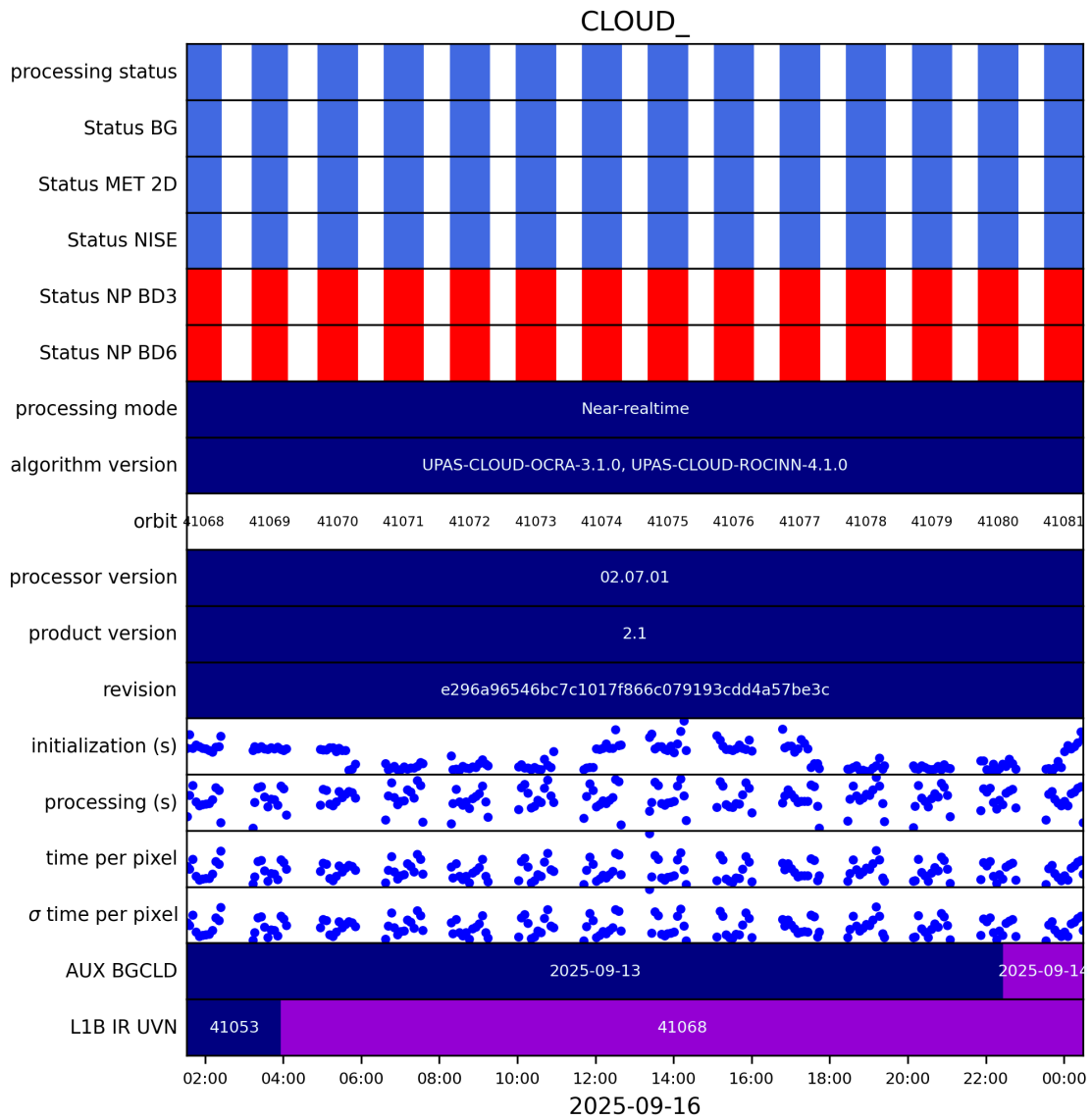


Figure 2: Input data per granule

5 Warnings and errors

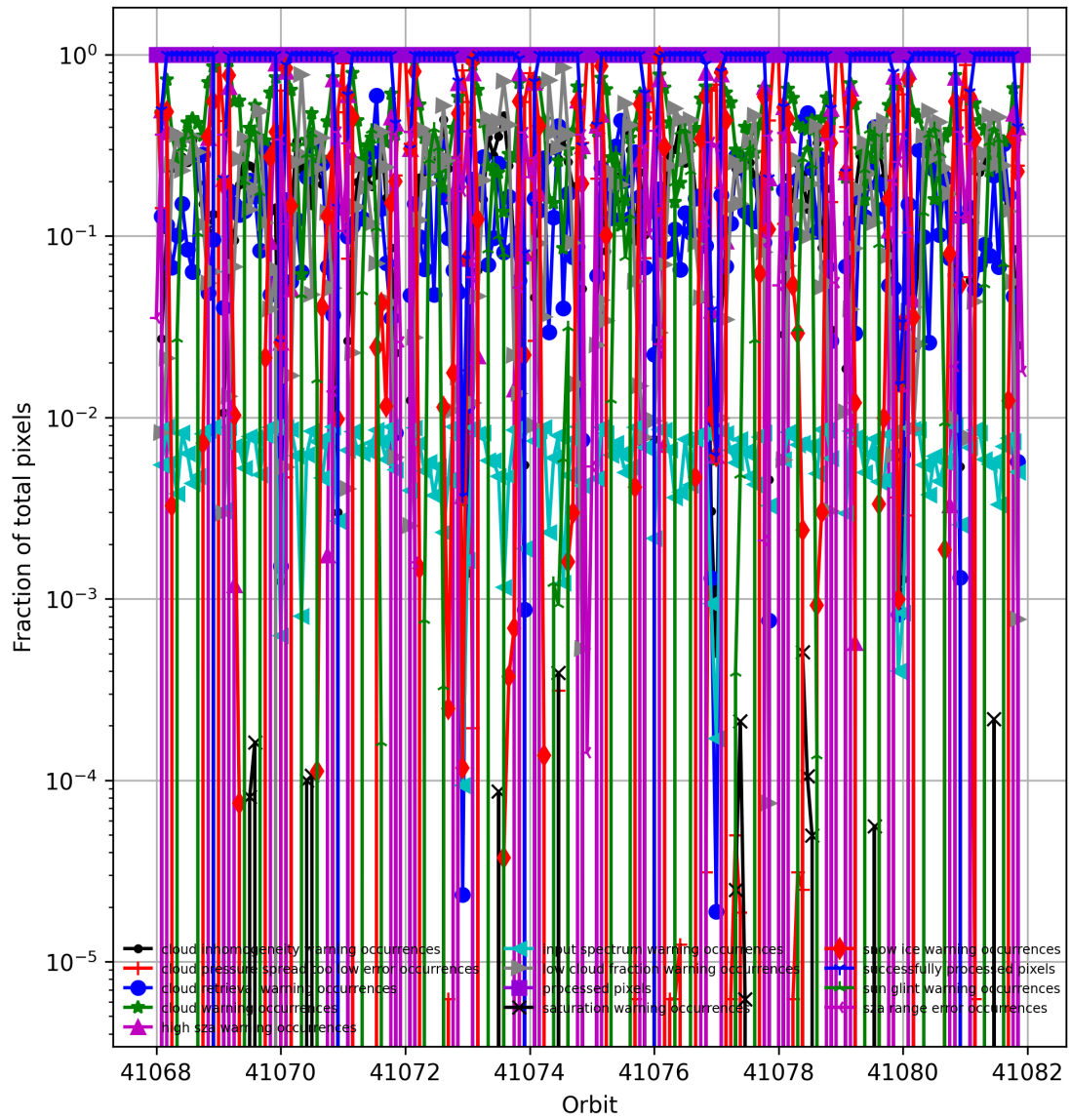


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

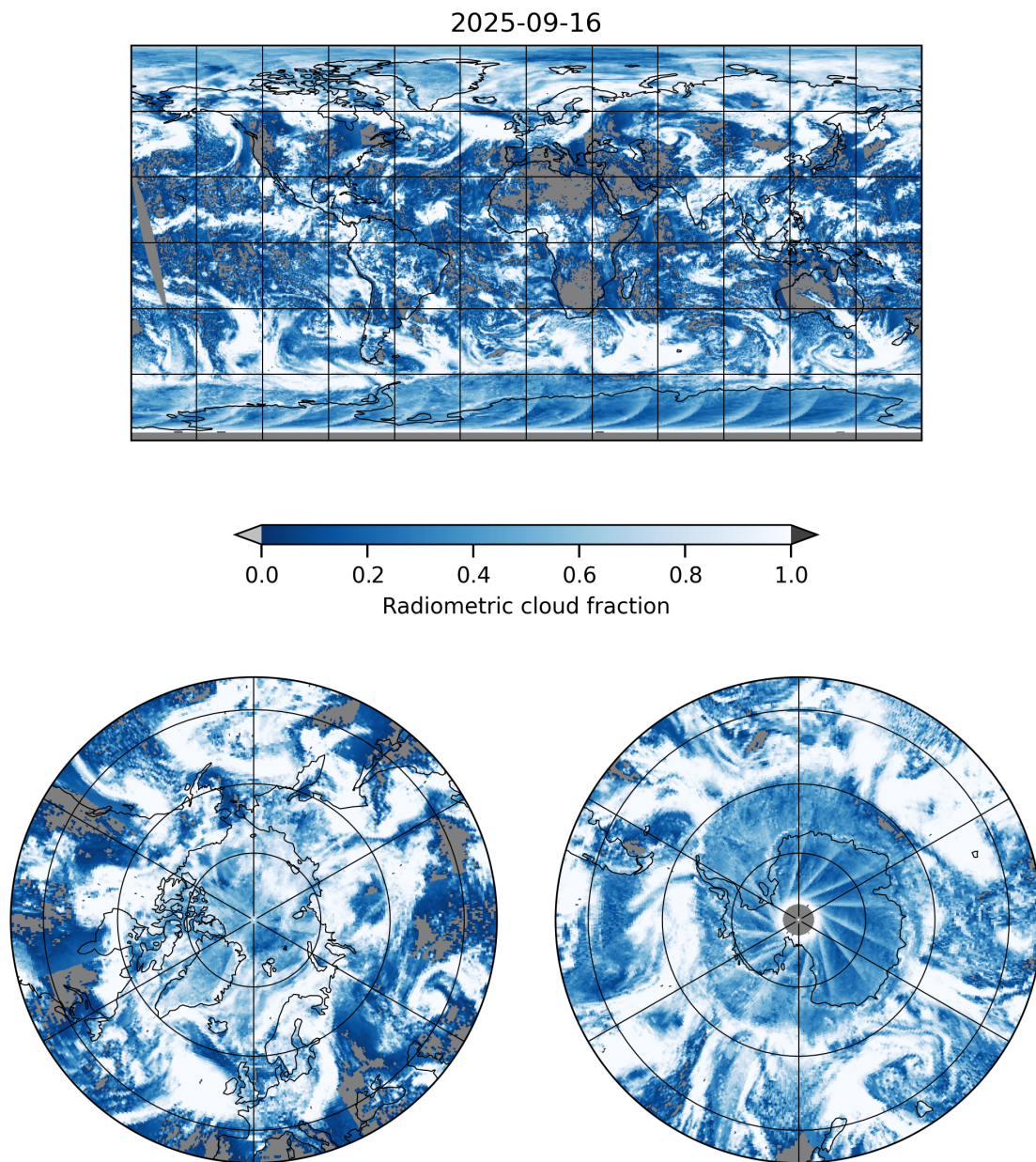


Figure 4: Map of “Radiometric cloud fraction” for 2025-09-16 to 2025-09-17

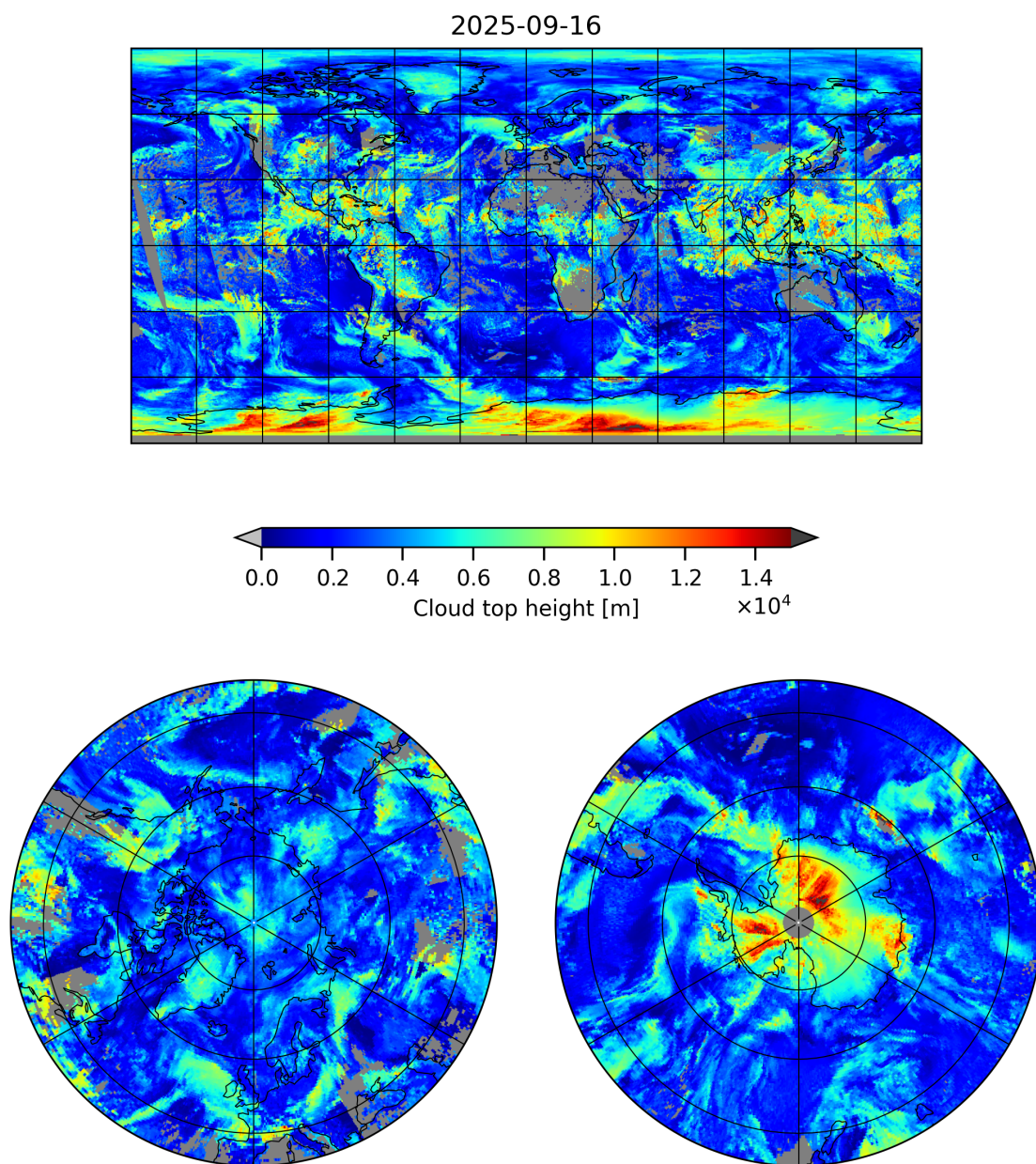


Figure 5: Map of “Cloud top height” for 2025-09-16 to 2025-09-17

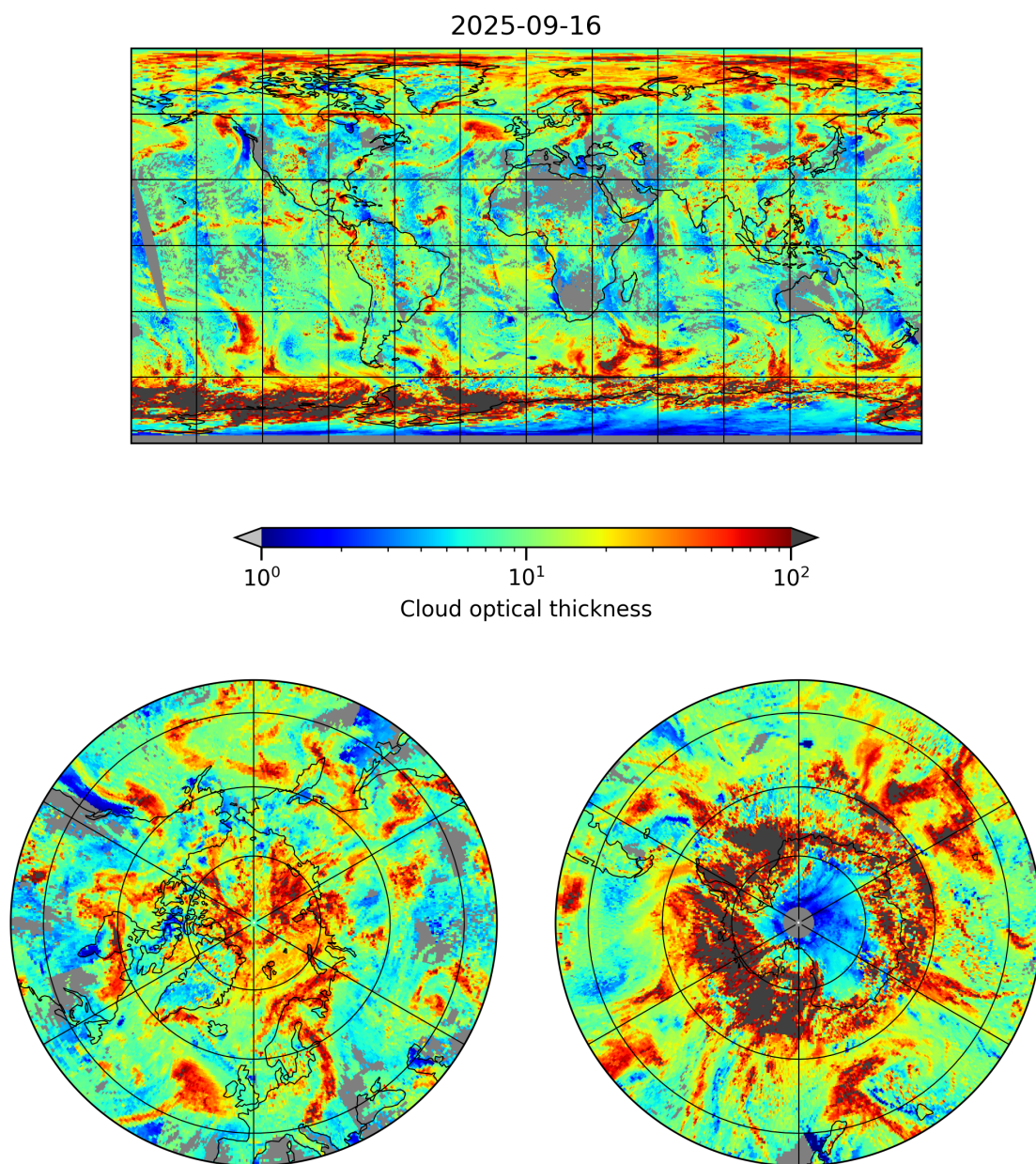


Figure 6: Map of “Cloud optical thickness” for 2025-09-16 to 2025-09-17

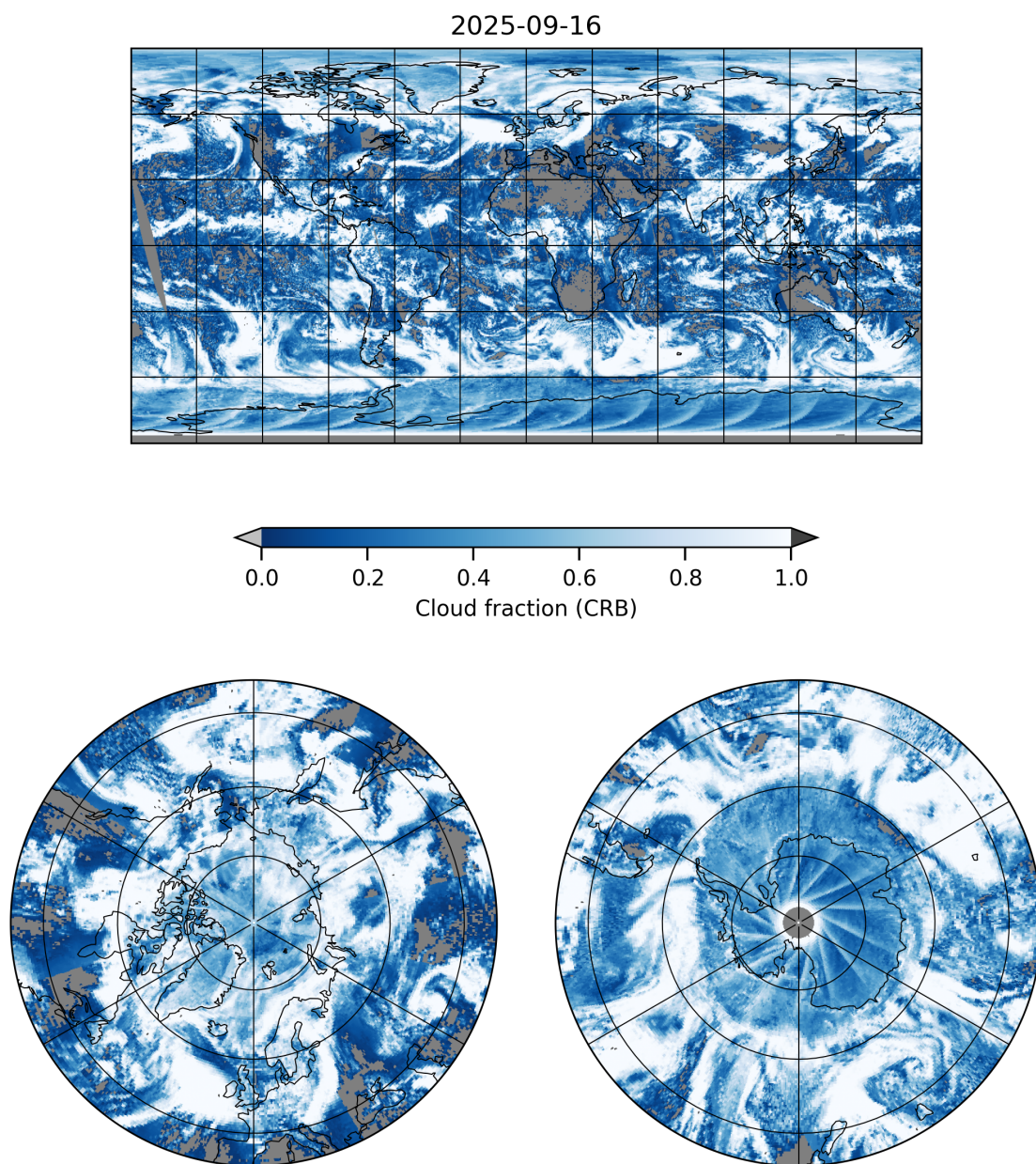


Figure 7: Map of “Cloud fraction (CRB)” for 2025-09-16 to 2025-09-17

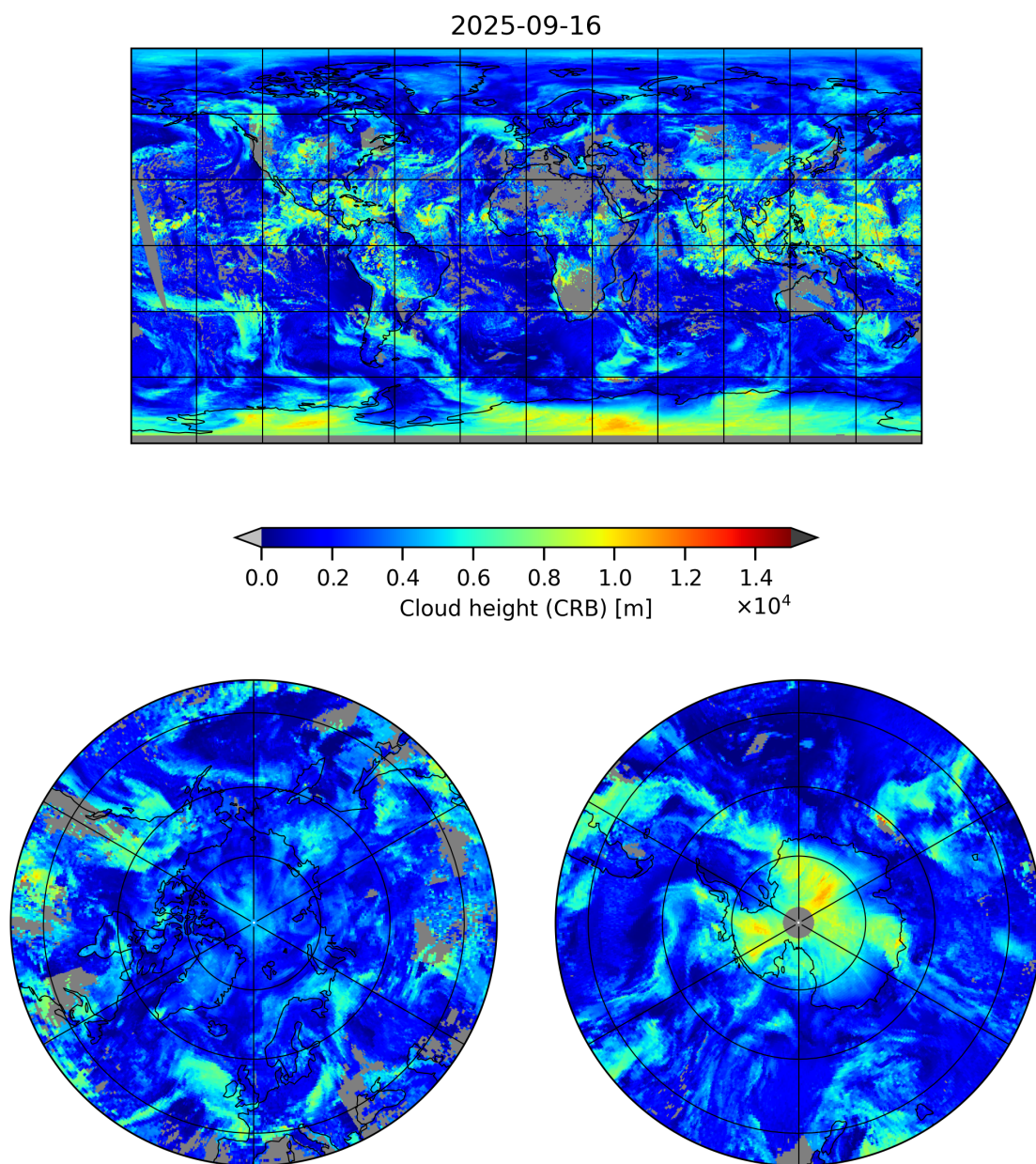


Figure 8: Map of “Cloud height (CRB)” for 2025-09-16 to 2025-09-17

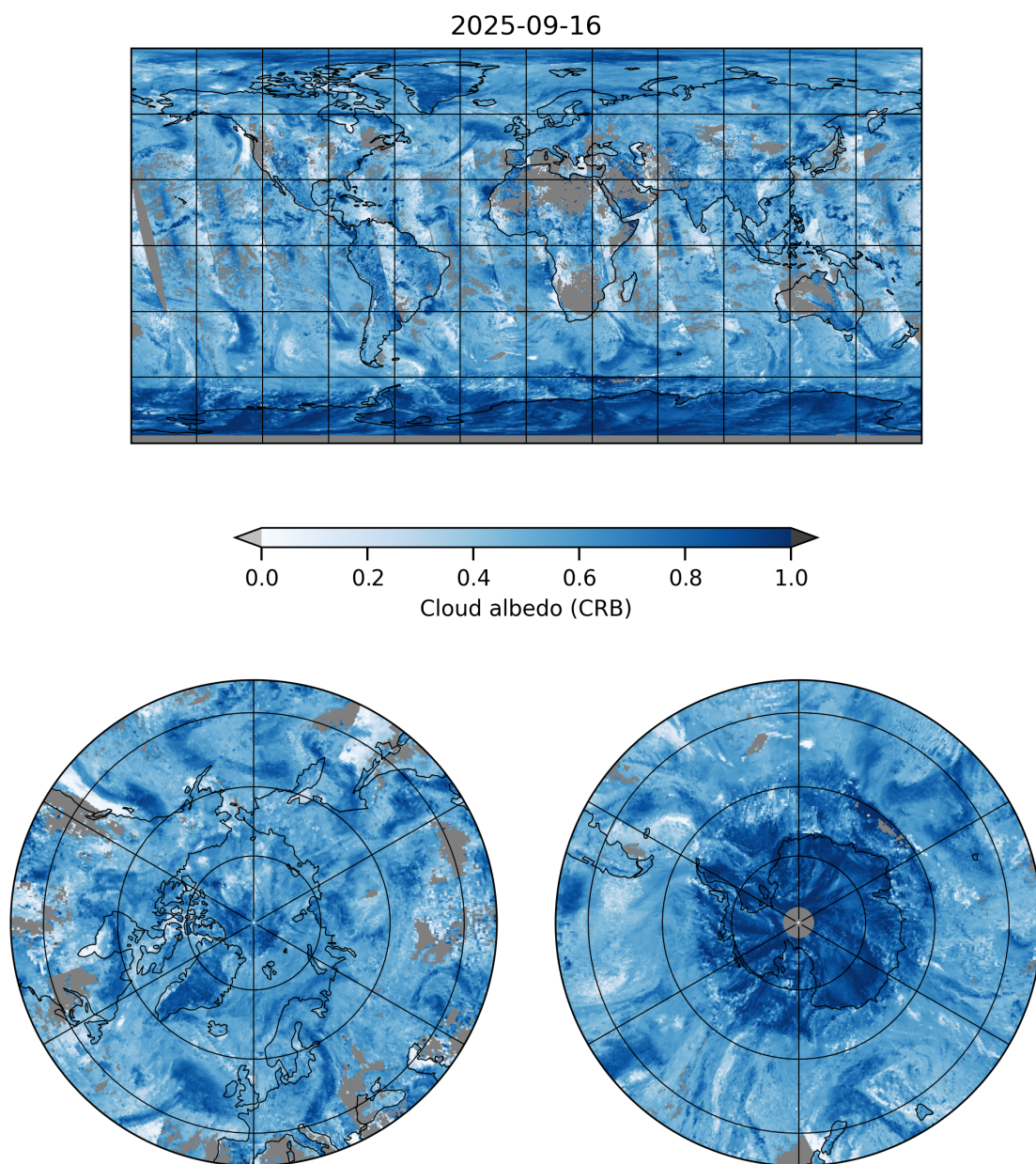


Figure 9: Map of “Cloud albedo (CRB)” for 2025-09-16 to 2025-09-17

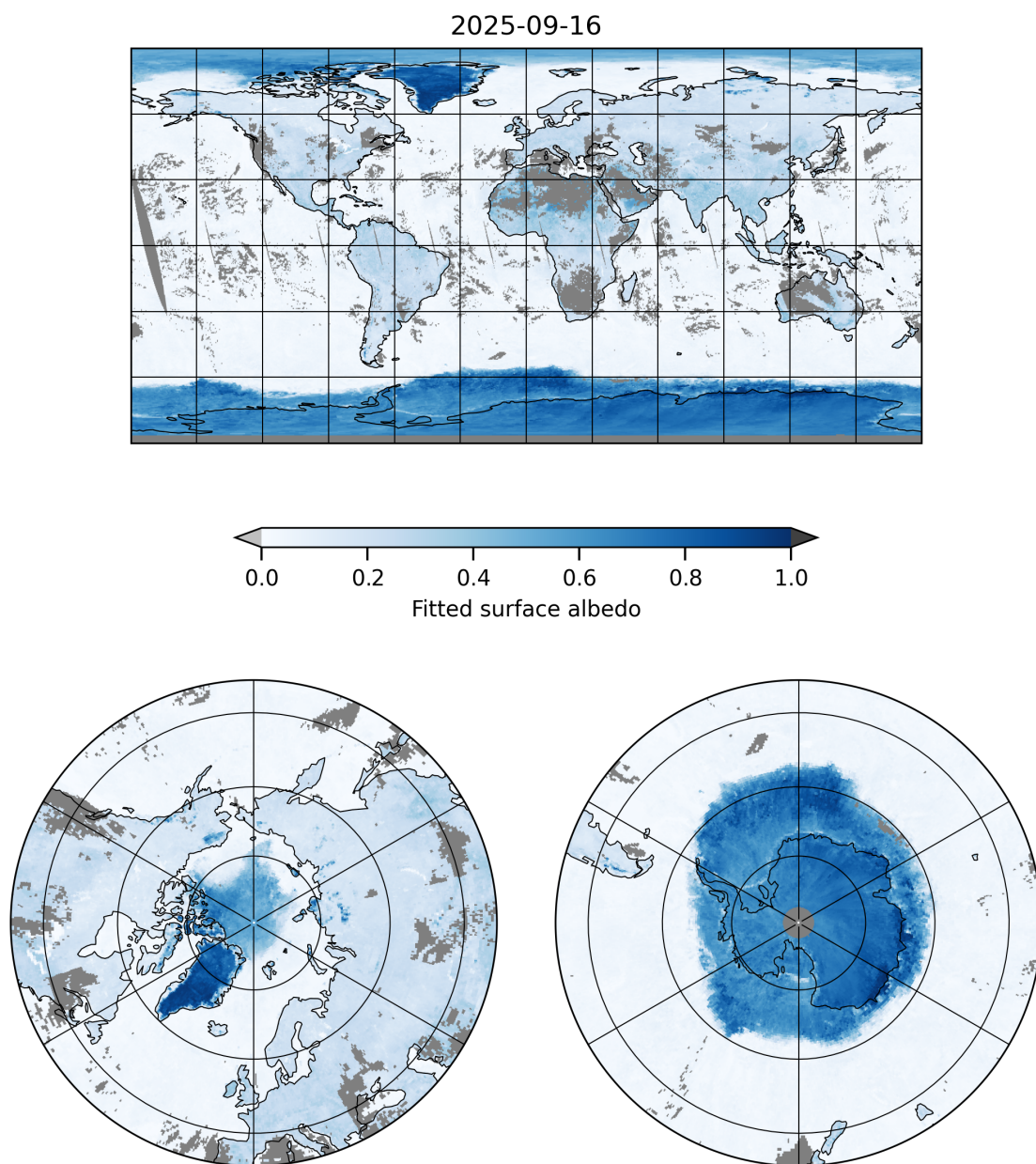


Figure 10: Map of “Fitted surface albedo” for 2025-09-16 to 2025-09-17

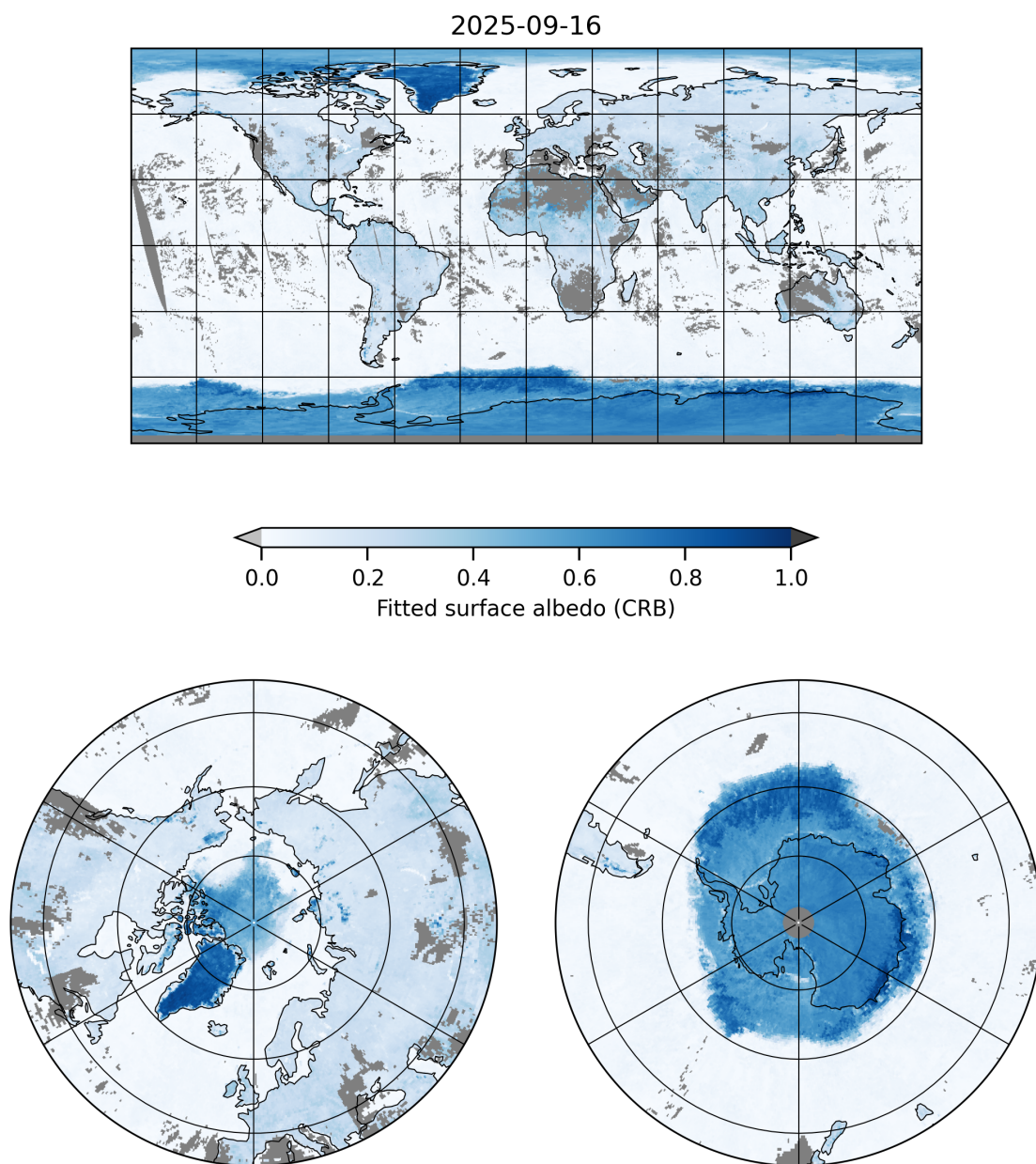


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-09-16 to 2025-09-17

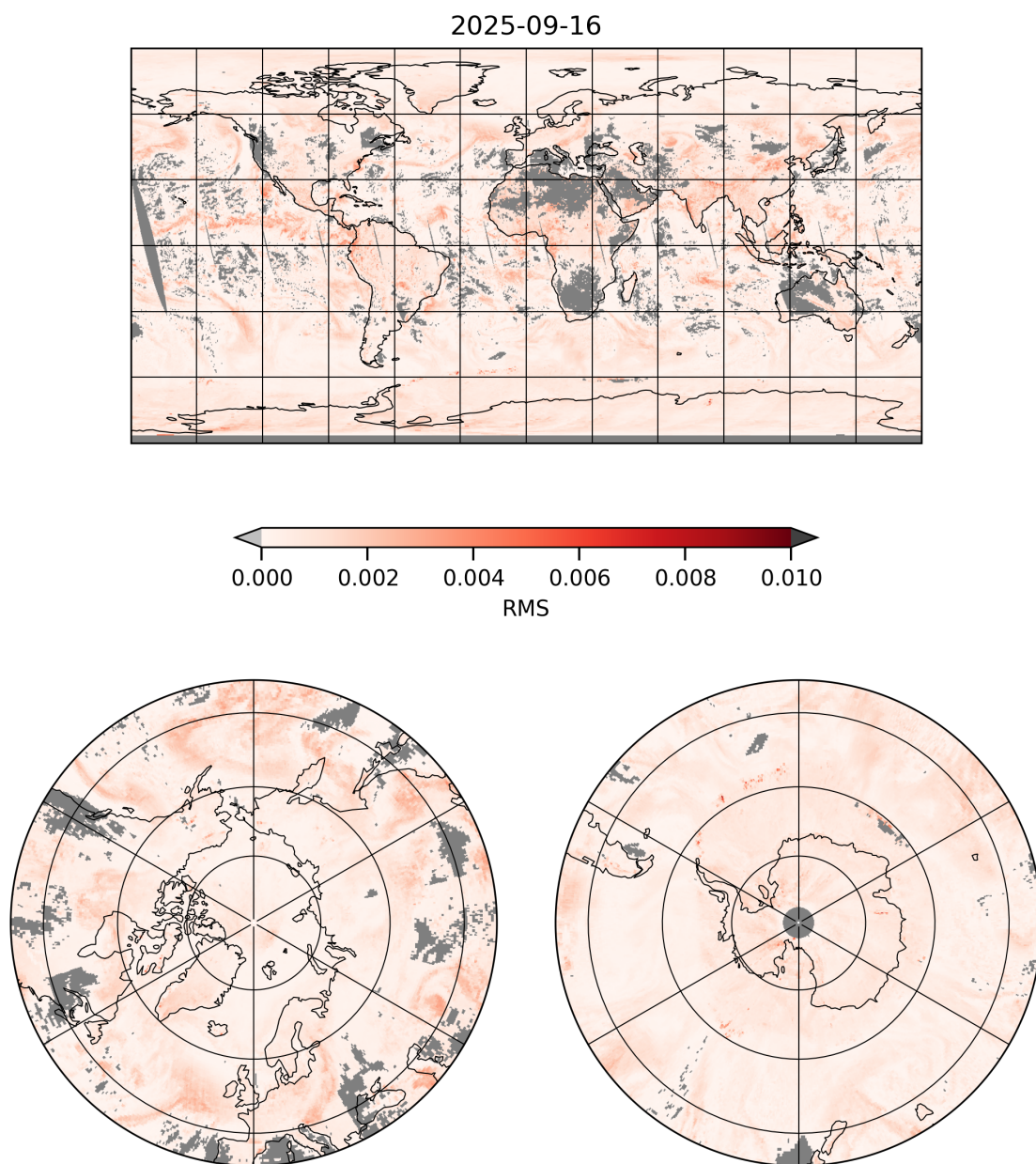


Figure 12: Map of “RMS” for 2025-09-16 to 2025-09-17

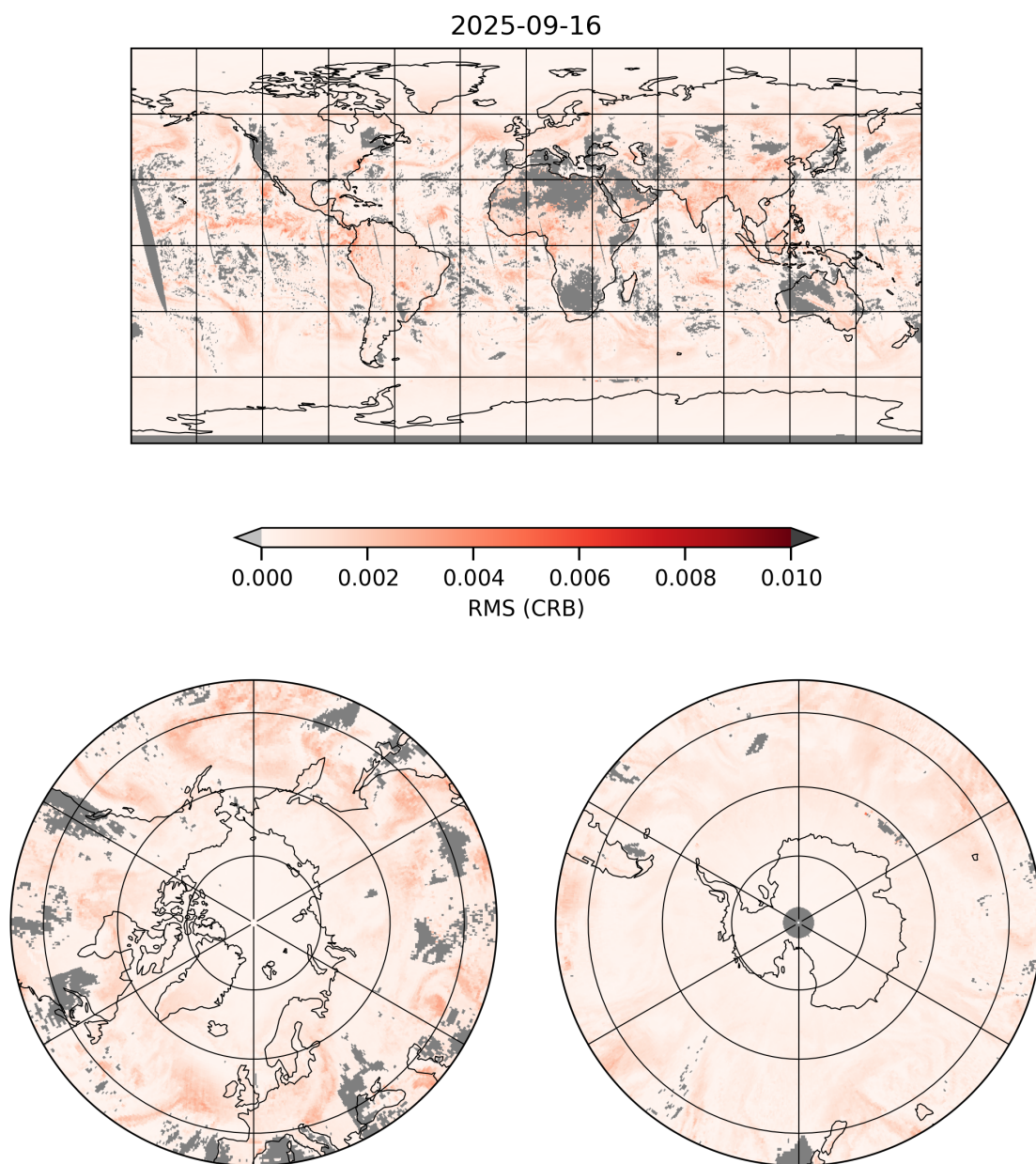


Figure 13: Map of “RMS (CRB)” for 2025-09-16 to 2025-09-17

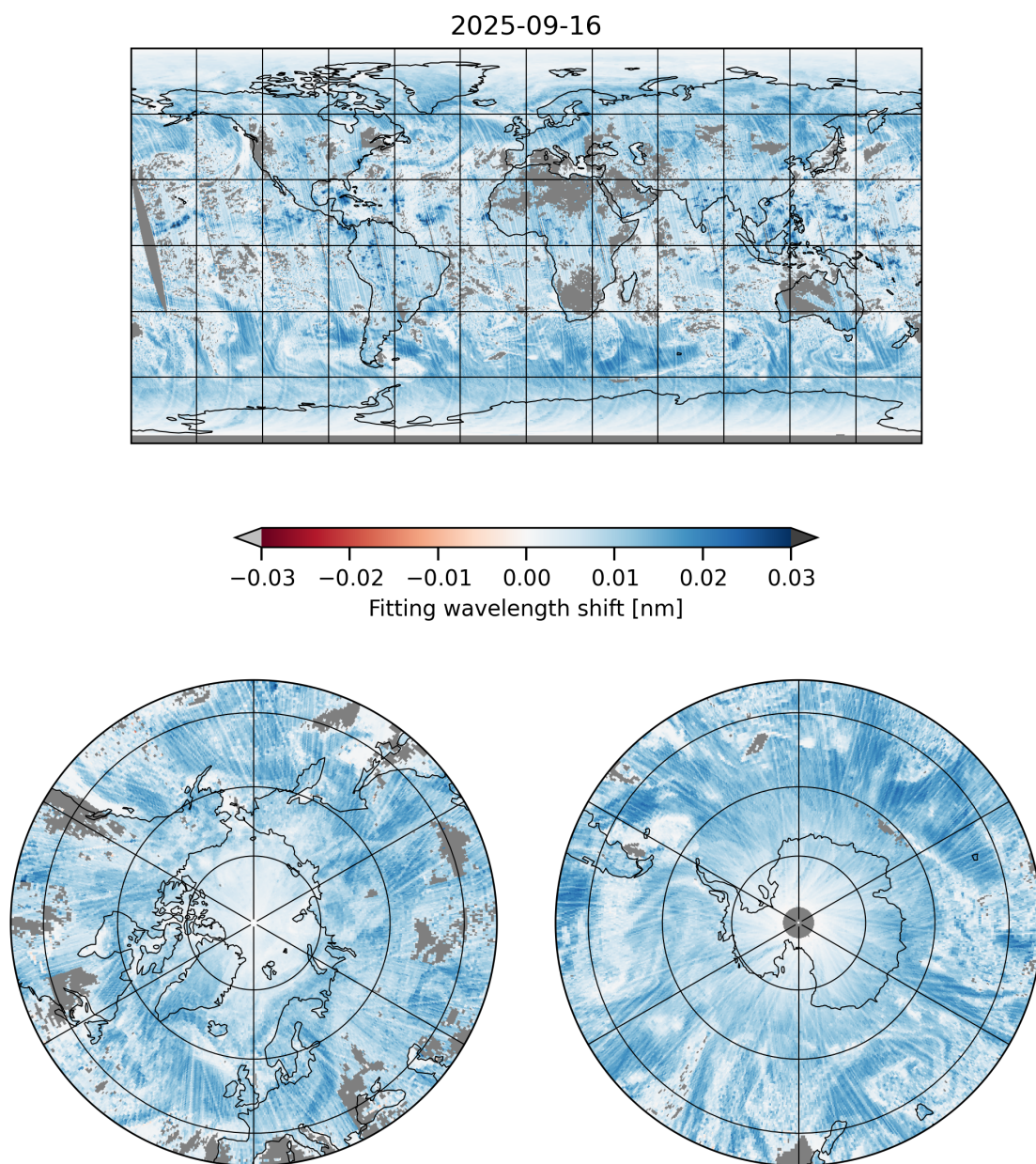


Figure 14: Map of “Fitting wavelength shift” for 2025-09-16 to 2025-09-17

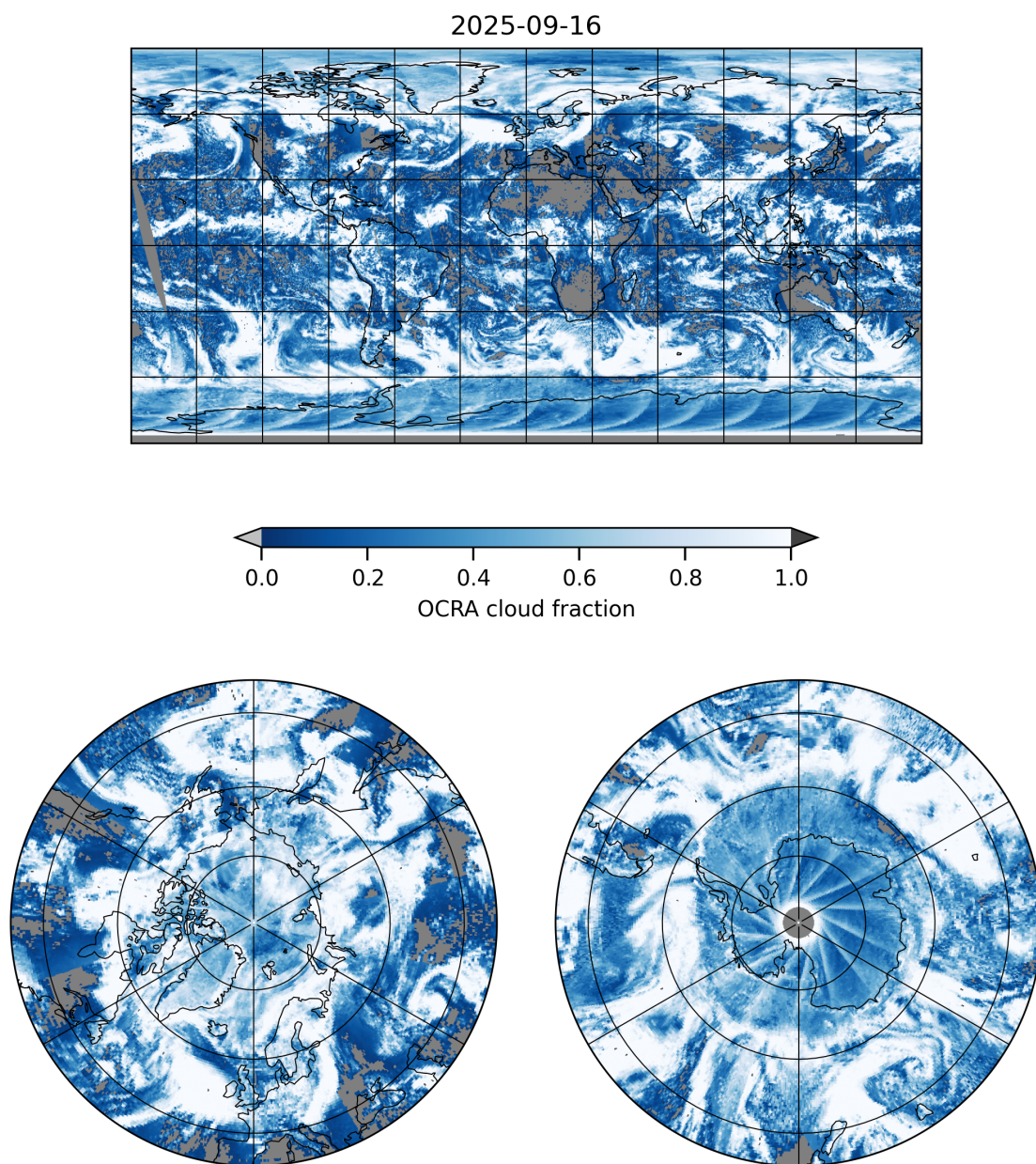


Figure 15: Map of “OCRA cloud fraction” for 2025-09-16 to 2025-09-17

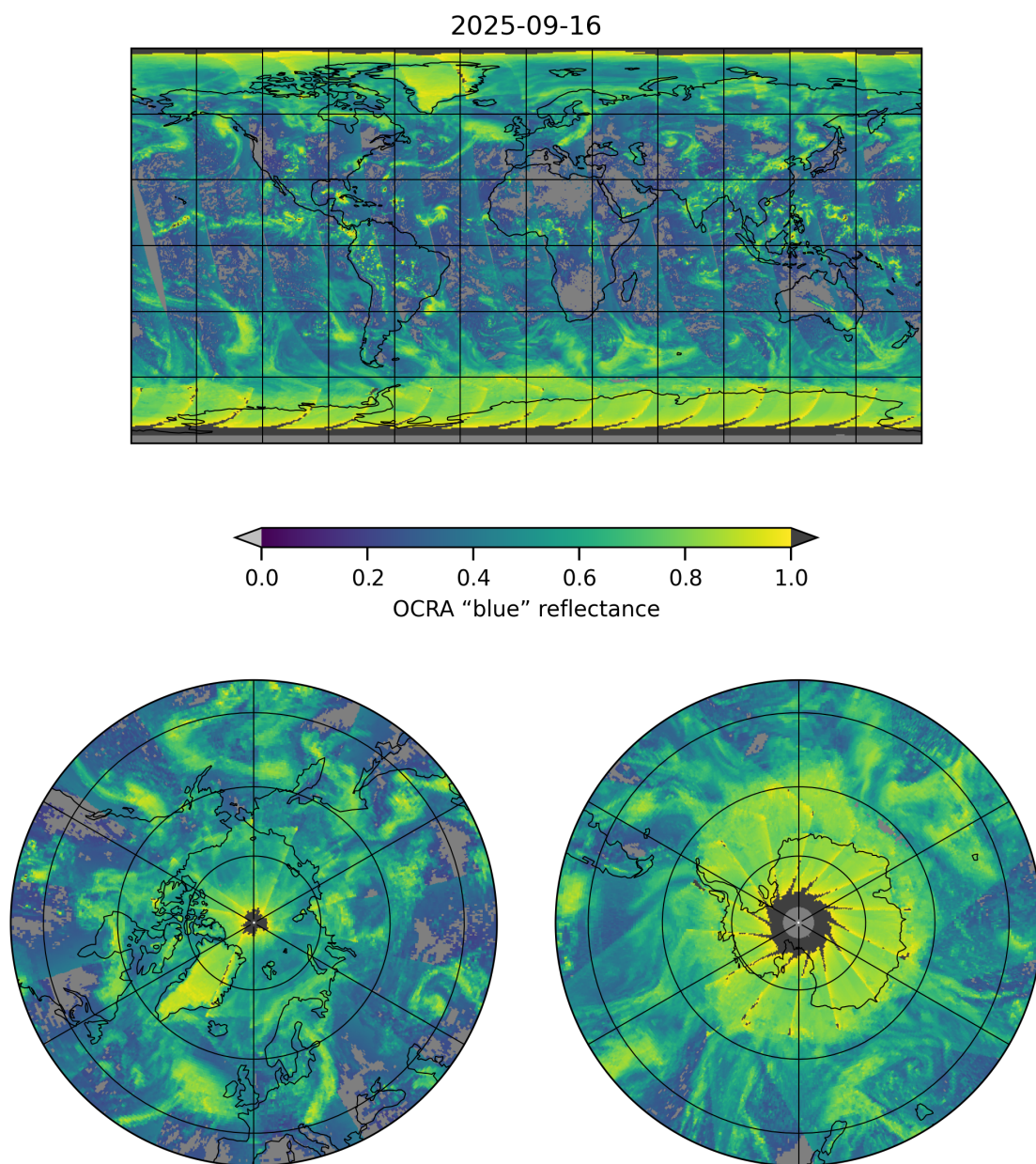


Figure 16: Map of "OCRA "blue" reflectance" for 2025-09-16 to 2025-09-17

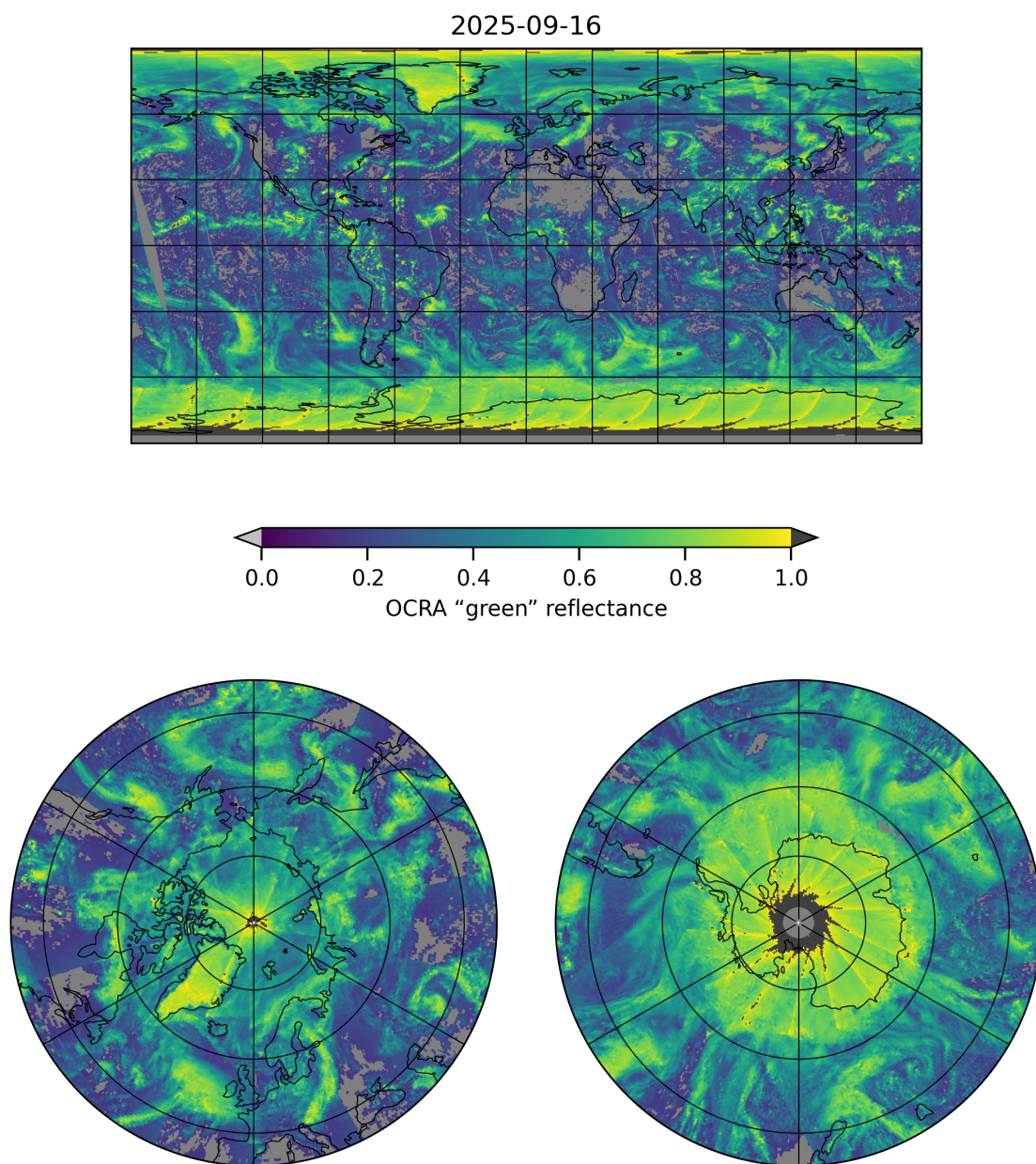


Figure 17: Map of "OCRA "green" reflectance" for 2025-09-16 to 2025-09-17

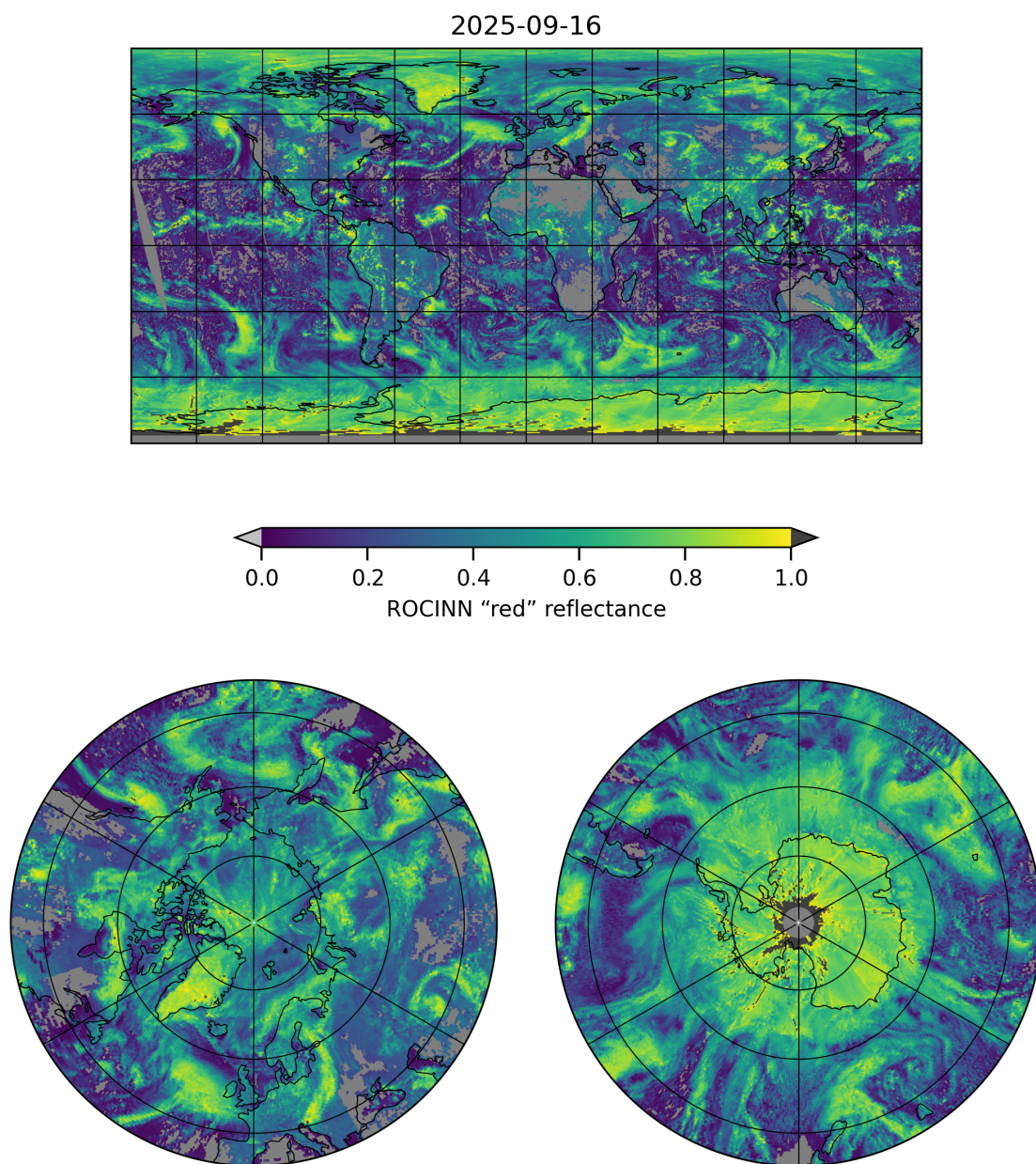


Figure 18: Map of "ROCINN "red" reflectance" for 2025-09-16 to 2025-09-17

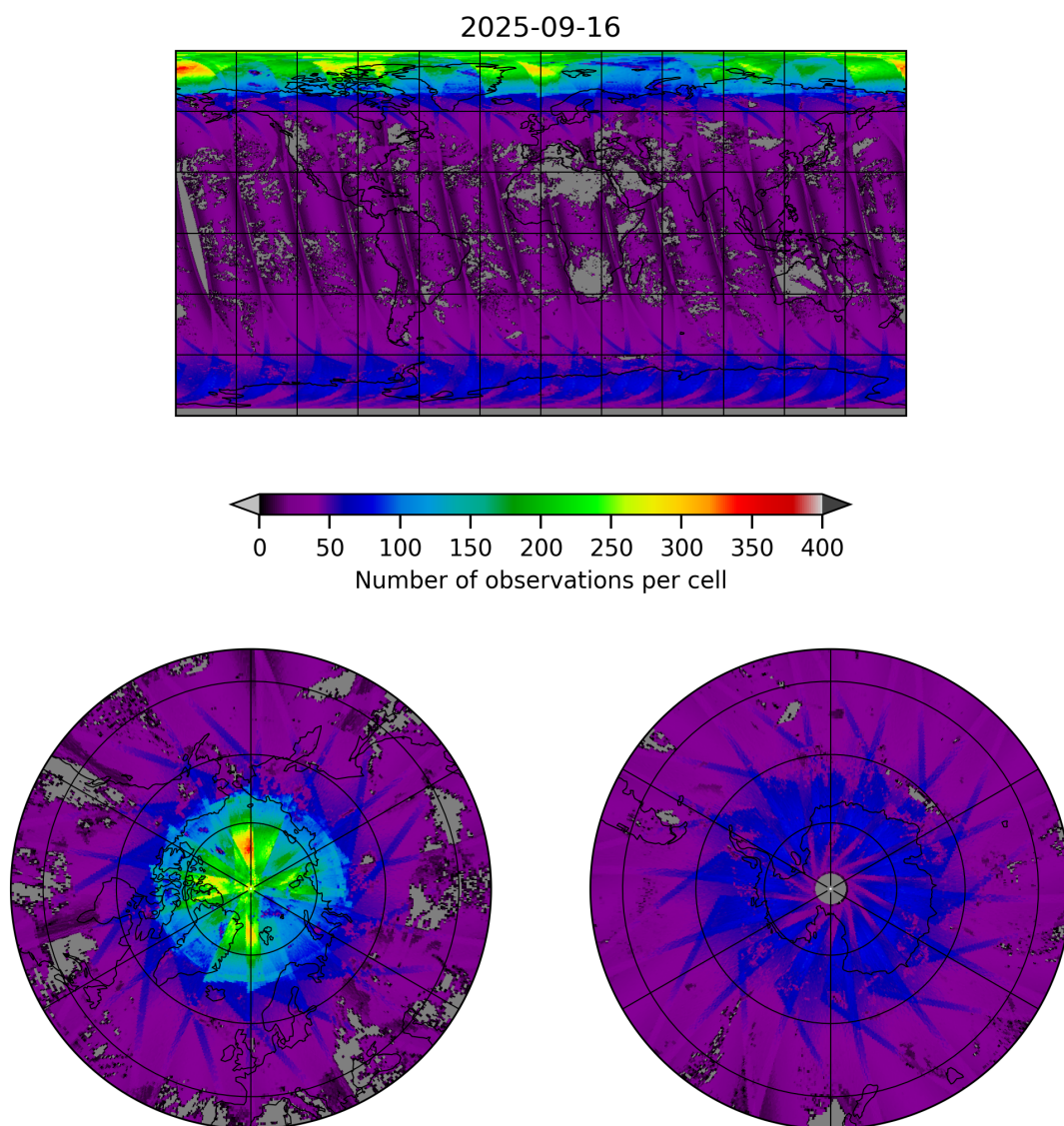


Figure 19: Map of the number of observations for 2025-09-16 to 2025-09-17

7 Zonal average

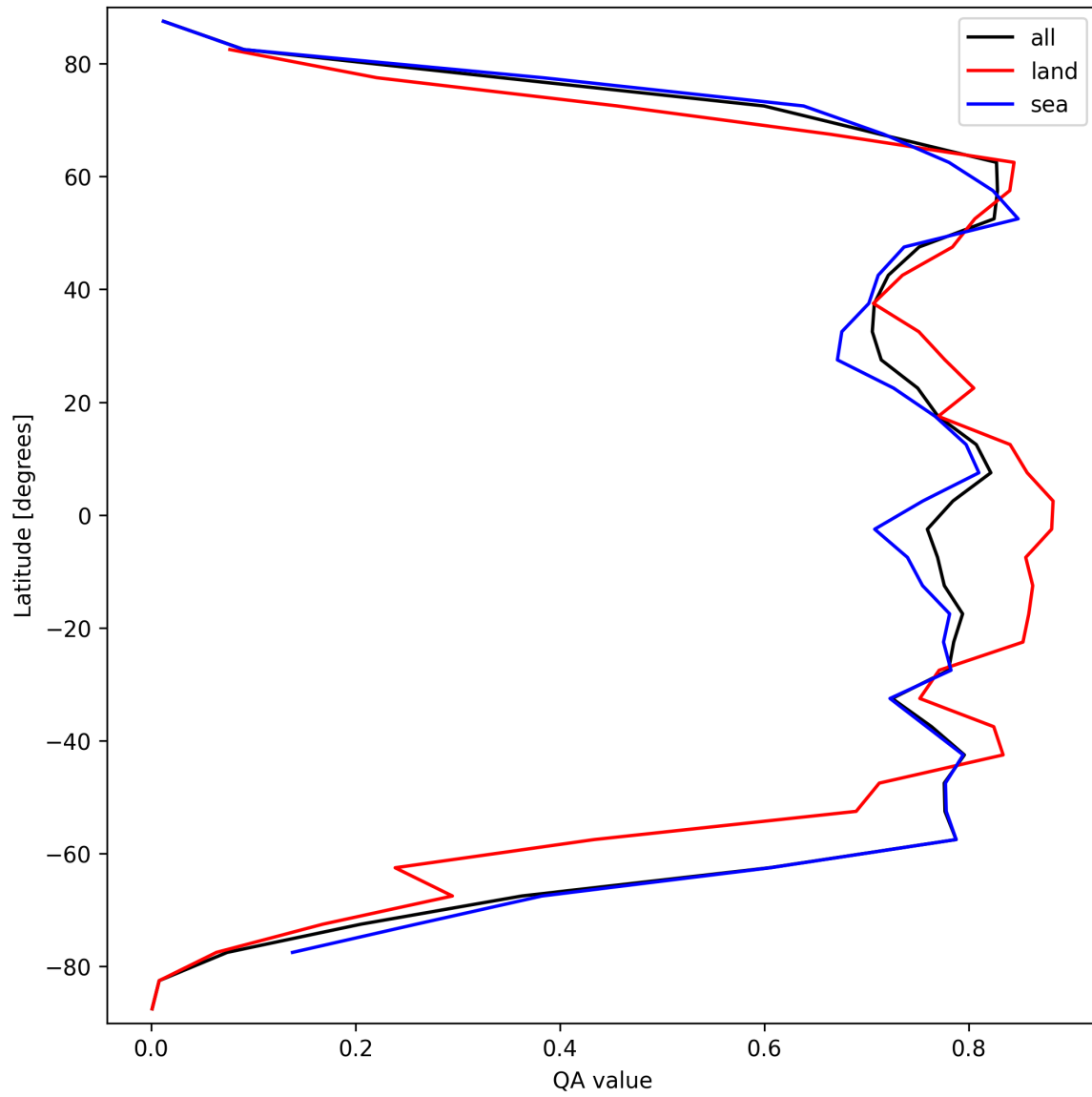


Figure 20: Zonal average of “QA value” for 2025-09-16 to 2025-09-17.

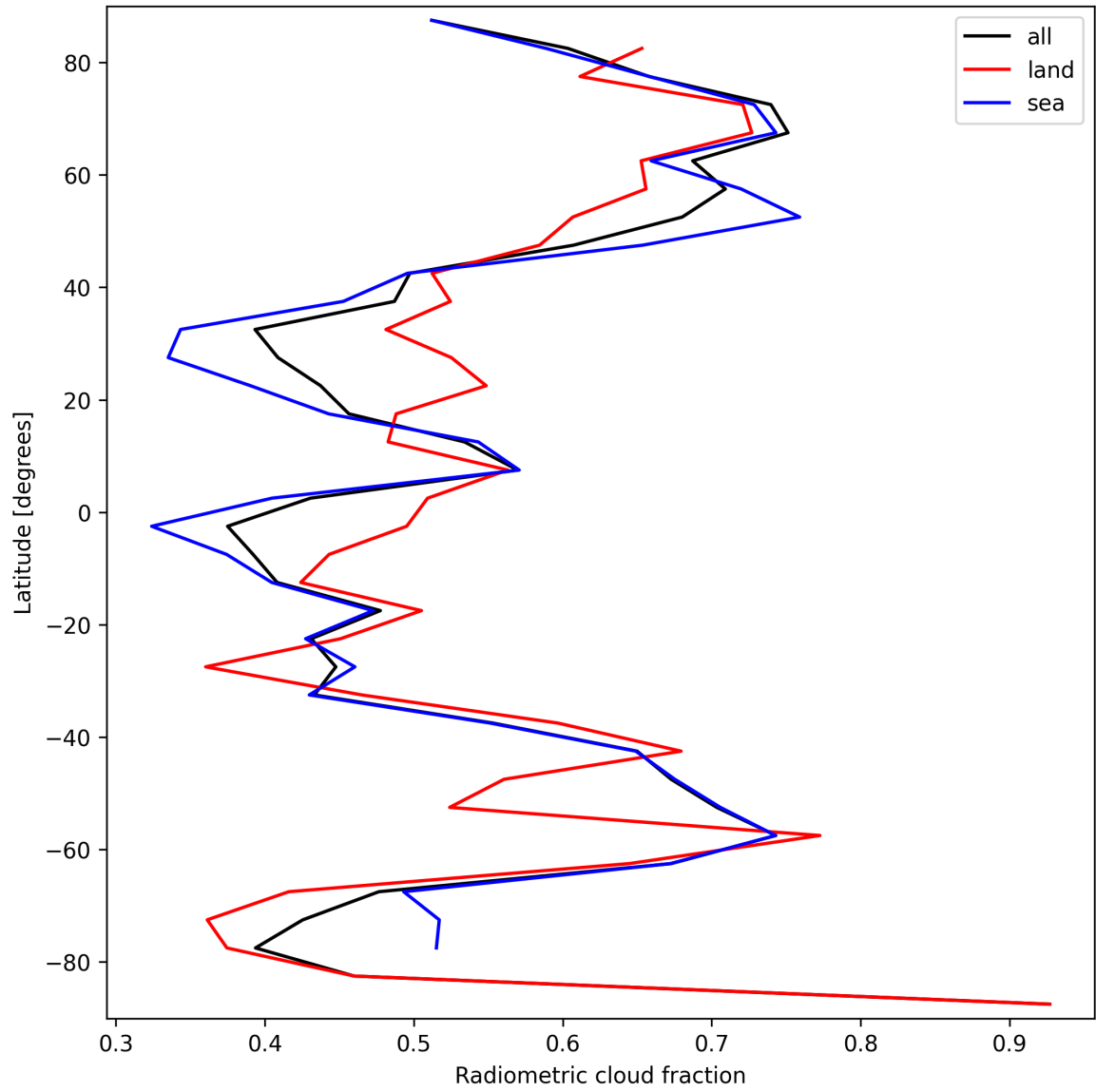


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-09-16 to 2025-09-17.

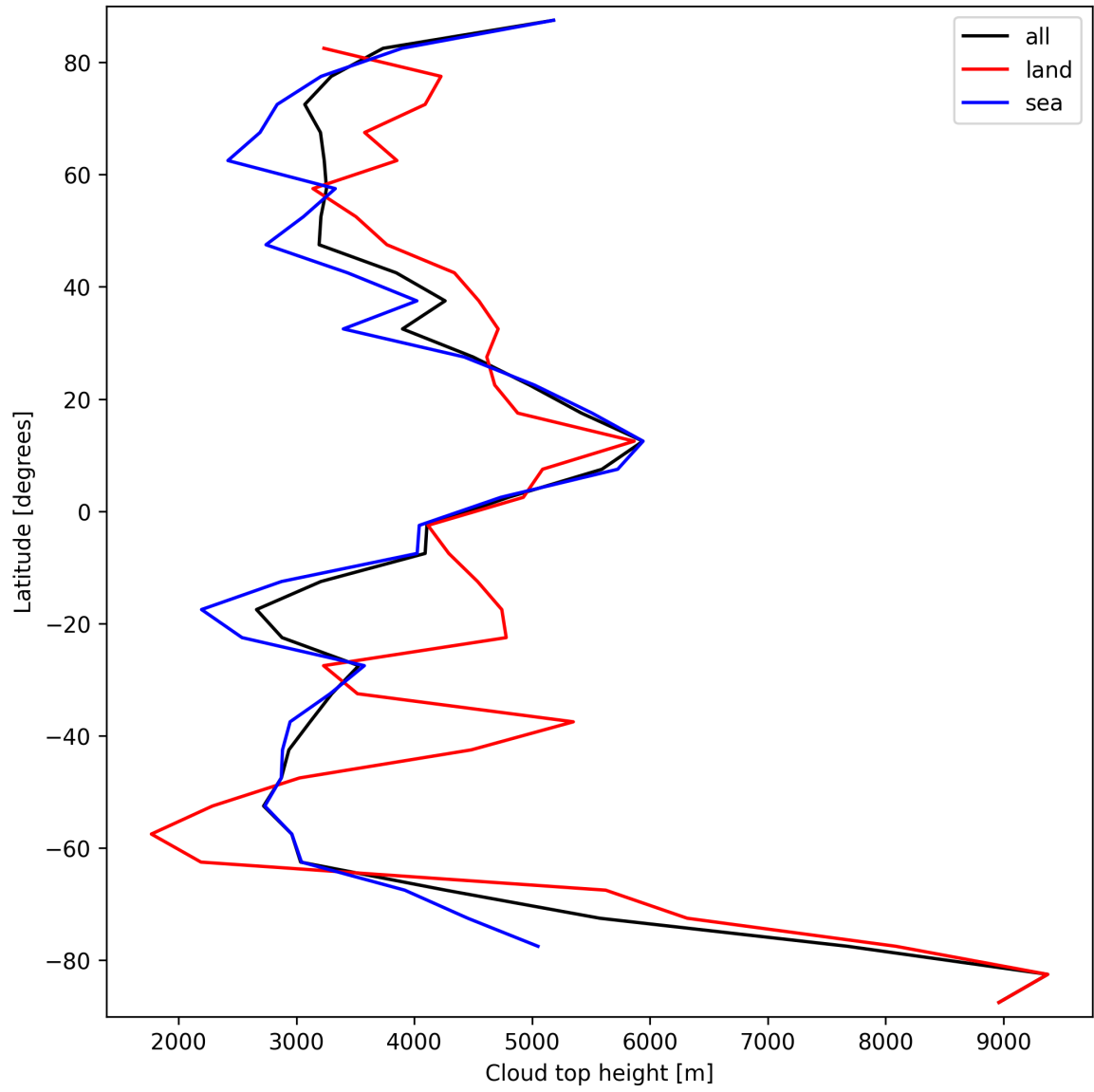


Figure 22: Zonal average of “Cloud top height” for 2025-09-16 to 2025-09-17.

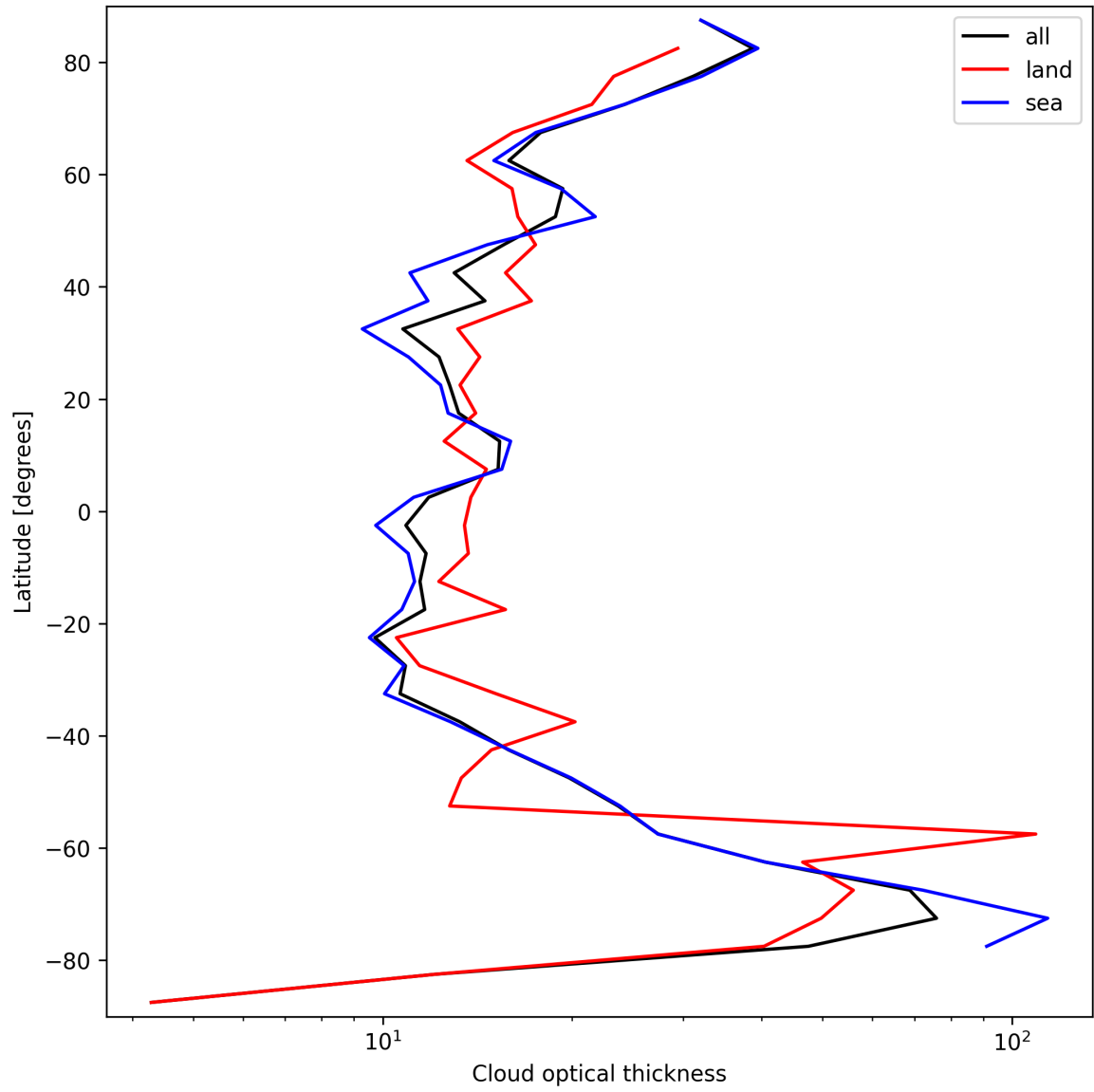


Figure 23: Zonal average of “Cloud optical thickness” for 2025-09-16 to 2025-09-17.

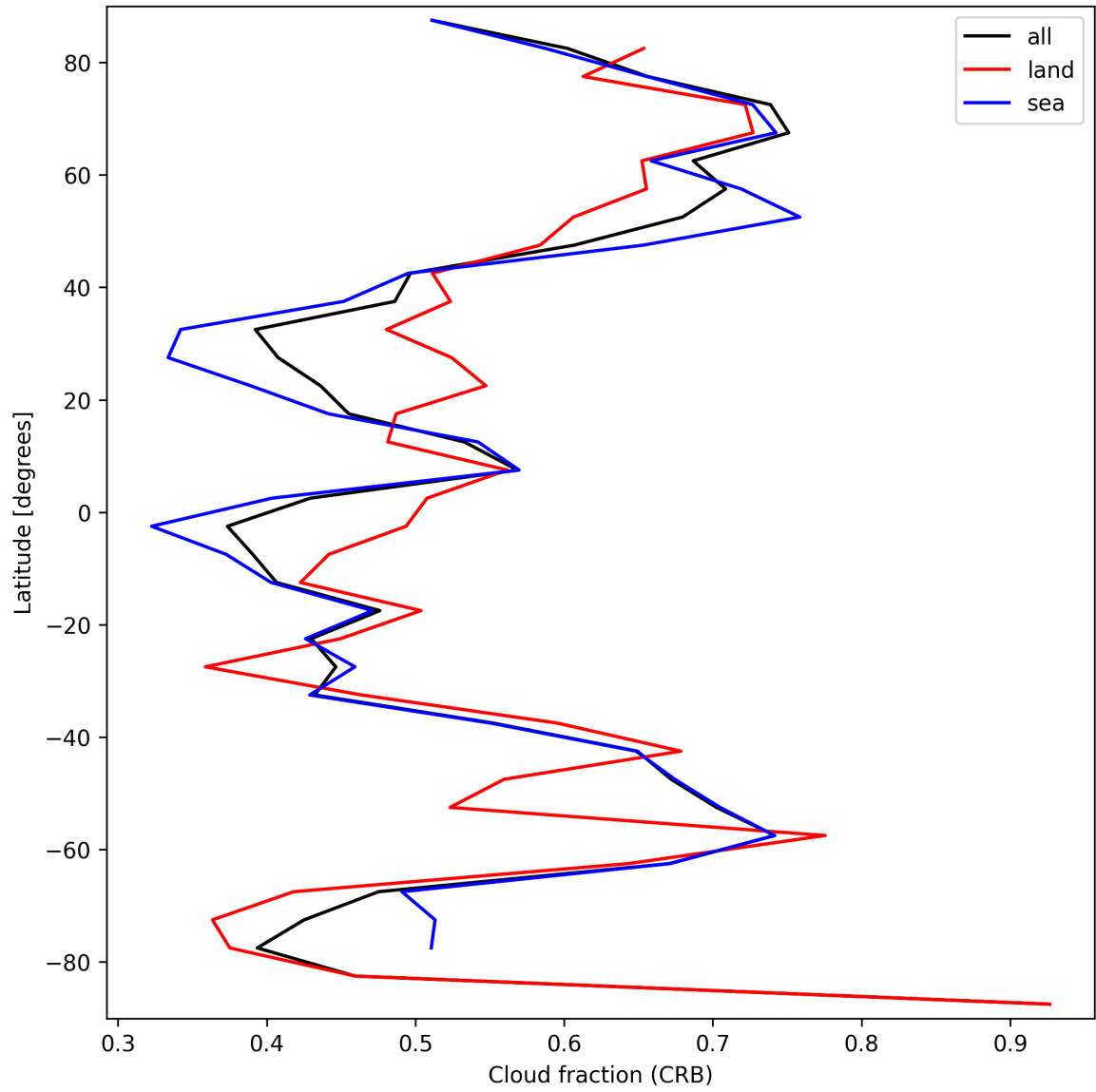


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-09-16 to 2025-09-17.

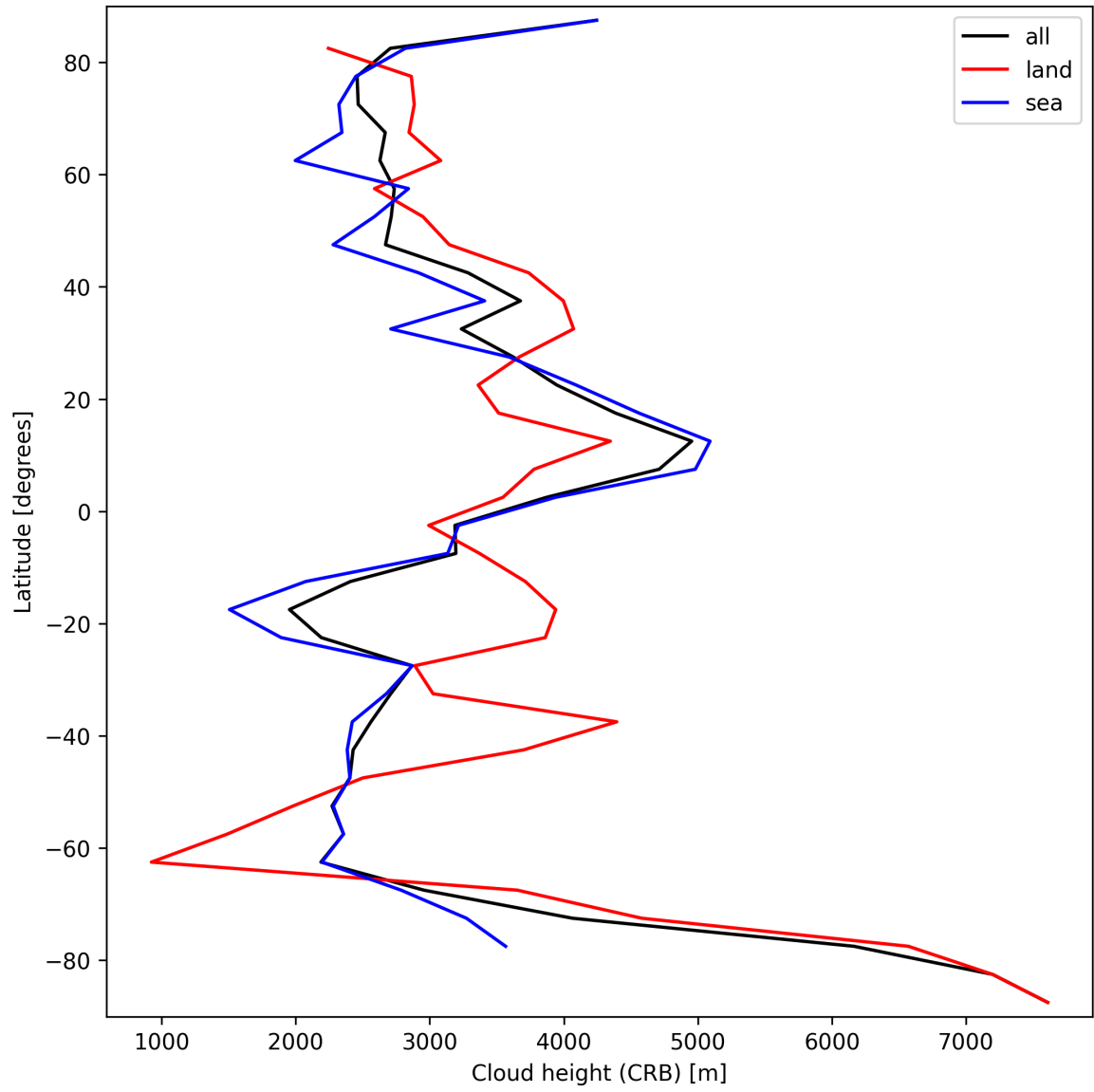


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-09-16 to 2025-09-17.

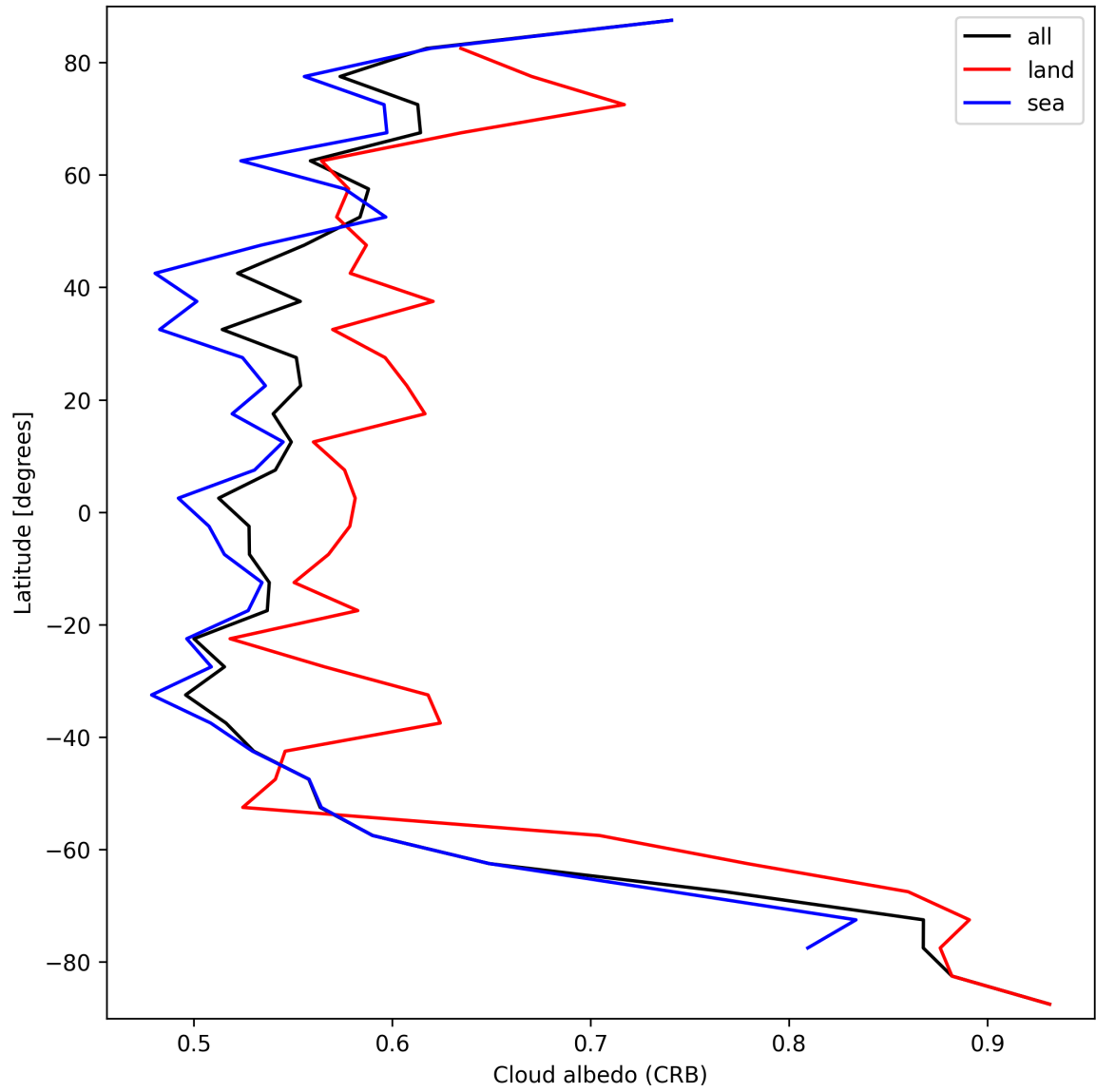


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-09-16 to 2025-09-17.

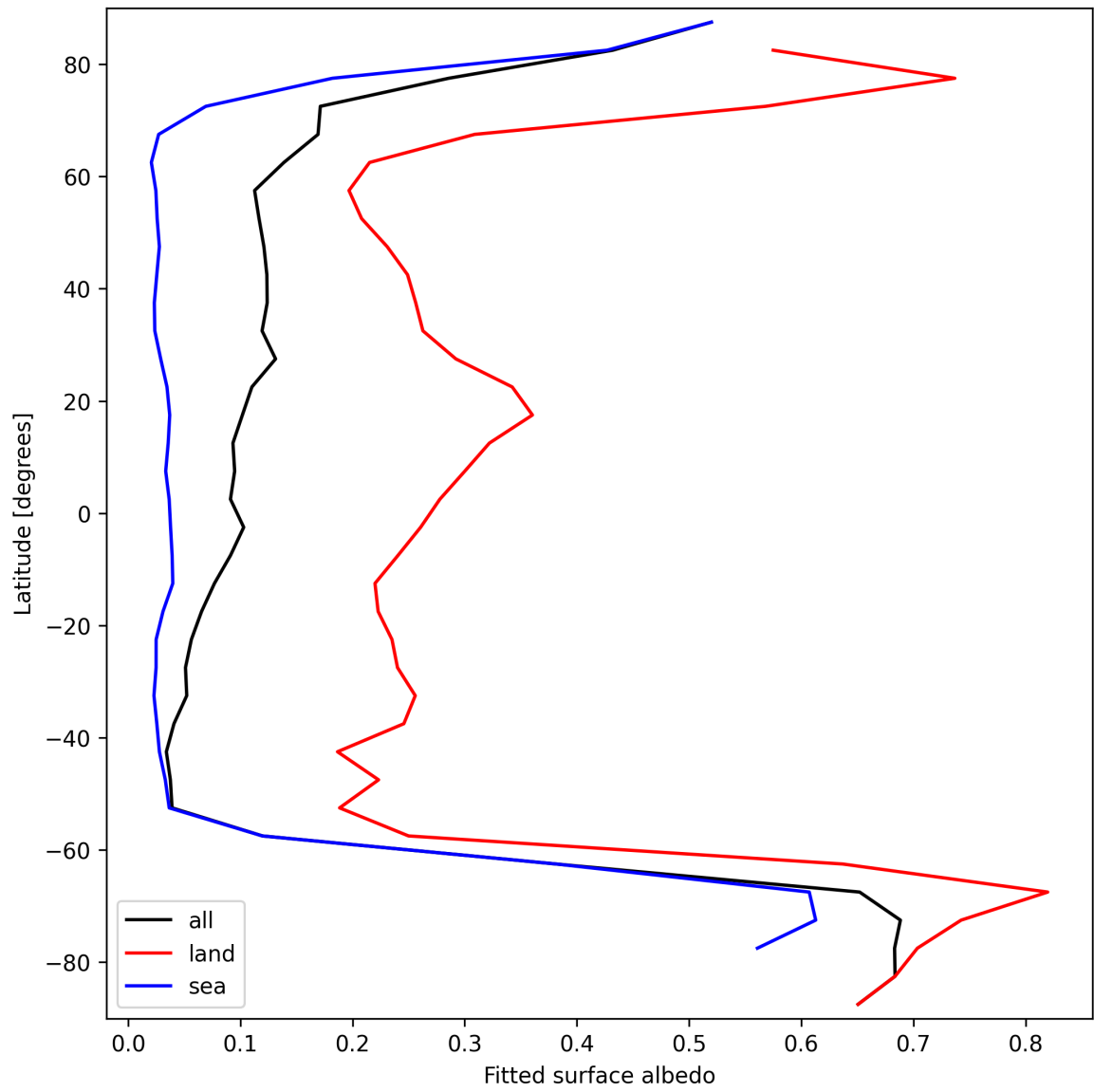


Figure 27: Zonal average of “Fitted surface albedo” for 2025-09-16 to 2025-09-17.

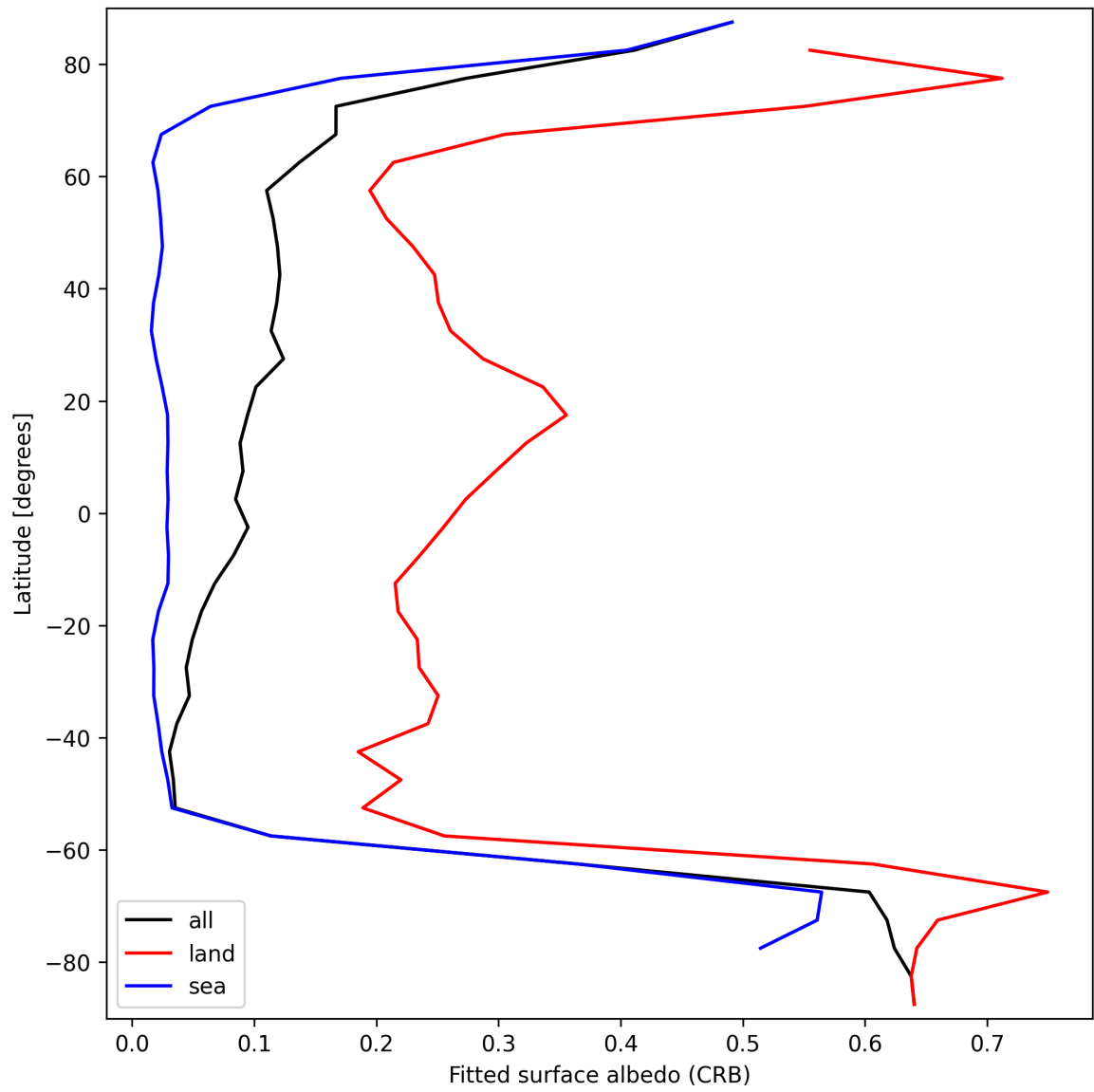


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-09-16 to 2025-09-17.

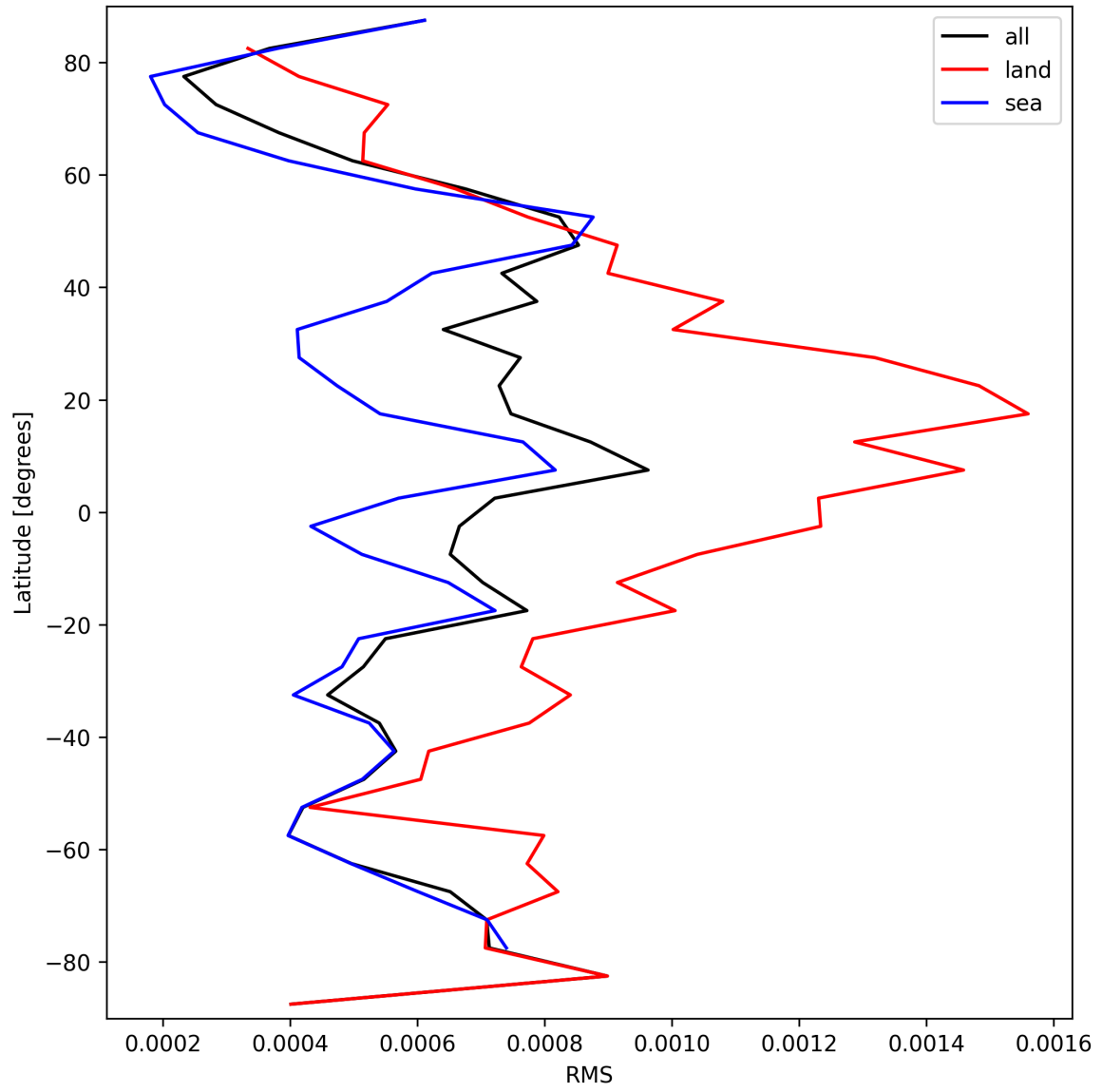


Figure 29: Zonal average of “RMS” for 2025-09-16 to 2025-09-17.

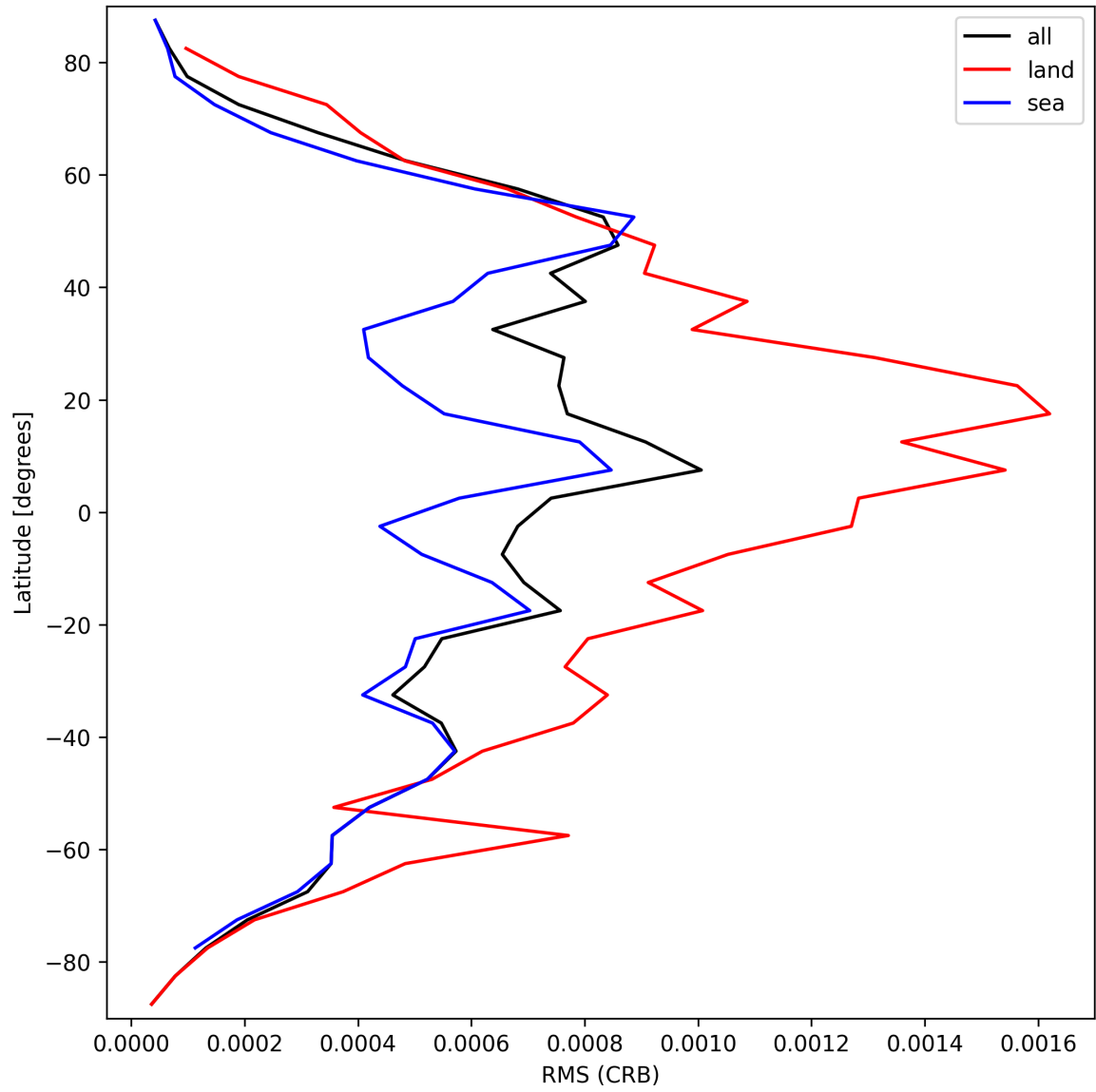


Figure 30: Zonal average of “RMS (CRB)” for 2025-09-16 to 2025-09-17.

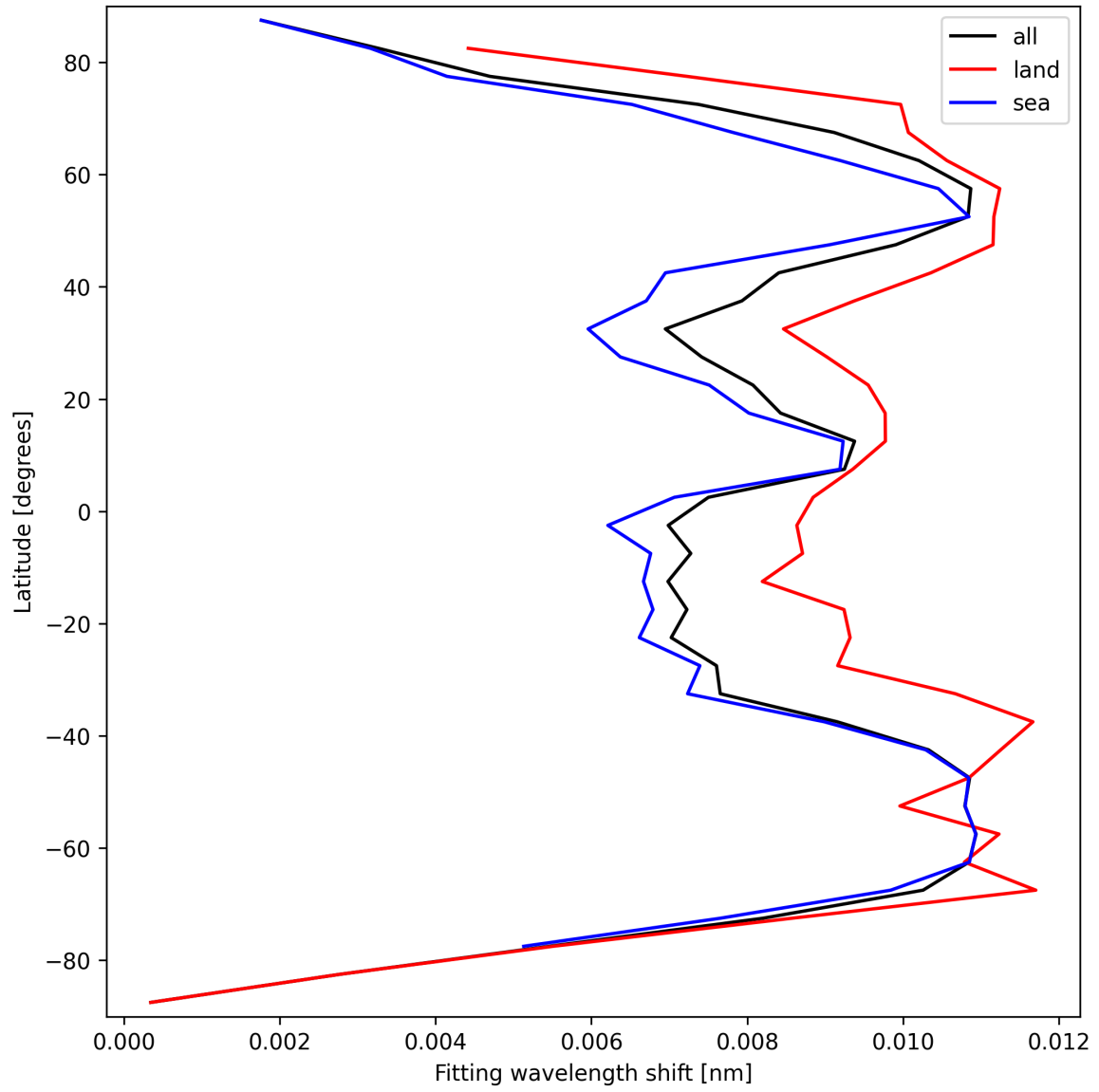


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-09-16 to 2025-09-17.

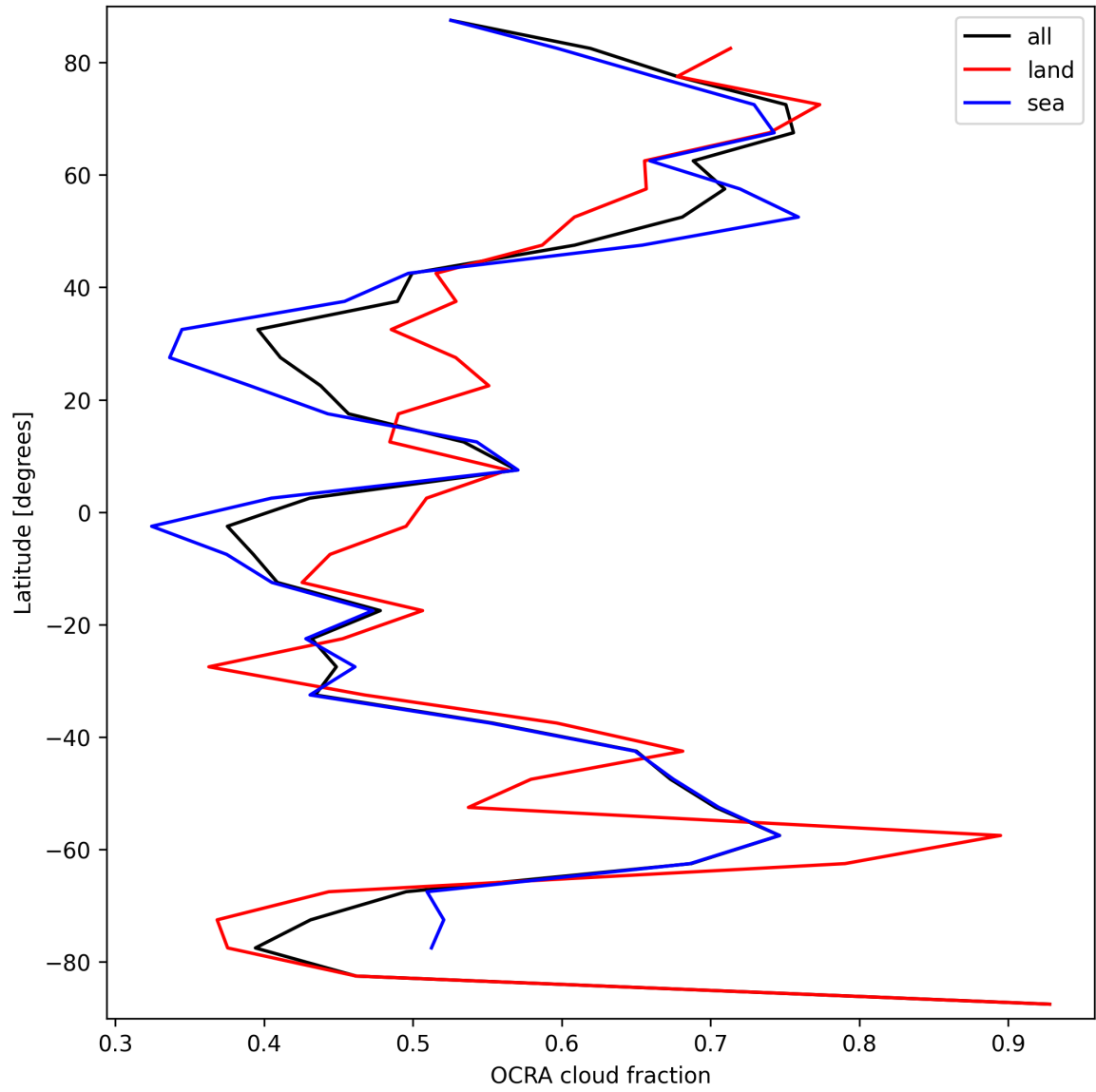


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-09-16 to 2025-09-17.

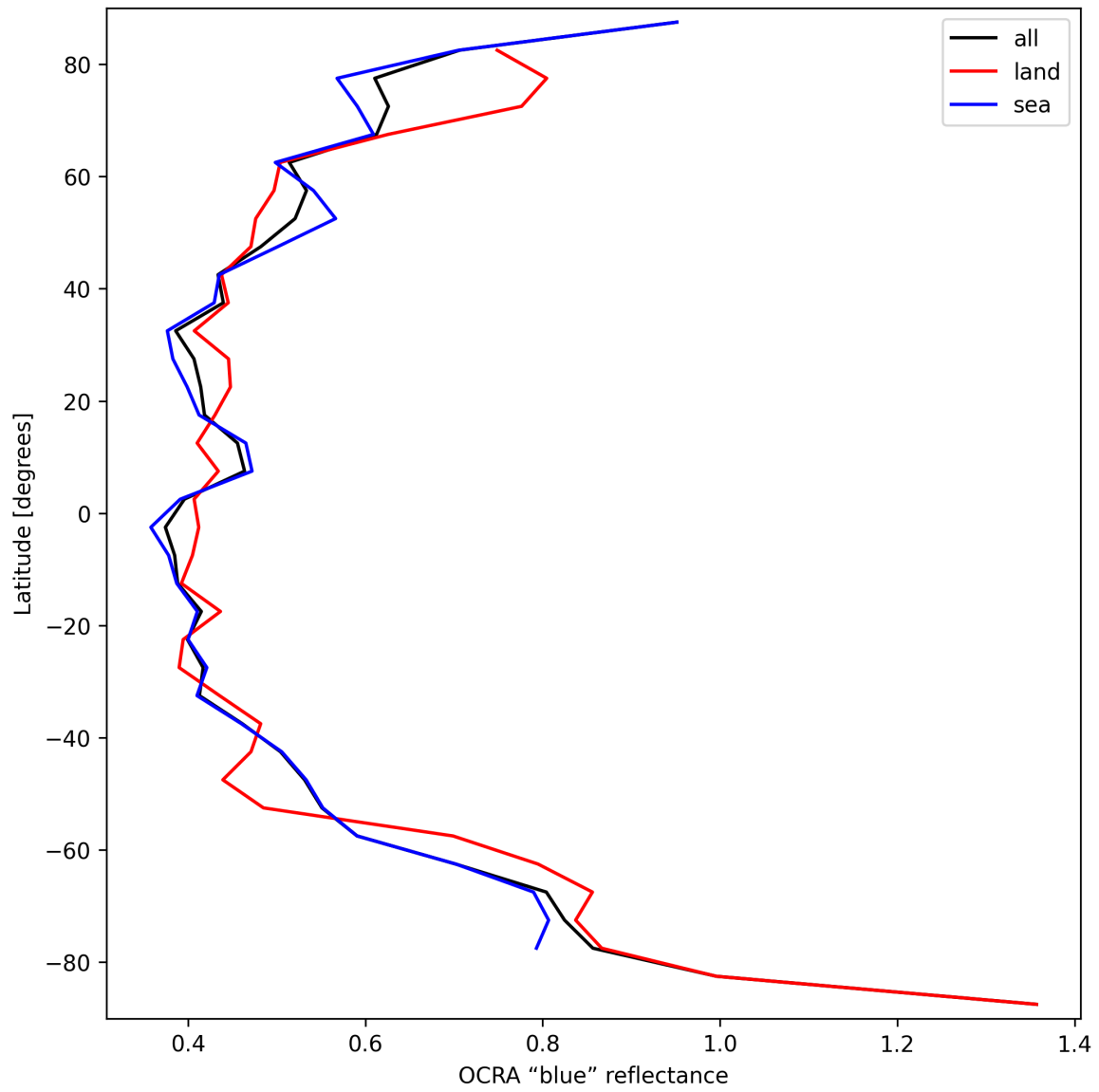


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-09-16 to 2025-09-17.

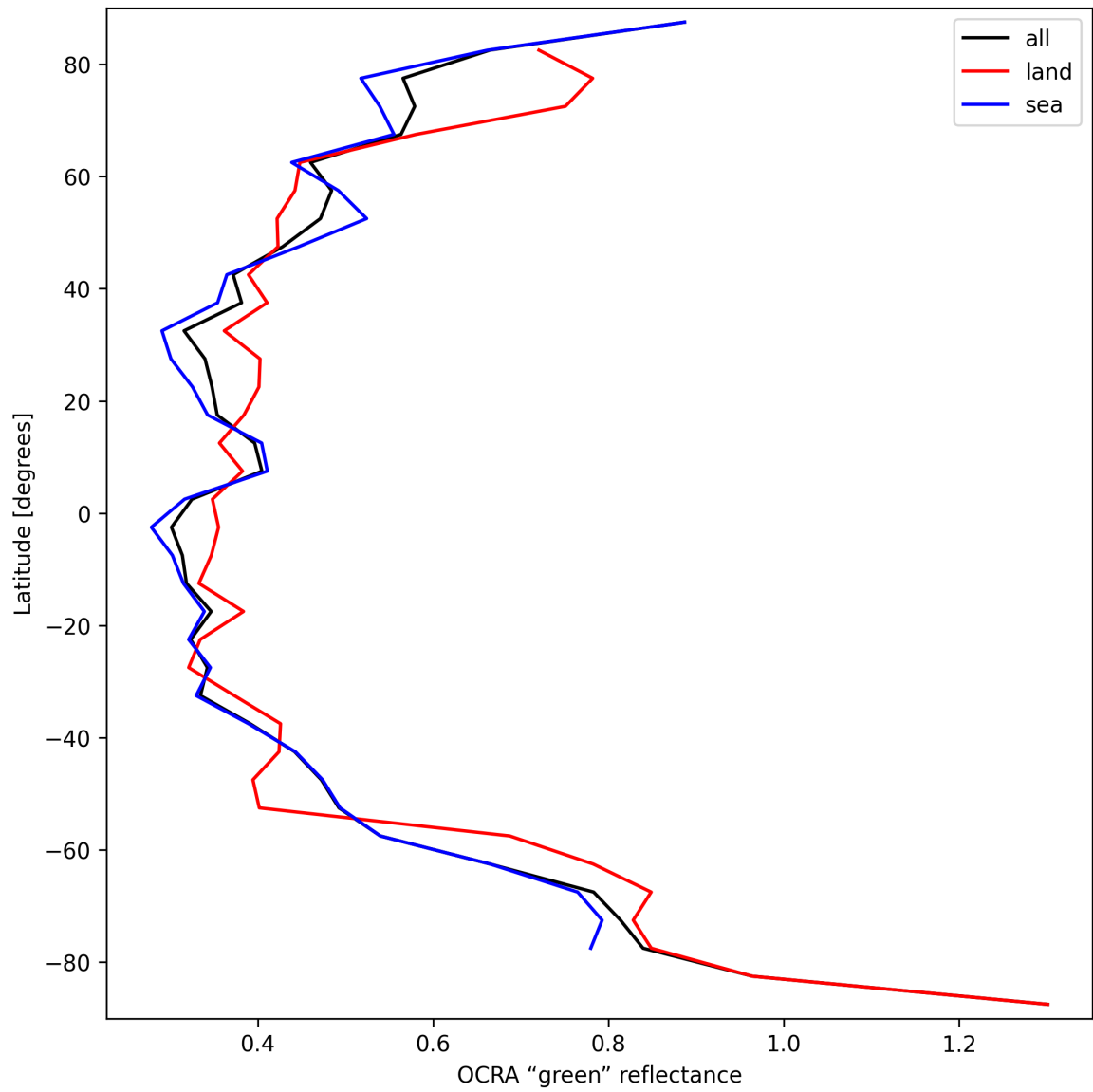


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-09-16 to 2025-09-17.

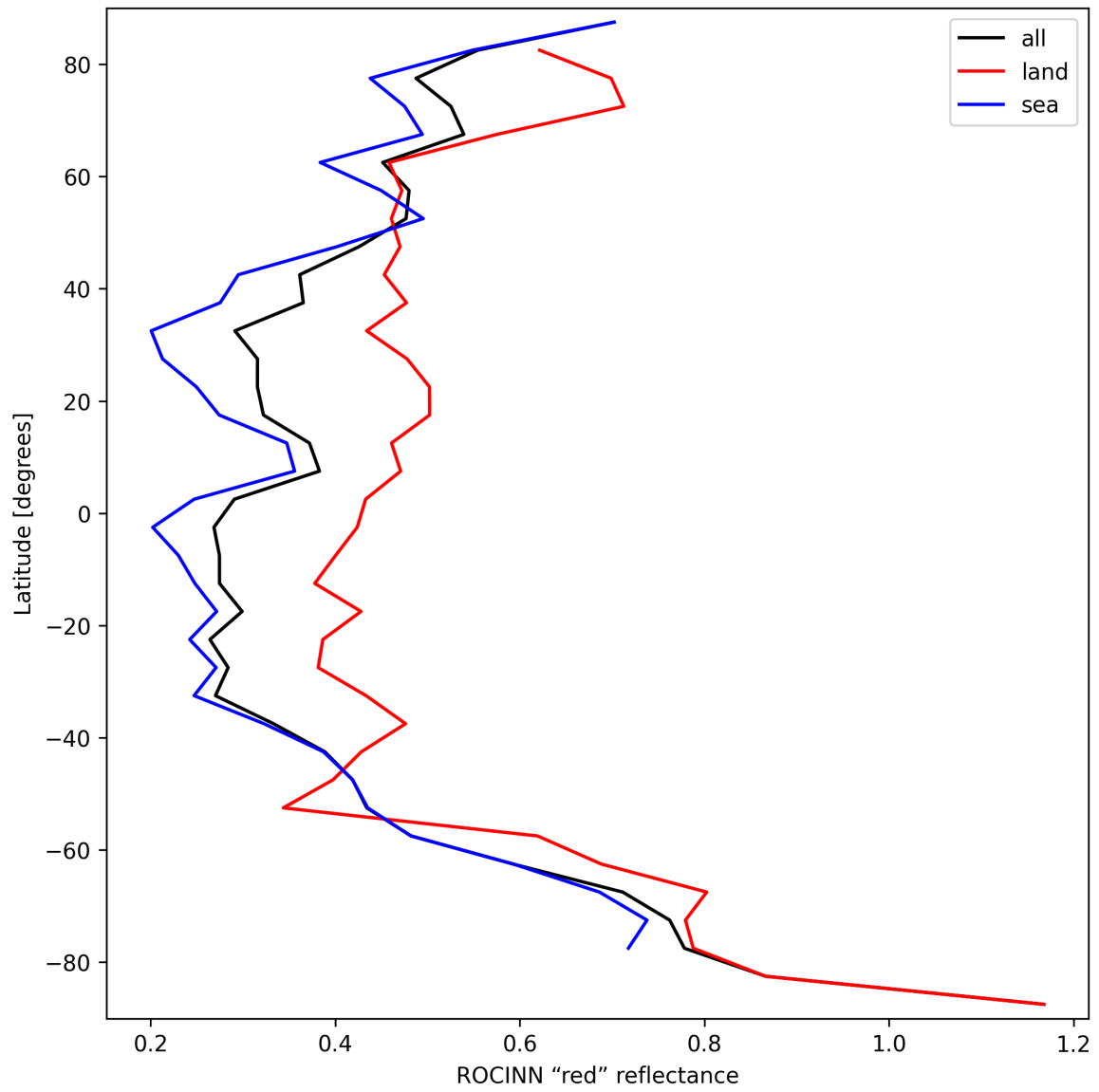


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-09-16 to 2025-09-17.

8 Histograms

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

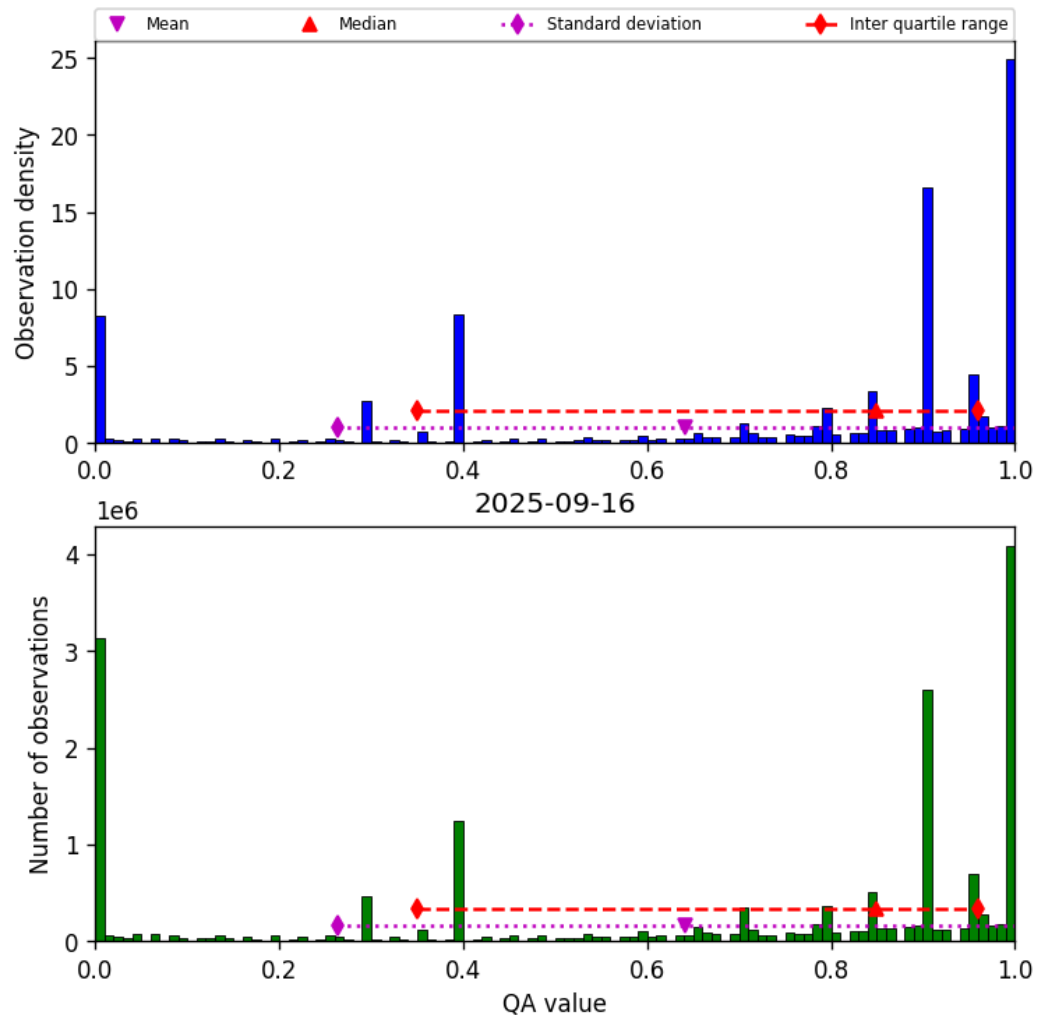


Figure 36: Histogram of “QA value” for 2025-09-16 to 2025-09-17

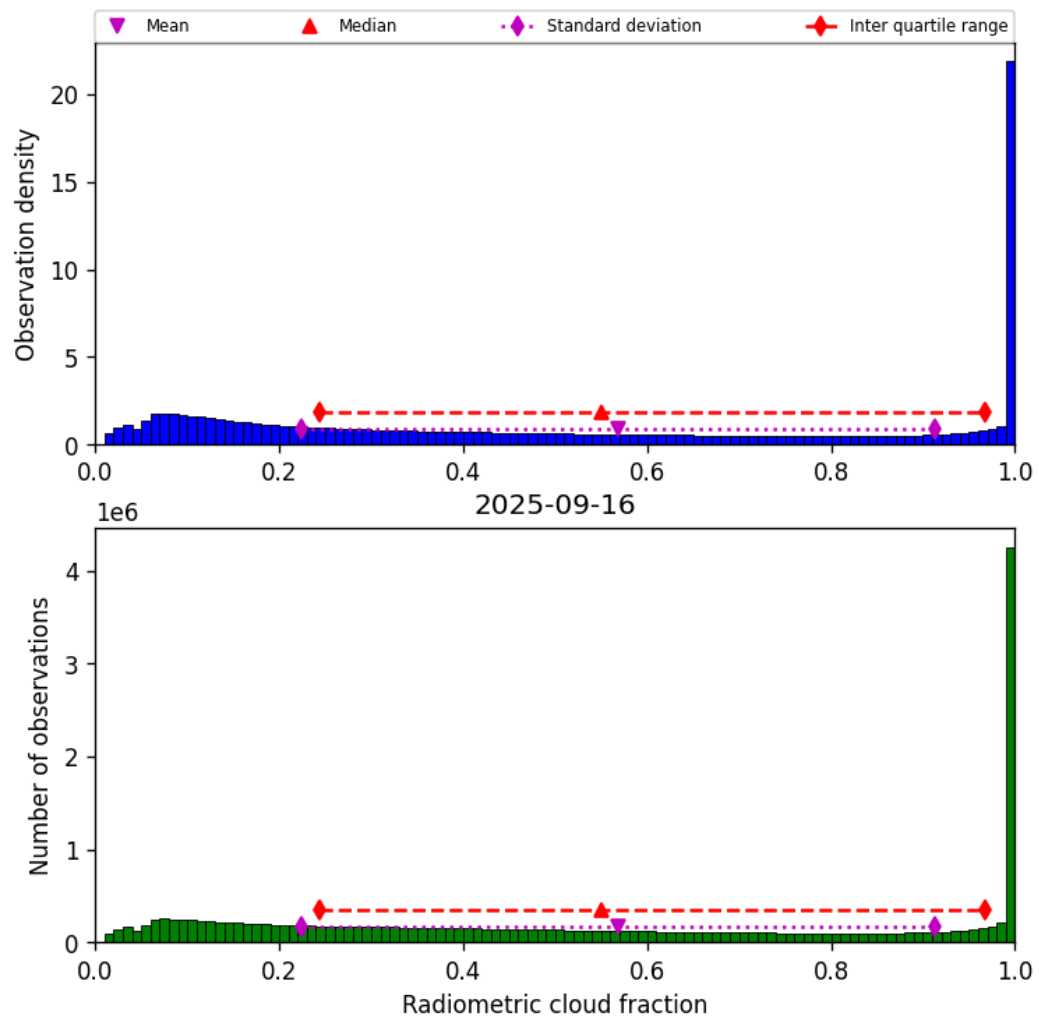


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-09-16 to 2025-09-17

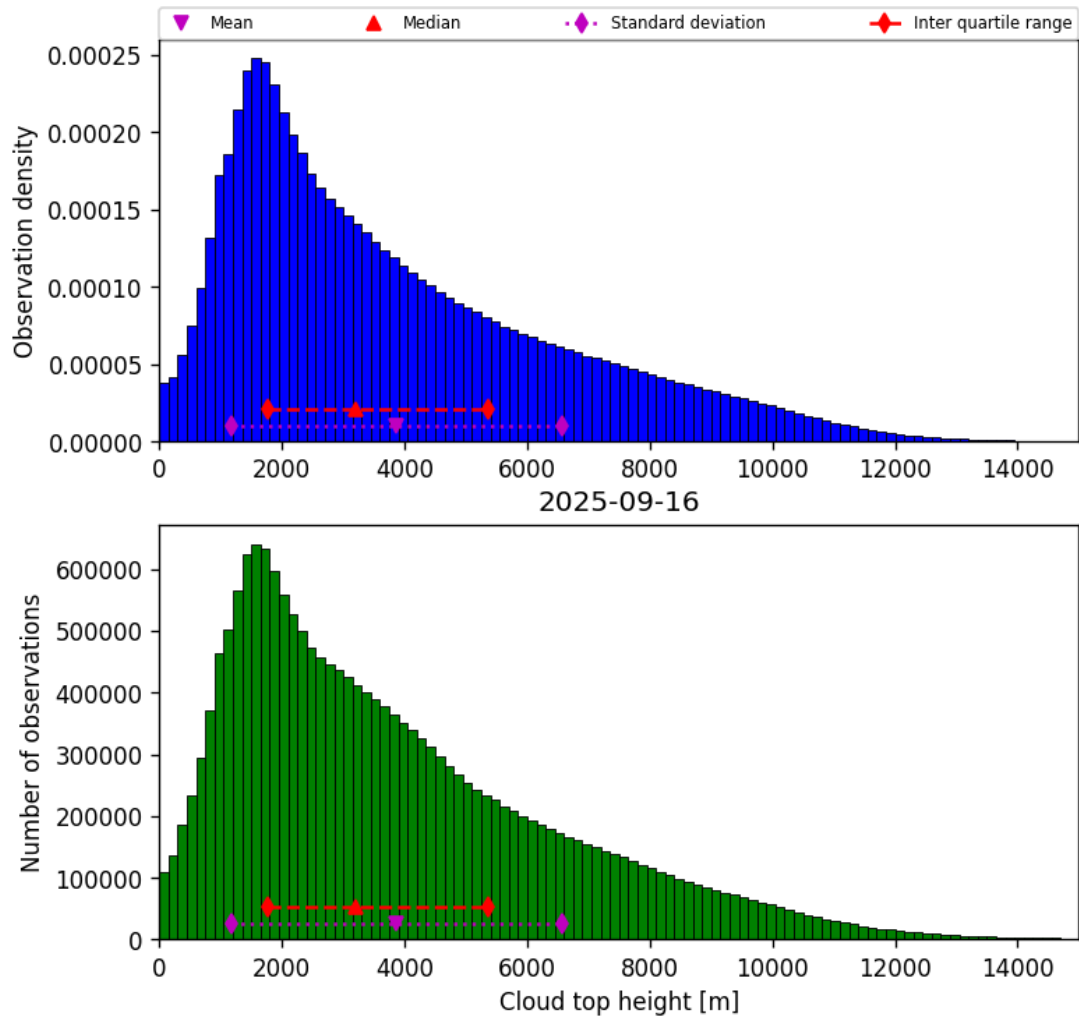


Figure 38: Histogram of “Cloud top height” for 2025-09-16 to 2025-09-17

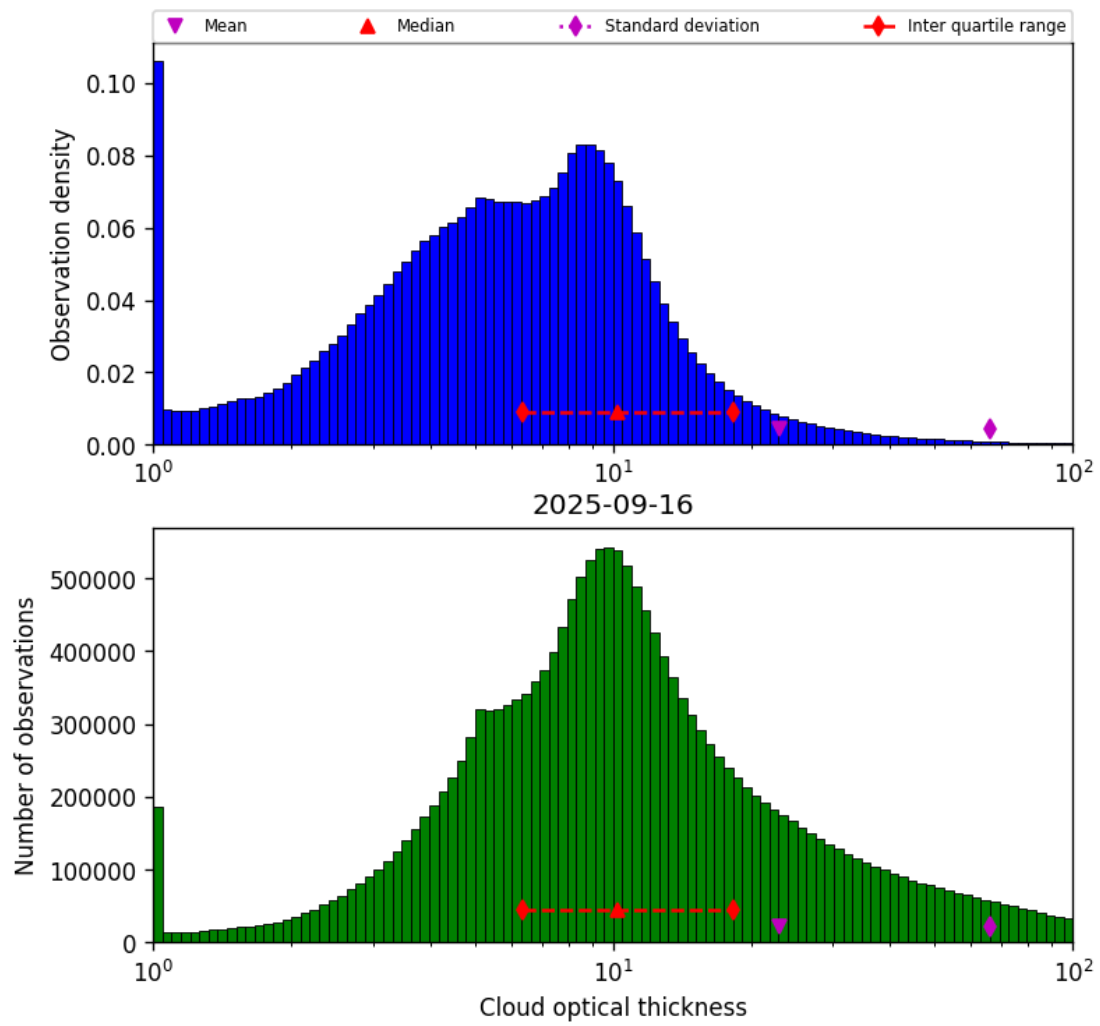


Figure 39: Histogram of “Cloud optical thickness” for 2025-09-16 to 2025-09-17

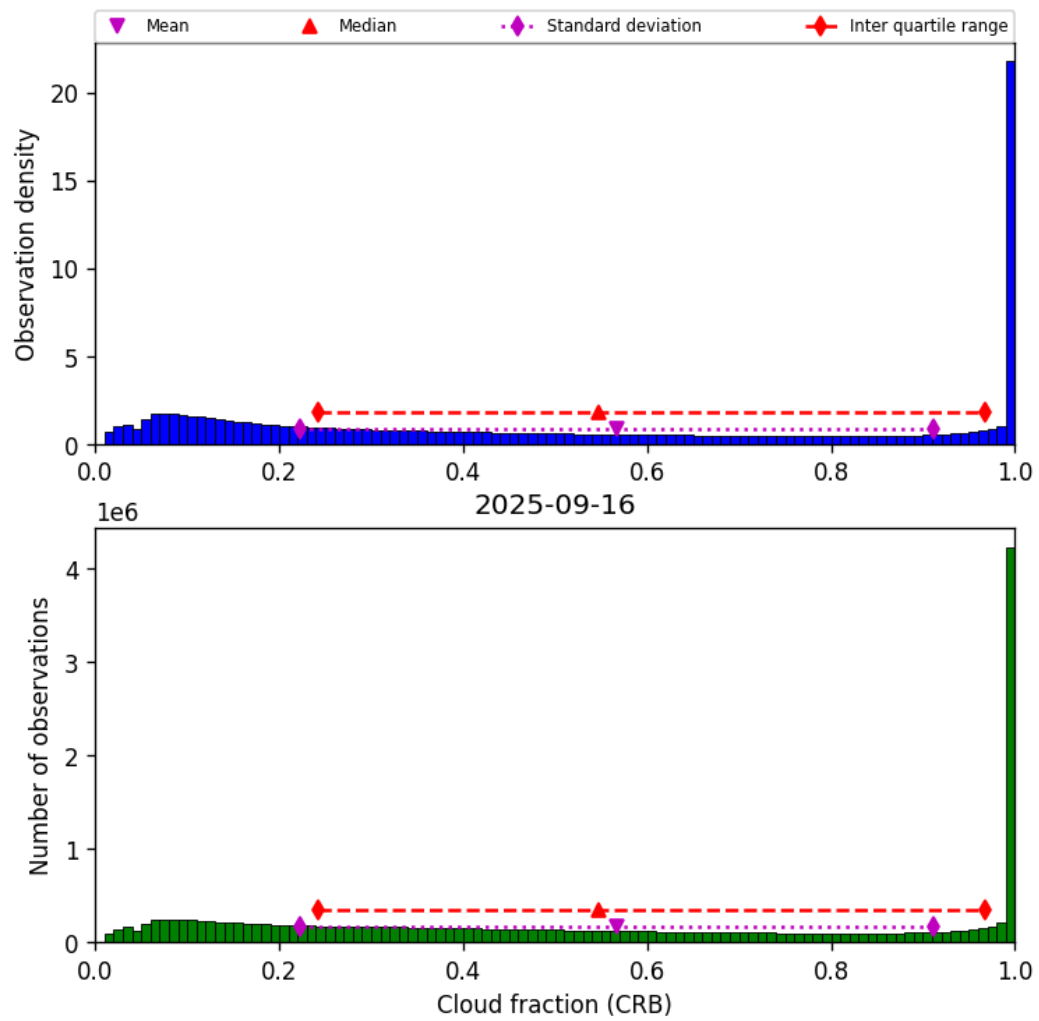


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-09-16 to 2025-09-17

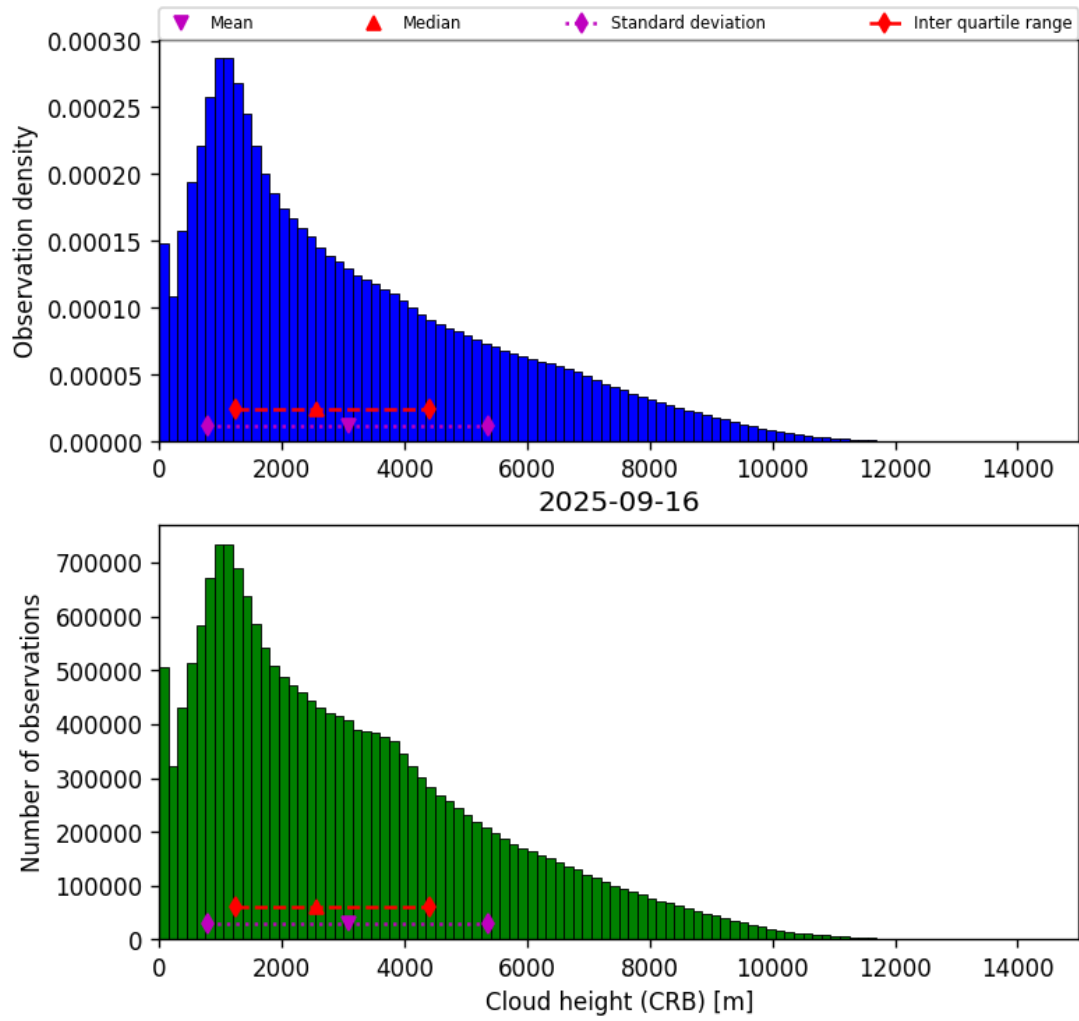


Figure 41: Histogram of “Cloud height (CRB)” for 2025-09-16 to 2025-09-17

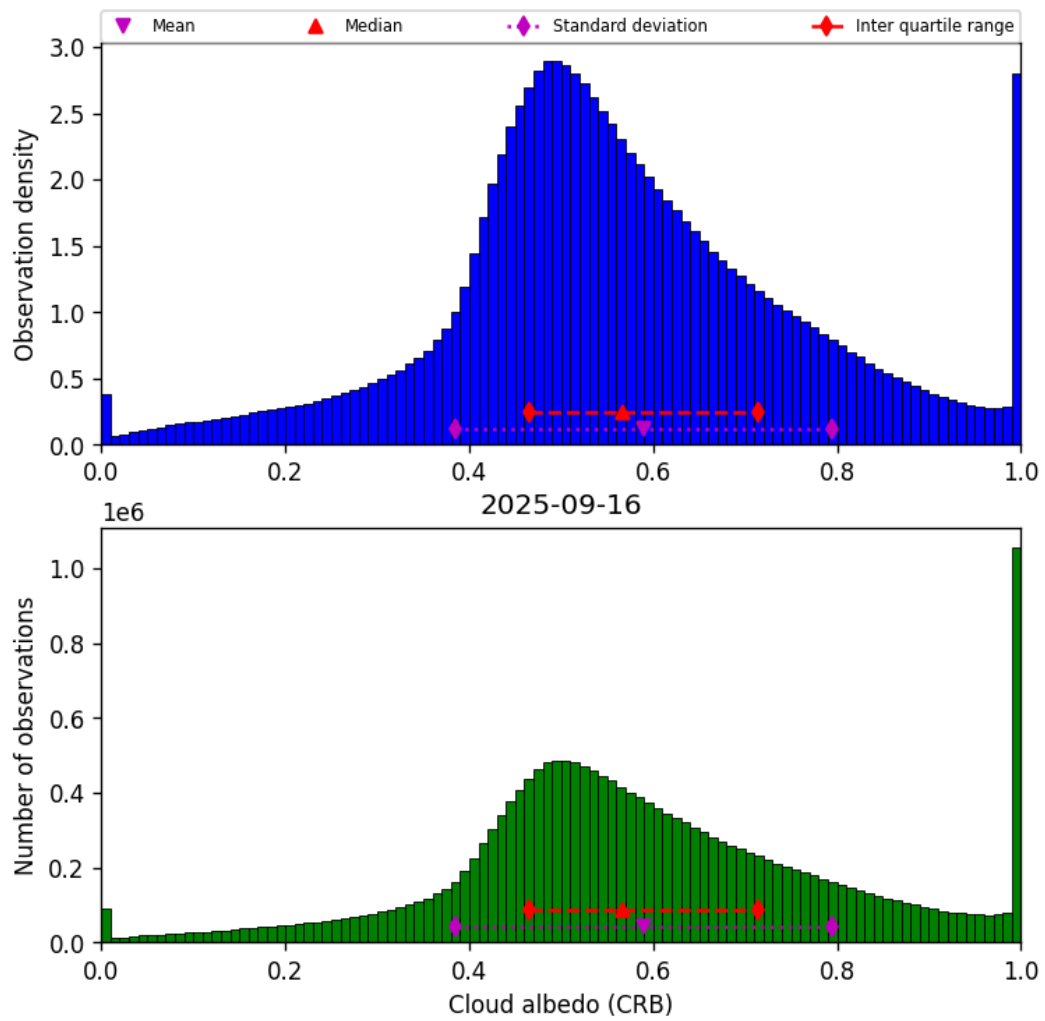


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-09-16 to 2025-09-17

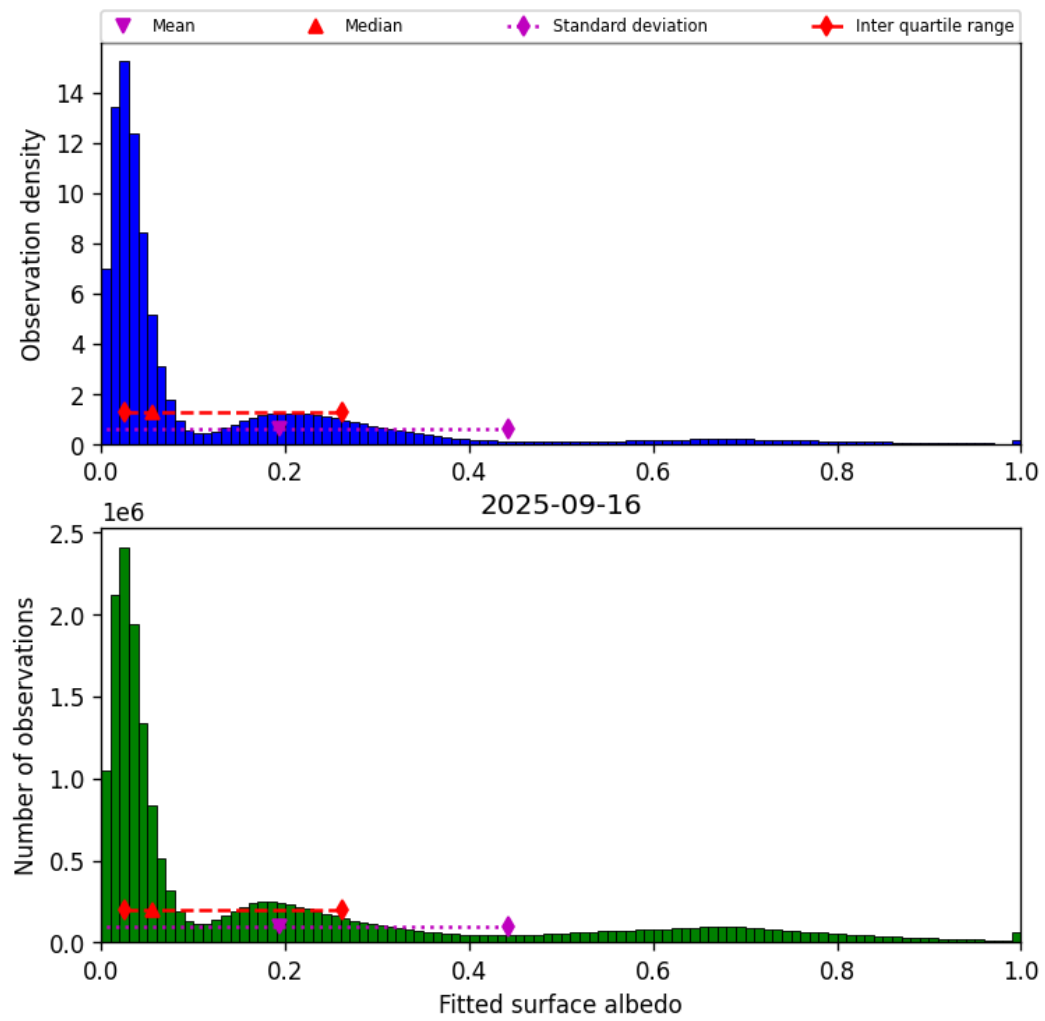


Figure 43: Histogram of “Fitted surface albedo” for 2025-09-16 to 2025-09-17

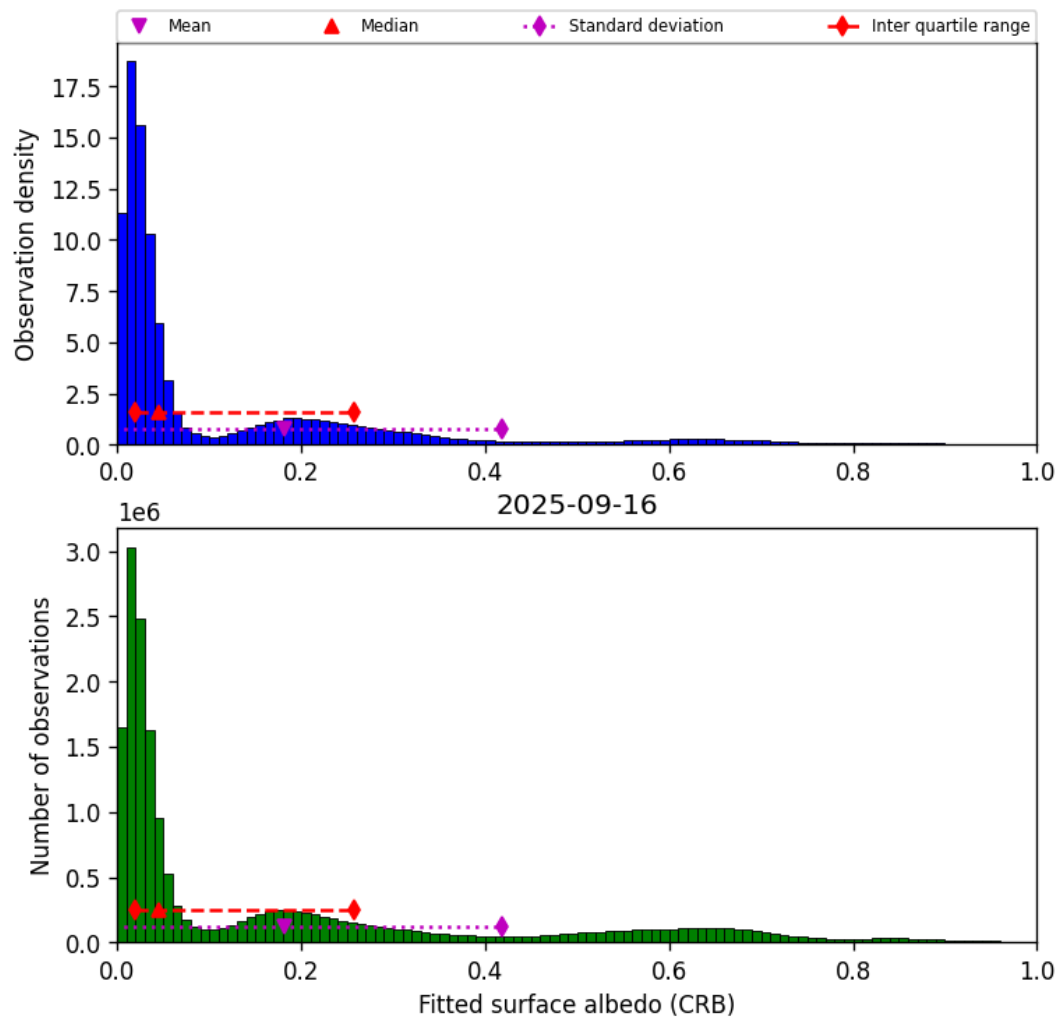


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-09-16 to 2025-09-17

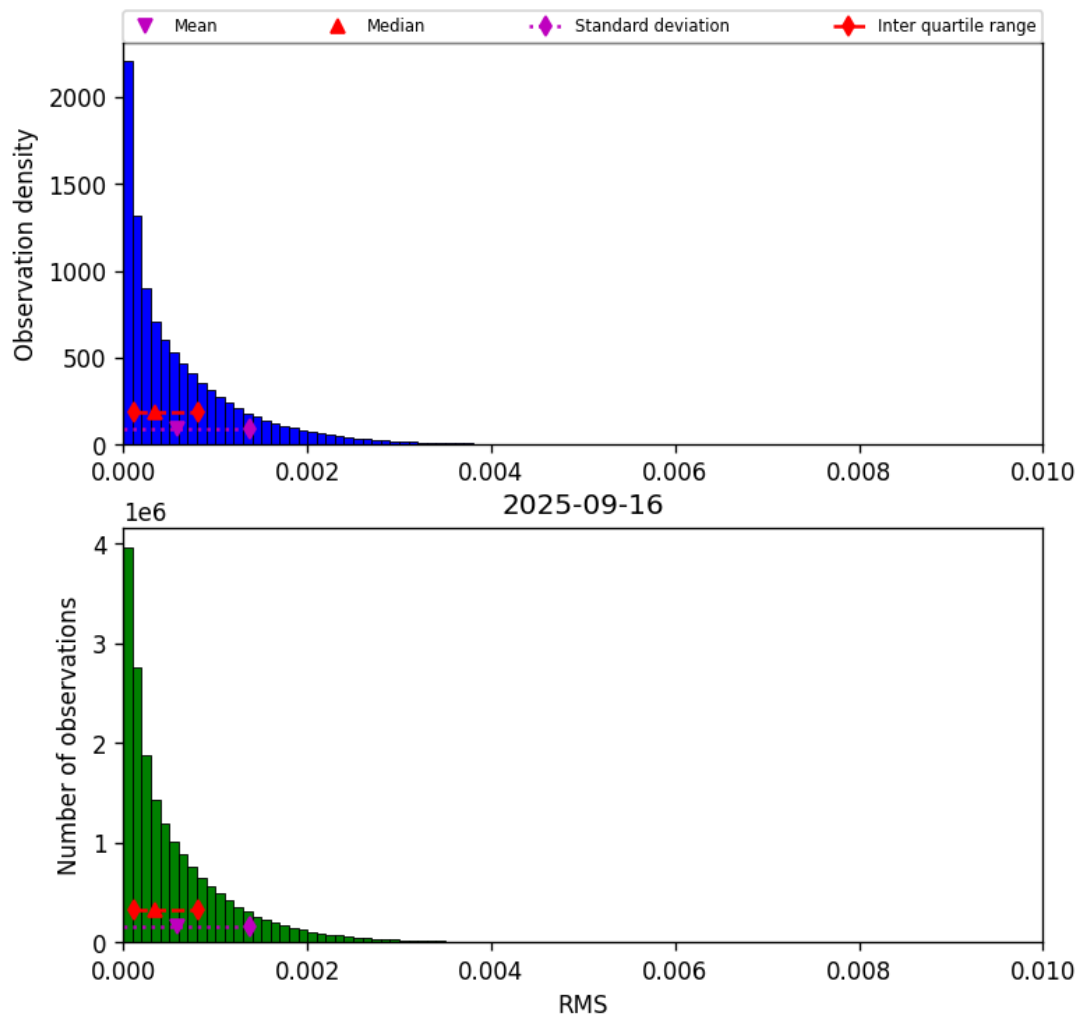


Figure 45: Histogram of “RMS” for 2025-09-16 to 2025-09-17

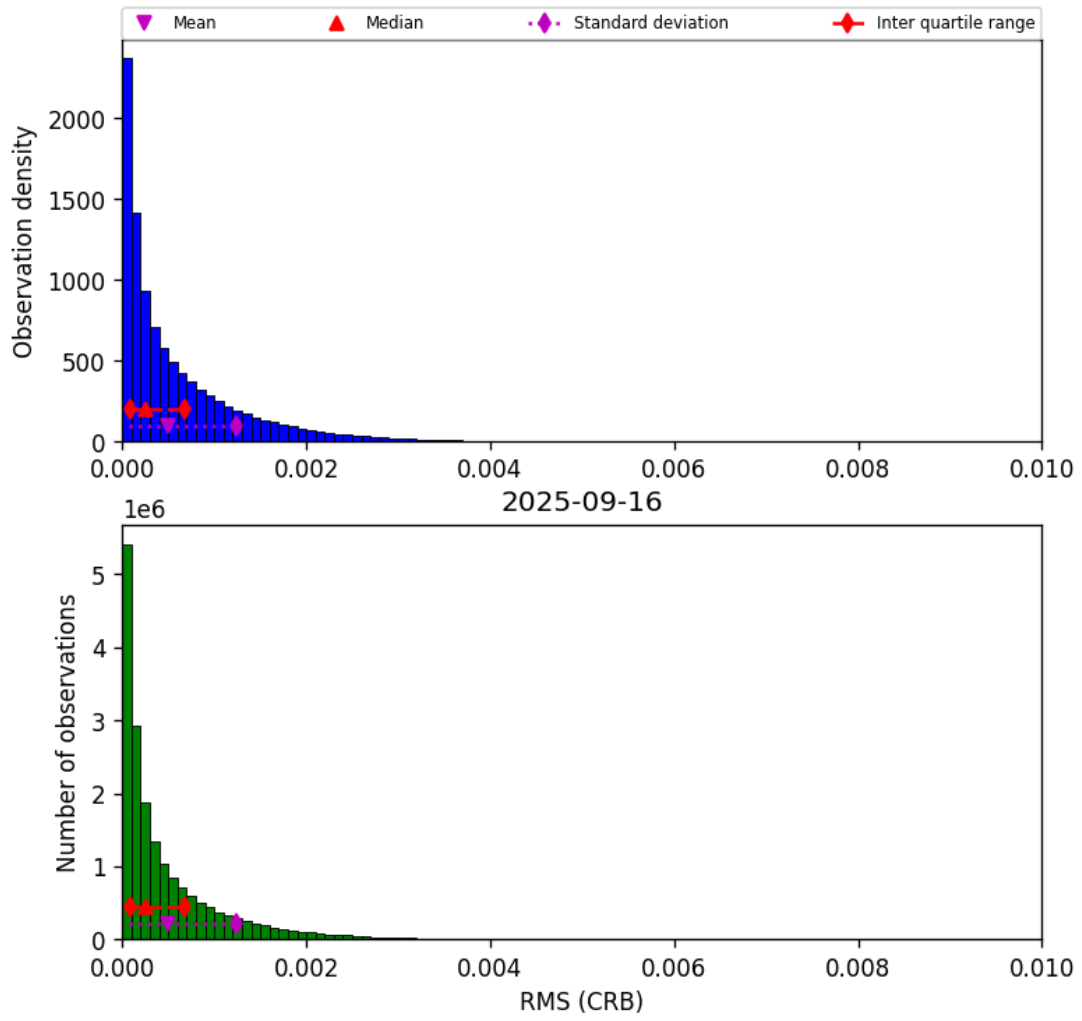


Figure 46: Histogram of “RMS (CRB)” for 2025-09-16 to 2025-09-17

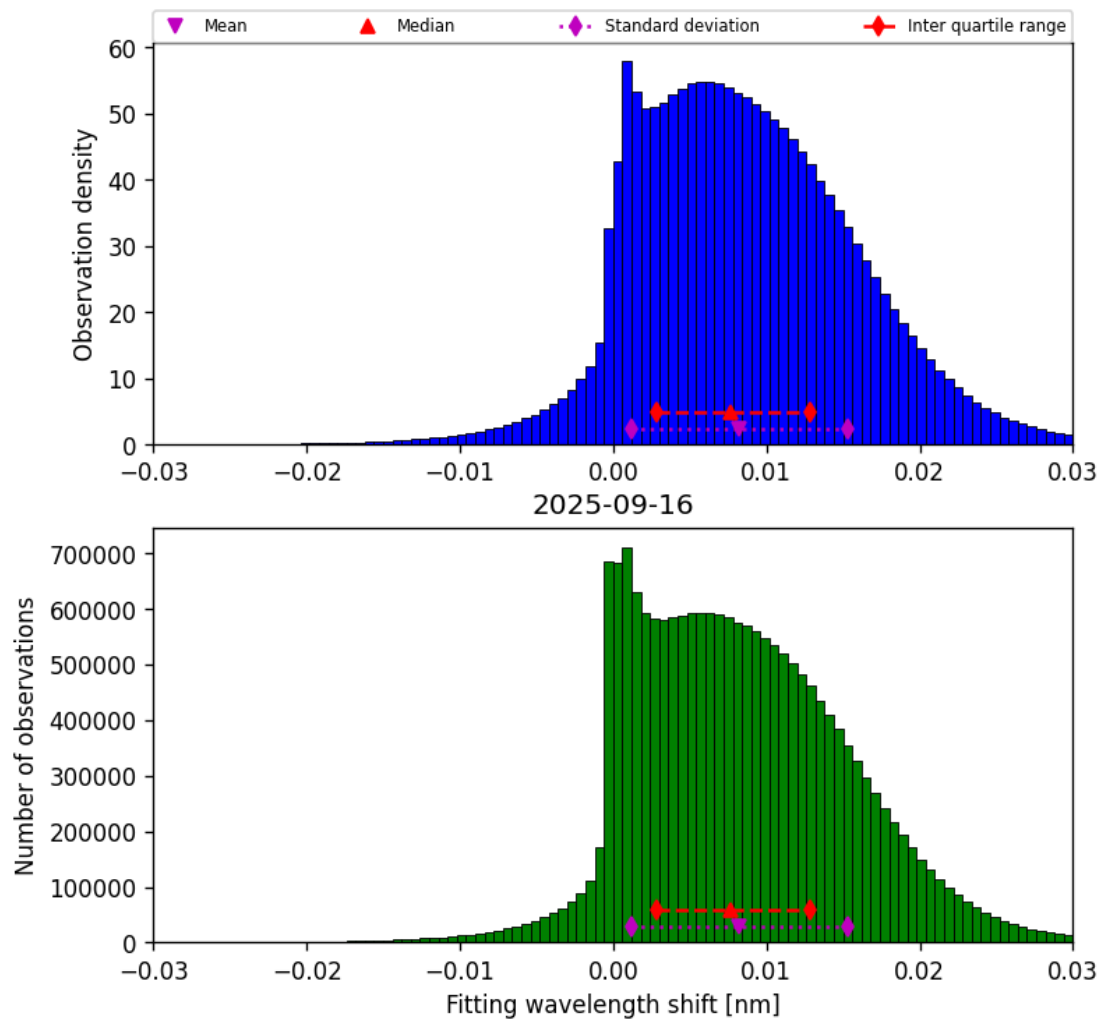


Figure 47: Histogram of “Fitting wavelength shift” for 2025-09-16 to 2025-09-17

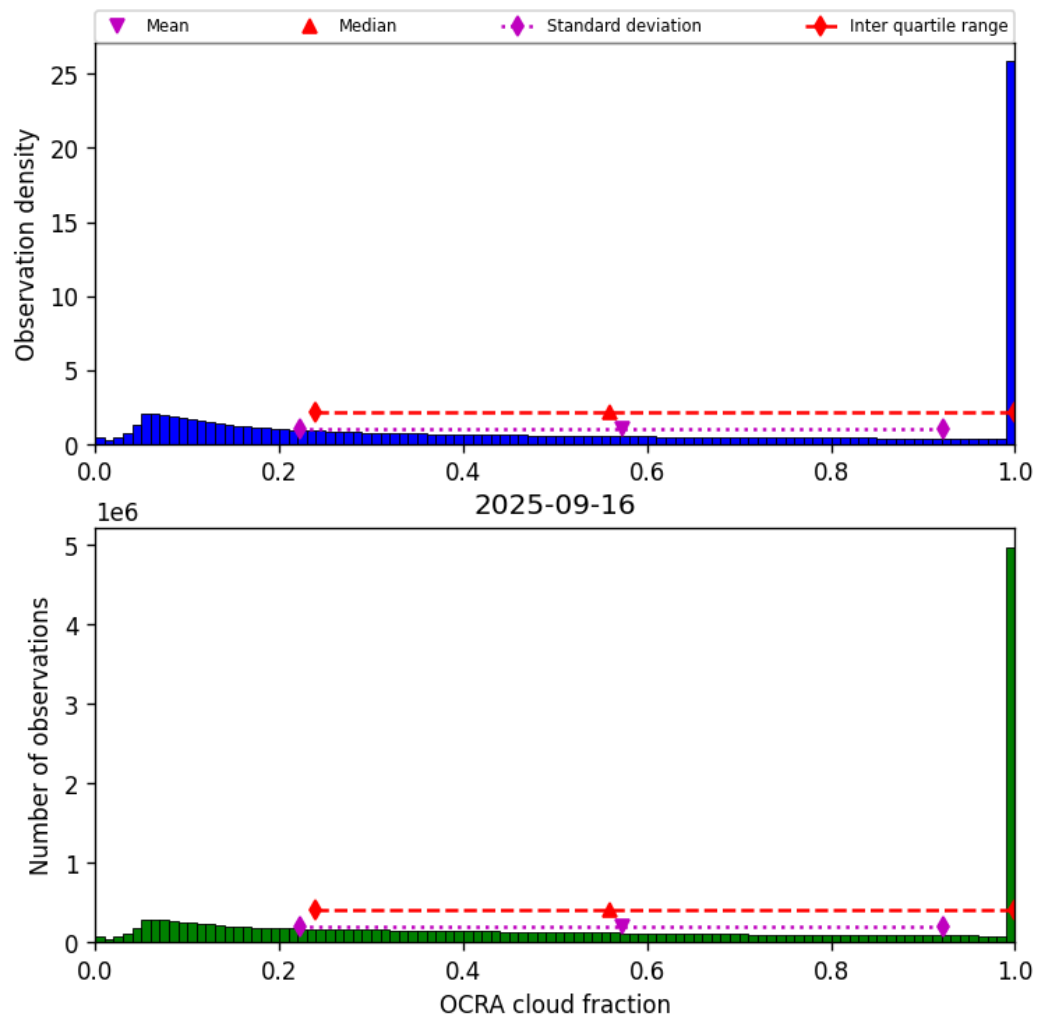


Figure 48: Histogram of “OCRA cloud fraction” for 2025-09-16 to 2025-09-17

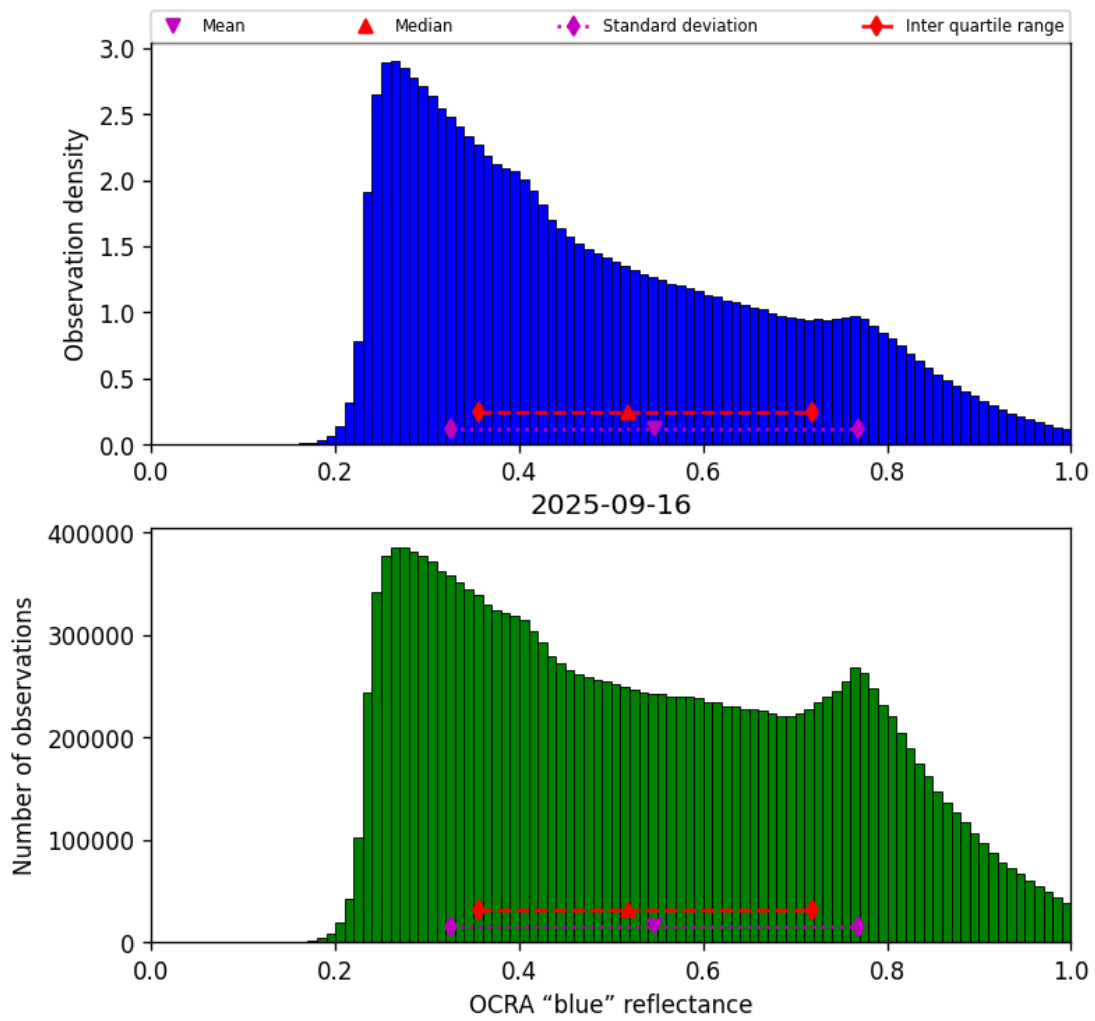


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-09-16 to 2025-09-17

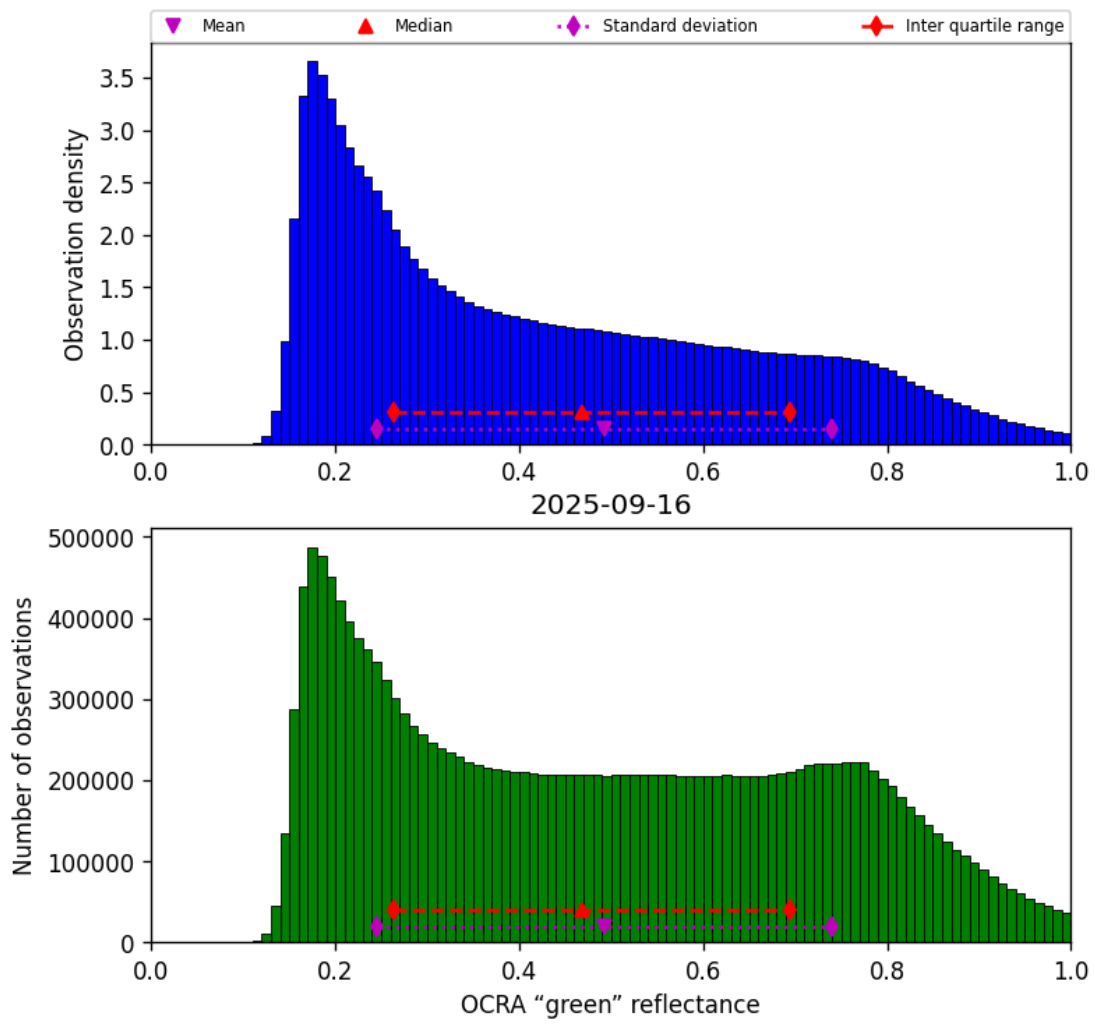


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-09-16 to 2025-09-17

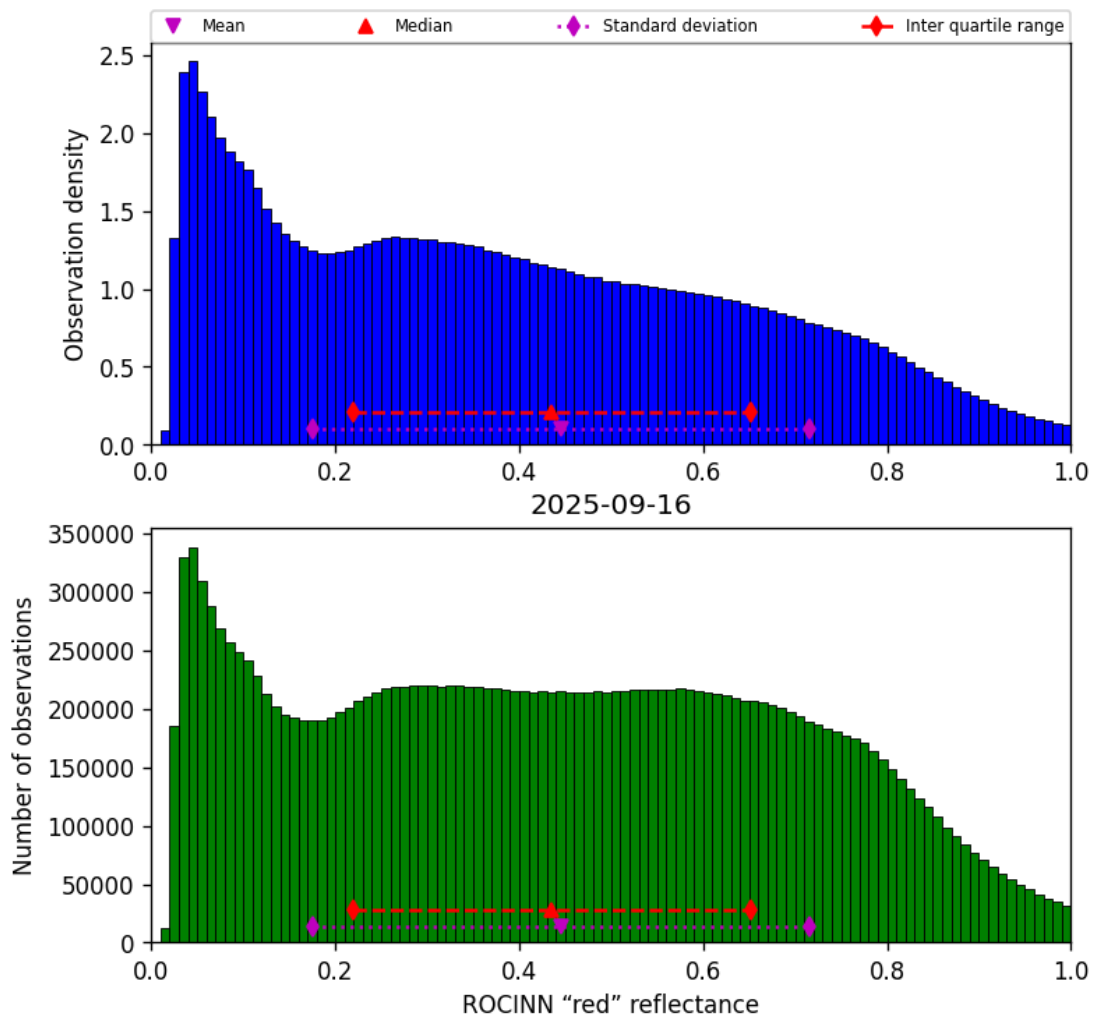


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-09-16 to 2025-09-17

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.

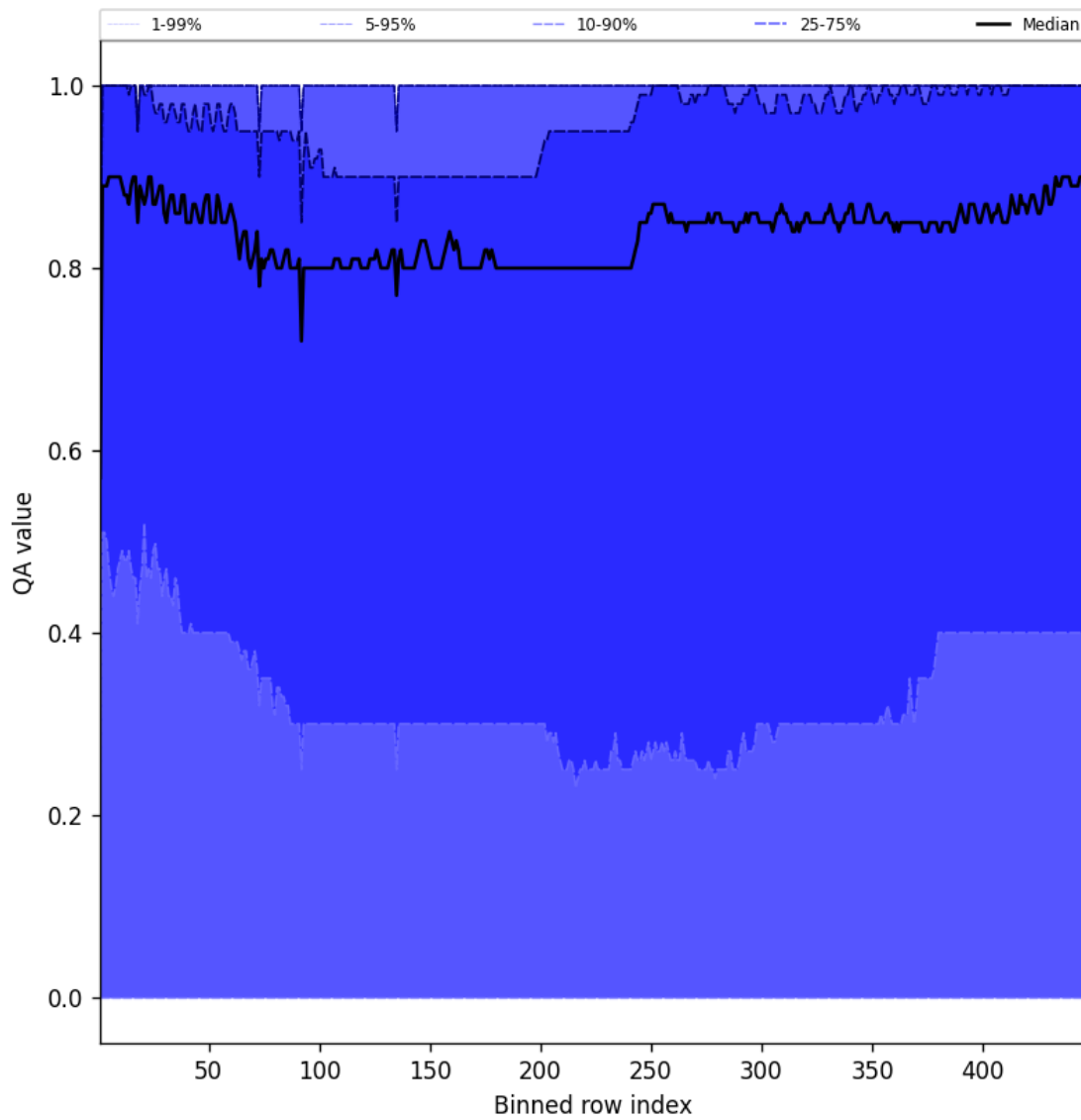


Figure 52: Along track statistics of “QA value” for 2025-09-16 to 2025-09-17

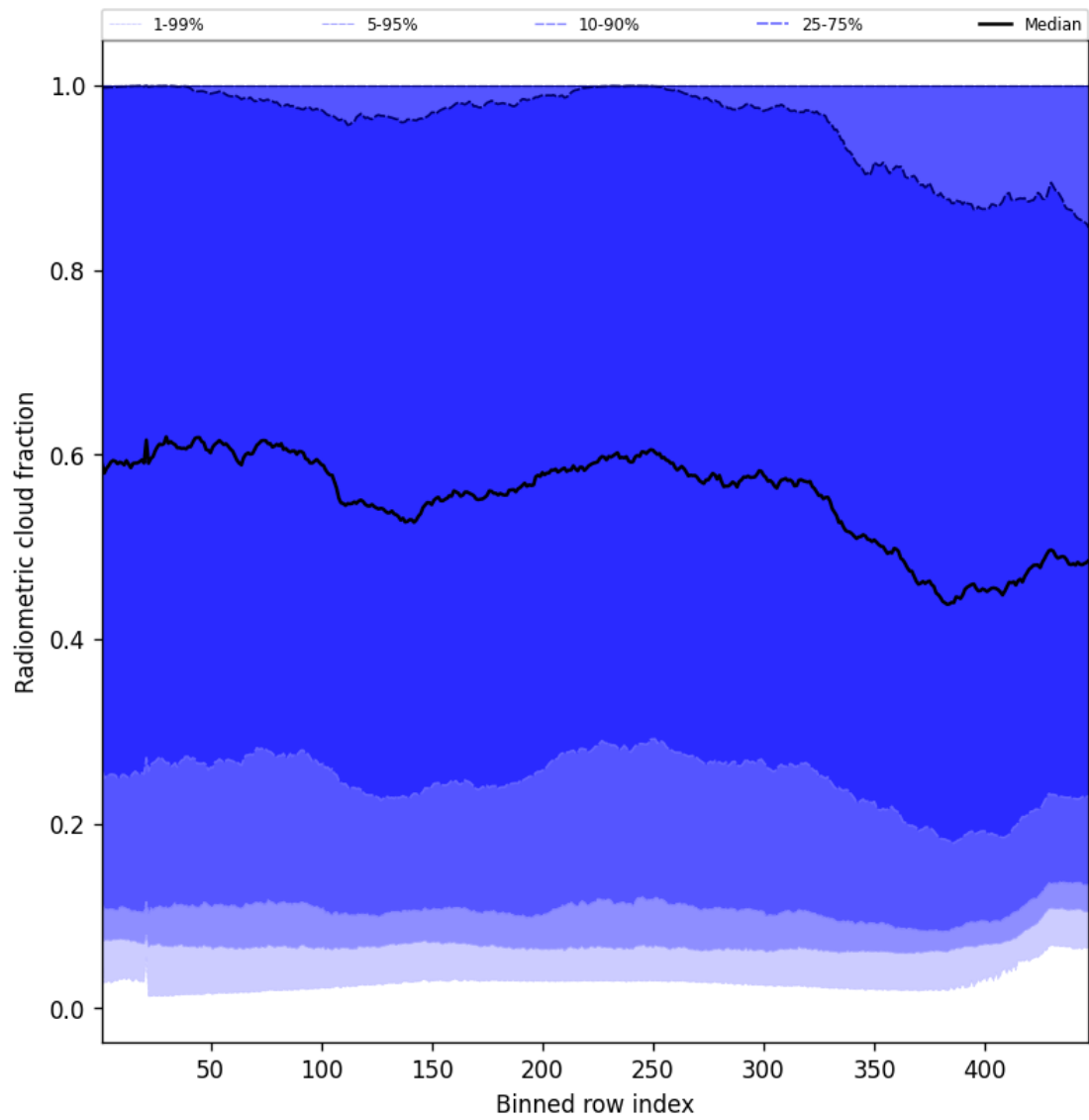


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-09-16 to 2025-09-17

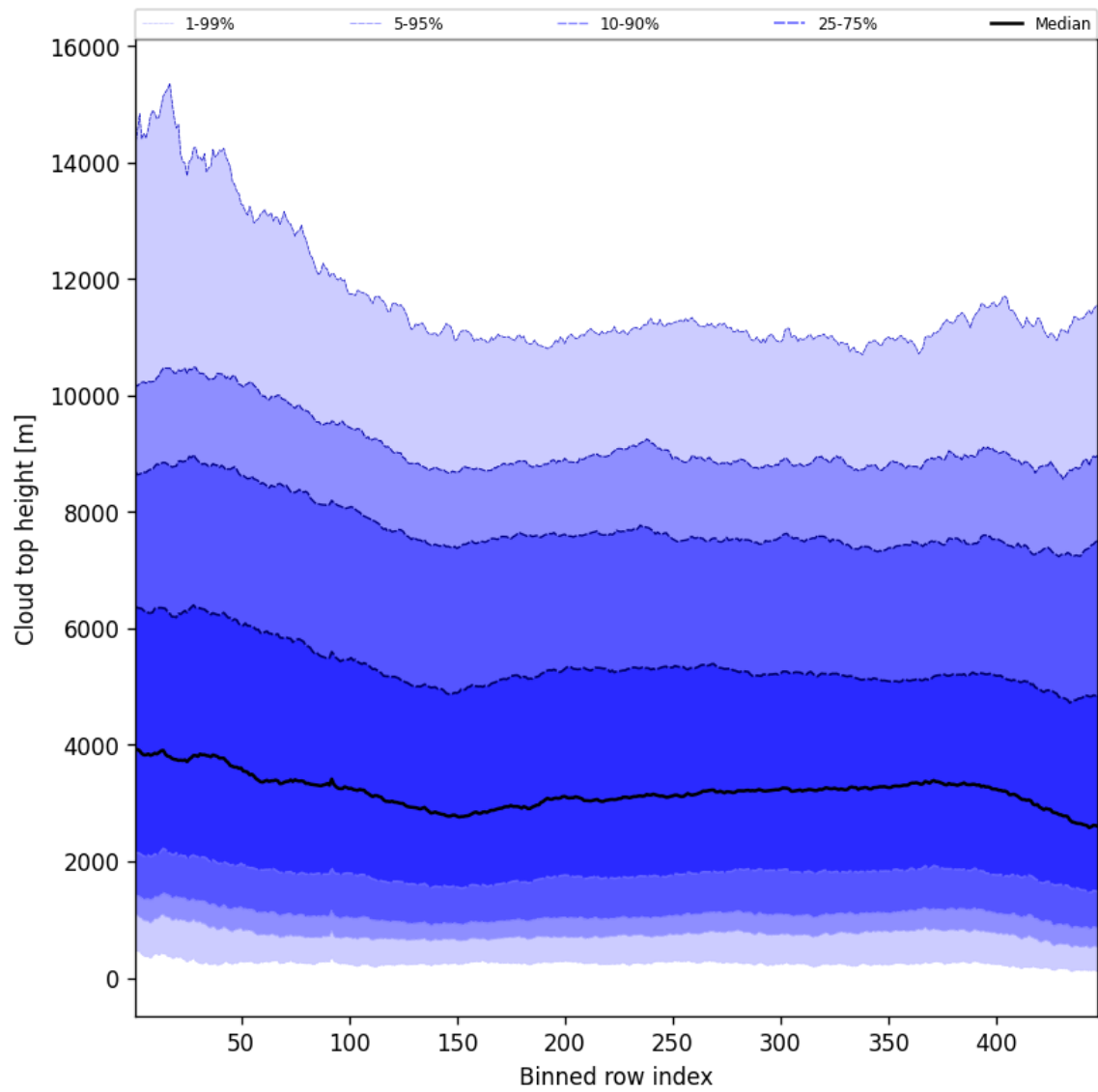


Figure 54: Along track statistics of “Cloud top height” for 2025-09-16 to 2025-09-17

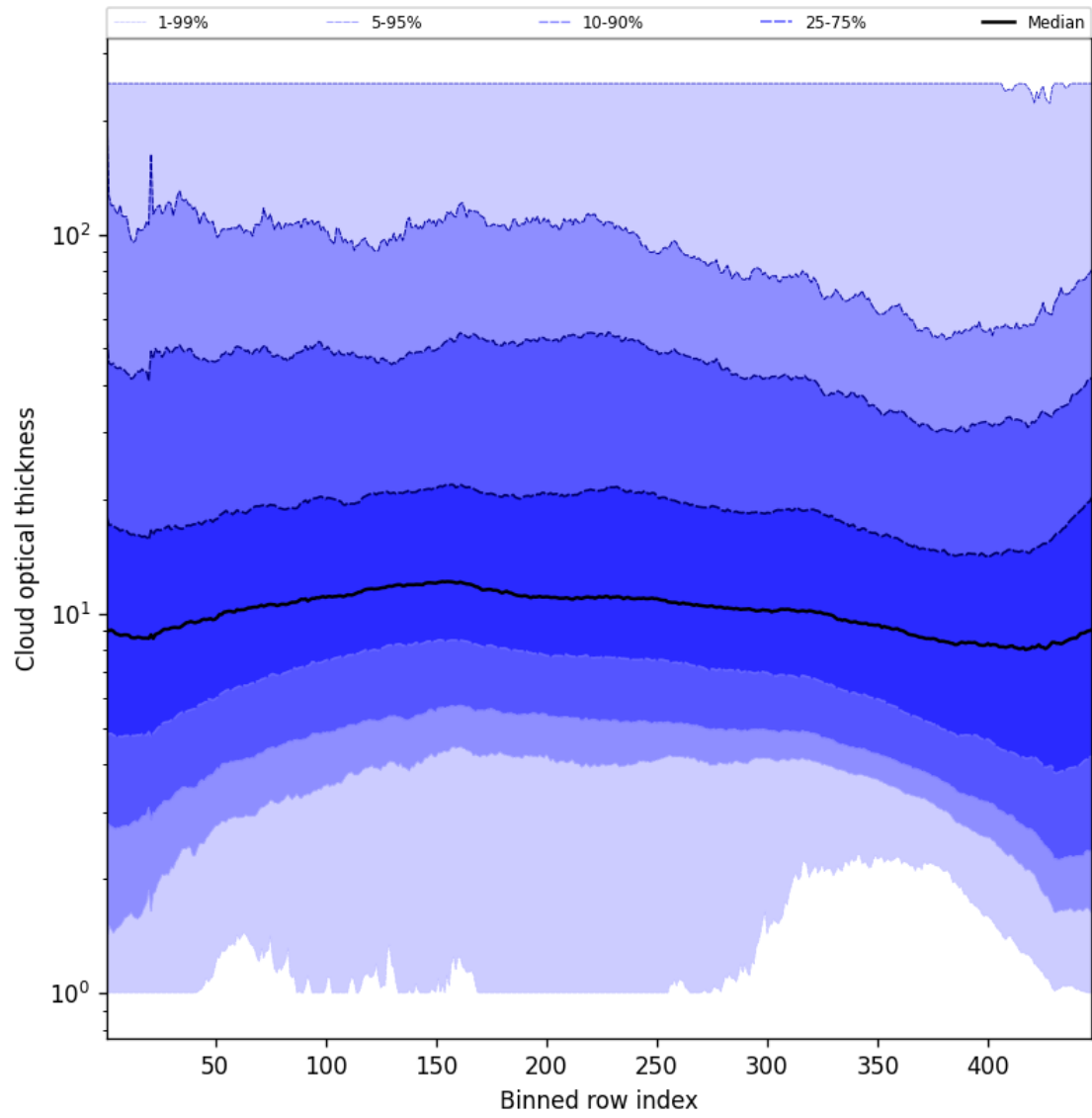


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-09-16 to 2025-09-17

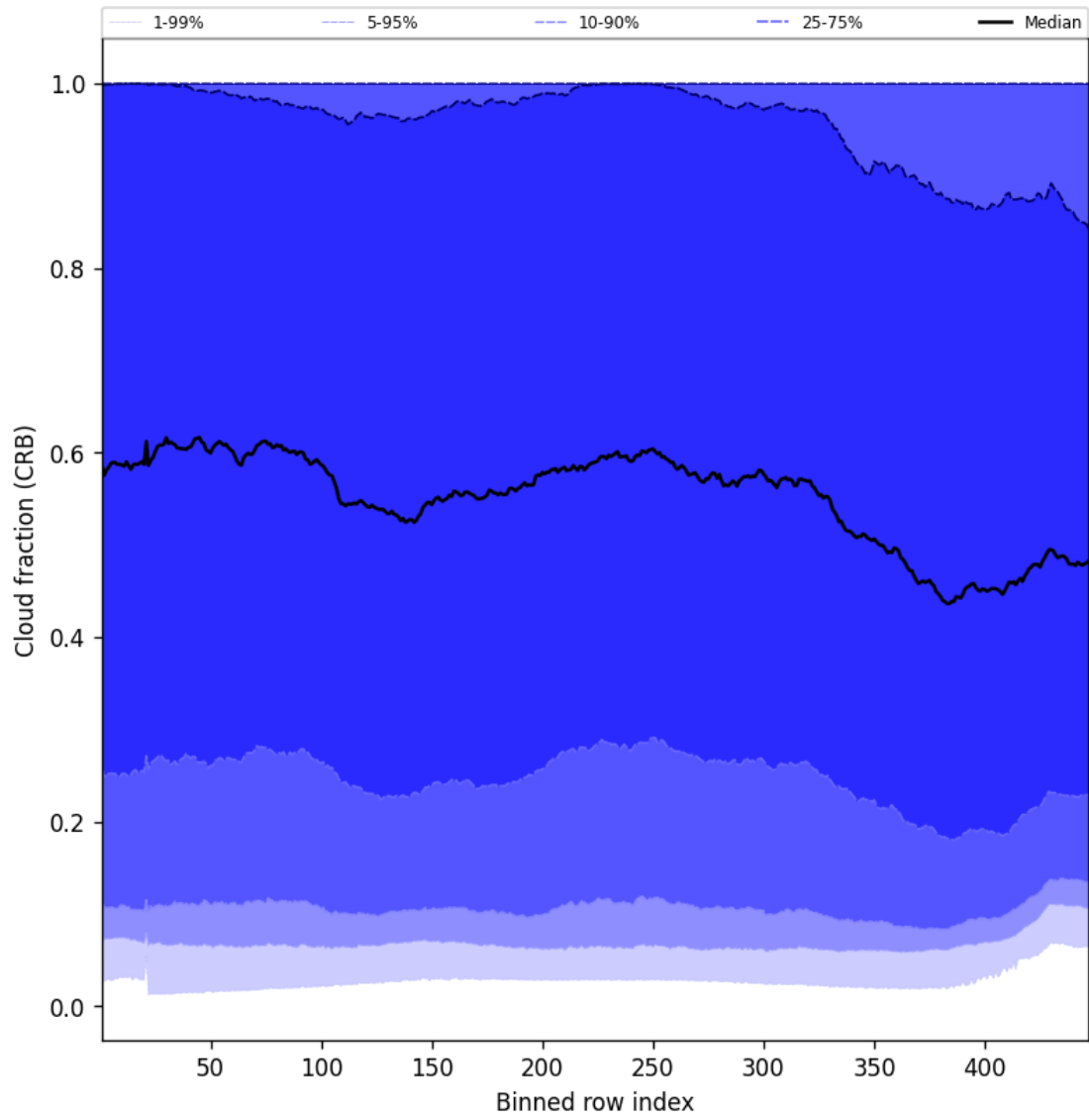


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-09-16 to 2025-09-17

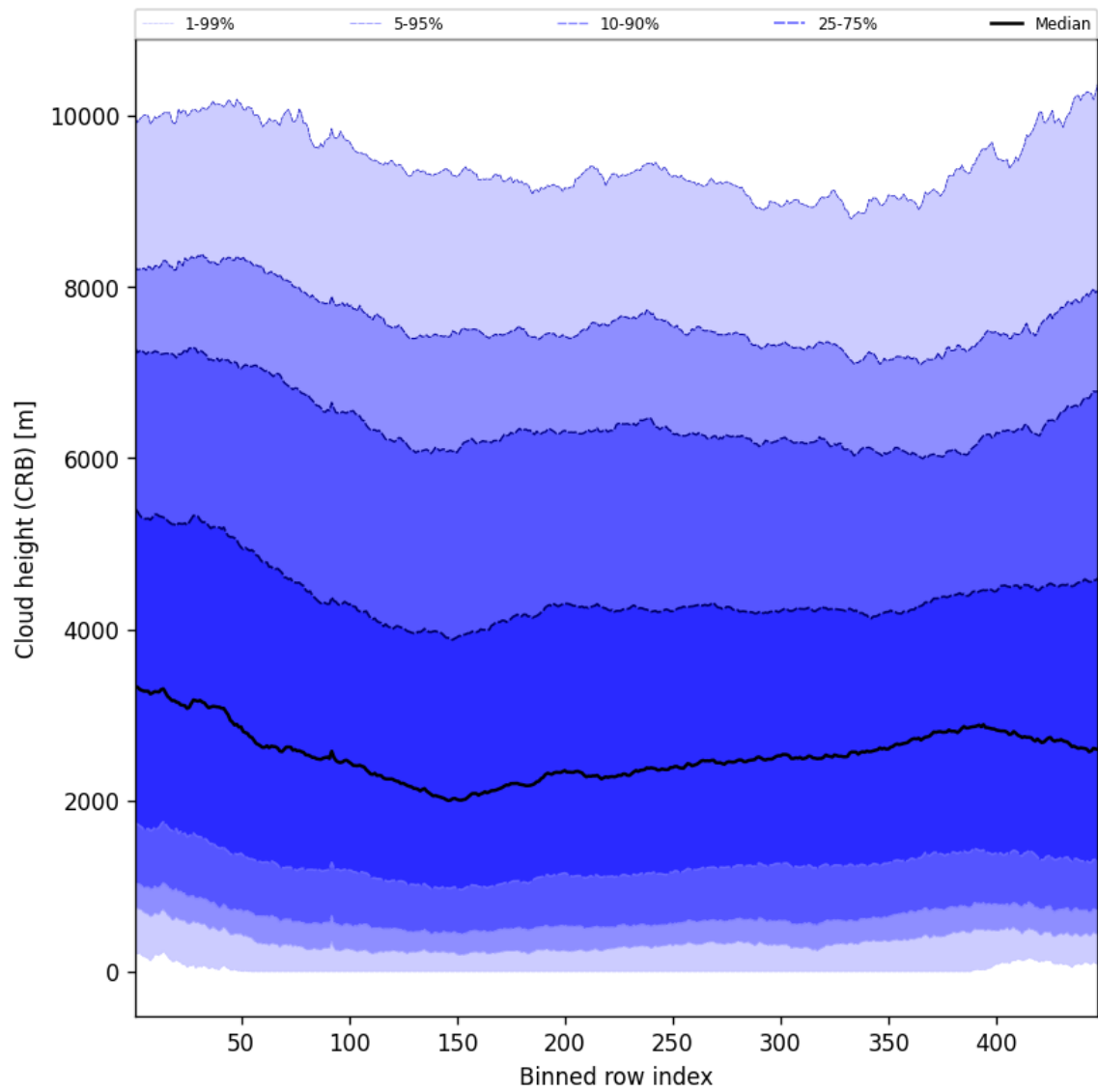


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-09-16 to 2025-09-17

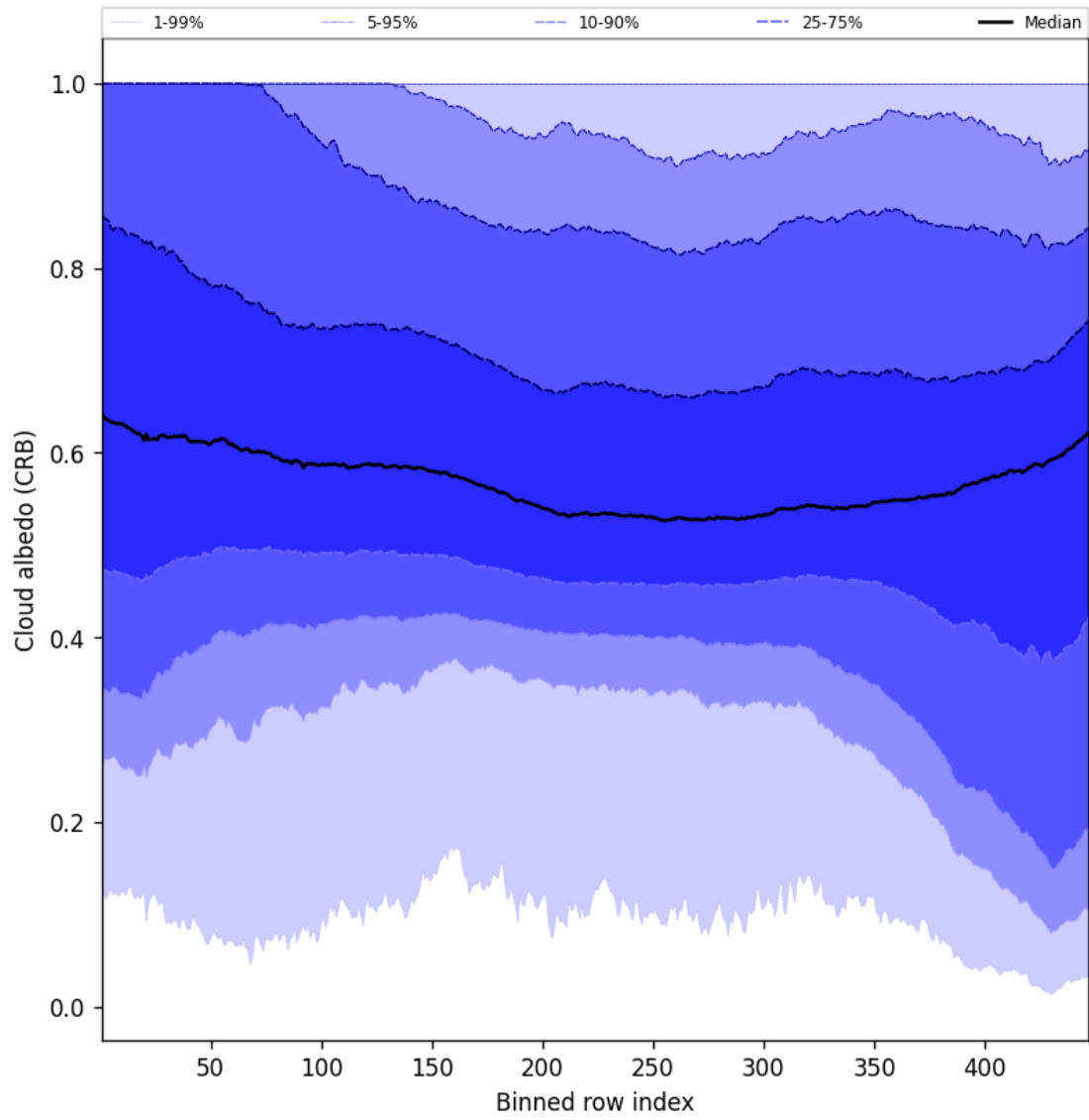


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-09-16 to 2025-09-17

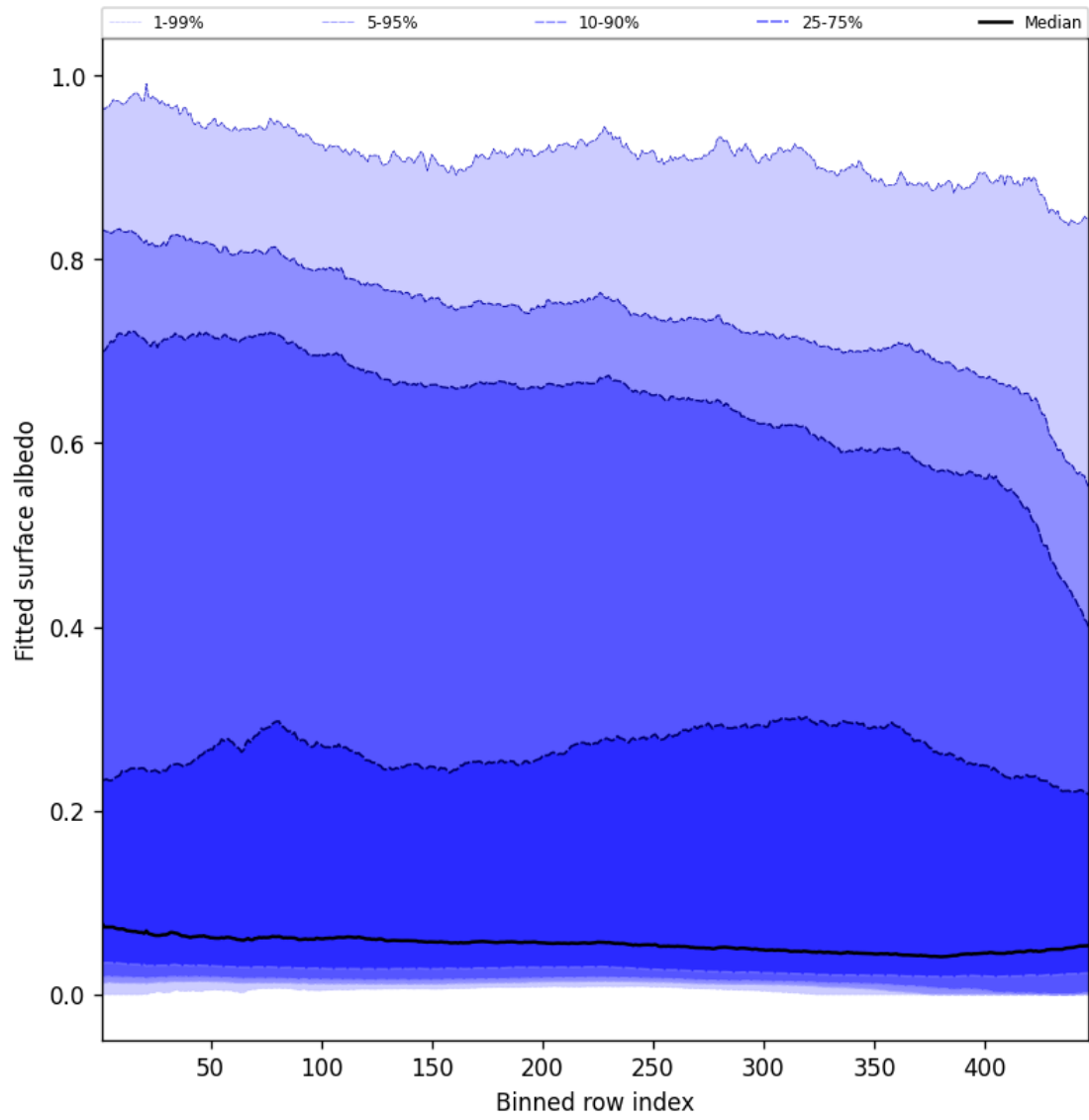


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-09-16 to 2025-09-17

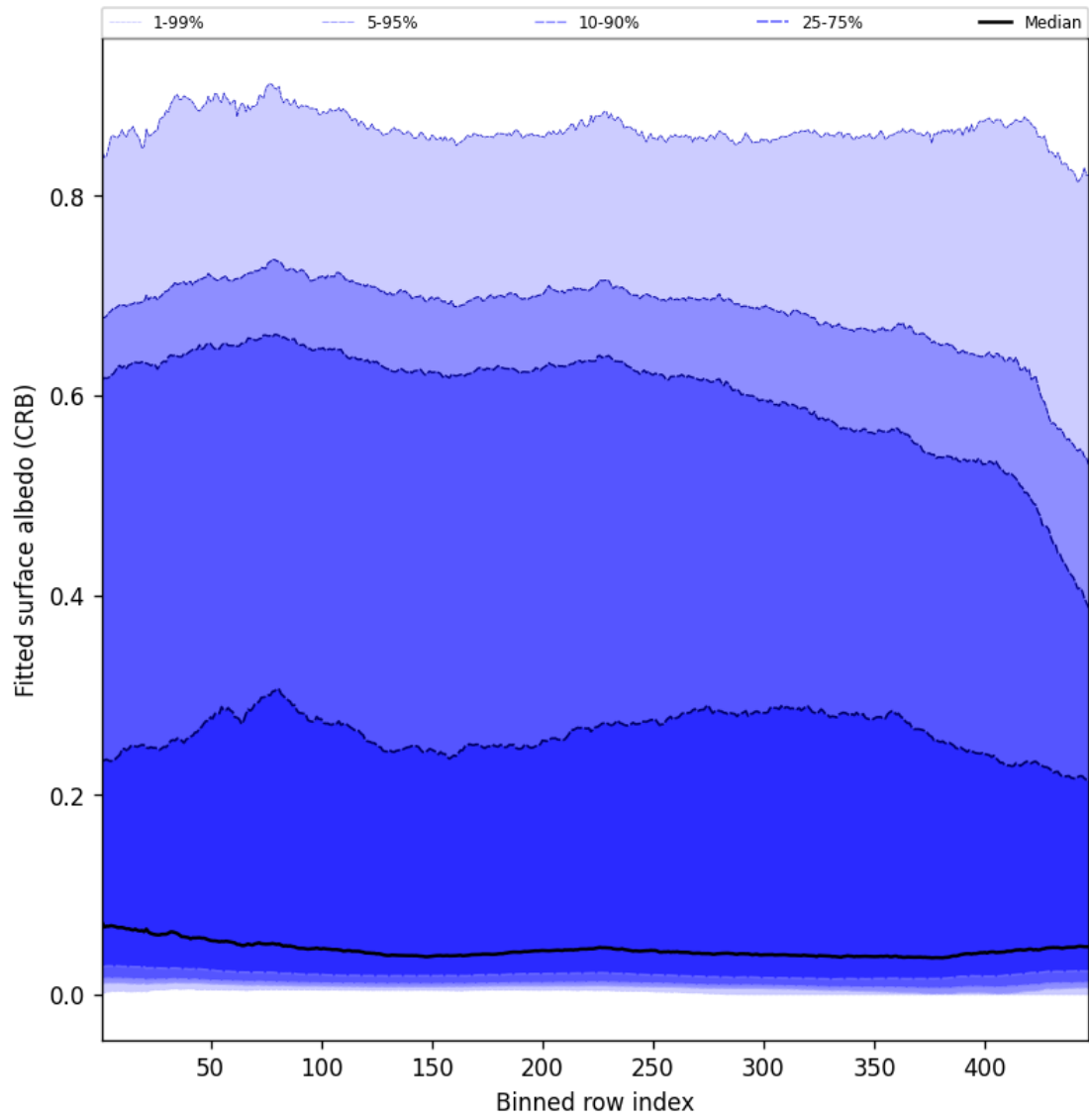


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-09-16 to 2025-09-17

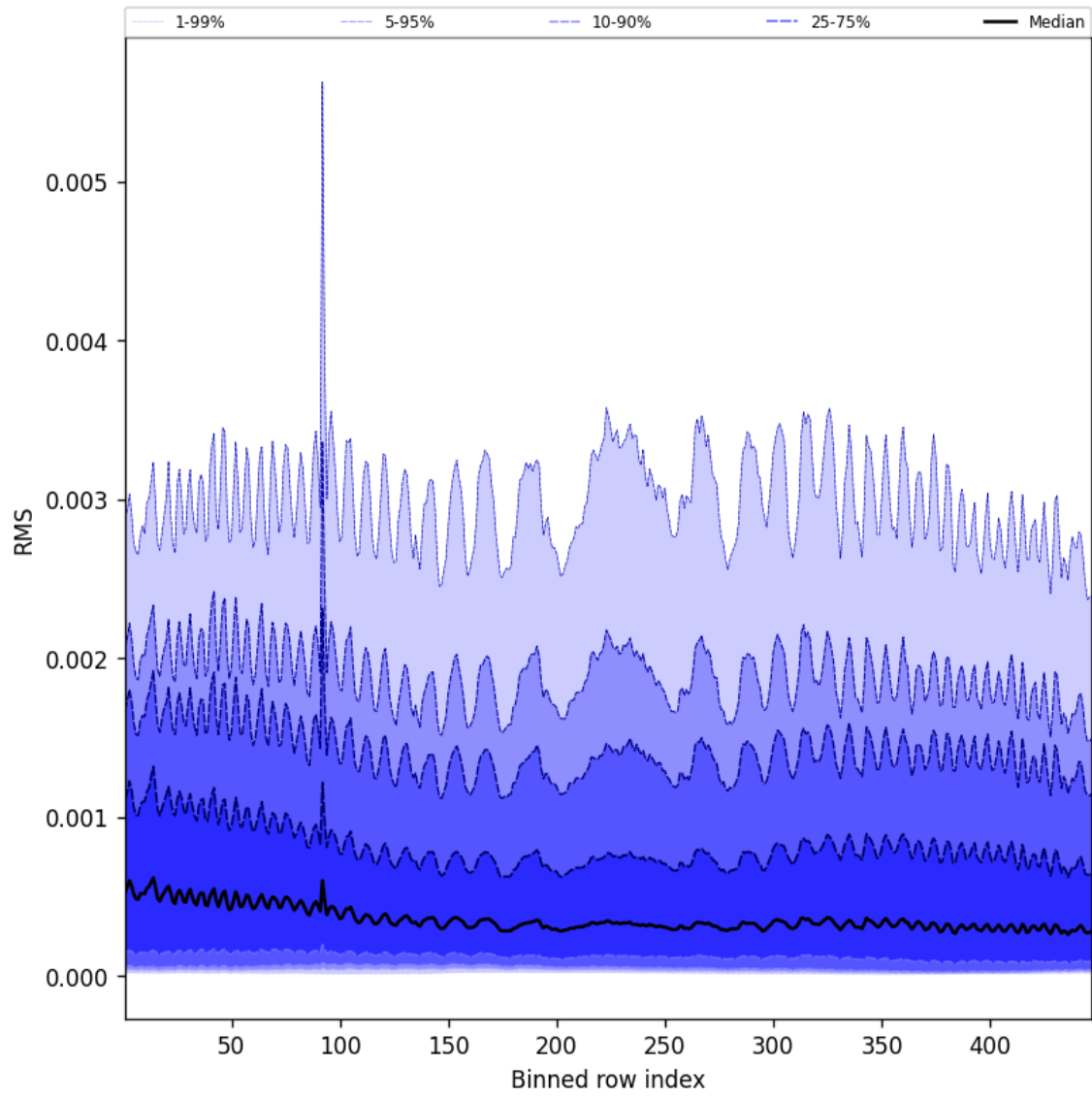


Figure 61: Along track statistics of “RMS” for 2025-09-16 to 2025-09-17

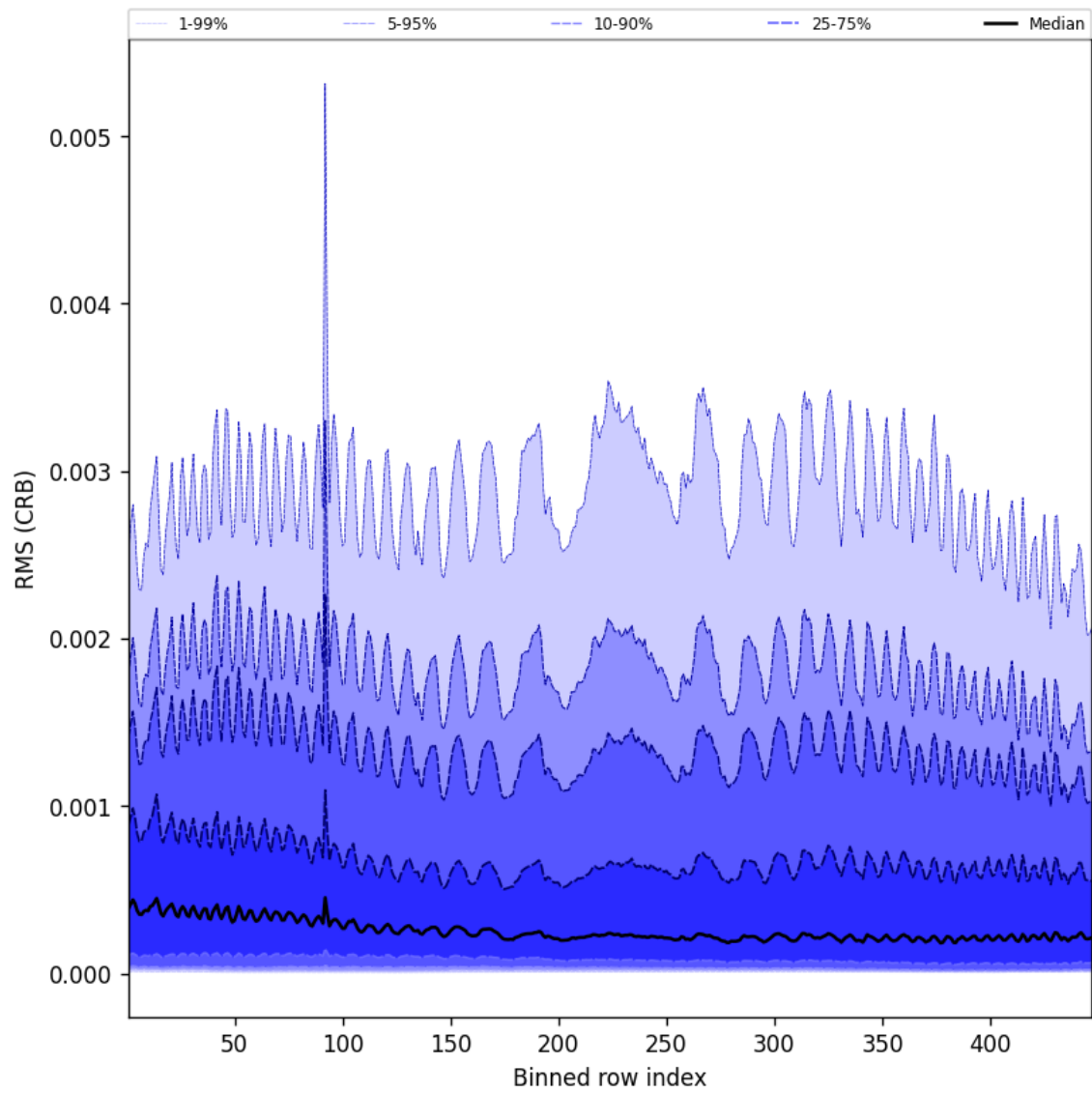


Figure 62: Along track statistics of “RMS (CRB)” for 2025-09-16 to 2025-09-17

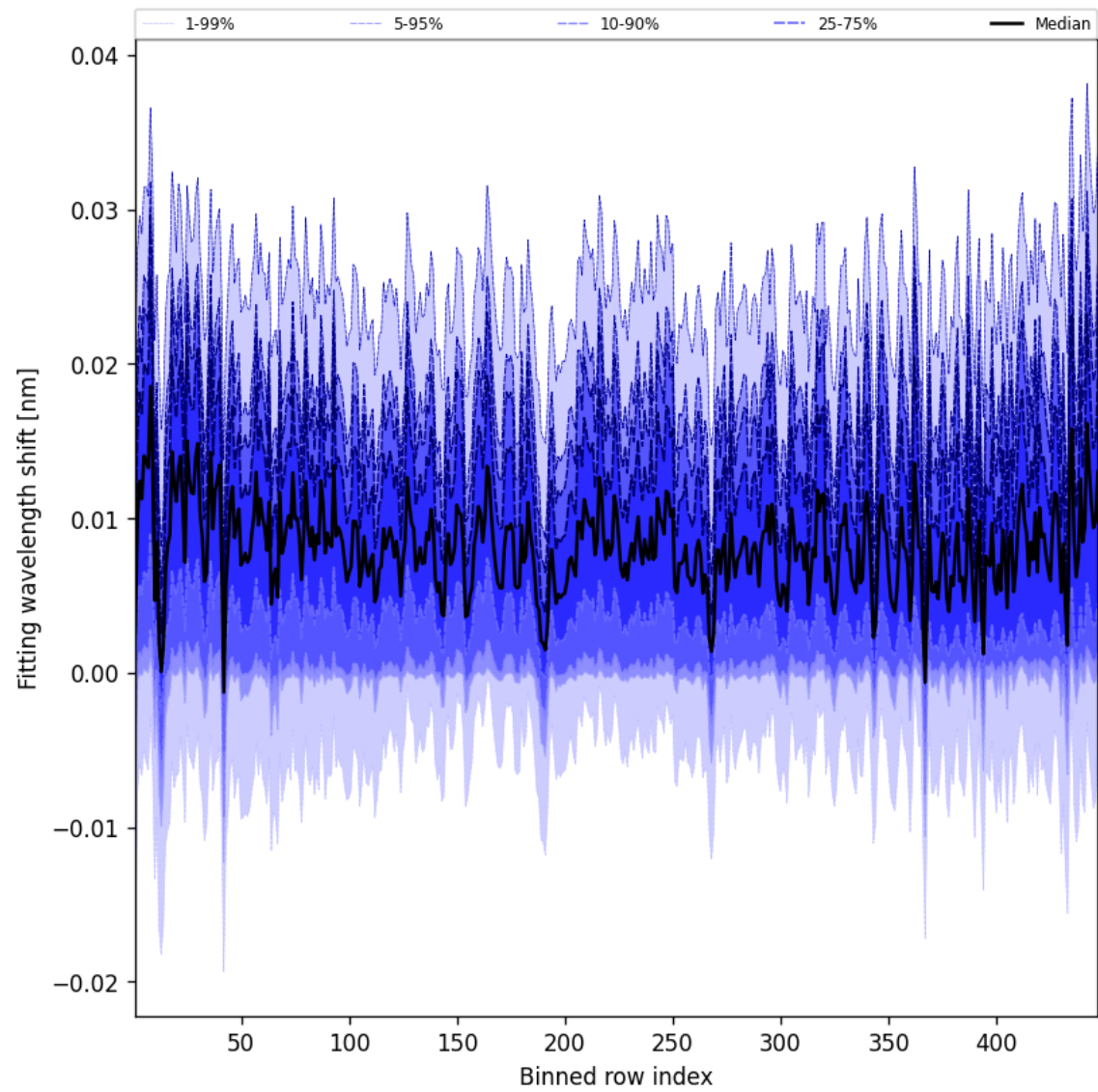


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-09-16 to 2025-09-17

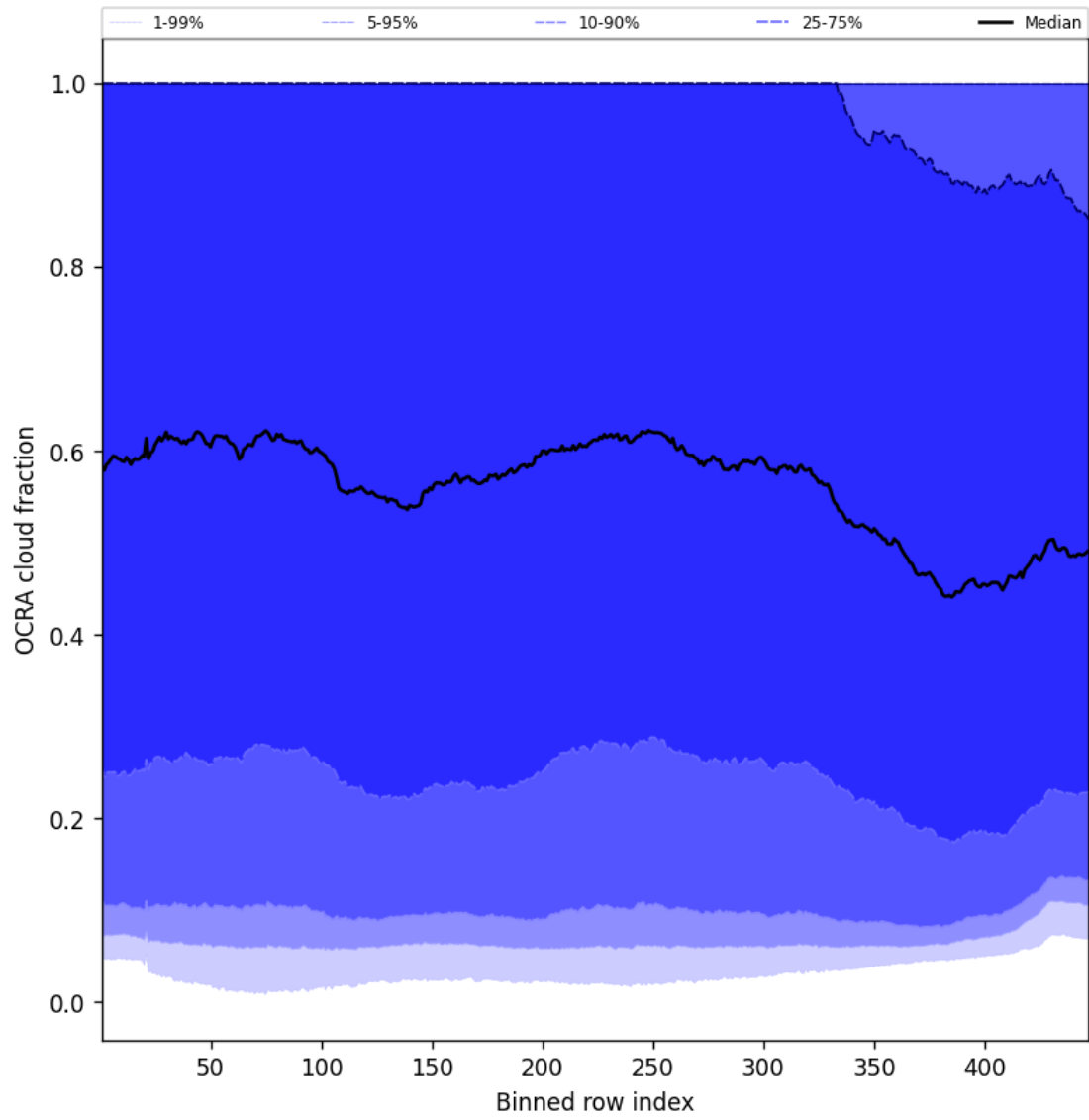


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-09-16 to 2025-09-17

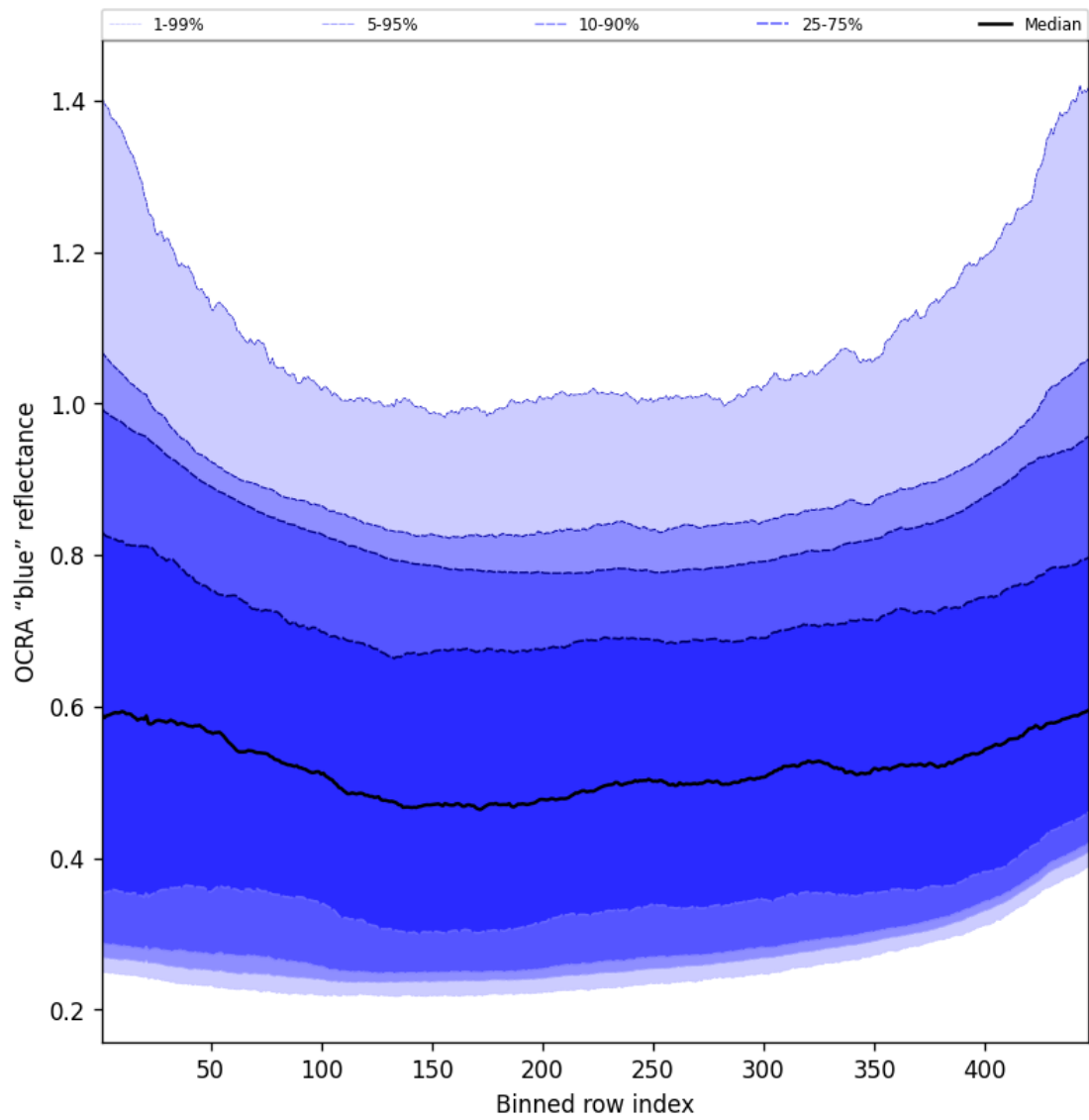


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-09-16 to 2025-09-17

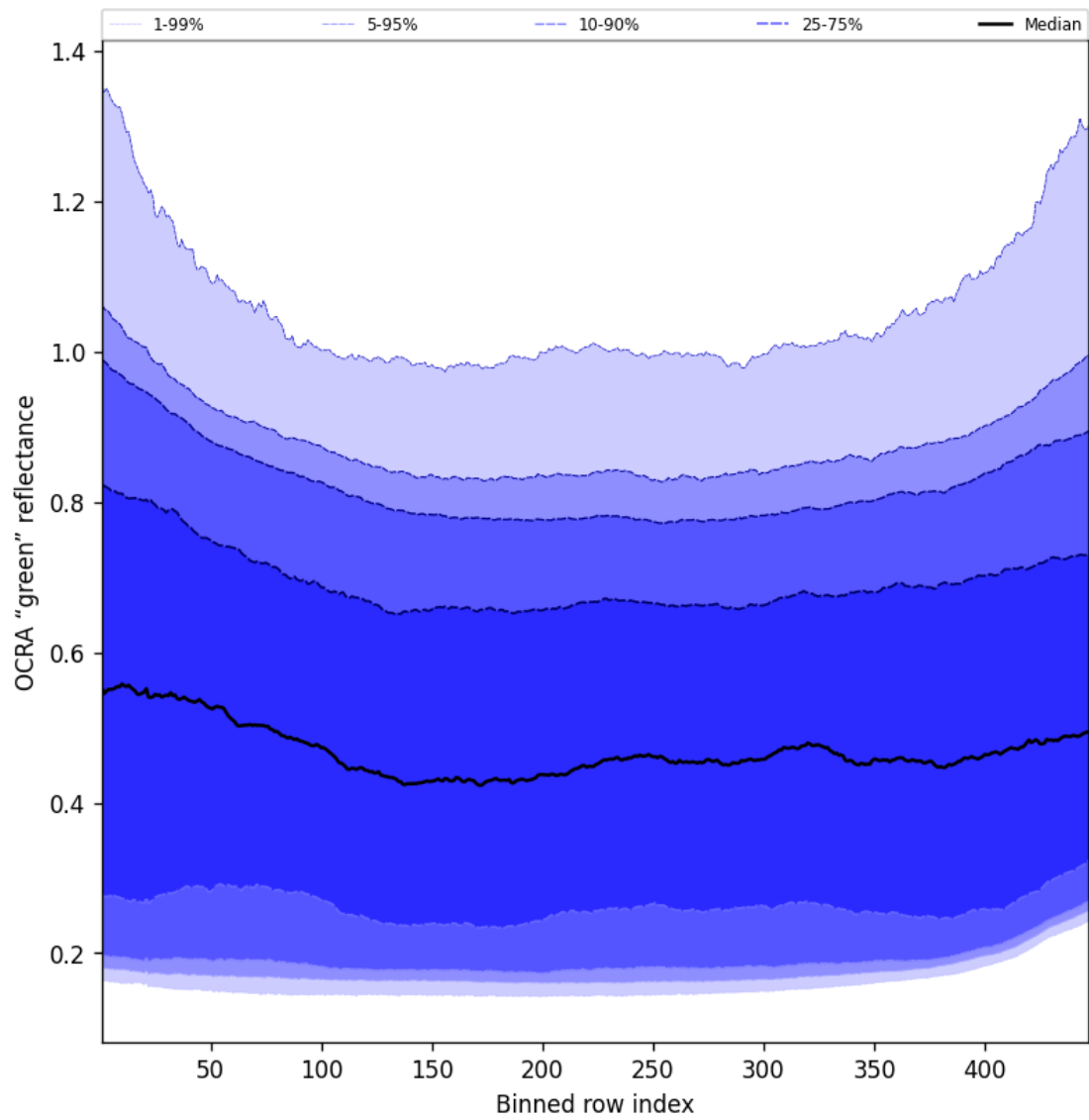


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-09-16 to 2025-09-17

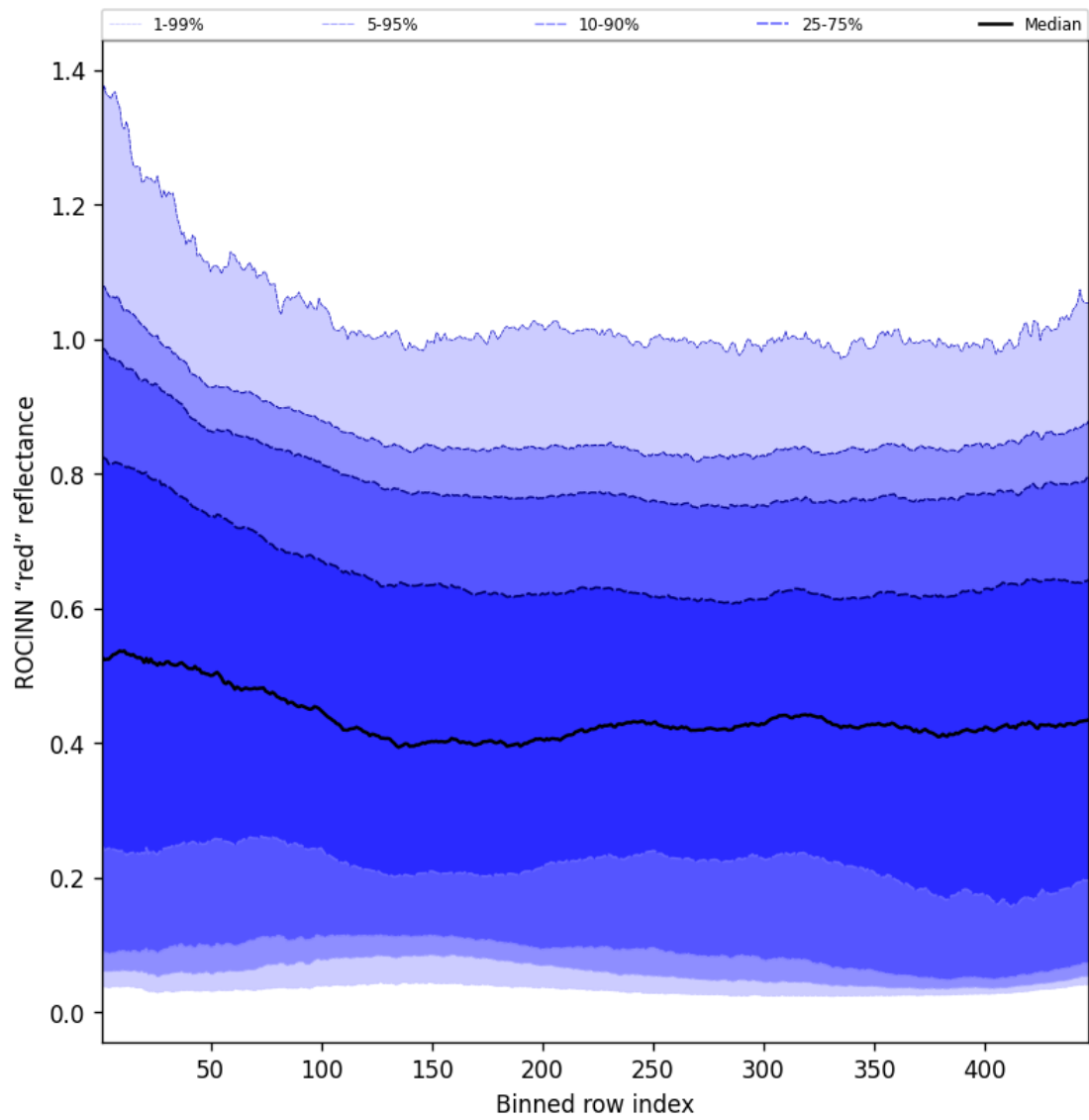


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-09-16 to 2025-09-17

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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