

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-06-20 (02:30)

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]	0.607 ± 0.376	14487687	0.995	0.680	0.760	0.0	1.000
cloud fraction [1]	0.599 ± 0.345	14487687	0.995	0.724	0.617	7.858×10^{-3}	1.000
cloud top height [m]	$(0.375 \pm 0.252) \times 10^4$	14487687	1.425×10^3	3.542×10^3	3.256×10^3	0.0	2.000×10^4
cloud optical thickness [1]	21.1 ± 37.5	14487687	9.34	12.2	9.88	1.000	250
cloud fraction crb [1]	0.598 ± 0.346	14487687	0.995	0.725	0.614	1.719×10^{-4}	1.000
cloud height crb [m]	$(0.294 \pm 0.226) \times 10^4$	14487687	75.0	3.269×10^3	2.439×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.561 ± 0.199	14487687	0.495	0.247	0.556	0.0	1.000
surface albedo fitted [1]	0.204 ± 0.241	14487687	2.500×10^{-2}	0.253	7.690×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.201 ± 0.246	14487687	1.500×10^{-2}	0.263	5.899×10^{-2}	0.0	1.000
fitted root mean square [1]	$(7.907 \pm 32.263) \times 10^{-4}$	14487687	5.000×10^{-5}	9.363×10^{-4}	3.602×10^{-4}	8.929×10^{-7}	2.80
fitted root mean square crb [1]	$(6.878 \pm 40.357) \times 10^{-4}$	14487687	5.000×10^{-5}	8.919×10^{-4}	2.891×10^{-4}	9.462×10^{-7}	2.15
wavelength shift [nm]	$(6.854 \pm 6.894) \times 10^{-3}$	14487687	-3.000×10^{-4}	1.006×10^{-2}	6.152×10^{-3}	-0.123	0.752
cloud fraction apriori [1]	0.607 ± 0.351	14487687	0.995	0.729	0.637	0.0	1.000
reflectance blue ocra [1]	0.524 ± 0.199	14487687	0.315	0.319	0.499	0.141	1.89
reflectance green ocra [1]	0.470 ± 0.226	14487687	0.185	0.380	0.443	8.374×10^{-2}	1.91
reflectance continuum aband [1]	0.430 ± 0.254	14487687	4.500×10^{-2}	0.398	0.409	1.271×10^{-2}	6.11

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	1.000×10^{-2}	0.260	0.940	1.000	1.000	1.000	1.000
cloud fraction [1]	2.620×10^{-2}	6.854×10^{-2}	0.108	0.164	0.272	0.996	1.000	1.000	1.000	1.000
cloud top height [m]	170	620	991	1.299×10^3	1.726×10^3	5.268×10^3	6.319×10^3	7.313×10^3	8.658×10^3	1.087×10^4
cloud optical thickness [1]	1.000	2.35	3.62	4.66	6.01	18.2	27.9	42.0	77.9	250
cloud fraction crb [1]	2.562×10^{-2}	6.756×10^{-2}	0.108	0.163	0.271	0.996	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	108	450	734	1.100×10^3	4.369×10^3	5.370×10^3	6.189×10^3	7.314×10^3	9.164×10^3
cloud albedo crb [1]	1.064×10^{-2}	0.215	0.308	0.383	0.446	0.693	0.763	0.821	0.894	1.000
surface albedo fitted [1]	0.0	1.078×10^{-2}	1.690×10^{-2}	2.249×10^{-2}	3.072×10^{-2}	0.284	0.438	0.619	0.772	0.927
surface albedo fitted crb [1]	3.276×10^{-4}	7.296×10^{-3}	1.169×10^{-2}	1.585×10^{-2}	2.213×10^{-2}	0.285	0.469	0.647	0.764	0.894
fitted root mean square [1]	8.339×10^{-6}	2.066×10^{-5}	3.462×10^{-5}	5.577×10^{-5}	1.010×10^{-4}	1.037×10^{-3}	1.510×10^{-3}	2.005×10^{-3}	2.736×10^{-3}	4.462×10^{-3}
fitted root mean square crb [1]	5.255×10^{-6}	1.083×10^{-5}	1.912×10^{-5}	3.094×10^{-5}	5.705×10^{-5}	9.489×10^{-4}	1.387×10^{-3}	1.840×10^{-3}	2.509×10^{-3}	3.868×10^{-3}
wavelength shift [nm]	-7.753×10^{-3}	-1.274×10^{-3}	-2.574×10^{-4}	1.740×10^{-4}	1.369×10^{-3}	1.143×10^{-2}	1.380×10^{-2}	1.582×10^{-2}	1.851×10^{-2}	2.433×10^{-2}
cloud fraction apriori [1]	2.958×10^{-2}	6.545×10^{-2}	0.102	0.157	0.271	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.229	0.257	0.281	0.309	0.353	0.672	0.749	0.808	0.868	0.975
reflectance green ocra [1]	0.148	0.172	0.194	0.220	0.267	0.647	0.733	0.795	0.858	0.964
reflectance continuum aband [1]	3.063×10^{-2}	5.627×10^{-2}	9.306×10^{-2}	0.144	0.226	0.624	0.716	0.778	0.854	0.985

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]	0.598 ± 0.368	9845858	0.660	0.750	0.0	1.000	0.240	0.900
cloud fraction [1]	0.645 ± 0.342	9845858	0.670	0.710	7.858×10^{-3}	1.000	0.330	1.000
cloud top height [m]	$(0.375 \pm 0.257) \times 10^4$	9845858	3.693×10^3	3.317×10^3	0.0	2.000×10^4	1.671×10^3	5.364×10^3
cloud optical thickness [1]	17.2 ± 30.7	9845858	10.2	9.09	1.000	250	5.47	15.6
cloud fraction crb [1]	0.644 ± 0.342	9845858	0.671	0.709	1.719×10^{-4}	1.000	0.329	1.000
cloud height crb [m]	$(0.289 \pm 0.230) \times 10^4$	9845858	3.486×10^3	2.424×10^3	0.0	2.000×10^4	961	4.447×10^3
cloud albedo crb [1]	0.547 ± 0.210	9845858	0.271	0.543	0.0	1.000	0.424	0.694
surface albedo fitted [1]	0.269 ± 0.263	9845858	0.365	0.194	0.0	1.000	3.953×10^{-2}	0.404
surface albedo fitted crb [1]	0.271 ± 0.266	9845858	0.400	0.194	0.0	1.000	3.240×10^{-2}	0.433
fitted root mean square [1]	$(1.003 \pm 3.881) \times 10^{-3}$	9845858	1.227×10^{-3}	5.828×10^{-4}	2.212×10^{-6}	2.80	1.337×10^{-4}	1.360×10^{-3}
fitted root mean square crb [1]	$(8.753 \pm 48.748) \times 10^{-4}$	9845858	1.154×10^{-3}	4.989×10^{-4}	9.716×10^{-7}	2.15	8.966×10^{-5}	1.244×10^{-3}
wavelength shift [nm]	$(7.782 \pm 6.965) \times 10^{-3}$	9845858	1.017×10^{-2}	7.521×10^{-3}	-0.123	0.752	2.272×10^{-3}	1.244×10^{-2}
cloud fraction apriori [1]	0.657 ± 0.345	9845858	0.660	0.743	0.0	1.000	0.340	1.000
reflectance blue ocra [1]	0.538 ± 0.206	9845858	0.345	0.525	0.141	1.80	0.354	0.700
reflectance green ocra [1]	0.493 ± 0.232	9845858	0.406	0.481	8.374×10^{-2}	1.91	0.277	0.683
reflectance continuum aband [1]	0.466 ± 0.249	9845858	0.396	0.455	1.271×10^{-2}	4.51	0.269	0.666

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]	0.624 ± 0.392	4641829	0.700	0.850	0.0	1.000	0.300	1.000
cloud fraction [1]	0.502 ± 0.333	4641829	0.628	0.459	7.969×10^{-3}	1.000	0.190	0.818
cloud top height [m]	$(0.375 \pm 0.240) \times 10^4$	4641829	3.211×10^3	3.141×10^3	0.0	1.974×10^4	1.813×10^3	5.024×10^3
cloud optical thickness [1]	29.3 ± 47.8	4641829	18.2	12.2	1.000	250	7.22	25.4
cloud fraction crb [1]	0.499 ± 0.333	4641829	0.625	0.455	7.799×10^{-3}	1.000	0.188	0.813
cloud height crb [m]	$(0.305 \pm 0.216) \times 10^4$	4641829	2.862×10^3	2.466×10^3	0.0	2.000×10^4	1.311×10^3	4.173×10^3
cloud albedo crb [1]	0.590 ± 0.170	4641829	0.203	0.575	0.0	1.000	0.487	0.690
surface albedo fitted [1]	$(6.377 \pm 7.981) \times 10^{-2}$	4641829	4.012×10^{-2}	3.823×10^{-2}	0.0	1.000	2.315×10^{-2}	6.327×10^{-2}
surface albedo fitted crb [1]	$(5.202 \pm 8.048) \times 10^{-2}$	4641829	2.822×10^{-2}	2.509×10^{-2}	0.0	1.000	1.474×10^{-2}	4.296×10^{-2}
fitted root mean square [1]	$(3.414 \pm 4.947) \times 10^{-4}$	4641829	3.533×10^{-4}	1.842×10^{-4}	8.929×10^{-7}	0.183	6.716×10^{-5}	4.205×10^{-4}
fitted root mean square crb [1]	$(2.900 \pm 4.416) \times 10^{-4}$	4641829	3.261×10^{-4}	1.054×10^{-4}	9.462×10^{-7}	1.731×10^{-2}	3.667×10^{-5}	3.628×10^{-4}
wavelength shift [nm]	$(4.887 \pm 6.304) \times 10^{-3}$	4641829	7.943×10^{-3}	3.527×10^{-3}	-4.764×10^{-2}	5.908×10^{-2}	5.147×10^{-4}	8.458×10^{-3}
cloud fraction apriori [1]	0.501 ± 0.340	4641829	0.650	0.456	0.0	1.000	0.178	0.828
reflectance blue ocrs [1]	0.493 ± 0.181	4641829	0.255	0.459	0.161	1.89	0.351	0.605
reflectance green ocrs [1]	0.423 ± 0.205	4641829	0.307	0.385	9.466×10^{-2}	1.88	0.252	0.559
reflectance continuum aband [1]	0.353 ± 0.247	4641829	0.368	0.316	1.455×10^{-2}	6.11	0.146	0.514

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]	0.621 ± 0.367	9295316	0.630	0.780	0.0	1.000	0.320	0.950
cloud fraction [1]	0.555 ± 0.343	9295316	0.710	0.539	7.969×10^{-3}	1.000	0.228	0.939
cloud top height [m]	$(0.353 \pm 0.257) \times 10^4$	9295316	3.348×10^3	2.858×10^3	0.0	2.000×10^4	1.520×10^3	4.868×10^3
cloud optical thickness [1]	22.9 ± 40.2	9295316	12.7	10.5	1.000	250	6.56	19.3
cloud fraction crb [1]	0.554 ± 0.343	9295316	0.710	0.536	1.719×10^{-4}	1.000	0.227	0.937
cloud height crb [m]	$(0.274 \pm 0.230) \times 10^4$	9295316	3.018×10^3	2.108×10^3	0.0	2.000×10^4	941	3.959×10^3
cloud albedo crb [1]	0.566 ± 0.185	9295316	0.229	0.554	0.0	1.000	0.456	0.685
surface albedo fitted [1]	0.141 ± 0.235	9295316	4.793×10^{-2}	3.813×10^{-2}	0.0	1.000	2.277×10^{-2}	7.070×10^{-2}
surface albedo fitted crb [1]	0.135 ± 0.238	9295316	3.673×10^{-2}	2.777×10^{-2}	0.0	1.000	1.603×10^{-2}	5.276×10^{-2}
fitted root mean square [1]	$(6.431 \pm 38.933) \times 10^{-4}$	9295316	6.743×10^{-4}	2.525×10^{-4}	8.929×10^{-7}	2.80	8.591×10^{-5}	7.602×10^{-4}
fitted root mean square crb [1]	$(5.542 \pm 49.750) \times 10^{-4}$	9295316	6.217×10^{-4}	1.869×10^{-4}	9.462×10^{-7}	2.15	5.367×10^{-5}	6.754×10^{-4}
wavelength shift [nm]	$(6.689 \pm 7.000) \times 10^{-3}$	9295316	9.721×10^{-3}	5.829×10^{-3}	-0.123	0.752	1.475×10^{-3}	1.120×10^{-2}
cloud fraction apriori [1]	0.562 ± 0.349	9295316	0.747	0.554	0.0	1.000	0.225	0.973
reflectance blue ocra [1]	0.520 ± 0.194	9295316	0.310	0.496	0.170	1.89	0.353	0.663
reflectance green ocra [1]	0.463 ± 0.223	9295316	0.377	0.439	0.104	1.88	0.260	0.637
reflectance continuum aband [1]	0.391 ± 0.260	9295316	0.444	0.371	1.455×10^{-2}	6.11	0.150	0.595

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]	0.615 ± 0.379	2961790	0.730	0.770	0.0	1.000	0.210	0.940
cloud fraction [1]	0.650 ± 0.348	2961790	0.674	0.739	7.858×10^{-3}	1.000	0.326	1.000
cloud top height [m]	$(0.437 \pm 0.244) \times 10^4$	2961790	3.434×10^3	4.111×10^3	0.0	2.000×10^4	2.508×10^3	5.942×10^3
cloud optical thickness [1]	17.8 ± 30.9	2961790	10.3	8.85	1.000	250	5.64	16.0
cloud fraction crb [1]	0.650 ± 0.348	2961790	0.675	0.739	7.799×10^{-3}	1.000	0.325	1.000
cloud height crb [m]	$(0.347 \pm 0.218) \times 10^4$	2961790	3.374×10^3	3.073×10^3	0.0	2.000×10^4	1.715×10^3	5.089×10^3
cloud albedo crb [1]	0.583 ± 0.216	2961790	0.283	0.585	0.0	1.000	0.454	0.737
surface albedo fitted [1]	0.344 ± 0.223	2961790	0.147	0.264	0.0	1.000	0.207	0.353
surface albedo fitted crb [1]	0.343 ± 0.220	2961790	0.152	0.261	4.764×10^{-3}	1.000	0.204	0.356
fitted root mean square [1]	$(1.134 \pm 1.237) \times 10^{-3}$	2961790	1.324×10^{-3}	8.195×10^{-4}	2.216×10^{-6}	0.202	3.065×10^{-4}	1.630×10^{-3}
fitted root mean square crb [1]	$(1.053 \pm 1.027) \times 10^{-3}$	2961790	1.310×10^{-3}	7.923×10^{-4}	1.181×10^{-6}	8.676×10^{-2}	2.484×10^{-4}	1.558×10^{-3}
wavelength shift [nm]	$(7.274 \pm 6.493) \times 10^{-3}$	2961790	9.994×10^{-3}	7.087×10^{-3}	-3.772×10^{-2}	5.118×10^{-2}	1.728×10^{-3}	1.172×10^{-2}
cloud fraction apriori [1]	0.664 ± 0.353	2961790	0.673	0.782	0.0	1.000	0.327	1.000
reflectance blue ocra [1]	0.533 ± 0.223	2961790	0.375	0.497	0.143	1.80	0.335	0.710
reflectance green ocra [1]	0.488 ± 0.248	2961790	0.427	0.444	8.784×10^{-2}	1.91	0.264	0.691
reflectance continuum aband [1]	0.520 ± 0.229	2961790	0.373	0.470	1.654×10^{-2}	4.54	0.329	0.702

3 Granule outlines

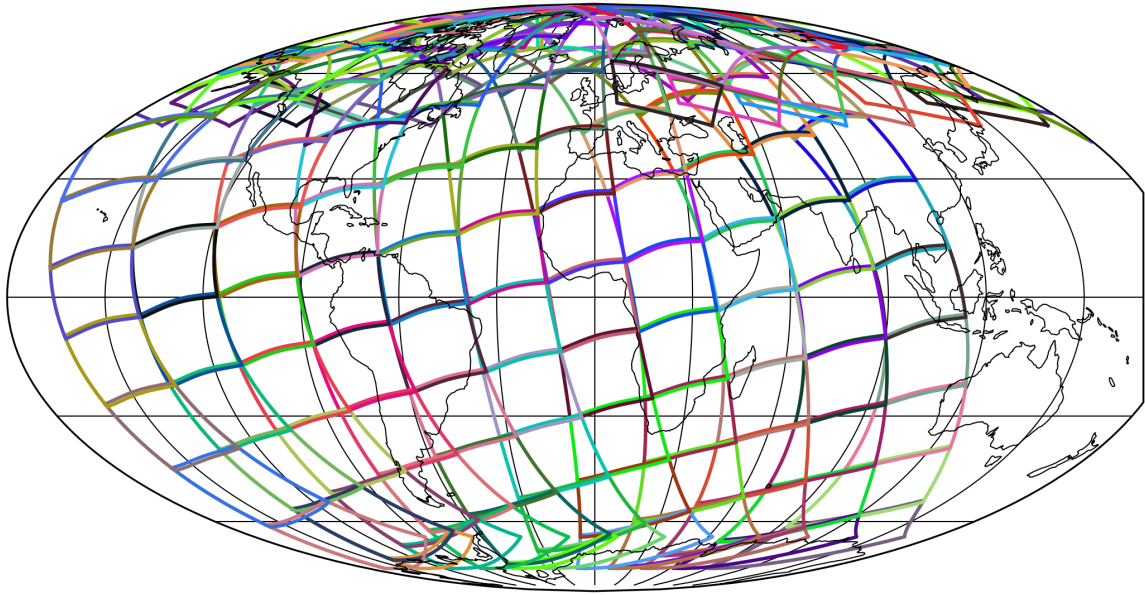


Figure 1: Outline of the granules.

4 Input data monitoring

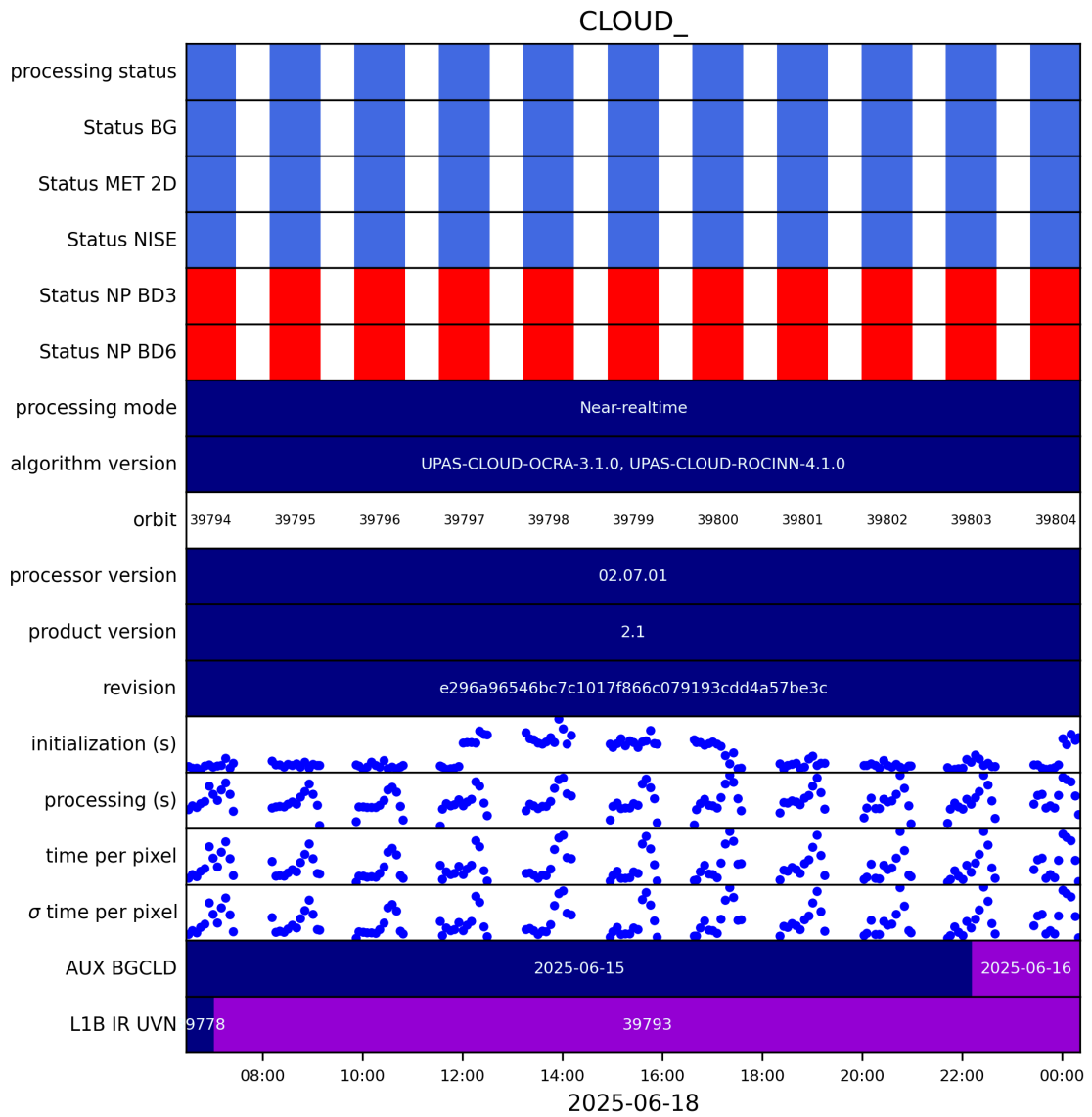


Figure 2: Input data per granule

5 Warnings and errors

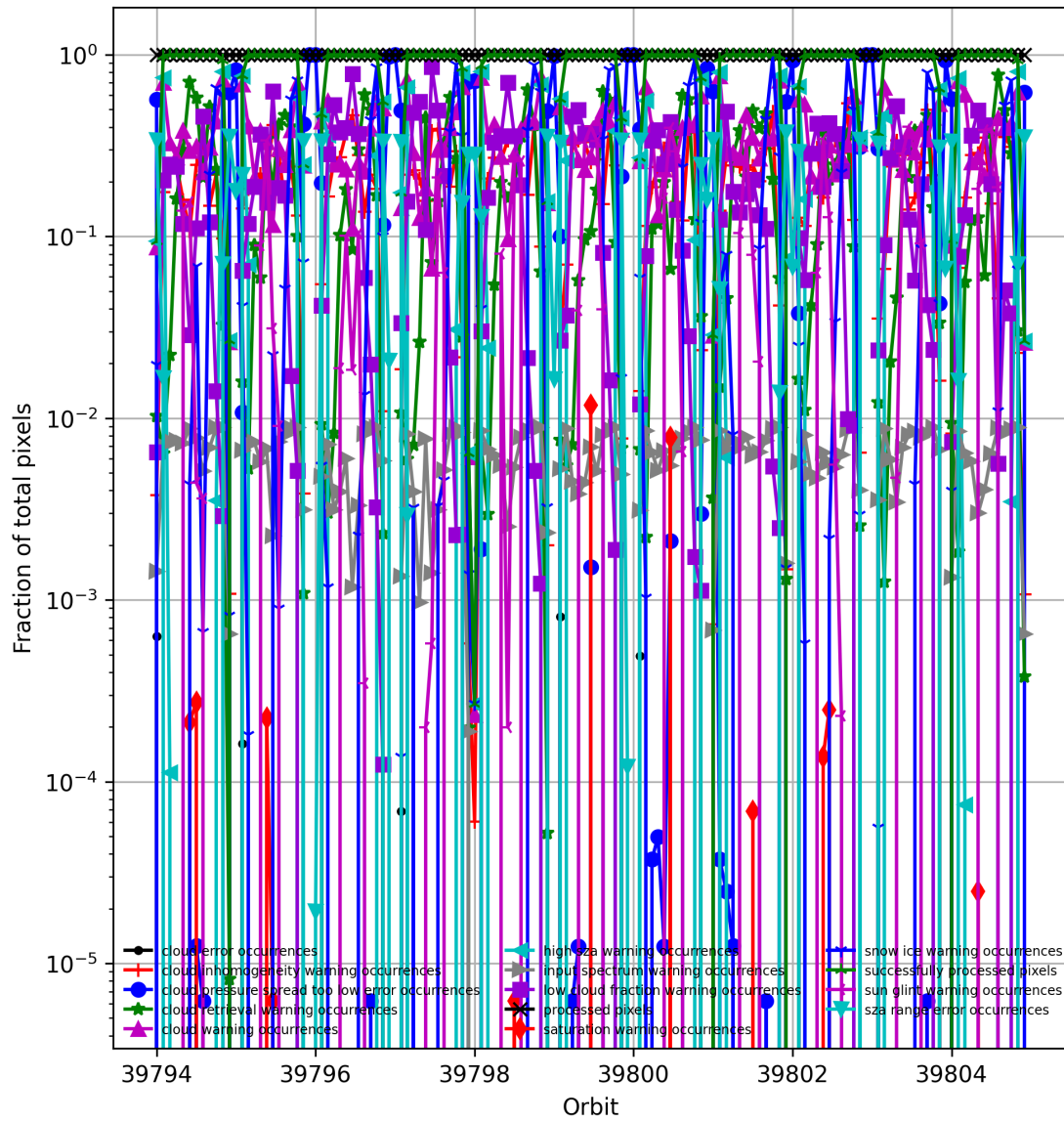


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

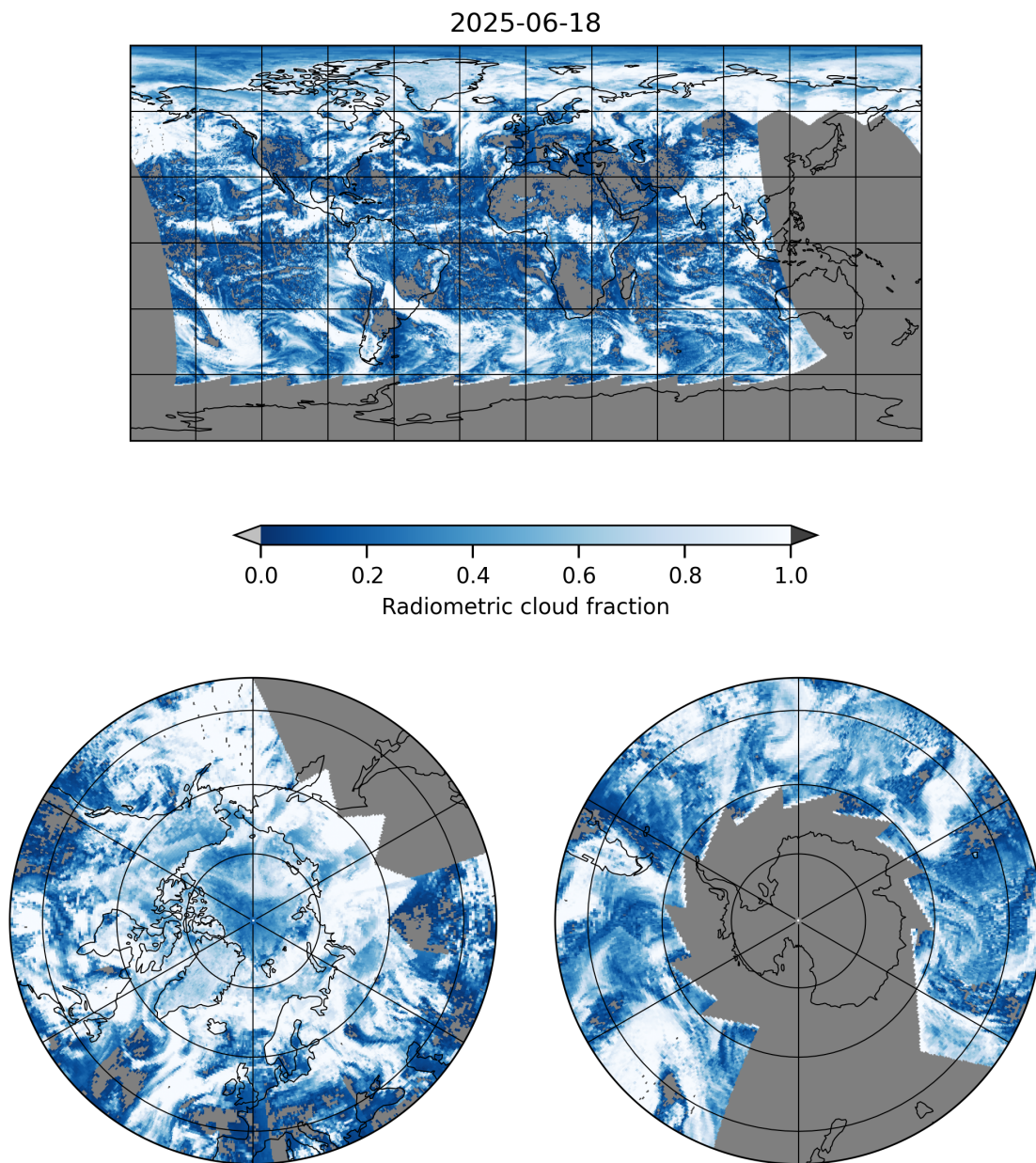


Figure 4: Map of “Radiometric cloud fraction” for 2025-06-18 to 2025-06-19

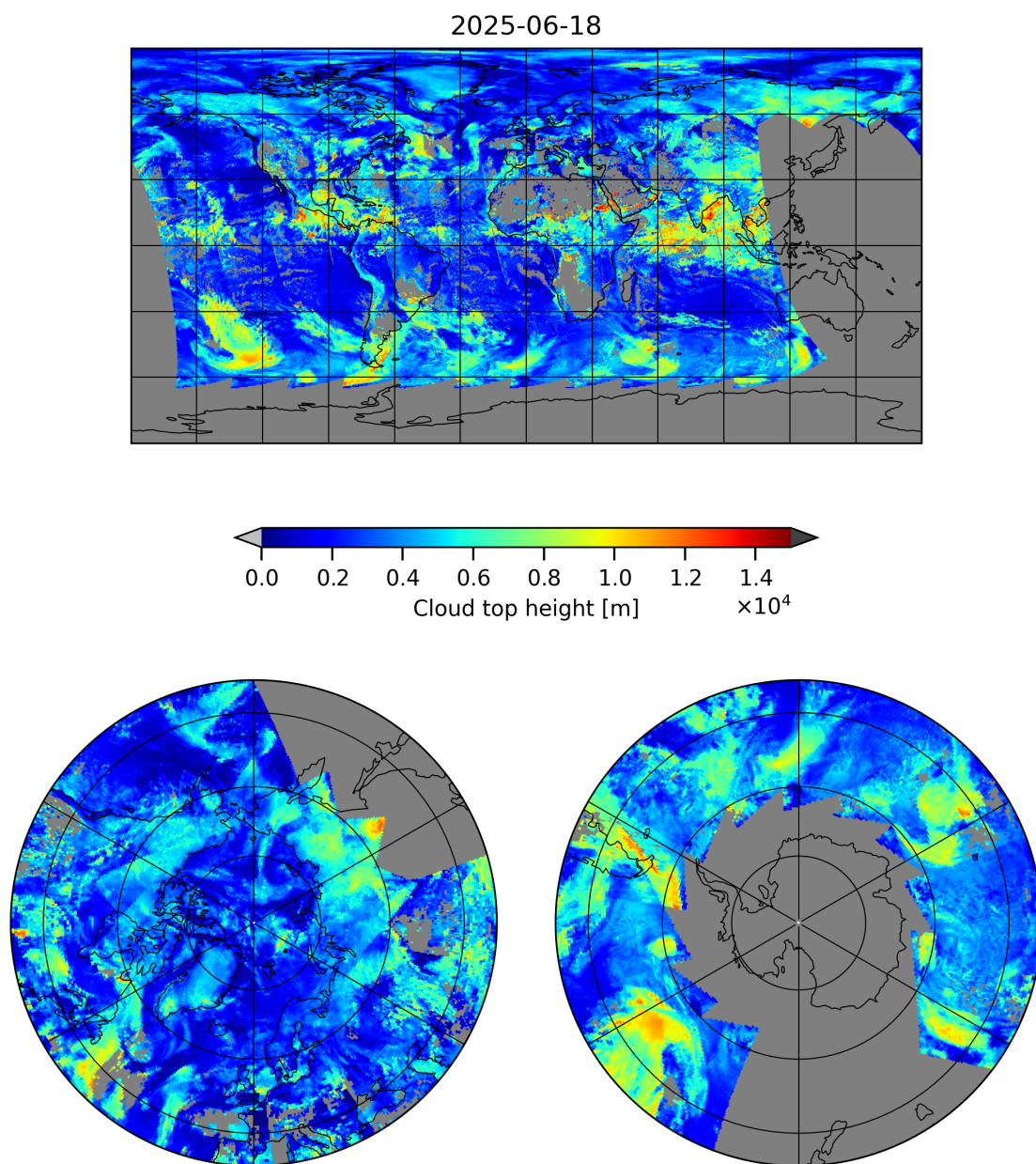


Figure 5: Map of “Cloud top height” for 2025-06-18 to 2025-06-19

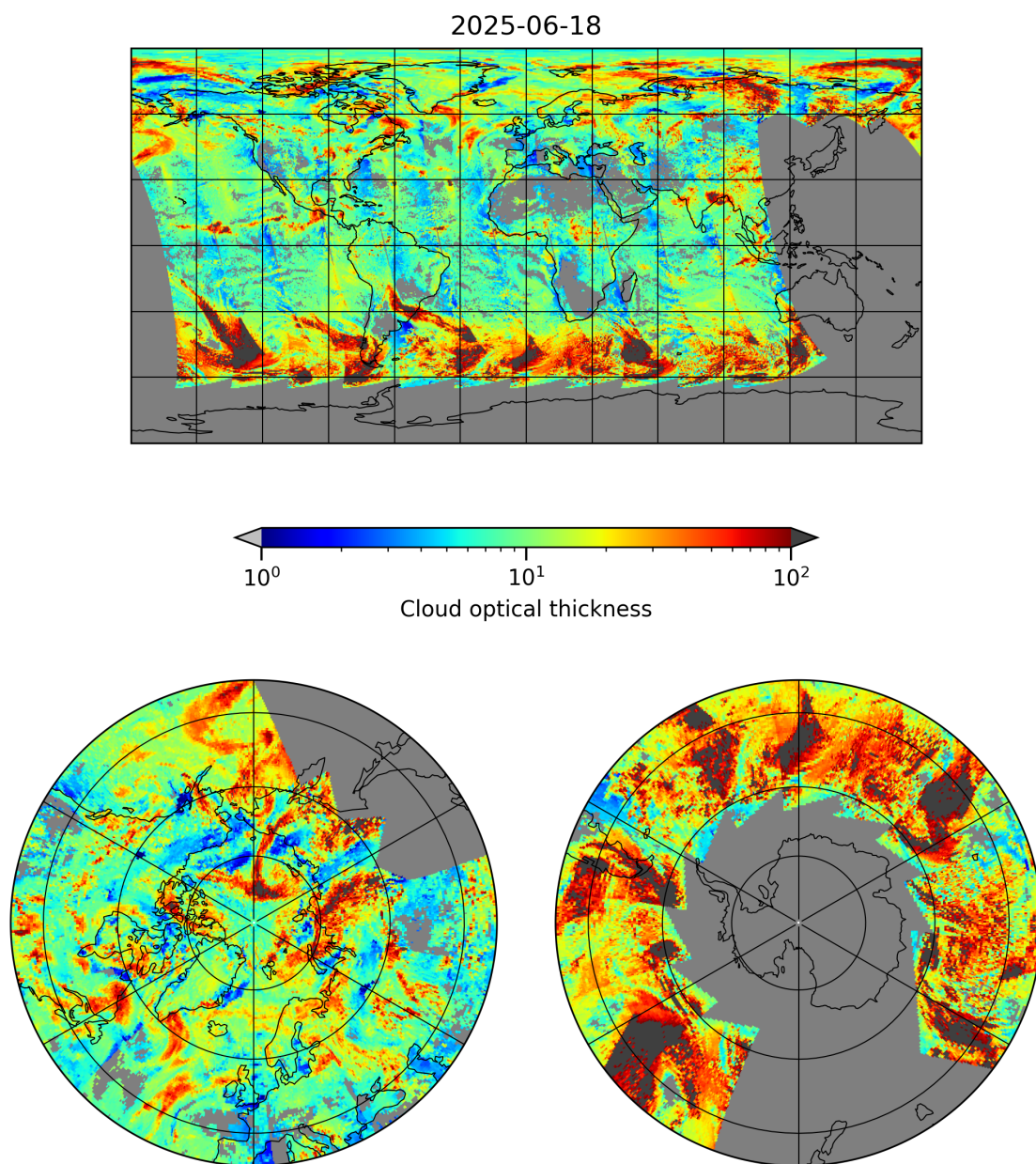


Figure 6: Map of “Cloud optical thickness” for 2025-06-18 to 2025-06-19

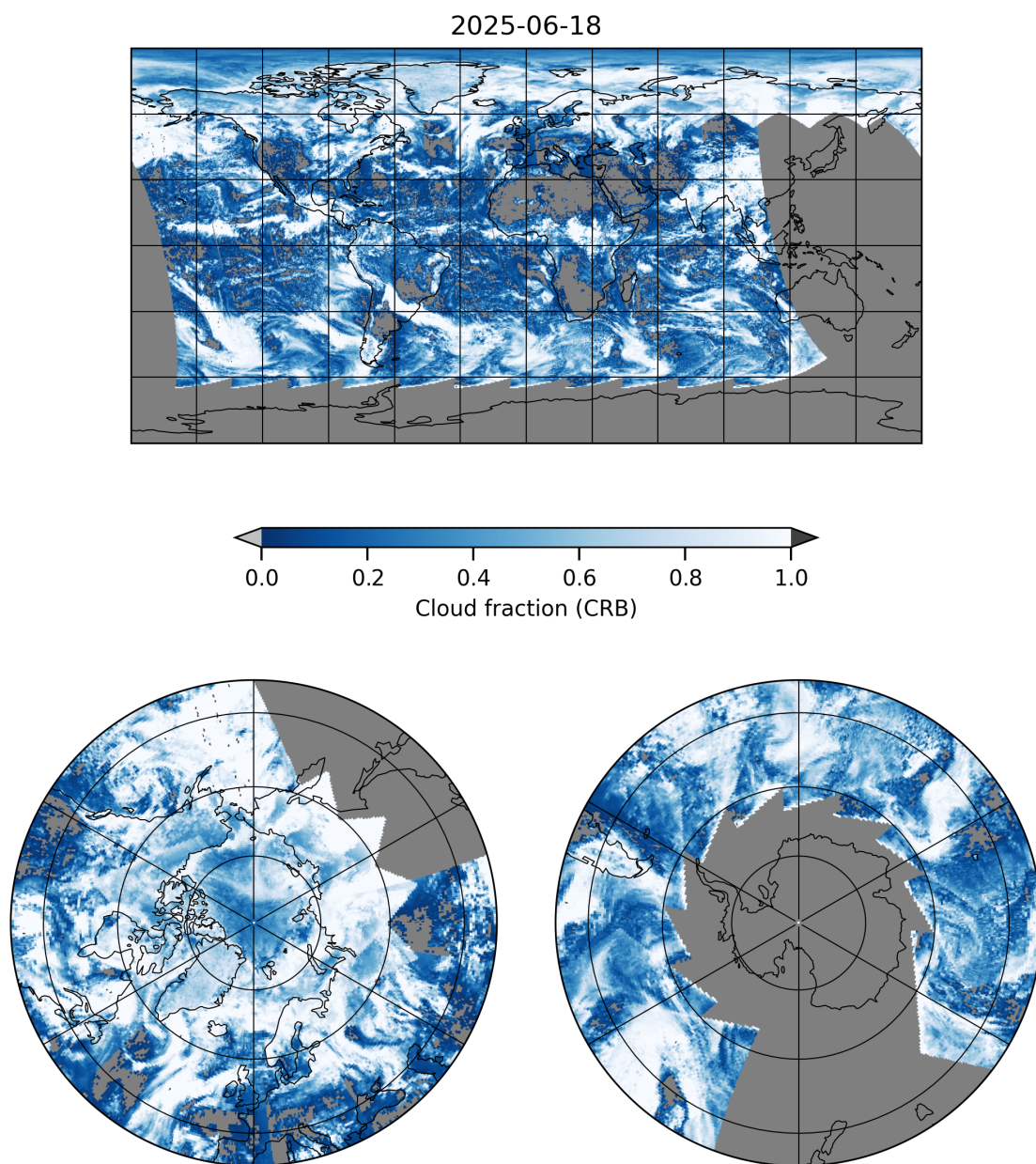


Figure 7: Map of “Cloud fraction (CRB)” for 2025-06-18 to 2025-06-19

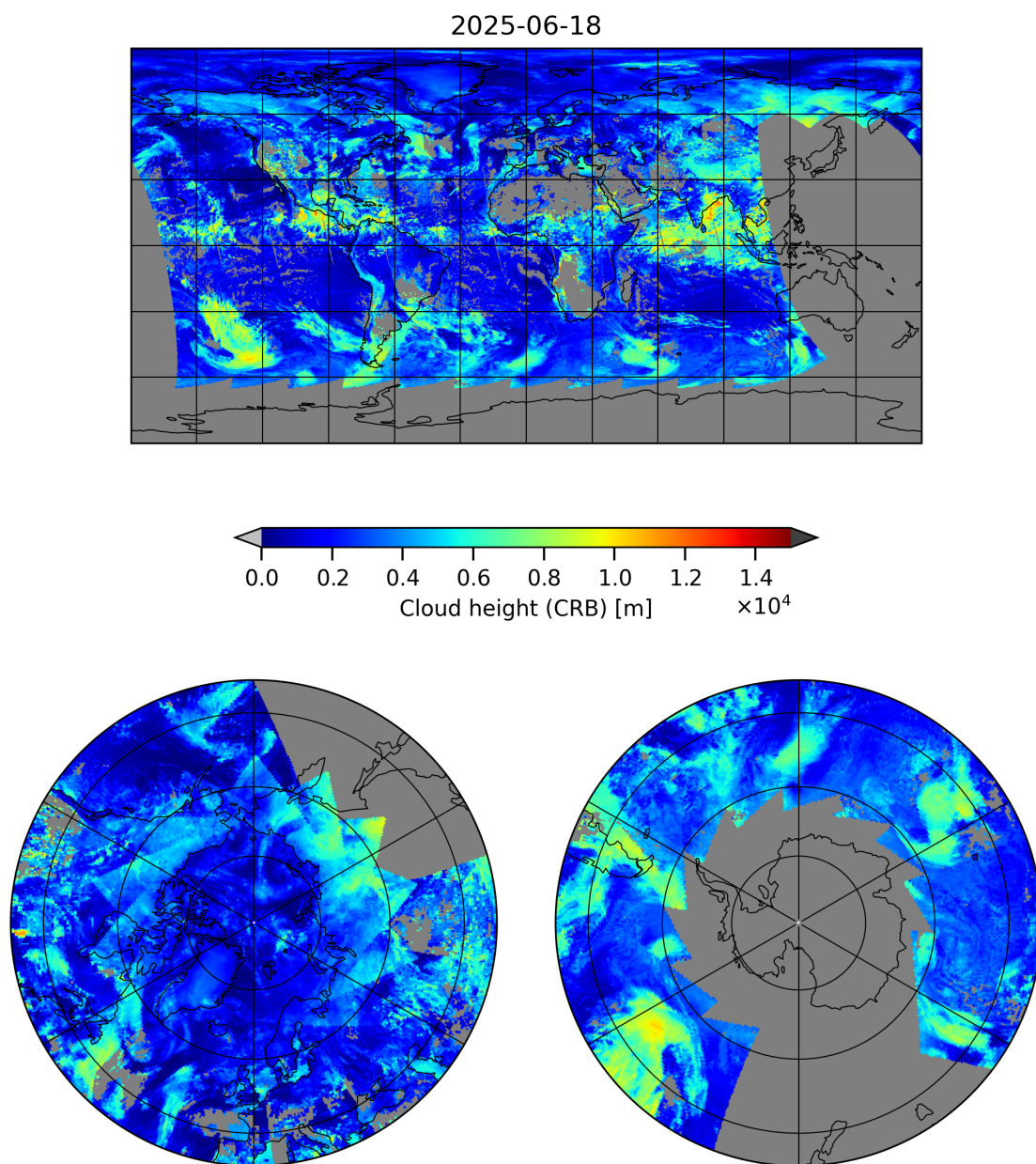


Figure 8: Map of “Cloud height (CRB)” for 2025-06-18 to 2025-06-19

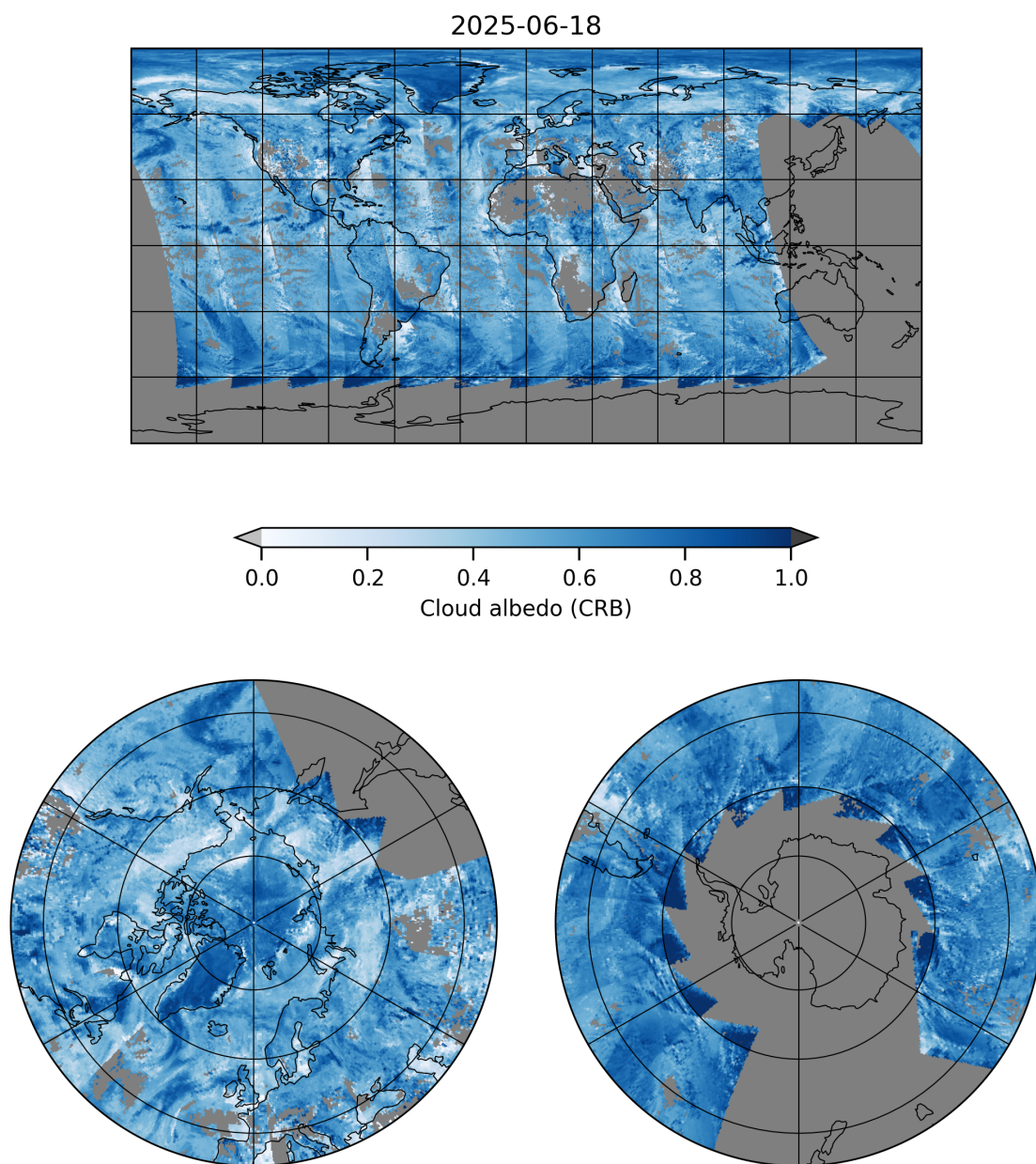


Figure 9: Map of “Cloud albedo (CRB)” for 2025-06-18 to 2025-06-19

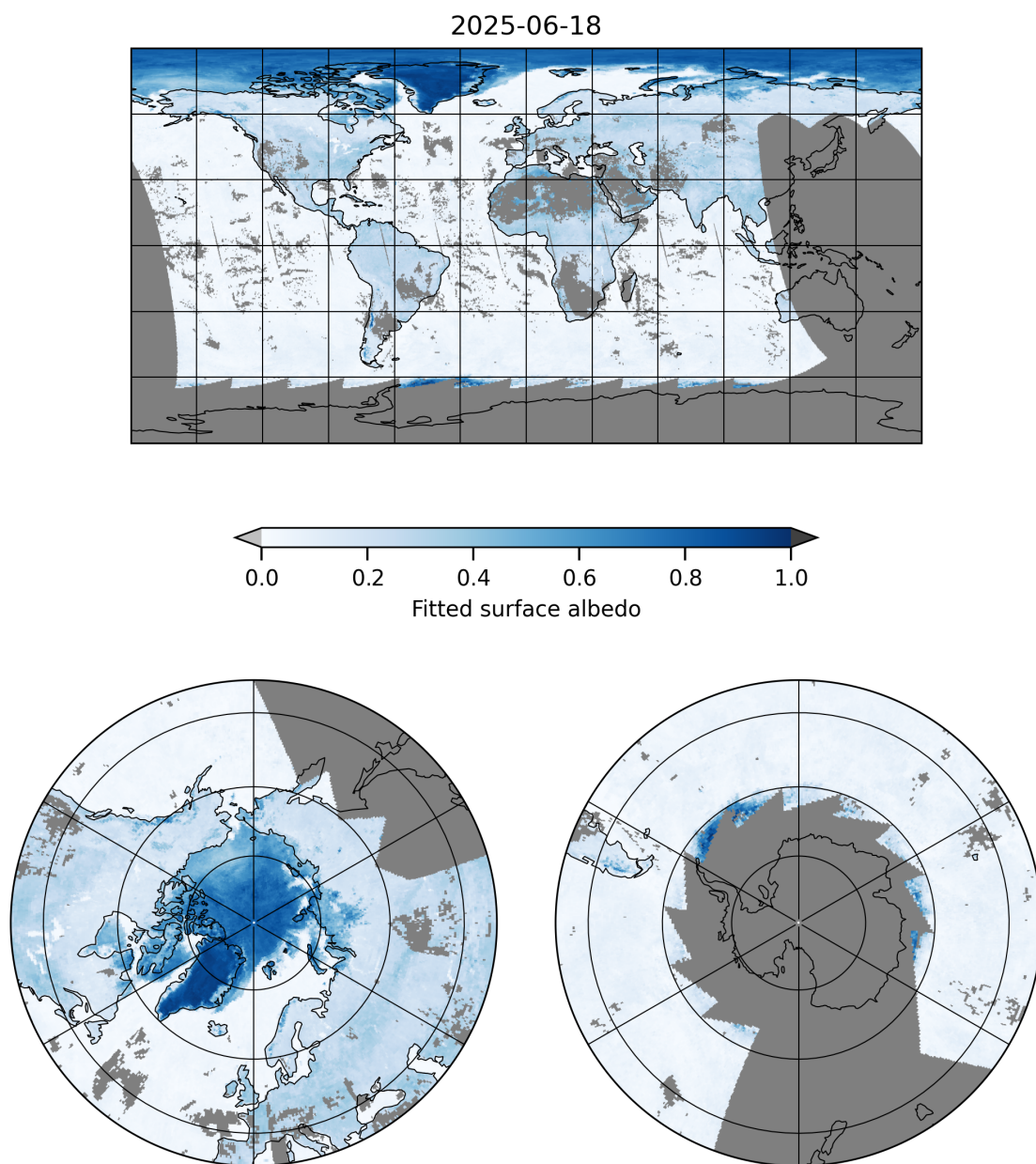


Figure 10: Map of “Fitted surface albedo” for 2025-06-18 to 2025-06-19

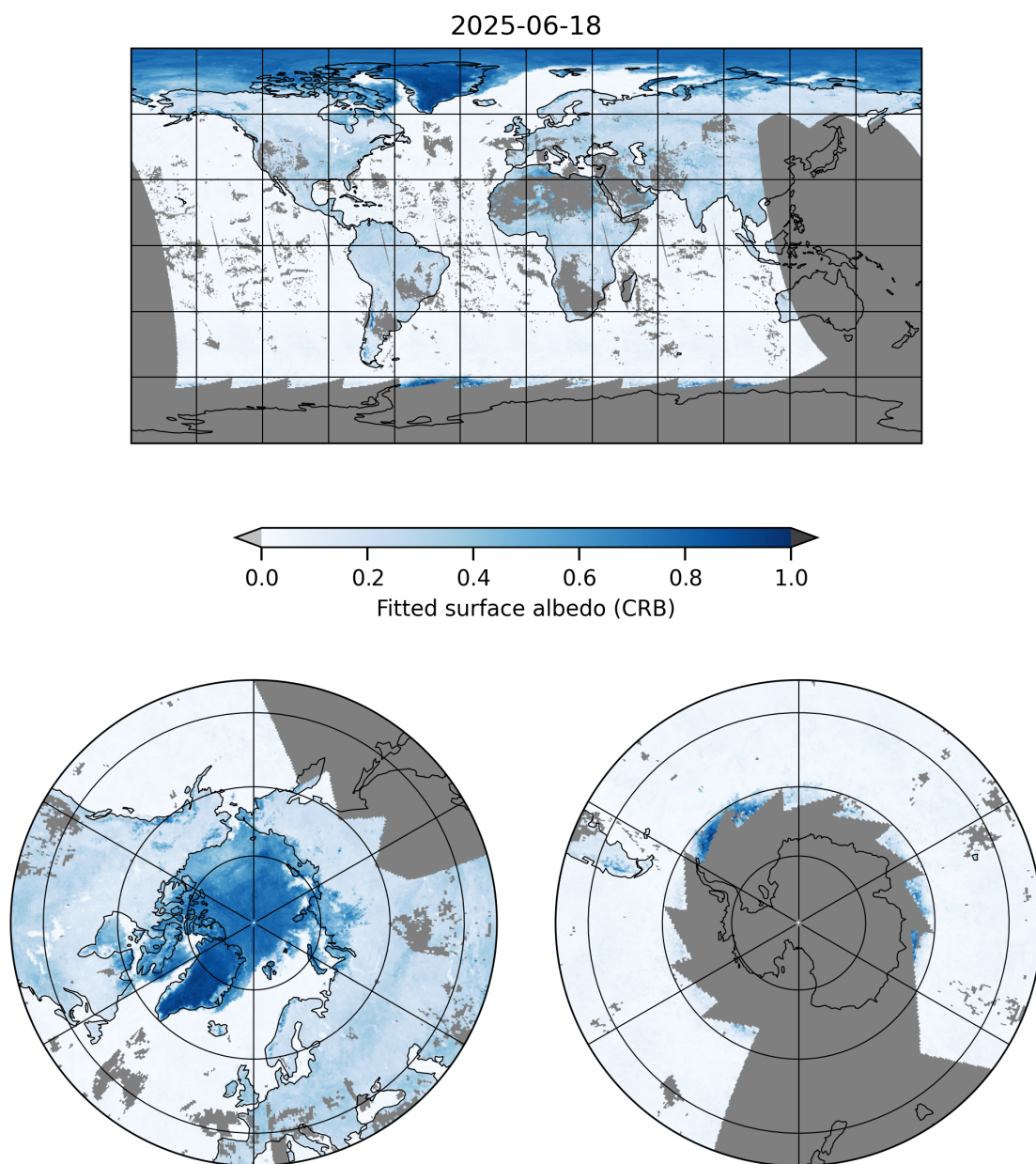


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-06-18 to 2025-06-19

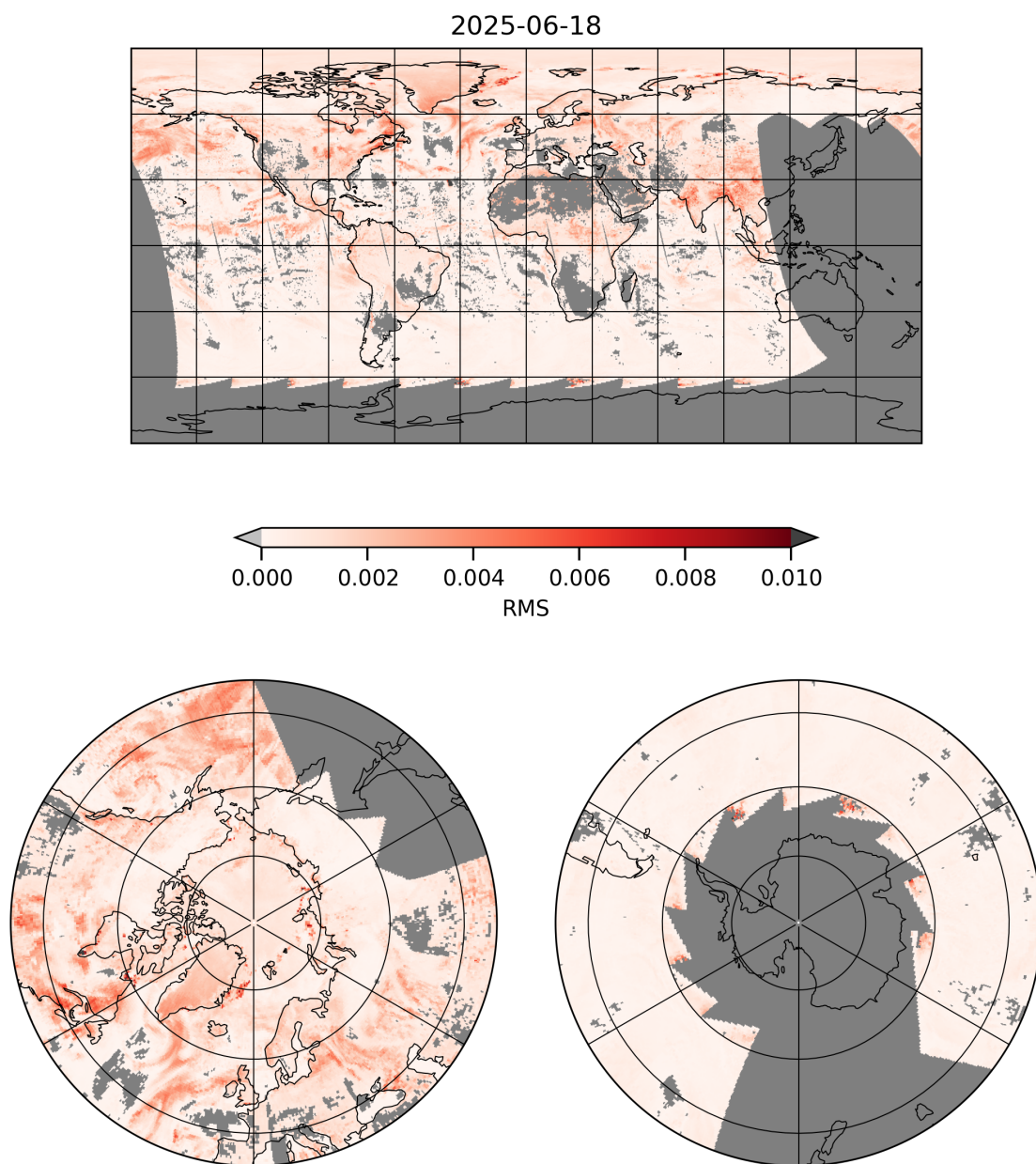


Figure 12: Map of “RMS” for 2025-06-18 to 2025-06-19

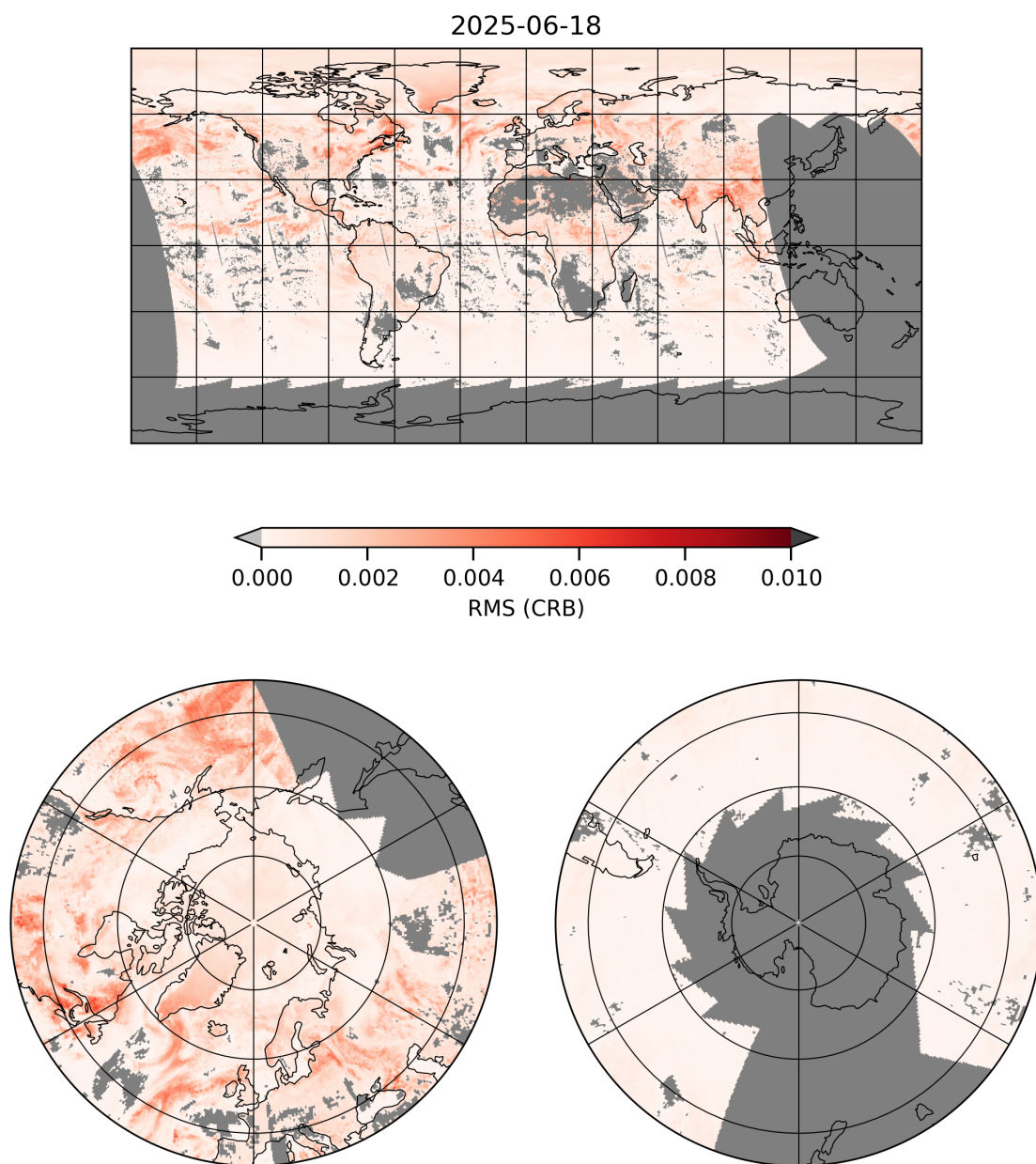


Figure 13: Map of “RMS (CRB)” for 2025-06-18 to 2025-06-19

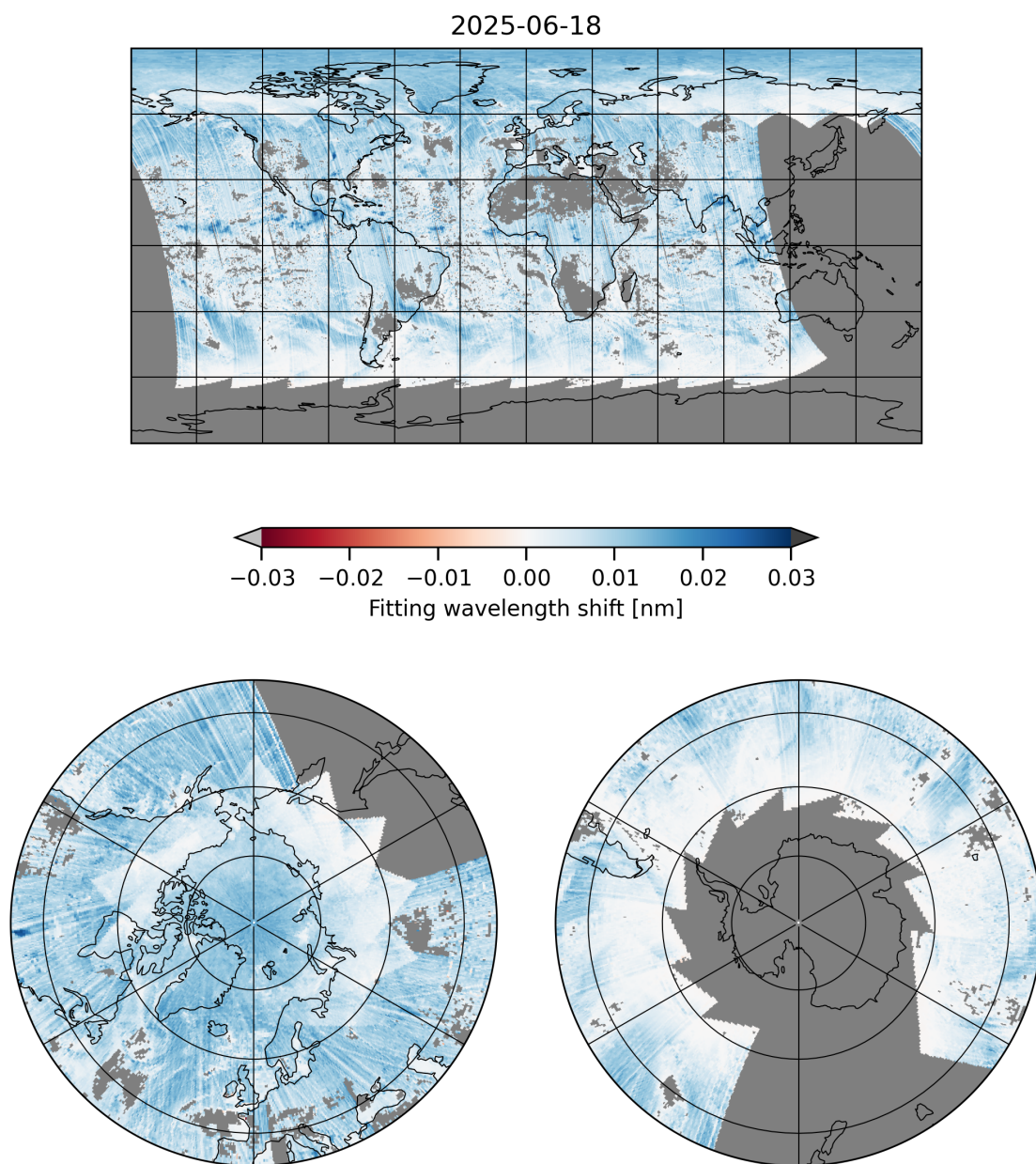


Figure 14: Map of “Fitting wavelength shift” for 2025-06-18 to 2025-06-19

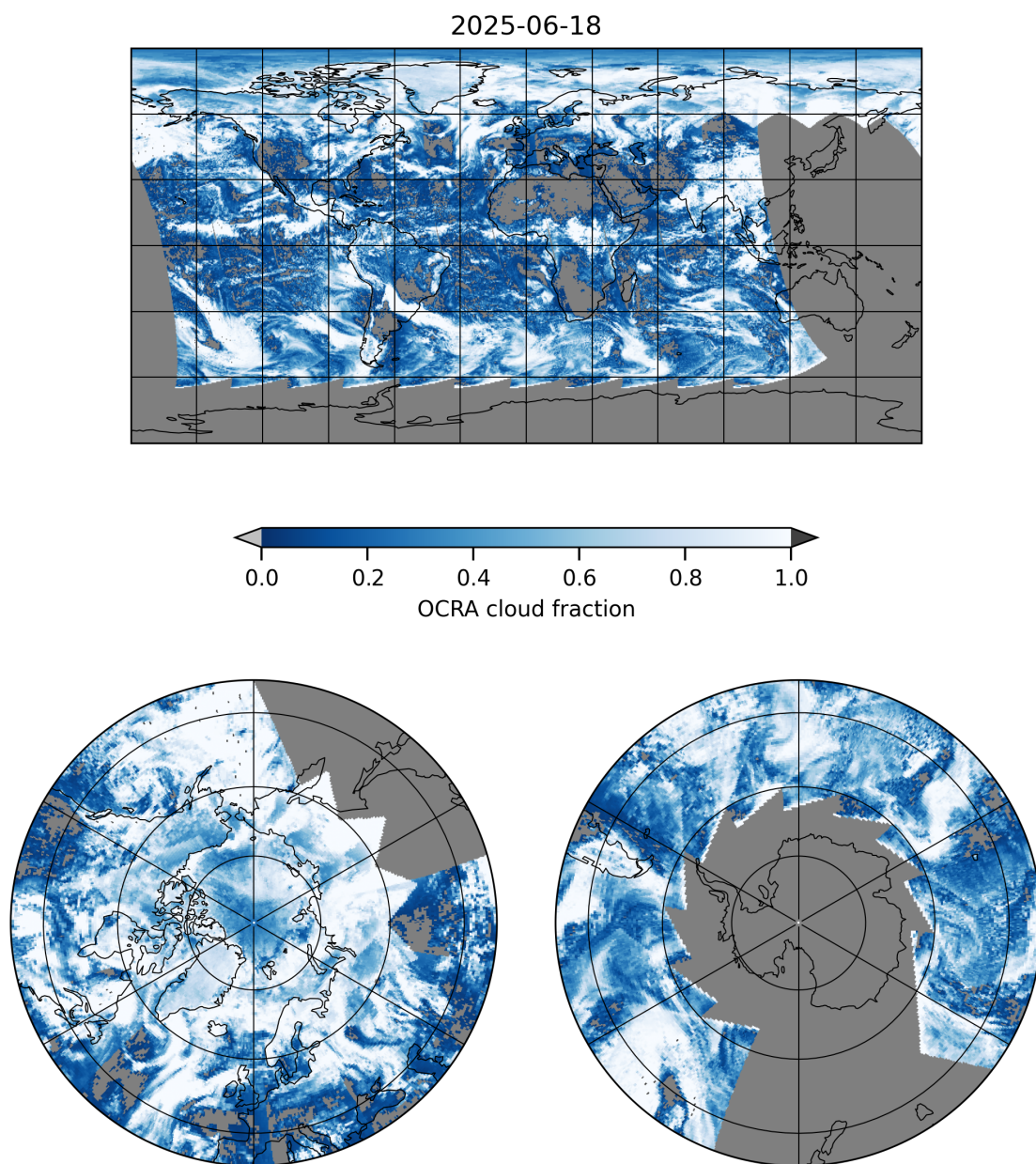
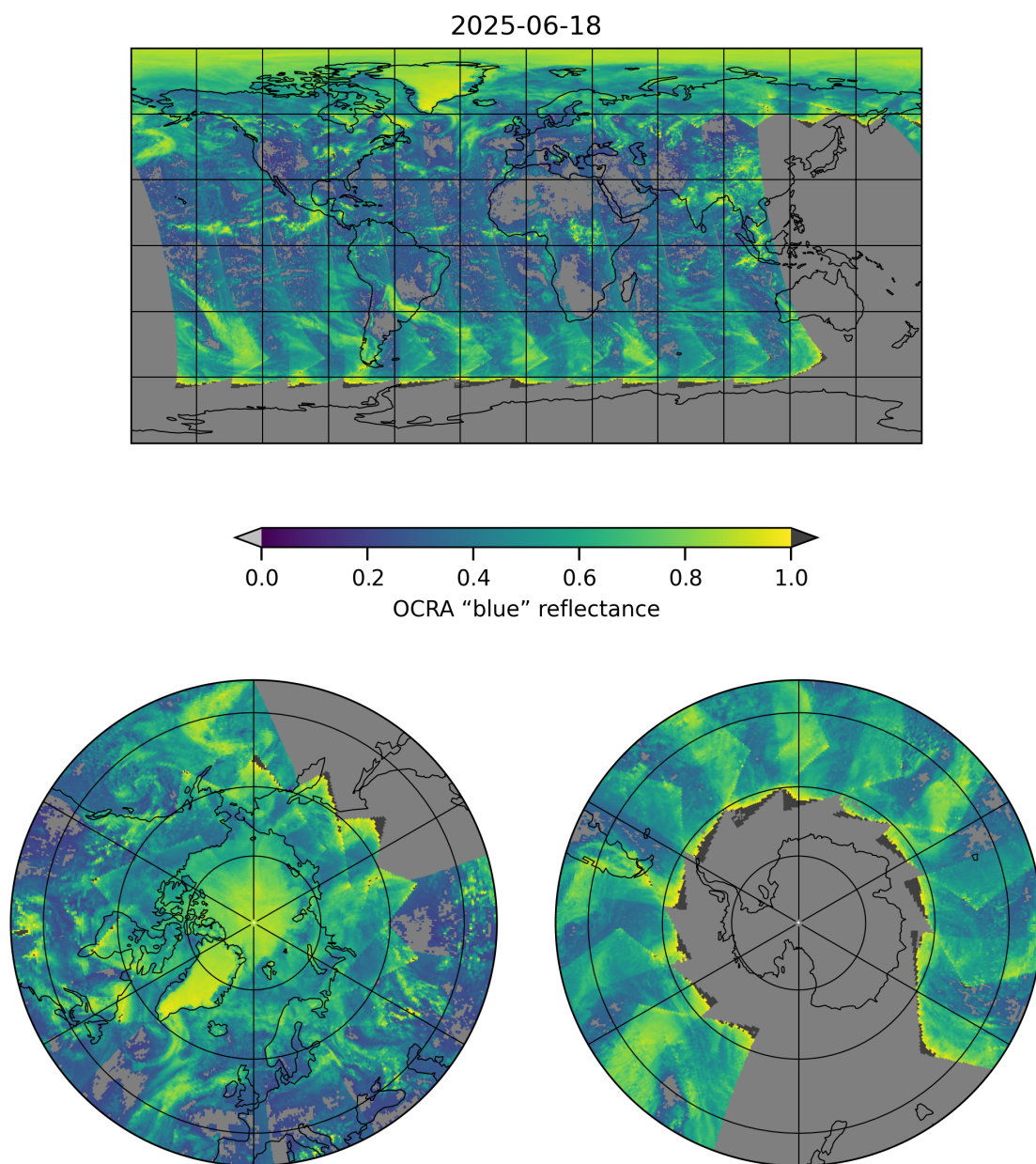


Figure 15: Map of “OCRA cloud fraction” for 2025-06-18 to 2025-06-19



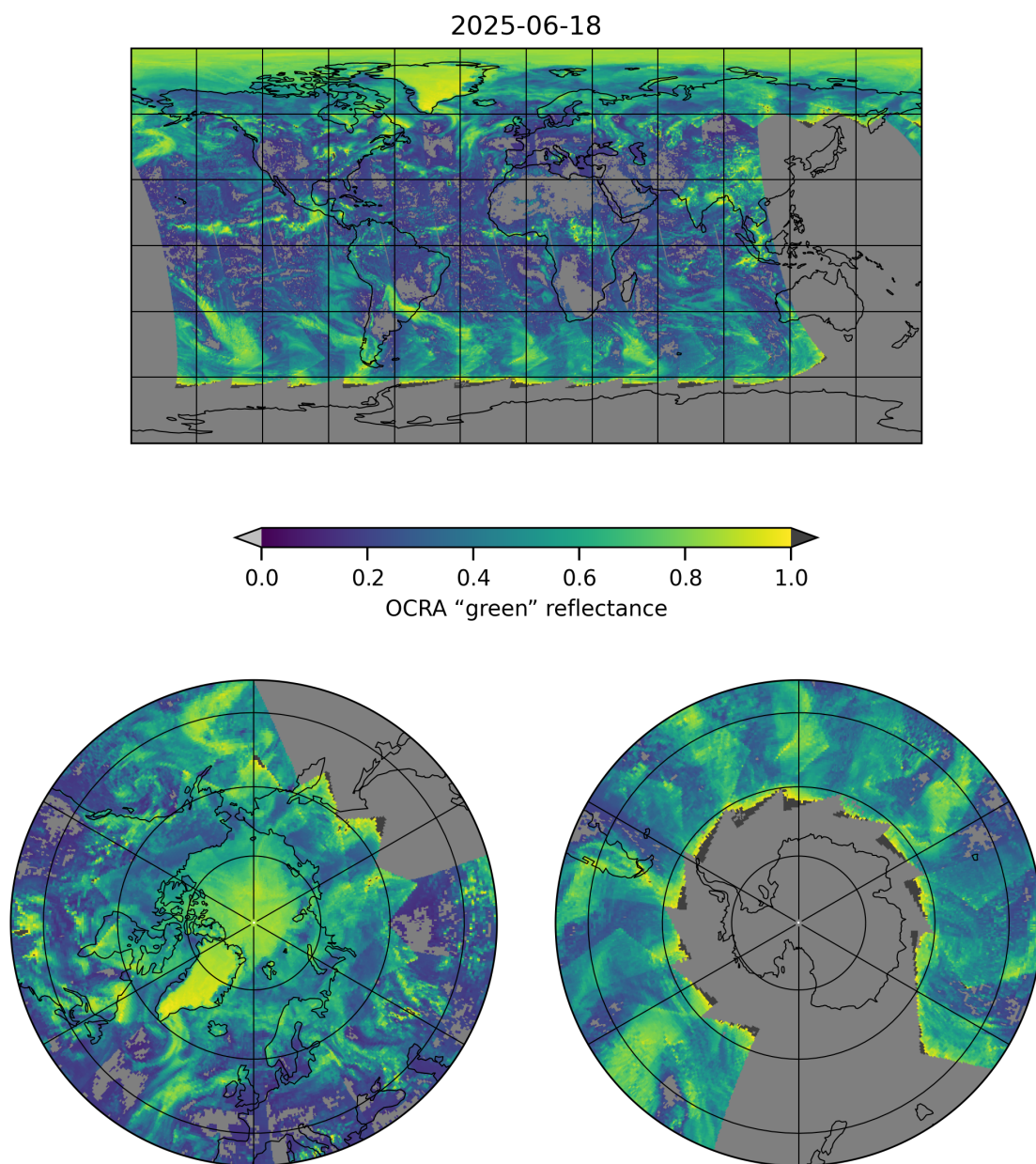


Figure 17: Map of "OCRA "green" reflectance" for 2025-06-18 to 2025-06-19

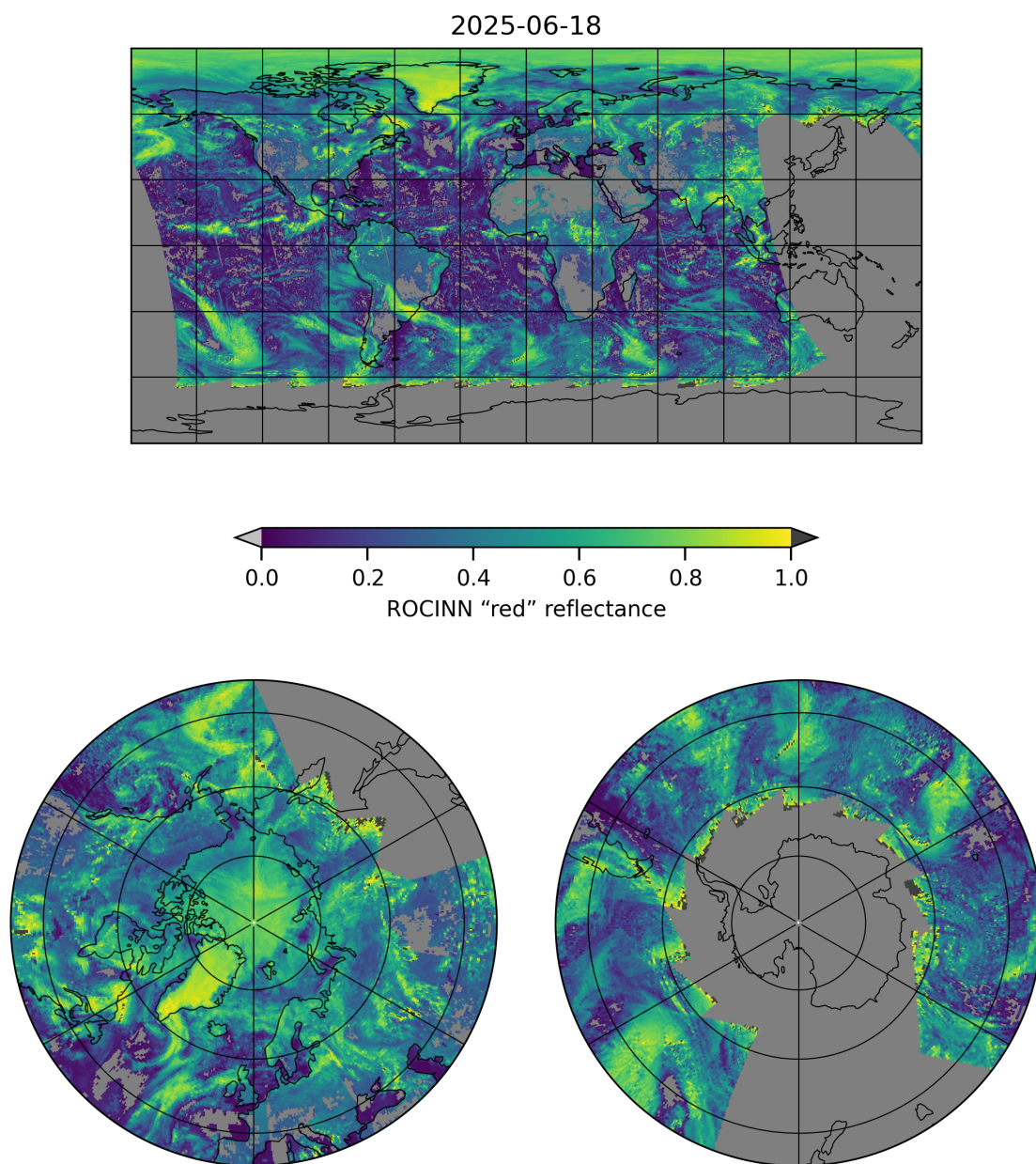


Figure 18: Map of "ROCINN "red" reflectance" for 2025-06-18 to 2025-06-19

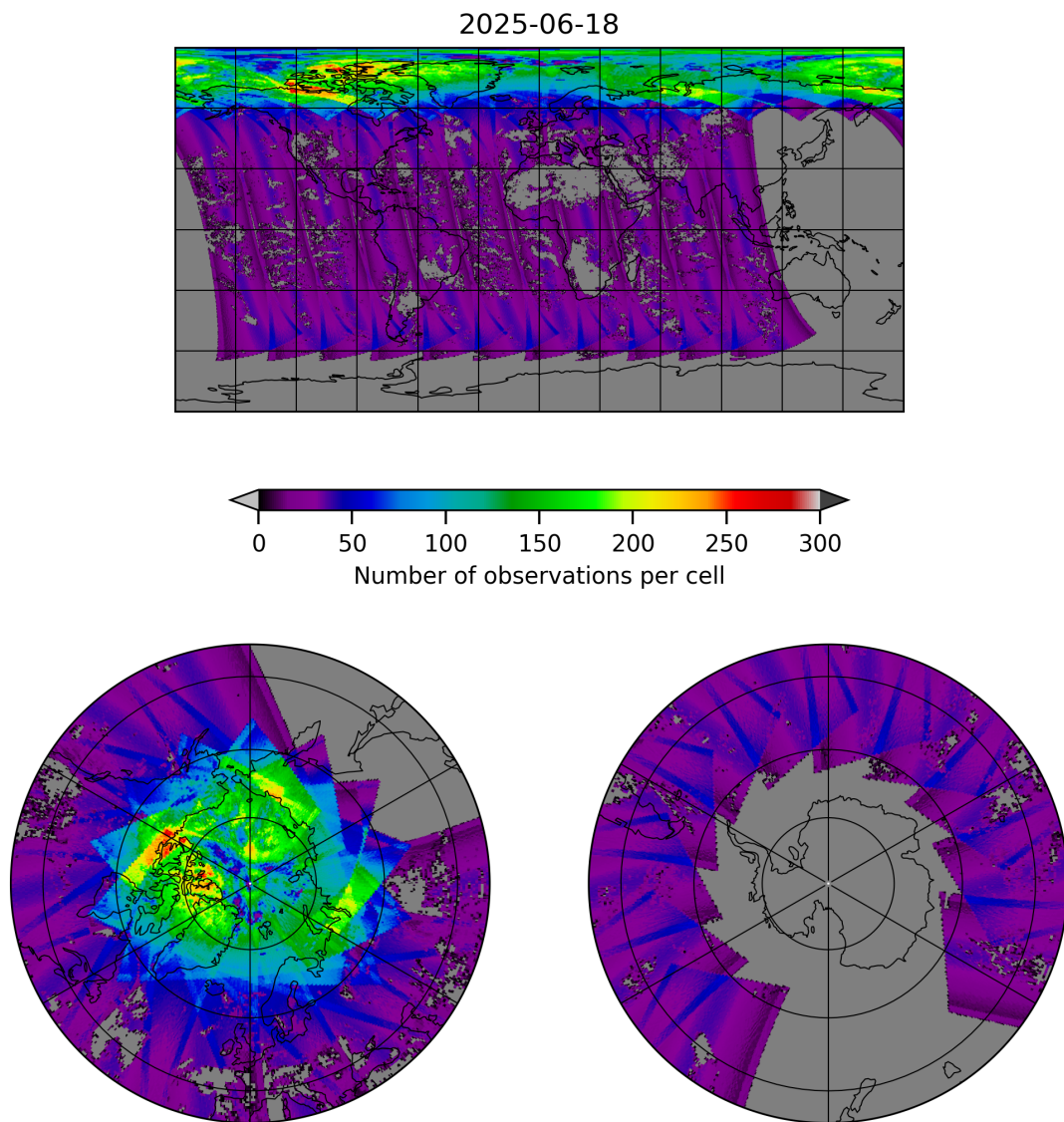


Figure 19: Map of the number of observations for 2025-06-18 to 2025-06-19

7 Zonal average

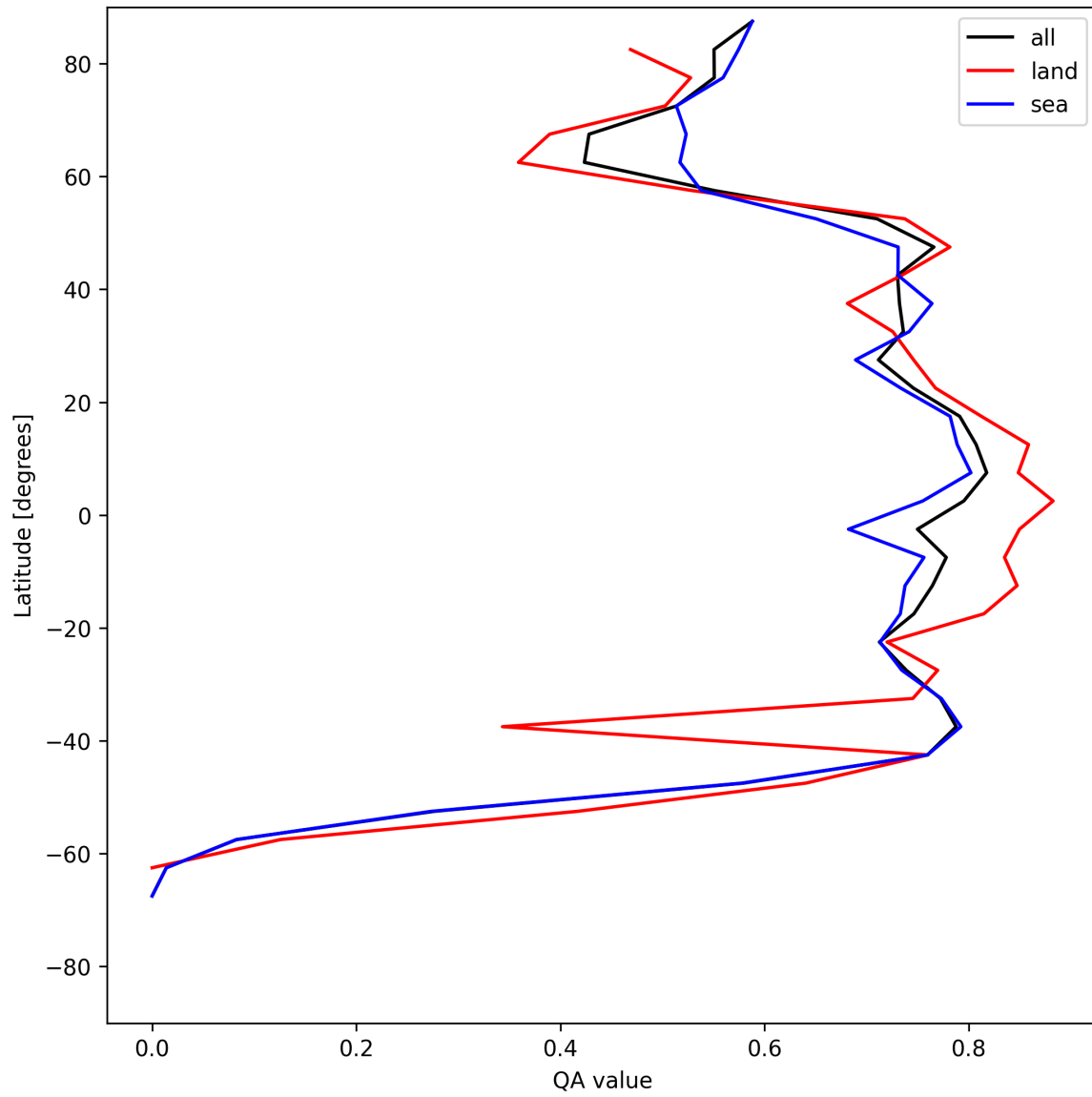


Figure 20: Zonal average of “QA value” for 2025-06-18 to 2025-06-19.

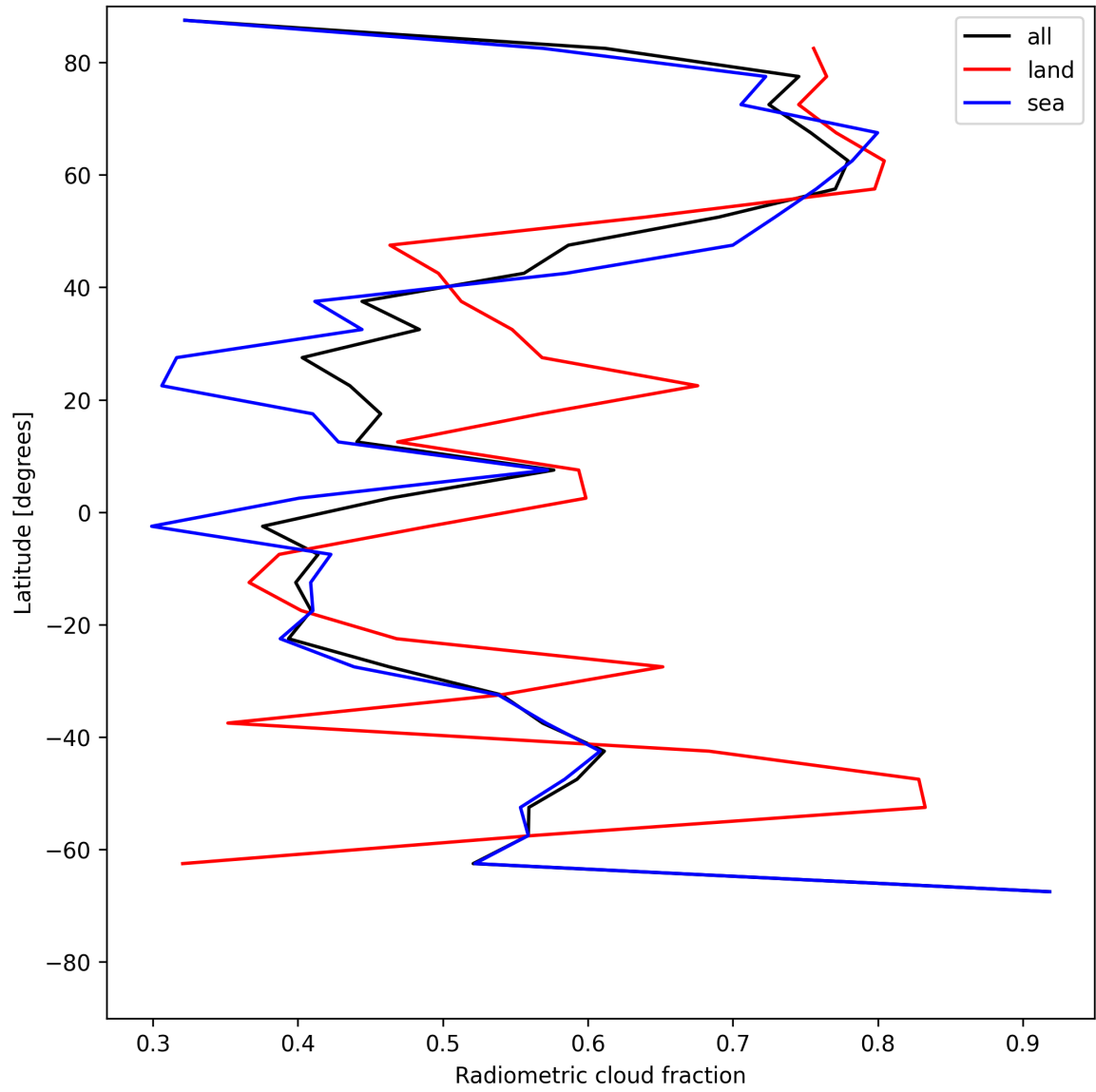


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-06-18 to 2025-06-19.

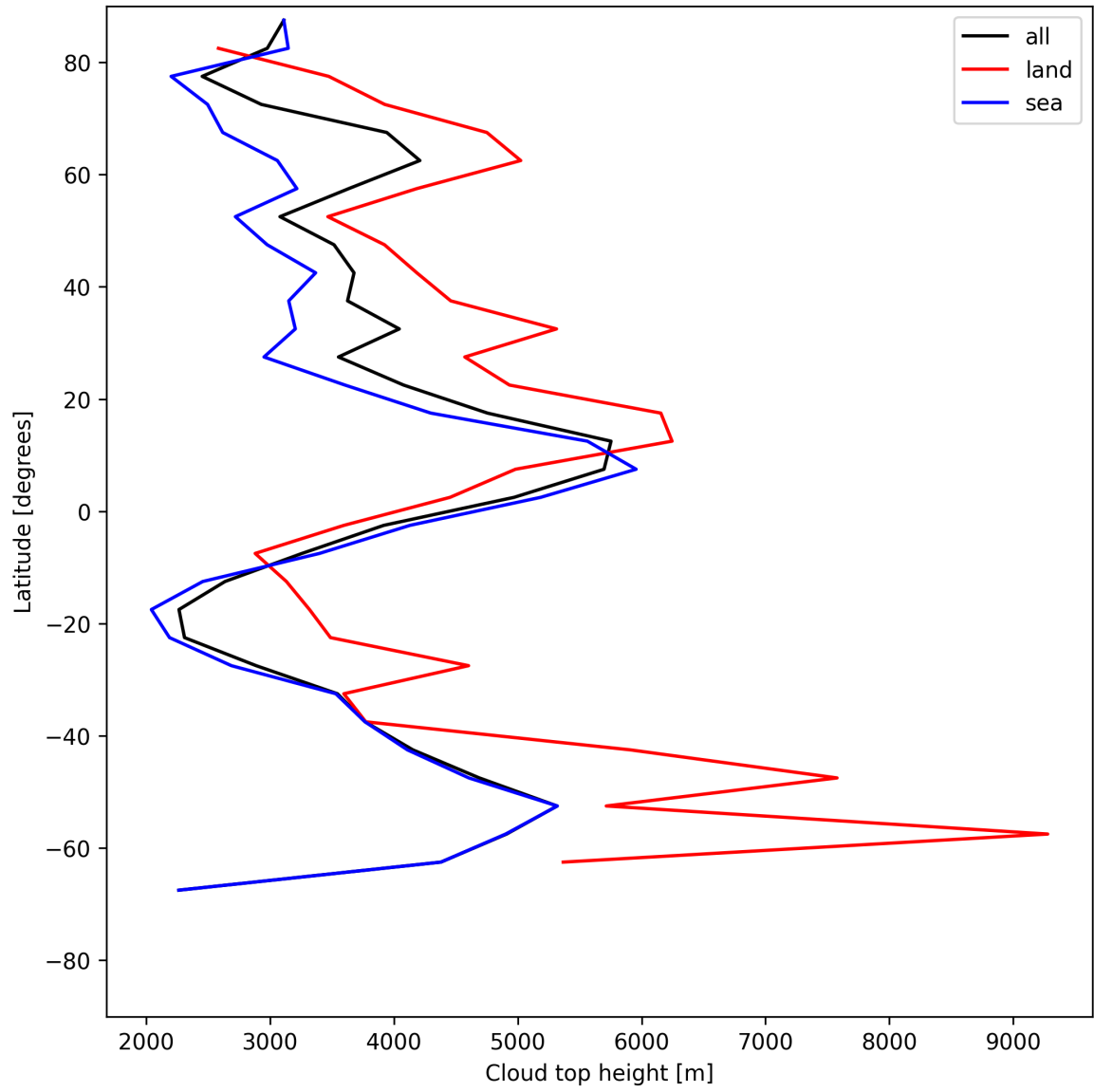


Figure 22: Zonal average of “Cloud top height” for 2025-06-18 to 2025-06-19.

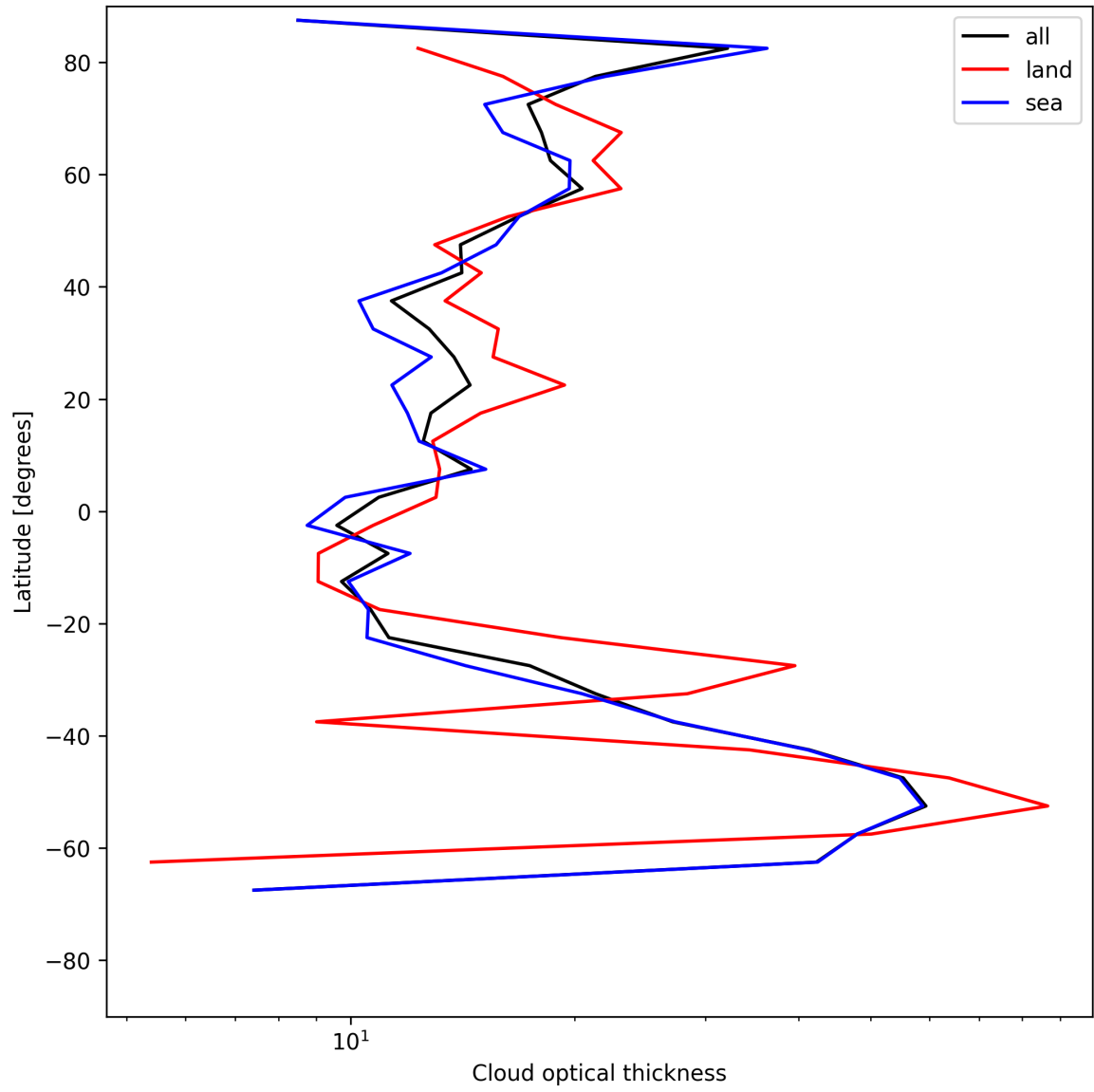


Figure 23: Zonal average of “Cloud optical thickness” for 2025-06-18 to 2025-06-19.

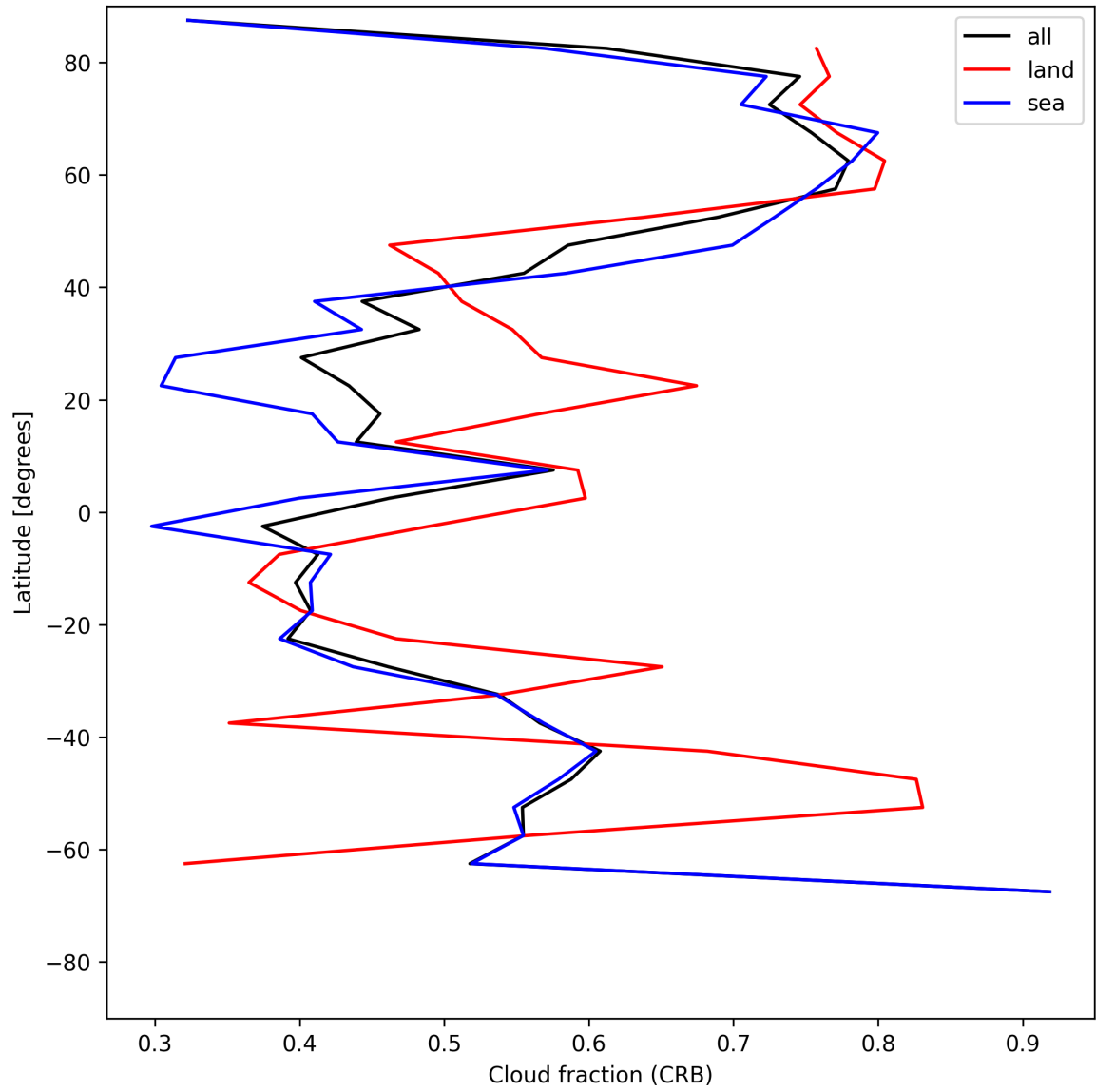


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-06-18 to 2025-06-19.

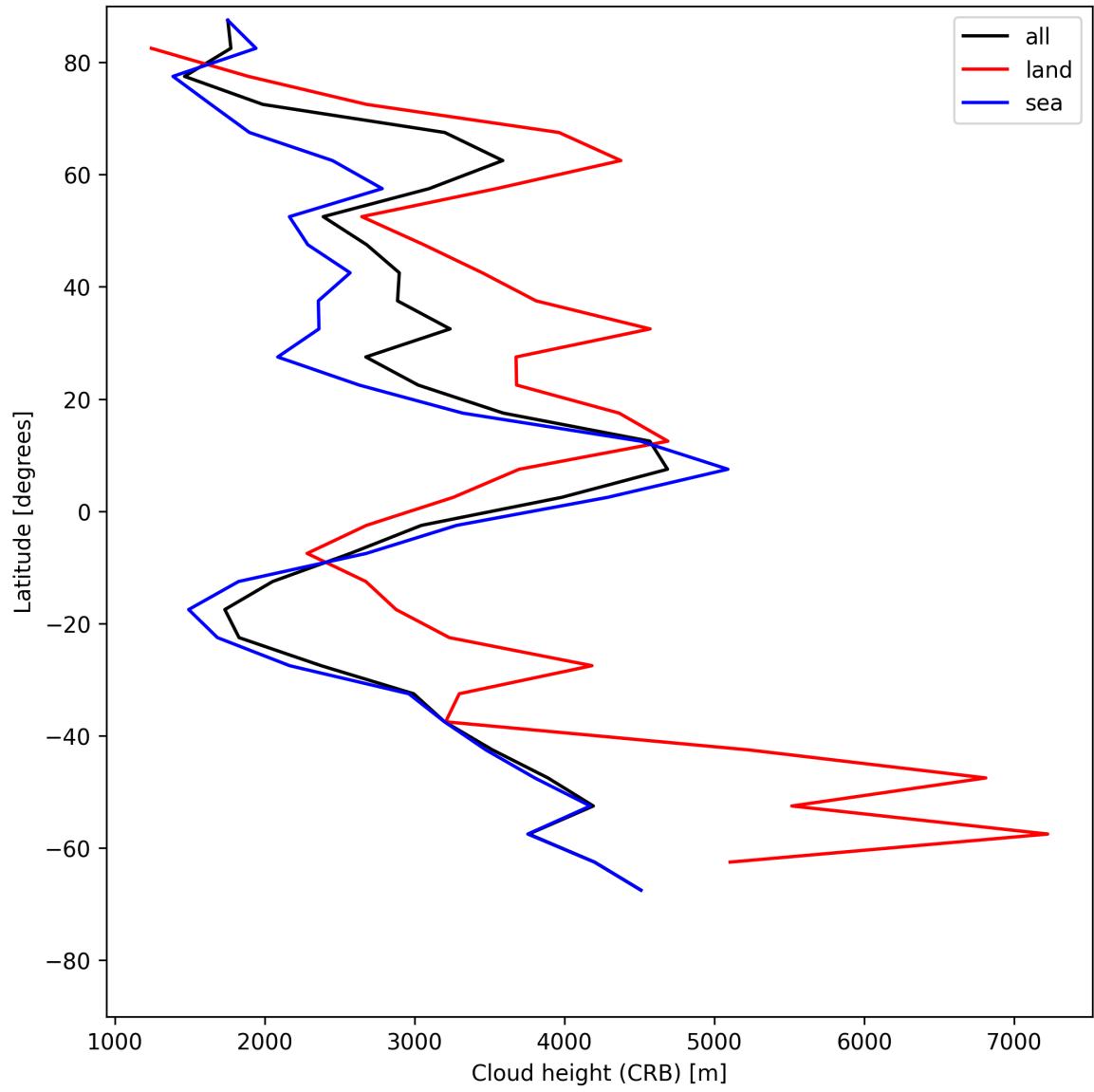


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-06-18 to 2025-06-19.

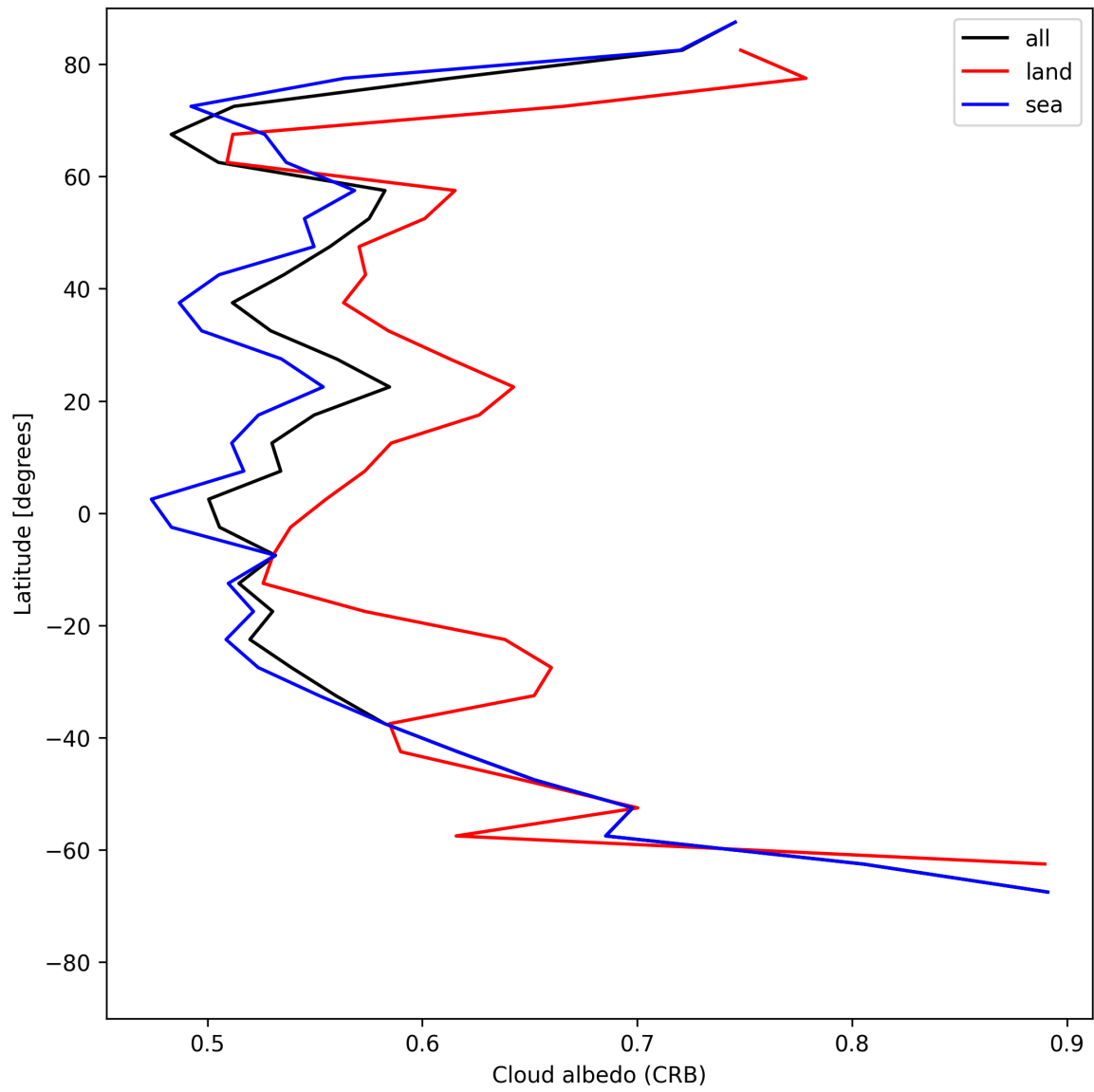


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-06-18 to 2025-06-19.

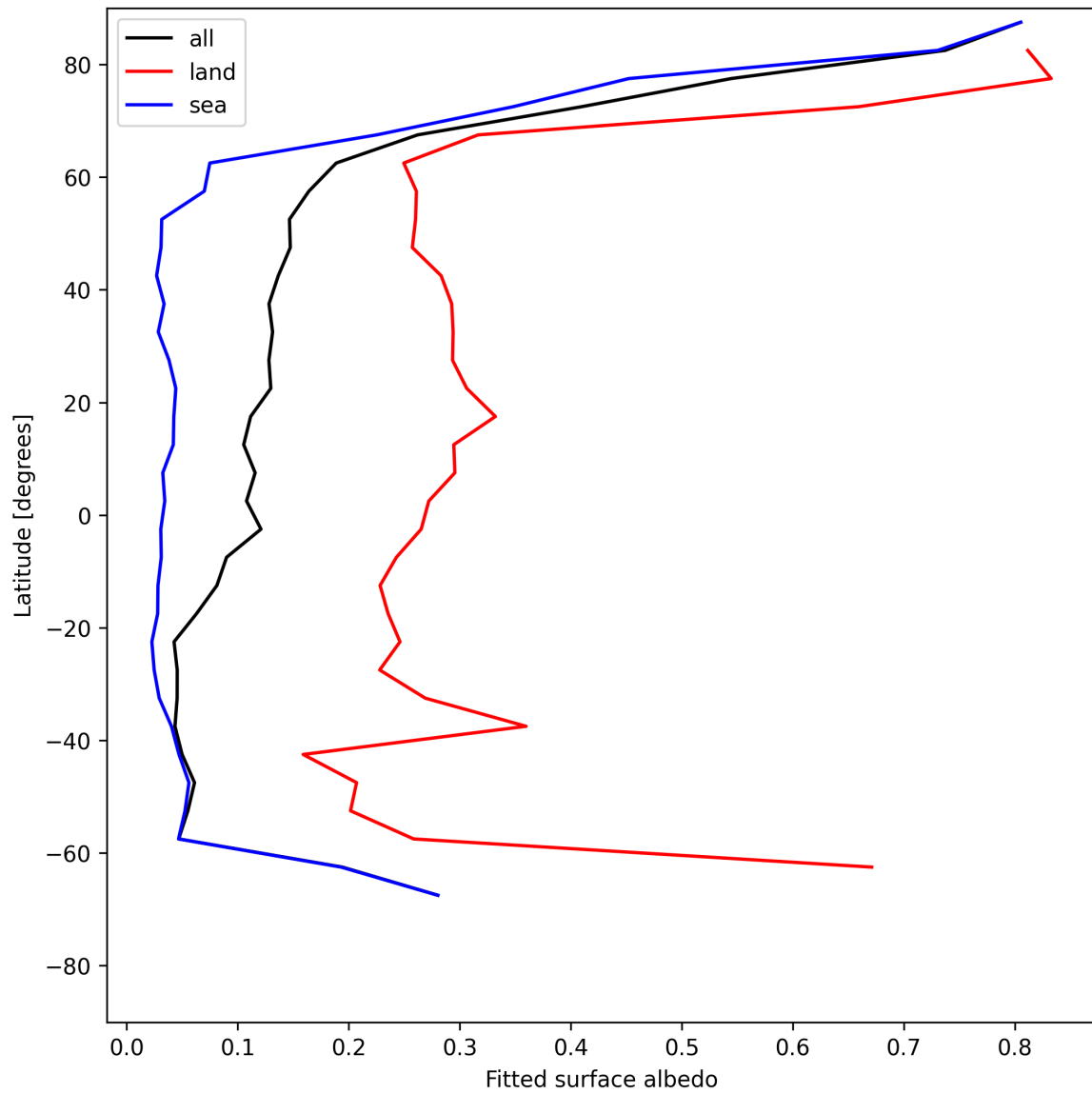


Figure 27: Zonal average of “Fitted surface albedo” for 2025-06-18 to 2025-06-19.

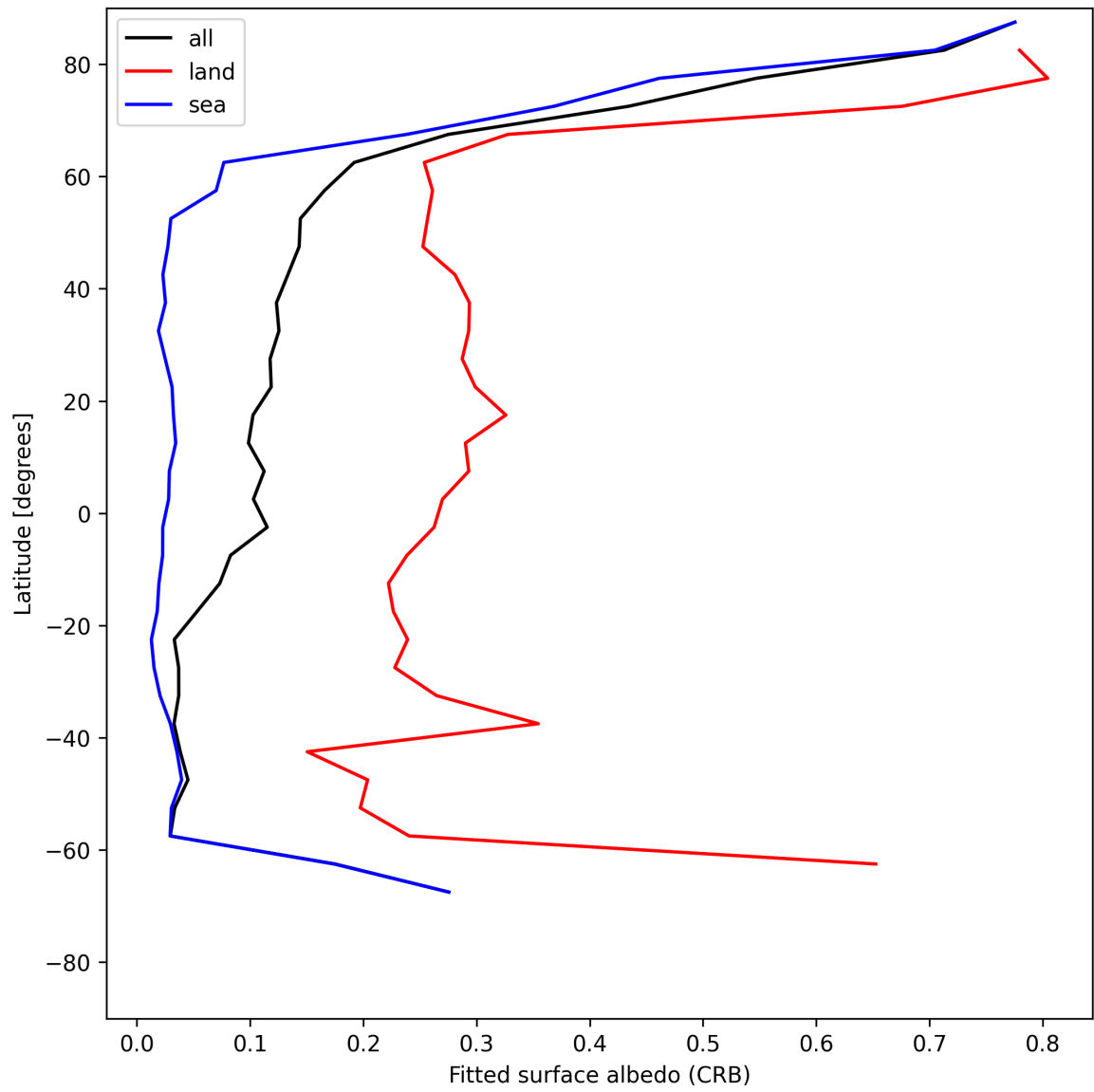


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-06-18 to 2025-06-19.

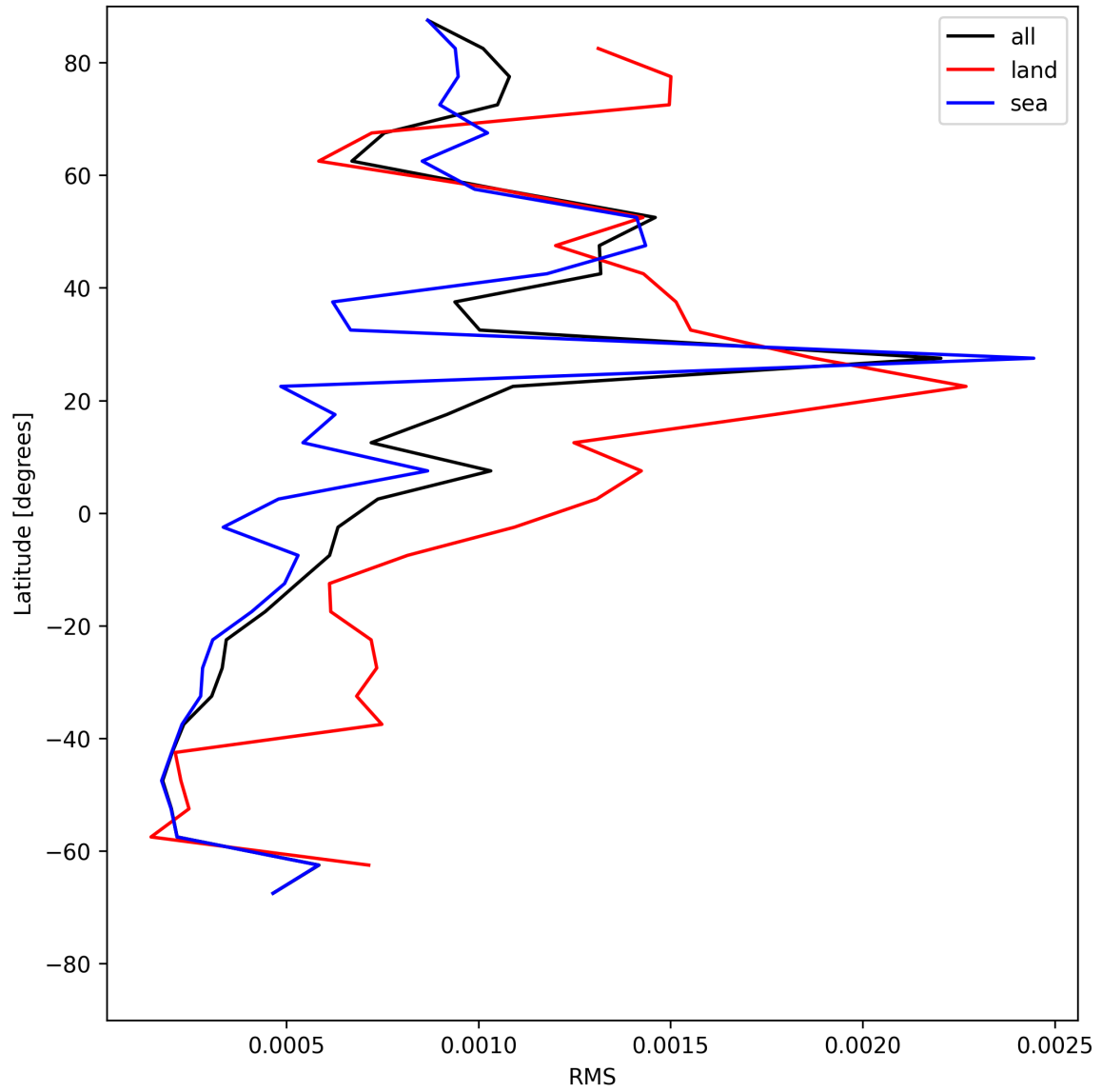


Figure 29: Zonal average of “RMS” for 2025-06-18 to 2025-06-19.

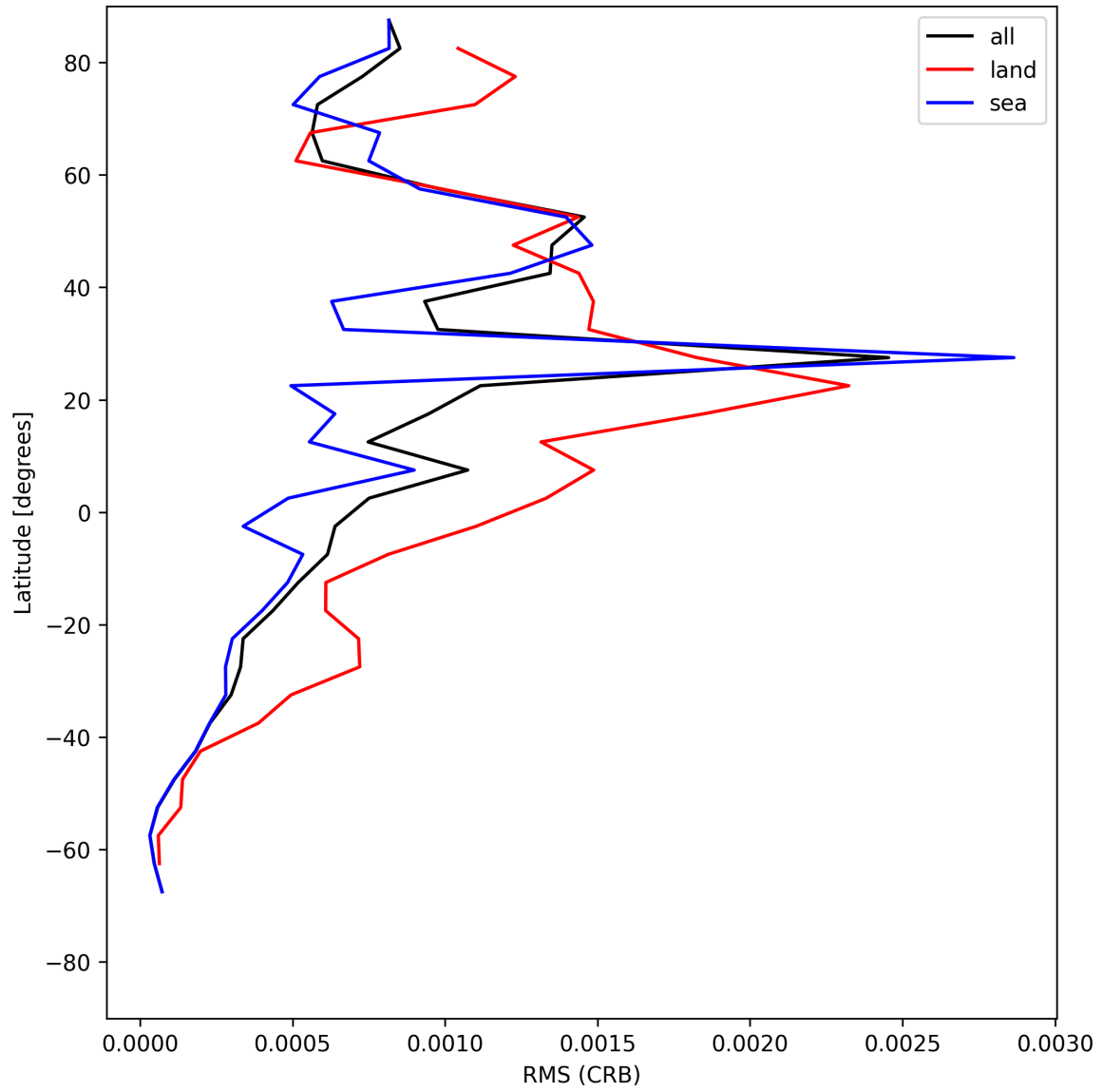


Figure 30: Zonal average of “RMS (CRB)” for 2025-06-18 to 2025-06-19.

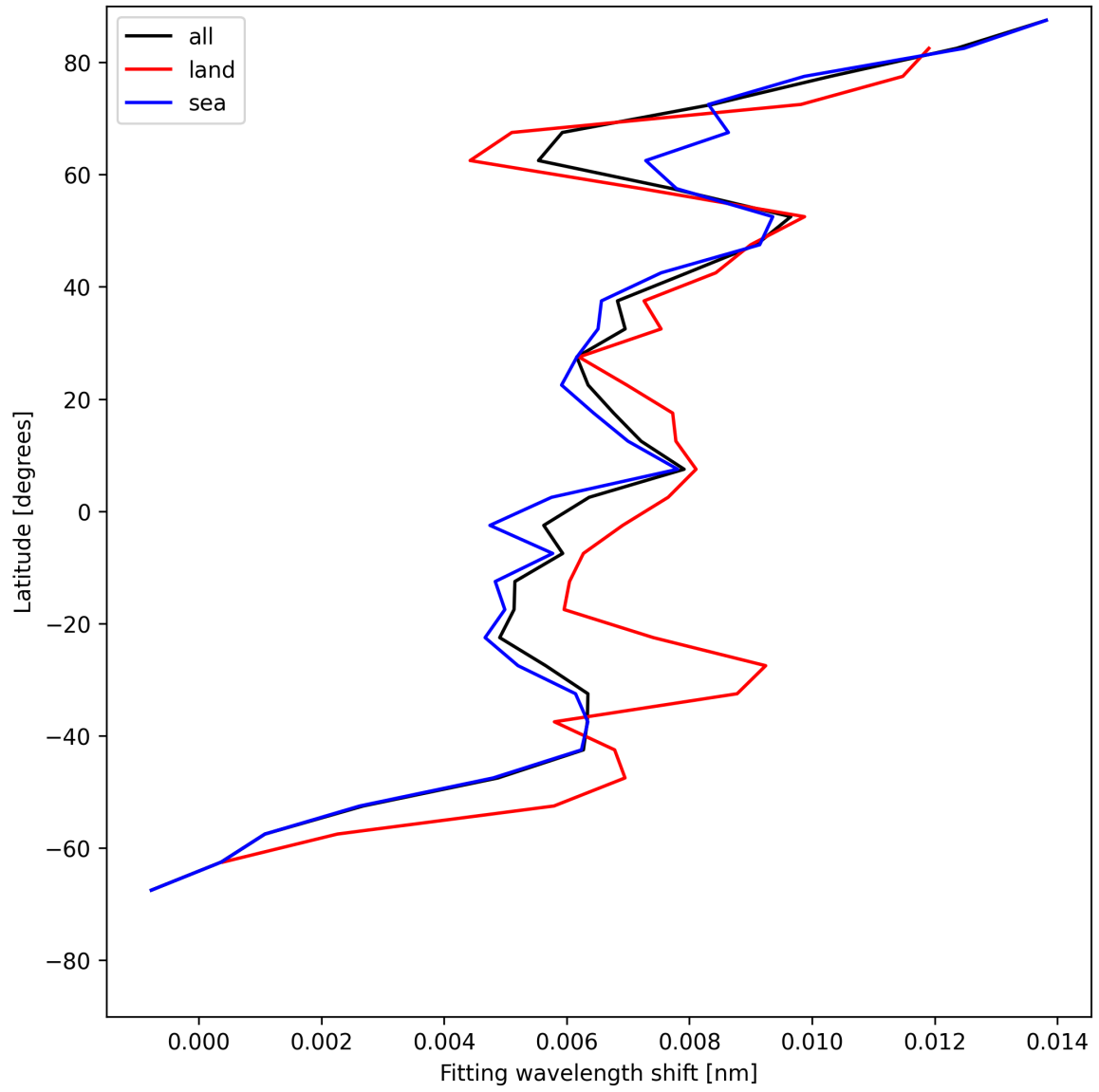


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-06-18 to 2025-06-19.

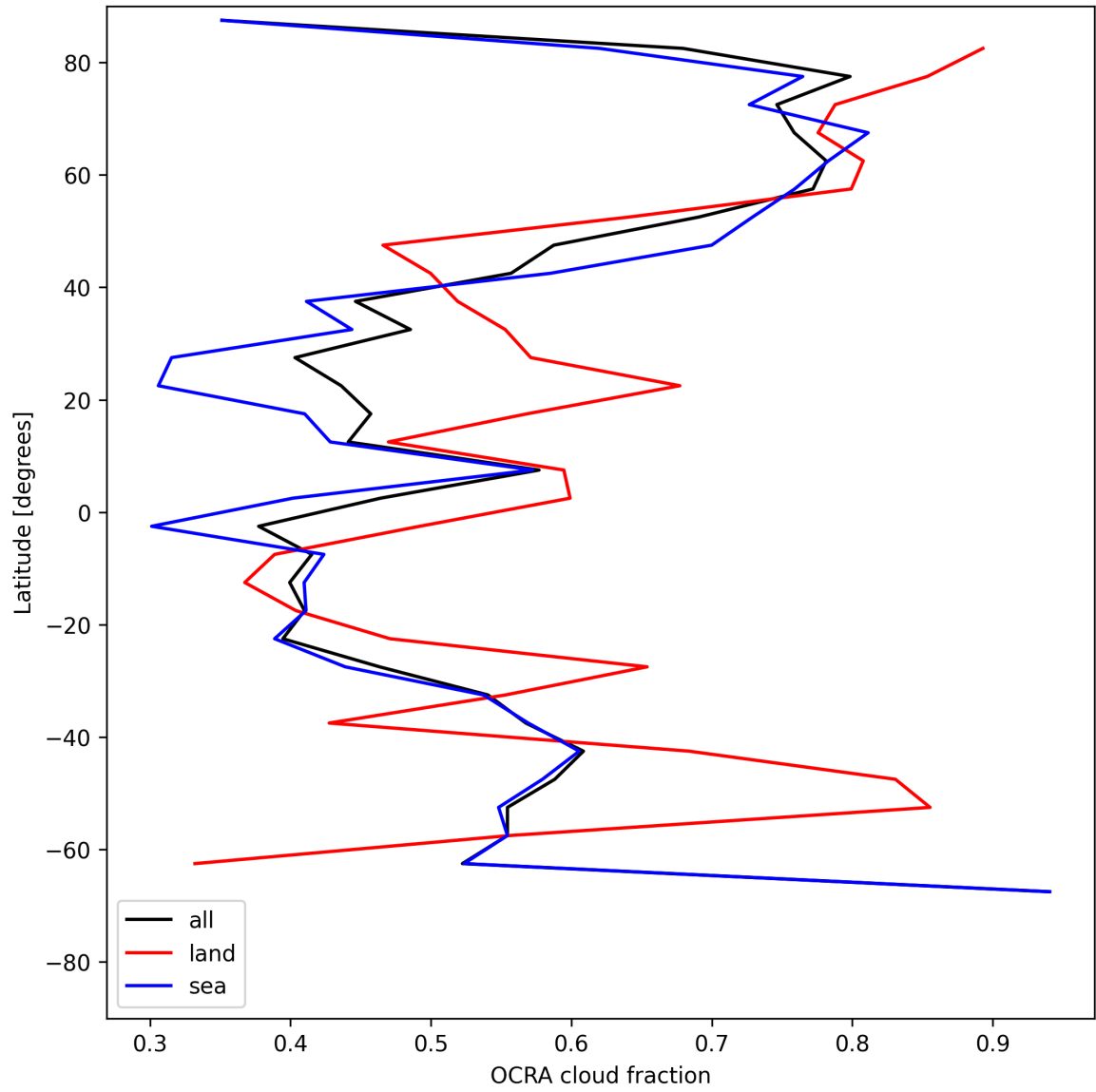


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-06-18 to 2025-06-19.

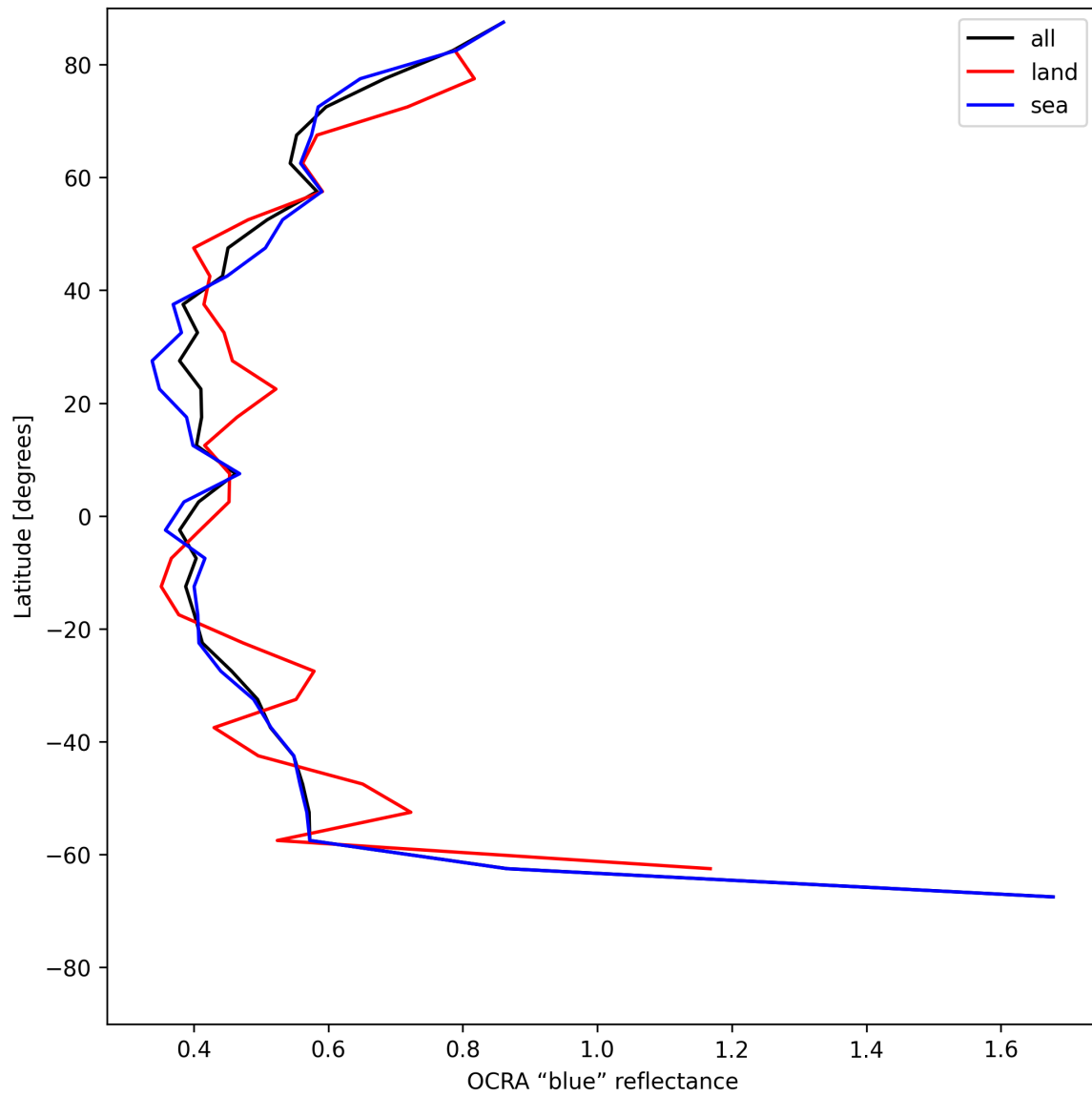


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-06-18 to 2025-06-19.

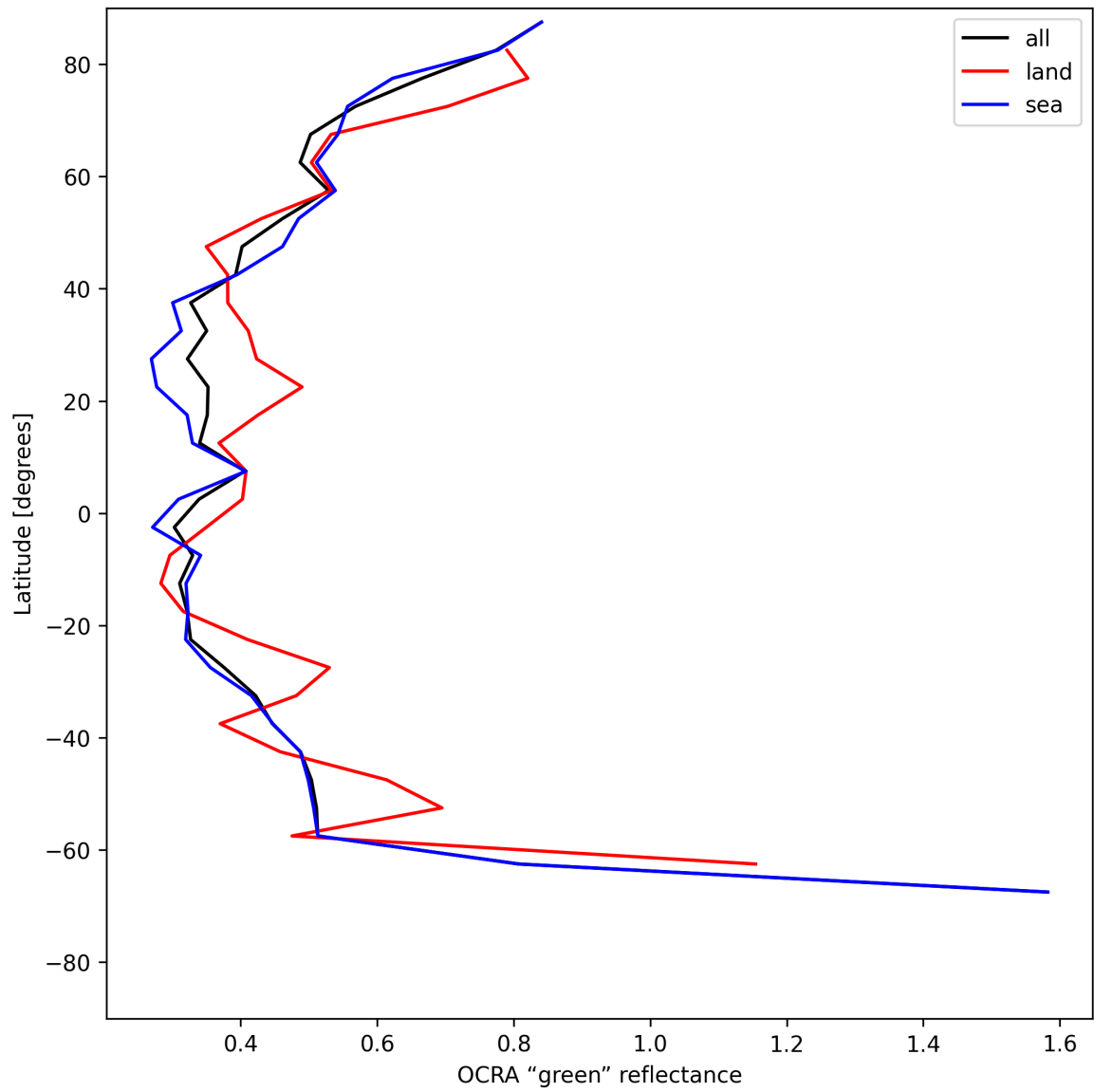


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-06-18 to 2025-06-19.

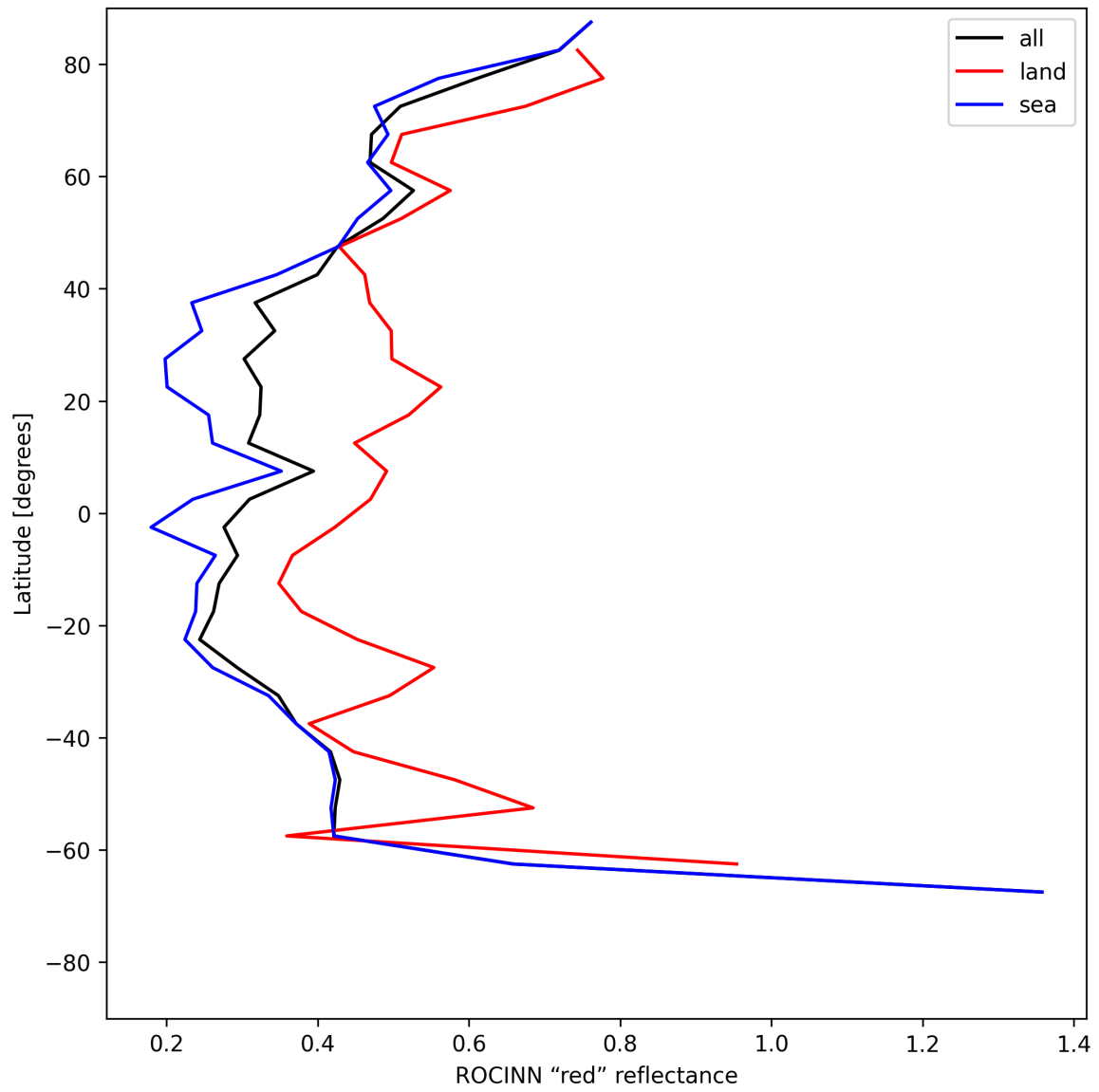


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-06-18 to 2025-06-19.

8 Histograms

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

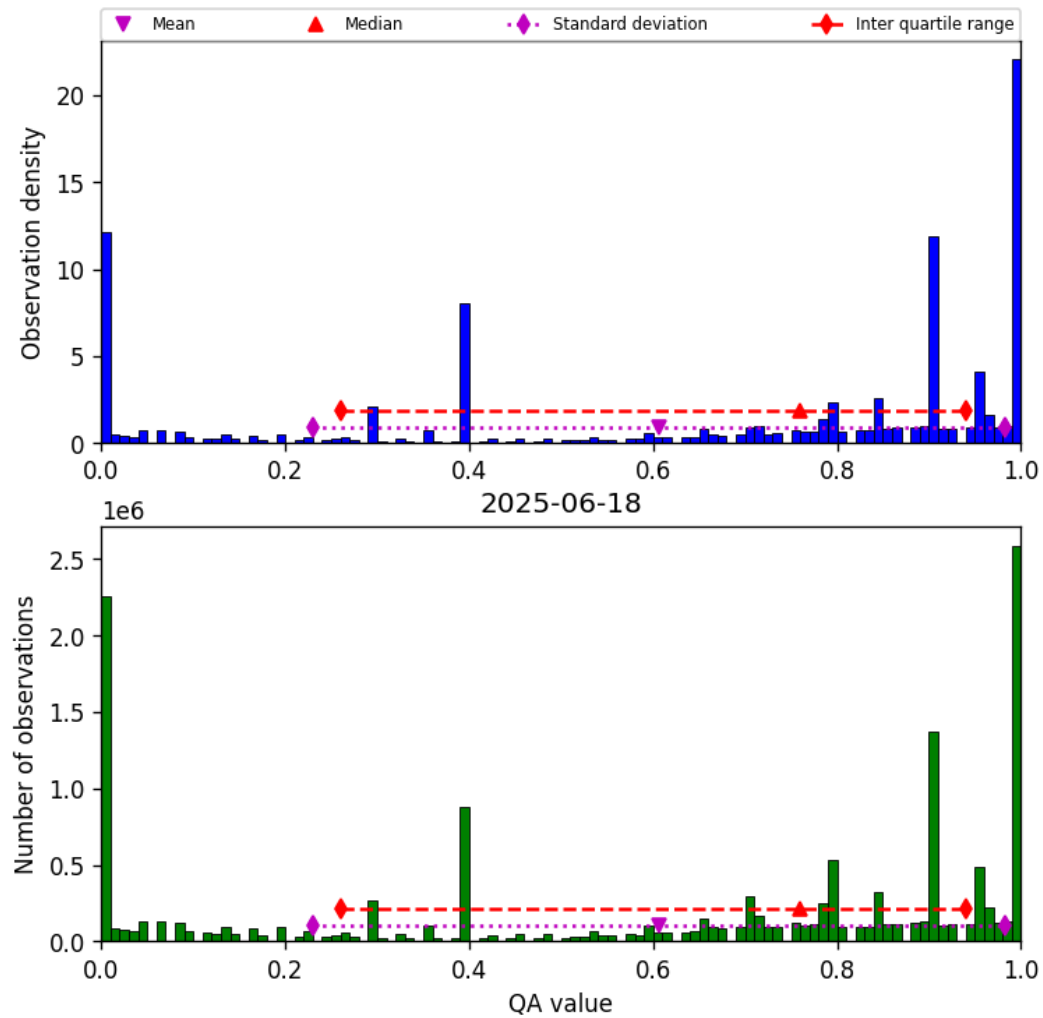


Figure 36: Histogram of “QA value” for 2025-06-18 to 2025-06-19

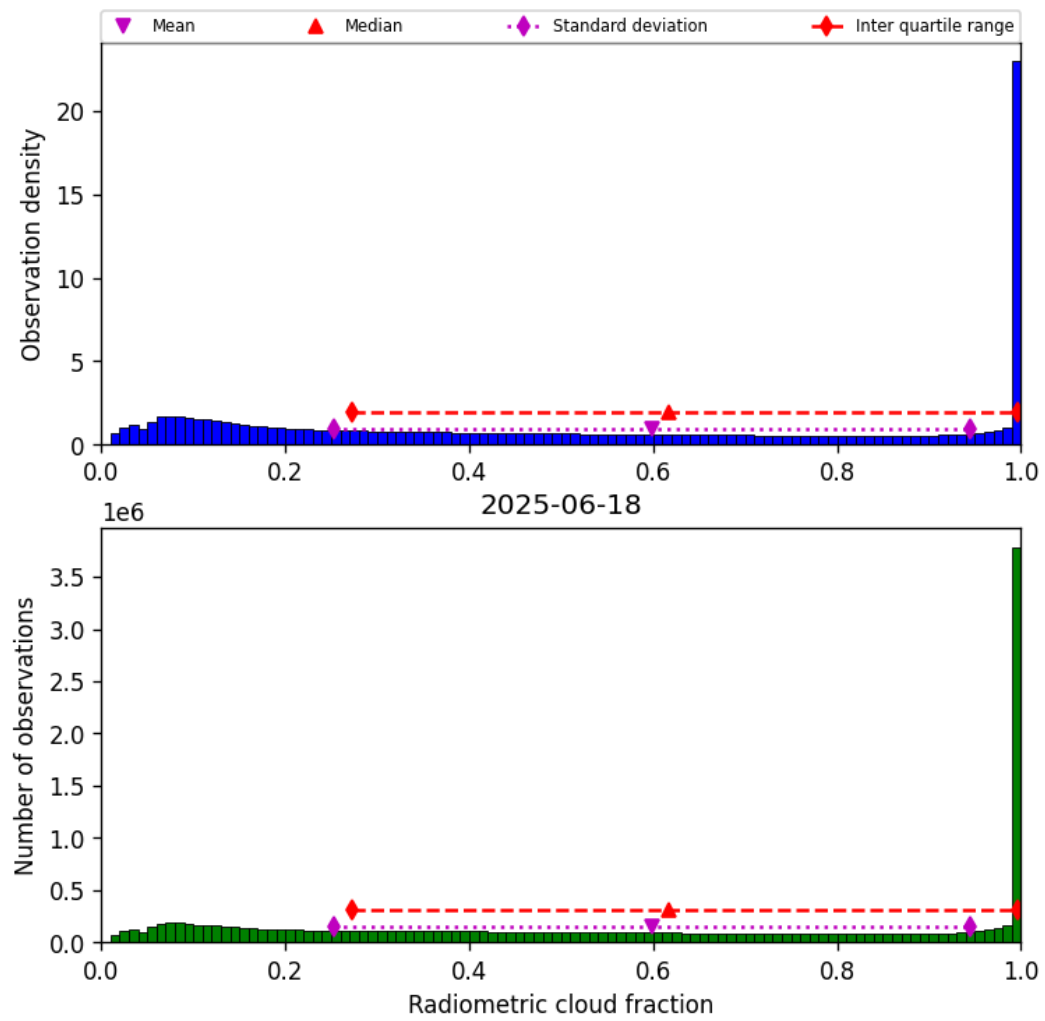


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-06-18 to 2025-06-19

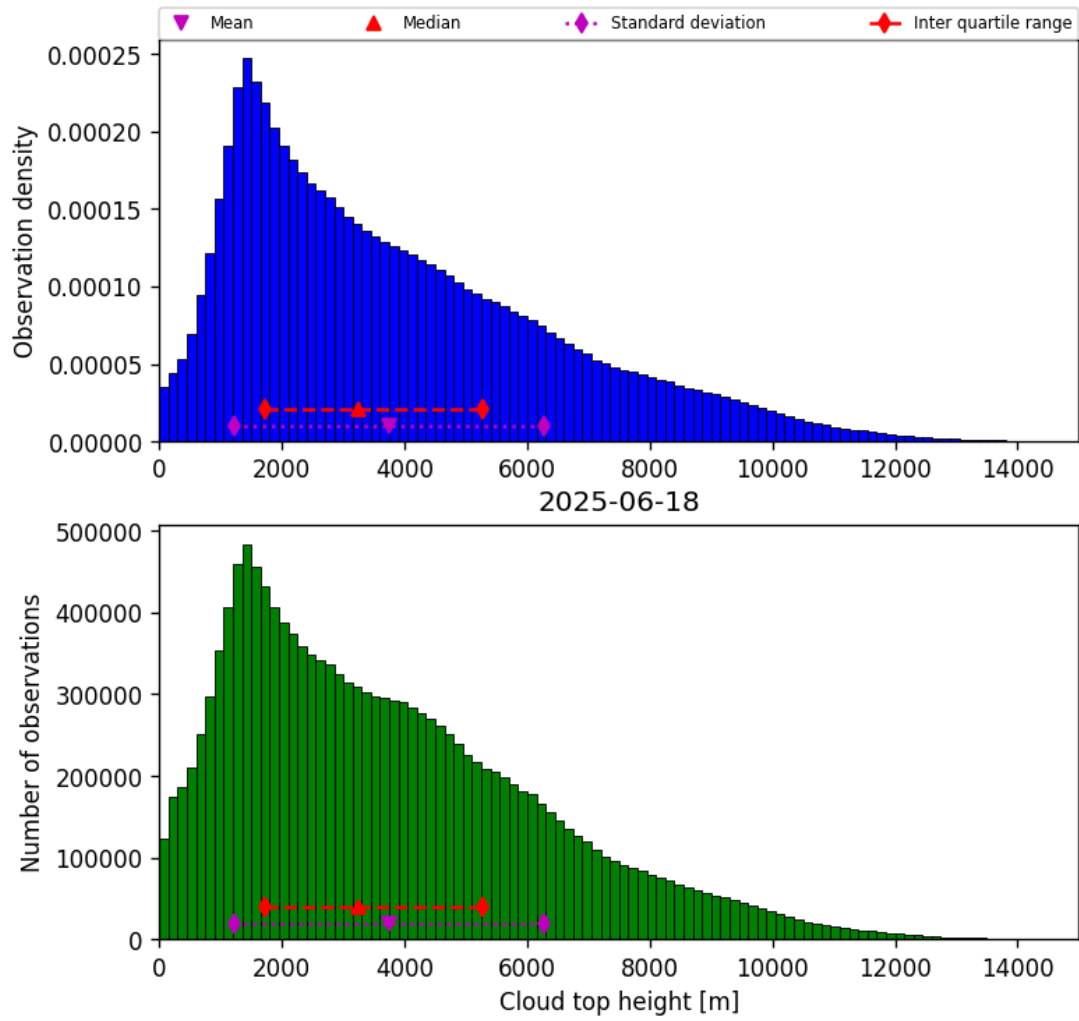


Figure 38: Histogram of “Cloud top height” for 2025-06-18 to 2025-06-19

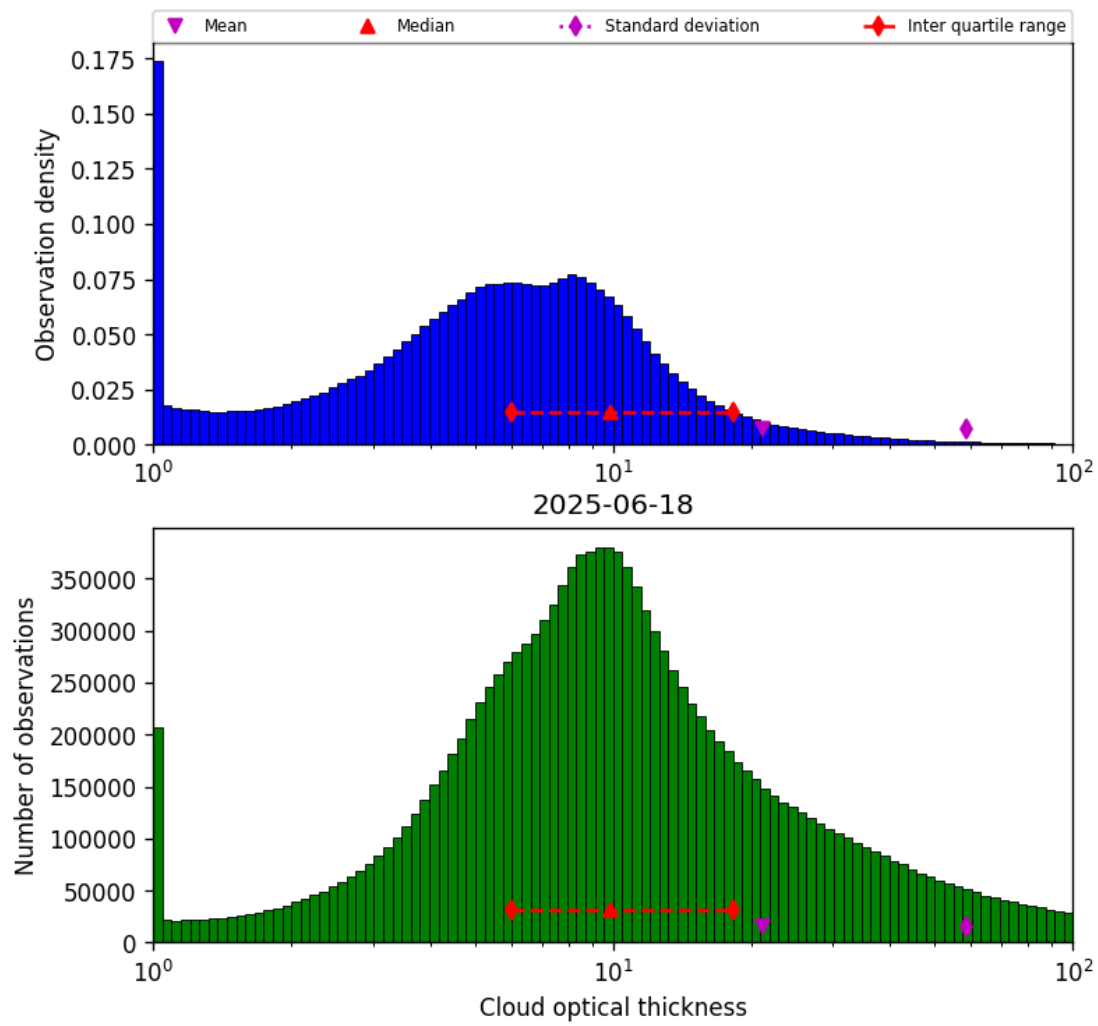


Figure 39: Histogram of “Cloud optical thickness” for 2025-06-18 to 2025-06-19

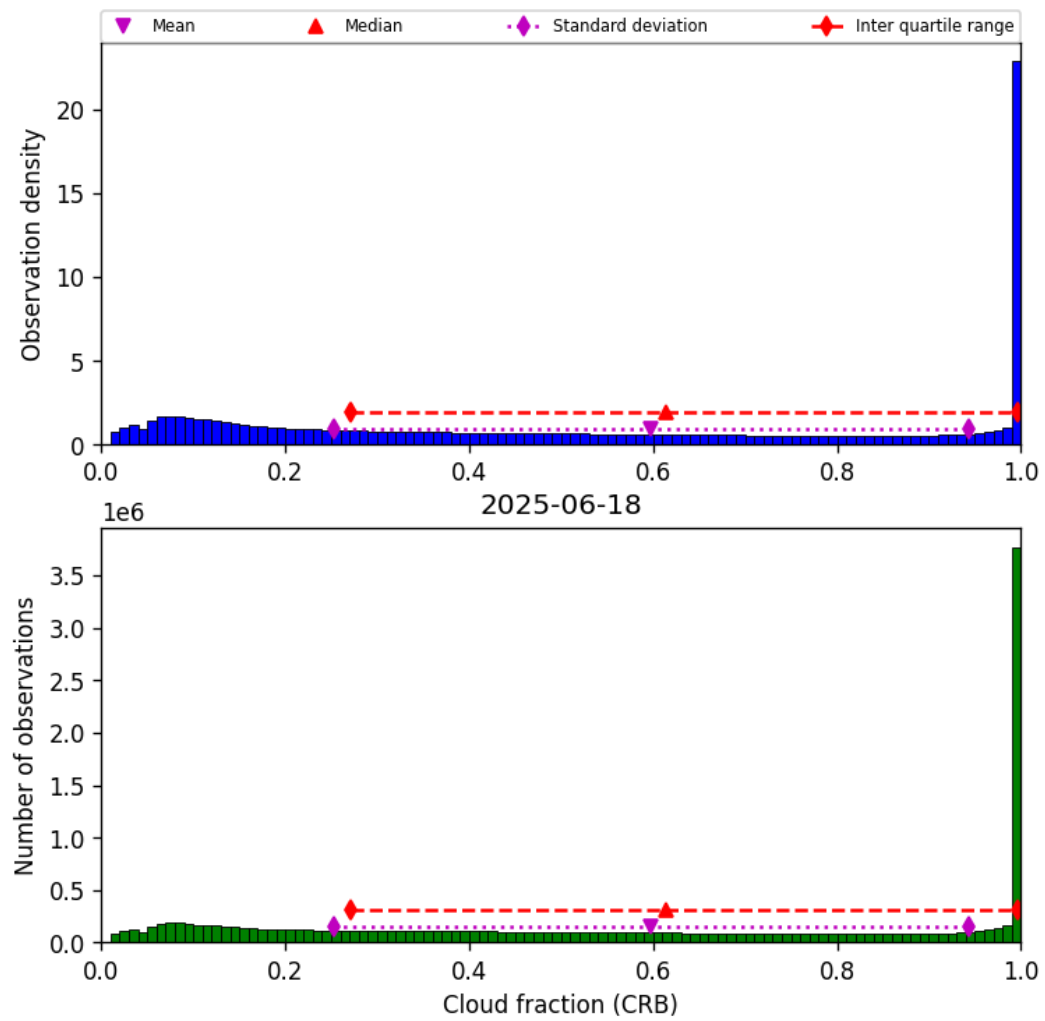


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-06-18 to 2025-06-19

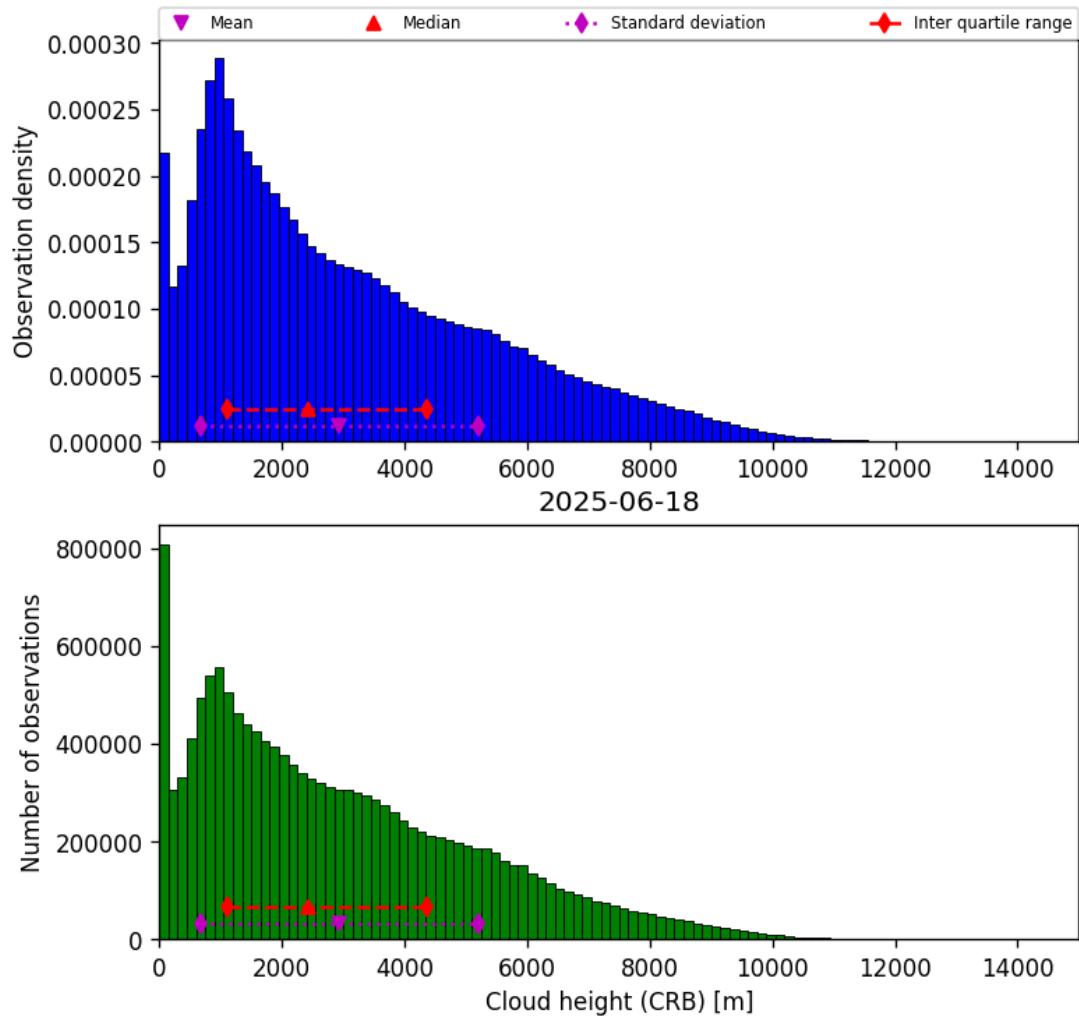


Figure 41: Histogram of “Cloud height (CRB)” for 2025-06-18 to 2025-06-19

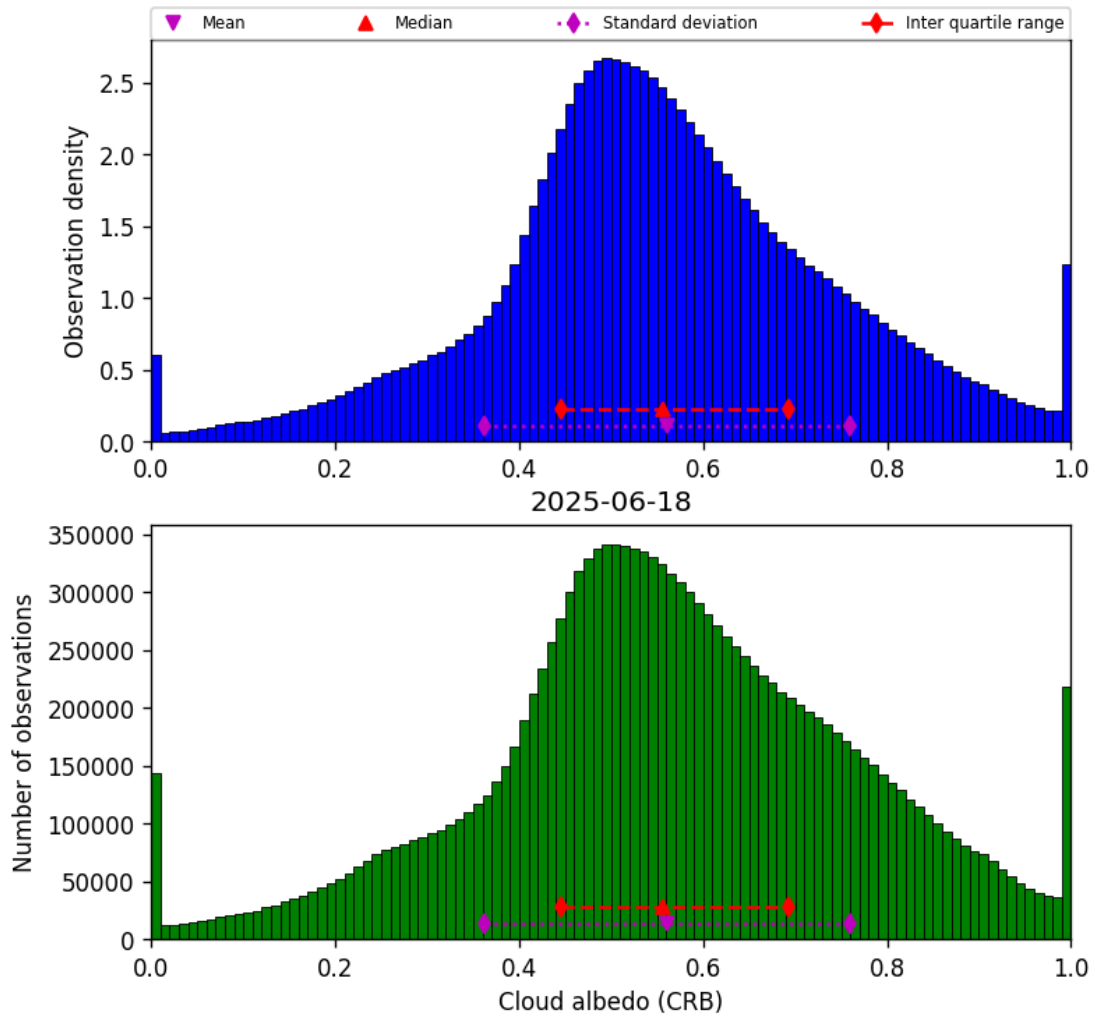


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-06-18 to 2025-06-19

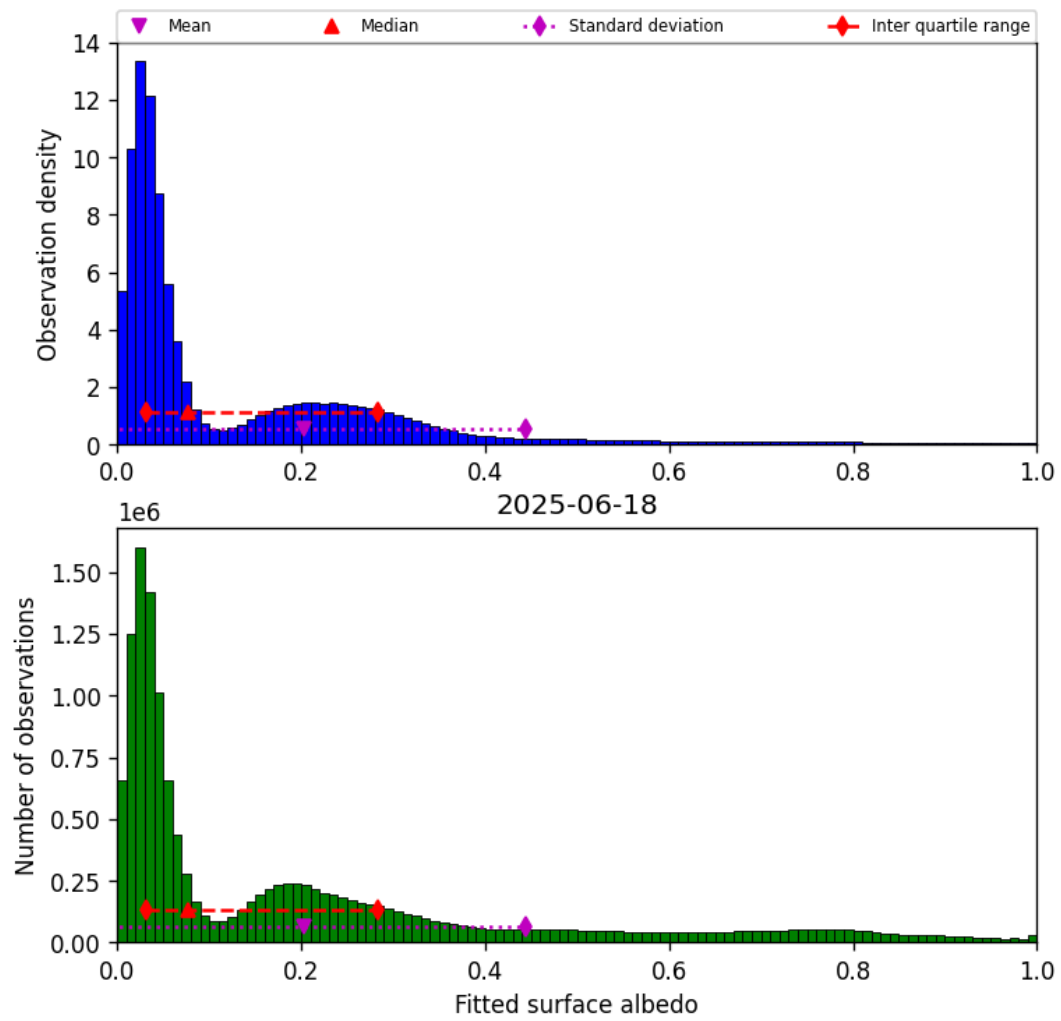


Figure 43: Histogram of “Fitted surface albedo” for 2025-06-18 to 2025-06-19

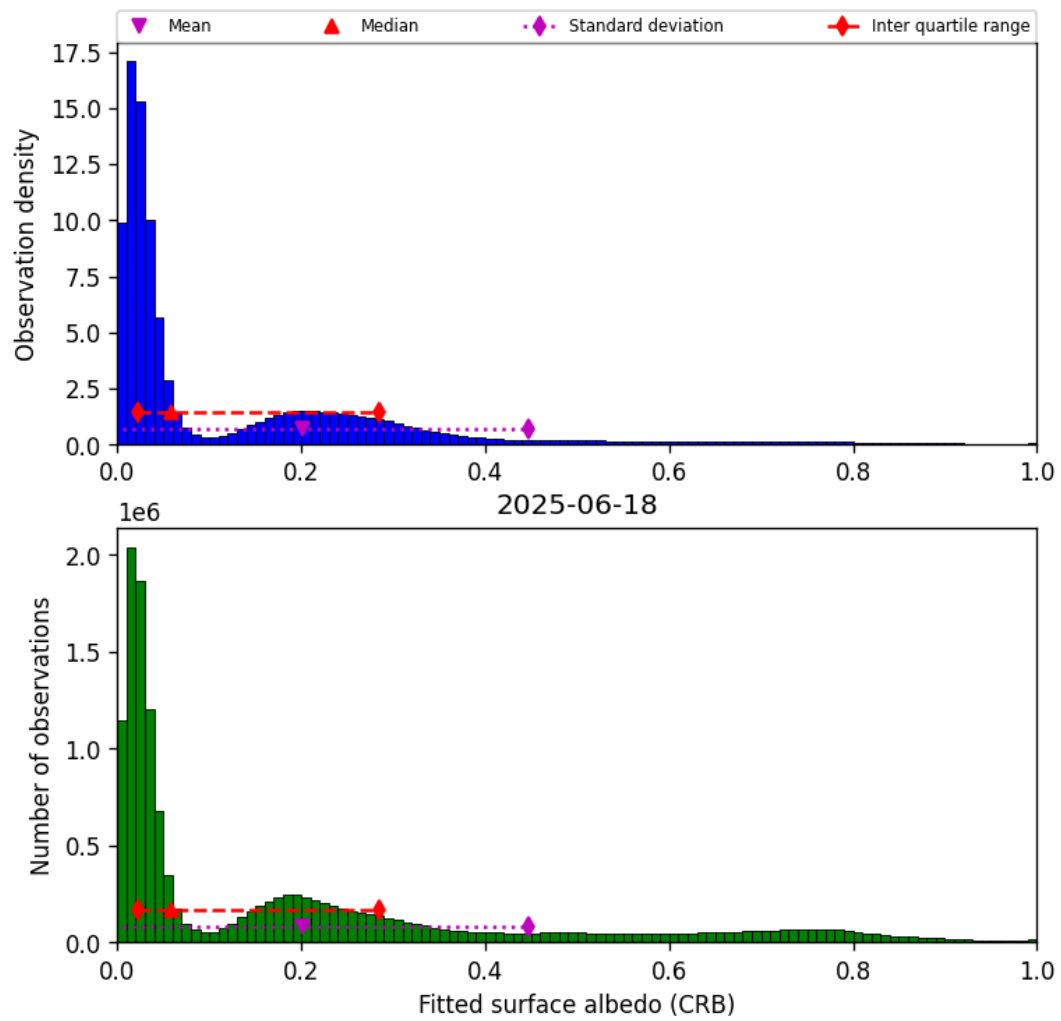


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-06-18 to 2025-06-19

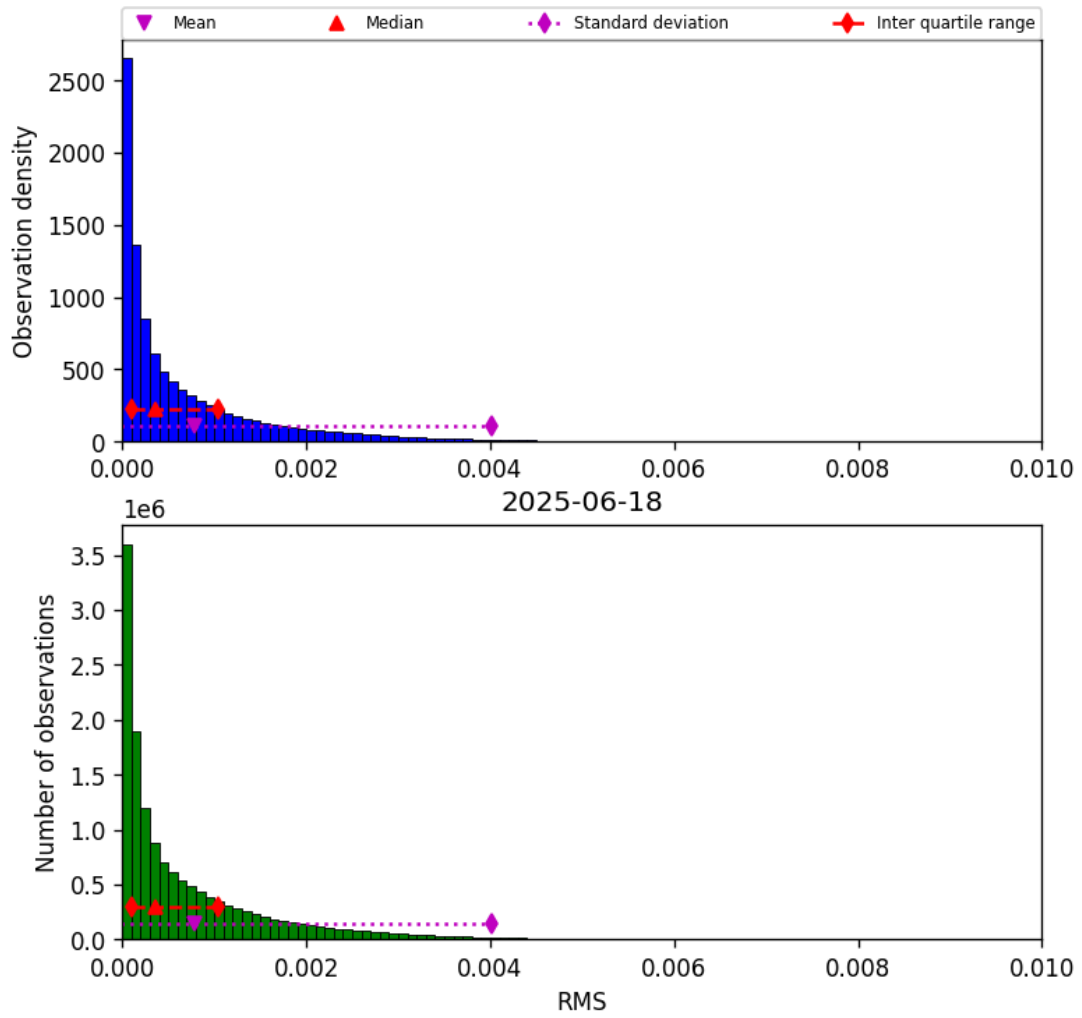


Figure 45: Histogram of “RMS” for 2025-06-18 to 2025-06-19

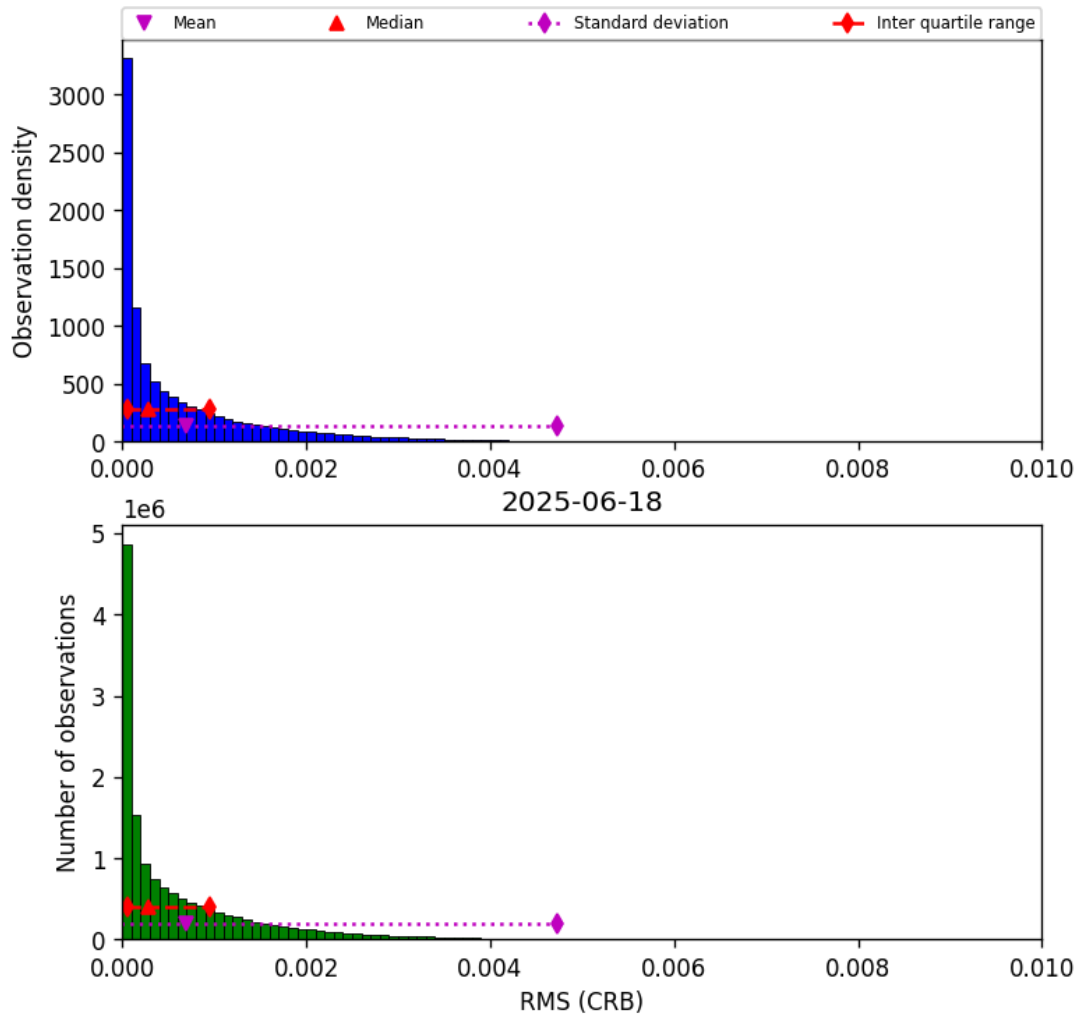


Figure 46: Histogram of “RMS (CRB)” for 2025-06-18 to 2025-06-19

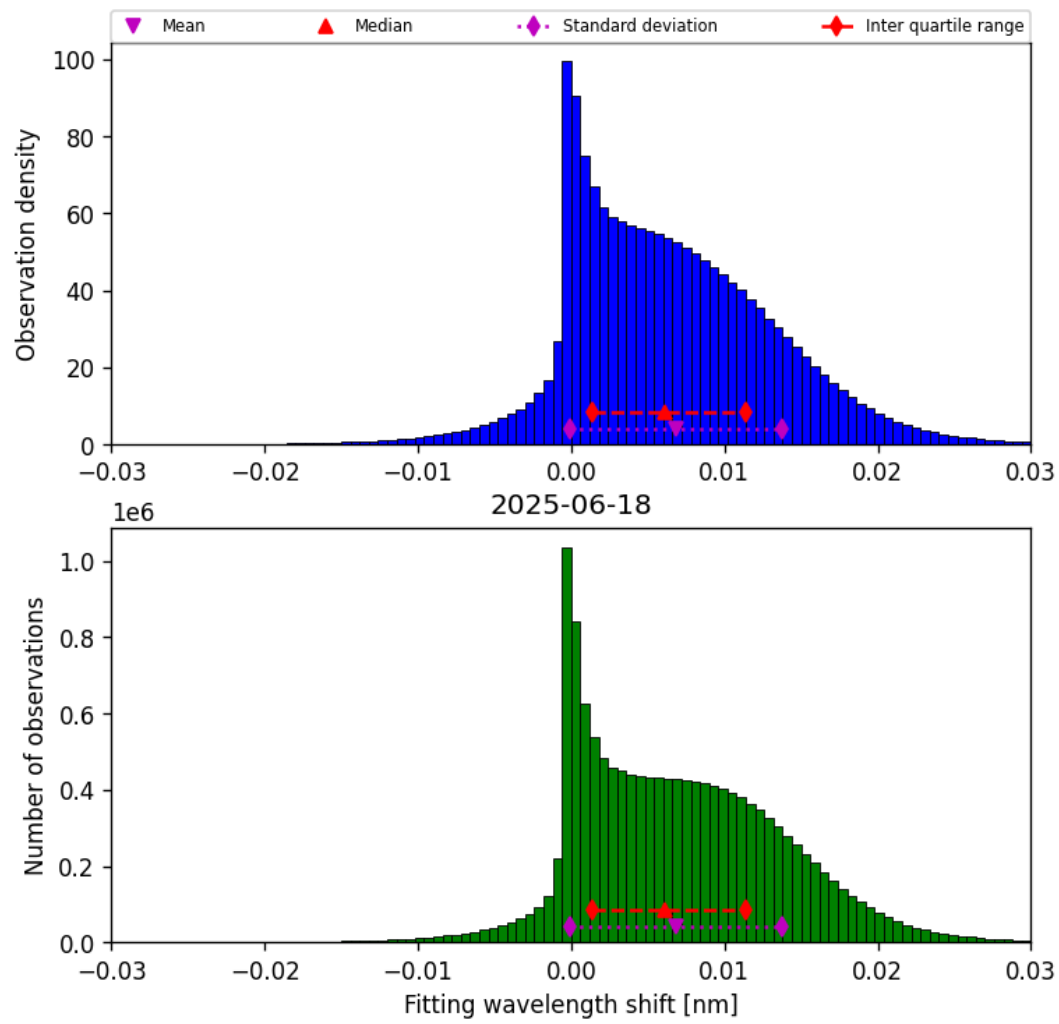


Figure 47: Histogram of “Fitting wavelength shift” for 2025-06-18 to 2025-06-19

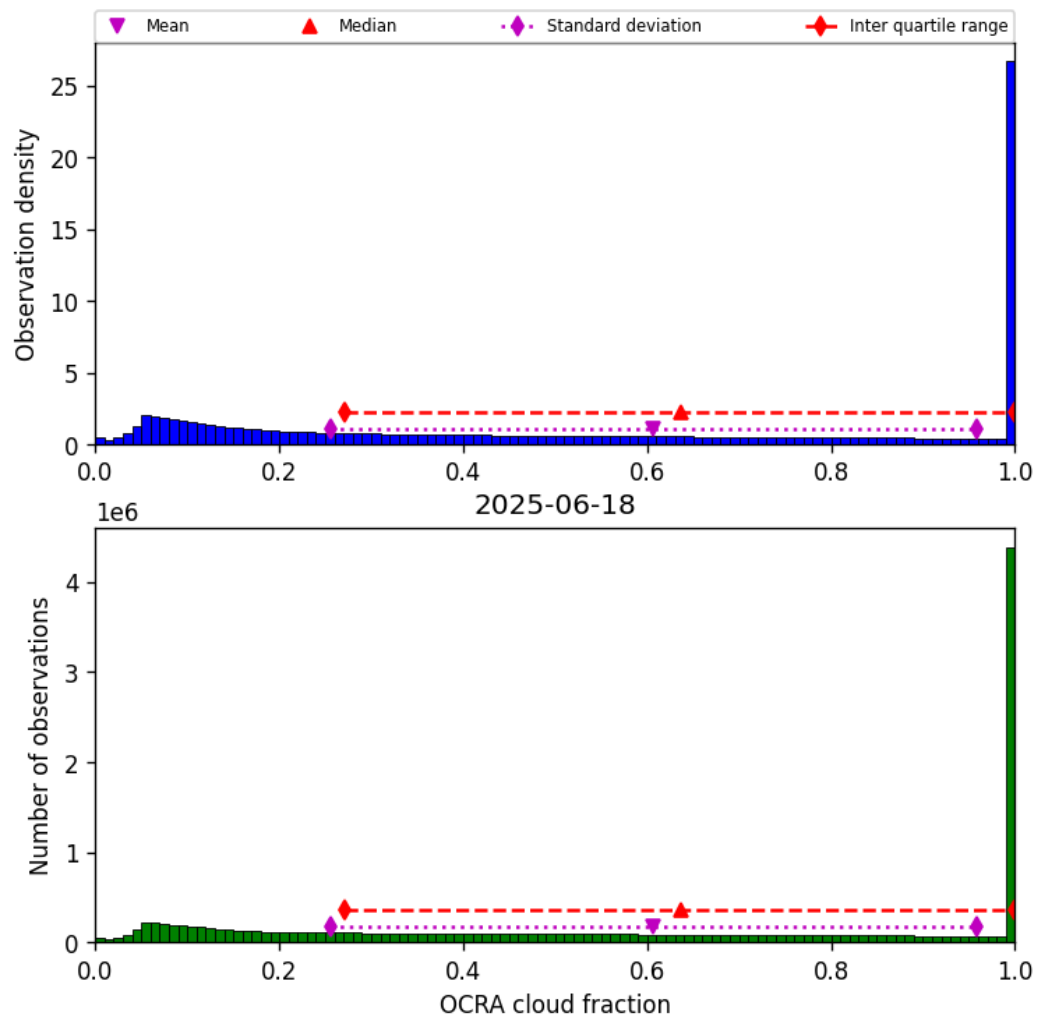


Figure 48: Histogram of “OCRA cloud fraction” for 2025-06-18 to 2025-06-19

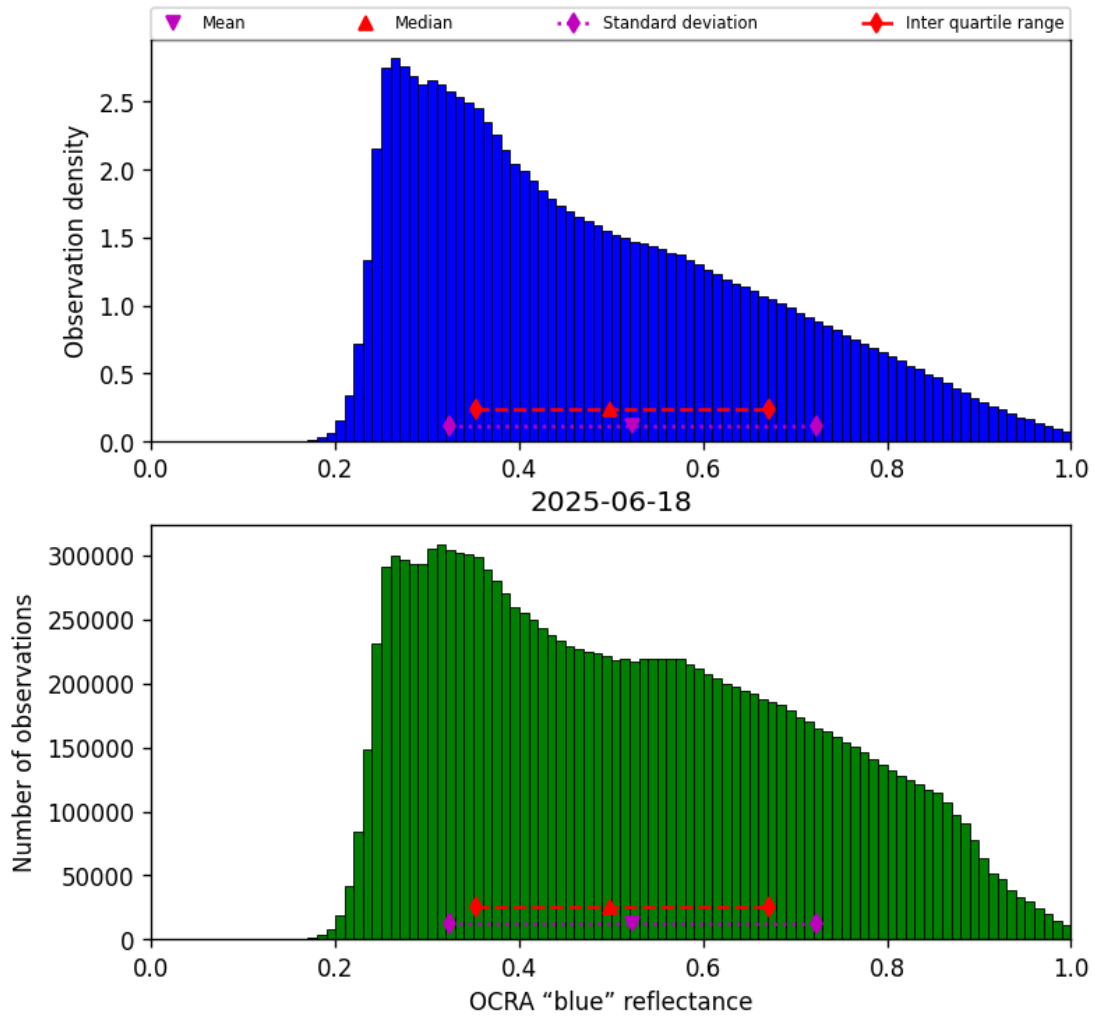


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-06-18 to 2025-06-19

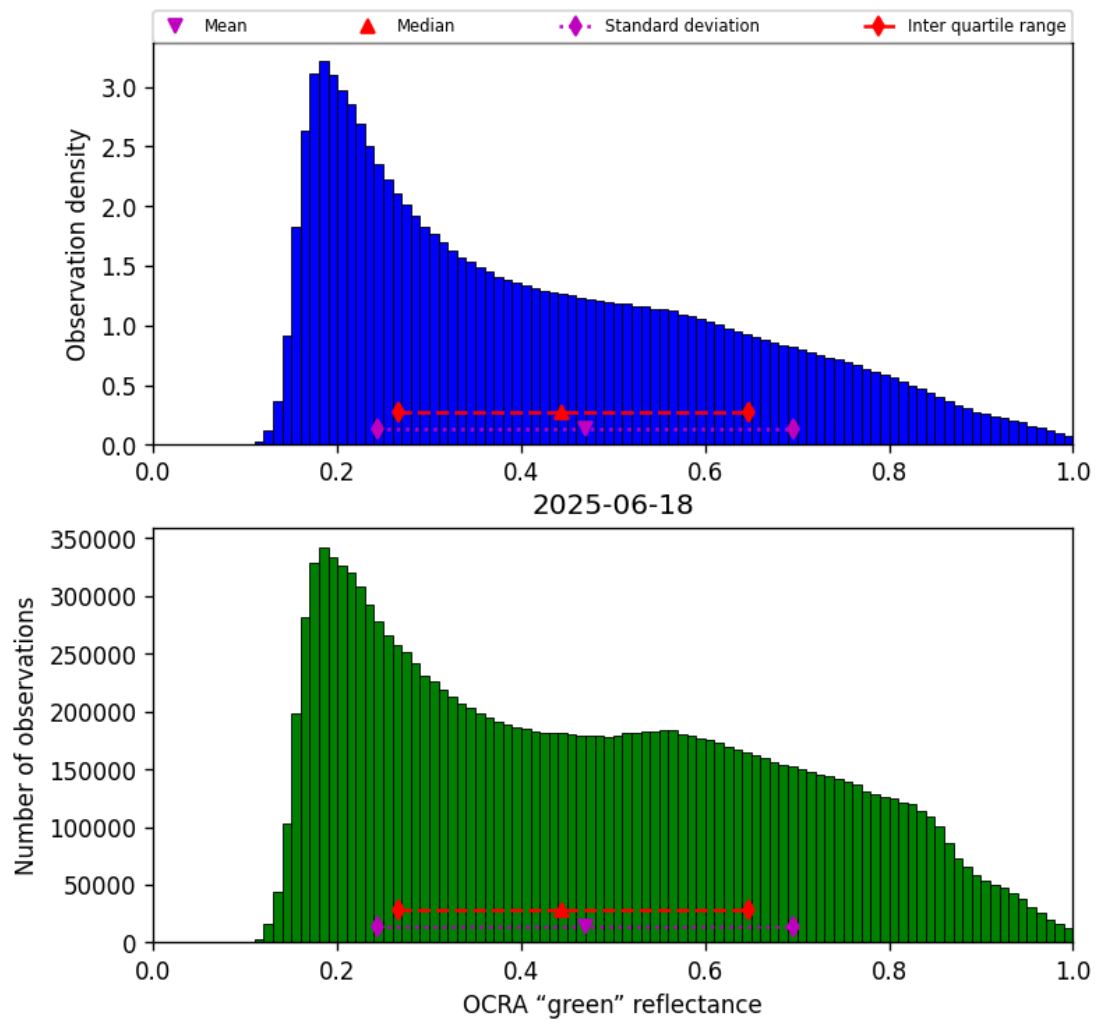


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-06-18 to 2025-06-19

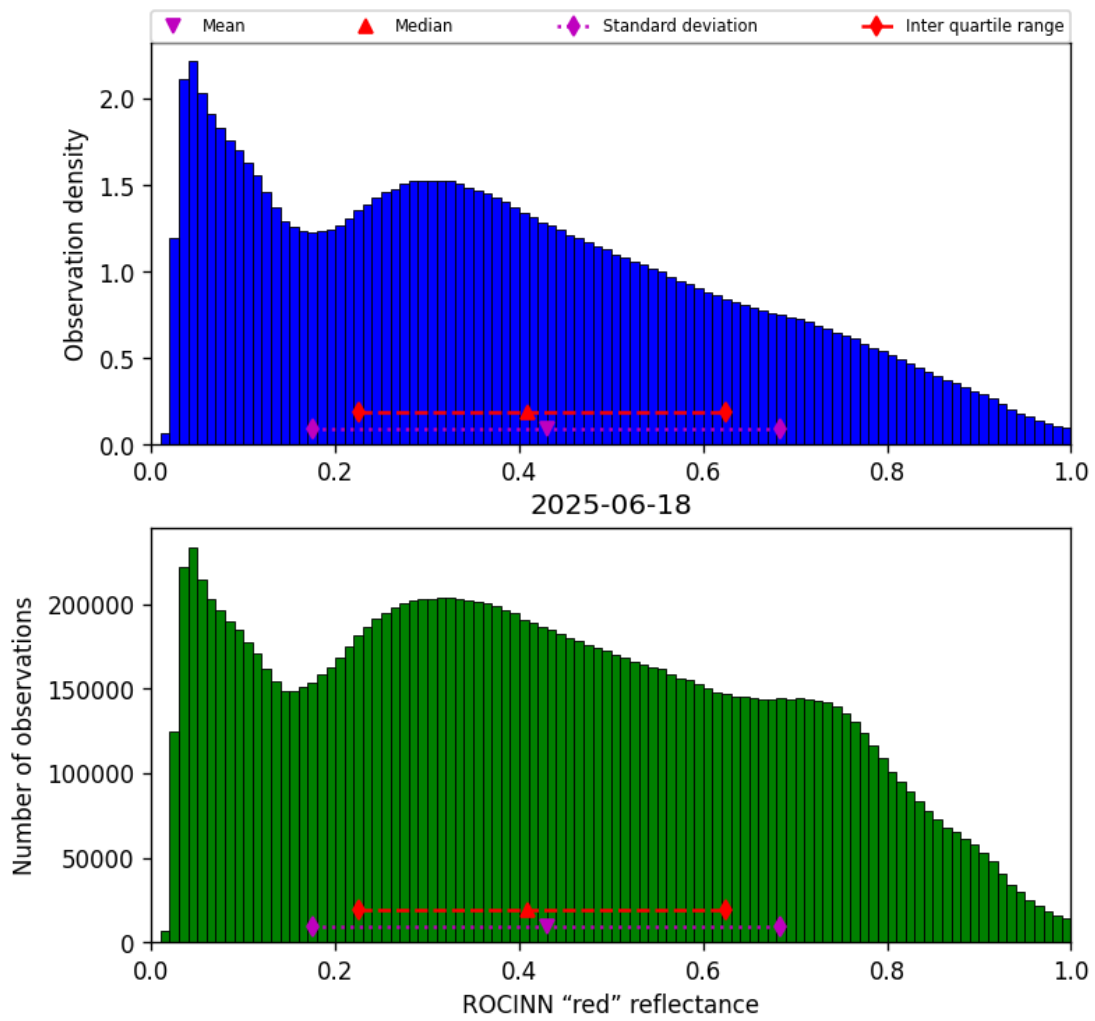


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-06-18 to 2025-06-19

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.

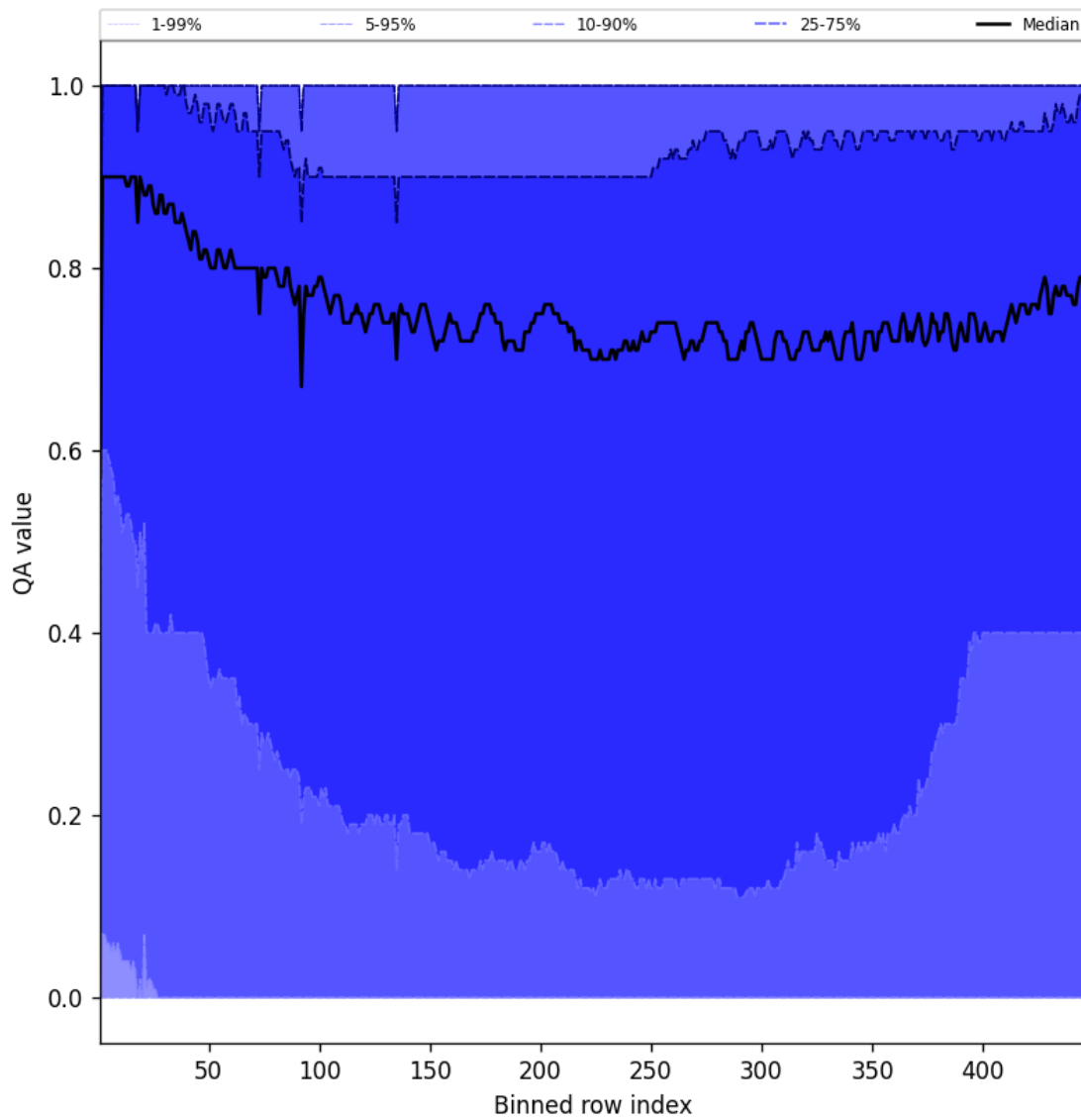


Figure 52: Along track statistics of “QA value” for 2025-06-18 to 2025-06-19

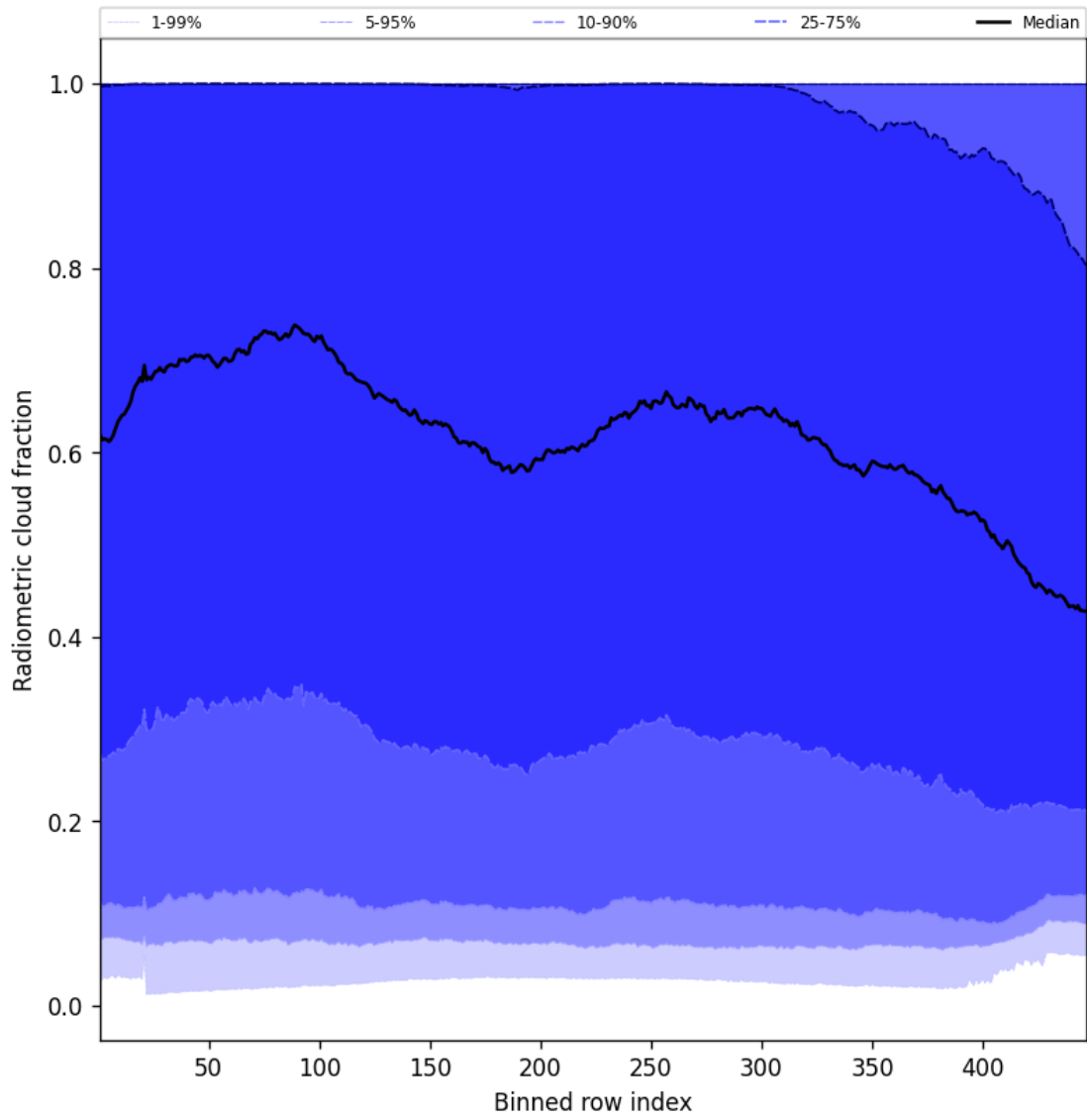


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-06-18 to 2025-06-19

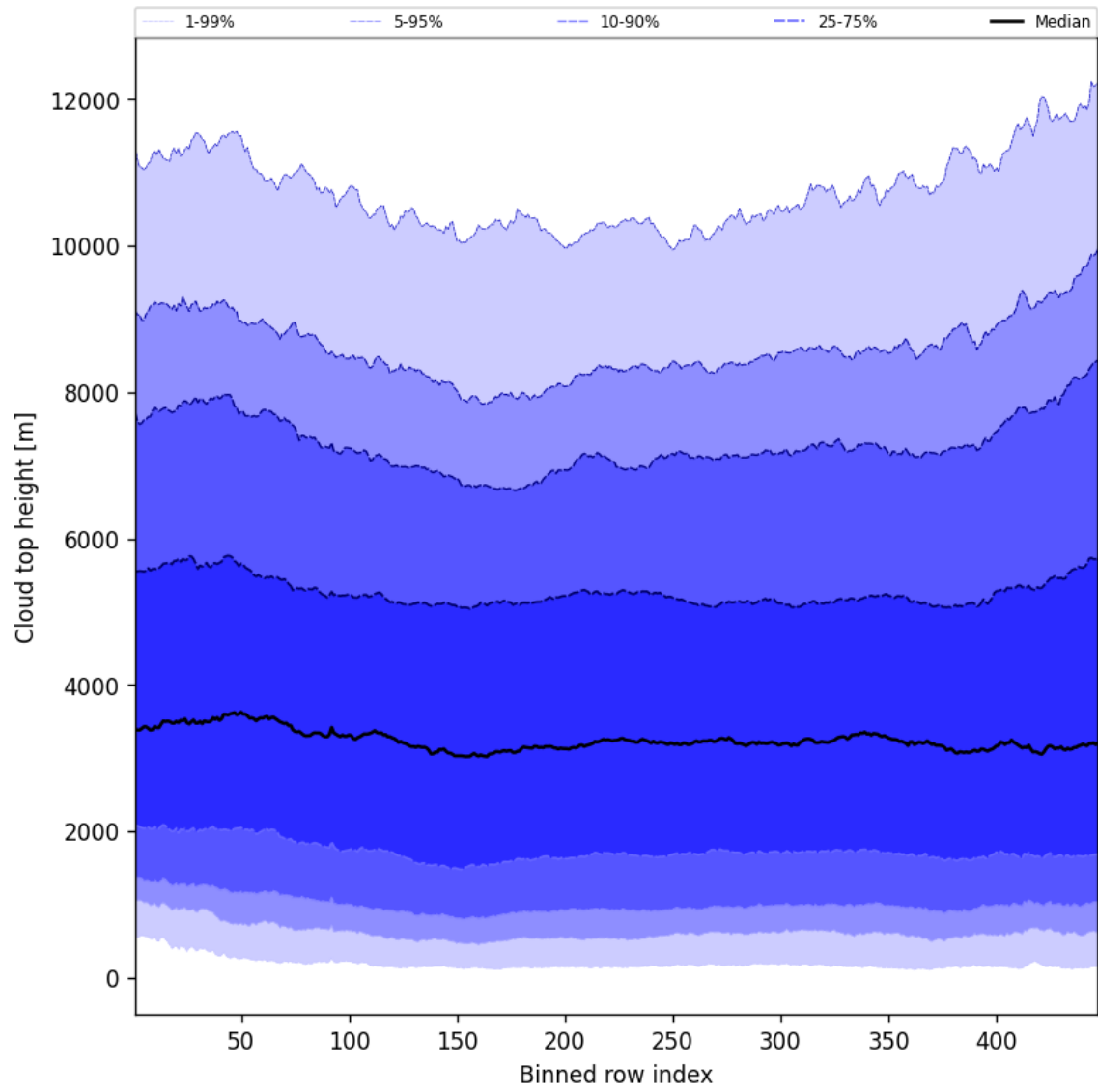


Figure 54: Along track statistics of “Cloud top height” for 2025-06-18 to 2025-06-19

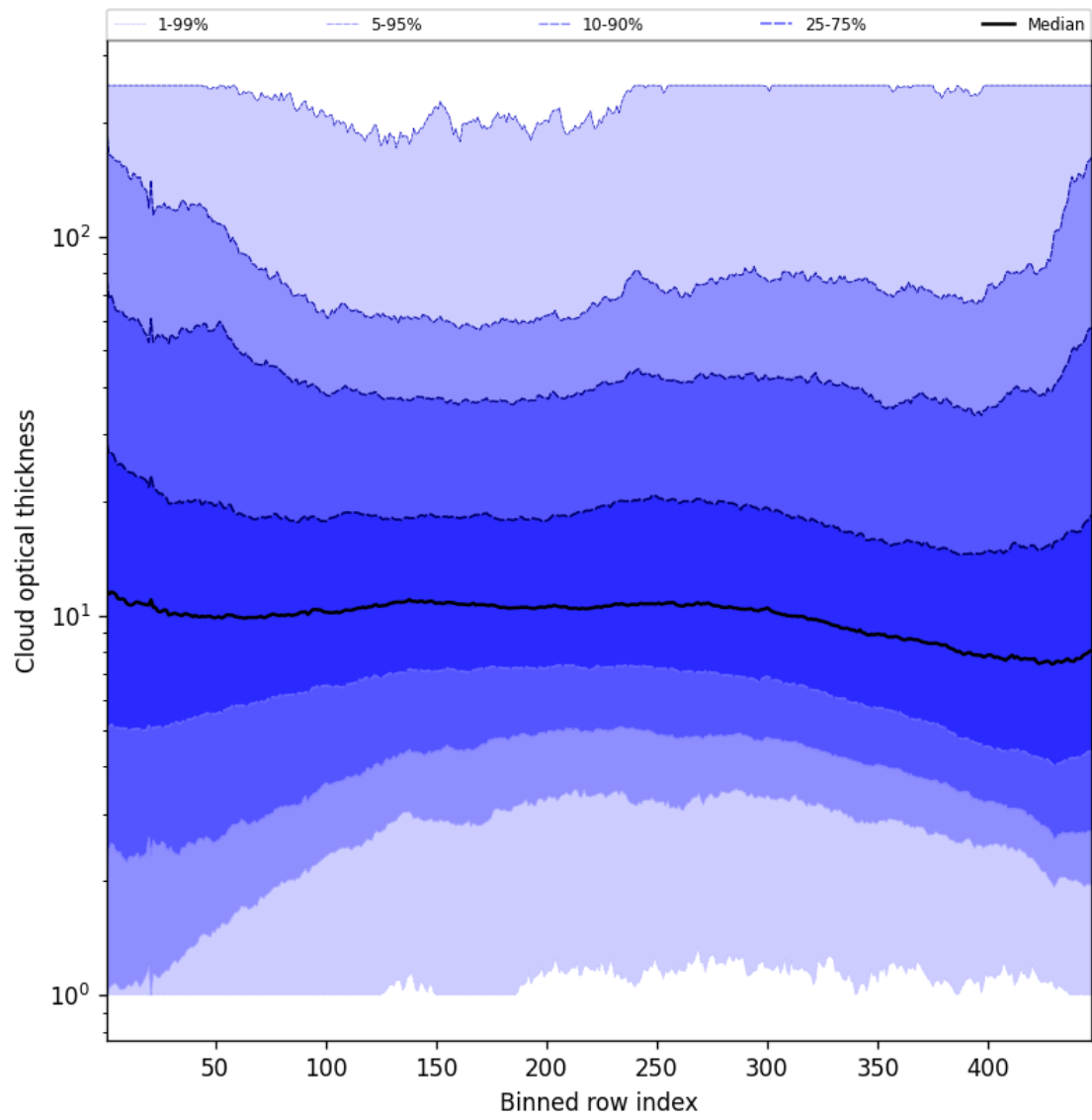


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-06-18 to 2025-06-19

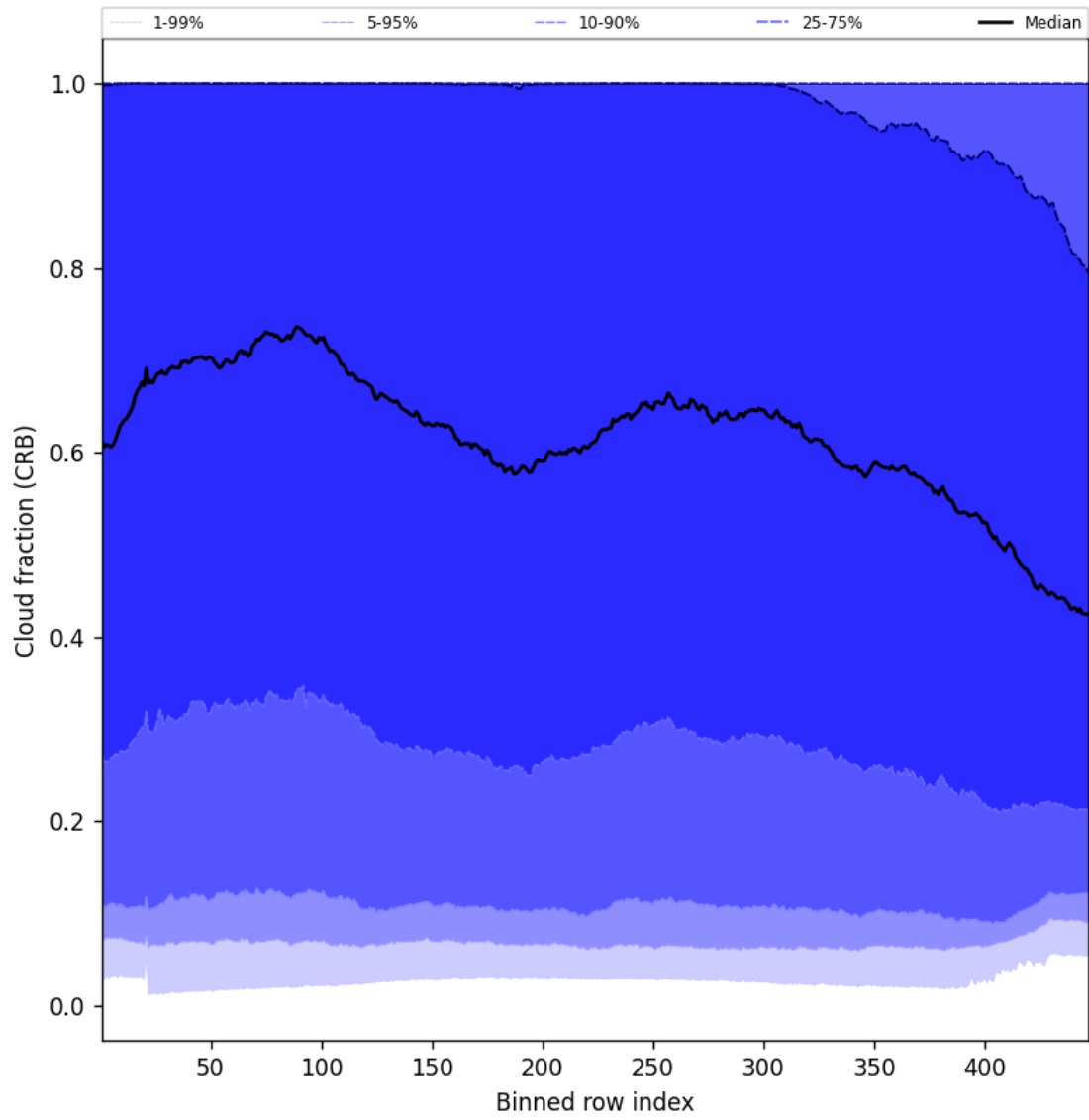


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-06-18 to 2025-06-19

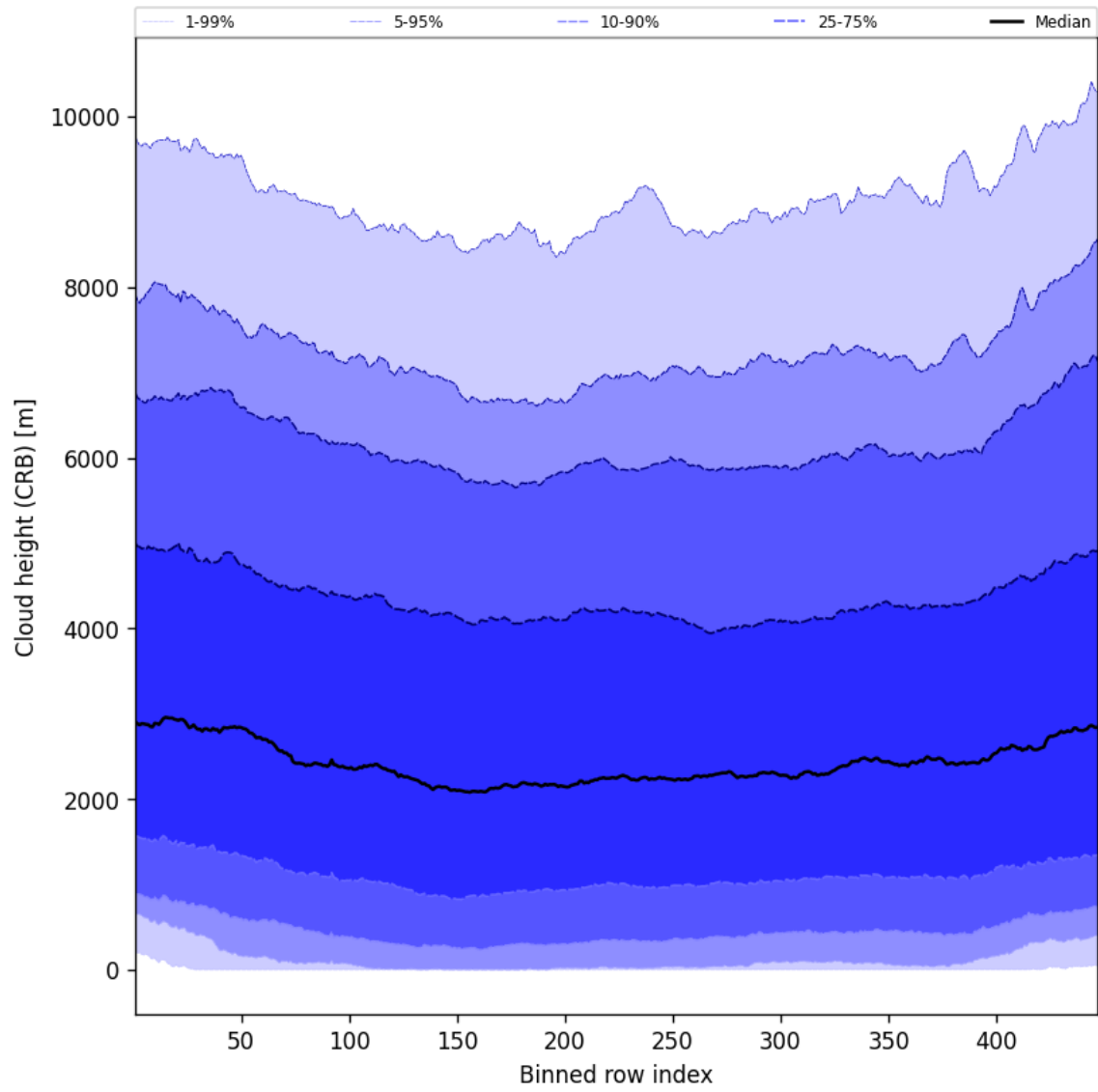


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-06-18 to 2025-06-19

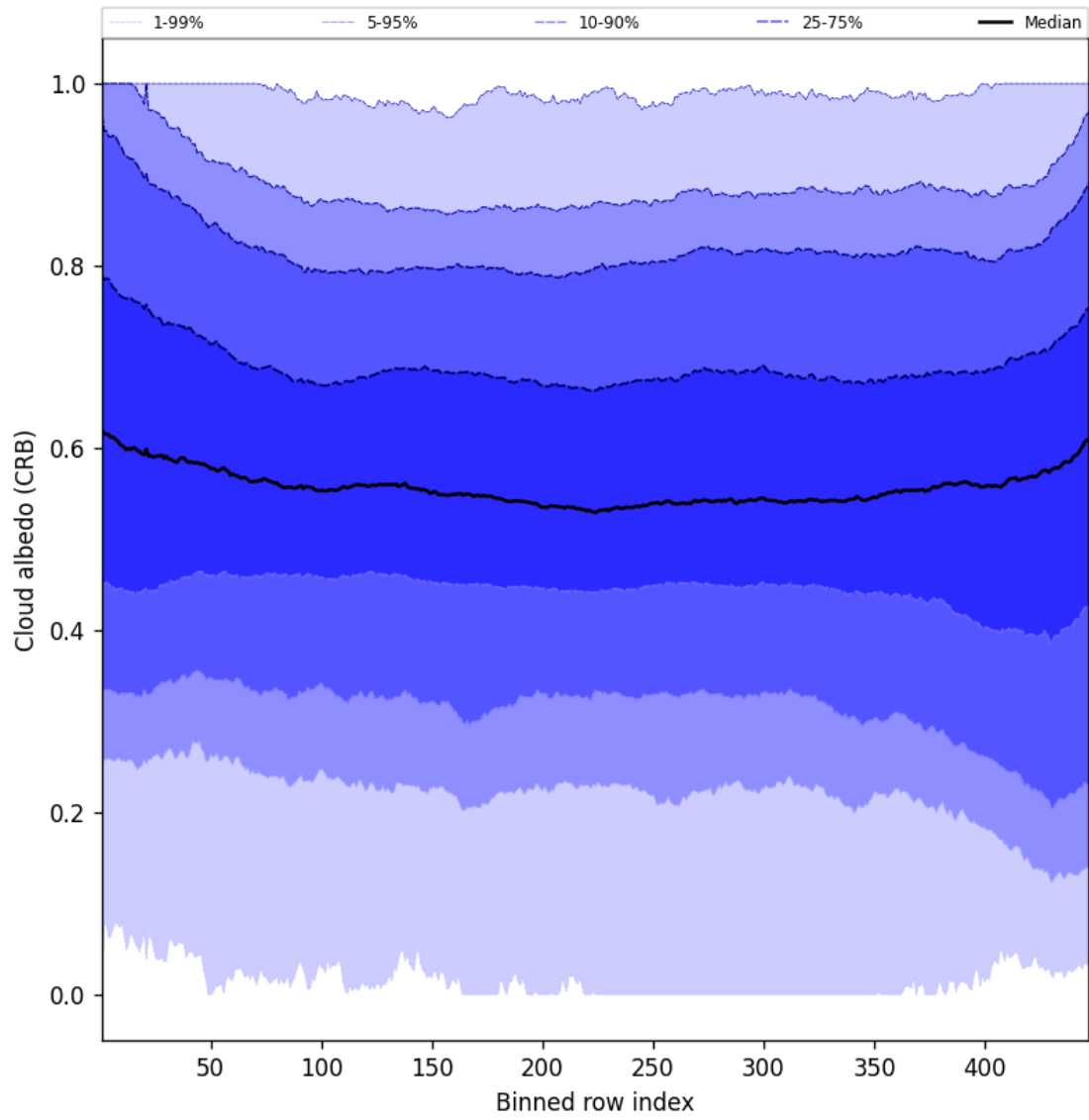


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-06-18 to 2025-06-19

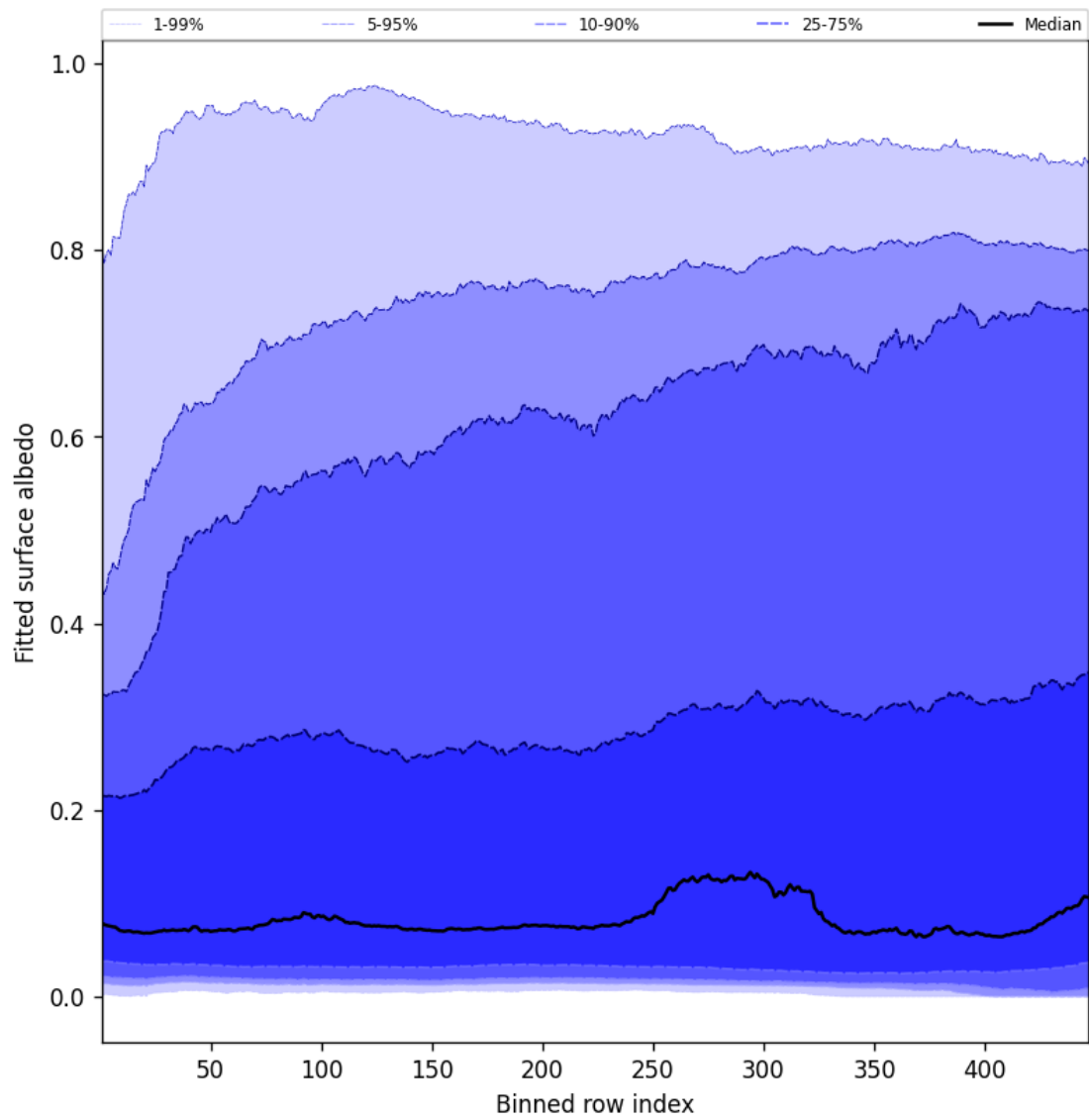


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-06-18 to 2025-06-19

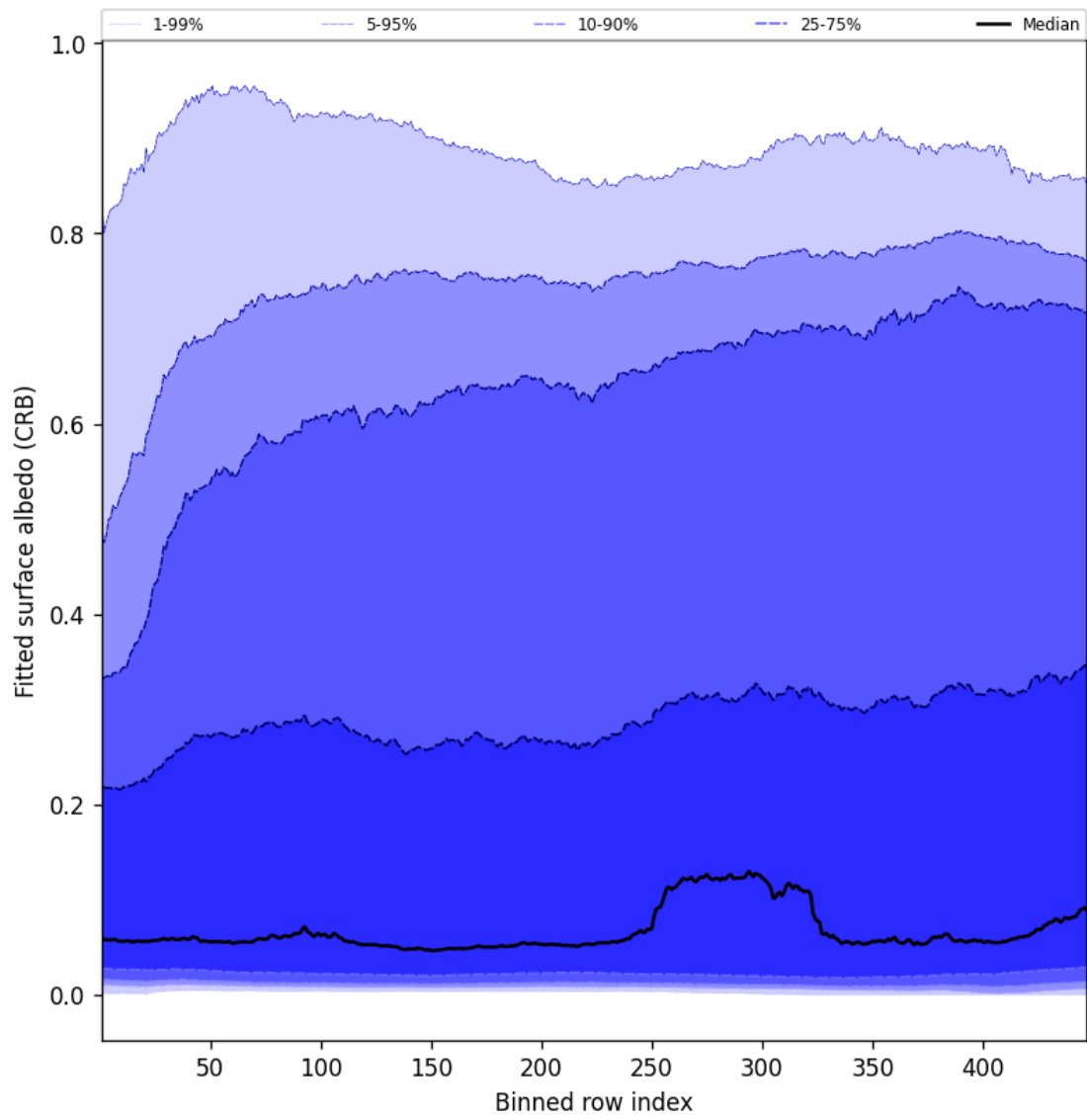


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-06-18 to 2025-06-19

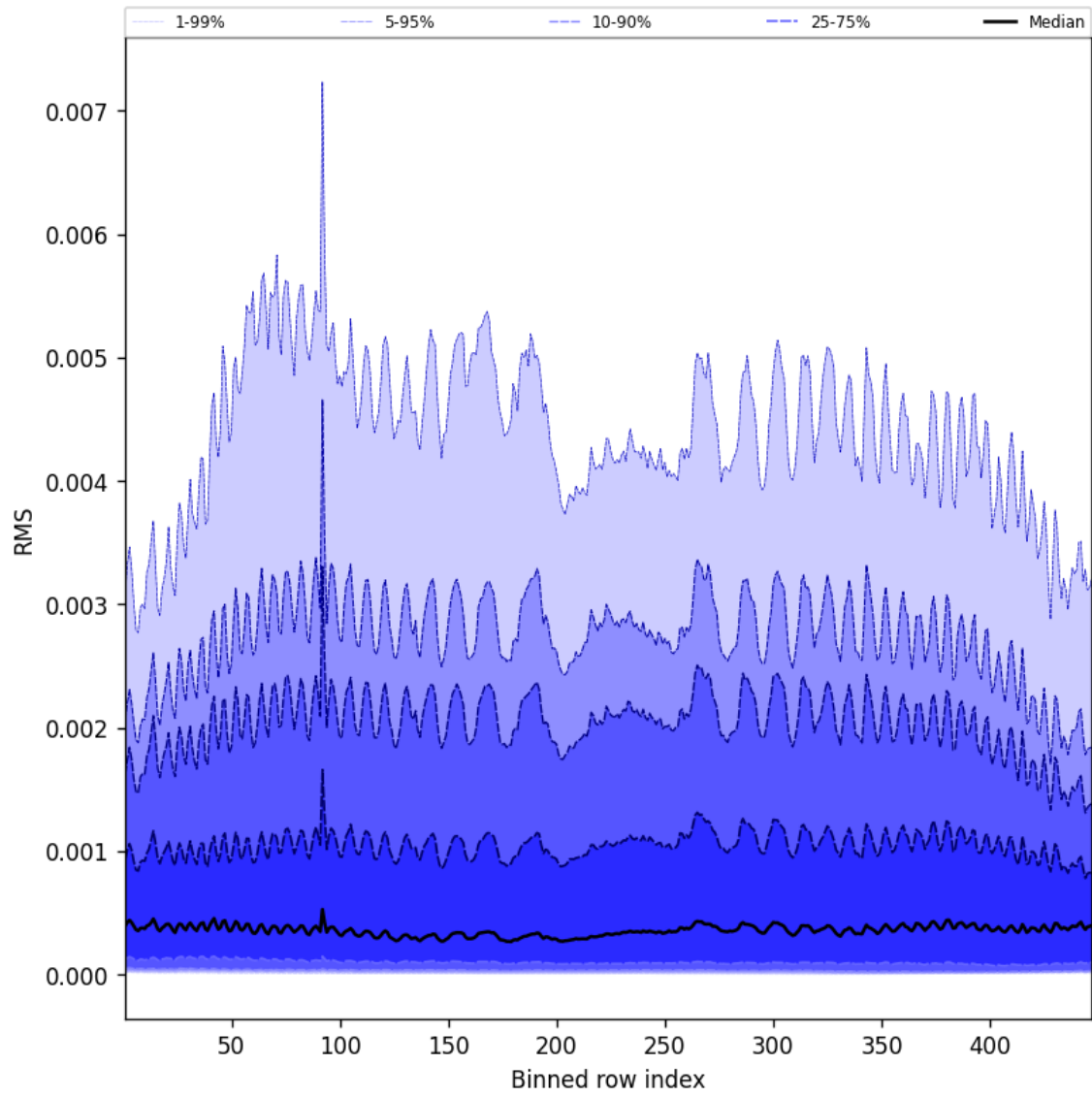


Figure 61: Along track statistics of “RMS” for 2025-06-18 to 2025-06-19

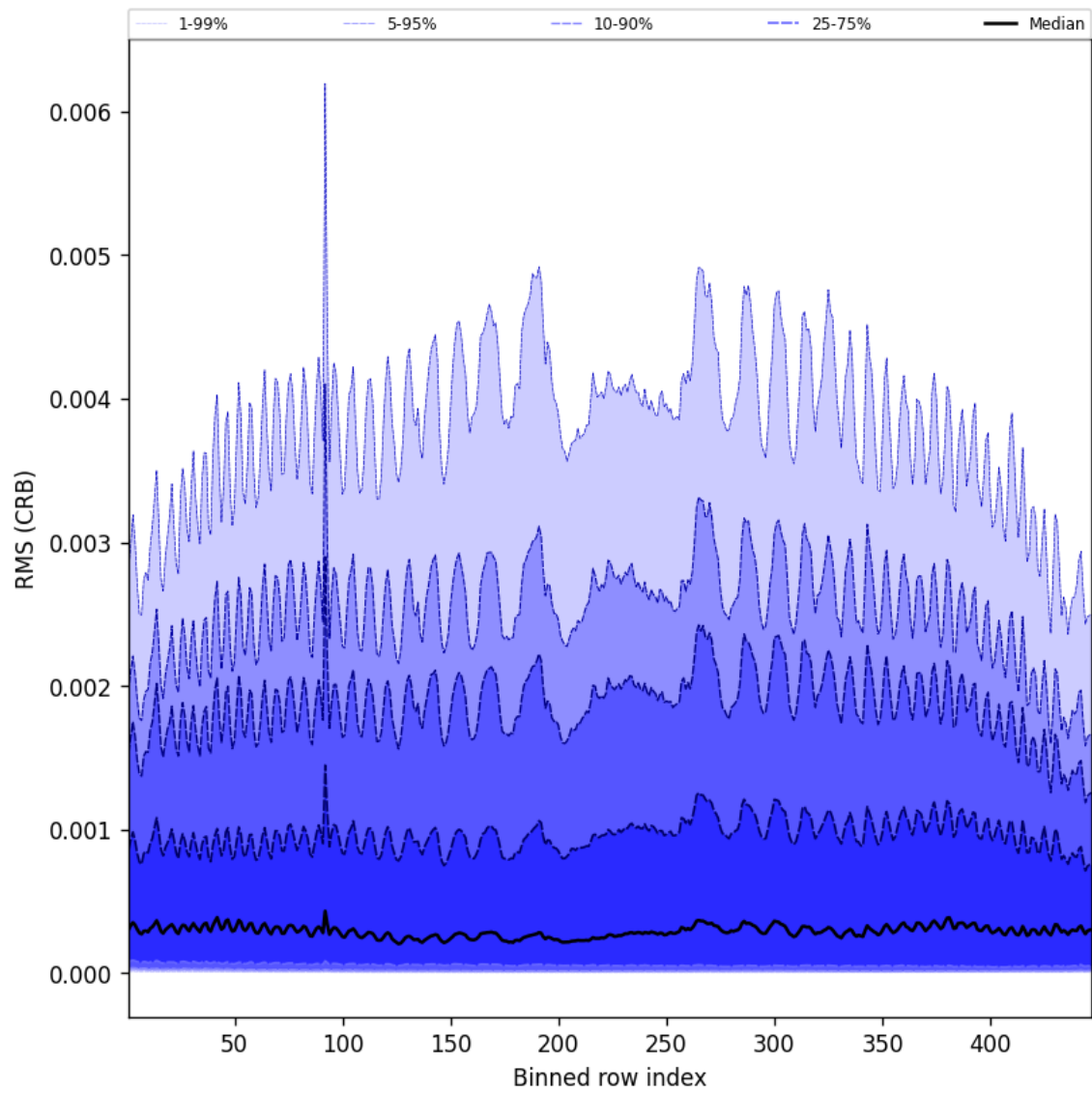


Figure 62: Along track statistics of “RMS (CRB)” for 2025-06-18 to 2025-06-19

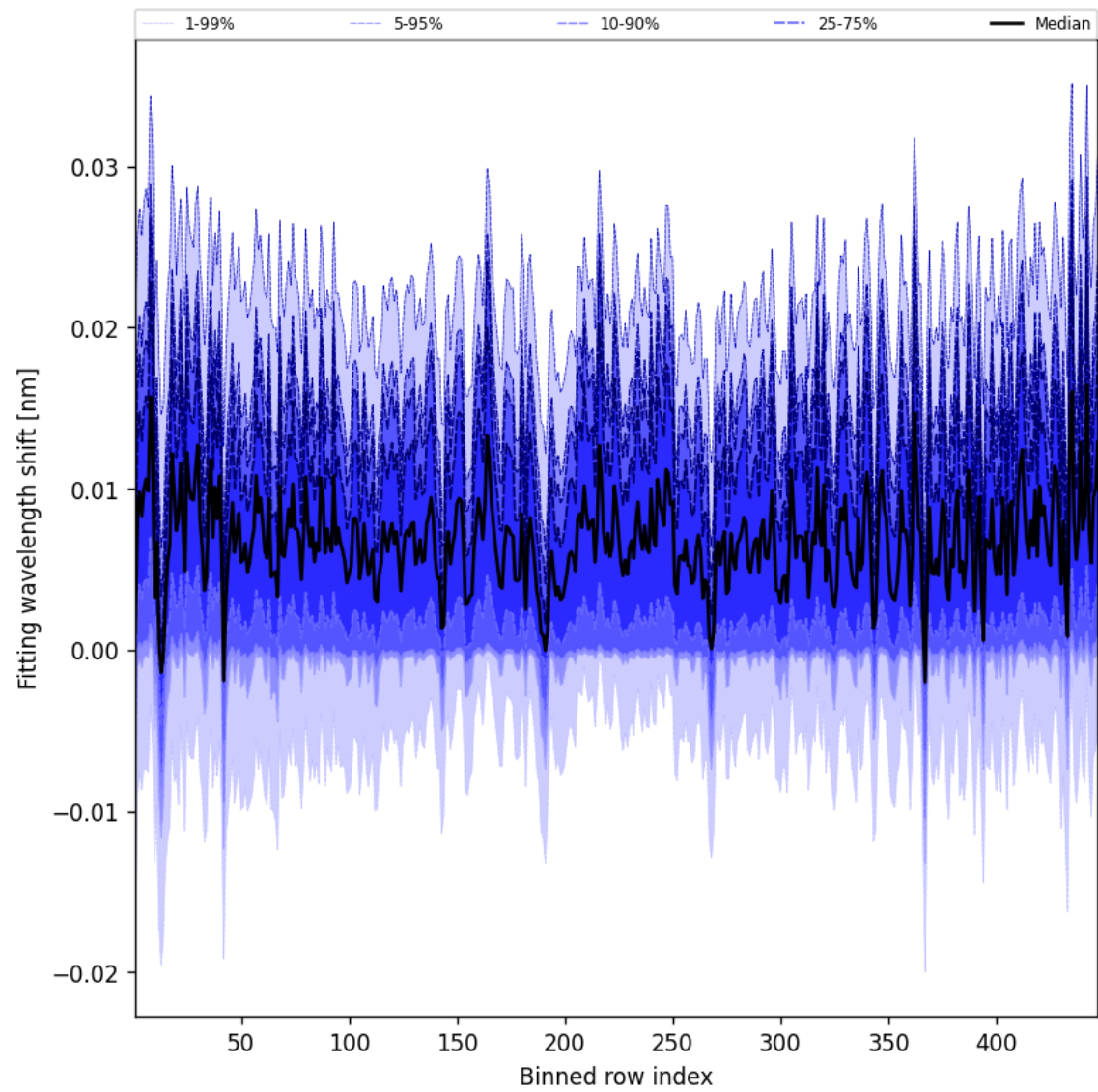


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-06-18 to 2025-06-19

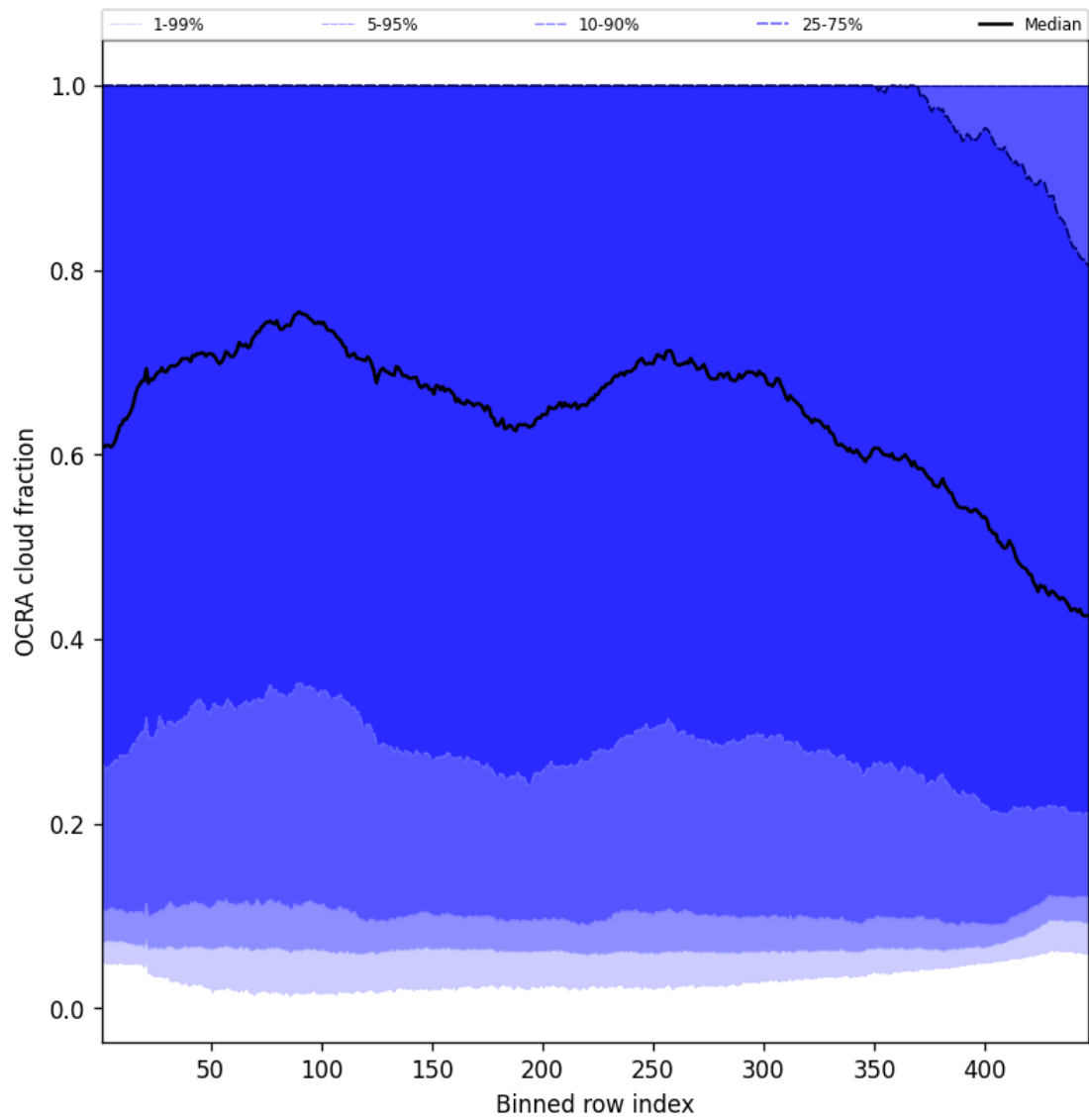


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-06-18 to 2025-06-19

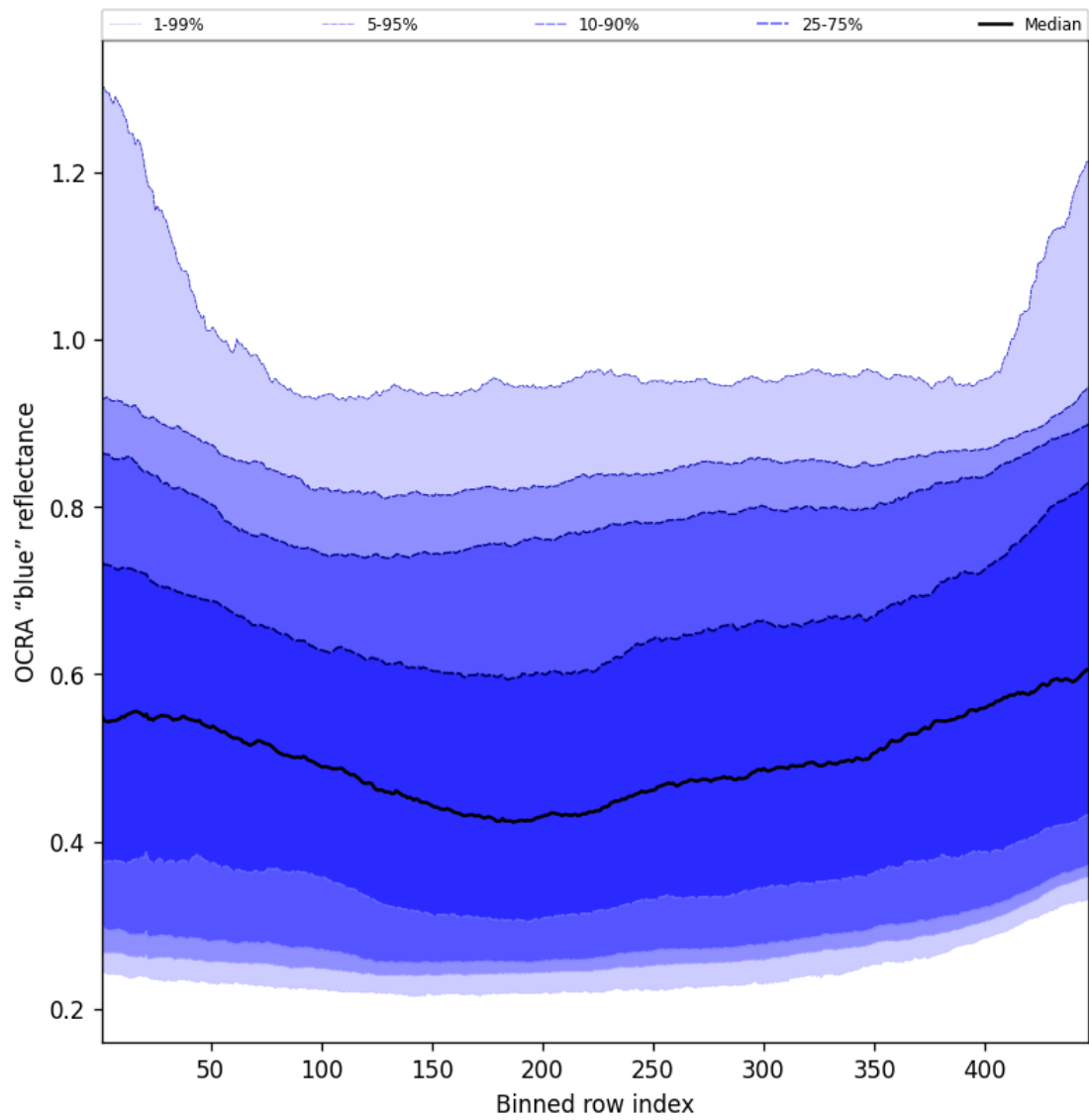


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-06-18 to 2025-06-19

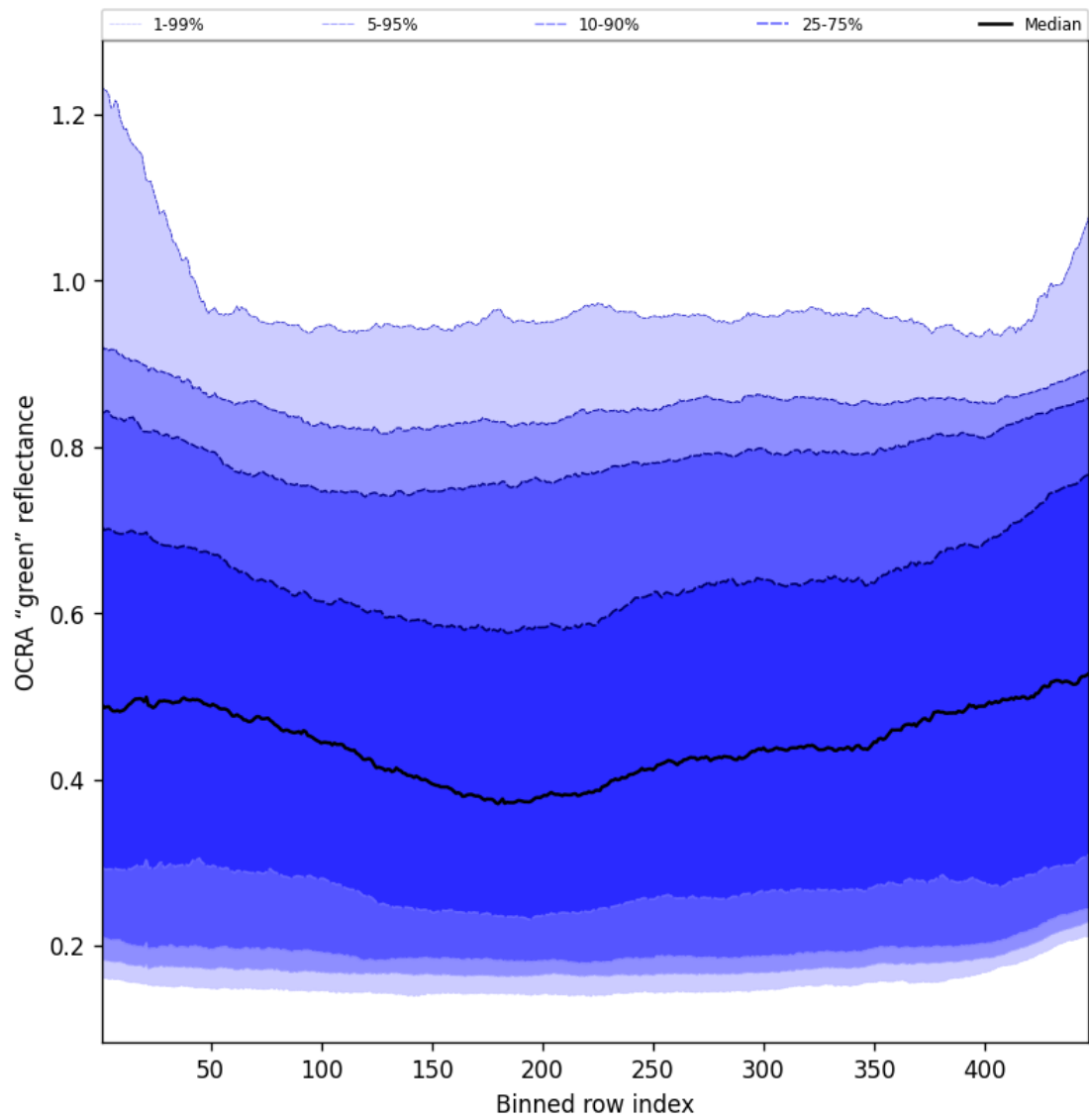


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-06-18 to 2025-06-19

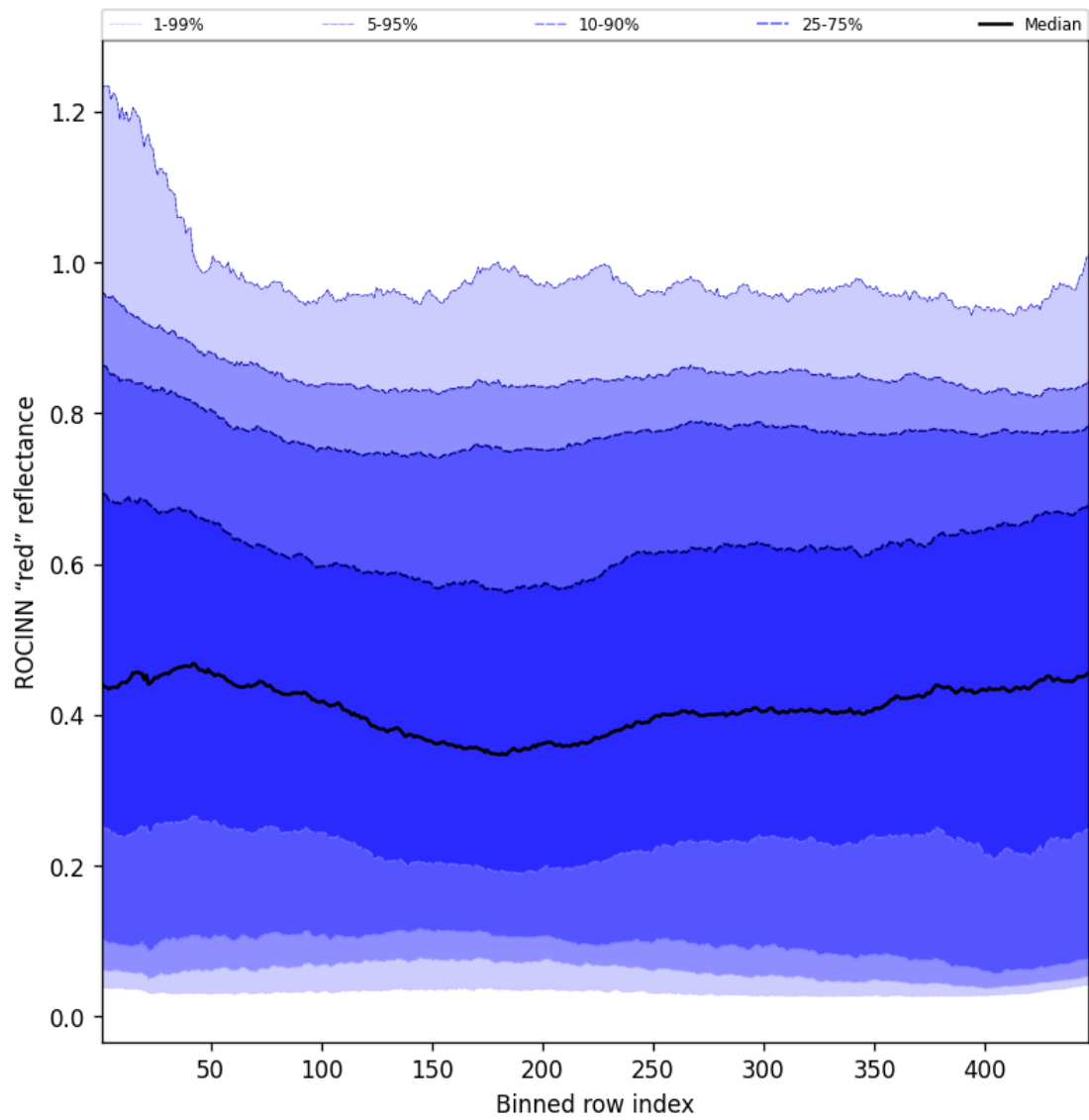


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-06-18 to 2025-06-19

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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