

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-09-26 (03:15)

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]	0.633 ± 0.377	20078207	0.995	0.640	0.810	0.0	1.000
cloud fraction [1]	0.570 ± 0.346	20078207	0.995	0.736	0.552	7.278×10^{-3}	1.000
cloud top height [m]	$(0.391 \pm 0.271) \times 10^4$	20078207	1.575×10^3	3.675×10^3	3.282×10^3	0.0	2.000×10^4
cloud optical thickness [1]	23.2 ± 43.1	20078207	9.77	12.6	10.2	1.000	250
cloud fraction crb [1]	0.569 ± 0.346	20078207	0.995	0.735	0.550	8.129×10^{-3}	1.000
cloud height crb [m]	$(0.310 \pm 0.228) \times 10^4$	20078207	975	3.169×10^3	2.645×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.600 ± 0.209	20078207	0.995	0.261	0.577	0.0	1.000
surface albedo fitted [1]	0.206 ± 0.270	20078207	2.500×10^{-2}	0.249	5.412×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.194 ± 0.256	20078207	1.500×10^{-2}	0.250	4.427×10^{-2}	0.0	1.000
fitted root mean square [1]	$(5.922 \pm 7.150) \times 10^{-4}$	20078207	5.000×10^{-5}	7.035×10^{-4}	3.606×10^{-4}	9.171×10^{-7}	0.170
fitted root mean square crb [1]	$(5.094 \pm 6.452) \times 10^{-4}$	20078207	5.000×10^{-5}	6.138×10^{-4}	2.575×10^{-4}	1.144×10^{-6}	4.685×10^{-2}
wavelength shift [nm]	$(8.442 \pm 7.120) \times 10^{-3}$	20078207	9.000×10^{-4}	1.039×10^{-2}	7.836×10^{-3}	-4.554×10^{-2}	6.348×10^{-2}
cloud fraction apriori [1]	0.574 ± 0.351	20078207	0.995	0.763	0.561	0.0	1.000
reflectance blue ocra [1]	0.563 ± 0.226	20078207	0.275	0.378	0.540	0.119	2.03
reflectance green ocra [1]	0.510 ± 0.254	20078207	0.175	0.447	0.492	7.043×10^{-2}	2.04
reflectance continuum aband [1]	0.459 ± 0.278	20078207	4.500×10^{-2}	0.451	0.452	1.144×10^{-2}	5.20

Table 2: Percentile ranges

Variable	1 %	5 %	10 %	15.9 %	25 %	75 %	84.1 %	90 %	95 %	99 %
qa value [1]	0.0	0.0	0.0	0.0	0.310	0.950	1.000	1.000	1.000	1.000
cloud fraction [1]	2.675×10^{-2}	6.915×10^{-2}	0.106	0.153	0.241	0.977	1.000	1.000	1.000	1.000
cloud top height [m]	282	770	1.082×10^3	1.368×10^3	1.775×10^3	5.450×10^3	6.670×10^3	7.756×10^3	9.161×10^3	1.187×10^4
cloud optical thickness [1]	1.000	2.79	3.93	4.90	6.23	18.8	29.3	44.5	87.5	250
cloud fraction crb [1]	2.623×10^{-2}	6.832×10^{-2}	0.106	0.153	0.241	0.976	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	368	635	881	1.236×10^3	4.405×10^3	5.480×10^3	6.437×10^3	7.604×10^3	9.575×10^3
cloud albedo crb [1]	6.351×10^{-2}	0.257	0.365	0.424	0.470	0.731	0.824	0.912	1.000	1.000
surface albedo fitted [1]	0.0	9.353×10^{-3}	1.488×10^{-2}	1.956×10^{-2}	2.631×10^{-2}	0.276	0.565	0.701	0.810	0.966
surface albedo fitted crb [1]	0.0	7.344×10^{-3}	1.132×10^{-2}	1.502×10^{-2}	2.050×10^{-2}	0.270	0.547	0.661	0.749	0.901
fitted root mean square [1]	1.506×10^{-5}	2.907×10^{-5}	4.675×10^{-5}	7.351×10^{-5}	1.233×10^{-4}	8.268×10^{-4}	1.125×10^{-3}	1.433×10^{-3}	1.907×10^{-3}	3.069×10^{-3}
fitted root mean square crb [1]	7.786×10^{-6}	1.741×10^{-5}	2.982×10^{-5}	4.679×10^{-5}	8.107×10^{-5}	6.949×10^{-4}	1.012×10^{-3}	1.342×10^{-3}	1.844×10^{-3}	2.953×10^{-3}
wavelength shift [nm]	-6.610×10^{-3}	-4.439×10^{-4}	3.077×10^{-4}	1.221×10^{-3}	2.871×10^{-3}	1.327×10^{-2}	1.573×10^{-2}	1.783×10^{-2}	2.058×10^{-2}	2.657×10^{-2}
cloud fraction apriori [1]	3.029×10^{-2}	6.555×10^{-2}	0.100	0.147	0.237	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.232	0.257	0.284	0.314	0.365	0.743	0.807	0.856	0.926	1.14
reflectance green ocra [1]	0.152	0.173	0.193	0.219	0.271	0.718	0.794	0.846	0.915	1.09
reflectance continuum aband [1]	3.084×10^{-2}	5.391×10^{-2}	8.646×10^{-2}	0.133	0.222	0.673	0.761	0.824	0.900	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]	0.626 ± 0.381	10584221	0.650	0.820	0.0	1.000	0.300	0.950
cloud fraction [1]	0.587 ± 0.353	10584221	0.758	0.600	7.278×10^{-3}	1.000	0.238	0.996
cloud top height [m]	$(0.412 \pm 0.257) \times 10^4$	10584221	3.521×10^3	3.619×10^3	0.0	2.000×10^4	2.107×10^3	5.628×10^3
cloud optical thickness [1]	22.0 ± 36.8	10584221	14.5	10.3	1.000	250	6.37	20.8
cloud fraction crb [1]	0.586 ± 0.353	10584221	0.760	0.598	8.129×10^{-3}	1.000	0.237	0.997
cloud height crb [m]	$(0.336 \pm 0.220) \times 10^4$	10584221	3.025×10^3	3.015×10^3	0.0	1.950×10^4	1.595×10^3	4.621×10^3
cloud albedo crb [1]	0.584 ± 0.201	10584221	0.253	0.572	0.0	1.000	0.462	0.715
surface albedo fitted [1]	0.170 ± 0.212	10584221	0.201	6.722×10^{-2}	0.0	1.000	2.809×10^{-2}	0.229
surface albedo fitted crb [1]	0.163 ± 0.209	10584221	0.201	5.320×10^{-2}	0.0	1.000	2.176×10^{-2}	0.223
fitted root mean square [1]	$(5.408 \pm 7.235) \times 10^{-4}$	10584221	6.024×10^{-4}	2.682×10^{-4}	9.171×10^{-7}	0.170	1.053×10^{-4}	7.077×10^{-4}
fitted root mean square crb [1]	$(4.888 \pm 6.798) \times 10^{-4}$	10584221	5.793×10^{-4}	1.967×10^{-4}	1.144×10^{-6}	4.685×10^{-2}	6.163×10^{-5}	6.409×10^{-4}
wavelength shift [nm]	$(7.563 \pm 6.919) \times 10^{-3}$	10584221	9.822×10^{-3}	6.626×10^{-3}	-4.341×10^{-2}	5.954×10^{-2}	2.173×10^{-3}	1.199×10^{-2}
cloud fraction apriori [1]	0.591 ± 0.358	10584221	0.767	0.610	0.0	1.000	0.233	1.000
reflectance blue oca [1]	0.543 ± 0.221	10584221	0.349	0.515	0.119	1.96	0.355	0.704
reflectance green oca [1]	0.487 ± 0.247	10584221	0.417	0.461	7.043×10^{-2}	2.04	0.260	0.677
reflectance continuum aband [1]	0.441 ± 0.271	10584221	0.417	0.421	1.144×10^{-2}	4.85	0.219	0.636

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 ± 0.372	9493986	0.560	0.810	0.0	1.000	0.400	0.960
cloud fraction [1]	0.550 ± 0.338	9493986	0.692	0.506	7.420×10^{-3}	1.000	0.243	0.935
cloud top height [m]	$(0.367 \pm 0.283) \times 10^4$	9493986	3.685×10^3	2.825×10^3	0.0	2.000×10^4	1.525×10^3	5.210×10^3
cloud optical thickness [1]	24.5 ± 49.1	9493986	10.8	10.1	1.000	250	6.09	16.9
cloud fraction crb [1]	0.550 ± 0.338	9493986	0.690	0.504	8.586×10^{-3}	1.000	0.244	0.934
cloud height crb [m]	$(0.281 \pm 0.233) \times 10^4$	9493986	3.126×10^3	2.119×10^3	0.0	2.000×10^4	986	4.112×10^3
cloud albedo crb [1]	0.617 ± 0.216	9493986	0.278	0.583	0.0	1.000	0.478	0.756
surface albedo fitted [1]	0.246 ± 0.317	9493986	0.555	4.567×10^{-2}	0.0	1.000	2.488×10^{-2}	0.580
surface albedo fitted crb [1]	0.228 ± 0.296	9493986	0.534	3.812×10^{-2}	0.0	1.000	1.935×10^{-2}	0.553
fitted root mean square [1]	$(6.496 \pm 7.009) \times 10^{-4}$	9493986	7.503×10^{-4}	4.750×10^{-4}	3.175×10^{-6}	0.103	1.661×10^{-4}	9.164×10^{-4}
fitted root mean square crb [1]	$(5.325 \pm 6.033) \times 10^{-4}$	9493986	6.258×10^{-4}	3.243×10^{-4}	1.931×10^{-6}	1.927×10^{-2}	1.136×10^{-4}	7.394×10^{-4}
wavelength shift [nm]	$(9.422 \pm 7.212) \times 10^{-3}$	9493986	1.047×10^{-2}	9.286×10^{-3}	-4.554×10^{-2}	6.348×10^{-2}	3.906×10^{-3}	1.438×10^{-2}
cloud fraction apriori [1]	0.555 ± 0.343	9493986	0.727	0.515	0.0	1.000	0.241	0.968
reflectance blue ocrs [1]	0.585 ± 0.231	9493986	0.398	0.573	0.131	2.03	0.379	0.776
reflectance green ocrs [1]	0.534 ± 0.260	9493986	0.471	0.532	9.274×10^{-2}	1.96	0.286	0.757
reflectance continuum aband [1]	0.479 ± 0.285	9493986	0.480	0.497	1.168×10^{-2}	5.20	0.225	0.706

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]	0.662 ± 0.361	14023581	0.560	0.850	0.0	1.000	0.400	0.960
cloud fraction [1]	0.573 ± 0.346	14023581	0.733	0.570	7.420×10^{-3}	1.000	0.237	0.970
cloud top height [m]	$(0.354 \pm 0.245) \times 10^4$	14023581	3.237×10^3	2.919×10^3	0.0	2.000×10^4	1.627×10^3	4.865×10^3
cloud optical thickness [1]	22.1 ± 39.3	14023581	11.8	10.6	1.000	250	7.02	18.8
cloud fraction crb [1]	0.571 ± 0.347	14023581	0.733	0.568	8.490×10^{-3}	1.000	0.235	0.969
cloud height crb [m]	$(0.283 \pm 0.217) \times 10^4$	14023581	2.951×10^3	2.322×10^3	0.0	2.000×10^4	1.081×10^3	4.032×10^3
cloud albedo crb [1]	0.566 ± 0.188	14023581	0.219	0.548	0.0	1.000	0.457	0.676
surface albedo fitted [1]	0.123 ± 0.219	14023581	4.095×10^{-2}	3.475×10^{-2}	0.0	1.000	2.086×10^{-2}	6.181×10^{-2}
surface albedo fitted crb [1]	0.114 ± 0.211	14023581	3.463×10^{-2}	2.756×10^{-2}	0.0	1.000	1.605×10^{-2}	5.068×10^{-2}
fitted root mean square [1]	$(5.210 \pm 6.515) \times 10^{-4}$	14023581	6.360×10^{-4}	2.718×10^{-4}	9.171×10^{-7}	4.470×10^{-2}	9.250×10^{-5}	7.285×10^{-4}
fitted root mean square crb [1]	$(4.674 \pm 6.104) \times 10^{-4}$	14023581	5.772×10^{-4}	2.095×10^{-4}	1.144×10^{-6}	2.424×10^{-2}	6.463×10^{-5}	6.418×10^{-4}
wavelength shift [nm]	$(8.137 \pm 7.323) \times 10^{-3}$	14023581	1.078×10^{-2}	7.291×10^{-3}	-4.554×10^{-2}	6.348×10^{-2}	2.369×10^{-3}	1.315×10^{-2}
cloud fraction apriori [1]	0.575 ± 0.351	14023581	0.769	0.577	0.0	1.000	0.231	1.000
reflectance blue oca [1]	0.535 ± 0.210	14023581	0.336	0.509	0.137	2.03	0.355	0.691
reflectance green oca [1]	0.475 ± 0.236	14023581	0.405	0.454	8.648×10^{-2}	2.04	0.256	0.661
reflectance continuum aband [1]	0.403 ± 0.265	14023581	0.460	0.394	1.168×10^{-2}	4.85	0.152	0.612

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]	0.527 ± 0.414	4407461	0.900	0.670	0.0	1.000	0.0	0.900
cloud fraction [1]	0.528 ± 0.338	4407461	0.701	0.443	7.278×10^{-3}	1.000	0.235	0.936
cloud top height [m]	$(0.523 \pm 0.314) \times 10^4$	4407461	4.181×10^3	4.846×10^3	0.0	2.000×10^4	2.830×10^3	7.012×10^3
cloud optical thickness [1]	25.0 ± 52.2	4407461	11.5	7.81	1.000	250	4.87	16.3
cloud fraction crb [1]	0.528 ± 0.337	4407461	0.698	0.442	8.129×10^{-3}	1.000	0.237	0.935
cloud height crb [m]	$(0.404 \pm 0.247) \times 10^4$	4407461	3.533×10^3	3.646×10^3	0.0	2.000×10^4	2.109×10^3	5.642×10^3
cloud albedo crb [1]	0.701 ± 0.240	4407461	0.388	0.705	0.0	1.000	0.537	0.926
surface albedo fitted [1]	0.465 ± 0.280	4407461	0.517	0.334	0.0	1.000	0.213	0.730
surface albedo fitted crb [1]	0.440 ± 0.254	4407461	0.470	0.334	4.818×10^{-3}	1.000	0.209	0.679
fitted root mean square [1]	$(8.281 \pm 8.369) \times 10^{-4}$	4407461	7.551×10^{-4}	6.327×10^{-4}	2.997×10^{-6}	0.170	3.288×10^{-4}	1.084×10^{-3}
fitted root mean square crb [1]	$(6.402 \pm 7.238) \times 10^{-4}$	4407461	7.059×10^{-4}	3.938×10^{-4}	2.821×10^{-6}	4.685×10^{-2}	1.559×10^{-4}	8.617×10^{-4}
wavelength shift [nm]	$(9.193 \pm 6.525) \times 10^{-3}$	4407461	9.182×10^{-3}	8.865×10^{-3}	-3.430×10^{-2}	5.353×10^{-2}	4.329×10^{-3}	1.351×10^{-2}
cloud fraction apriori [1]	0.537 ± 0.343	4407461	0.765	0.453	0.0	1.000	0.235	1.000
reflectance blue ocra [1]	0.651 ± 0.258	4407461	0.438	0.724	0.119	2.03	0.401	0.839
reflectance green ocra [1]	0.617 ± 0.284	4407461	0.509	0.697	7.043×10^{-2}	1.96	0.327	0.837
reflectance continuum aband [1]	0.619 ± 0.260	4407461	0.421	0.645	1.415×10^{-2}	5.20	0.390	0.811

3 Granule outlines

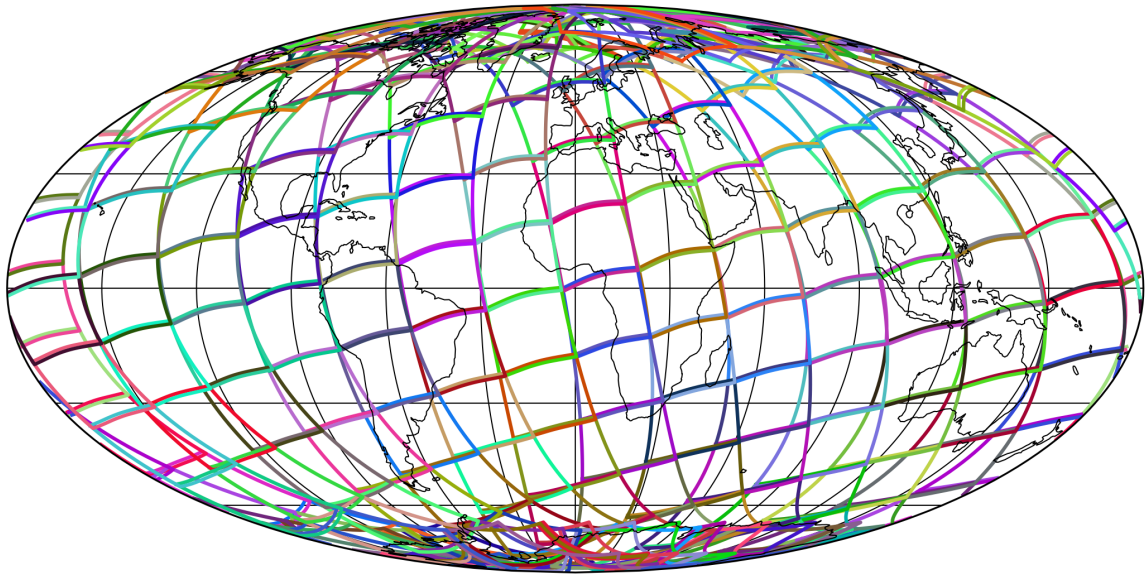


Figure 1: Outline of the granules.

4 Input data monitoring

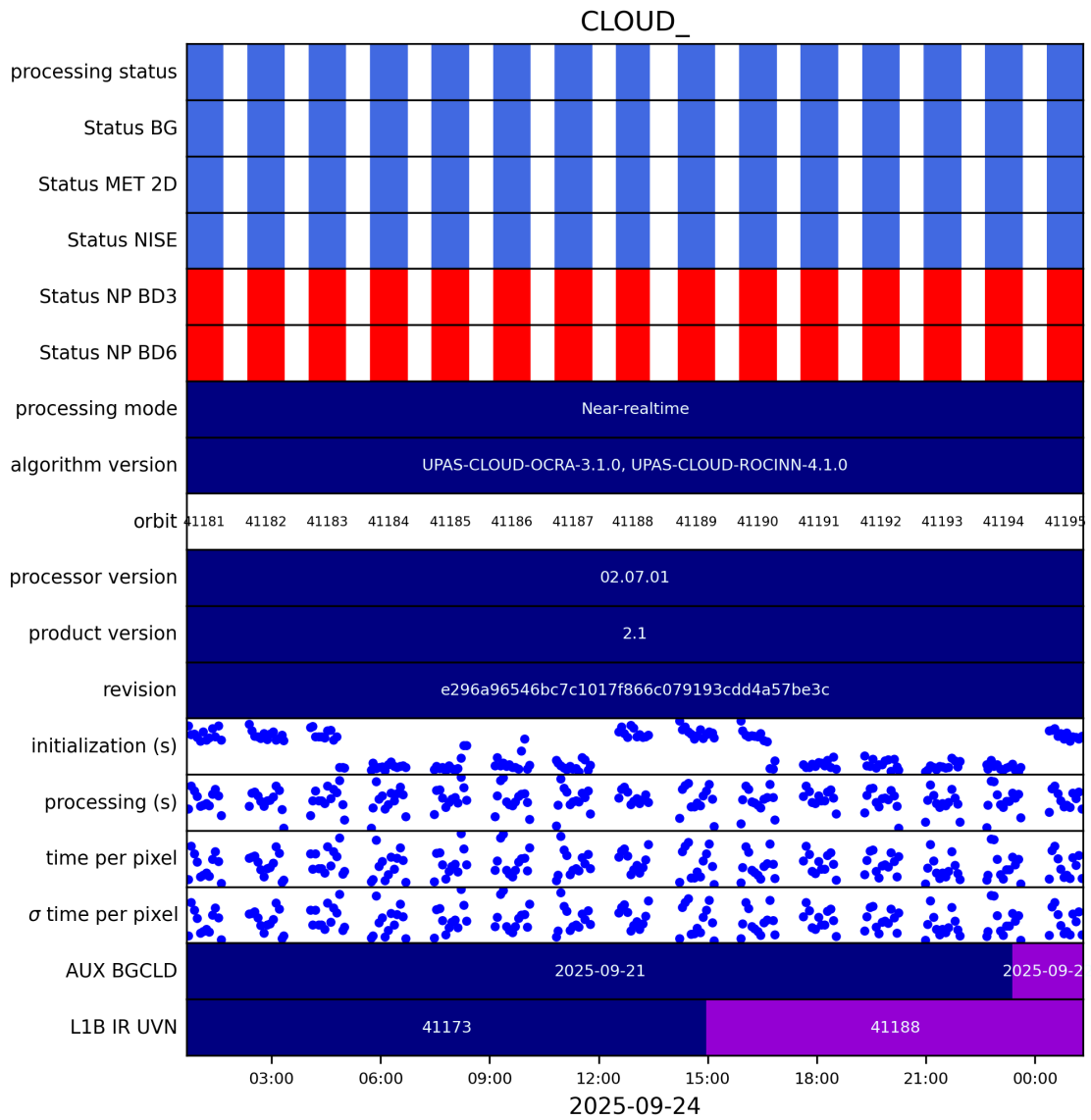


Figure 2: Input data per granule

5 Warnings and errors

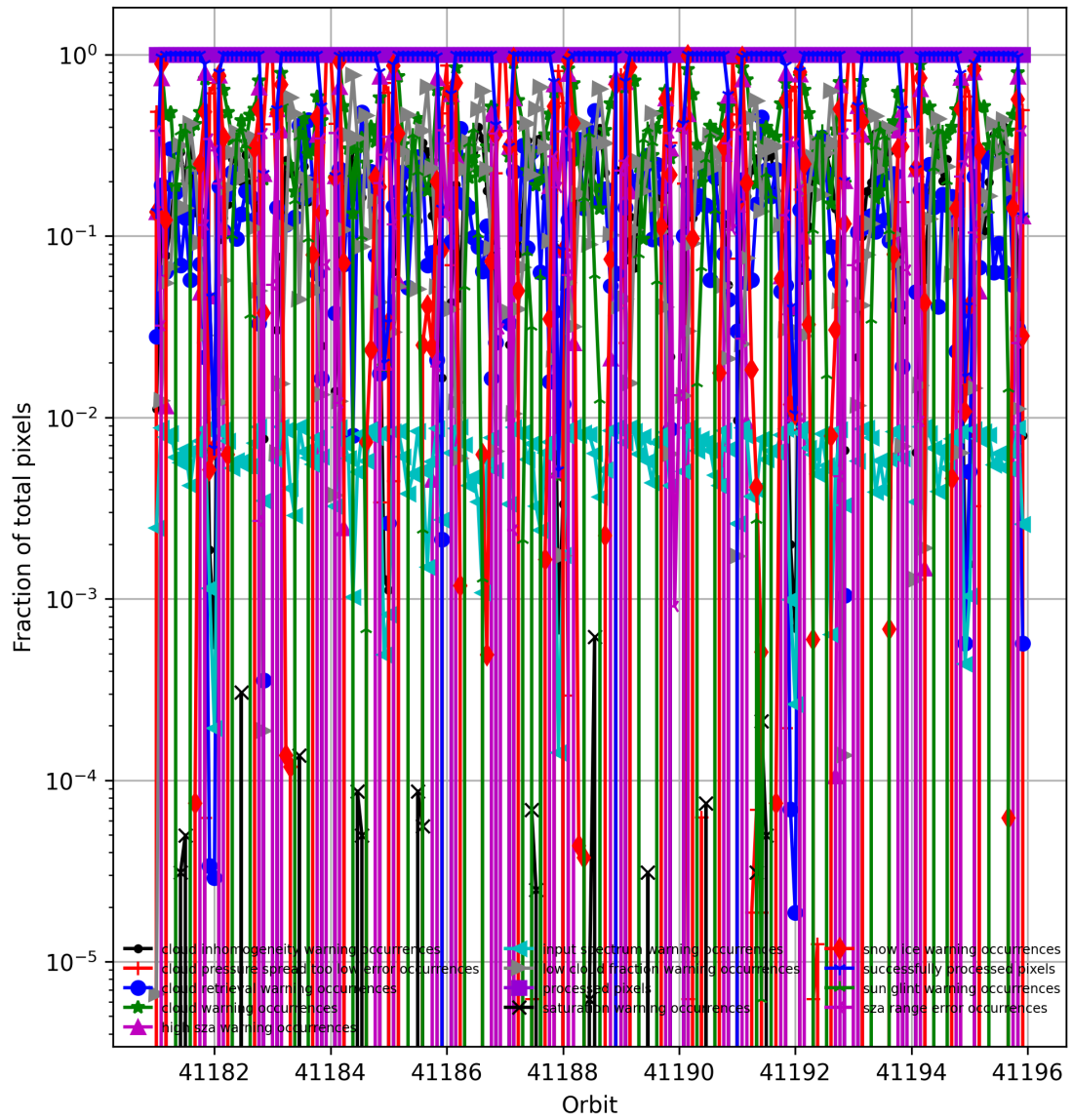


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

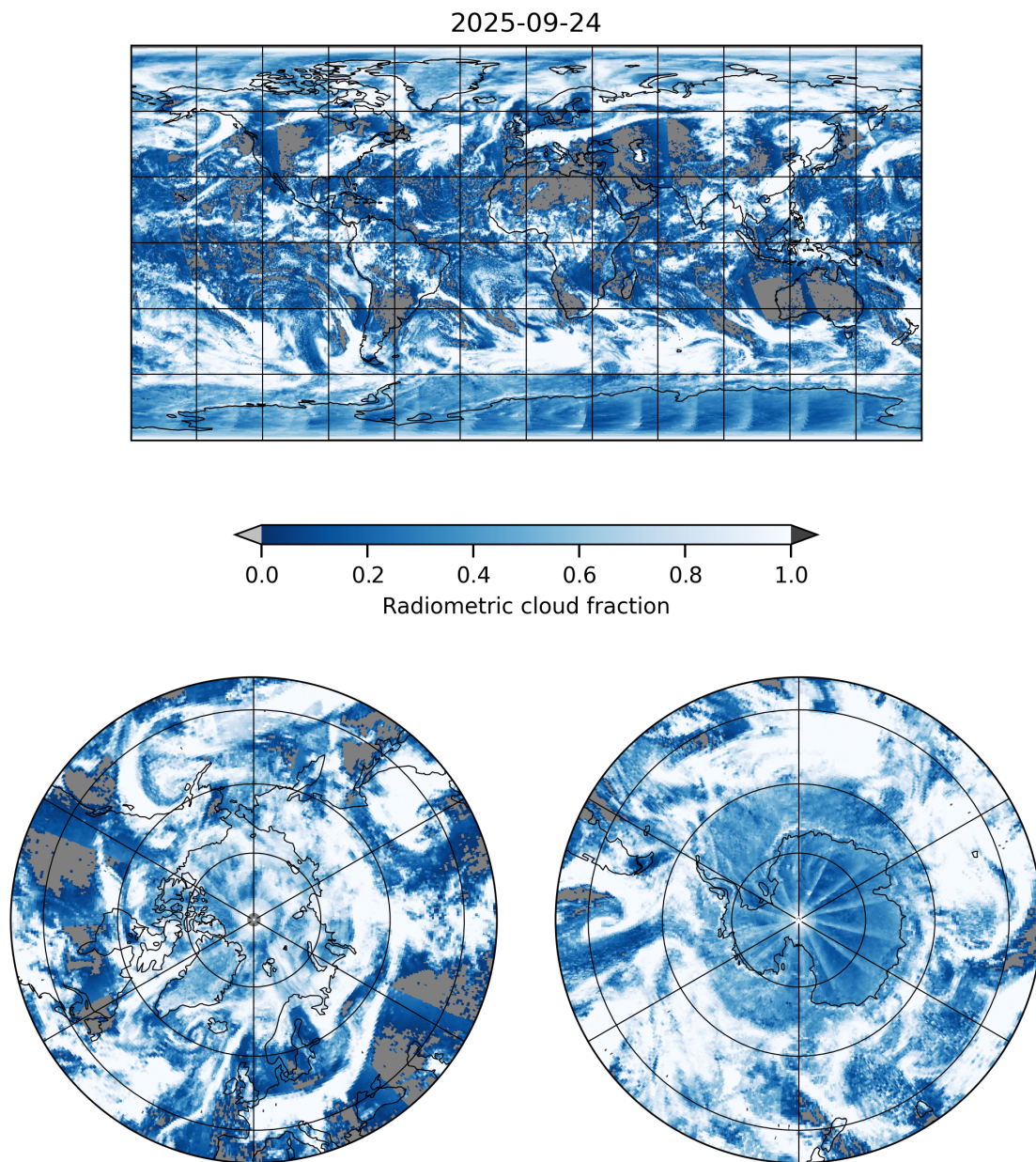


Figure 4: Map of “Radiometric cloud fraction” for 2025-09-24 to 2025-09-25

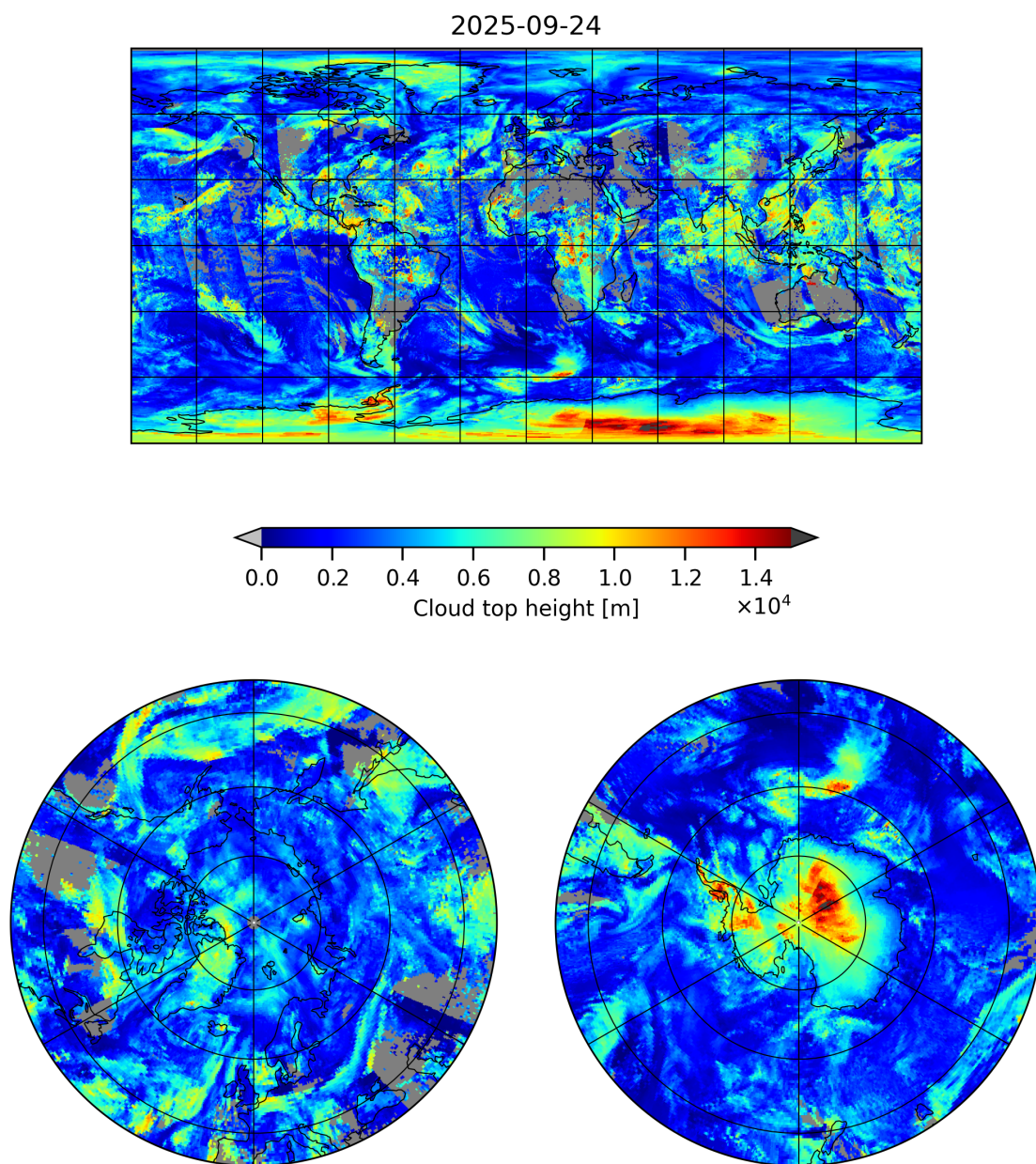


Figure 5: Map of “Cloud top height” for 2025-09-24 to 2025-09-25

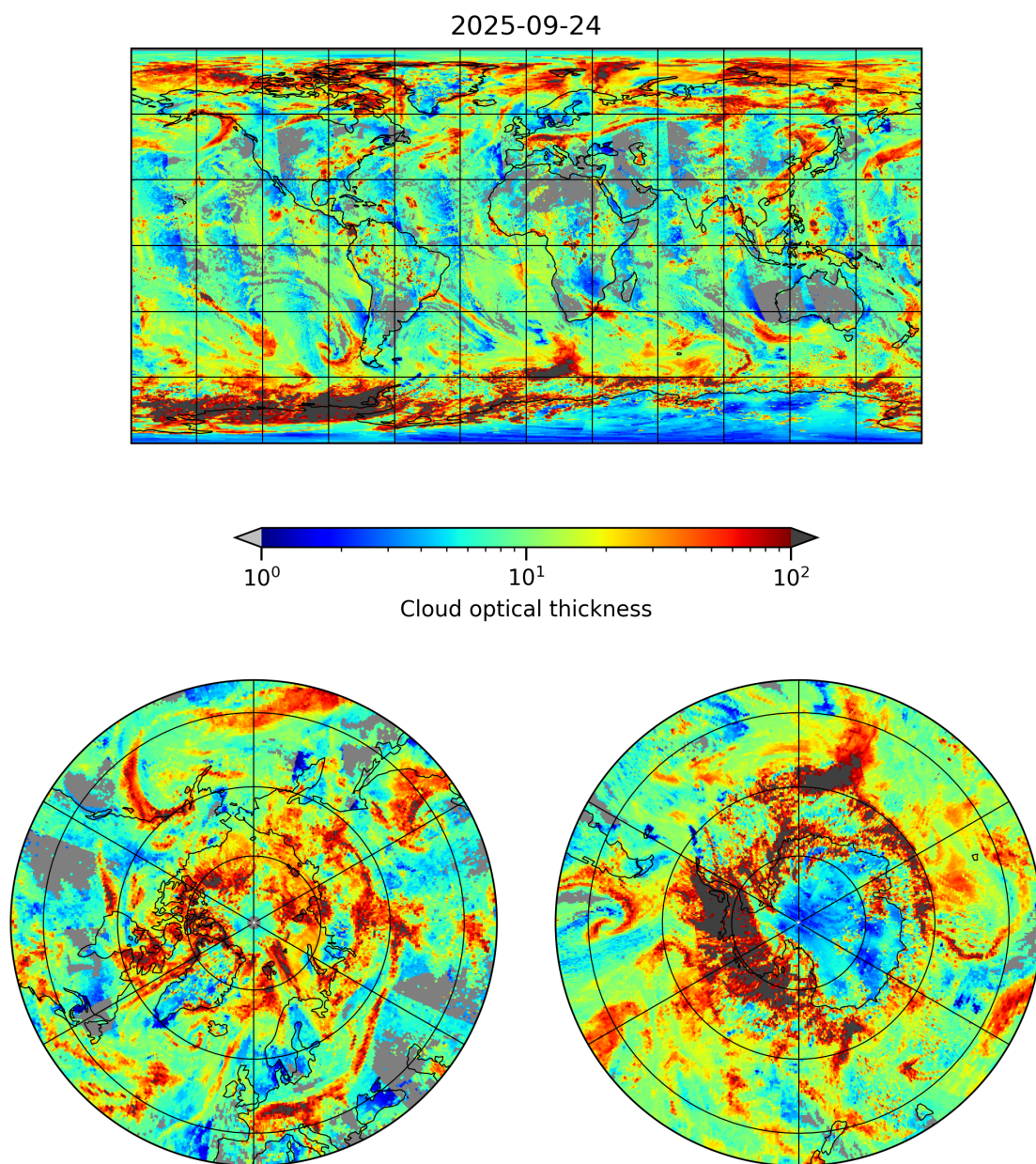


Figure 6: Map of “Cloud optical thickness” for 2025-09-24 to 2025-09-25

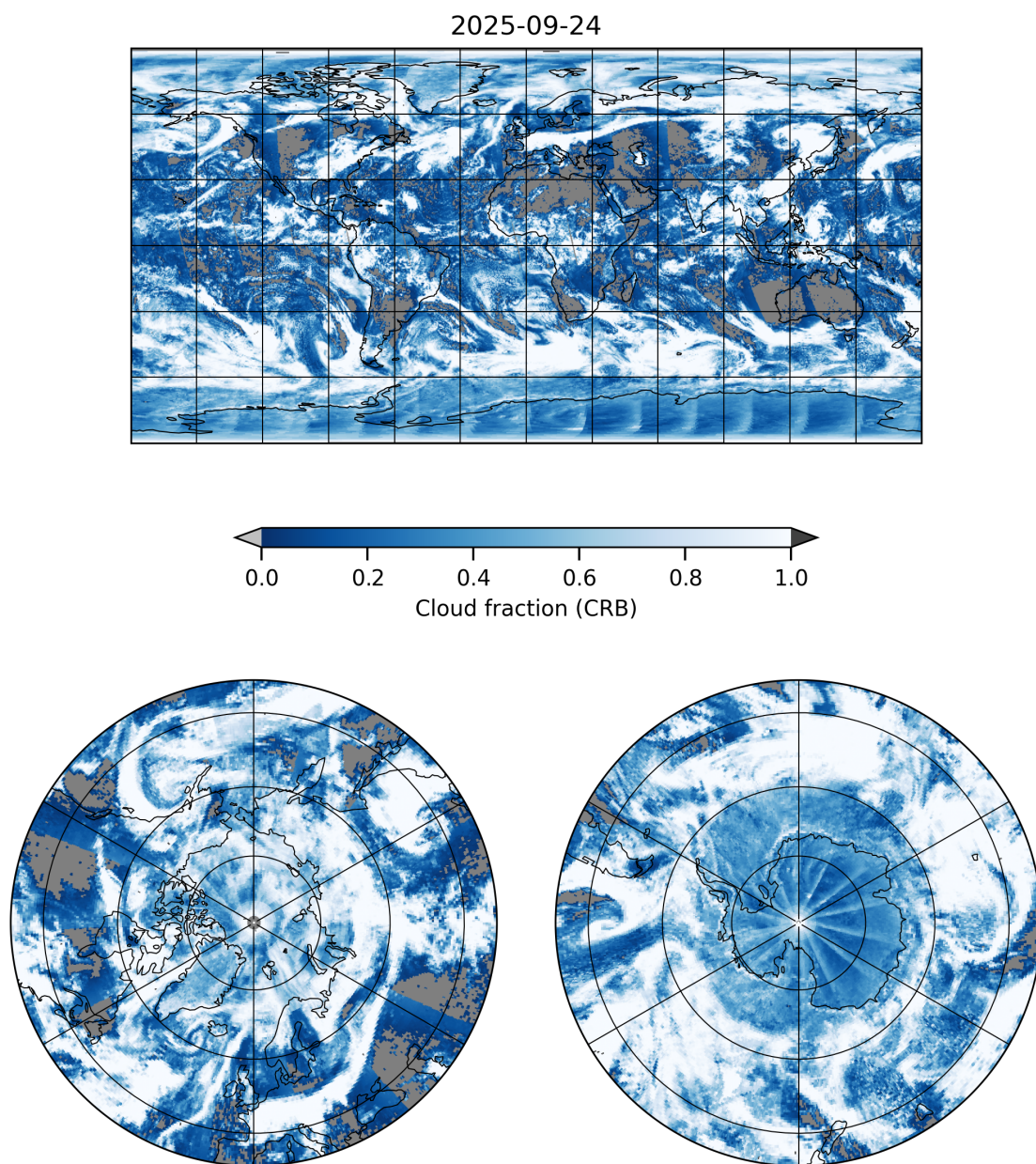


Figure 7: Map of “Cloud fraction (CRB)” for 2025-09-24 to 2025-09-25

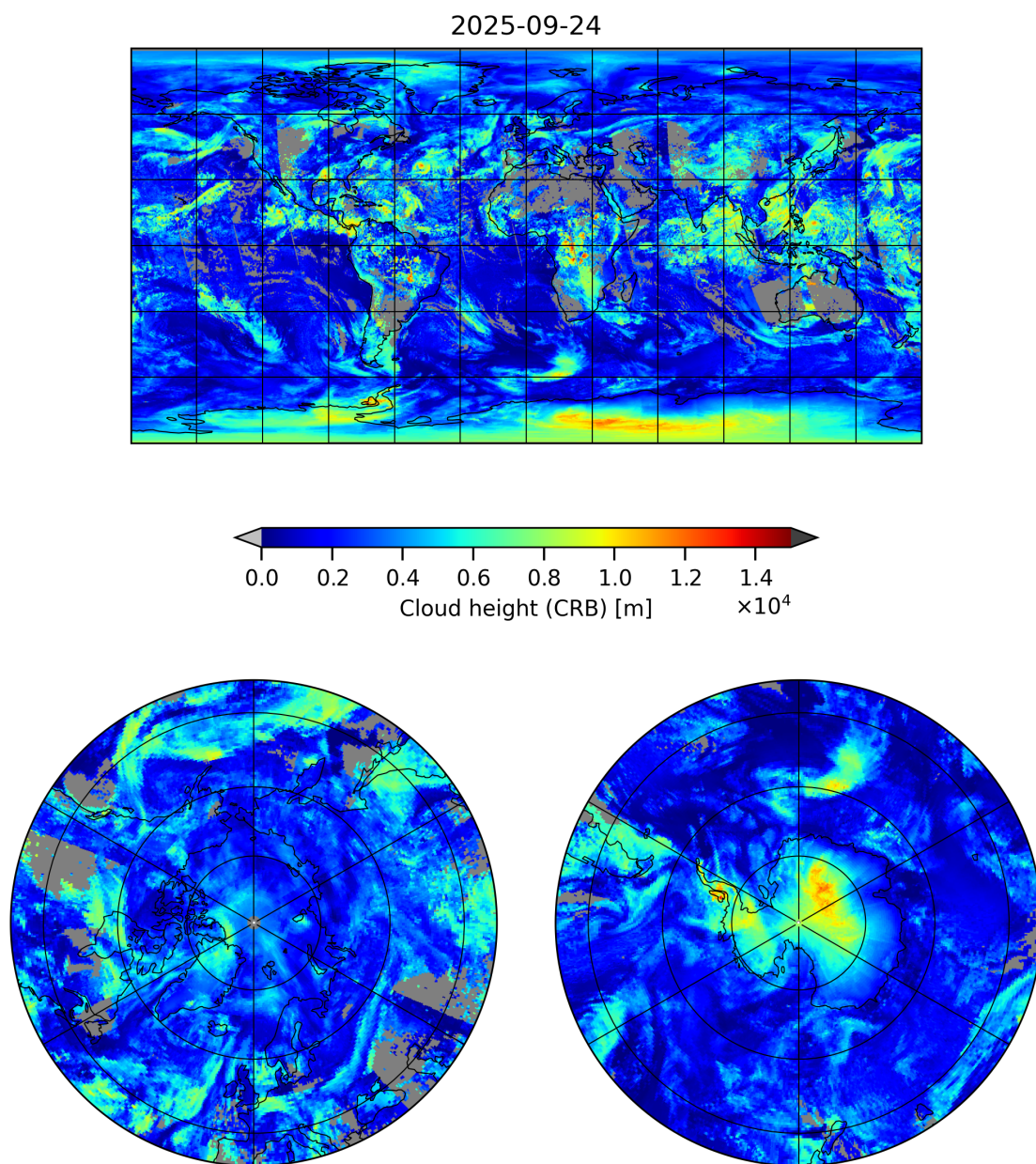


Figure 8: Map of “Cloud height (CRB)” for 2025-09-24 to 2025-09-25

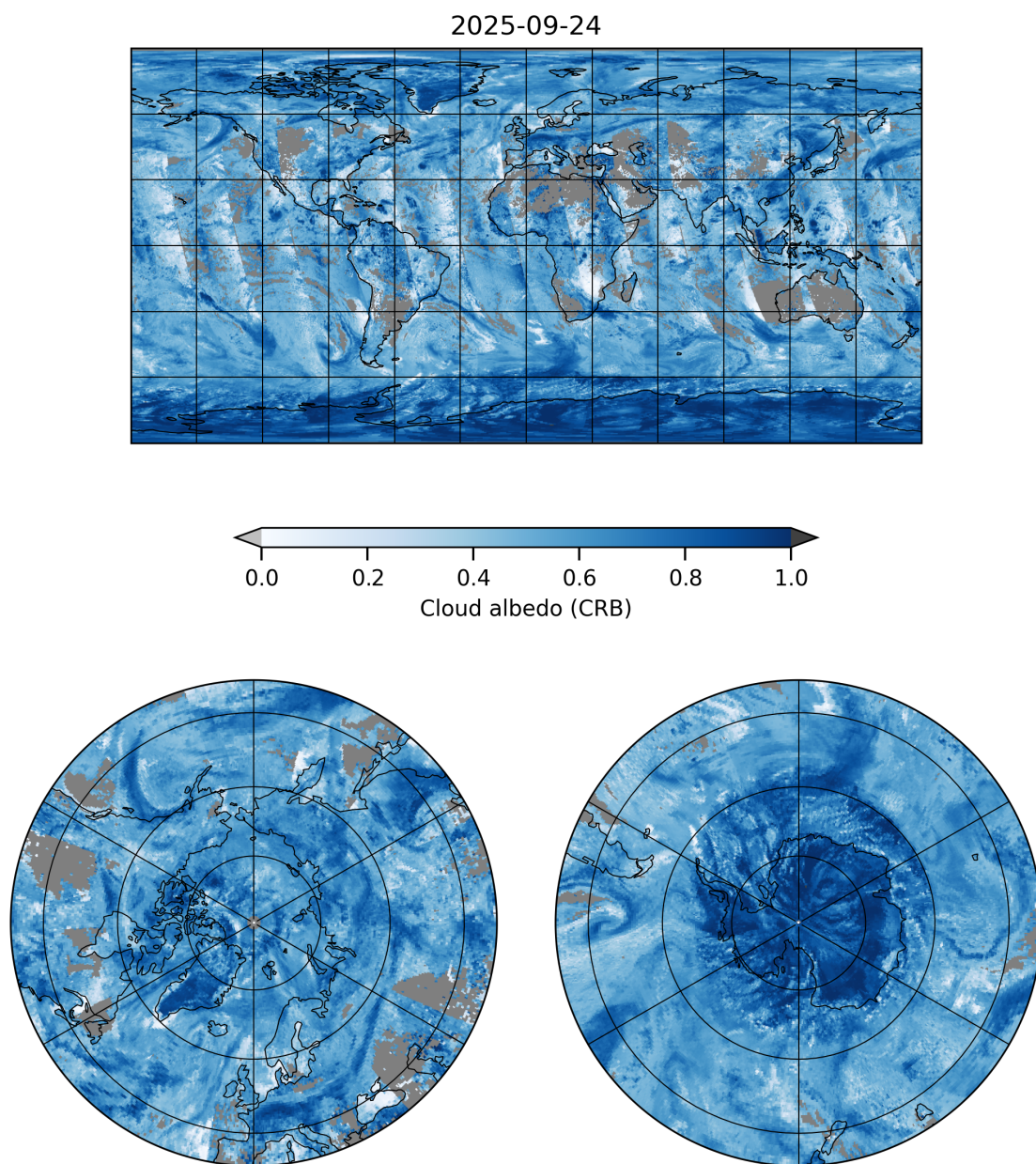


Figure 9: Map of “Cloud albedo (CRB)” for 2025-09-24 to 2025-09-25

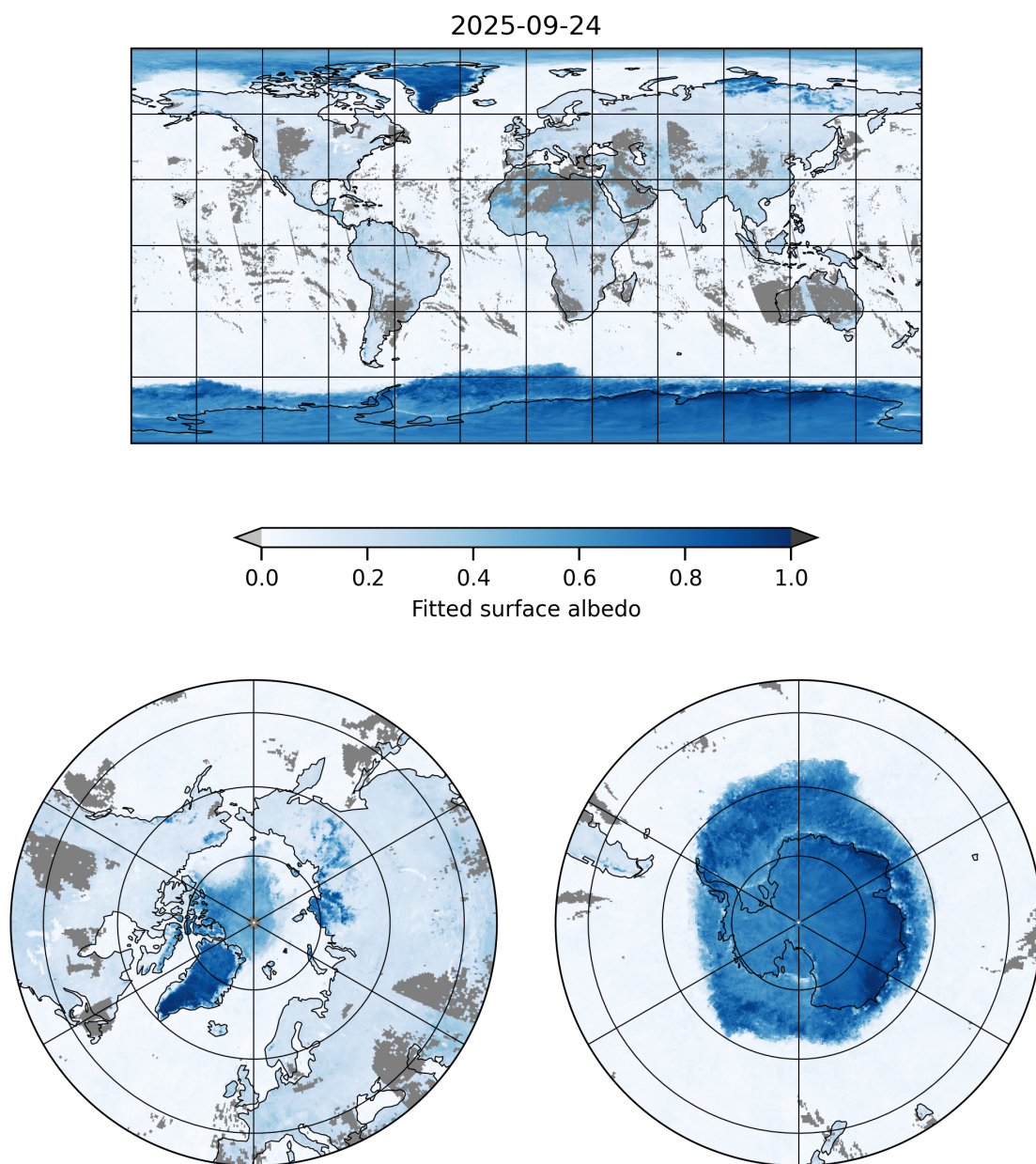


Figure 10: Map of “Fitted surface albedo” for 2025-09-24 to 2025-09-25

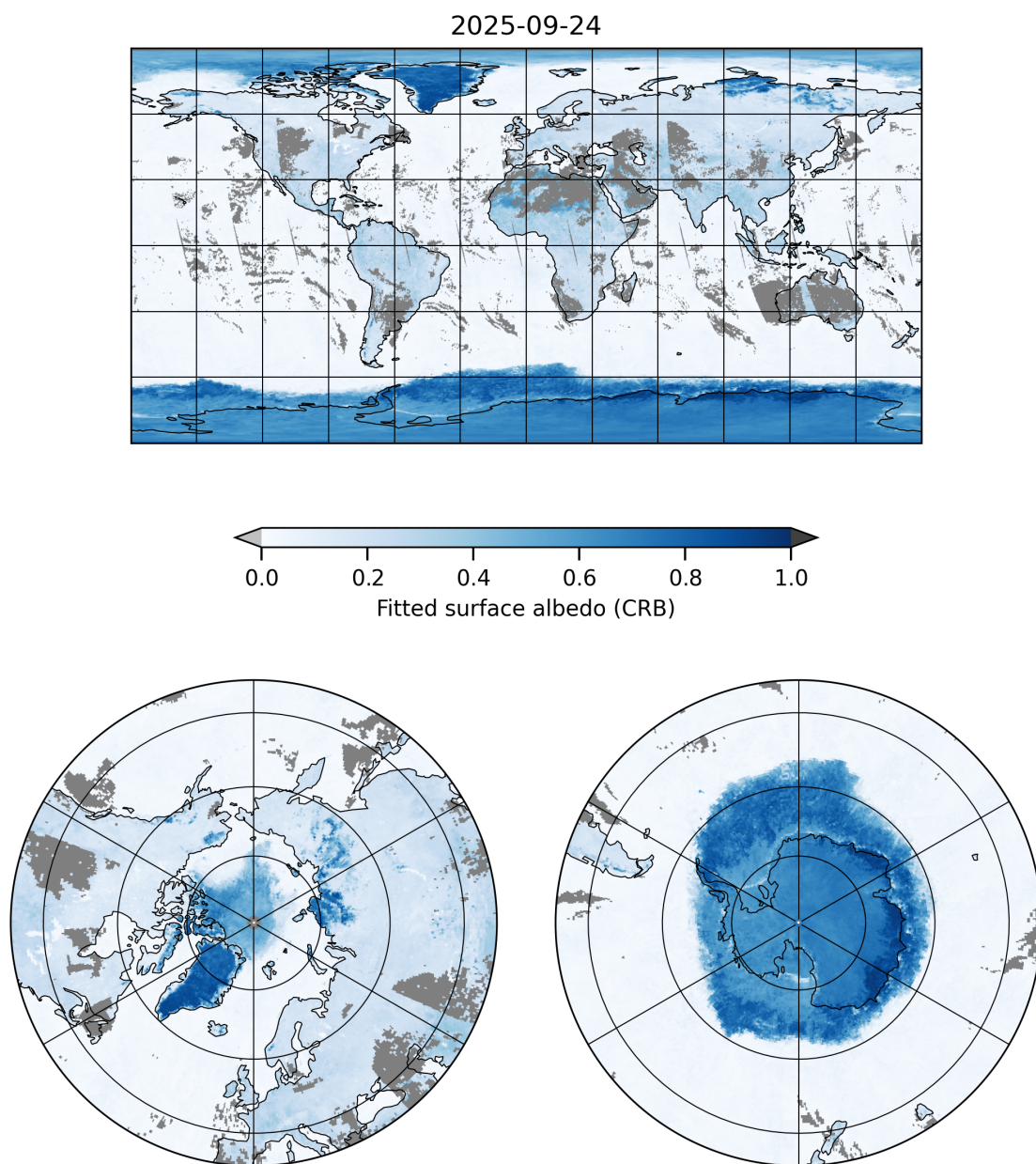


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-09-24 to 2025-09-25

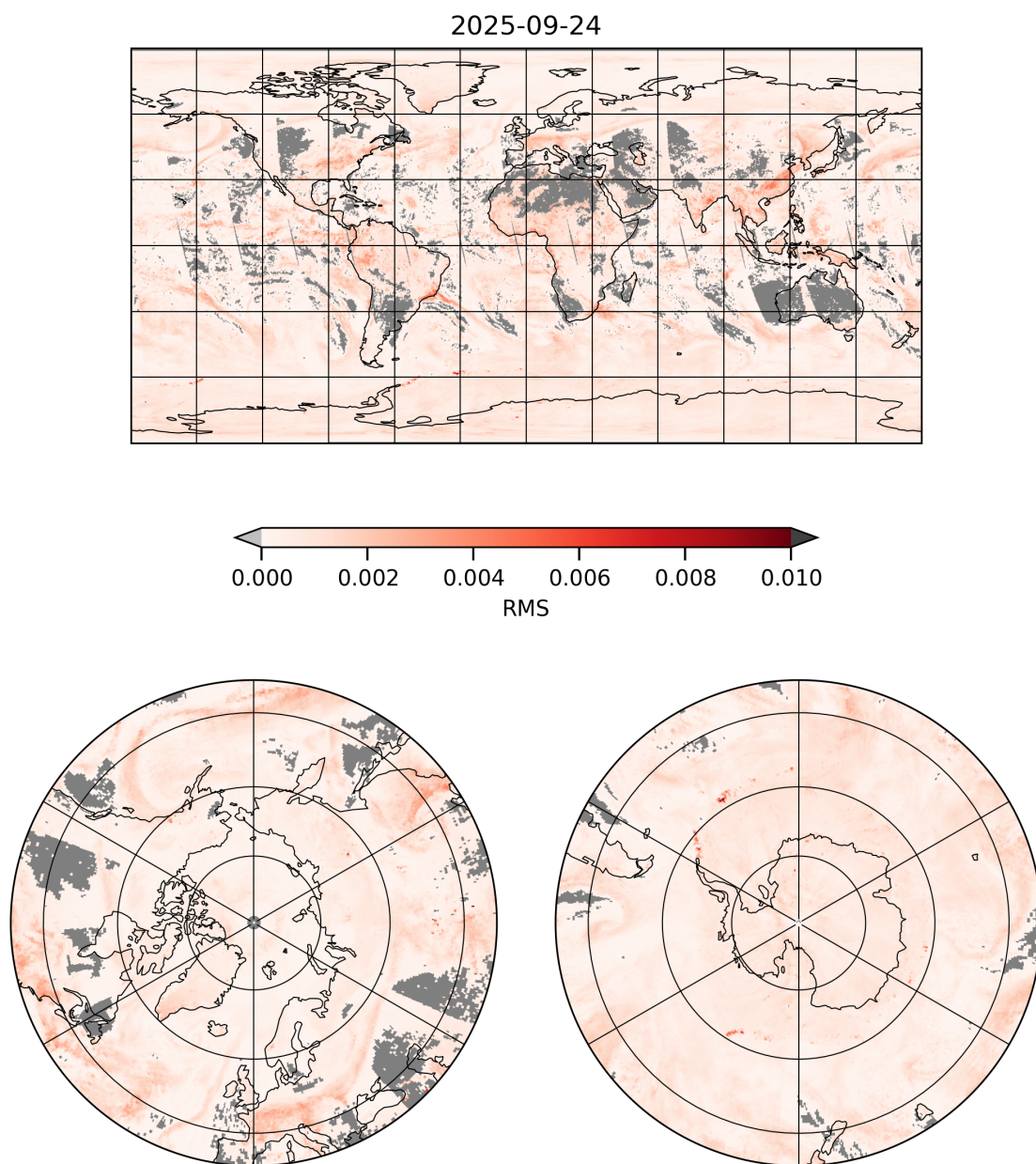


Figure 12: Map of “RMS” for 2025-09-24 to 2025-09-25

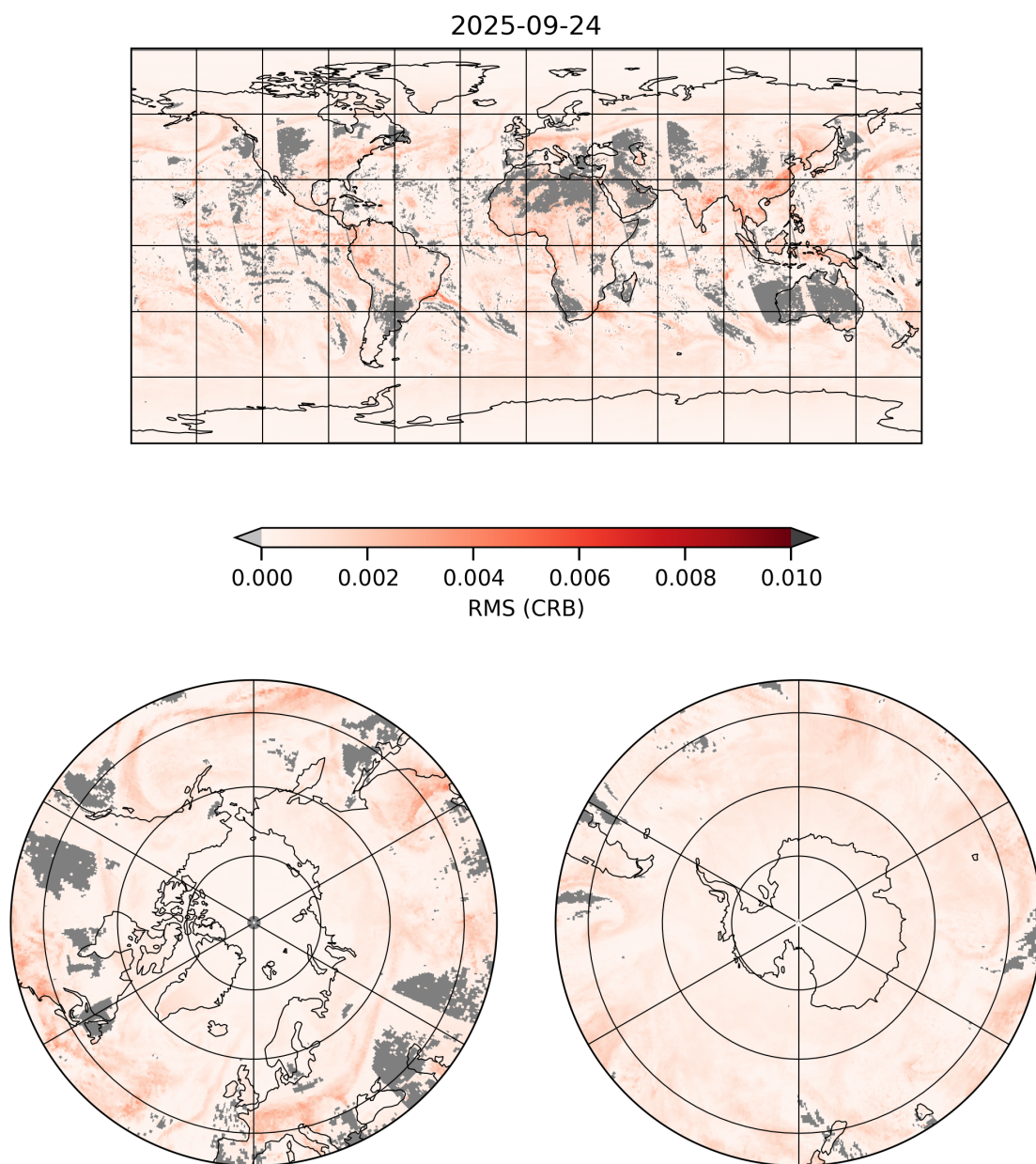


Figure 13: Map of “RMS (CRB)” for 2025-09-24 to 2025-09-25

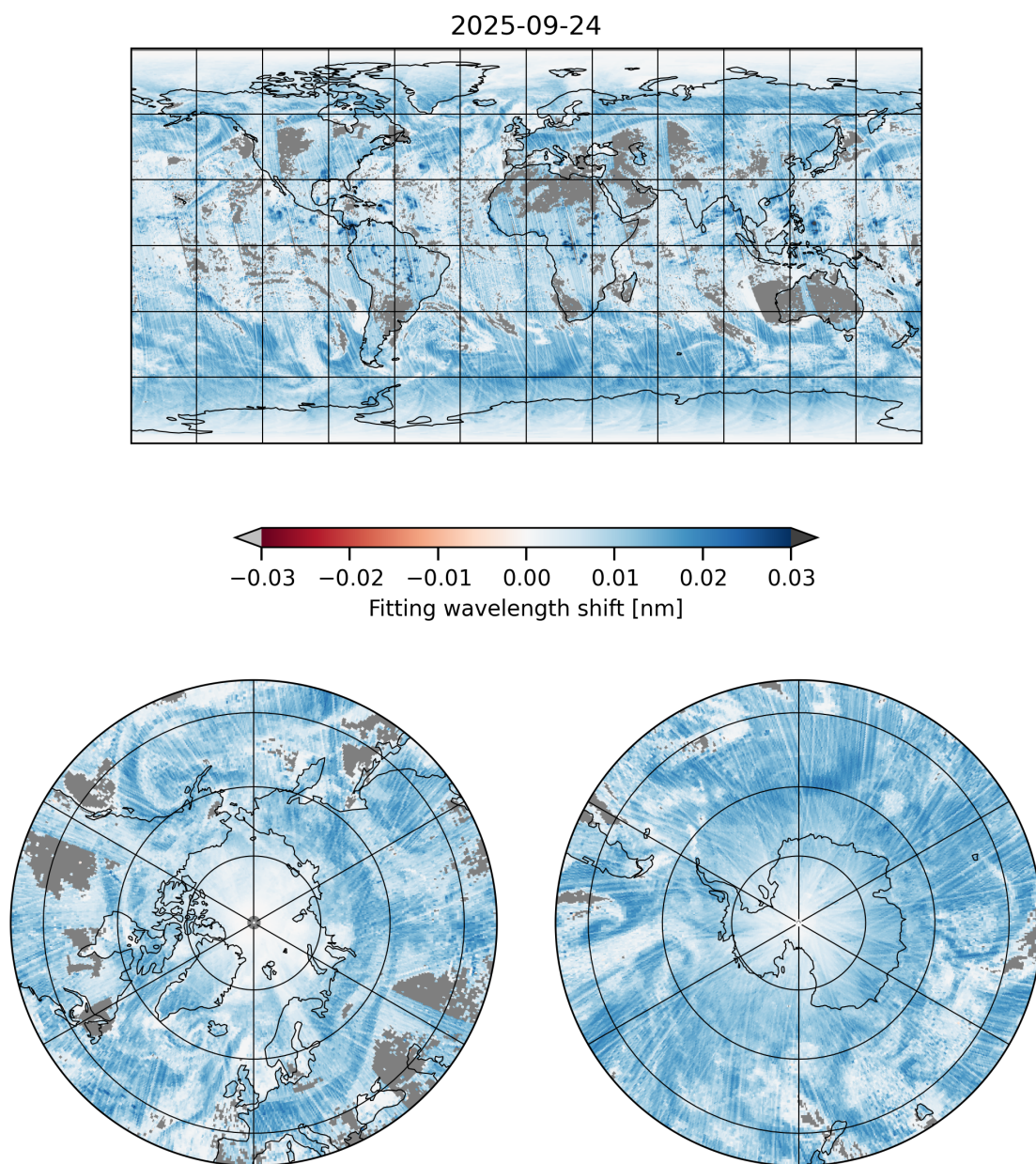


Figure 14: Map of “Fitting wavelength shift” for 2025-09-24 to 2025-09-25

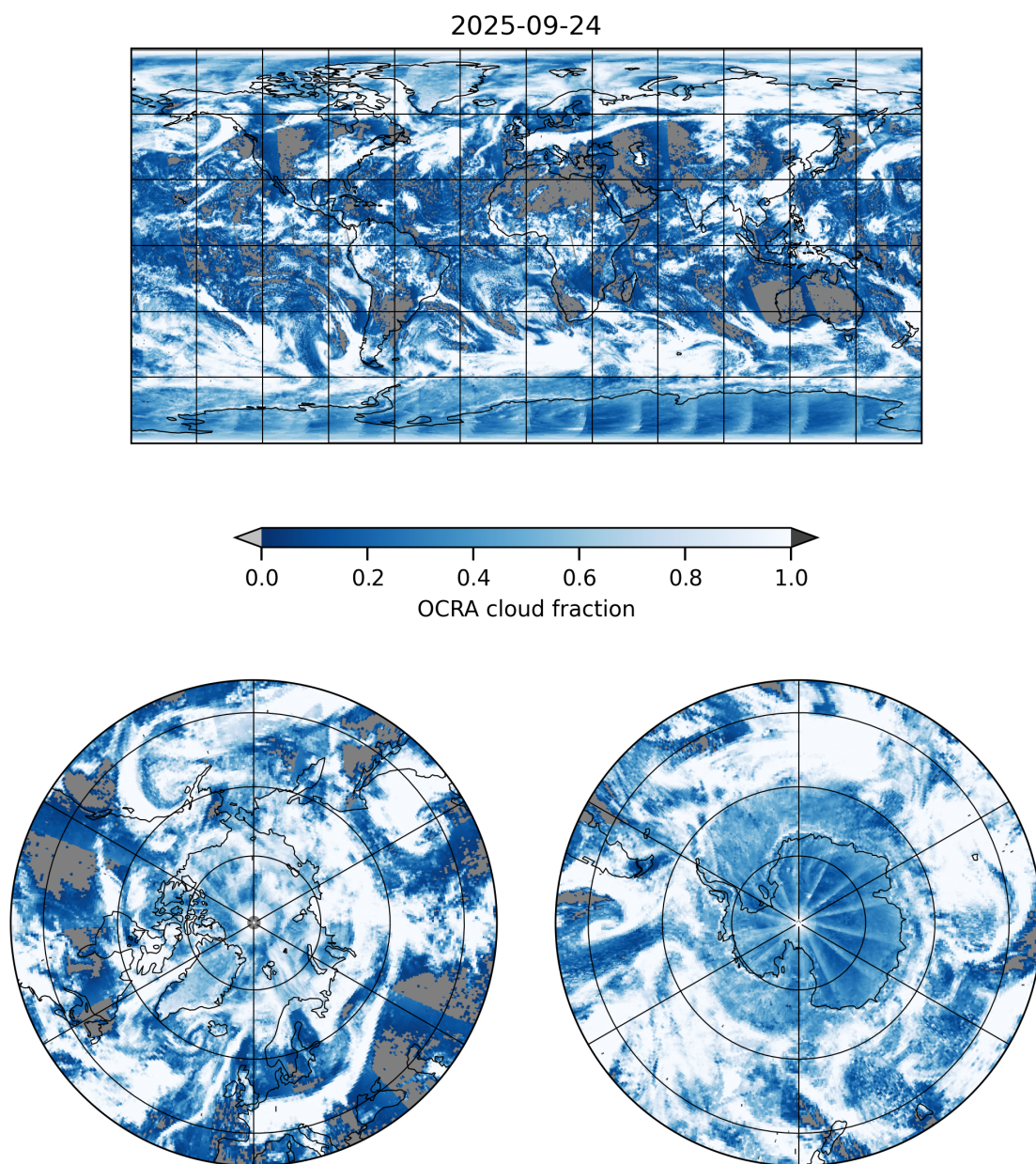


Figure 15: Map of “OCRA cloud fraction” for 2025-09-24 to 2025-09-25

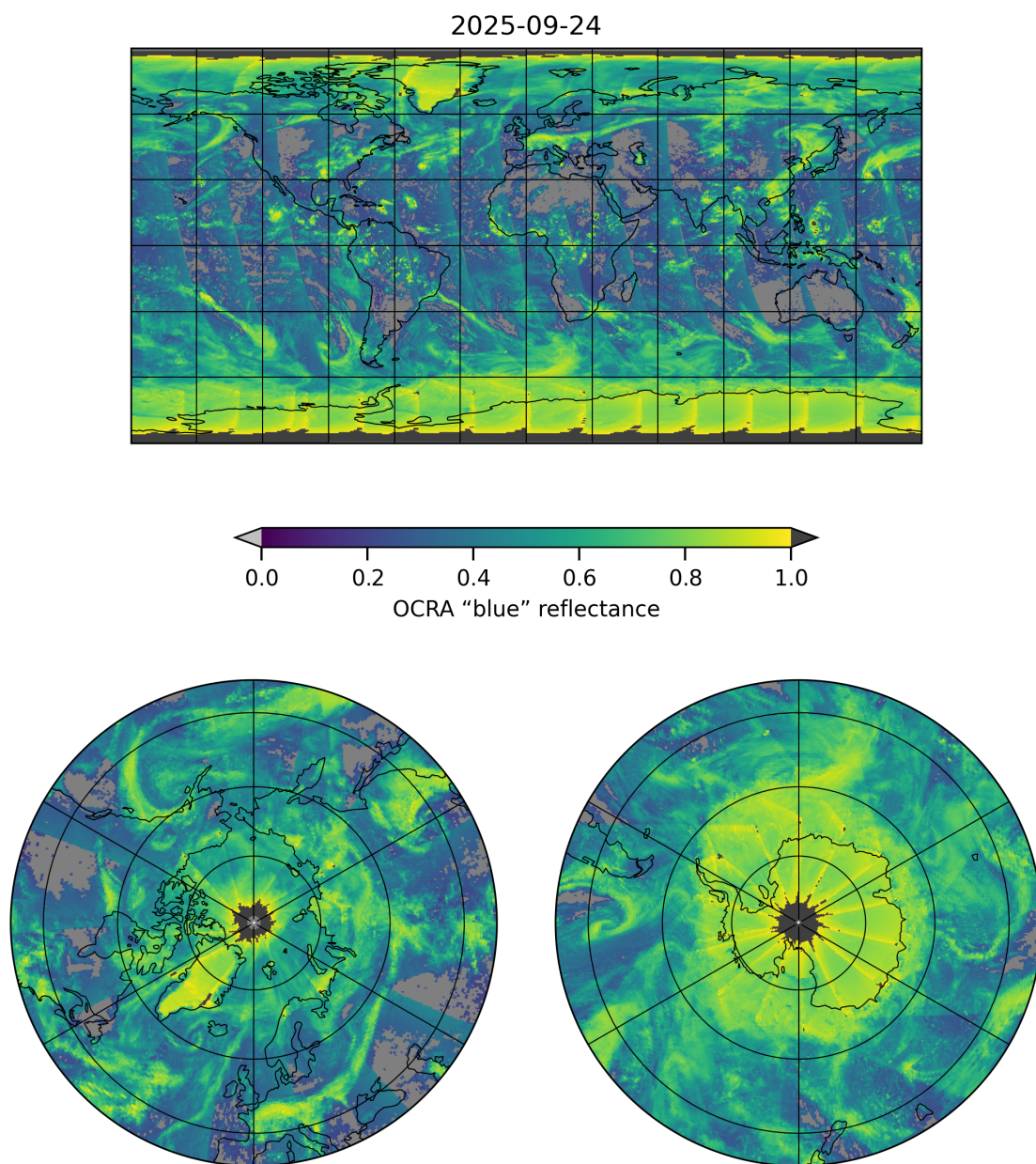


Figure 16: Map of "OCRA "blue" reflectance" for 2025-09-24 to 2025-09-25

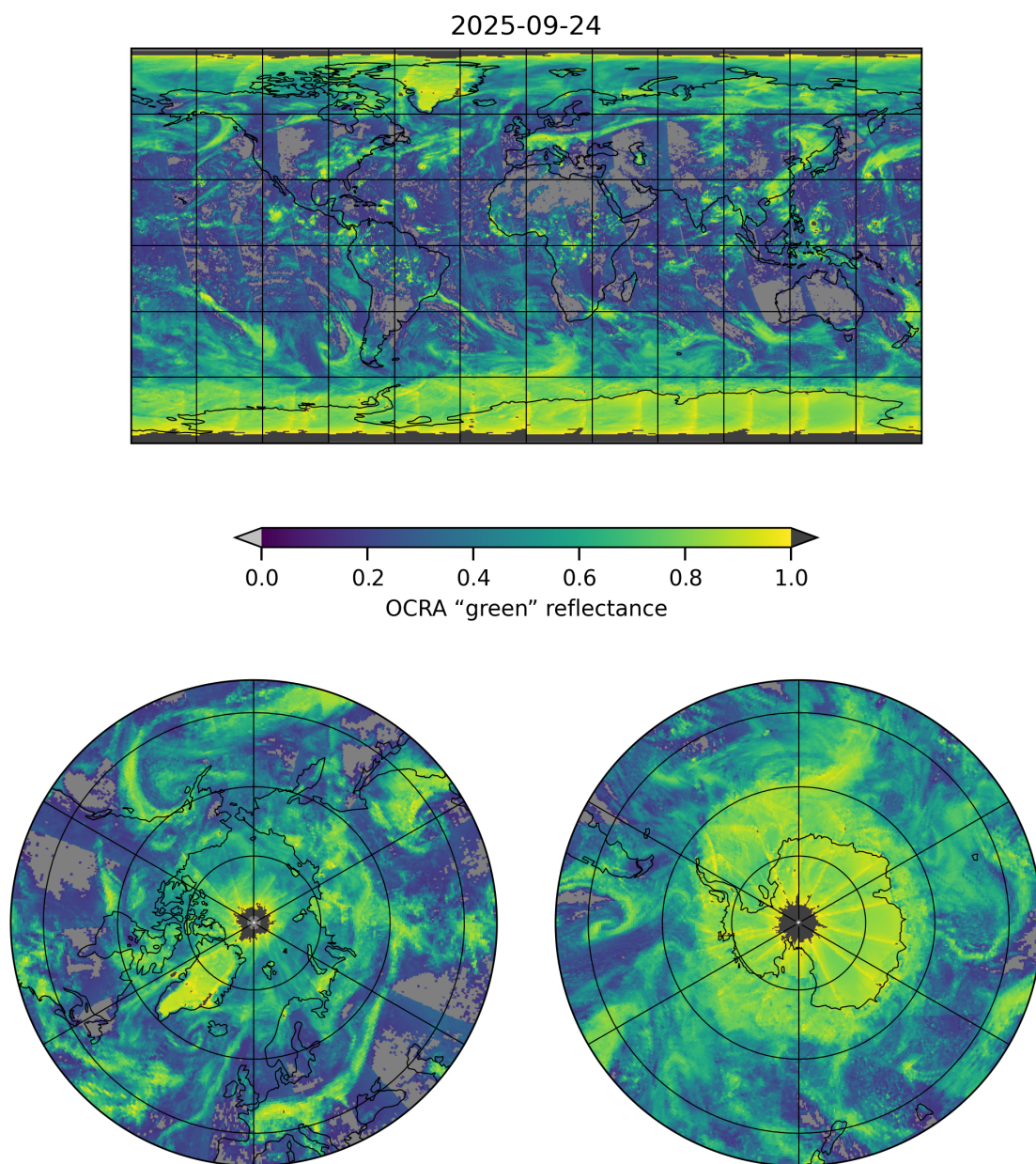


Figure 17: Map of "OCRA "green" reflectance" for 2025-09-24 to 2025-09-25

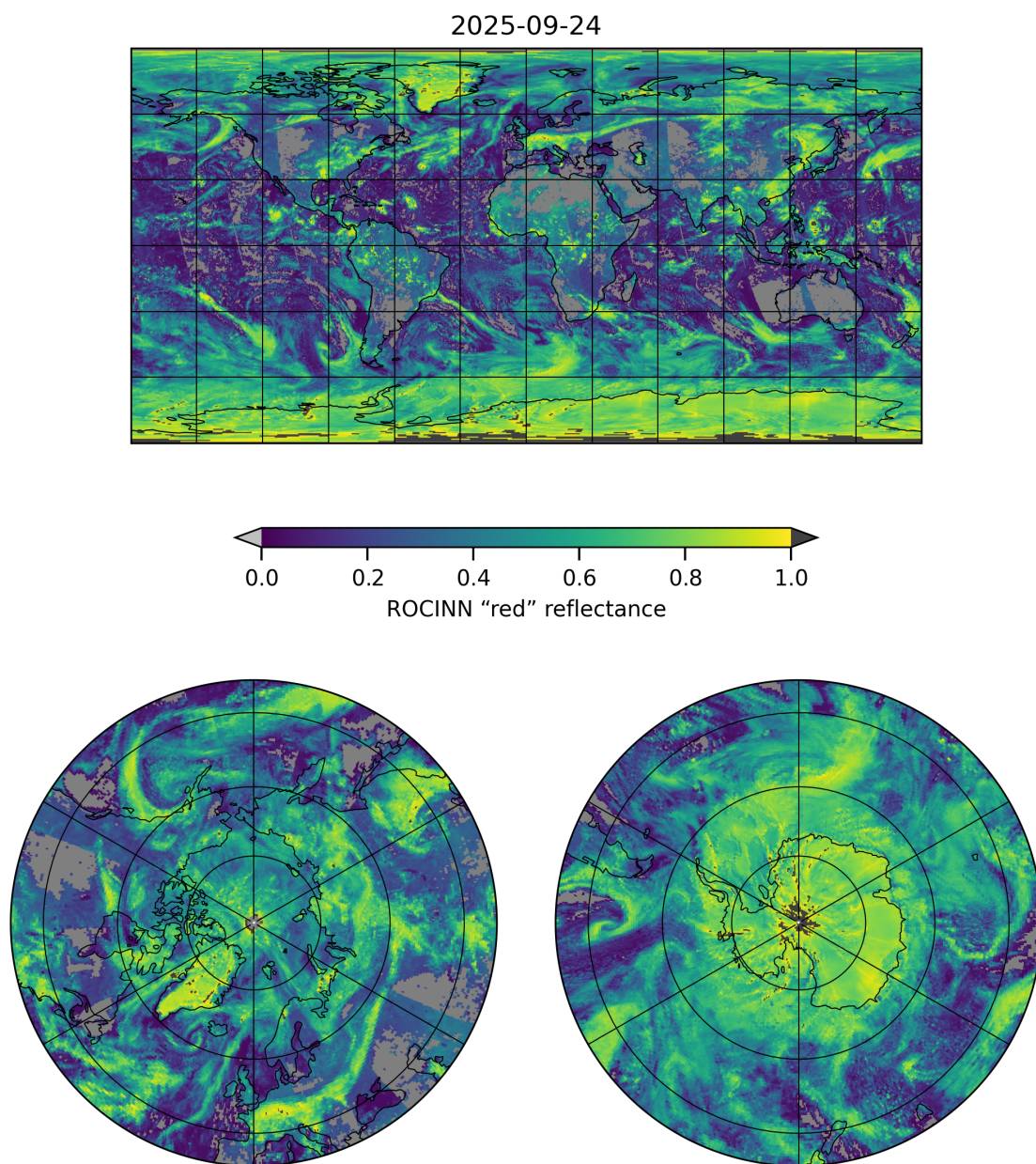


Figure 18: Map of "ROCINN "red" reflectance" for 2025-09-24 to 2025-09-25

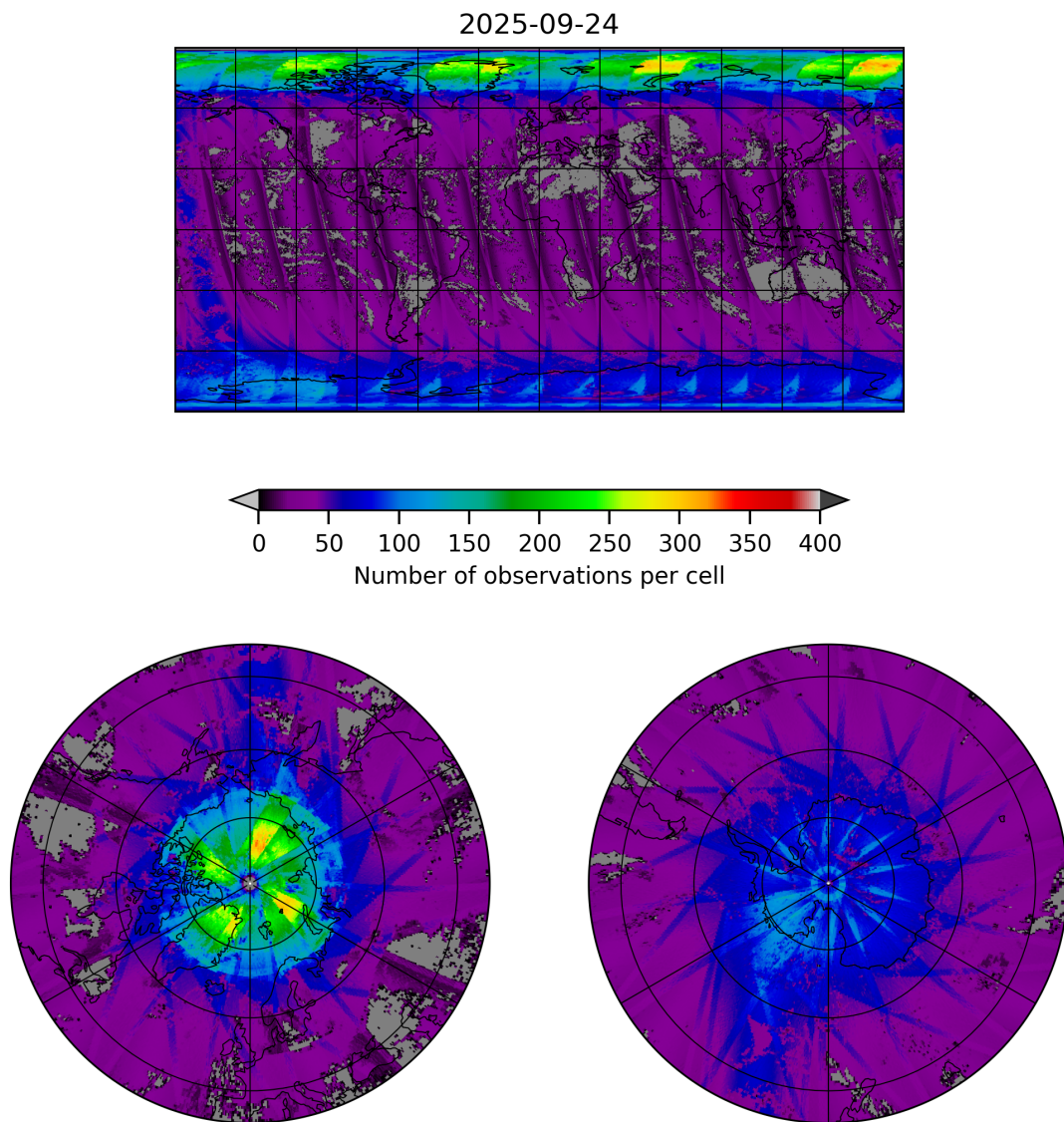


Figure 19: Map of the number of observations for 2025-09-24 to 2025-09-25

7 Zonal average

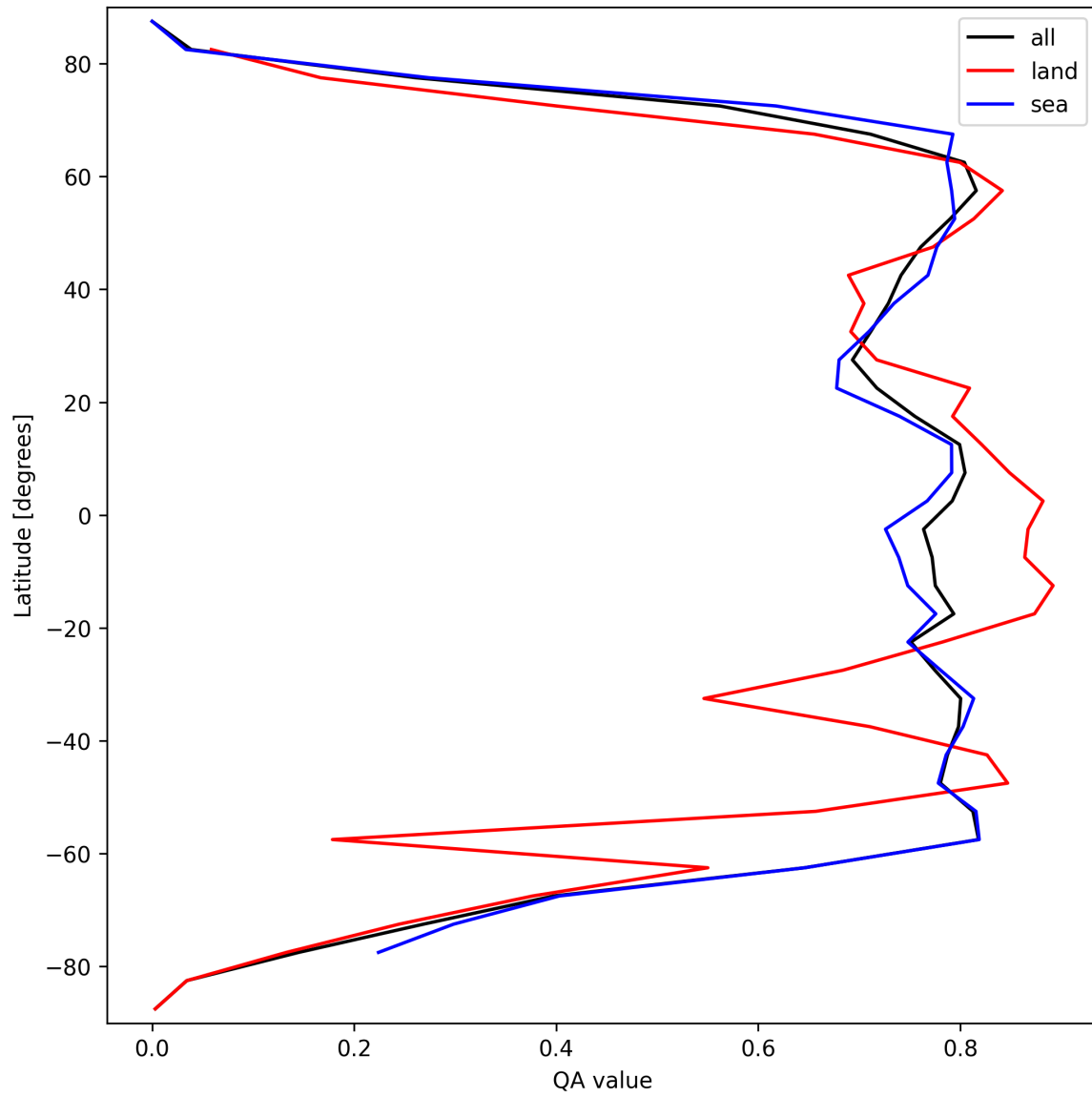


Figure 20: Zonal average of “QA value” for 2025-09-24 to 2025-09-25.

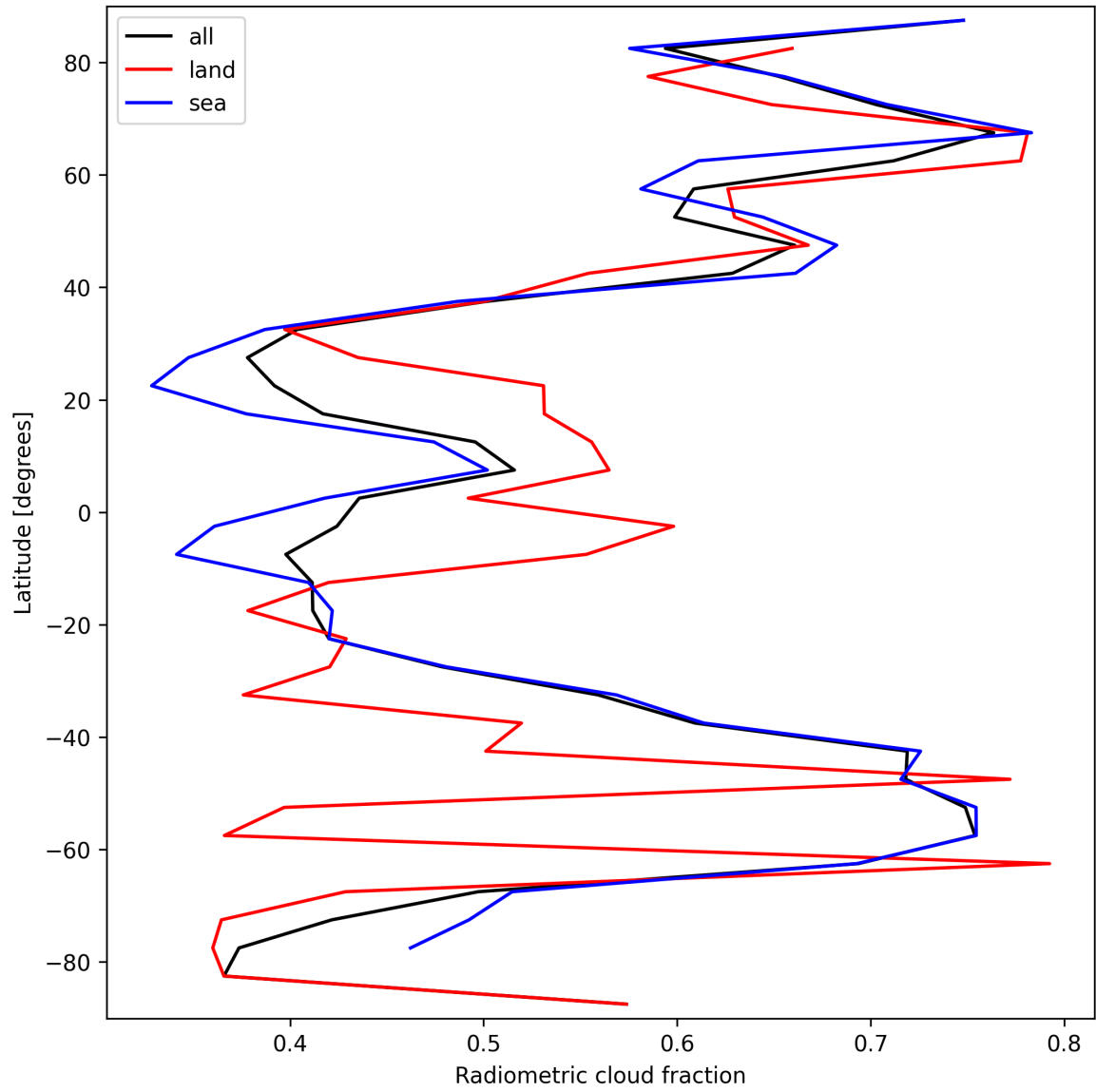


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-09-24 to 2025-09-25.

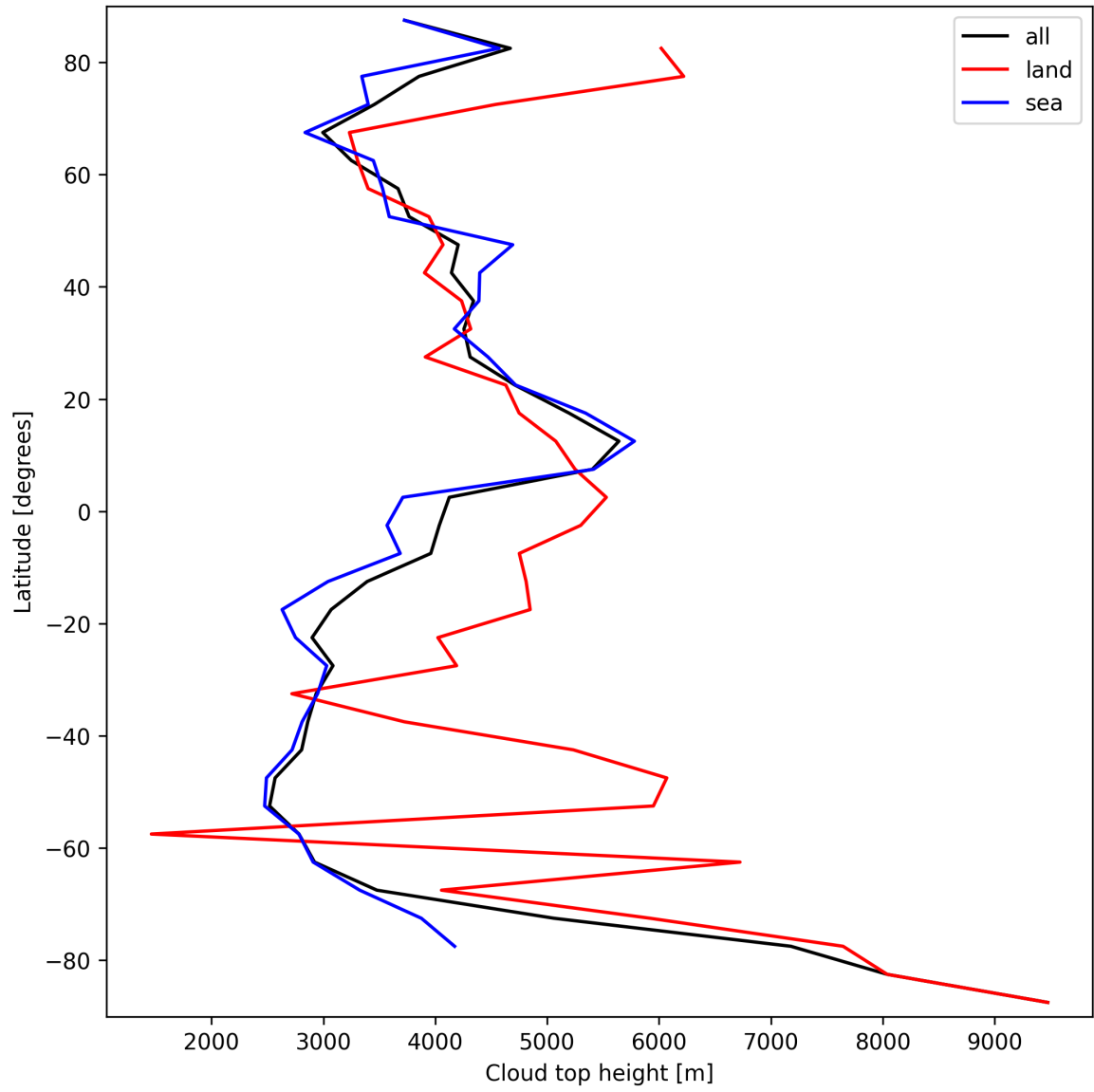


Figure 22: Zonal average of “Cloud top height” for 2025-09-24 to 2025-09-25.

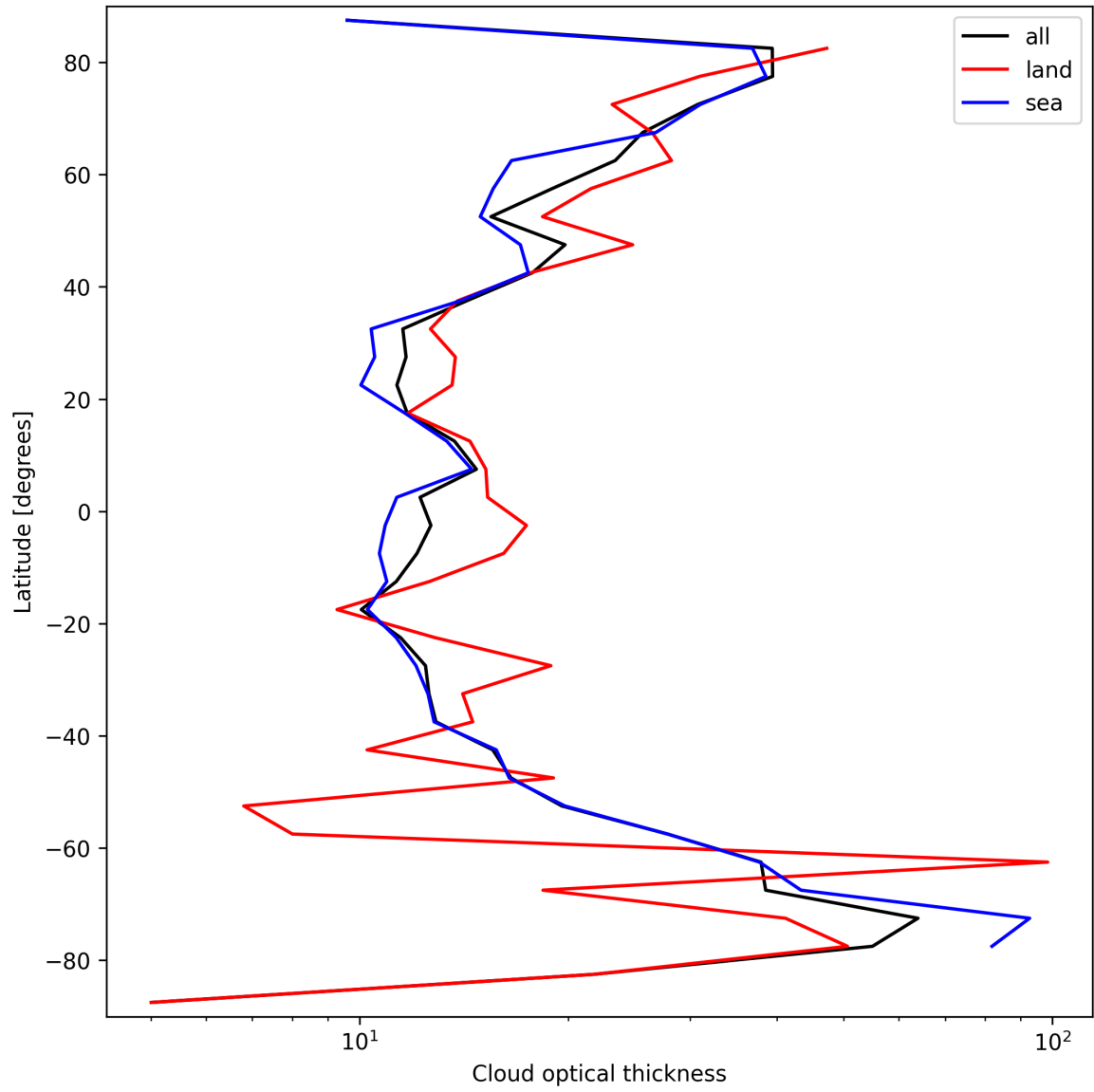


Figure 23: Zonal average of “Cloud optical thickness” for 2025-09-24 to 2025-09-25.

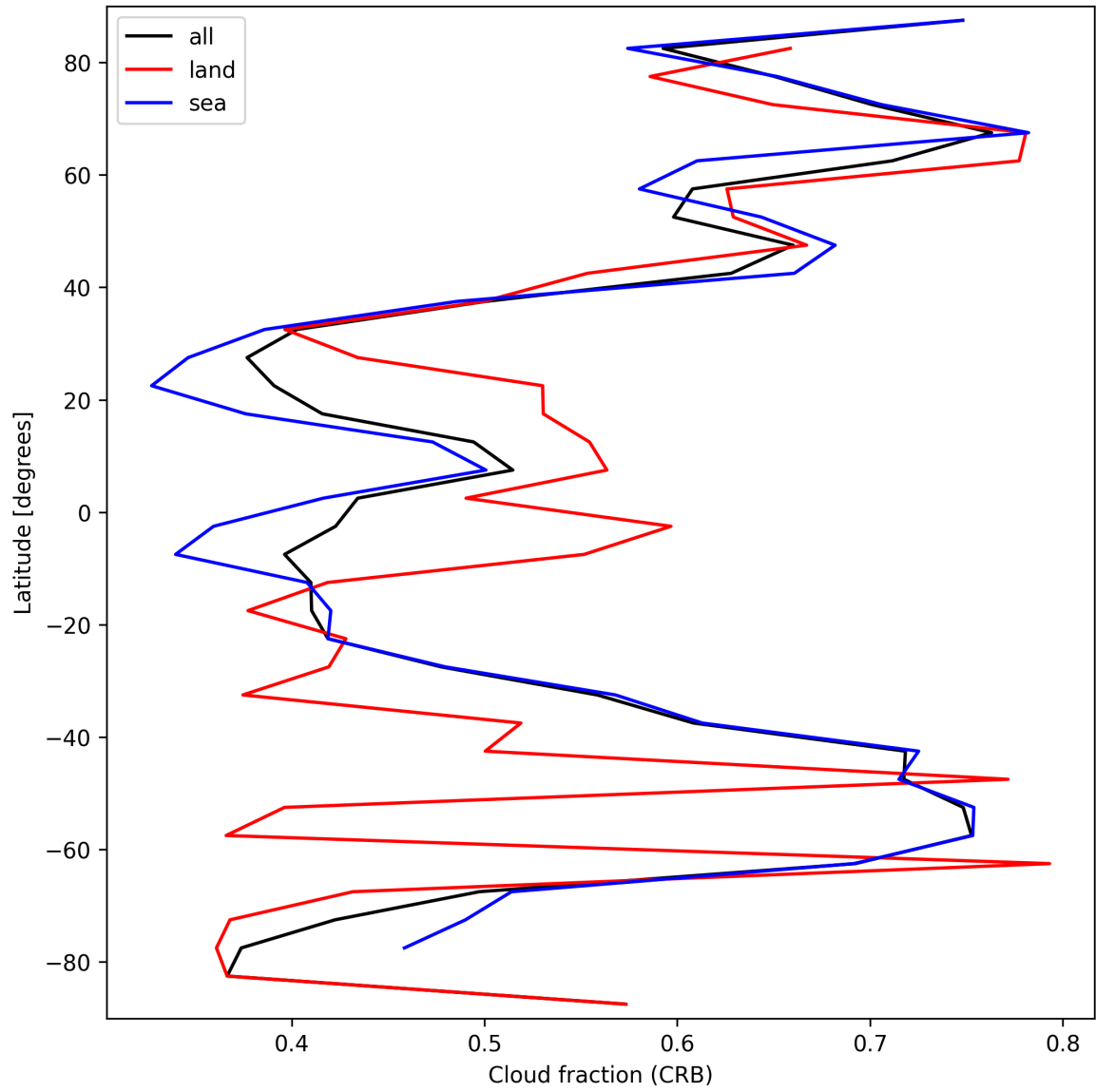


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-09-24 to 2025-09-25.

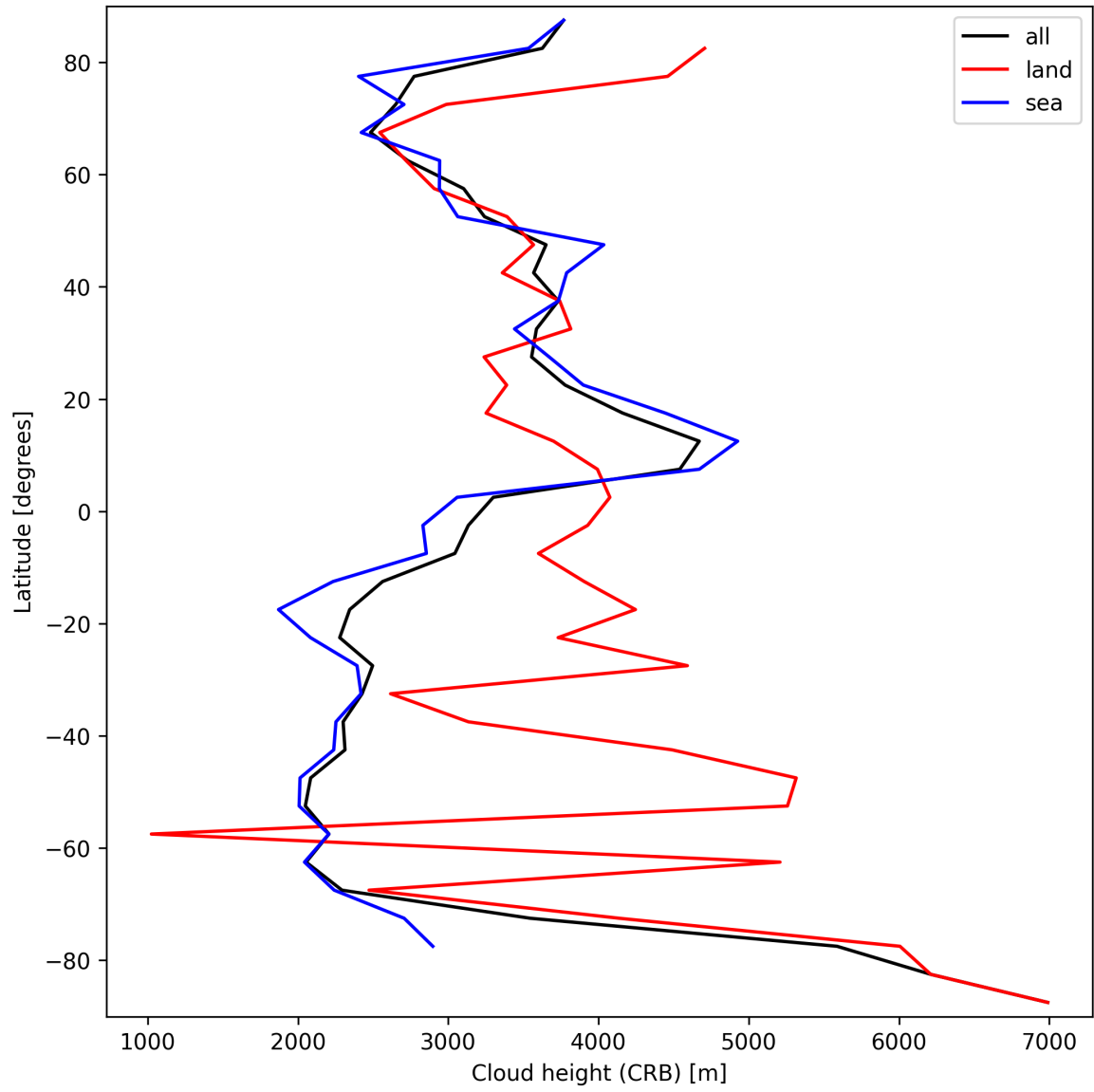


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-09-24 to 2025-09-25.

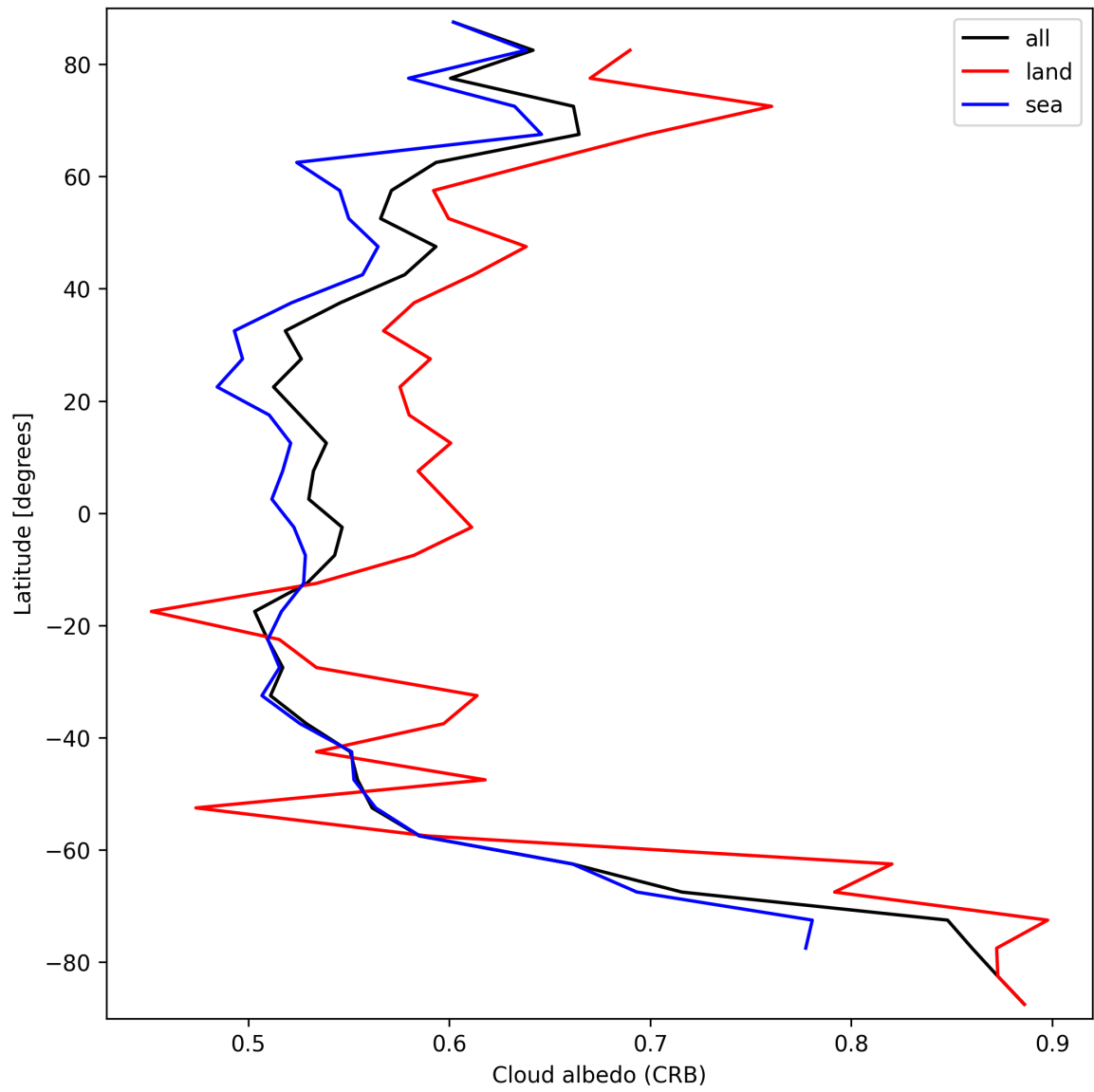


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-09-24 to 2025-09-25.

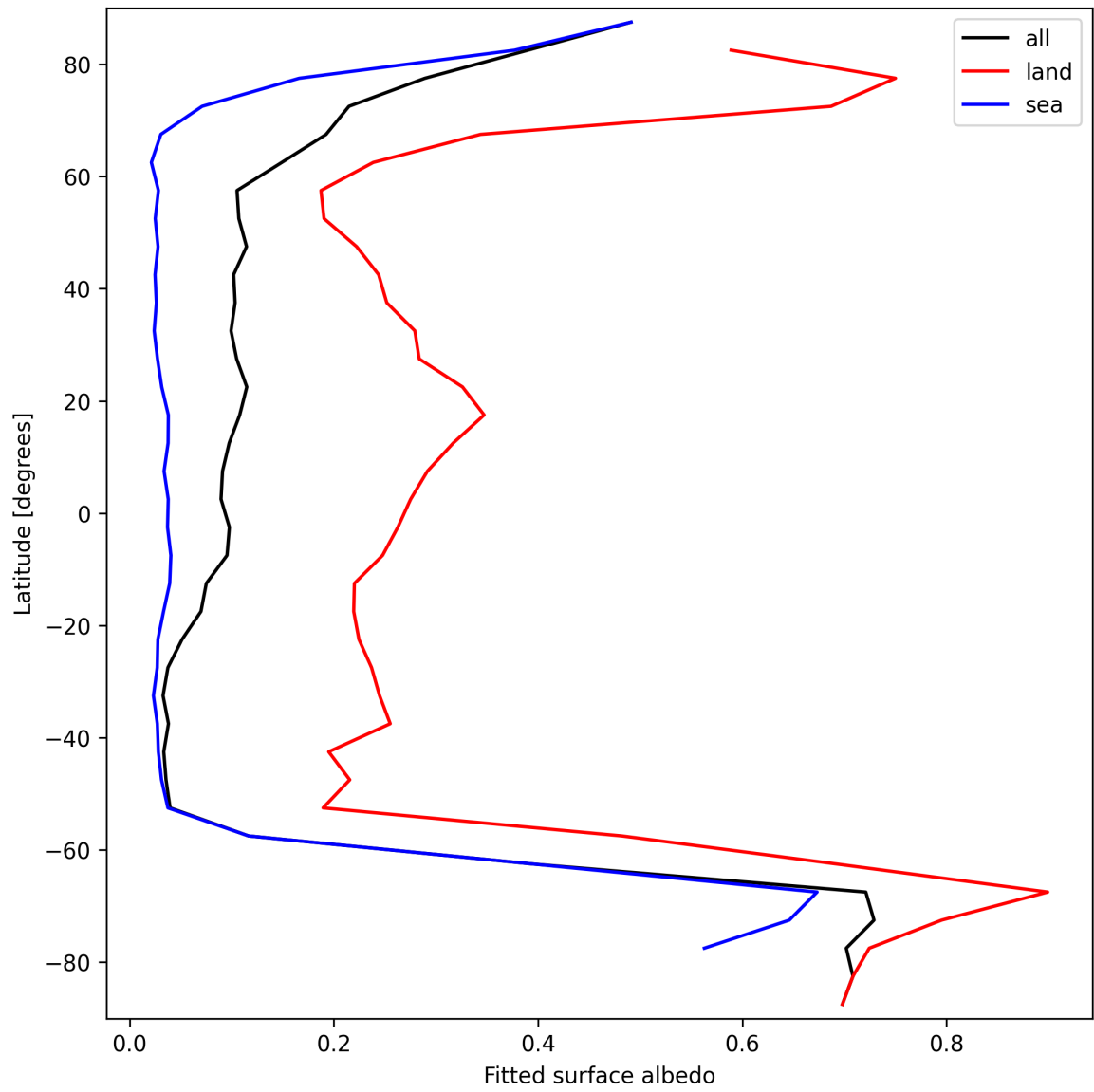


Figure 27: Zonal average of “Fitted surface albedo” for 2025-09-24 to 2025-09-25.

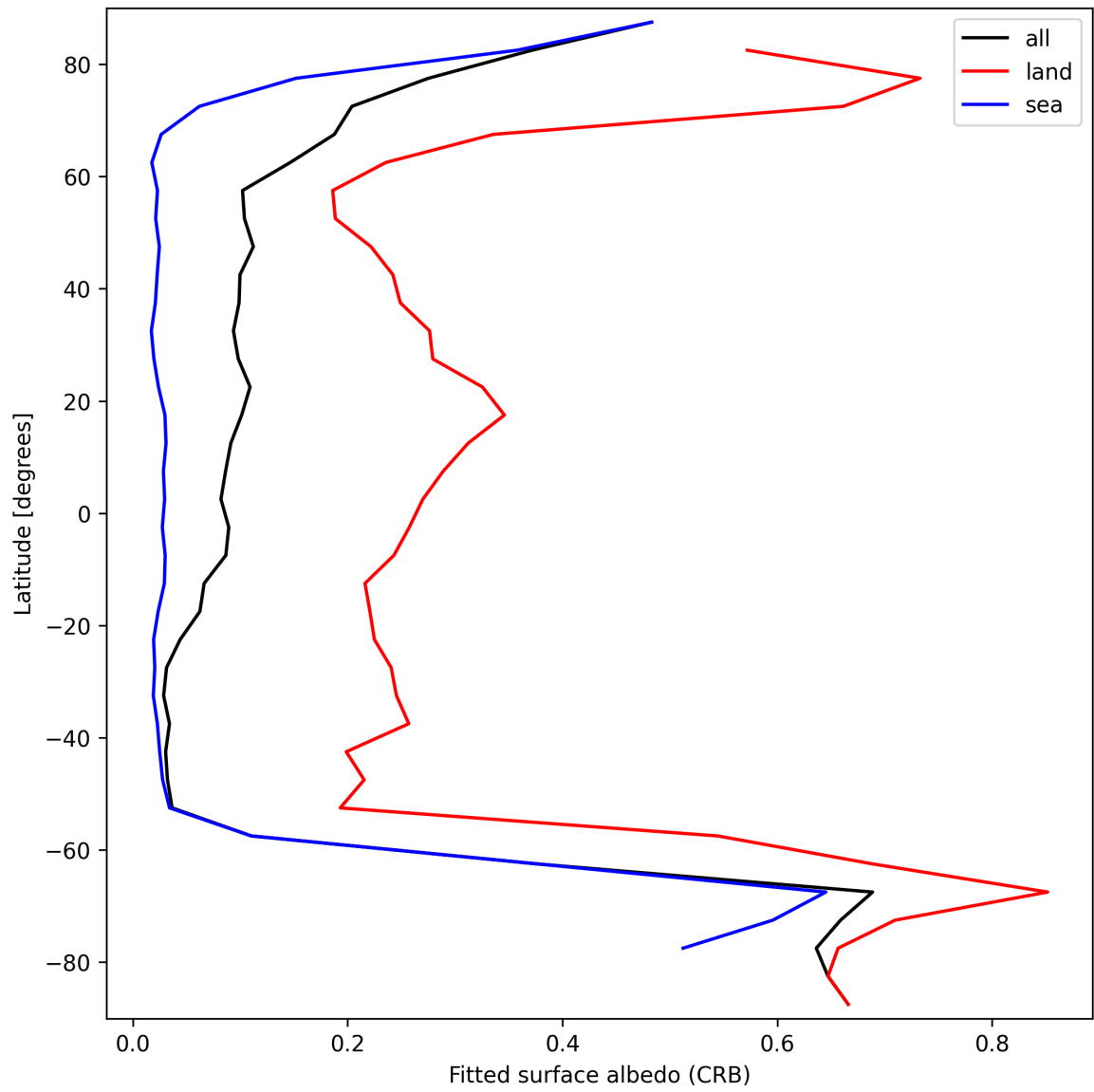


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-09-24 to 2025-09-25.

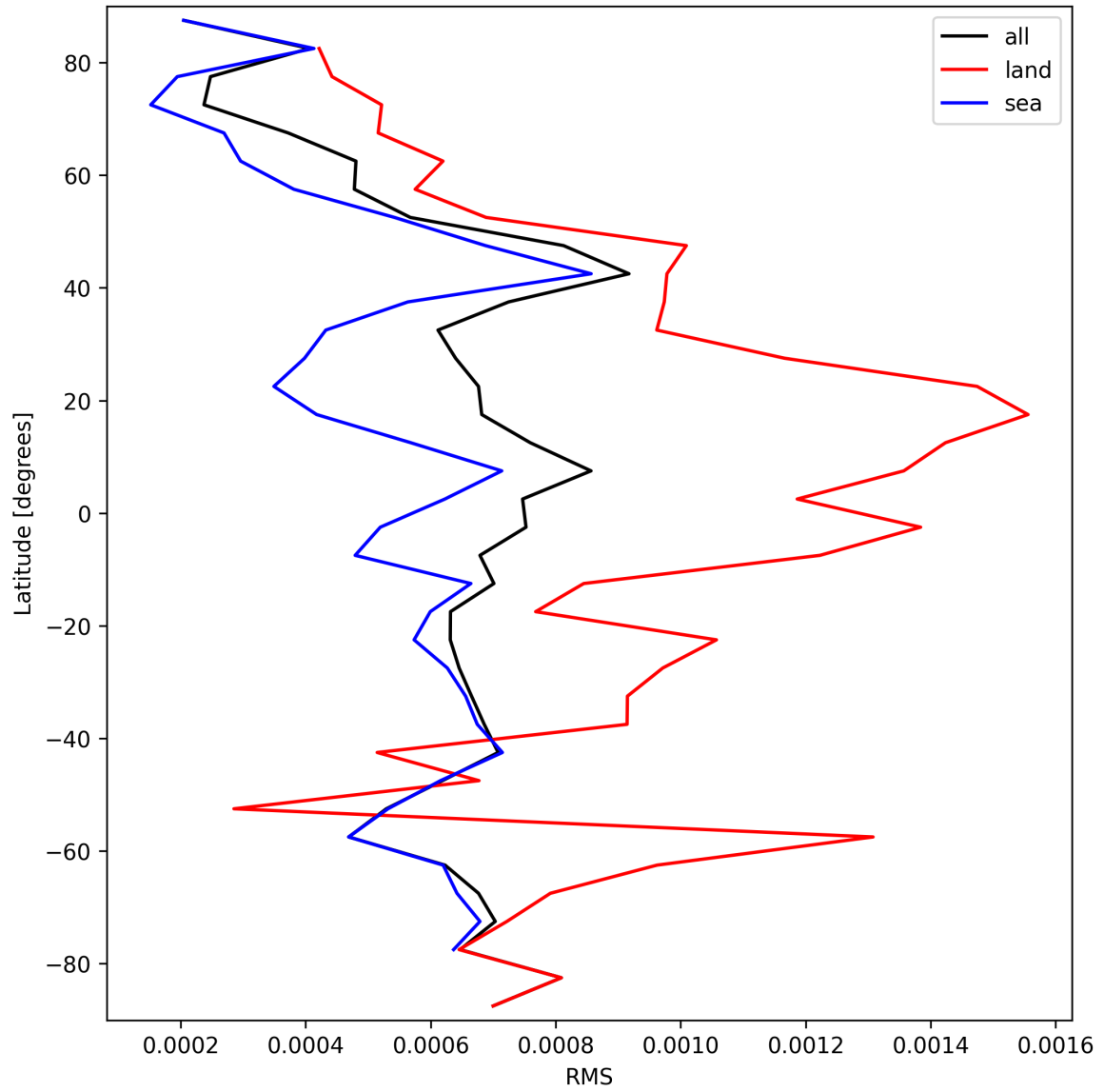


Figure 29: Zonal average of “RMS” for 2025-09-24 to 2025-09-25.

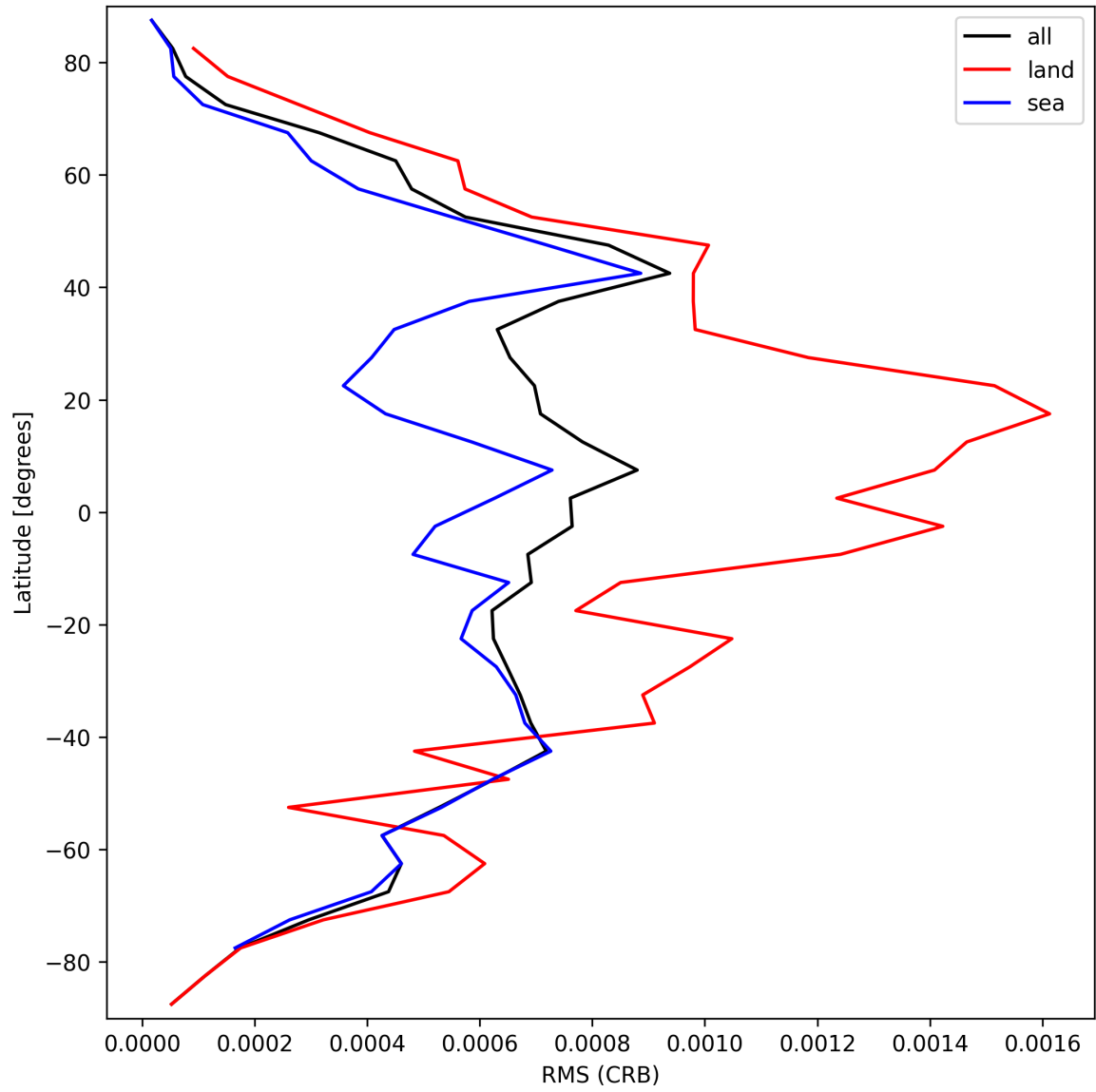


Figure 30: Zonal average of “RMS (CRB)” for 2025-09-24 to 2025-09-25.

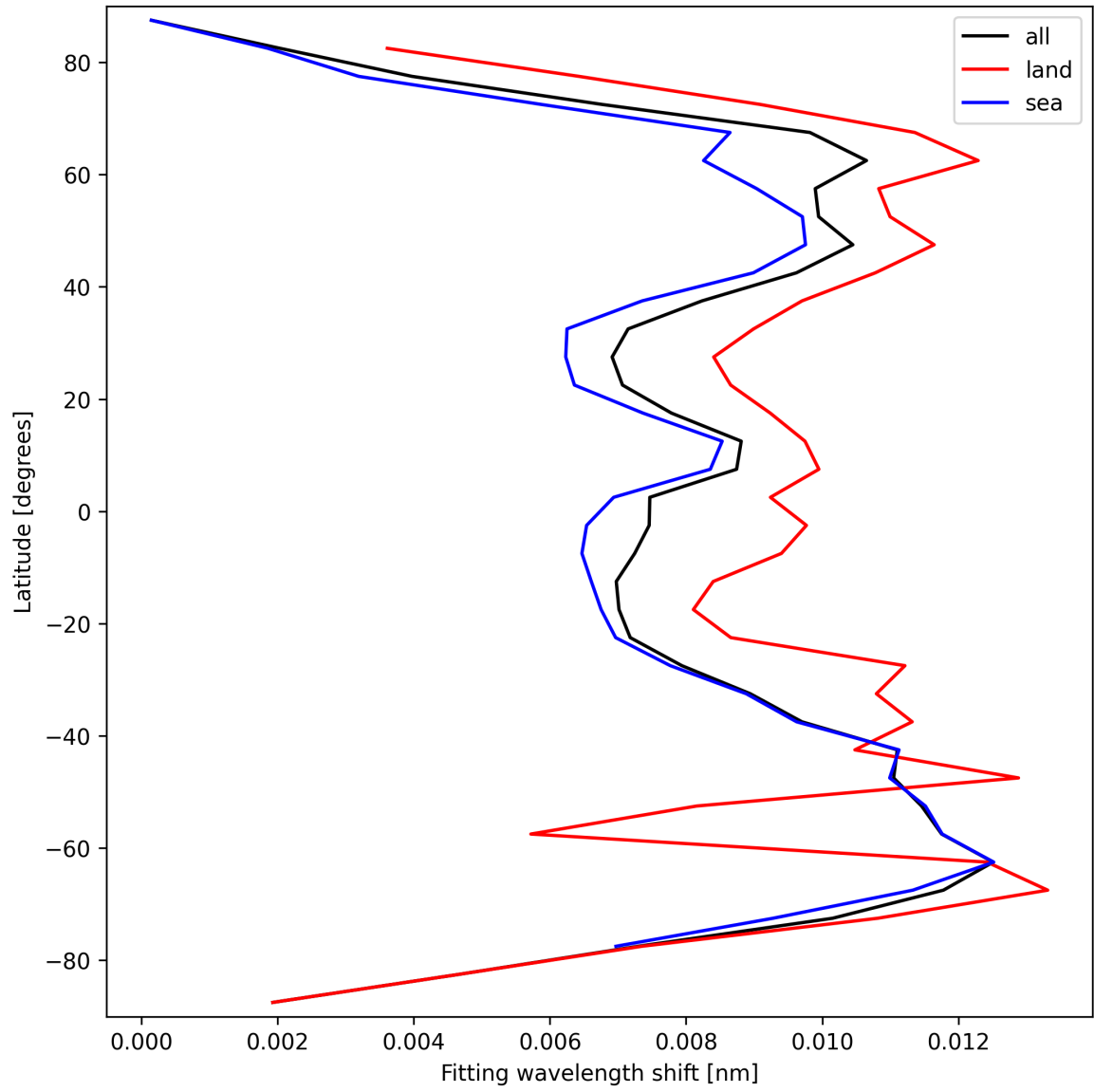


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-09-24 to 2025-09-25.

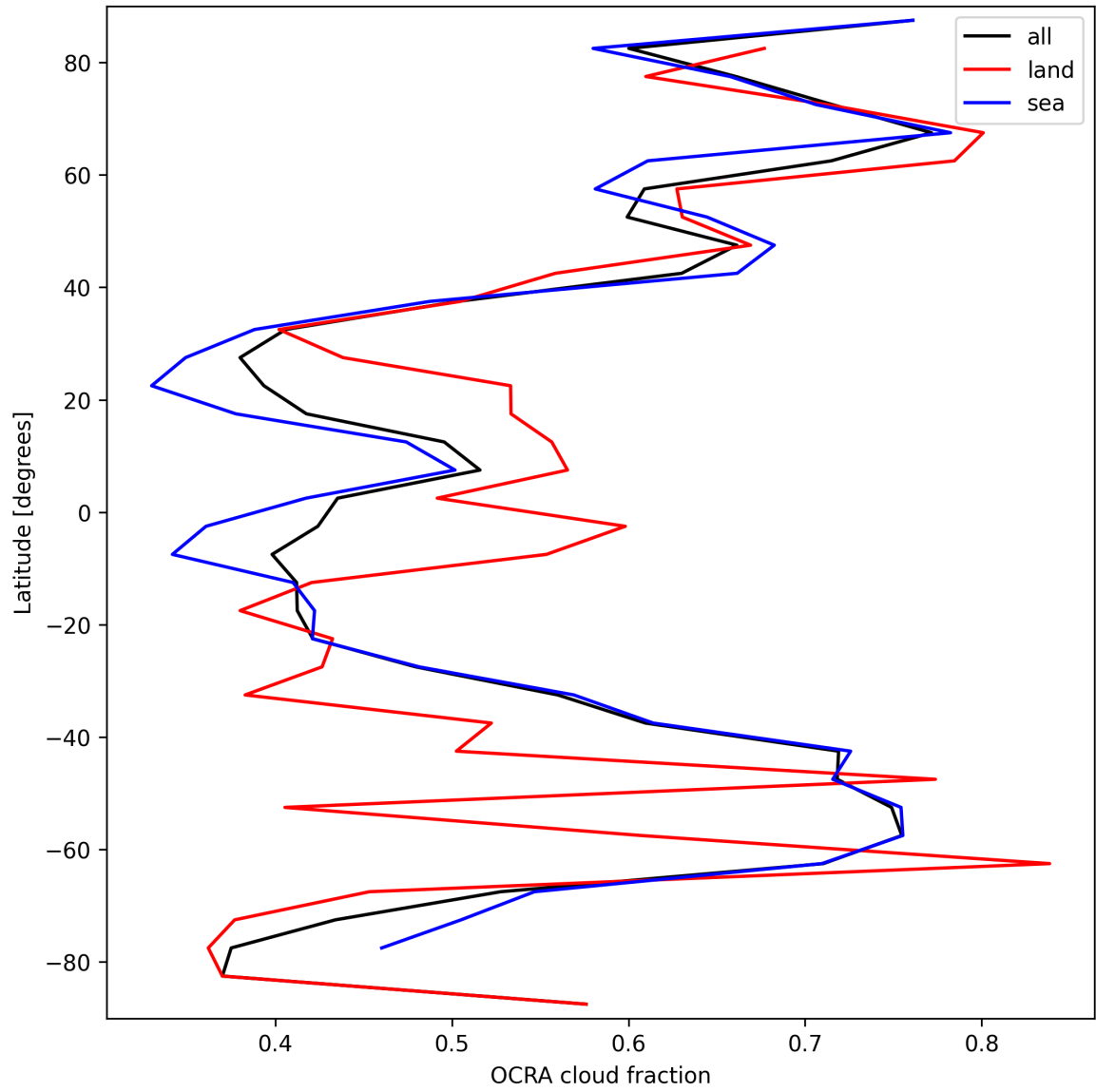


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-09-24 to 2025-09-25.

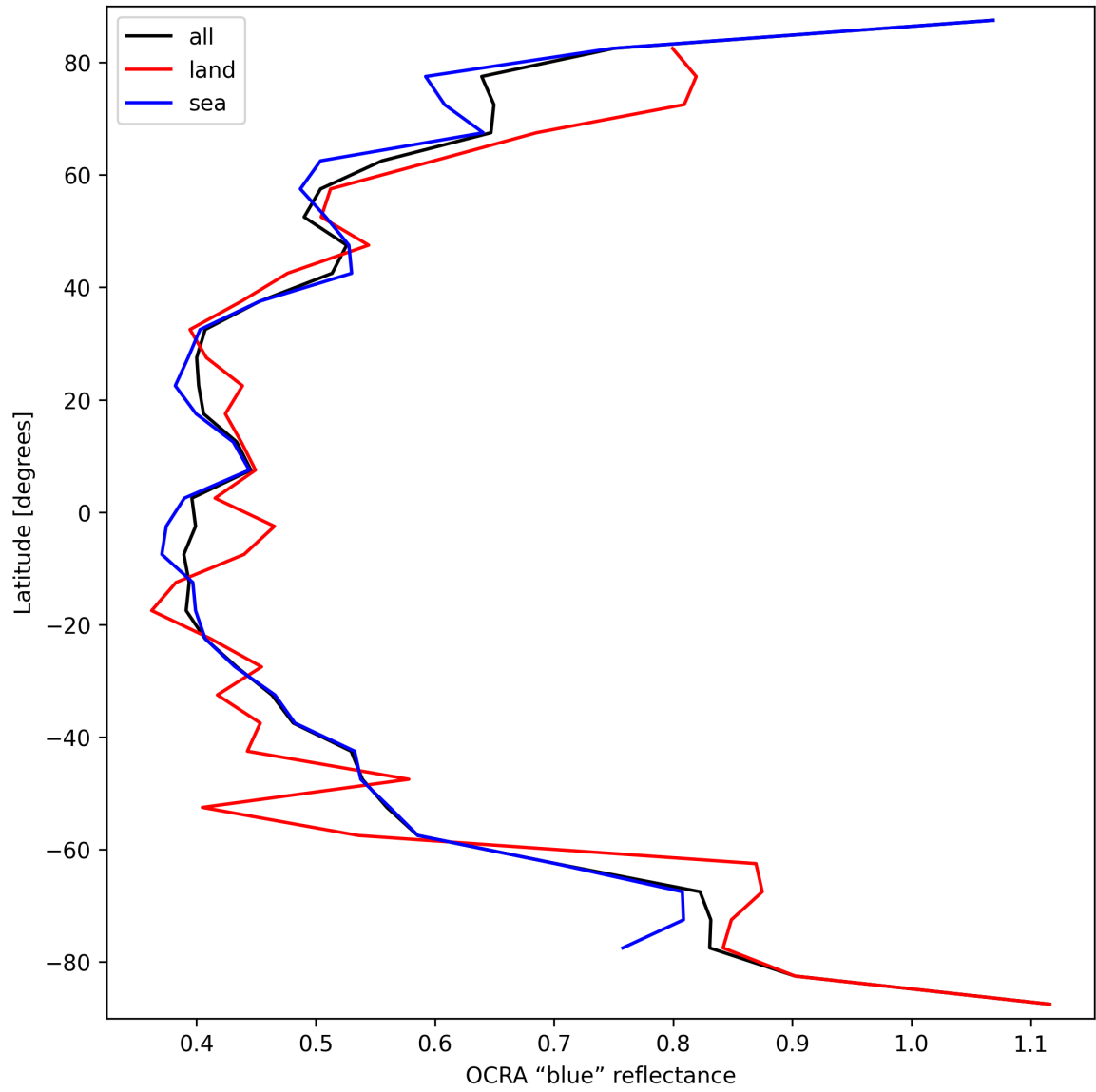


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-09-24 to 2025-09-25.

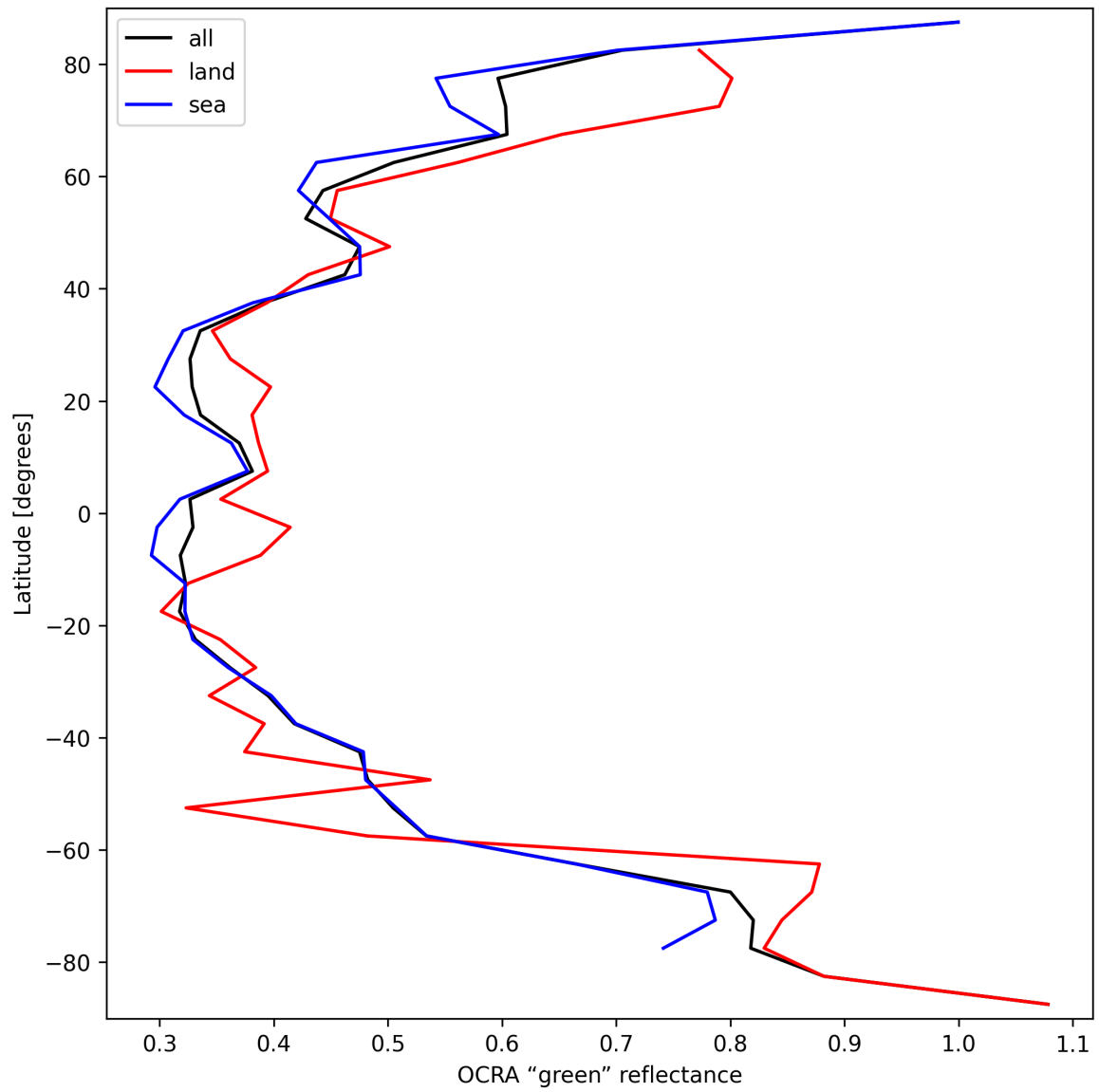


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-09-24 to 2025-09-25.

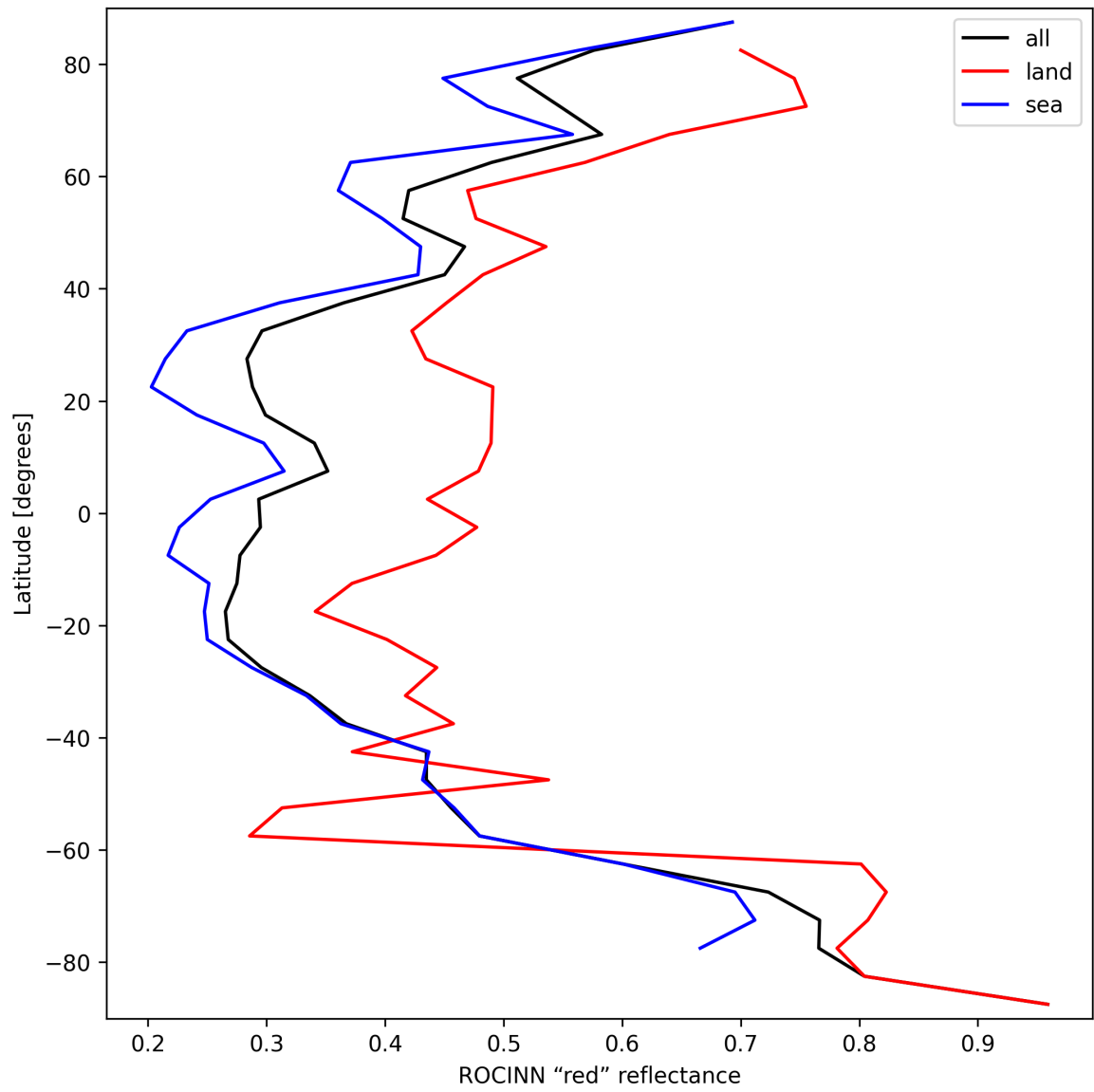


Figure 35: Zonal average of "ROCINN "red" reflectance" for 2025-09-24 to 2025-09-25.

8 Histograms

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

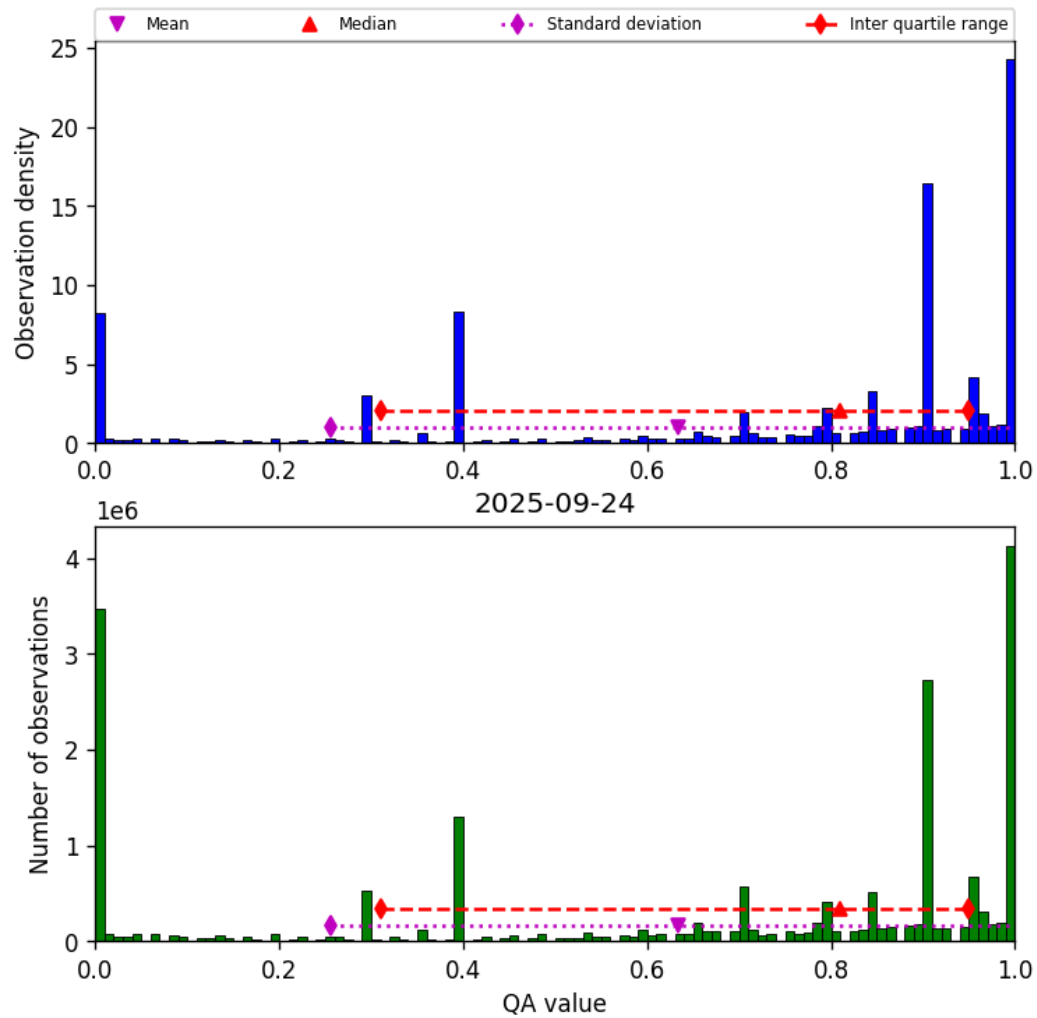


Figure 36: Histogram of “QA value” for 2025-09-24 to 2025-09-25

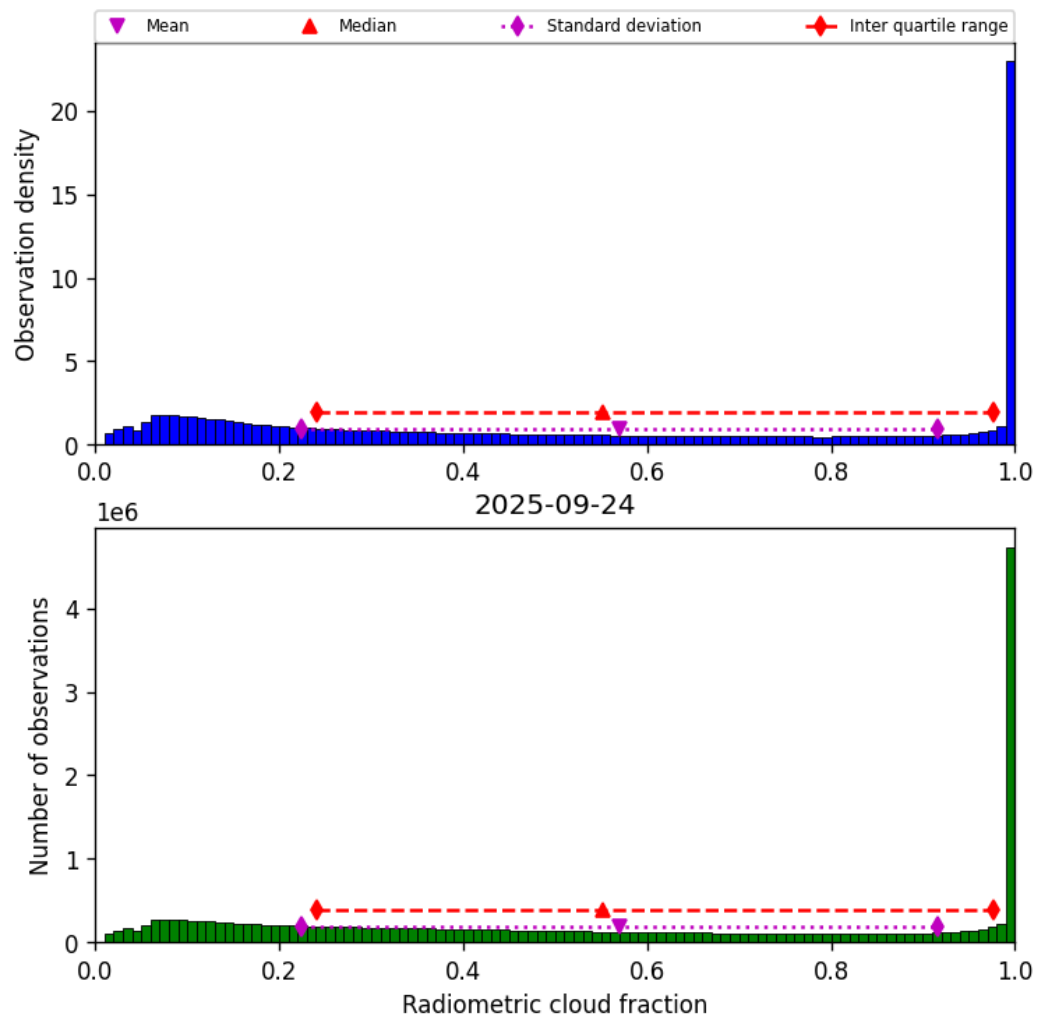


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-09-24 to 2025-09-25

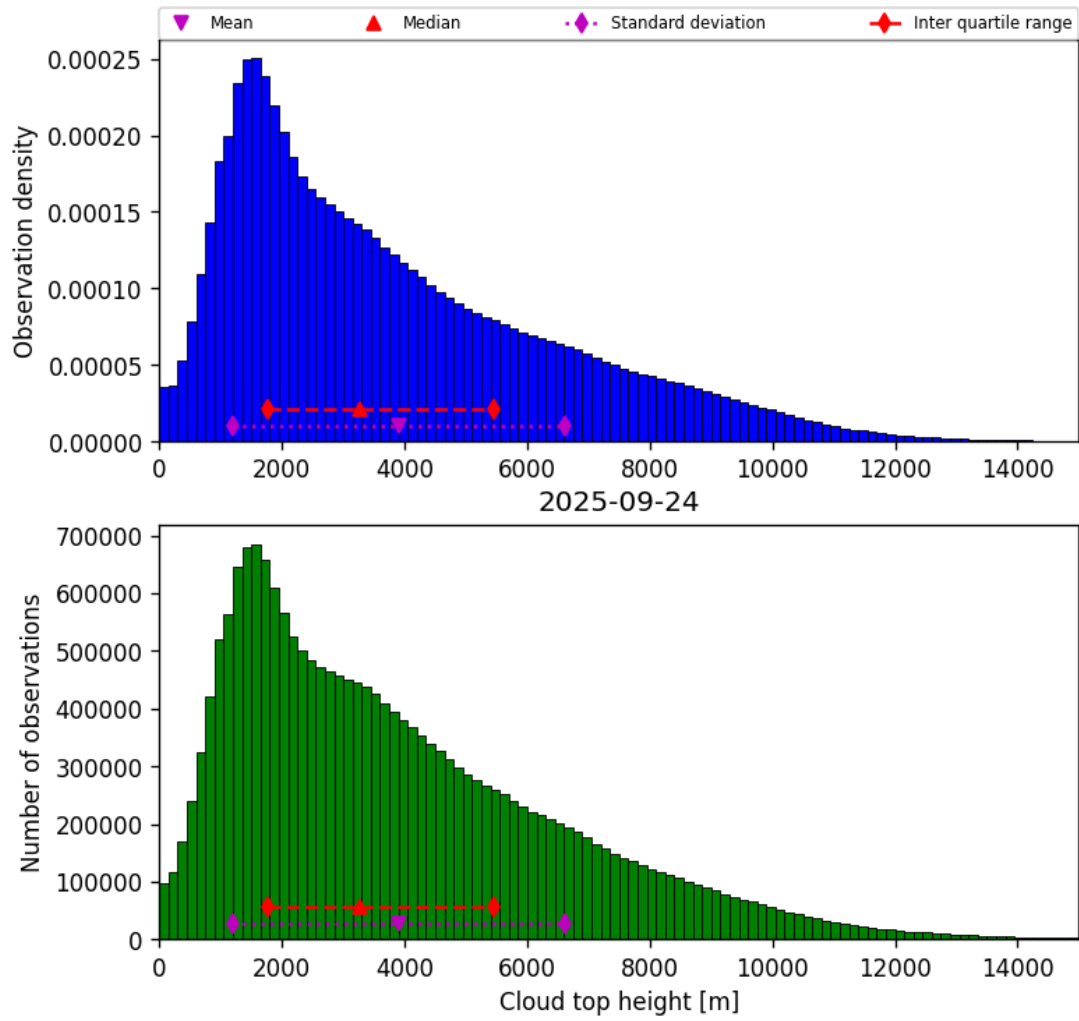


Figure 38: Histogram of “Cloud top height” for 2025-09-24 to 2025-09-25

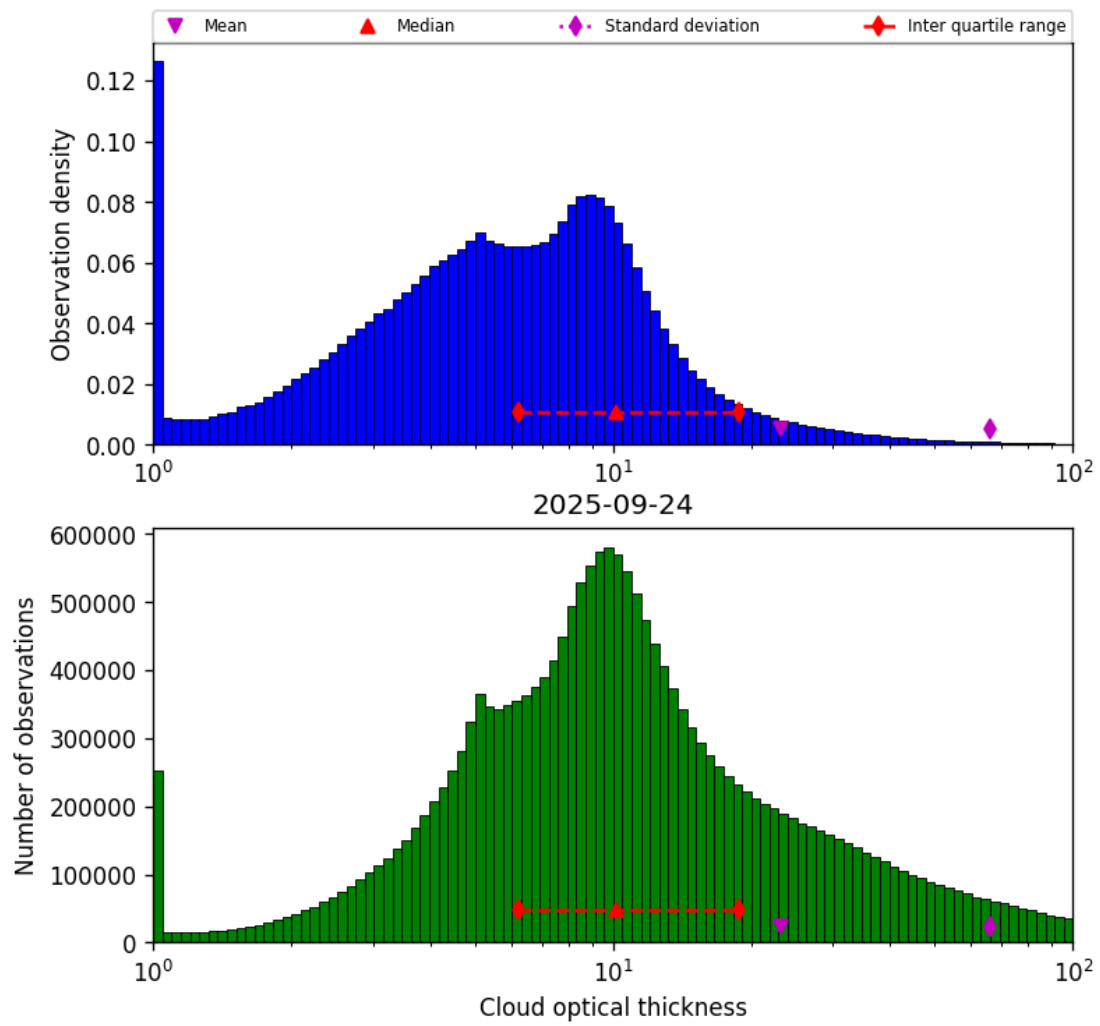


Figure 39: Histogram of “Cloud optical thickness” for 2025-09-24 to 2025-09-25

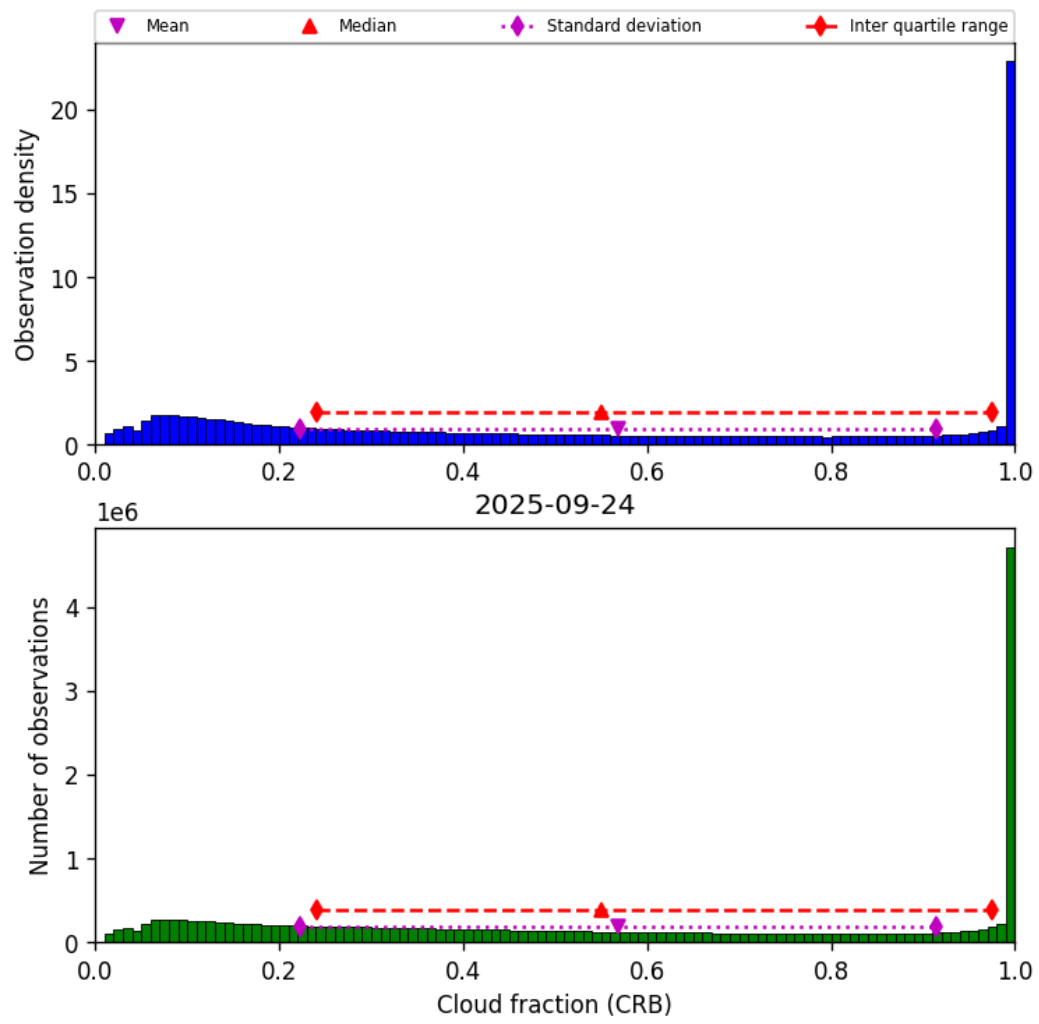


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-09-24 to 2025-09-25

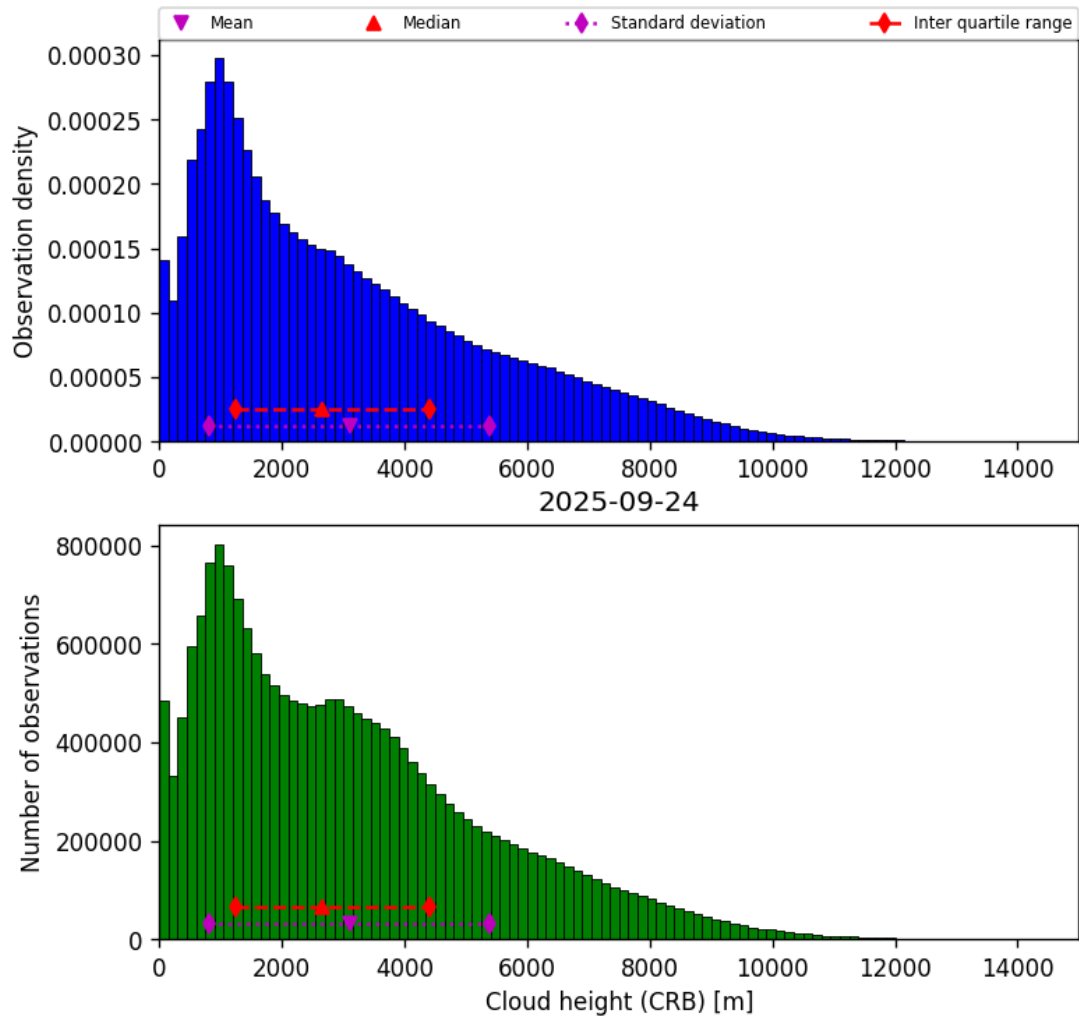


Figure 41: Histogram of “Cloud height (CRB)” for 2025-09-24 to 2025-09-25

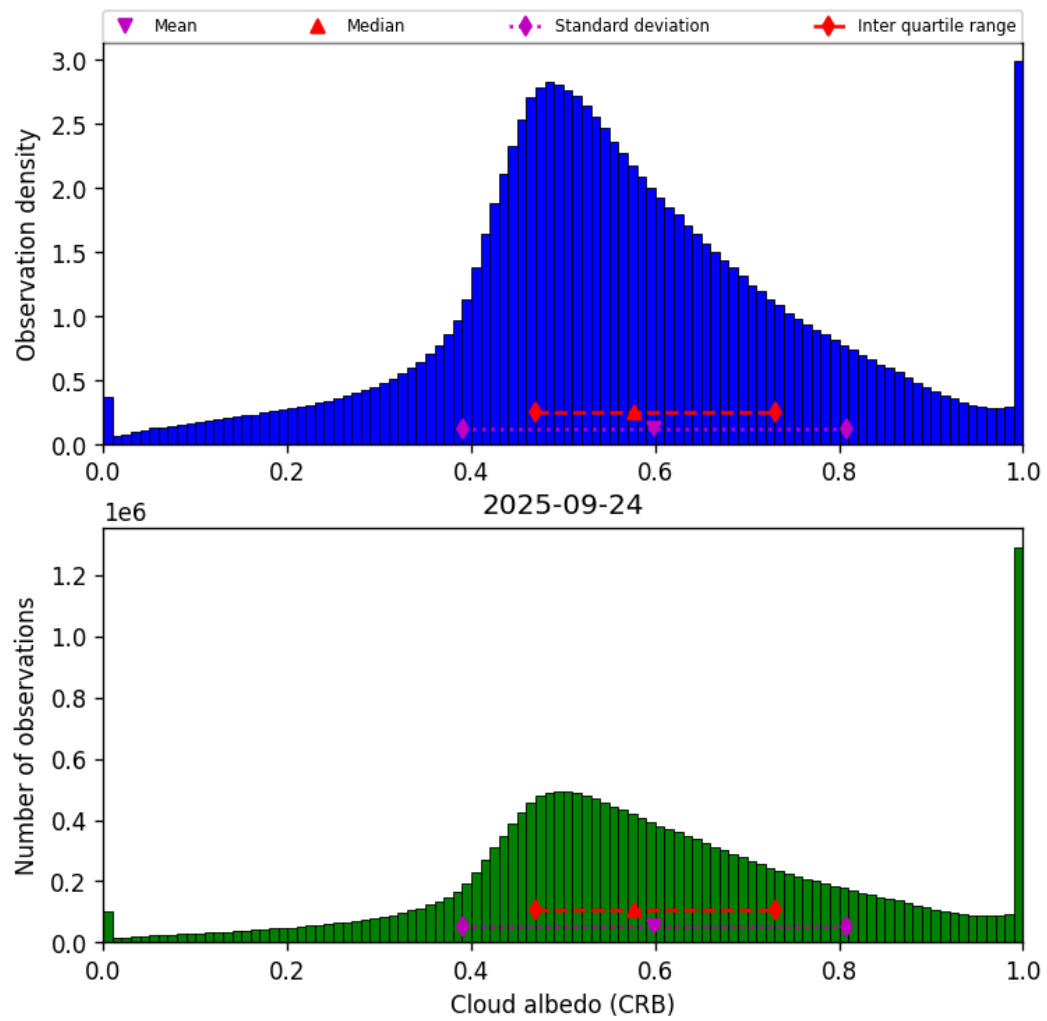


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-09-24 to 2025-09-25

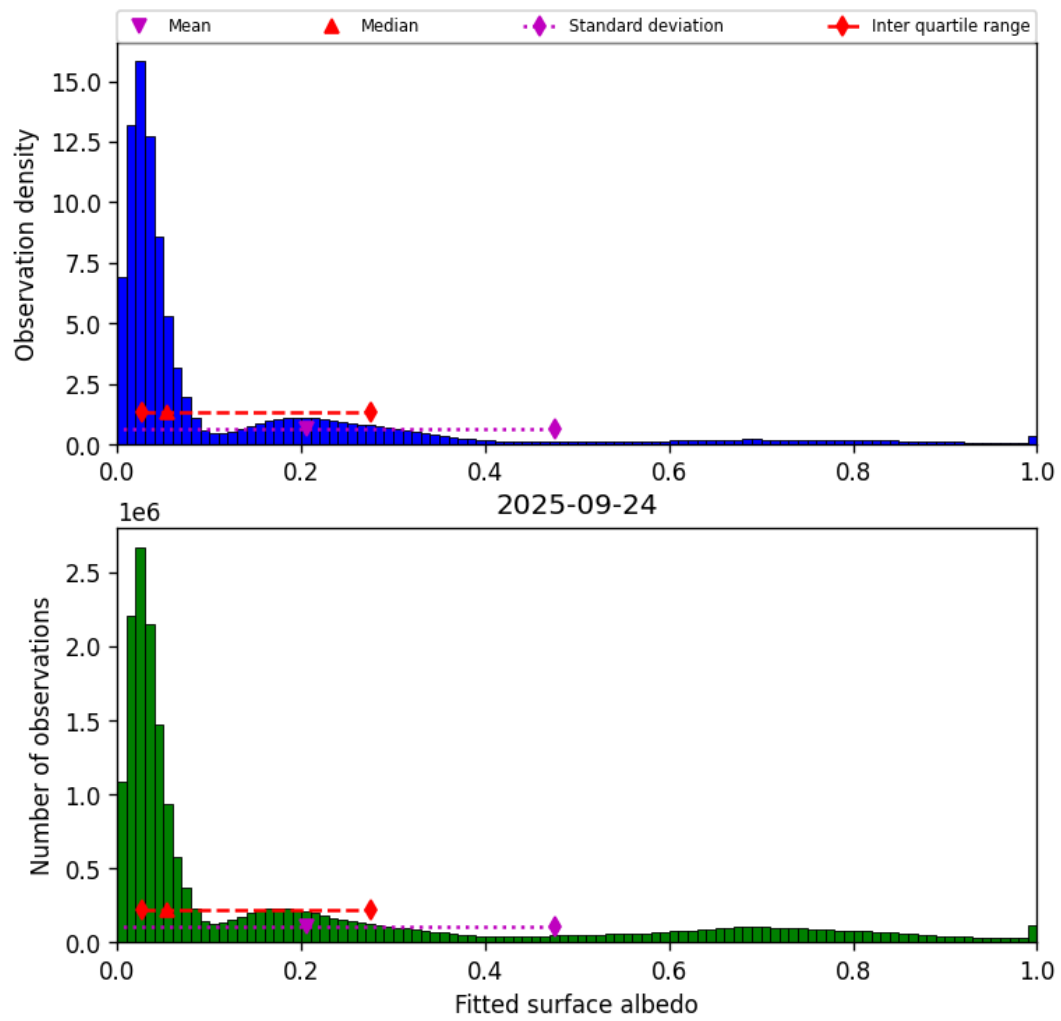


Figure 43: Histogram of “Fitted surface albedo” for 2025-09-24 to 2025-09-25

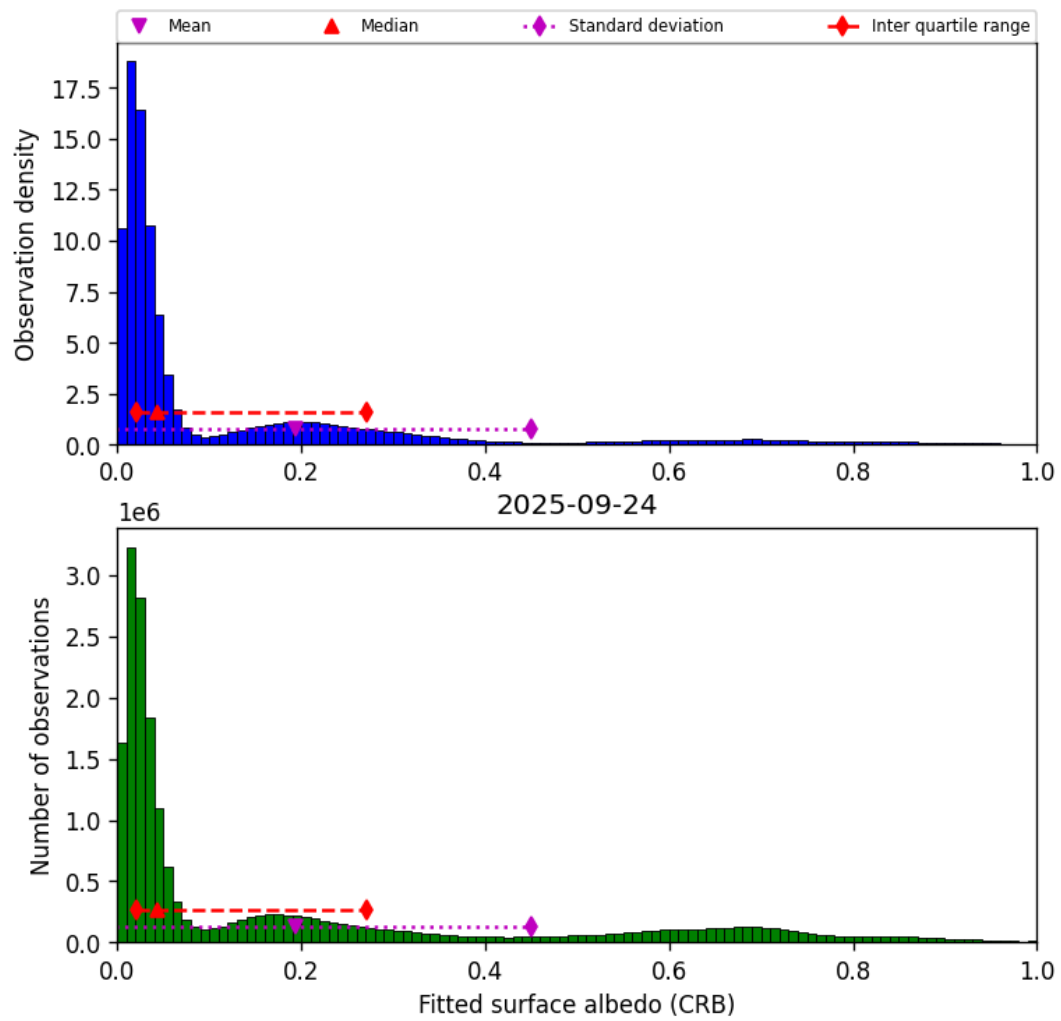


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-09-24 to 2025-09-25

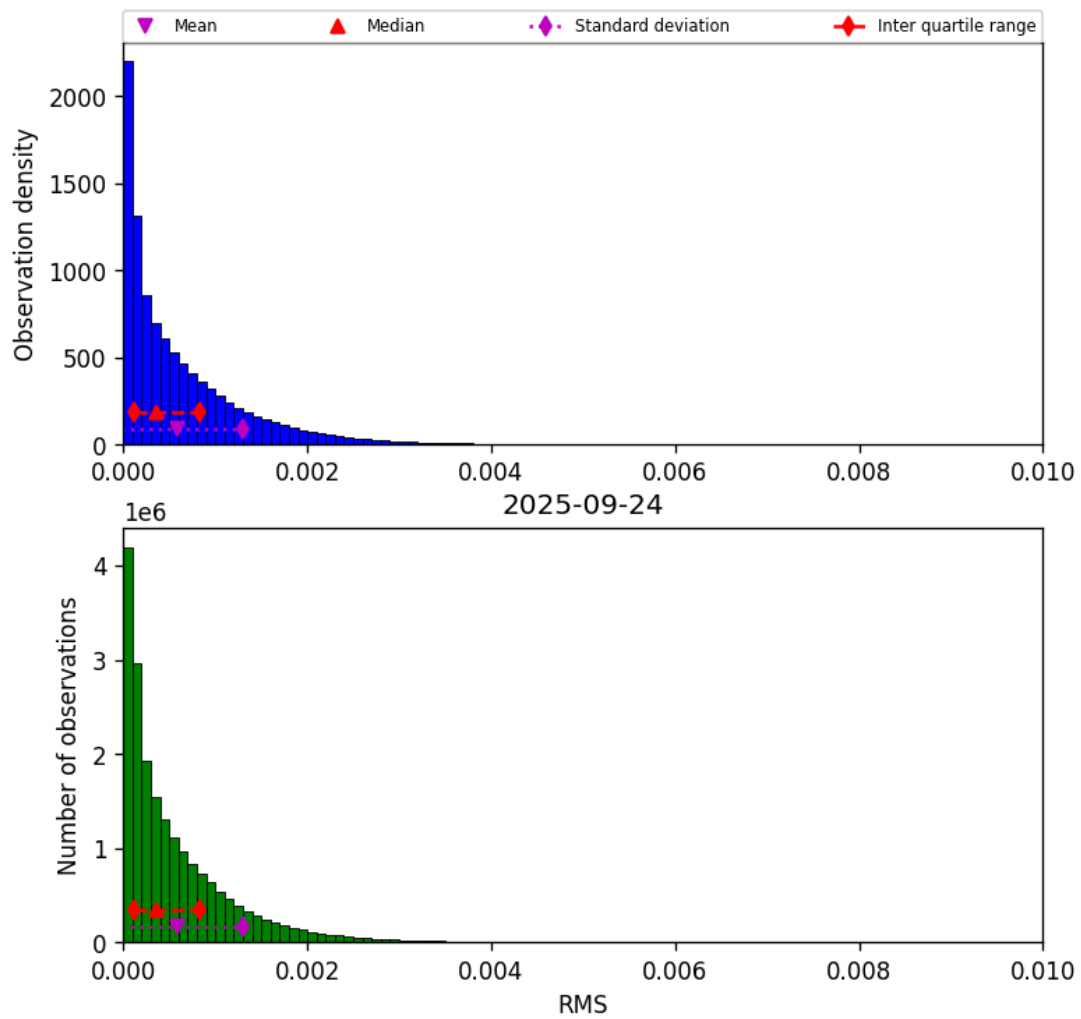


Figure 45: Histogram of “RMS” for 2025-09-24 to 2025-09-25

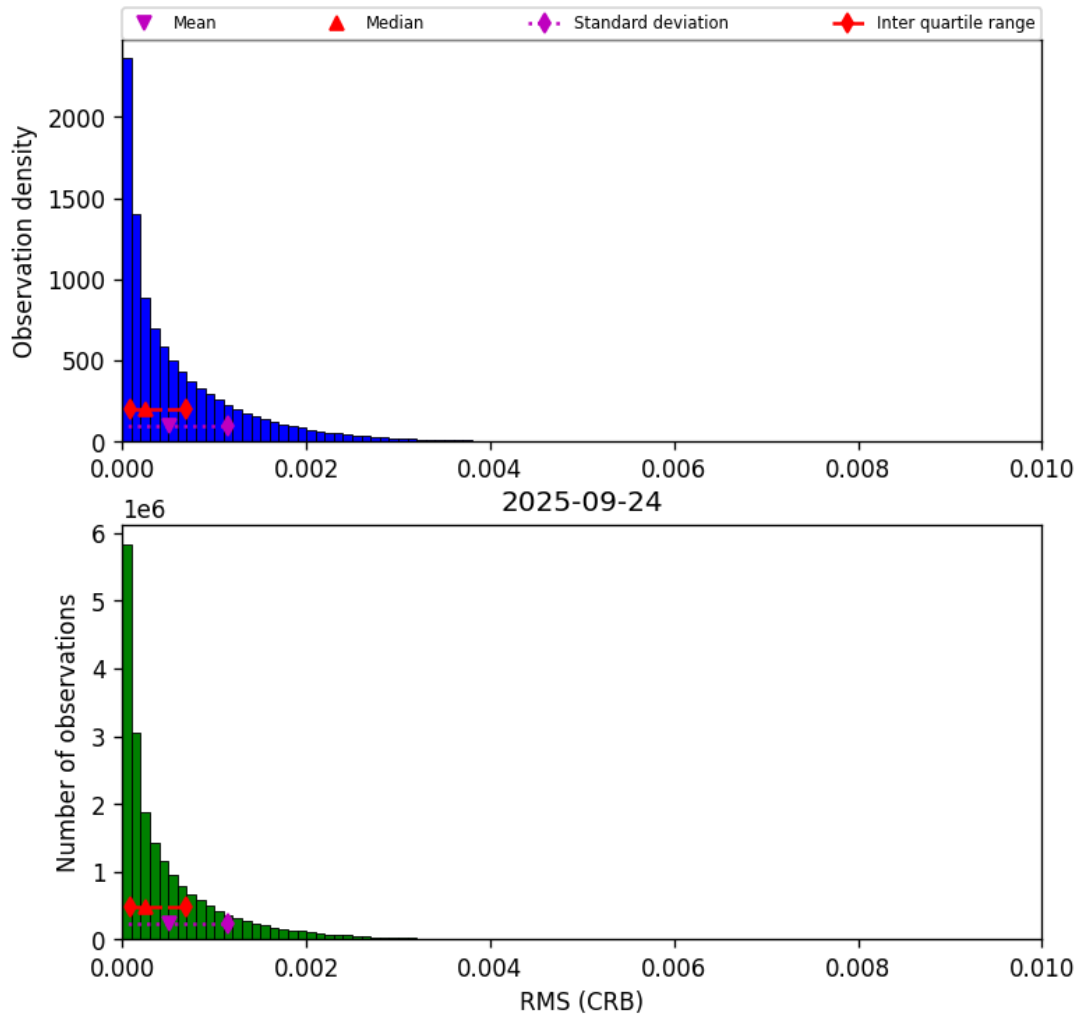


Figure 46: Histogram of "RMS (CRB)" for 2025-09-24 to 2025-09-25

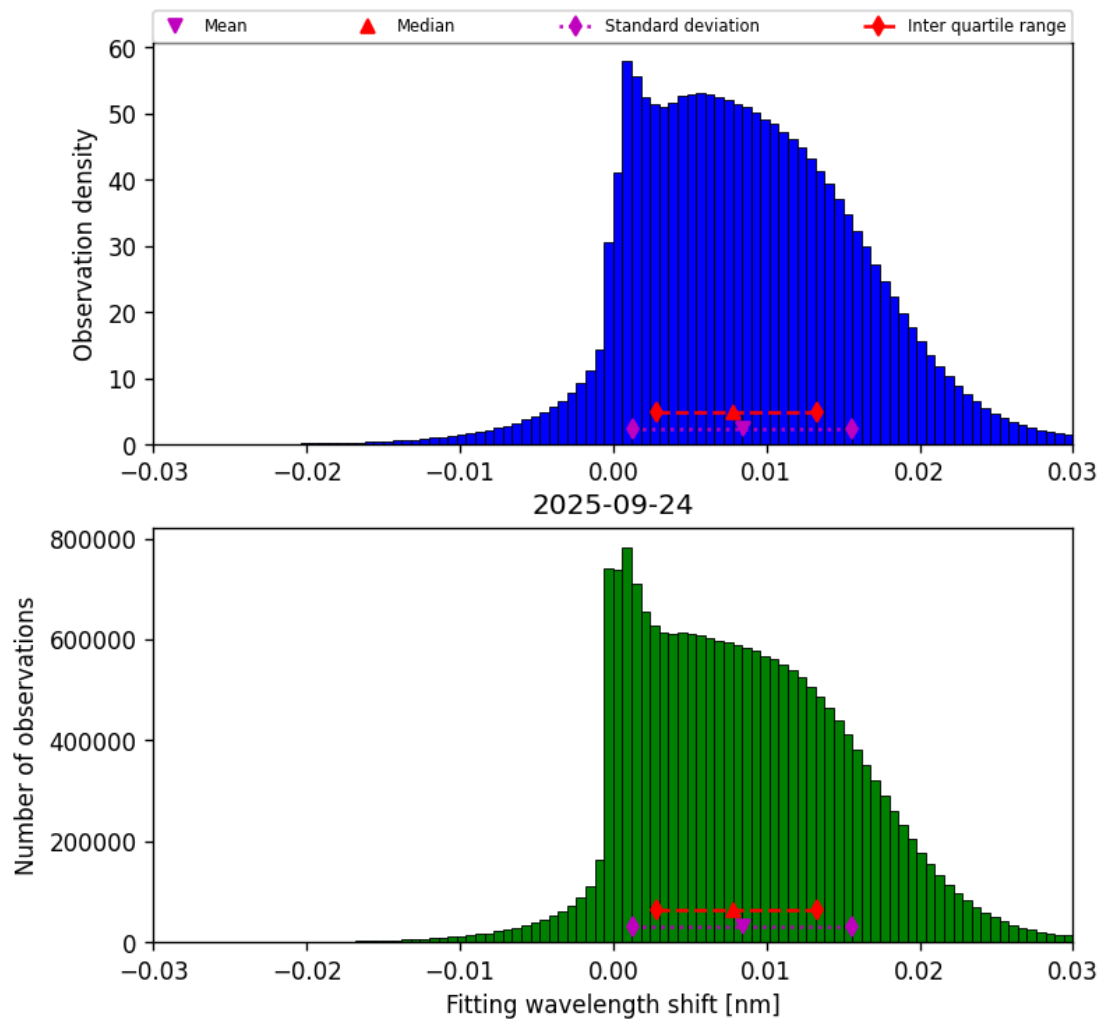


Figure 47: Histogram of “Fitting wavelength shift” for 2025-09-24 to 2025-09-25

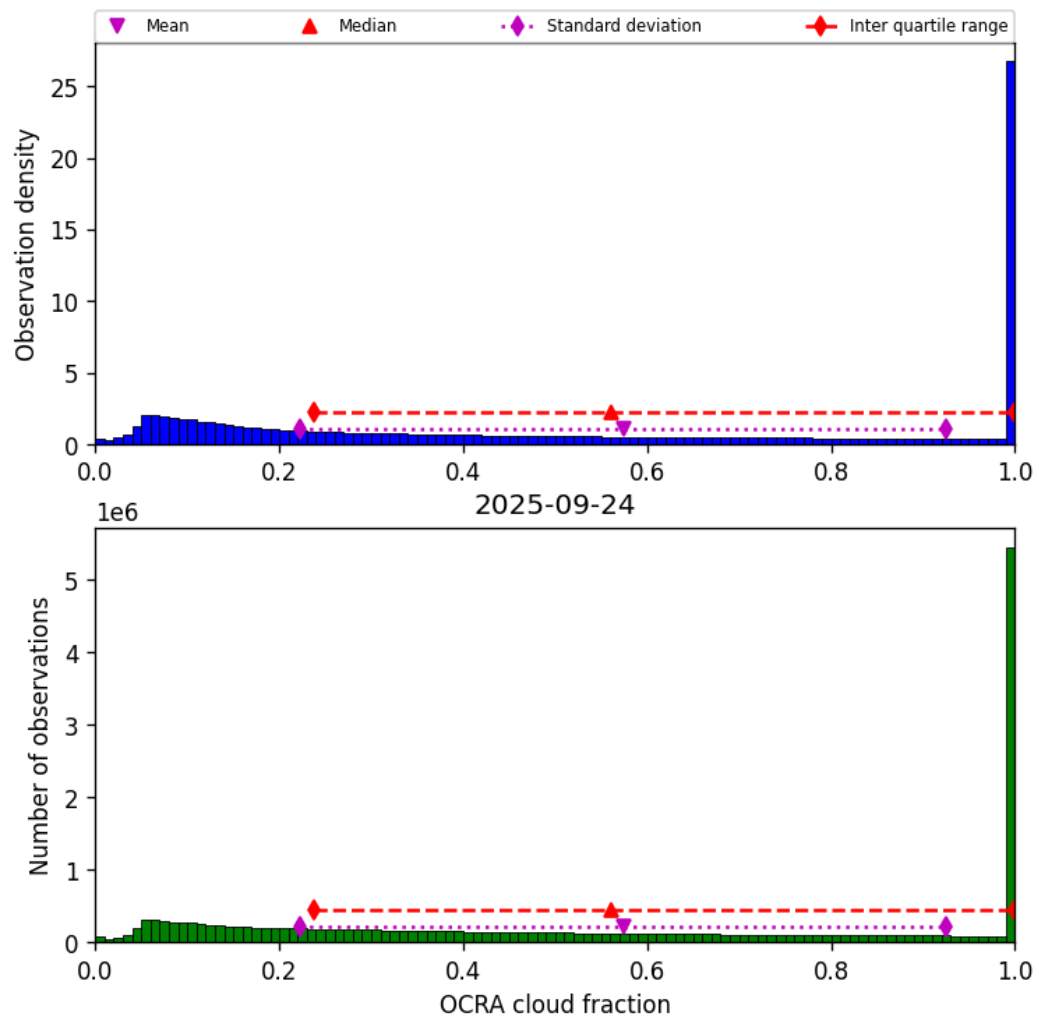


Figure 48: Histogram of “OCRA cloud fraction” for 2025-09-24 to 2025-09-25

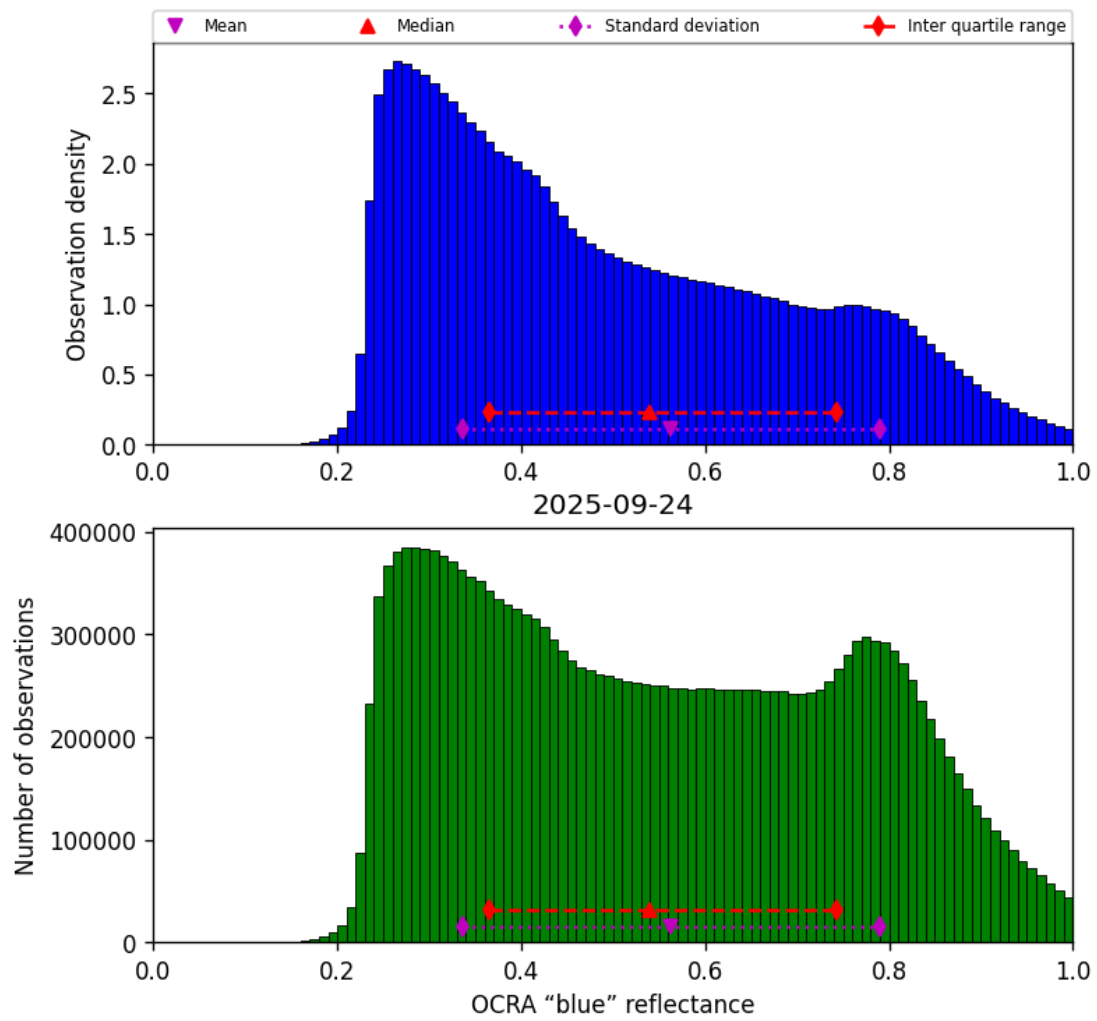


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-09-24 to 2025-09-25

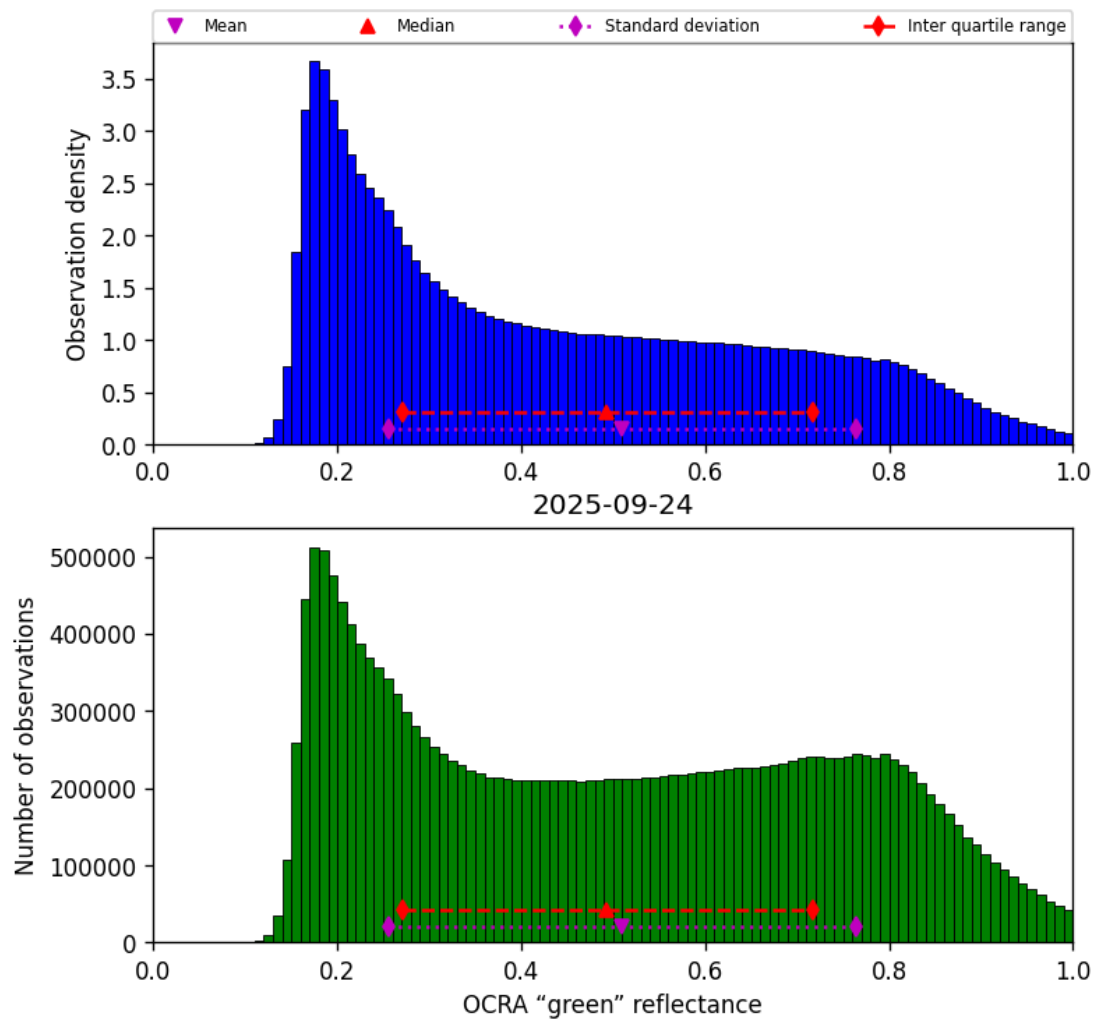


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-09-24 to 2025-09-25

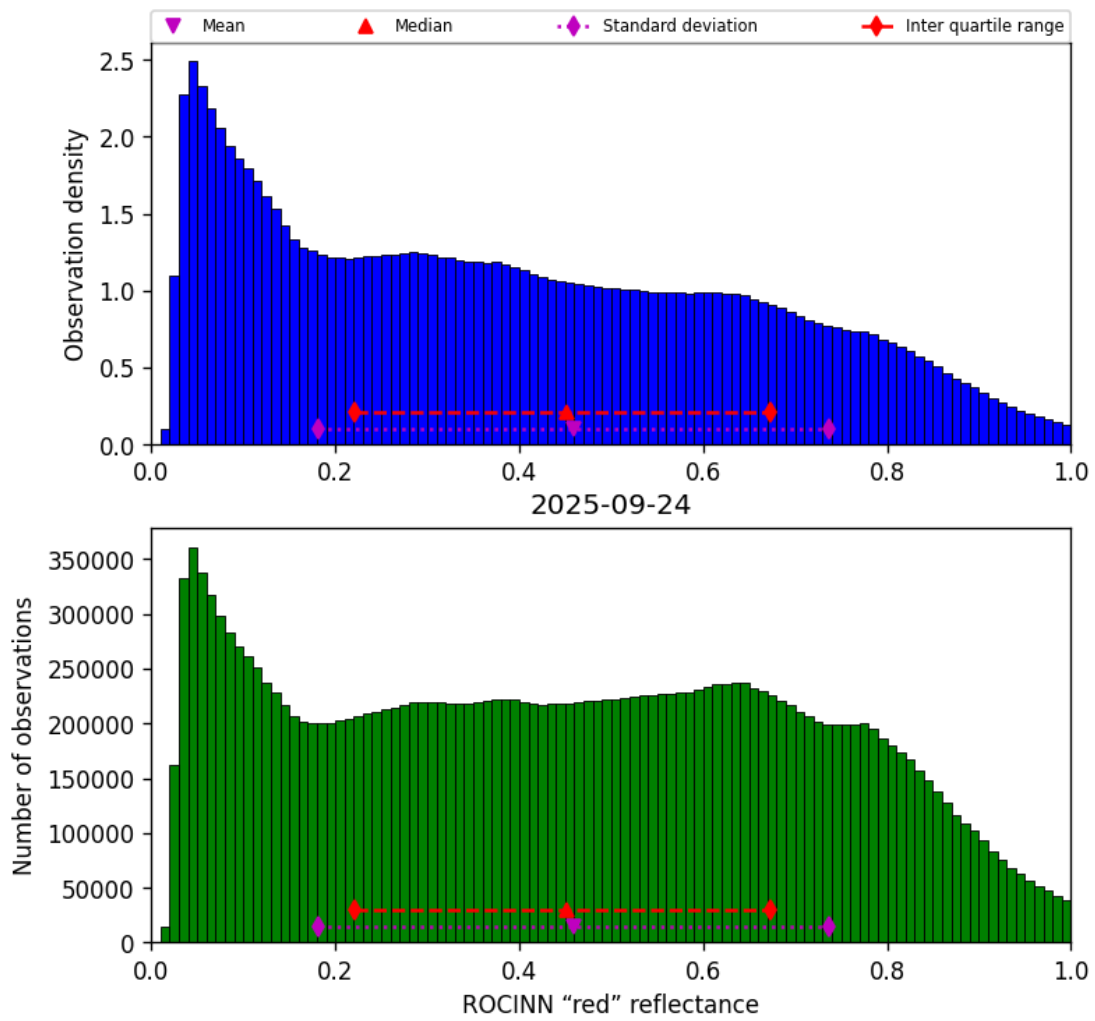


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-09-24 to 2025-09-25

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.

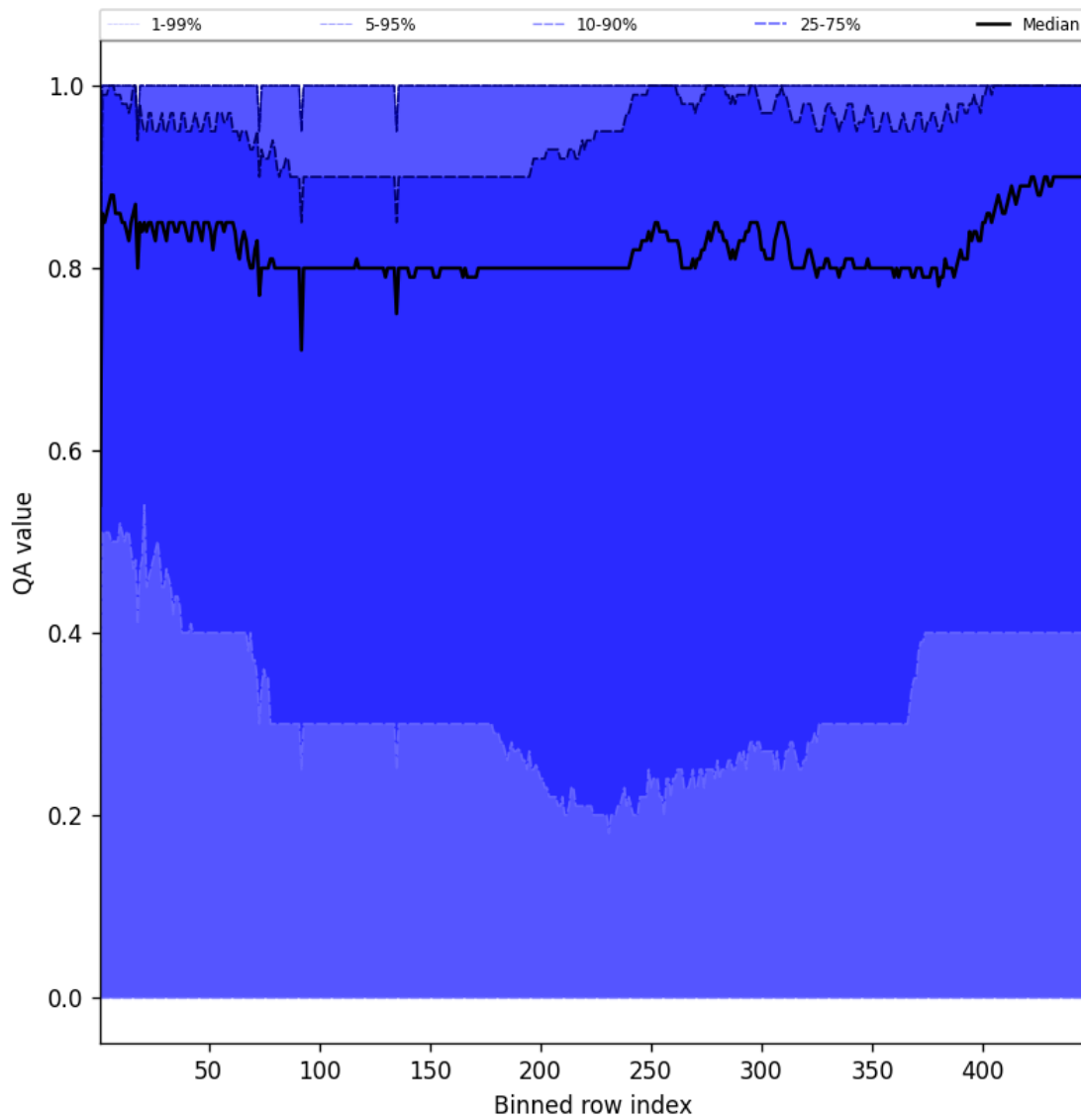


Figure 52: Along track statistics of “QA value” for 2025-09-24 to 2025-09-25

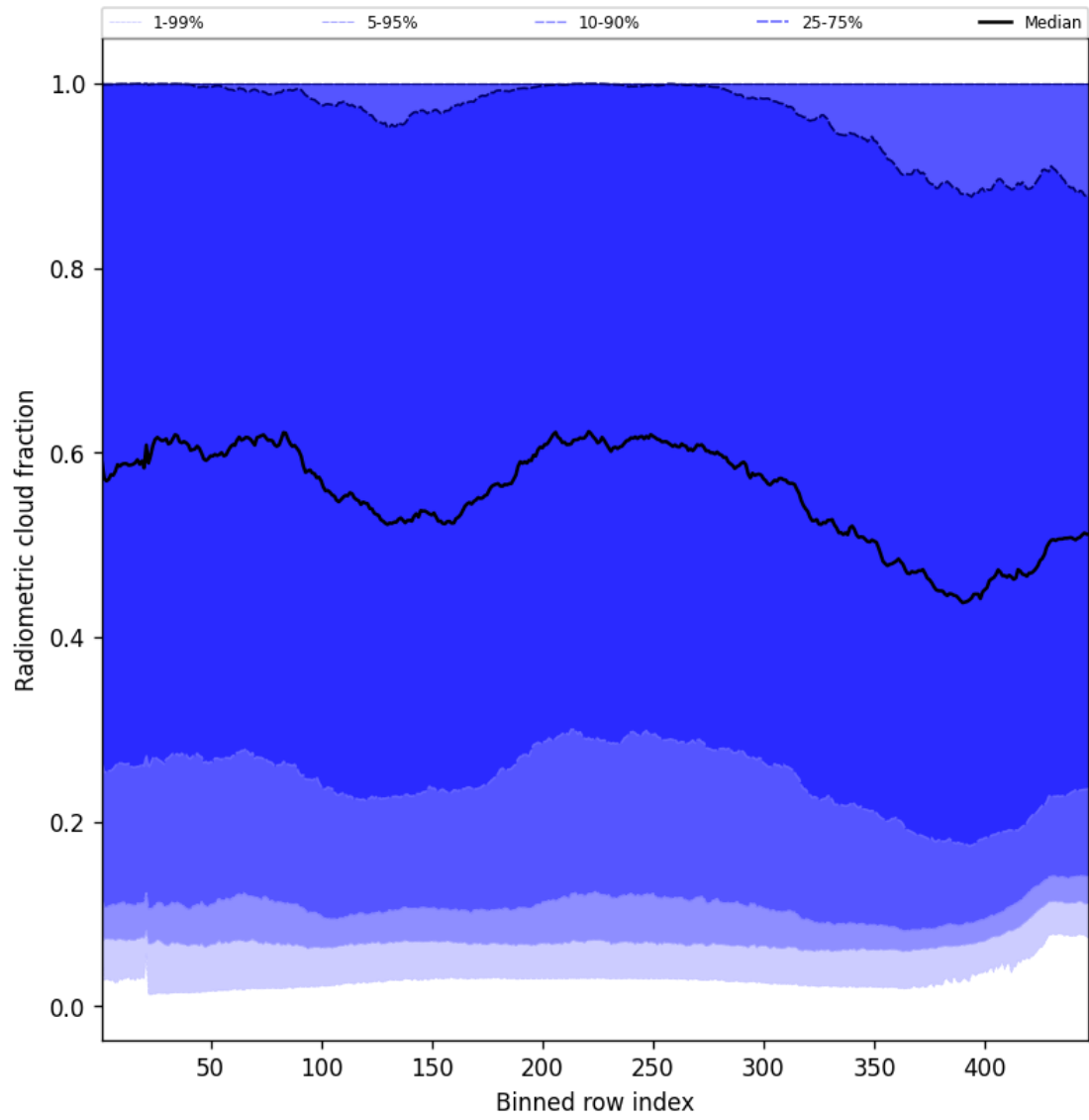


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-09-24 to 2025-09-25

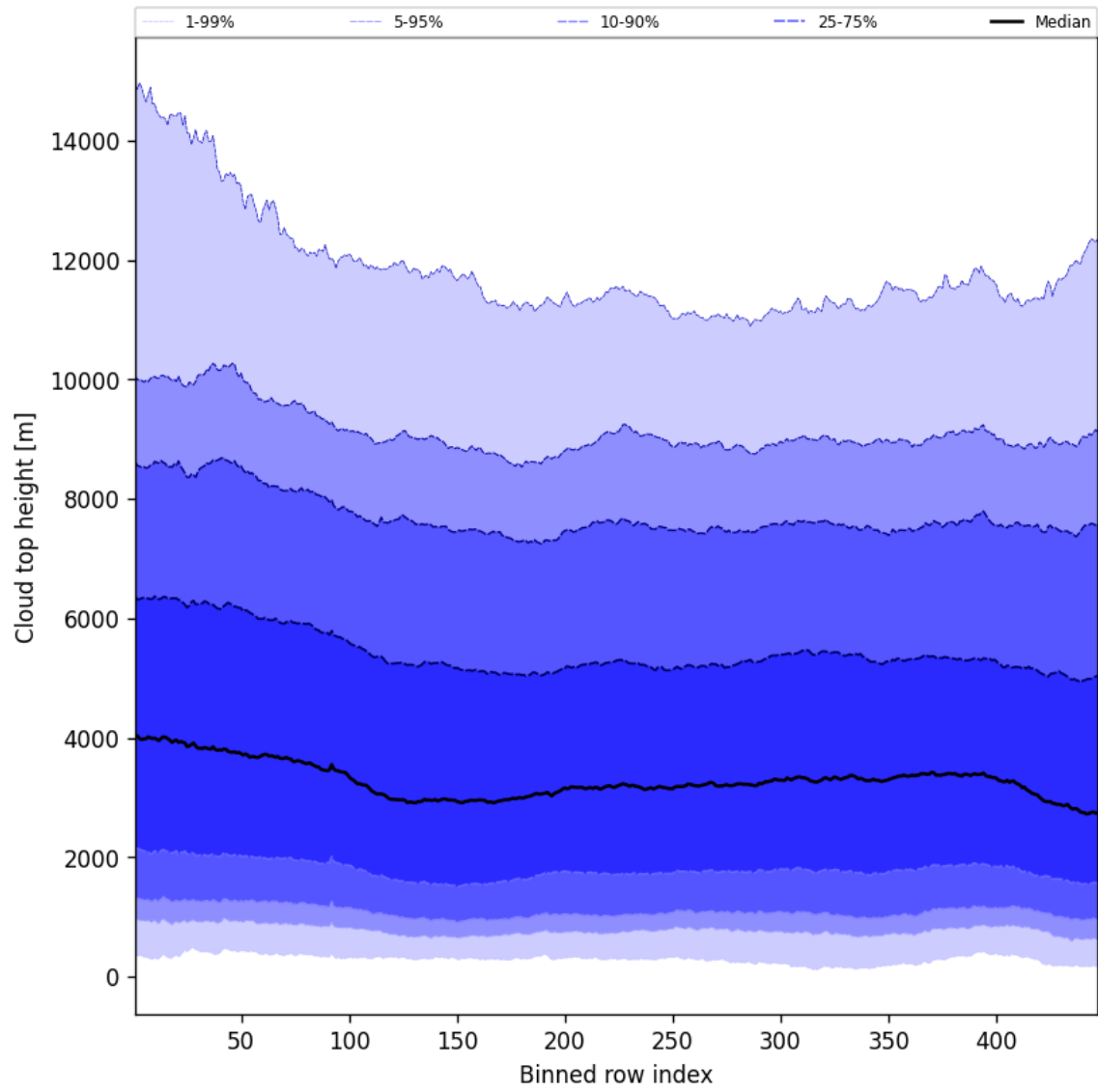


Figure 54: Along track statistics of “Cloud top height” for 2025-09-24 to 2025-09-25

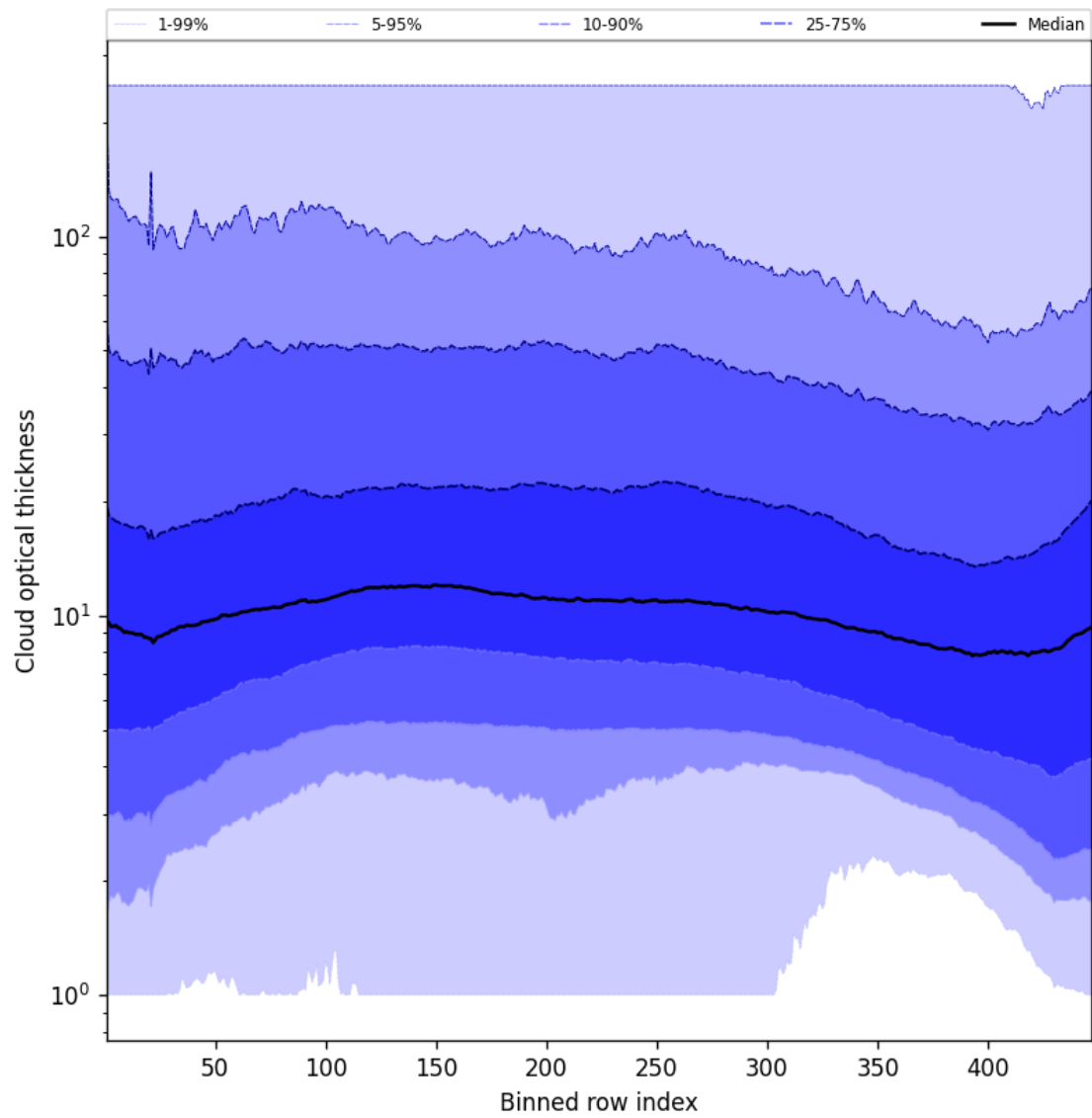


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-09-24 to 2025-09-25

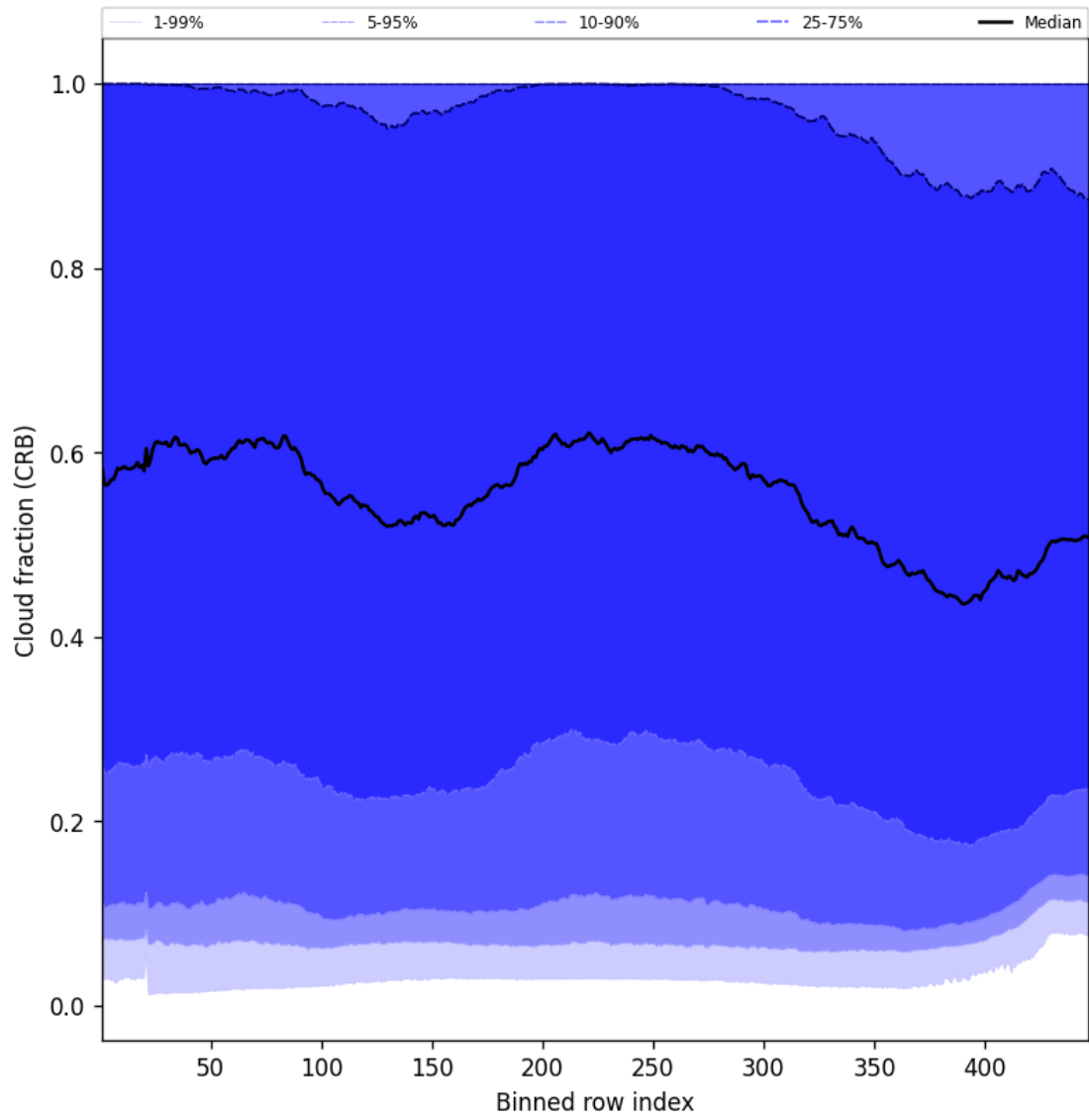


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-09-24 to 2025-09-25

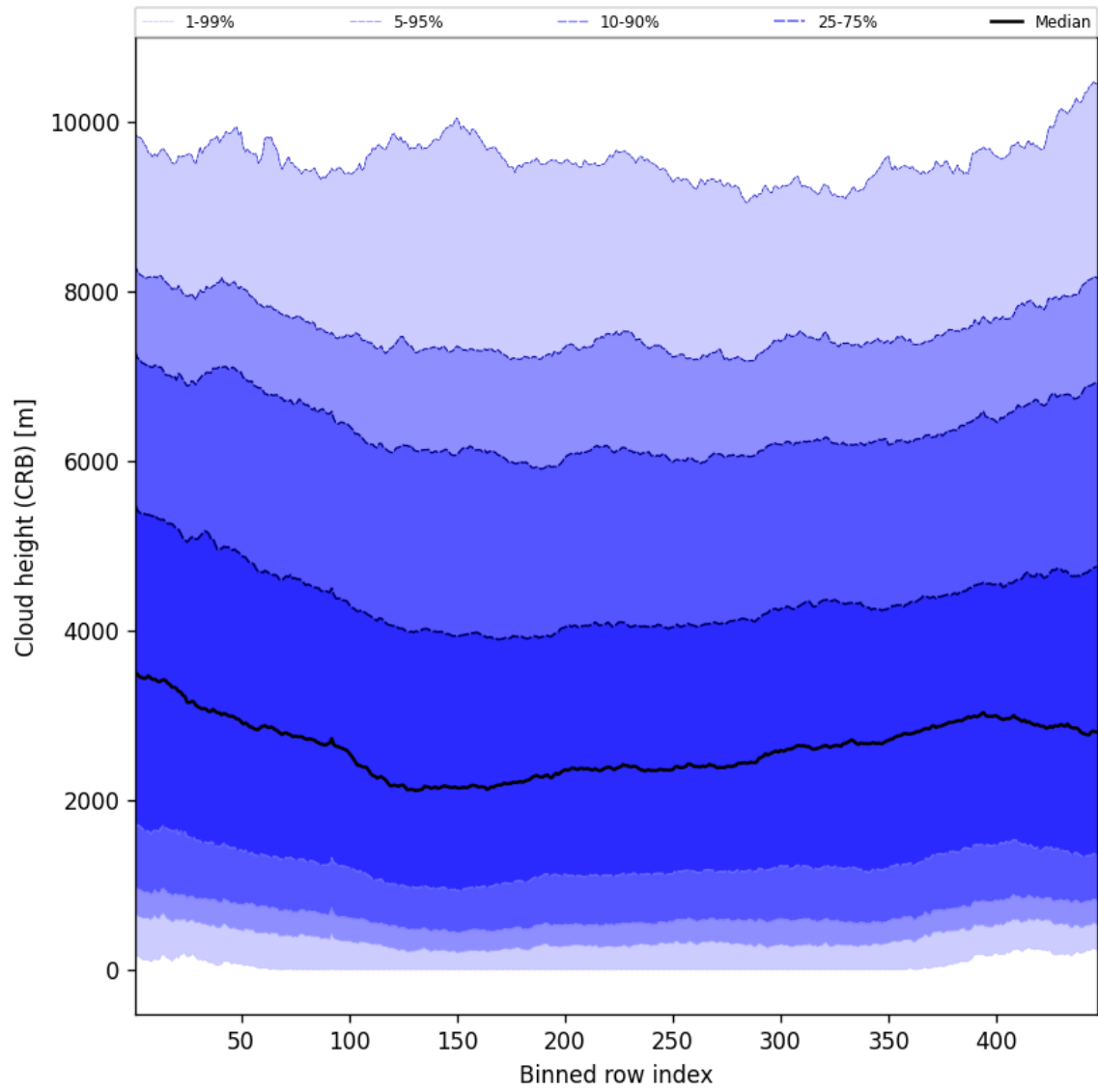


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-09-24 to 2025-09-25

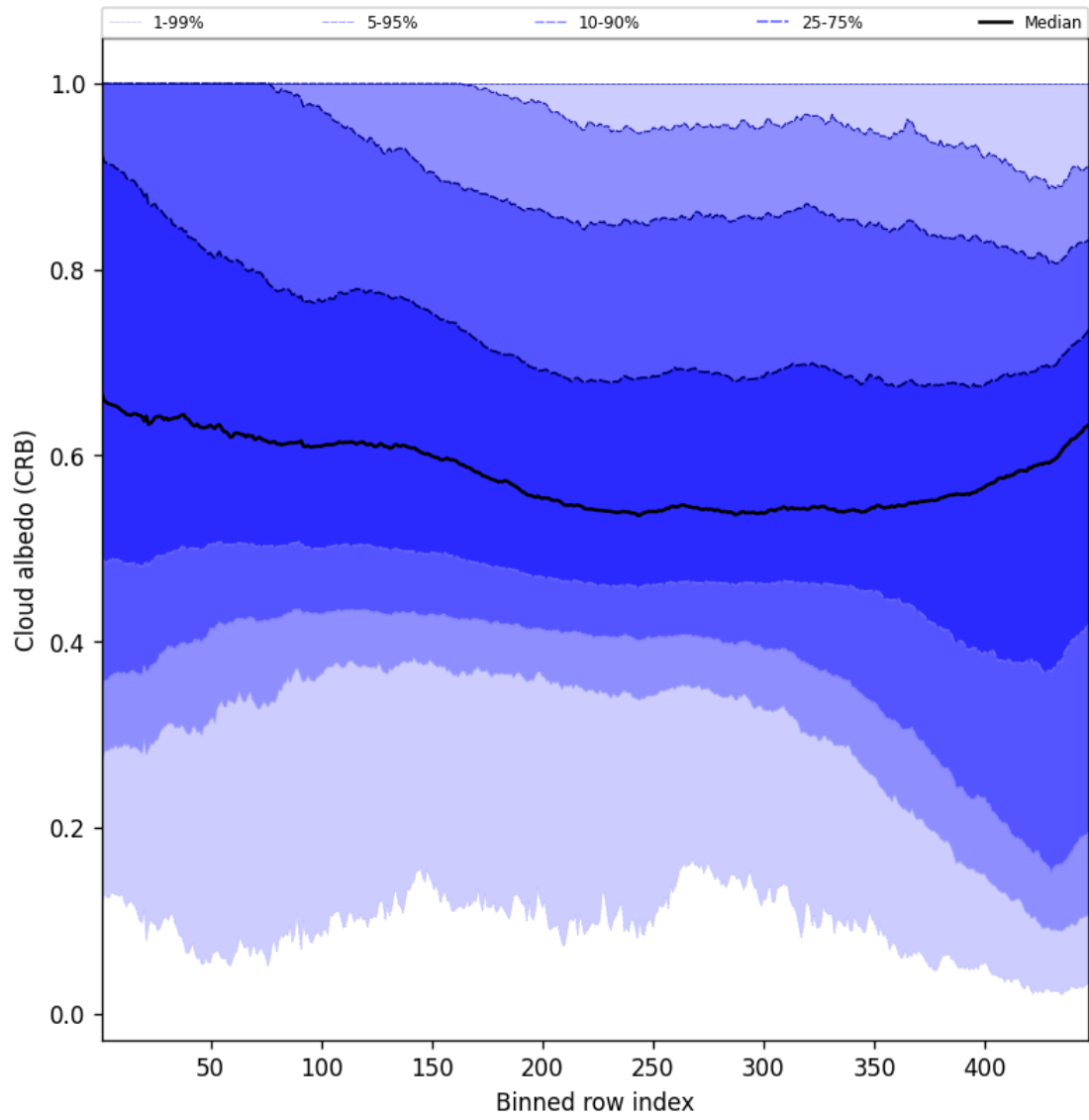


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-09-24 to 2025-09-25

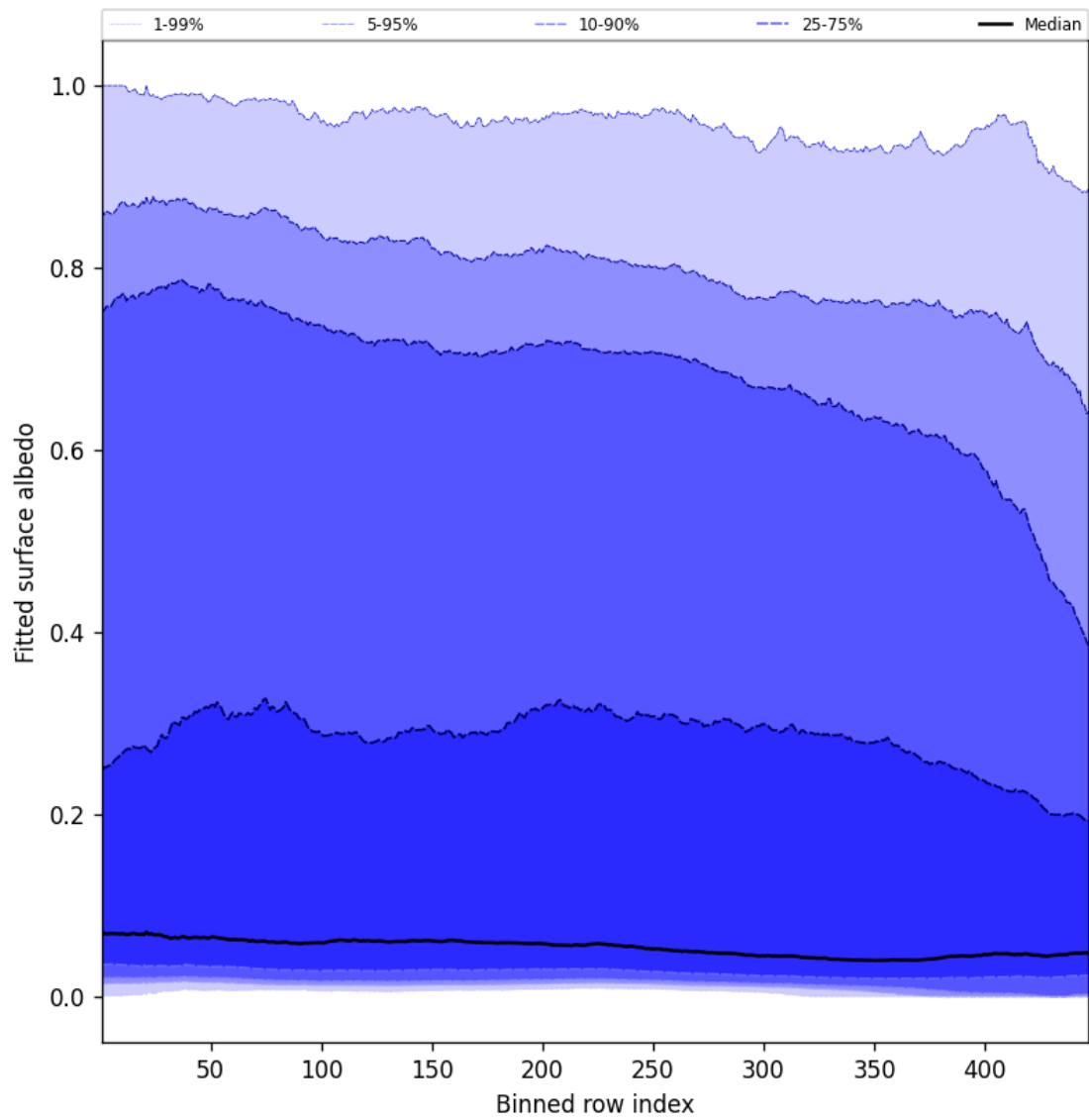


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-09-24 to 2025-09-25

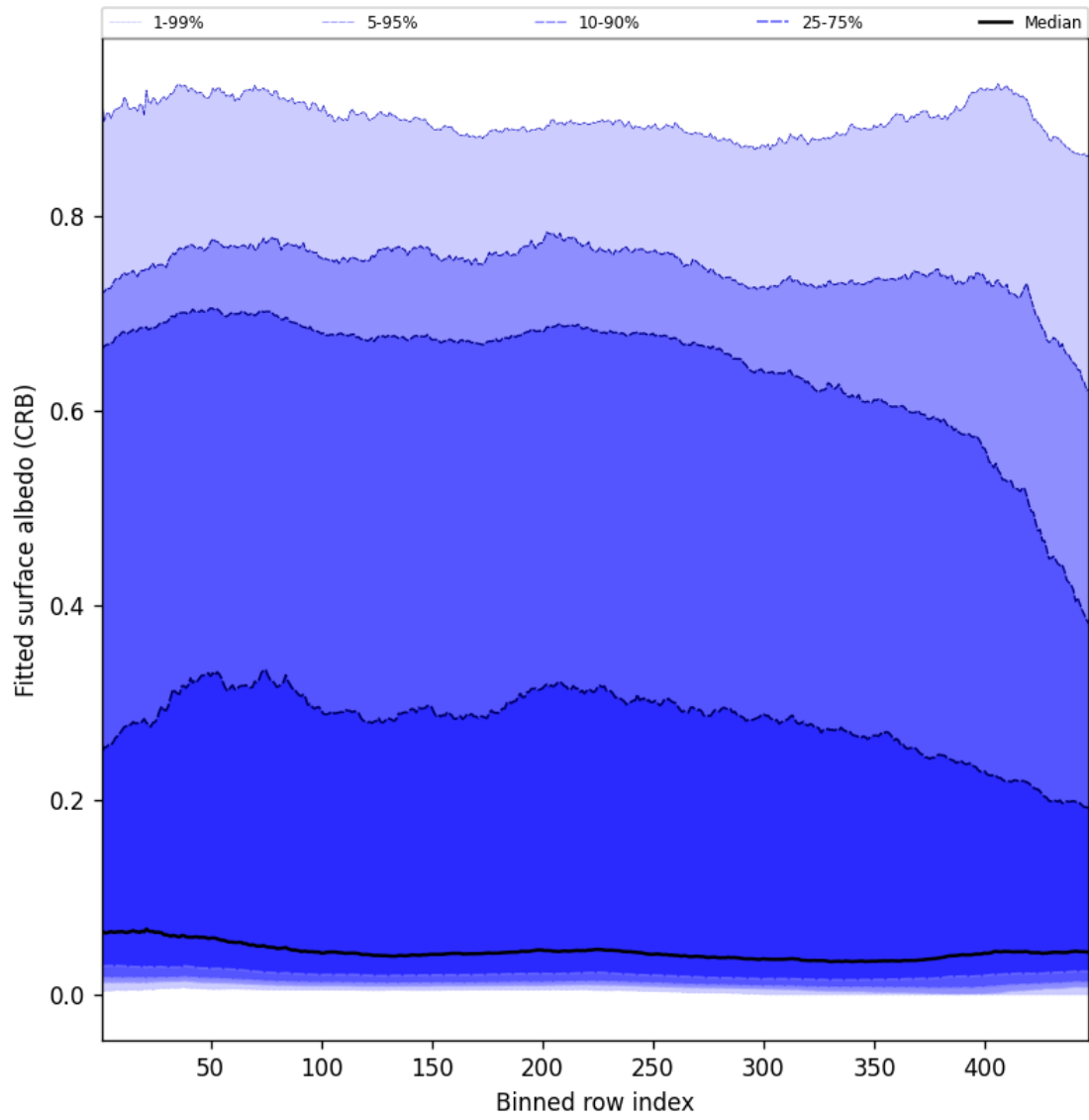


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-09-24 to 2025-09-25

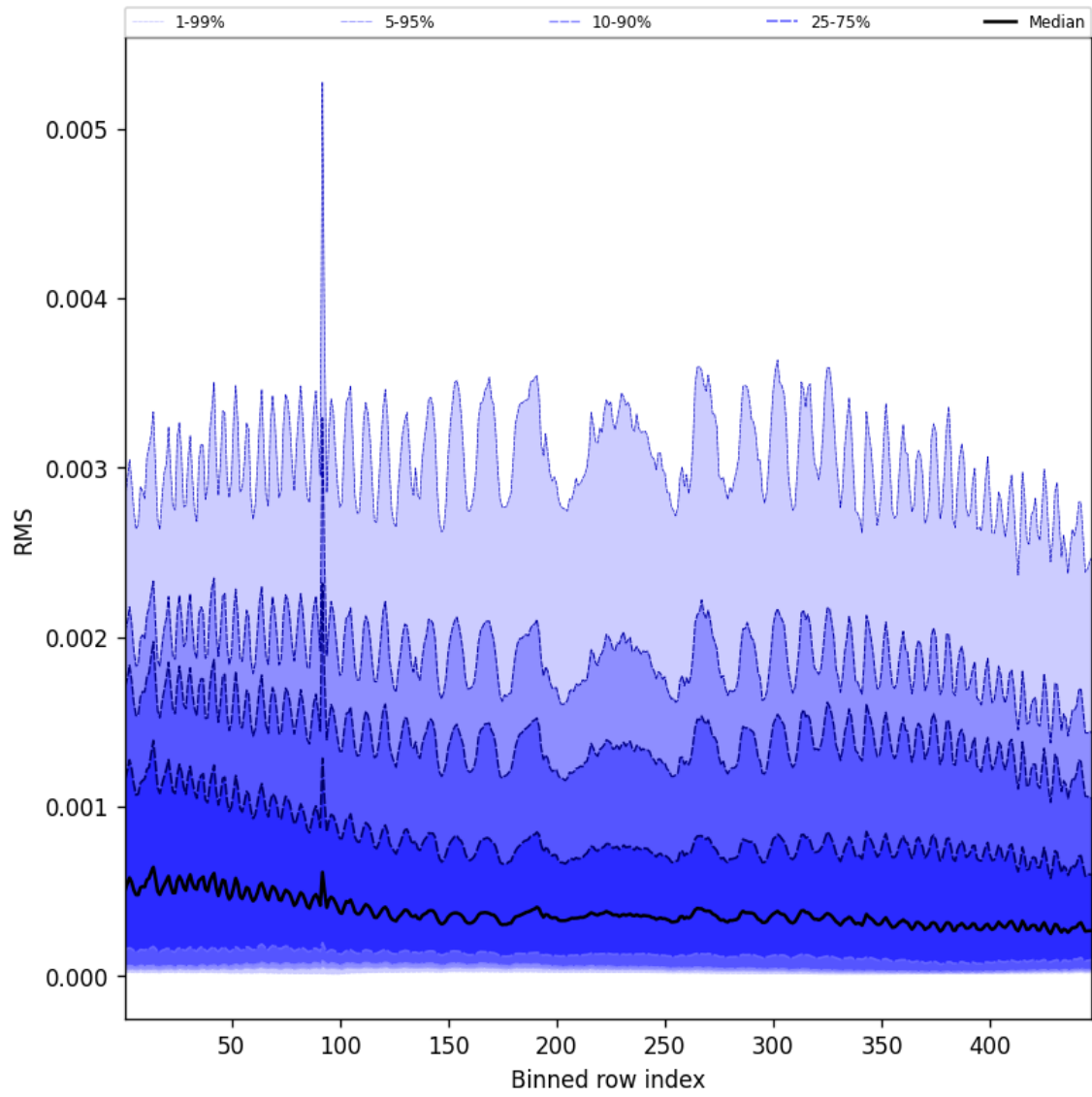


Figure 61: Along track statistics of “RMS” for 2025-09-24 to 2025-09-25

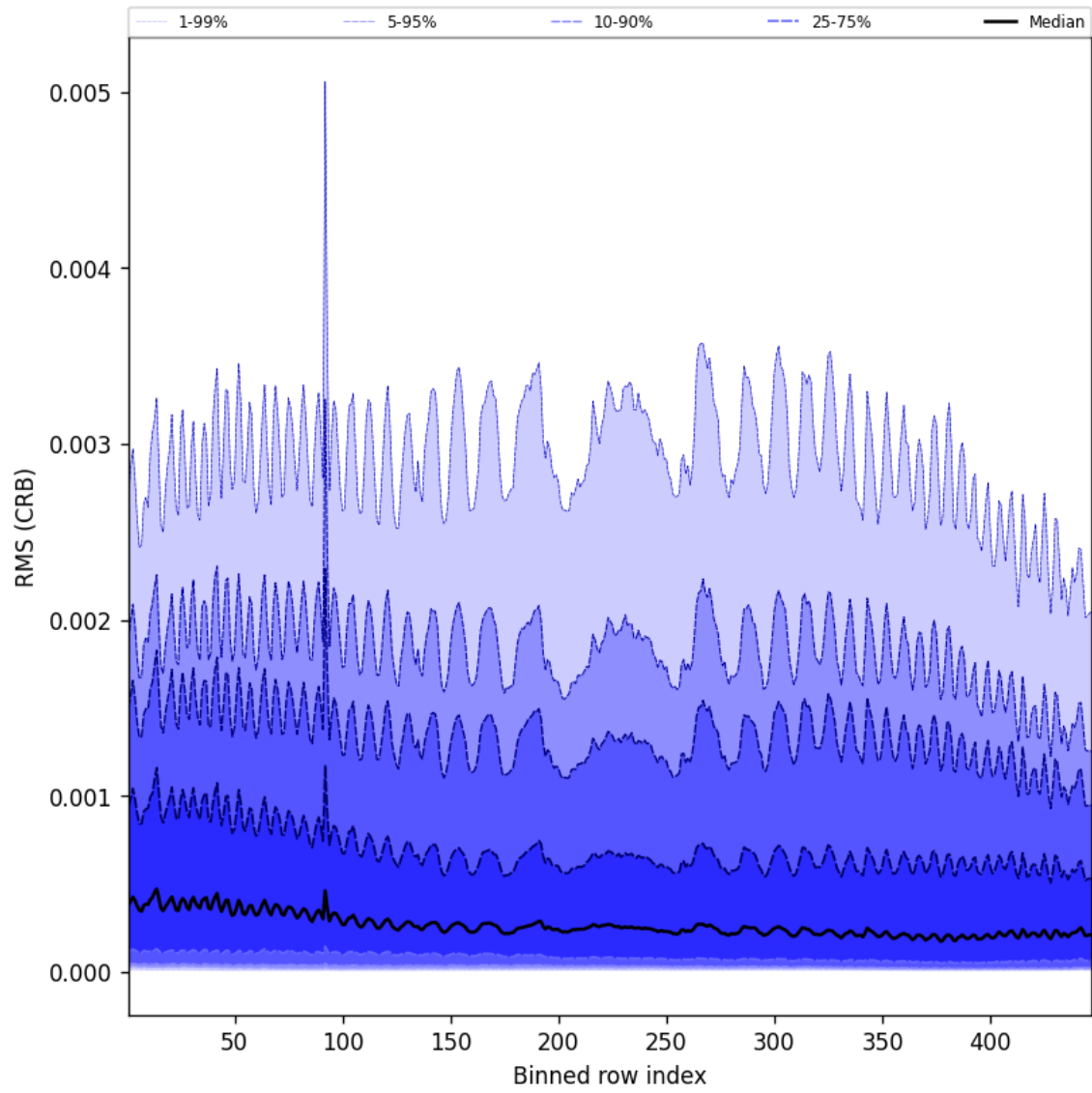


Figure 62: Along track statistics of “RMS (CRB)” for 2025-09-24 to 2025-09-25

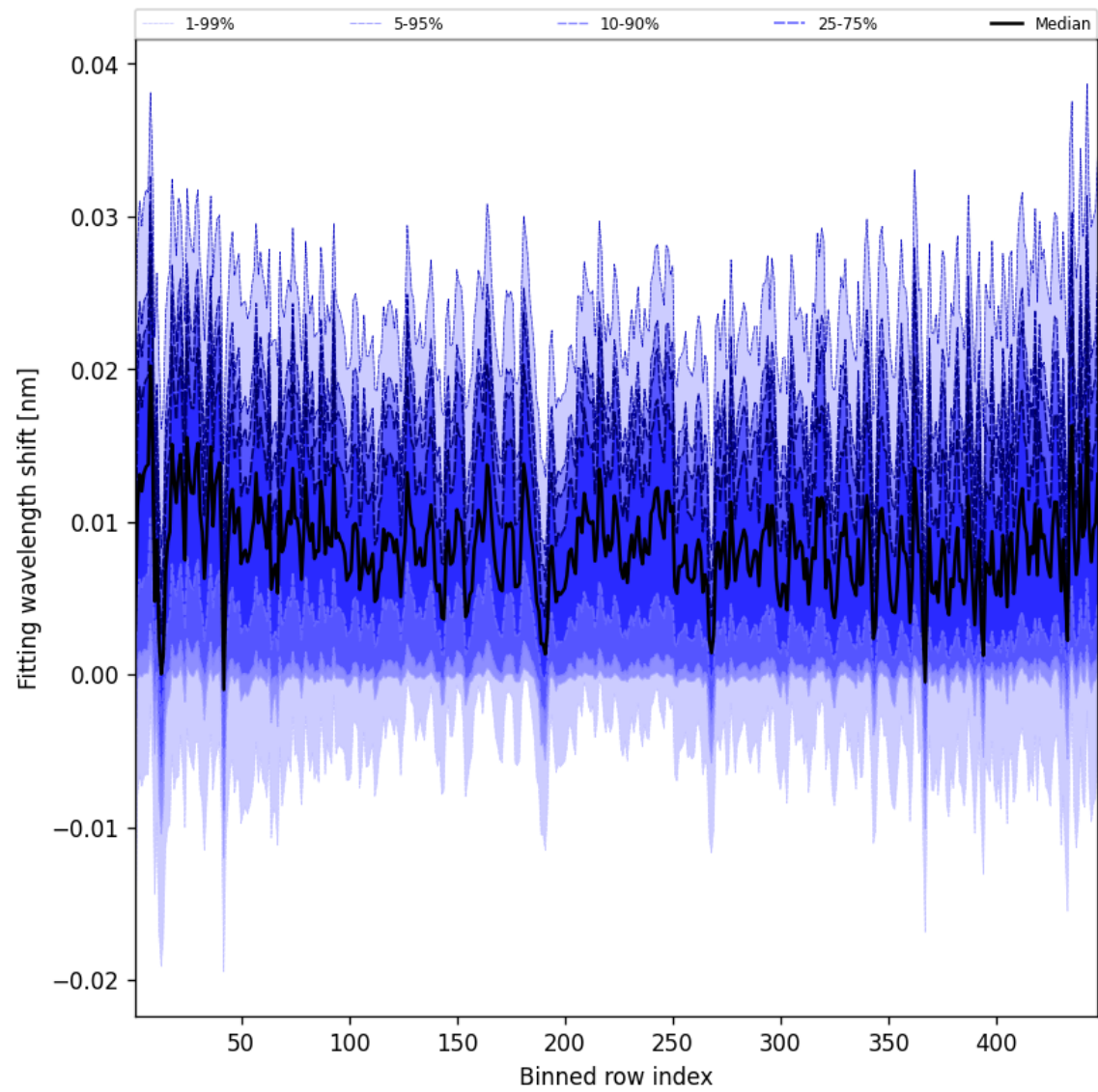


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-09-24 to 2025-09-25

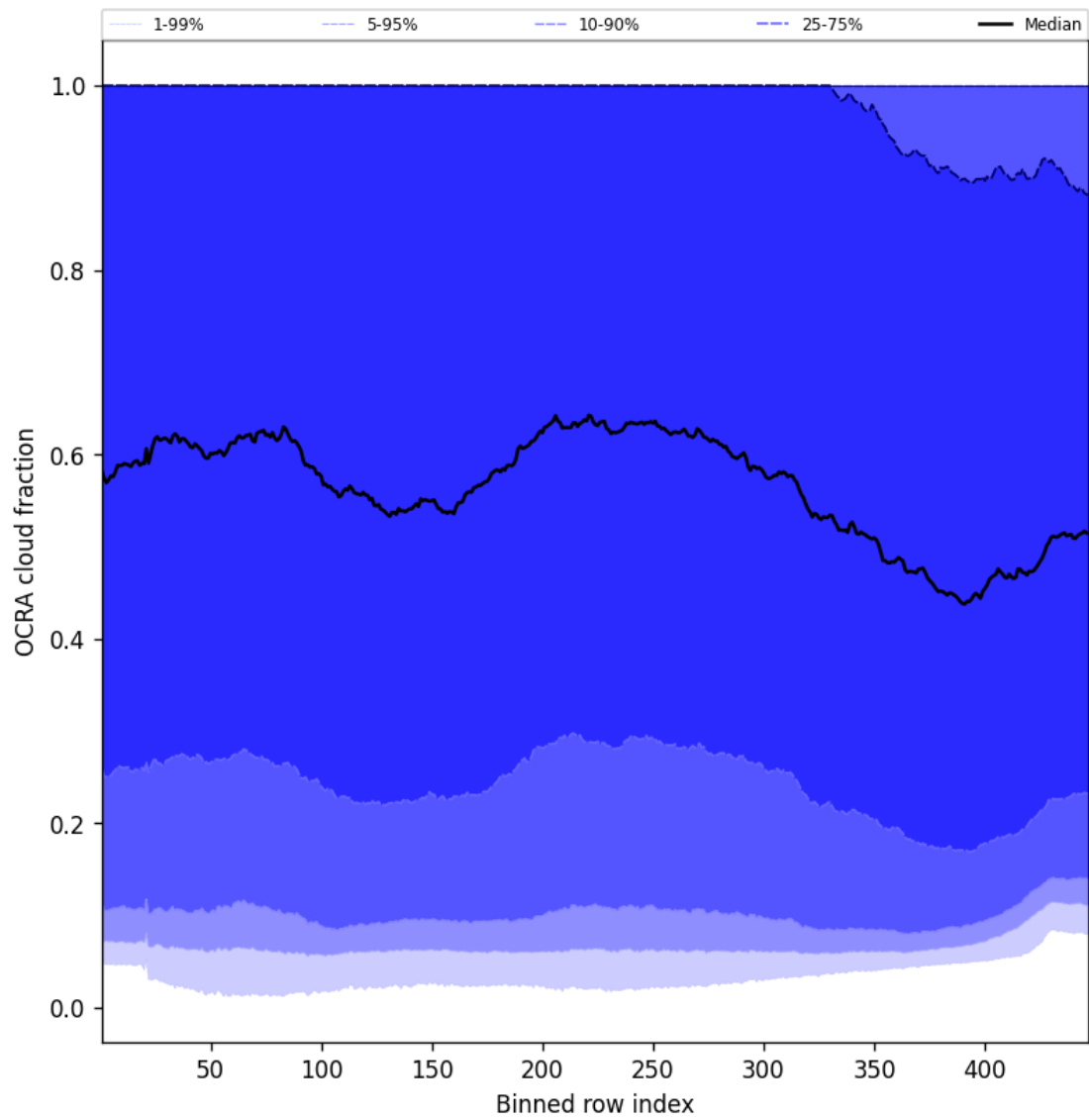


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-09-24 to 2025-09-25

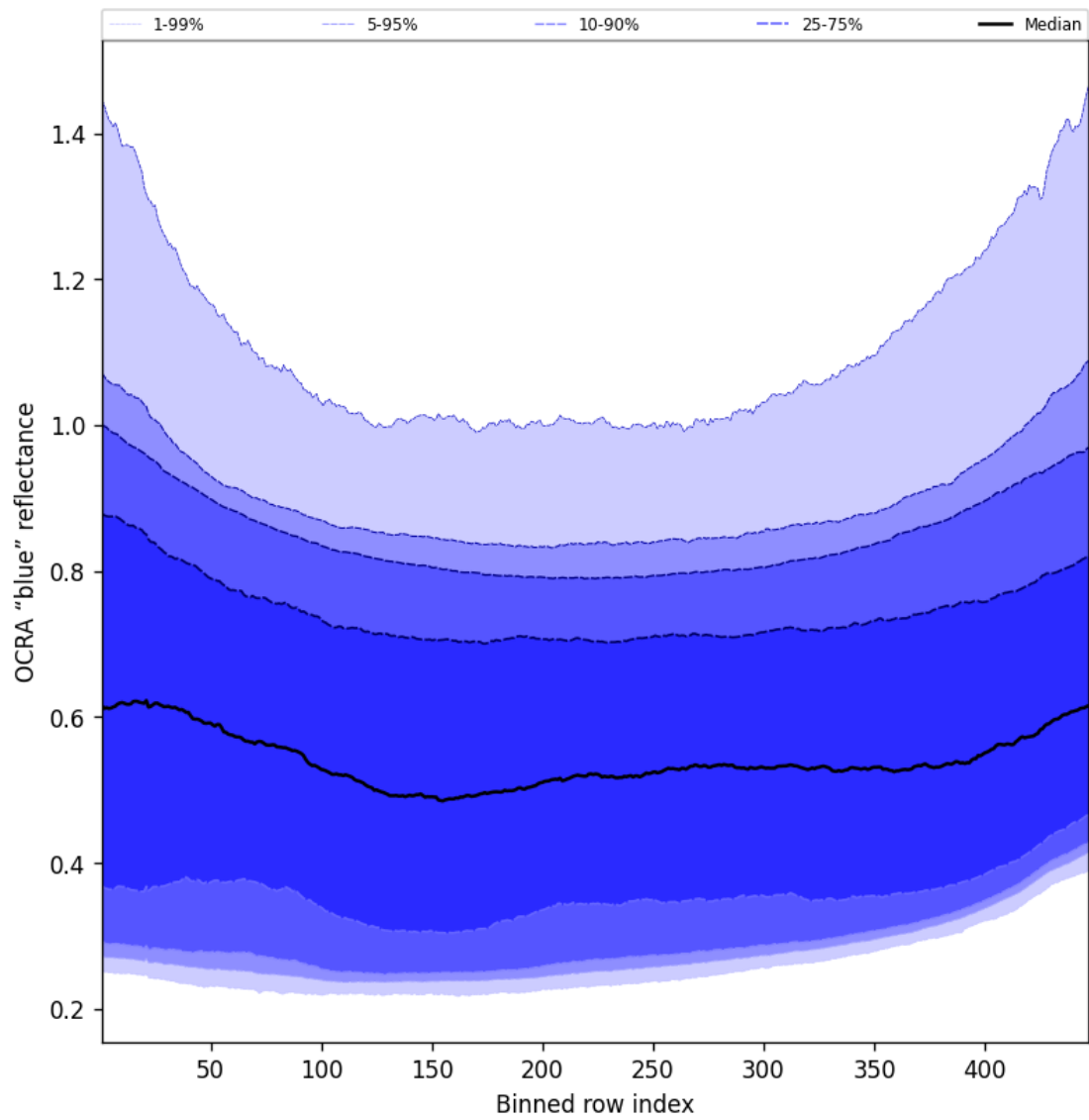


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-09-24 to 2025-09-25

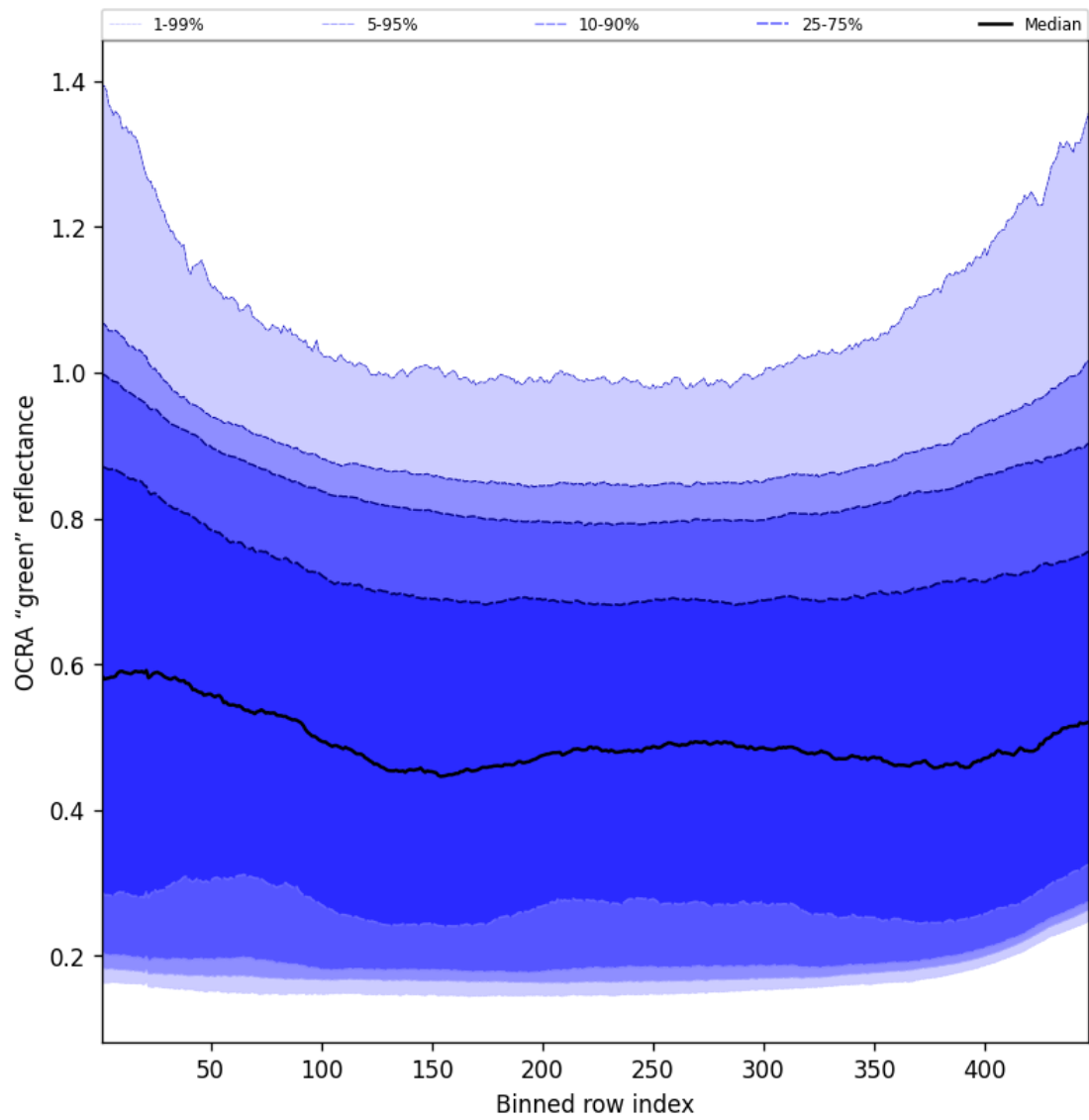


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-09-24 to 2025-09-25

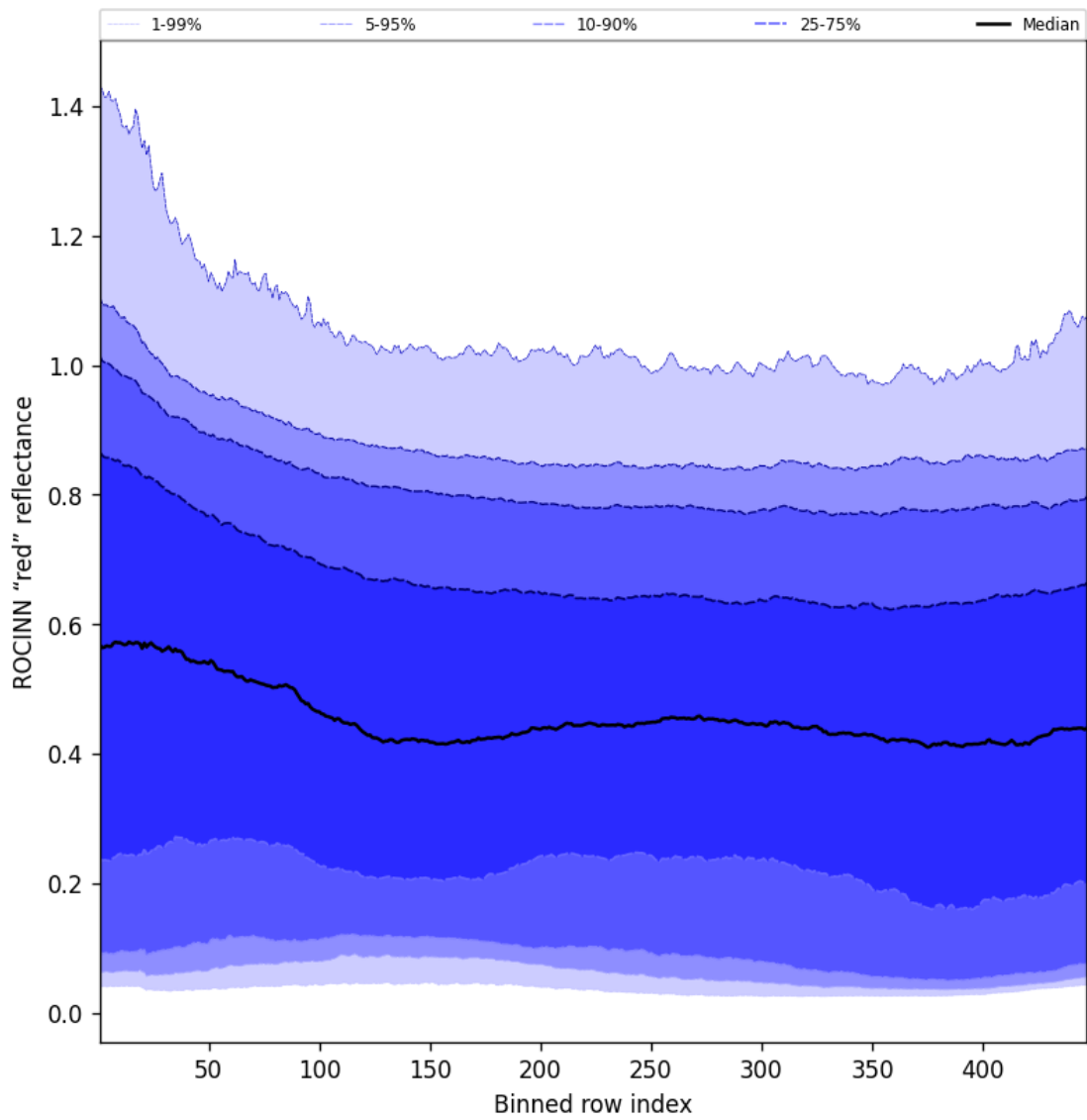


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-09-24 to 2025-09-25

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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