

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-10-06 (20:04)

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]	0.629 ± 0.365	1872009	0.995	0.550	0.790	0.0	1.000
cloud fraction [1]	0.634 ± 0.348	1872009	0.995	0.696	0.706	7.634×10^{-3}	1.000
cloud top height [m]	$(0.333 \pm 0.221) \times 10^4$	1872009	1.425×10^3	2.788×10^3	2.822×10^3	0.0	2.000×10^4
cloud optical thickness [1]	26.3 ± 44.1	1872009	10.2	16.9	11.6	1.000	250
cloud fraction crb [1]	0.633 ± 0.348	1872009	0.995	0.697	0.704	8.710×10^{-3}	1.000
cloud height crb [m]	$(0.267 \pm 0.194) \times 10^4$	1872009	975	2.569×10^3	2.250×10^3	0.0	1.591×10^4
cloud albedo crb [1]	0.599 ± 0.197	1872009	0.995	0.250	0.579	0.0	1.000
surface albedo fitted [1]	0.156 ± 0.245	1872009	2.500×10^{-2}	0.112	3.929×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.146 ± 0.234	1872009	1.500×10^{-2}	0.114	3.124×10^{-2}	0.0	1.000
fitted root mean square [1]	$(5.120 \pm 6.673) \times 10^{-4}$	1872009	5.000×10^{-5}	6.001×10^{-4}	2.710×10^{-4}	2.736×10^{-6}	5.429×10^{-2}
fitted root mean square crb [1]	$(4.389 \pm 5.859) \times 10^{-4}$	1872009	5.000×10^{-5}	5.269×10^{-4}	1.992×10^{-4}	1.751×10^{-6}	1.015×10^{-2}
wavelength shift [nm]	$(8.187 \pm 7.116) \times 10^{-3}$	1872009	9.000×10^{-4}	1.059×10^{-2}	7.628×10^{-3}	-4.203×10^{-2}	6.175×10^{-2}
cloud fraction apriori [1]	0.639 ± 0.352	1872009	0.995	0.698	0.720	0.0	1.000
reflectance blue ocra [1]	0.581 ± 0.222	1872009	0.245	0.355	0.574	0.185	2.00
reflectance green ocra [1]	0.529 ± 0.251	1872009	0.175	0.429	0.533	9.589×10^{-2}	1.95
reflectance continuum aband [1]	0.463 ± 0.286	1872009	3.500×10^{-2}	0.476	0.478	1.242×10^{-2}	3.57

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	0.400	0.950	1.000	1.000	1.000	1.000
cloud fraction [1]	2.886×10^{-2}	7.303×10^{-2}	0.115	0.171	0.304	1.000	1.000	1.000	1.000	1.000
cloud top height [m]	252	710	1.012×10^3	1.290×10^3	1.650×10^3	4.437×10^3	5.603×10^3	6.625×10^3	7.778×10^3	9.789×10^3
cloud optical thickness [1]	1.52	3.24	4.43	5.59	7.39	24.3	36.8	53.9	98.8	250
cloud fraction crb [1]	2.815×10^{-2}	7.224×10^{-2}	0.114	0.170	0.303	1.000	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	333	583	815	1.140×10^3	3.709×10^3	4.620×10^3	5.558×10^3	6.625×10^3	8.214×10^3
cloud albedo crb [1]	9.063×10^{-2}	0.280	0.381	0.433	0.477	0.727	0.807	0.878	0.972	1.000
surface albedo fitted [1]	0.0	6.157×10^{-3}	1.205×10^{-2}	1.596×10^{-2}	2.157×10^{-2}	0.133	0.401	0.633	0.753	0.928
surface albedo fitted crb [1]	0.0	6.346×10^{-3}	9.611×10^{-3}	1.231×10^{-2}	1.642×10^{-2}	0.130	0.396	0.607	0.704	0.870
fitted root mean square [1]	1.493×10^{-5}	2.645×10^{-5}	4.189×10^{-5}	6.374×10^{-5}	1.039×10^{-4}	7.040×10^{-4}	9.952×10^{-4}	1.275×10^{-3}	1.723×10^{-3}	2.806×10^{-3}
fitted root mean square crb [1]	7.555×10^{-6}	1.484×10^{-5}	2.379×10^{-5}	3.767×10^{-5}	6.351×10^{-5}	5.905×10^{-4}	8.818×10^{-4}	1.171×10^{-3}	1.643×10^{-3}	2.794×10^{-3}
wavelength shift [nm]	-7.255×10^{-3}	-4.625×10^{-4}	1.899×10^{-4}	1.015×10^{-3}	2.509×10^{-3}	1.310×10^{-2}	1.550×10^{-2}	1.752×10^{-2}	2.017×10^{-2}	2.597×10^{-2}
cloud fraction apriori [1]	3.185×10^{-2}	6.891×10^{-2}	0.108	0.164	0.302	1.000	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.240	0.263	0.294	0.331	0.394	0.748	0.808	0.857	0.925	1.16
reflectance green ocra [1]	0.154	0.175	0.195	0.226	0.295	0.723	0.794	0.848	0.916	1.12
reflectance continuum aband [1]	2.705×10^{-2}	4.502×10^{-2}	7.073×10^{-2}	0.113	0.204	0.680	0.760	0.825	0.901	1.05

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]	0.622 ± 0.371	1191893	0.580	0.800	0.0	1.000	0.370	0.950
cloud fraction [1]	0.659 ± 0.349	1191893	0.671	0.774	7.634×10^{-3}	1.000	0.329	1.000
cloud top height [m]	$(0.313 \pm 0.198) \times 10^4$	1191893	2.484×10^3	2.719×10^3	0.0	2.000×10^4	1.607×10^3	4.091×10^3
cloud optical thickness [1]	26.0 ± 39.4	1191893	19.4	12.6	1.000	250	7.68	27.0
cloud fraction crb [1]	0.658 ± 0.349	1191893	0.673	0.771	8.710×10^{-3}	1.000	0.327	1.000
cloud height crb [m]	$(0.256 \pm 0.180) \times 10^4$	1191893	2.355×10^3	2.218×10^3	0.0	1.191×10^4	1.134×10^3	3.489×10^3
cloud albedo crb [1]	0.583 ± 0.188	1191893	0.231	0.573	0.0	1.000	0.472	0.703
surface albedo fitted [1]	0.112 ± 0.170	1191893	9.630×10^{-2}	4.003×10^{-2}	0.0	1.000	2.152×10^{-2}	0.118
surface albedo fitted crb [1]	0.106 ± 0.170	1191893	9.810×10^{-2}	3.167×10^{-2}	0.0	1.000	1.648×10^{-2}	0.115
fitted root mean square [1]	$(4.284 \pm 5.760) \times 10^{-4}$	1191893	4.734×10^{-4}	2.138×10^{-4}	2.736×10^{-6}	3.381×10^{-2}	9.057×10^{-5}	5.640×10^{-4}
fitted root mean square crb [1]	$(3.751 \pm 5.118) \times 10^{-4}$	1191893	4.566×10^{-4}	1.527×10^{-4}	1.751×10^{-6}	1.015×10^{-2}	4.983×10^{-5}	5.065×10^{-4}
wavelength shift [nm]	$(7.360 \pm 7.001) \times 10^{-3}$	1191893	1.025×10^{-2}	6.442×10^{-3}	-4.203×10^{-2}	5.668×10^{-2}	1.792×10^{-3}	1.205×10^{-2}
cloud fraction apriori [1]	0.662 ± 0.353	1191893	0.675	0.787	0.0	1.000	0.325	1.000
reflectance blue ocra [1]	0.570 ± 0.213	1191893	0.317	0.565	0.185	2.00	0.394	0.711
reflectance green ocra [1]	0.515 ± 0.241	1191893	0.392	0.523	9.589×10^{-2}	1.95	0.294	0.686
reflectance continuum aband [1]	0.448 ± 0.280	1191893	0.446	0.463	1.242×10^{-2}	3.57	0.202	0.648

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 ± 0.355	680116	0.550	0.780	0.0	1.000	0.400	0.950
cloud fraction [1]	0.592 ± 0.342	680116	0.713	0.596	8.169×10^{-3}	1.000	0.273	0.986
cloud top height [m]	$(0.369 \pm 0.253) \times 10^4$	680116	3.548×10^3	3.048×10^3	0.0	2.000×10^4	1.744×10^3	5.292×10^3
cloud optical thickness [1]	26.8 ± 51.4	680116	11.4	10.4	1.000	250	6.98	18.3
cloud fraction crb [1]	0.591 ± 0.343	680116	0.713	0.594	8.779×10^{-3}	1.000	0.273	0.986
cloud height crb [m]	$(0.285 \pm 0.216) \times 10^4$	680116	3.168×10^3	2.309×10^3	0.0	1.591×10^4	1.152×10^3	4.321×10^3
cloud albedo crb [1]	0.629 ± 0.207	680116	0.300	0.590	0.0	1.000	0.485	0.785
surface albedo fitted [1]	0.232 ± 0.325	680116	0.577	3.805×10^{-2}	0.0	1.000	2.165×10^{-2}	0.598
surface albedo fitted crb [1]	0.215 ± 0.305	680116	0.563	3.054×10^{-2}	0.0	1.000	1.633×10^{-2}	0.580
fitted root mean square [1]	$(6.586 \pm 7.813) \times 10^{-4}$	680116	7.783×10^{-4}	4.284×10^{-4}	5.250×10^{-6}	5.429×10^{-2}	1.482×10^{-4}	9.265×10^{-4}
fitted root mean square crb [1]	$(5.507 \pm 6.827) \times 10^{-4}$	680116	6.134×10^{-4}	2.889×10^{-4}	2.668×10^{-6}	8.714×10^{-3}	1.059×10^{-4}	7.192×10^{-4}
wavelength shift [nm]	$(9.635 \pm 7.085) \times 10^{-3}$	680116	1.018×10^{-2}	9.664×10^{-3}	-3.974×10^{-2}	6.175×10^{-2}	4.303×10^{-3}	1.448×10^{-2}
cloud fraction apriori [1]	0.598 ± 0.346	680116	0.726	0.613	0.0	1.000	0.274	1.000
reflectance blue ocra [1]	0.602 ± 0.234	680116	0.404	0.599	0.202	1.90	0.393	0.796
reflectance green ocra [1]	0.553 ± 0.267	680116	0.489	0.557	0.115	1.88	0.295	0.784
reflectance continuum aband [1]	0.490 ± 0.296	680116	0.530	0.512	1.465×10^{-2}	3.23	0.207	0.736

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]	0.654 ± 0.357	1567320	0.550	0.820	0.0	1.000	0.400	0.950
cloud fraction [1]	0.617 ± 0.352	1567320	0.732	0.678	7.634×10^{-3}	1.000	0.268	1.000
cloud top height [m]	$(0.328 \pm 0.221) \times 10^4$	1567320	2.723×10^3	2.777×10^3	0.0	2.000×10^4	1.612×10^3	4.335×10^3
cloud optical thickness [1]	23.7 ± 39.0	1567320	14.6	11.3	1.000	250	7.50	22.1
cloud fraction crb [1]	0.616 ± 0.352	1567320	0.734	0.676	8.710×10^{-3}	1.000	0.266	1.000
cloud height crb [m]	$(0.263 \pm 0.197) \times 10^4$	1567320	2.516×10^3	2.189×10^3	0.0	1.591×10^4	1.094×10^3	3.610×10^3
cloud albedo crb [1]	0.572 ± 0.183	1567320	0.221	0.555	0.0	1.000	0.465	0.686
surface albedo fitted [1]	0.111 ± 0.210	1567320	3.868×10^{-2}	3.267×10^{-2}	0.0	1.000	1.916×10^{-2}	5.785×10^{-2}
surface albedo fitted crb [1]	0.102 ± 0.202	1567320	3.265×10^{-2}	2.562×10^{-2}	0.0	1.000	1.459×10^{-2}	4.724×10^{-2}
fitted root mean square [1]	$(5.123 \pm 6.853) \times 10^{-4}$	1567320	6.236×10^{-4}	2.405×10^{-4}	2.736×10^{-6}	3.658×10^{-2}	9.056×10^{-5}	7.142×10^{-4}
fitted root mean square crb [1]	$(4.678 \pm 6.256) \times 10^{-4}$	1567320	6.042×10^{-4}	1.897×10^{-4}	1.751×10^{-6}	8.714×10^{-3}	5.832×10^{-5}	6.625×10^{-4}
wavelength shift [nm]	$(7.941 \pm 7.194) \times 10^{-3}$	1567320	1.057×10^{-2}	7.220×10^{-3}	-4.203×10^{-2}	6.175×10^{-2}	2.280×10^{-3}	1.285×10^{-2}
cloud fraction apriori [1]	0.620 ± 0.356	1567320	0.737	0.687	0.0	1.000	0.263	1.000
reflectance blue ocrs [1]	0.549 ± 0.211	1567320	0.337	0.530	0.185	2.00	0.368	0.704
reflectance green ocrs [1]	0.491 ± 0.240	1567320	0.413	0.481	9.589×10^{-2}	1.95	0.264	0.677
reflectance continuum aband [1]	0.419 ± 0.275	1567320	0.471	0.422	1.242×10^{-2}	3.57	0.160	0.631

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]	0.400 ± 0.376	194224	0.700	0.460	0.0	1.000	0.0	0.700
cloud fraction [1]	0.663 ± 0.319	194224	0.633	0.671	9.816×10^{-3}	1.000	0.367	1.000
cloud top height [m]	$(0.408 \pm 0.226) \times 10^4$	194224	3.517×10^3	3.676×10^3	0.0	2.000×10^4	2.249×10^3	5.766×10^3
cloud optical thickness [1]	45.2 ± 71.7	194224	35.3	13.8	1.000	250	6.14	41.5
cloud fraction crb [1]	0.662 ± 0.318	194224	0.633	0.668	1.102×10^{-2}	1.000	0.367	1.000
cloud height crb [m]	$(0.323 \pm 0.172) \times 10^4$	194224	2.766×10^3	3.099×10^3	19.4	1.141×10^4	1.773×10^3	4.539×10^3
cloud albedo crb [1]	0.776 ± 0.208	194224	0.347	0.793	0.0	1.000	0.643	0.990
surface albedo fitted [1]	0.493 ± 0.270	194224	0.536	0.615	6.470×10^{-3}	1.000	0.179	0.715
surface albedo fitted crb [1]	0.466 ± 0.249	194224	0.479	0.593	9.869×10^{-3}	1.000	0.174	0.653
fitted root mean square [1]	$(5.975 \pm 6.222) \times 10^{-4}$	194224	5.506×10^{-4}	4.611×10^{-4}	5.250×10^{-6}	5.429×10^{-2}	2.564×10^{-4}	8.070×10^{-4}
fitted root mean square crb [1]	$(2.832 \pm 2.583) \times 10^{-4}$	194224	3.147×10^{-4}	2.187×10^{-4}	4.085×10^{-6}	5.711×10^{-3}	9.002×10^{-5}	4.047×10^{-4}
wavelength shift [nm]	$(9.085 \pm 6.637) \times 10^{-3}$	194224	1.054×10^{-2}	8.985×10^{-3}	-2.677×10^{-2}	4.458×10^{-2}	3.368×10^{-3}	1.390×10^{-2}
cloud fraction apriori [1]	0.679 ± 0.320	194224	0.623	0.738	0.0	1.000	0.377	1.000
reflectance blue ocra [1]	0.793 ± 0.184	194224	0.165	0.789	0.211	1.90	0.707	0.872
reflectance green ocra [1]	0.773 ± 0.199	194224	0.196	0.780	0.129	1.88	0.674	0.870
reflectance continuum aband [1]	0.729 ± 0.225	194224	0.241	0.729	2.255×10^{-2}	3.38	0.604	0.845

3 Granule outlines

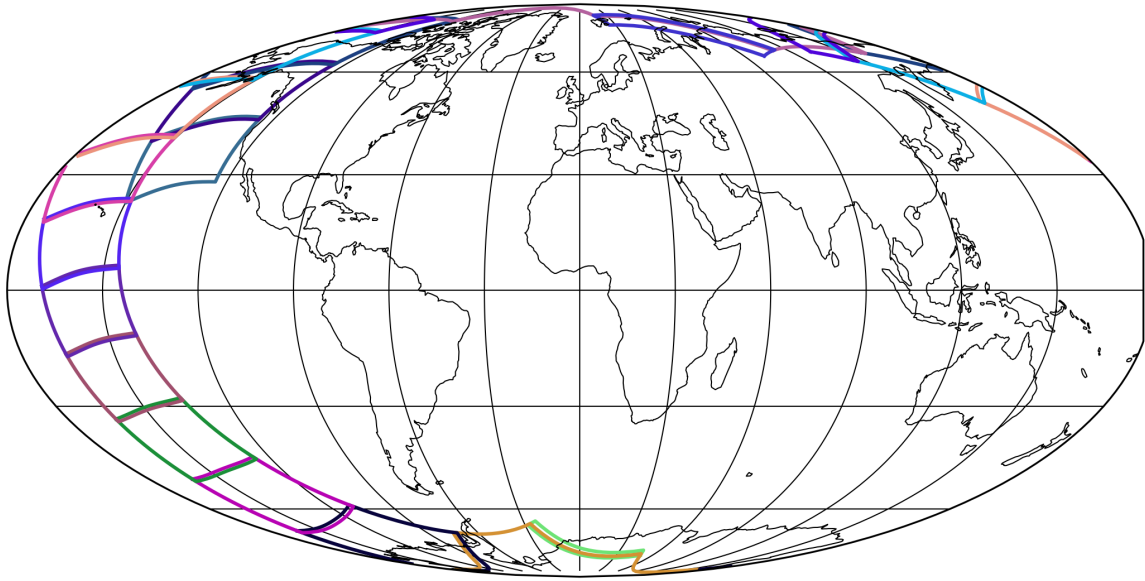


Figure 1: Outline of the granules.

4 Input data monitoring

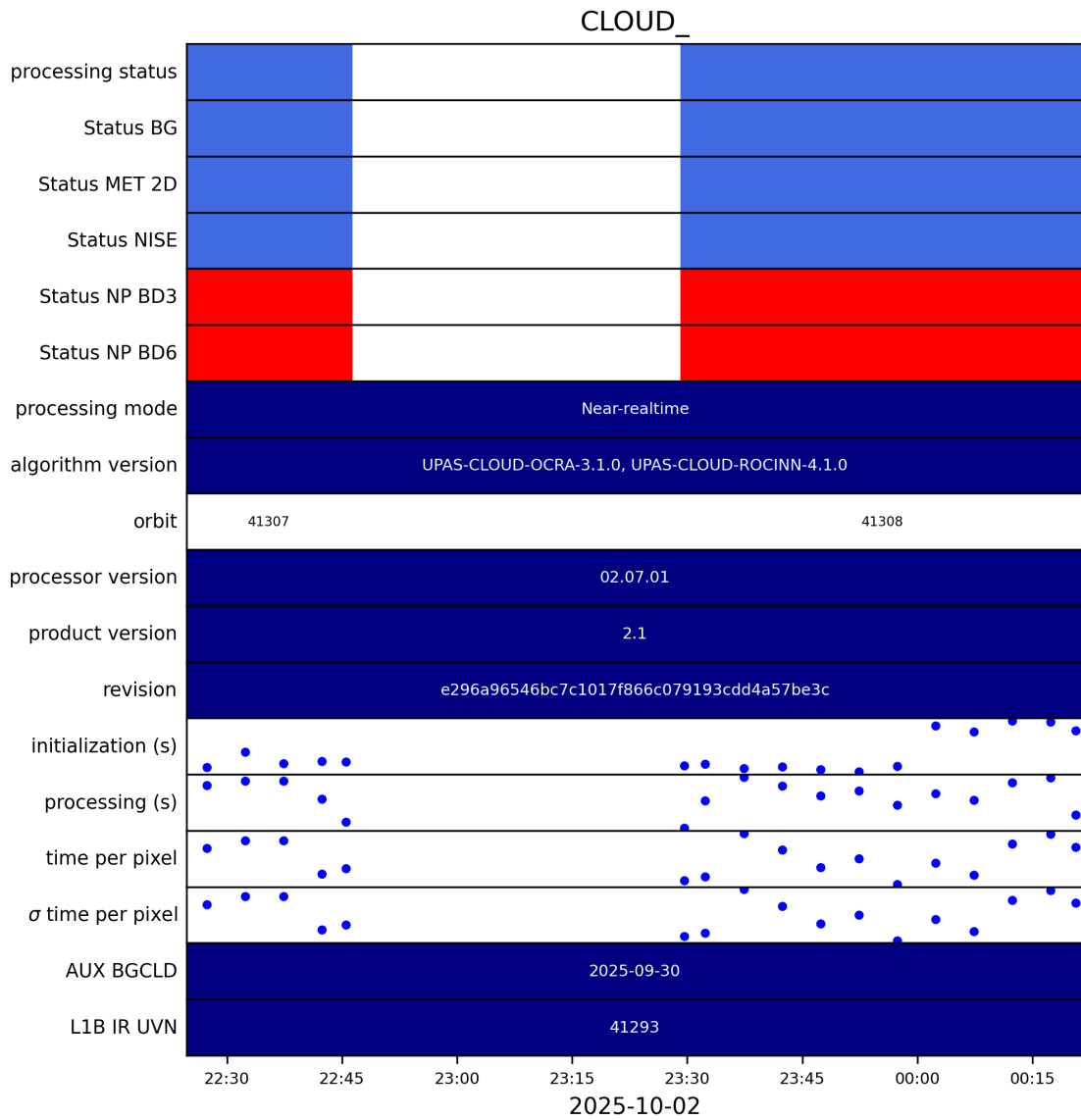


Figure 2: Input data per granule

5 Warnings and errors

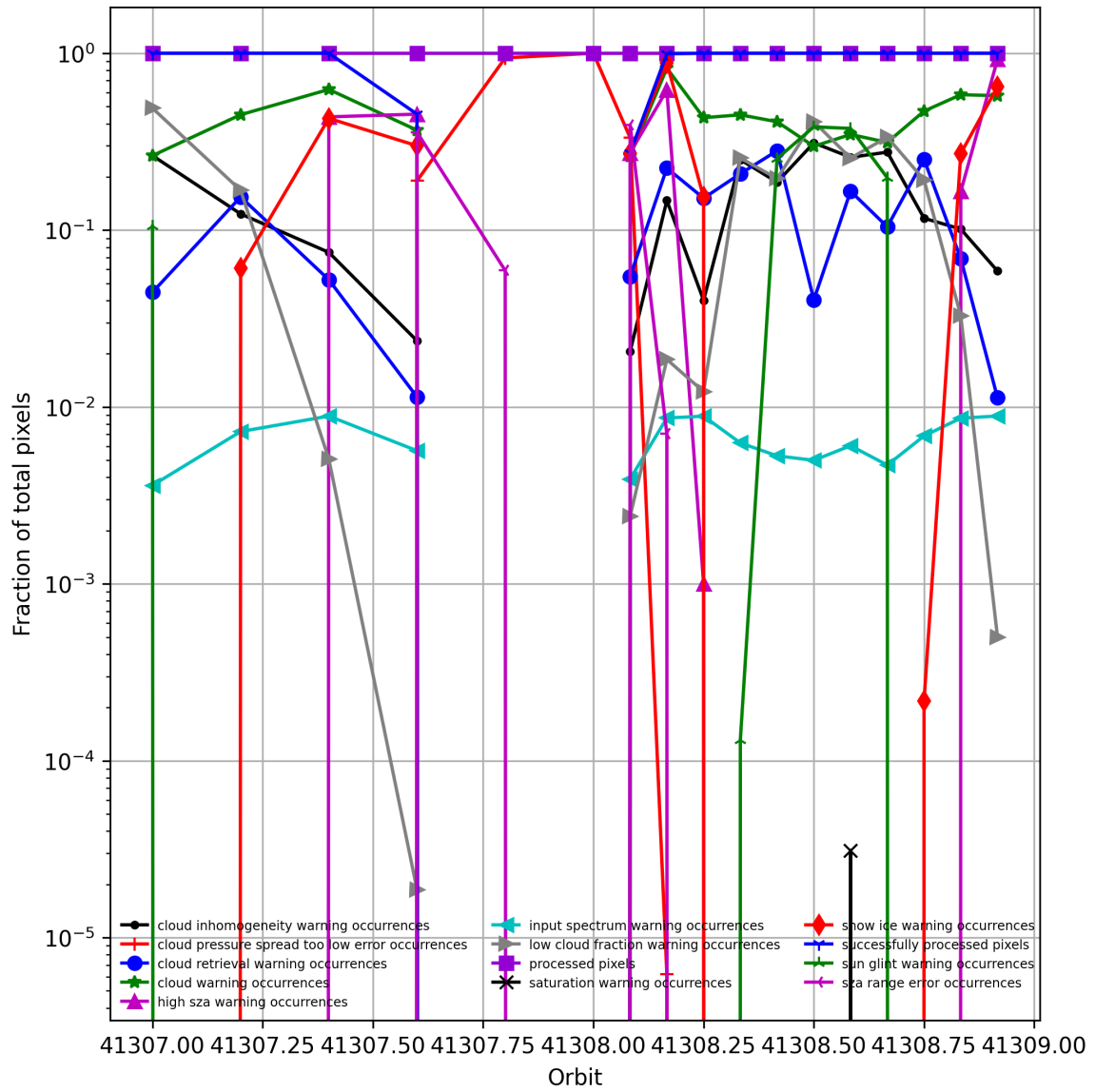


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

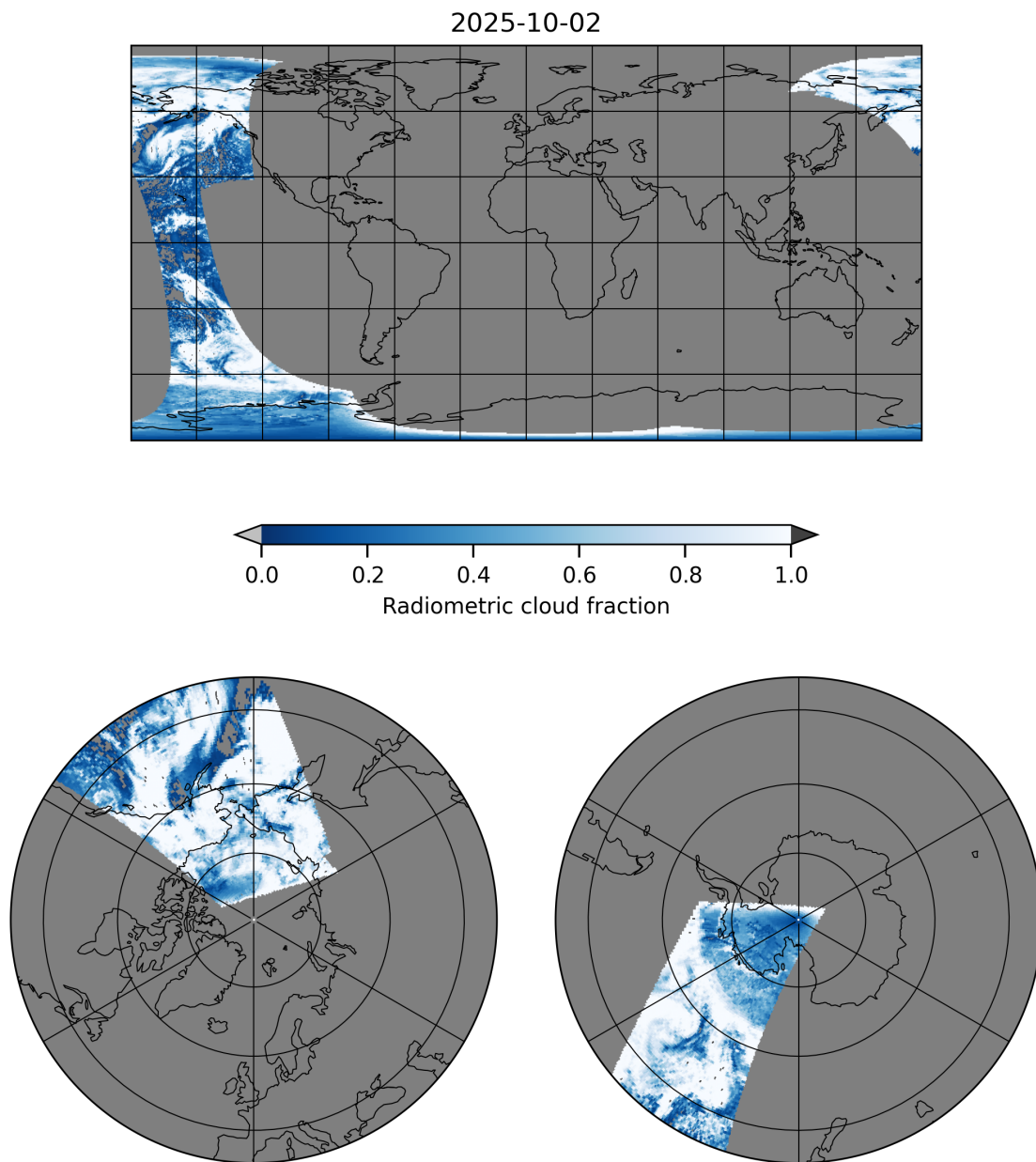


Figure 4: Map of “Radiometric cloud fraction” for 2025-10-02 to 2025-10-03

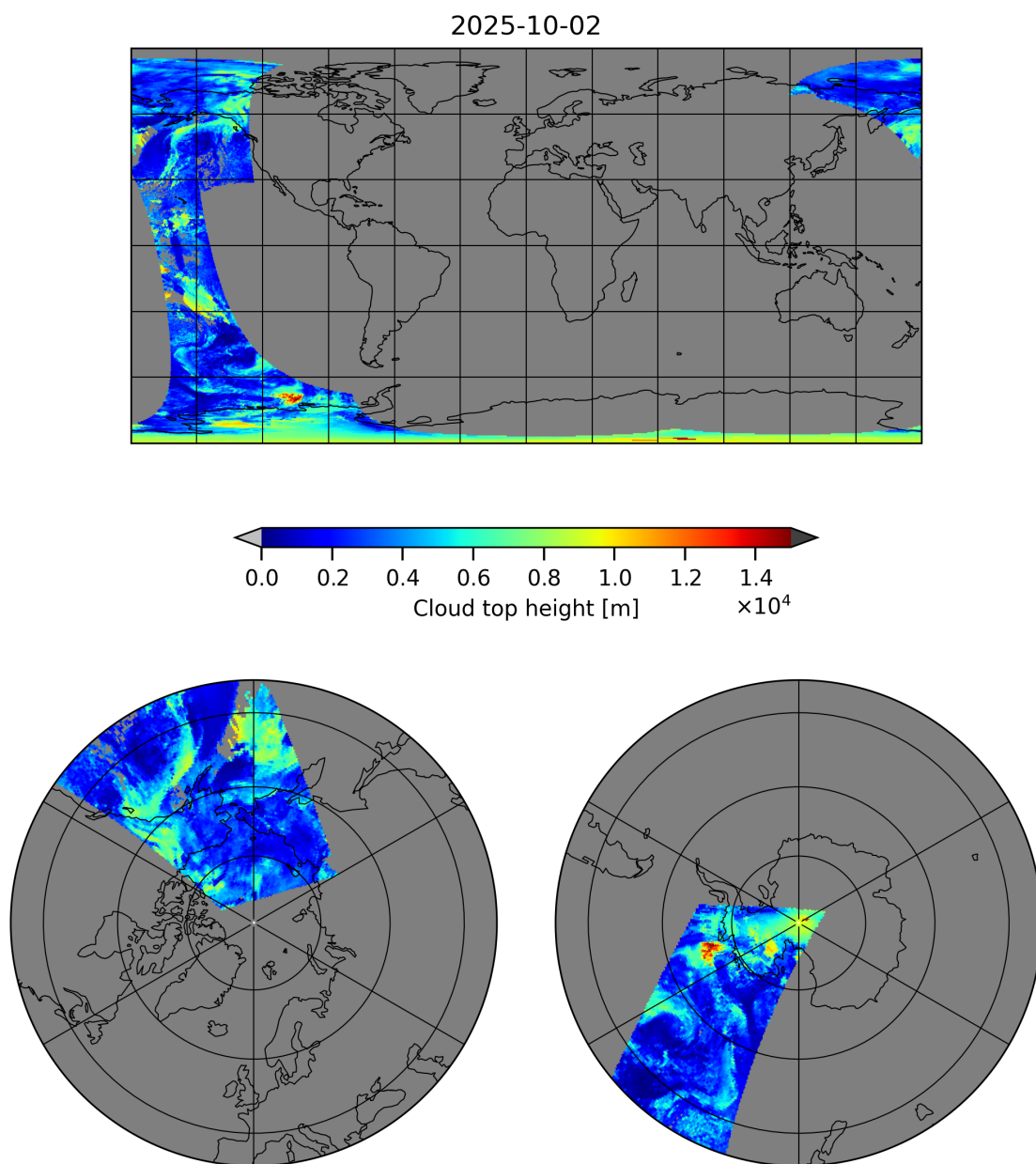


Figure 5: Map of “Cloud top height” for 2025-10-02 to 2025-10-03

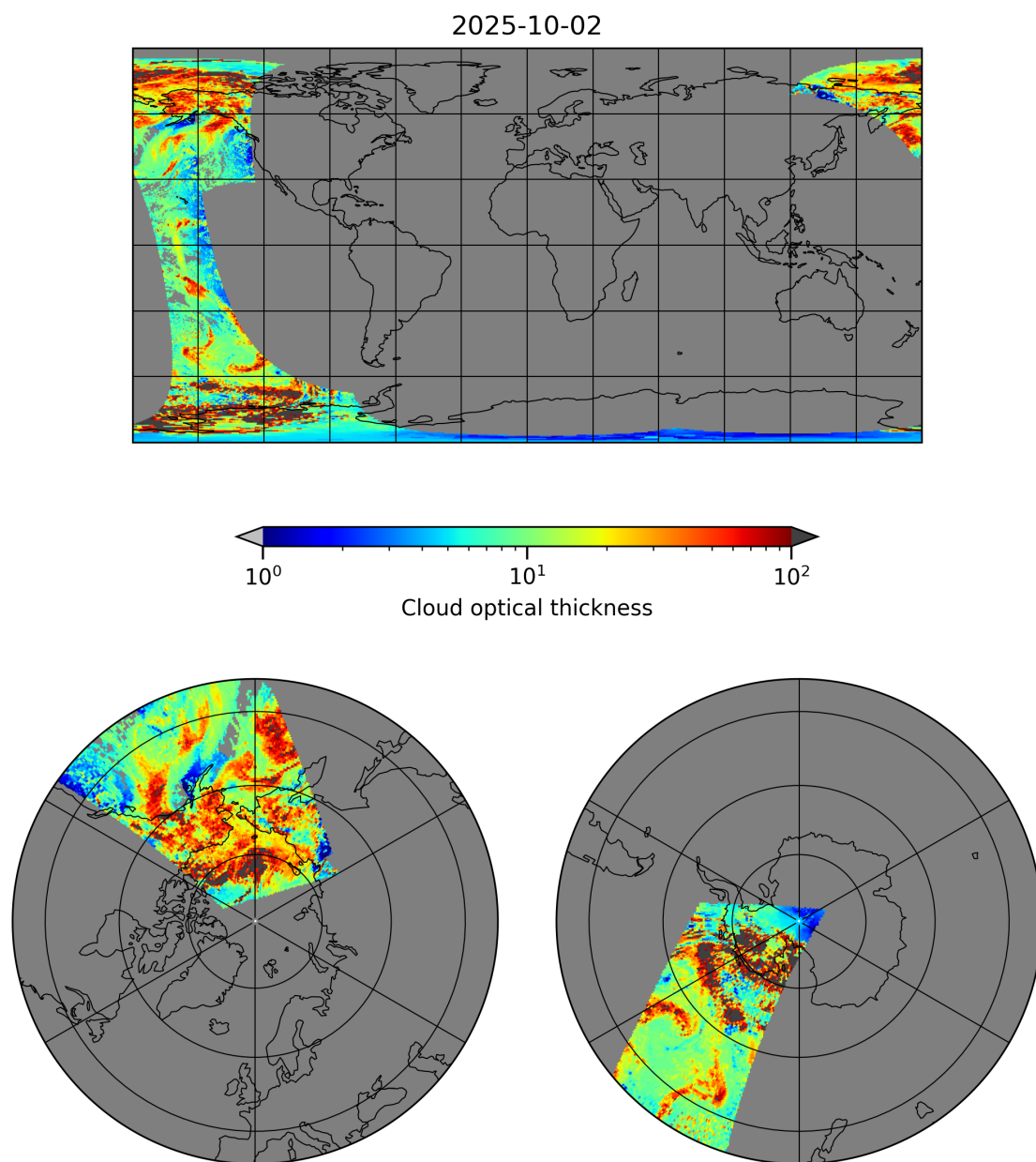


Figure 6: Map of “Cloud optical thickness” for 2025-10-02 to 2025-10-03

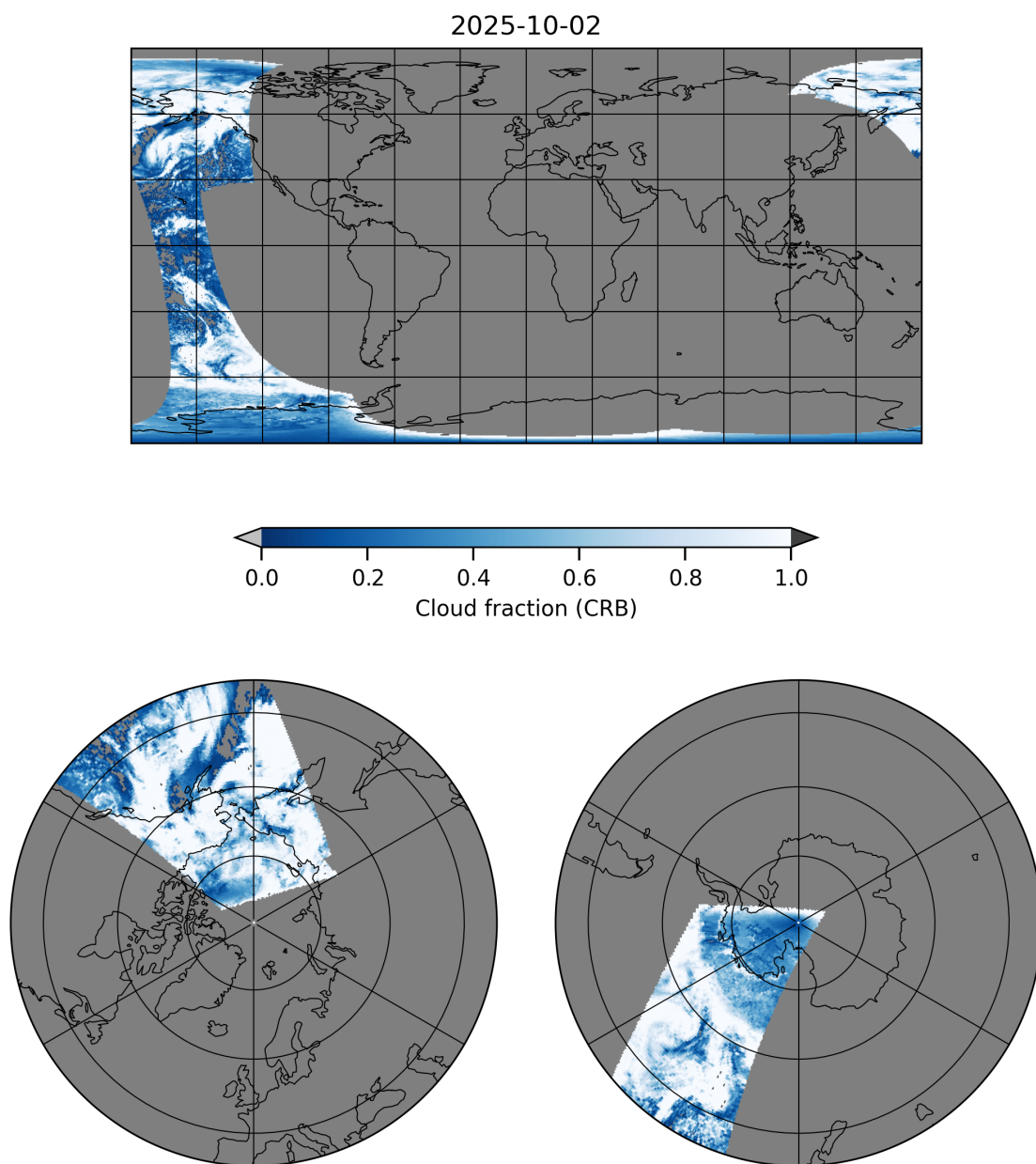


Figure 7: Map of “Cloud fraction (CRB)” for 2025-10-02 to 2025-10-03

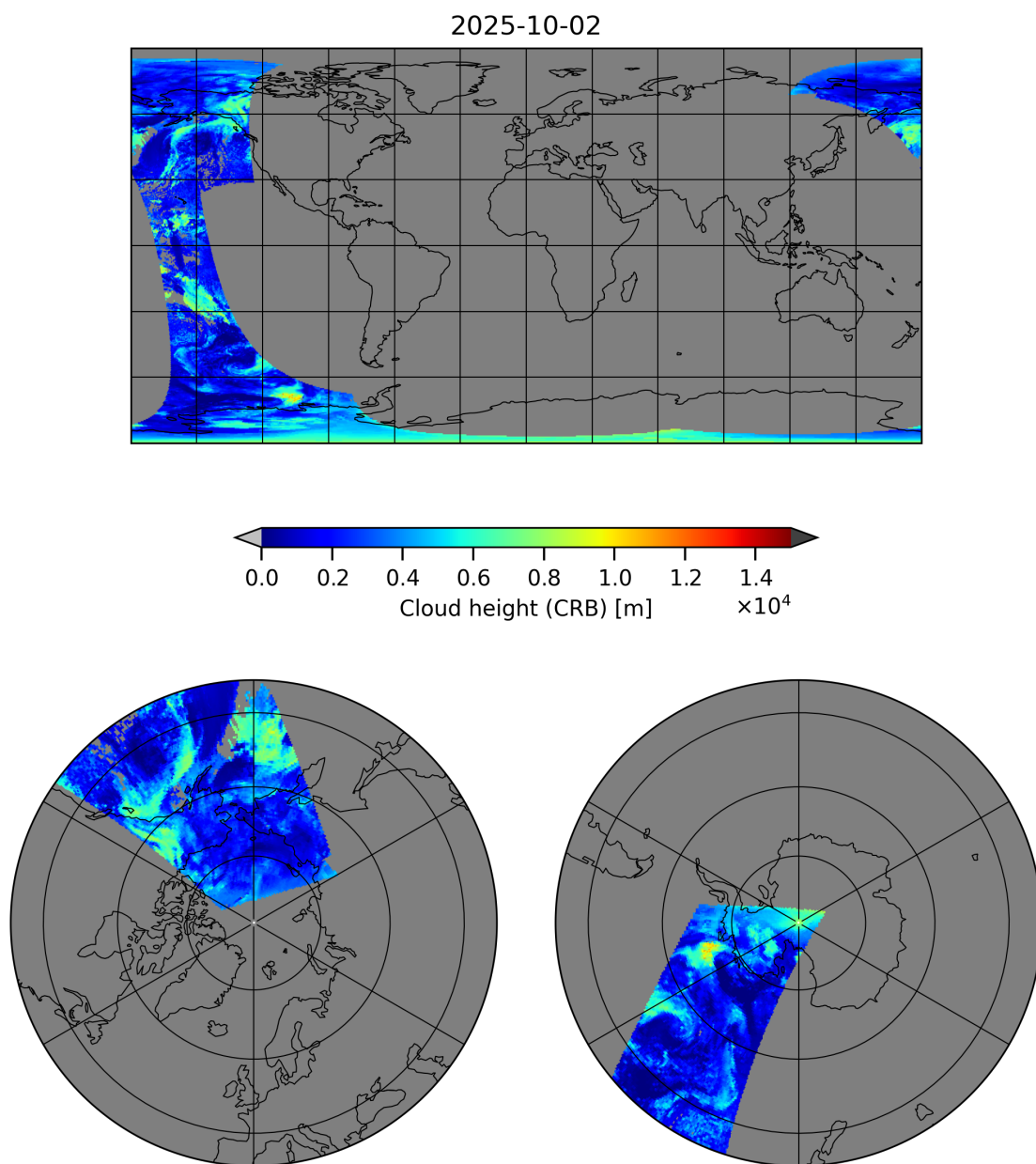


Figure 8: Map of “Cloud height (CRB)” for 2025-10-02 to 2025-10-03

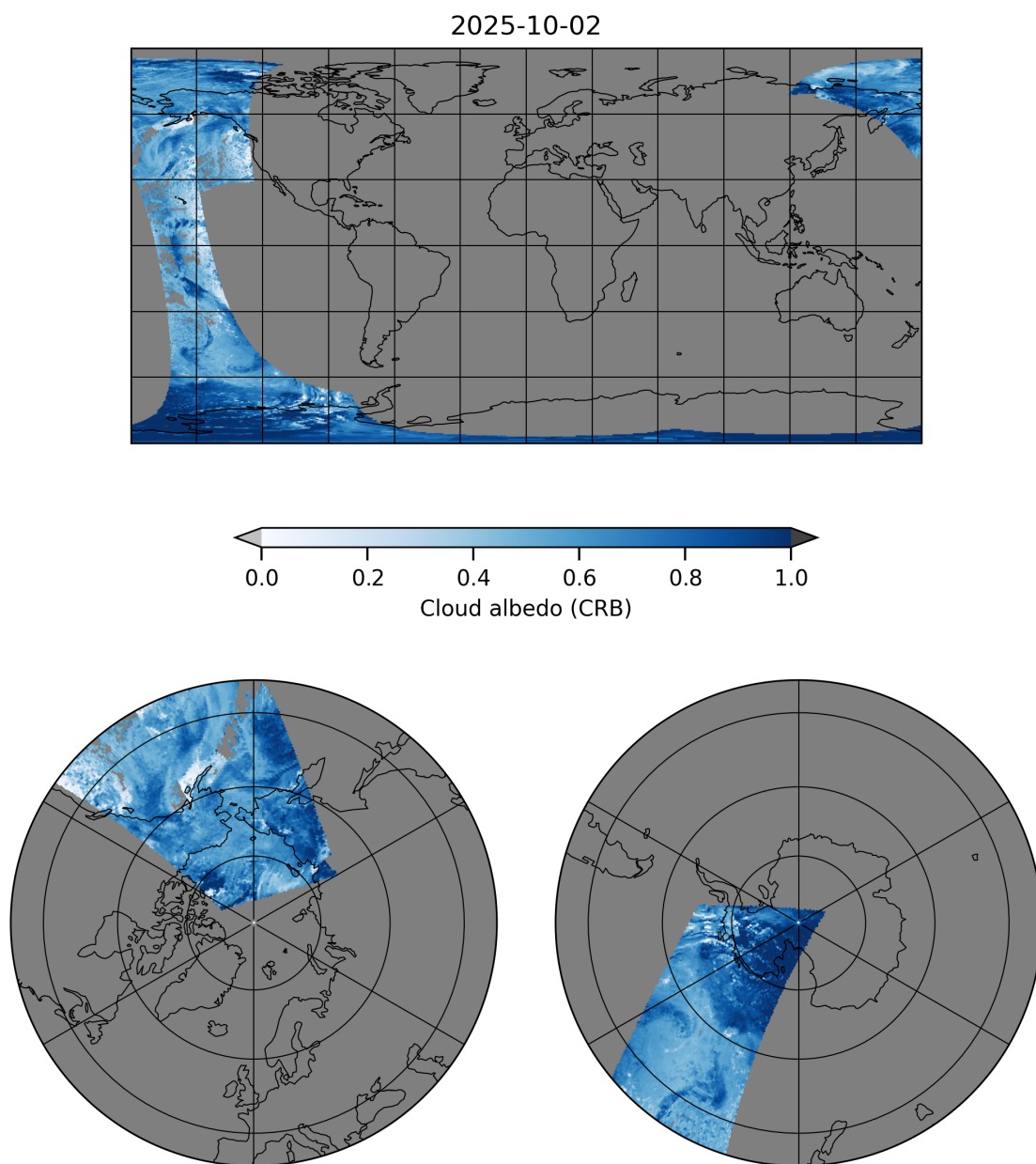


Figure 9: Map of “Cloud albedo (CRB)” for 2025-10-02 to 2025-10-03

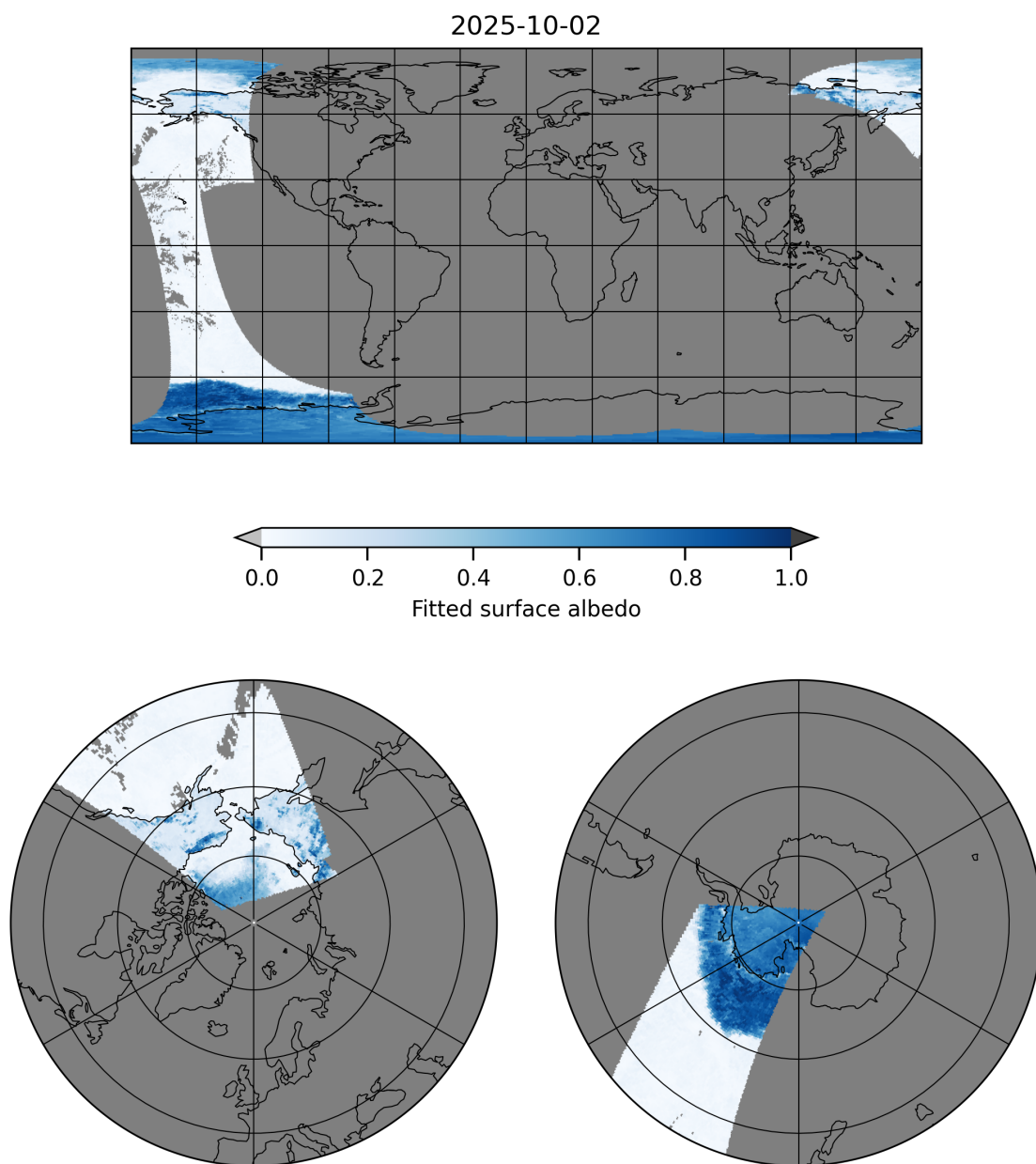


Figure 10: Map of “Fitted surface albedo” for 2025-10-02 to 2025-10-03

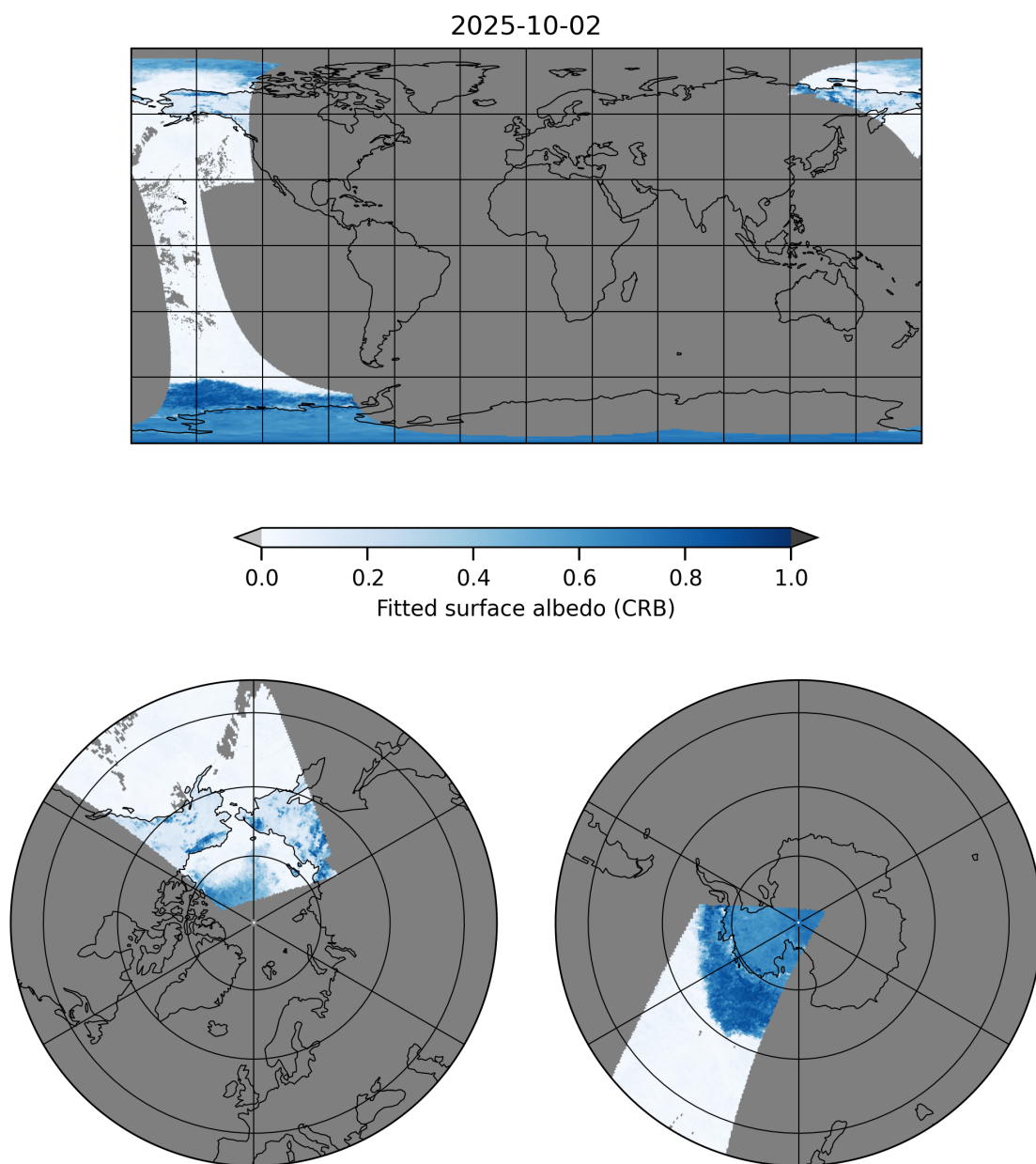


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-10-02 to 2025-10-03

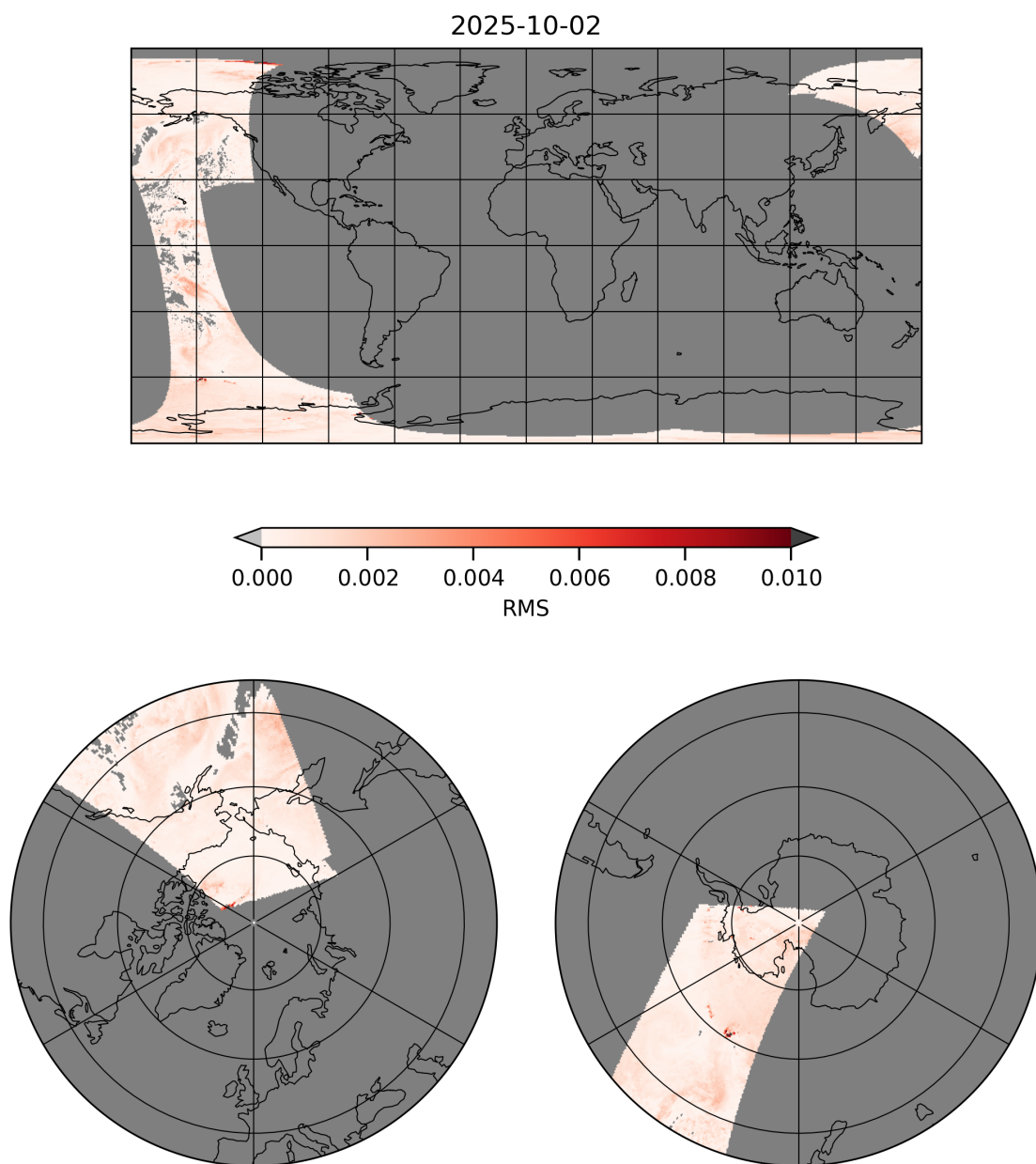


Figure 12: Map of “RMS” for 2025-10-02 to 2025-10-03

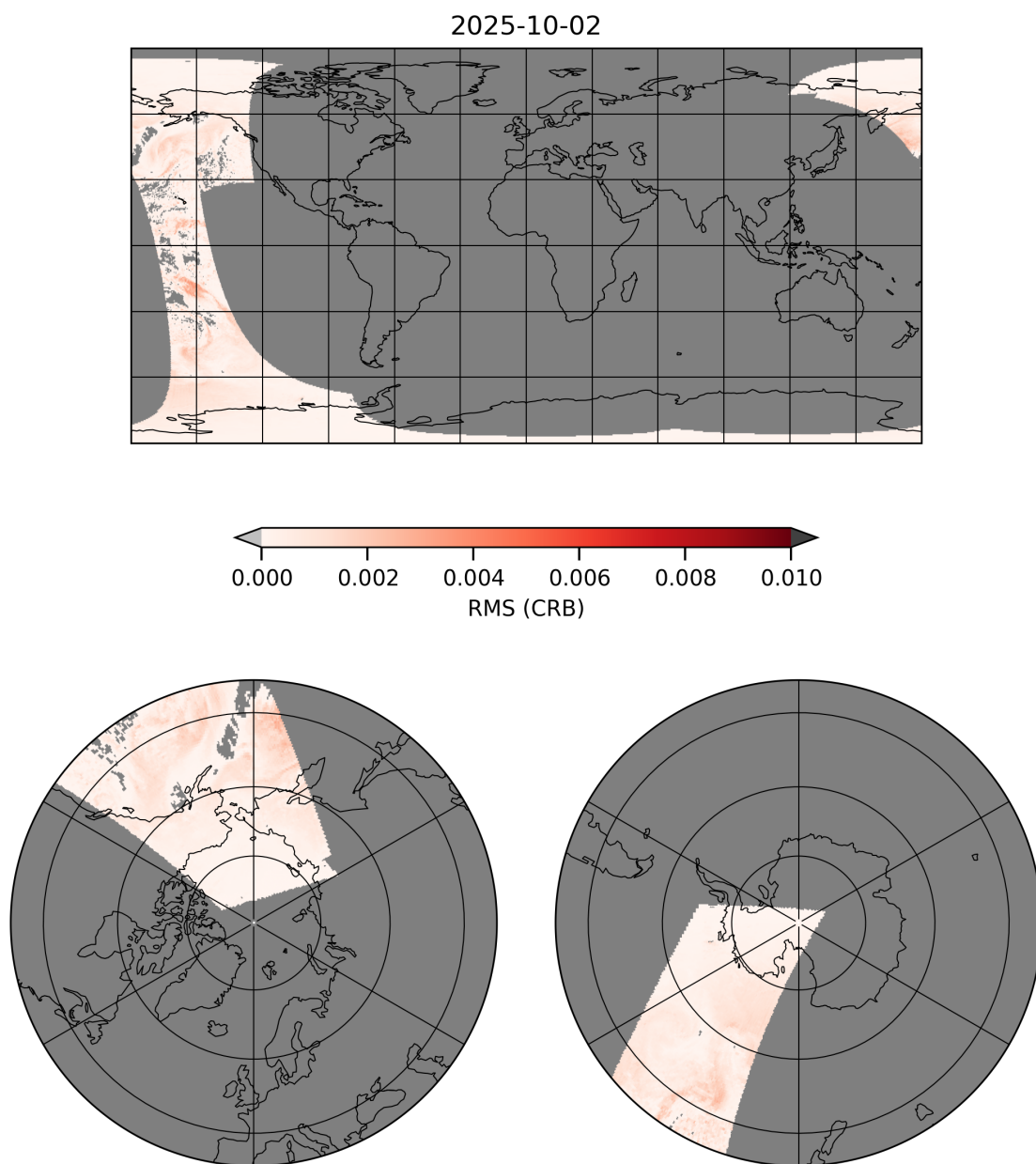


Figure 13: Map of “RMS (CRB)” for 2025-10-02 to 2025-10-03

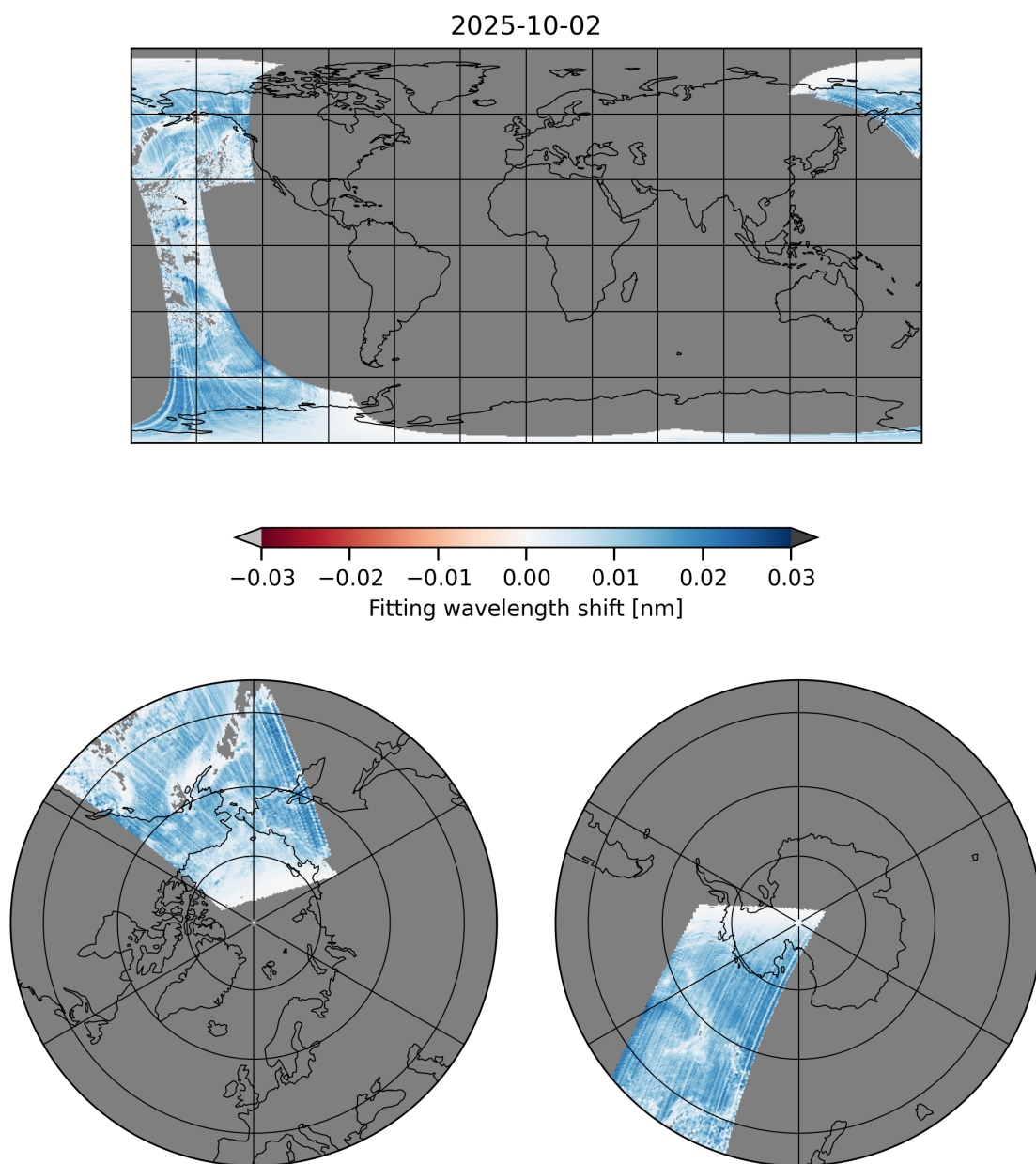


Figure 14: Map of “Fitting wavelength shift” for 2025-10-02 to 2025-10-03

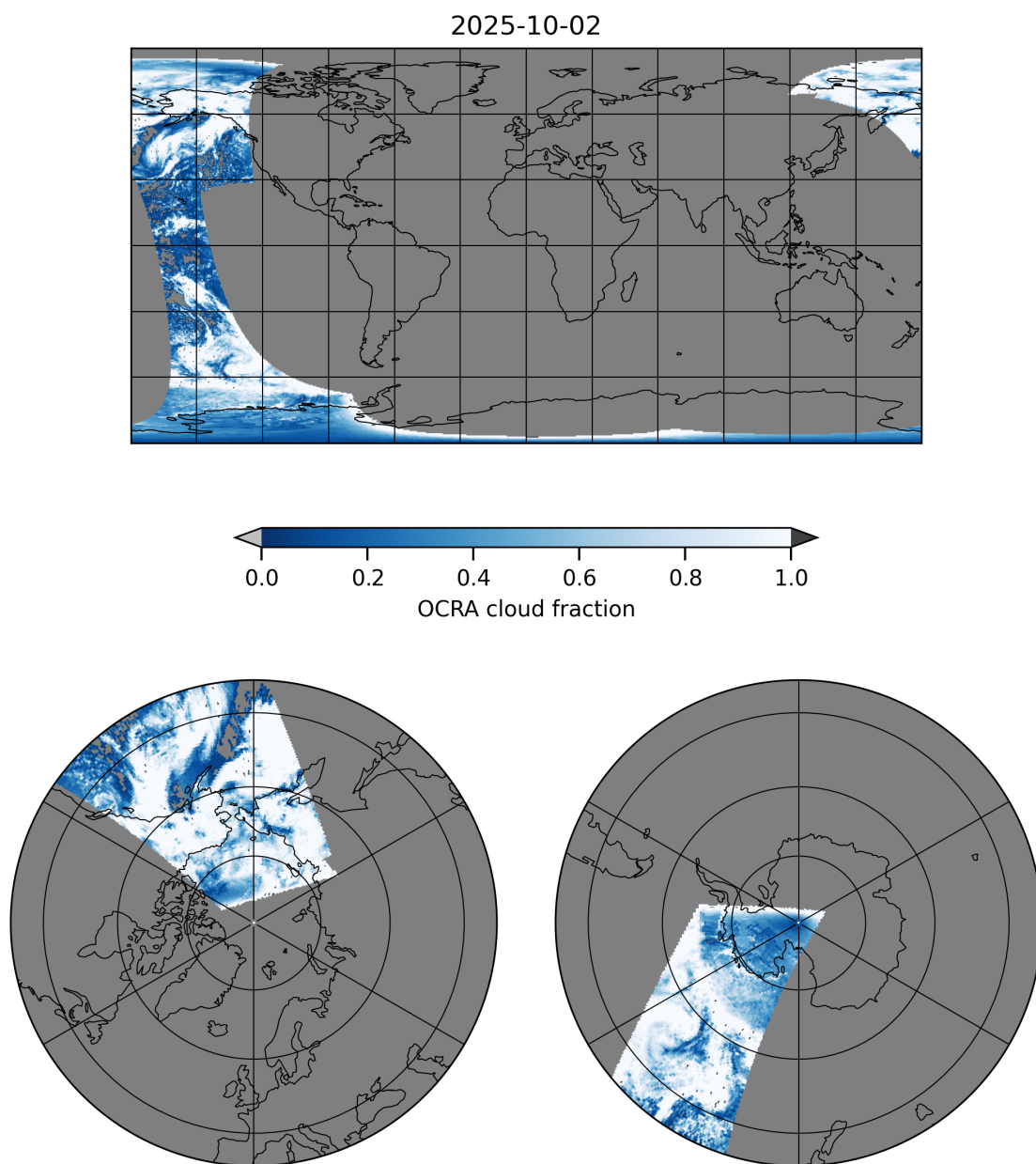


Figure 15: Map of “OCRA cloud fraction” for 2025-10-02 to 2025-10-03

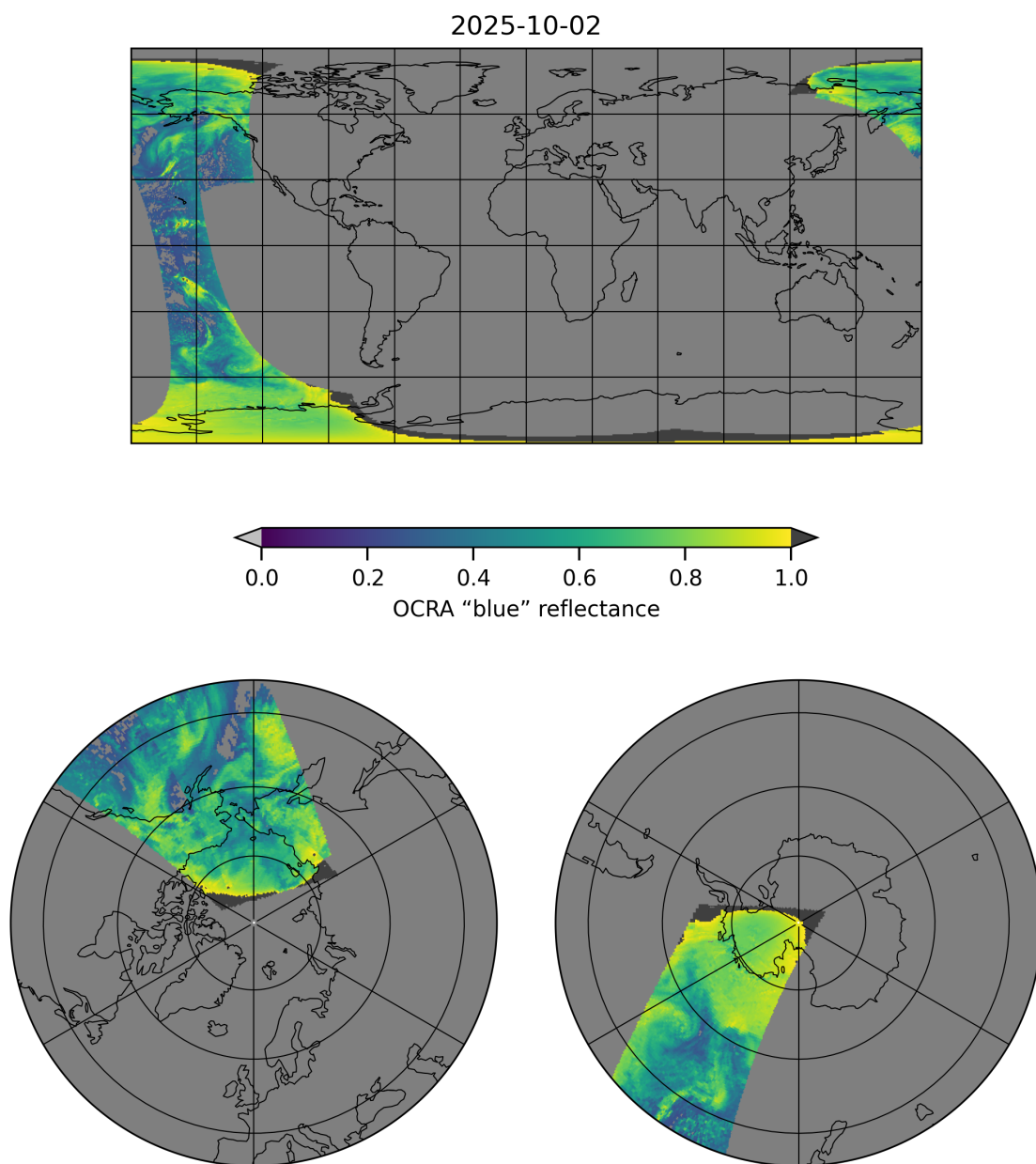


Figure 16: Map of "OCRA "blue" reflectance" for 2025-10-02 to 2025-10-03

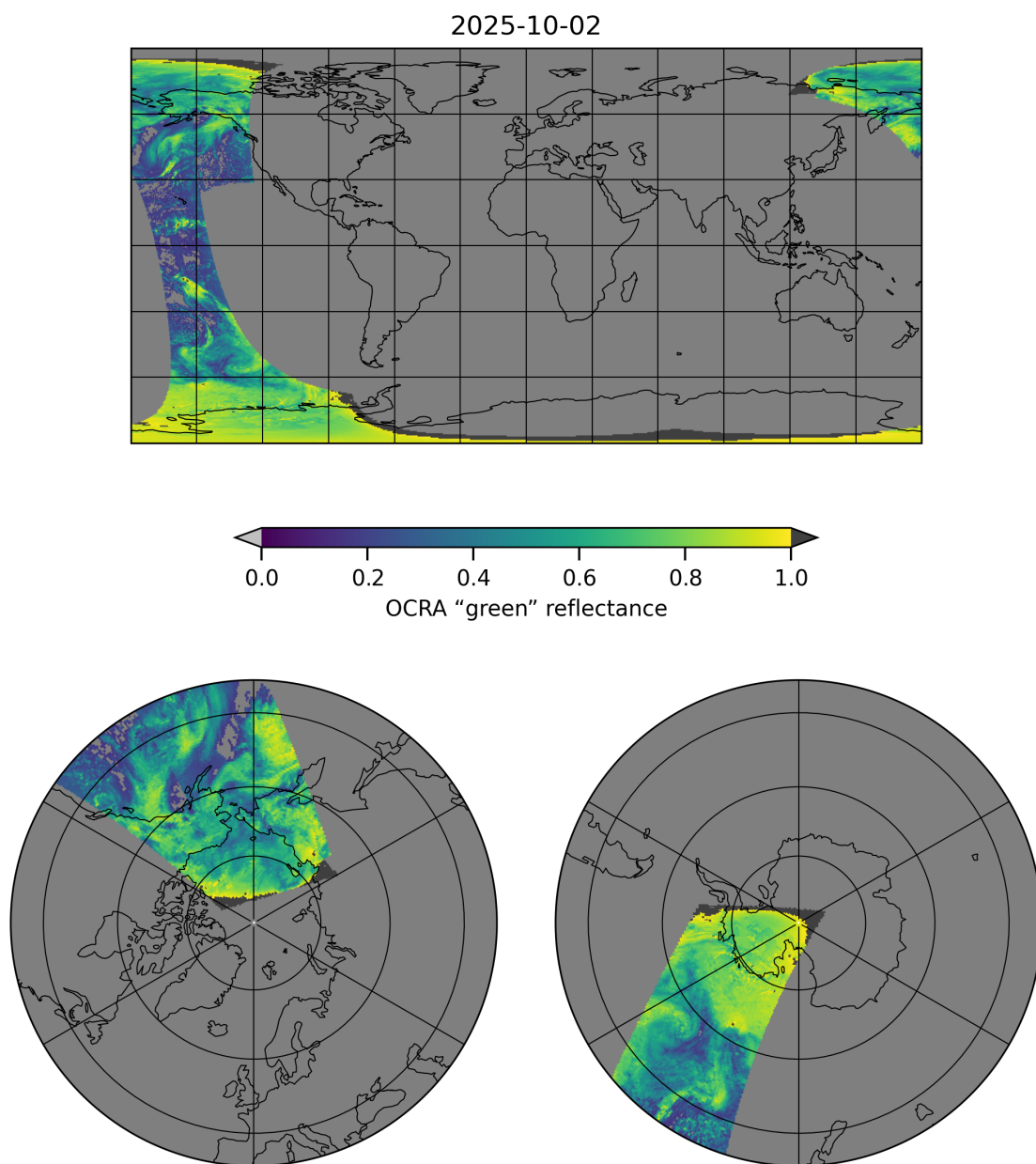


Figure 17: Map of "OCRA "green" reflectance" for 2025-10-02 to 2025-10-03

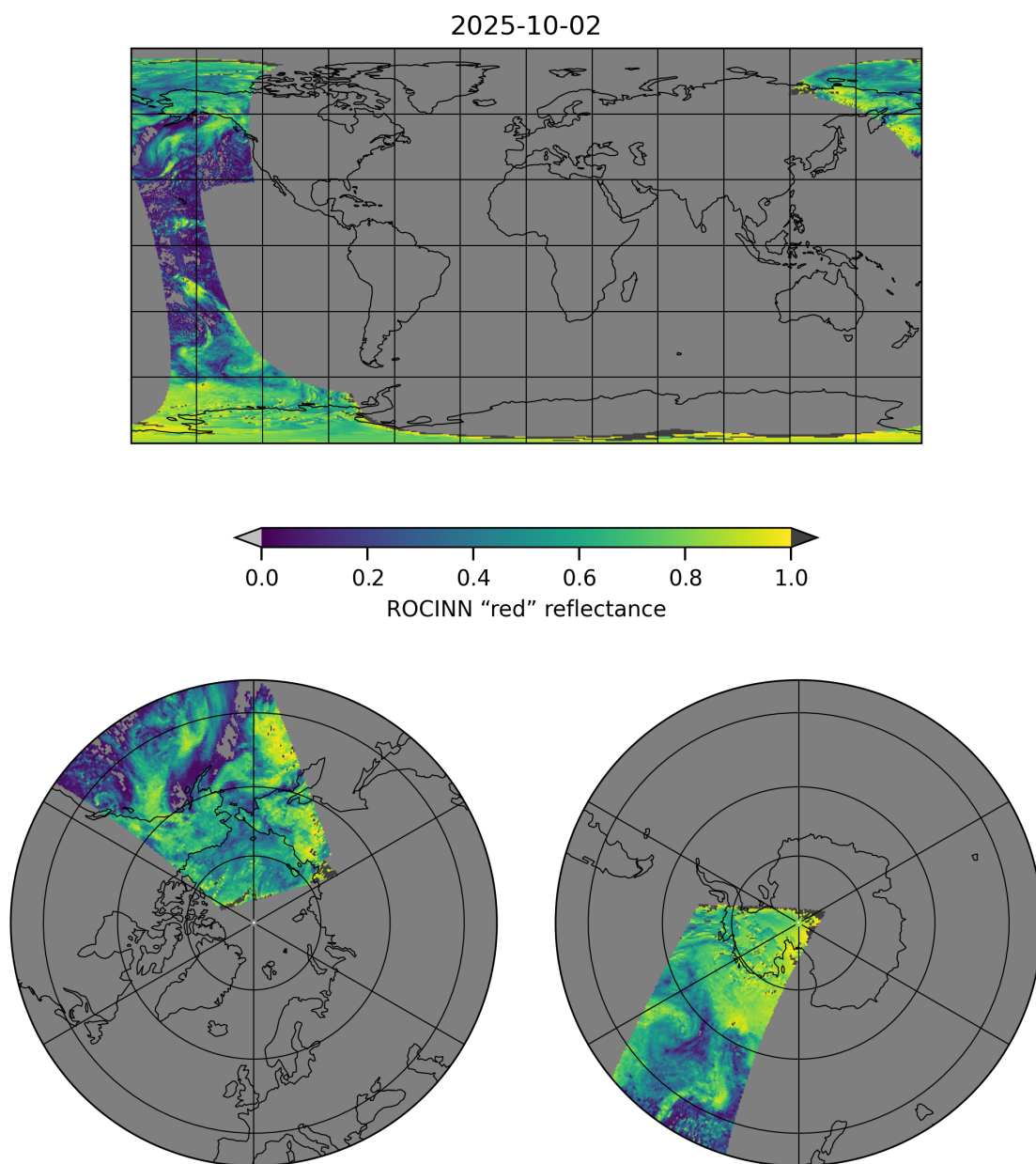


Figure 18: Map of "ROCINN "red" reflectance" for 2025-10-02 to 2025-10-03

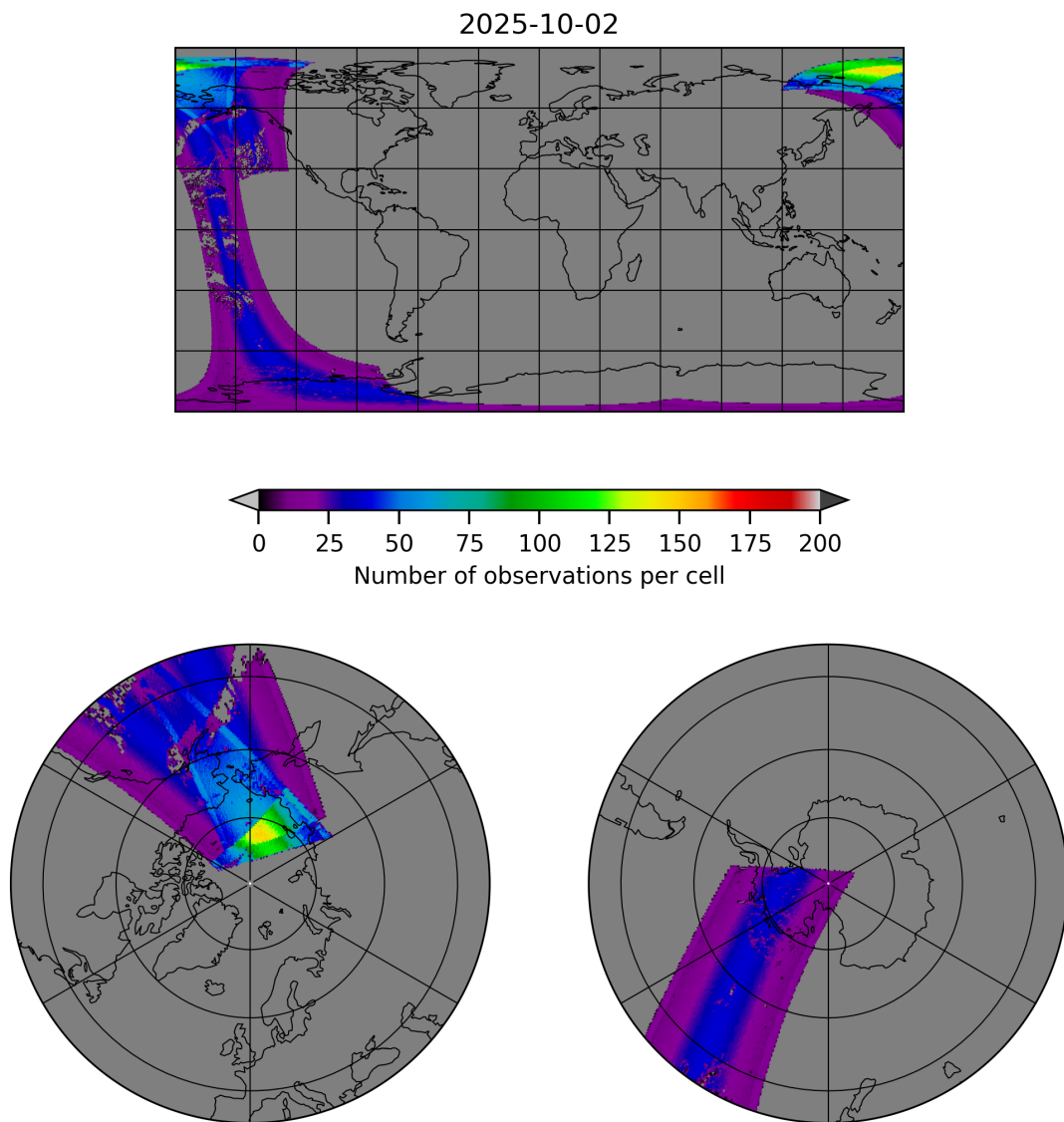


Figure 19: Map of the number of observations for 2025-10-02 to 2025-10-03

7 Zonal average

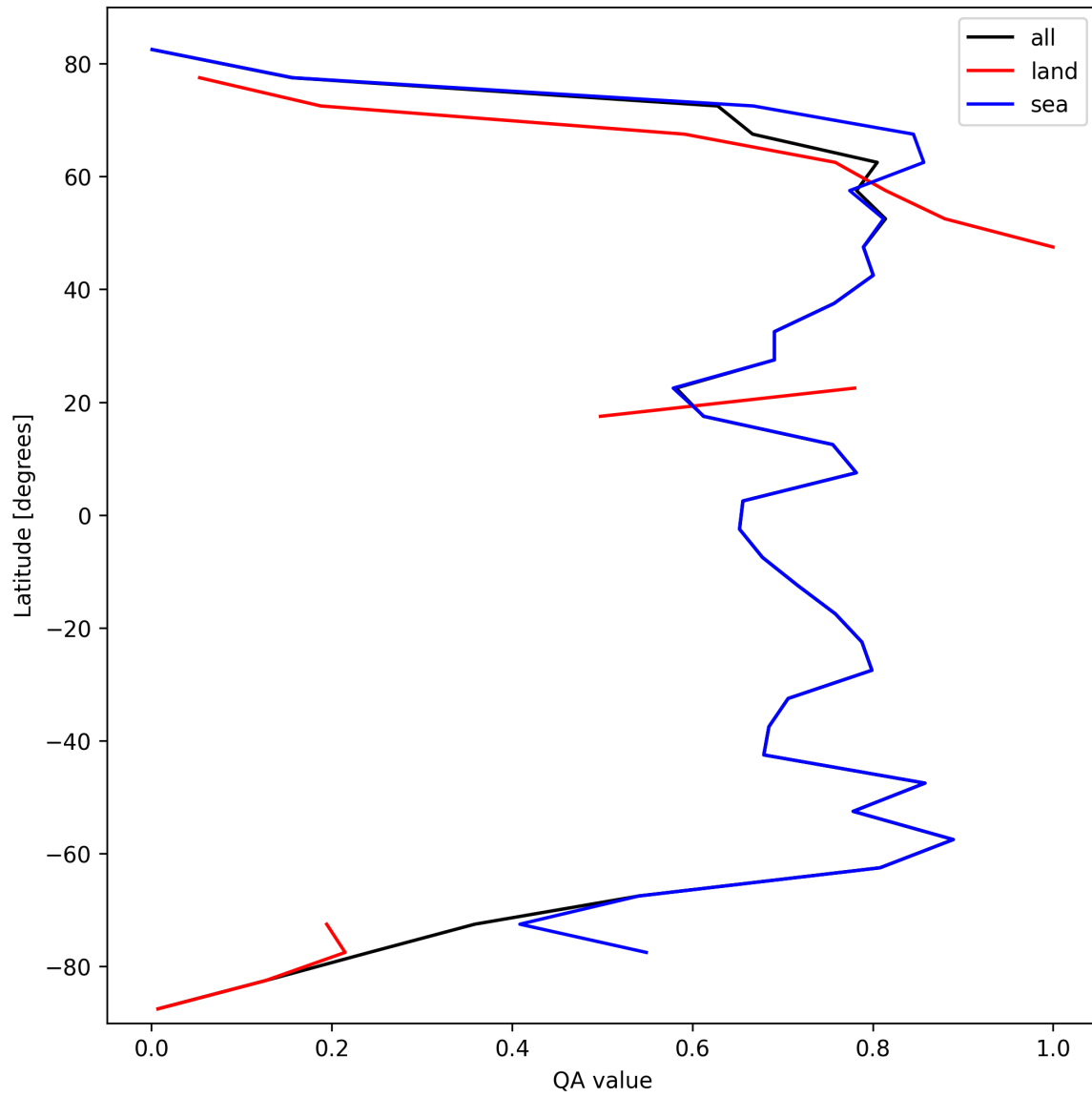


Figure 20: Zonal average of “QA value” for 2025-10-02 to 2025-10-03.

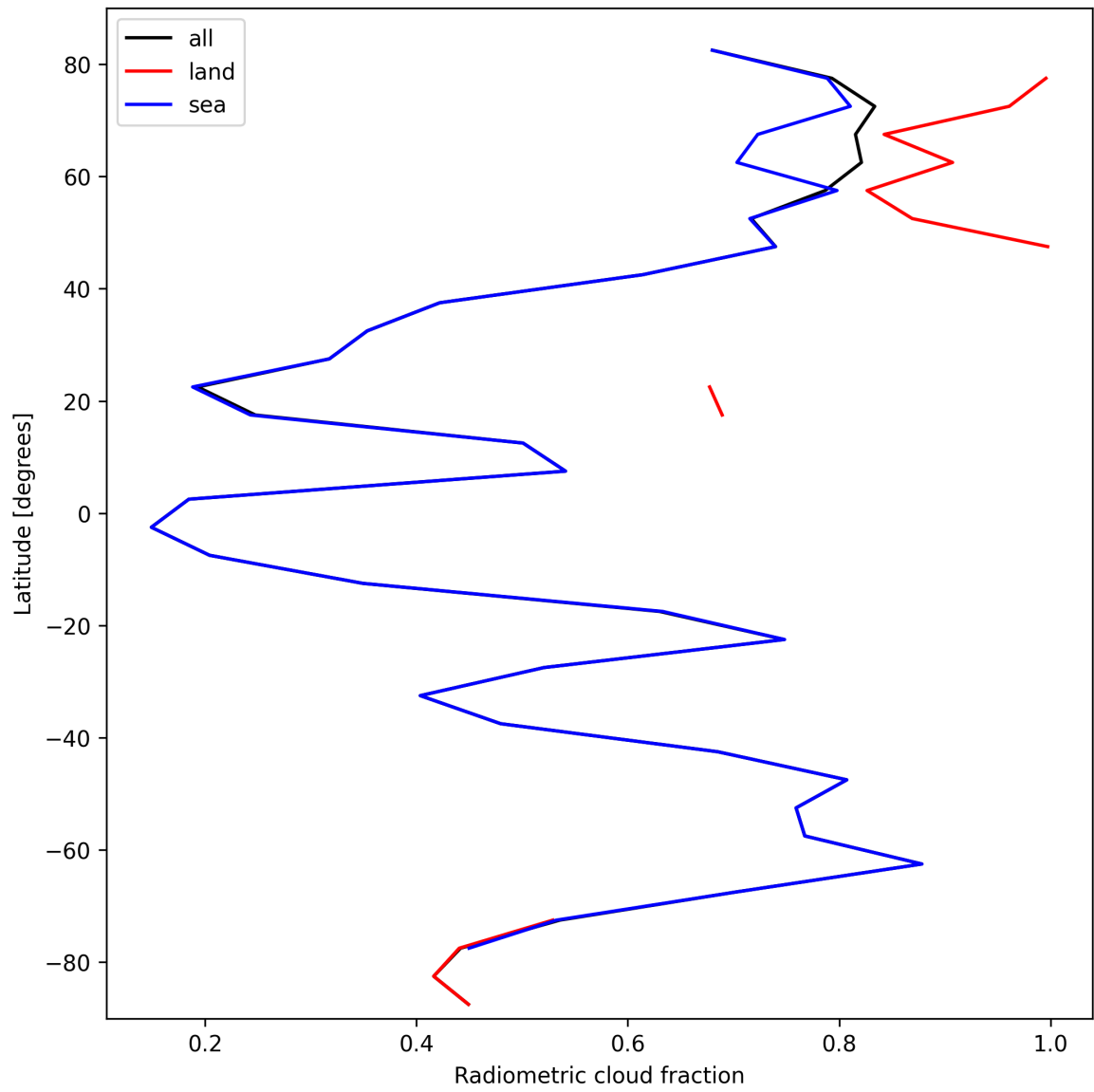


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-10-02 to 2025-10-03.

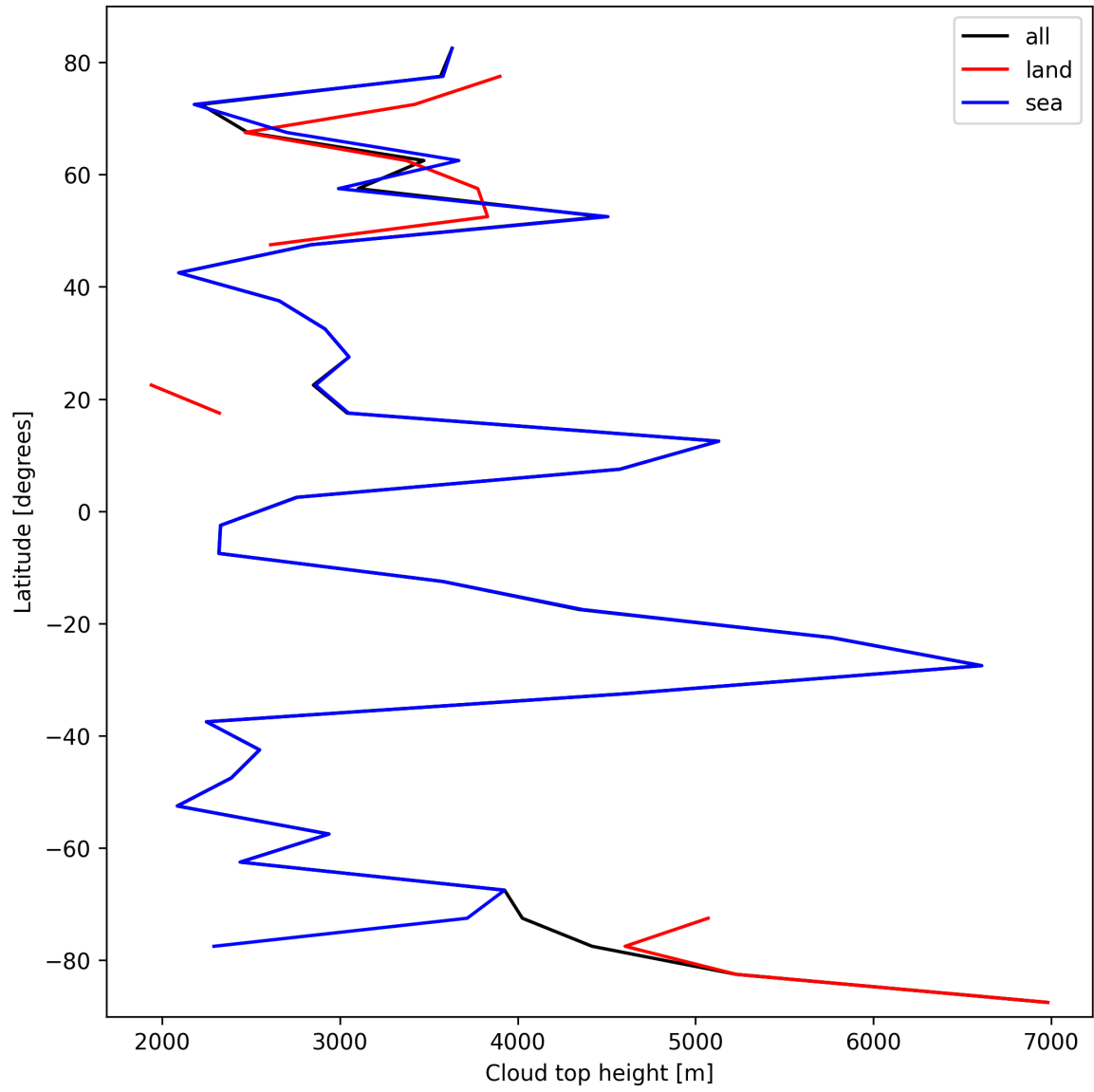


Figure 22: Zonal average of “Cloud top height” for 2025-10-02 to 2025-10-03.

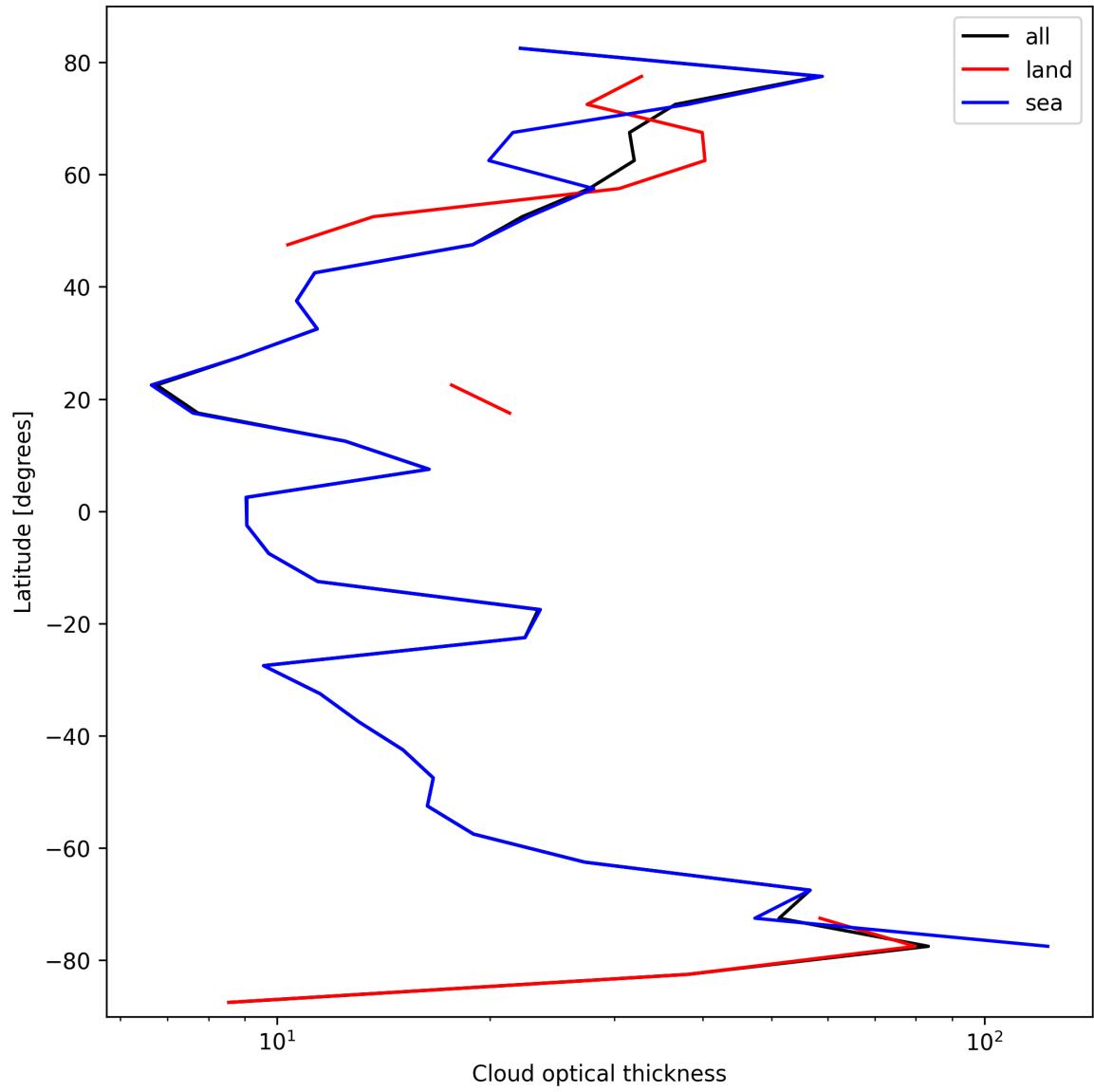


Figure 23: Zonal average of “Cloud optical thickness” for 2025-10-02 to 2025-10-03.

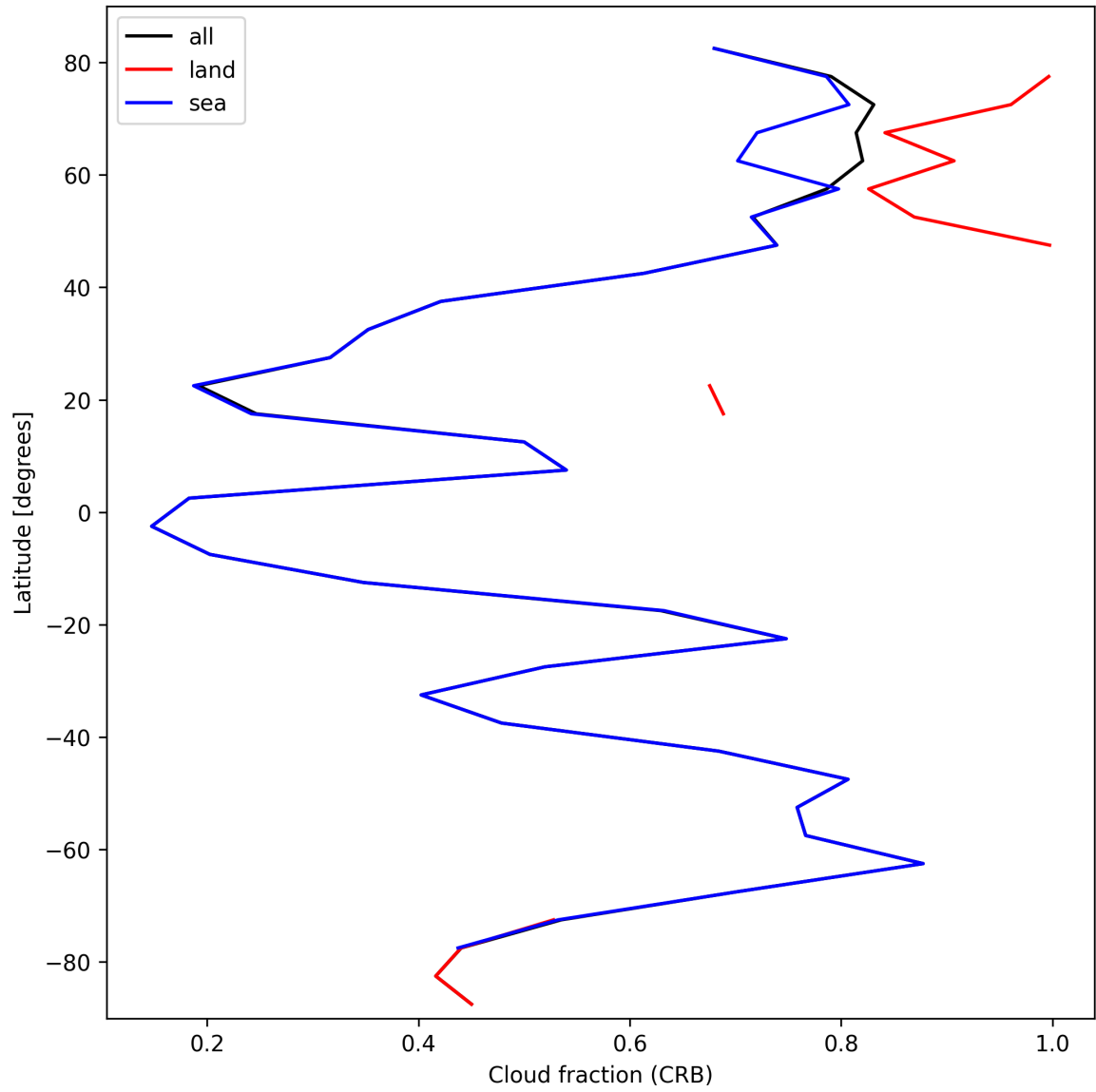


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-10-02 to 2025-10-03.

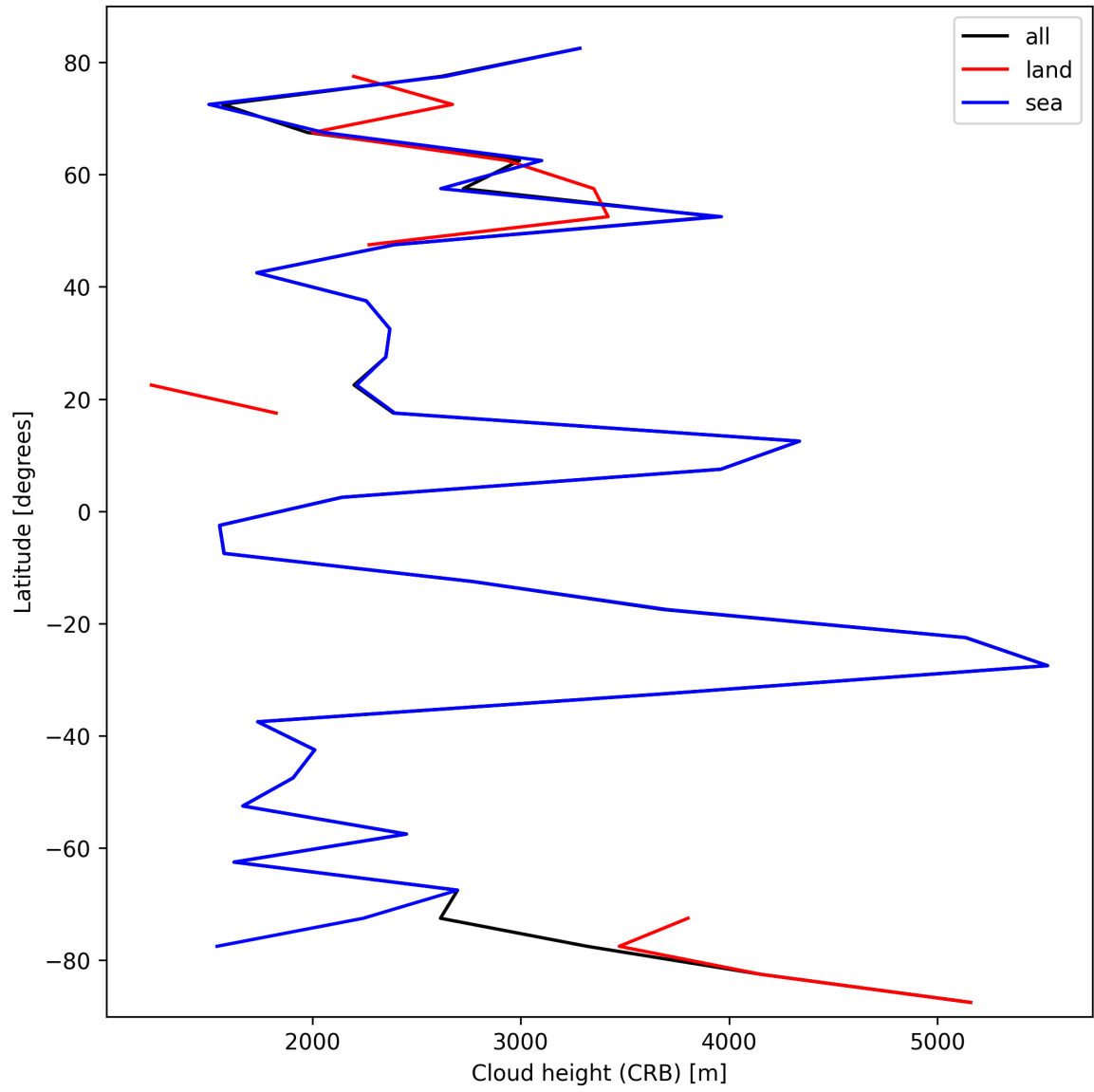


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-10-02 to 2025-10-03.

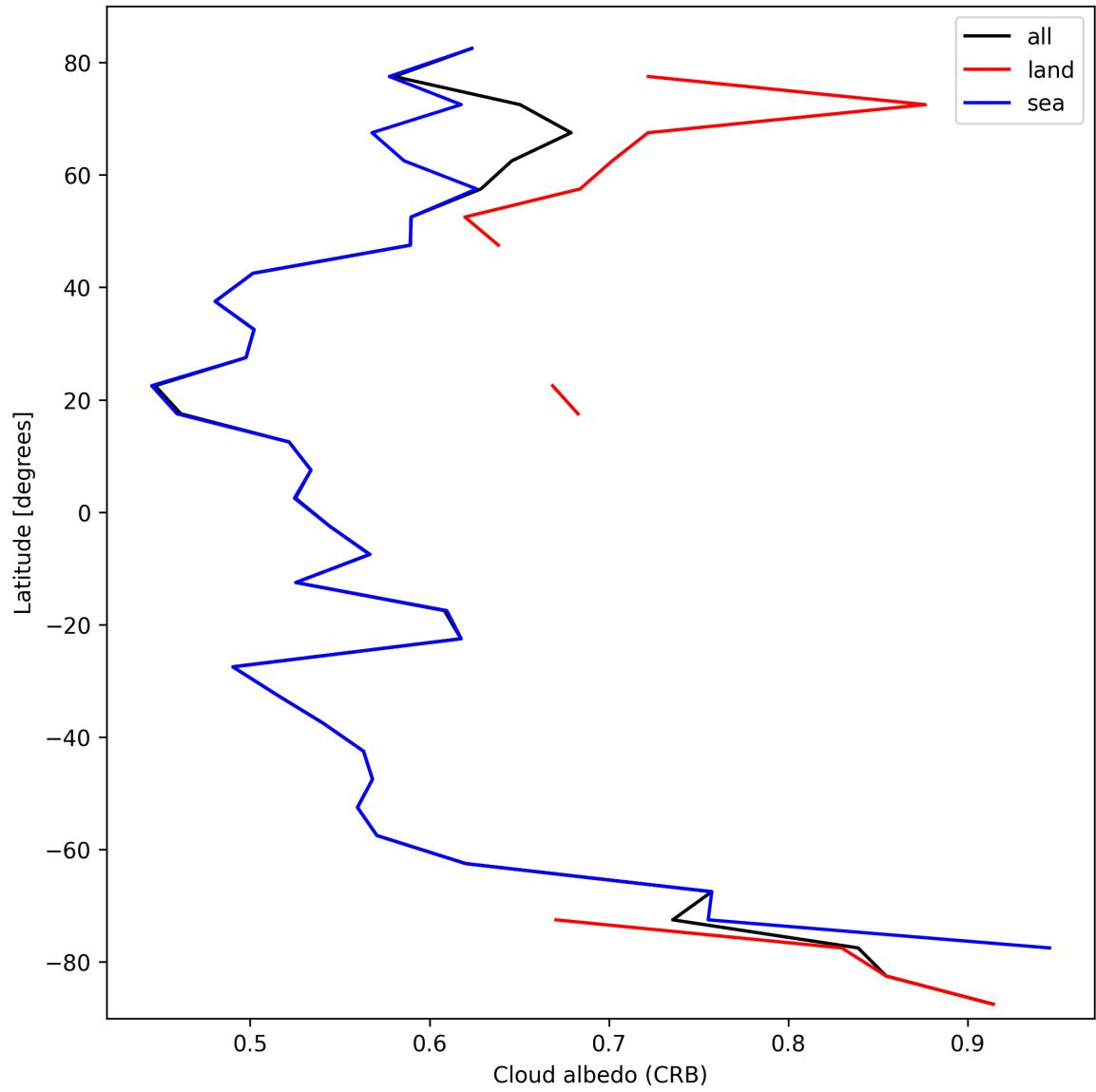


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-10-02 to 2025-10-03.

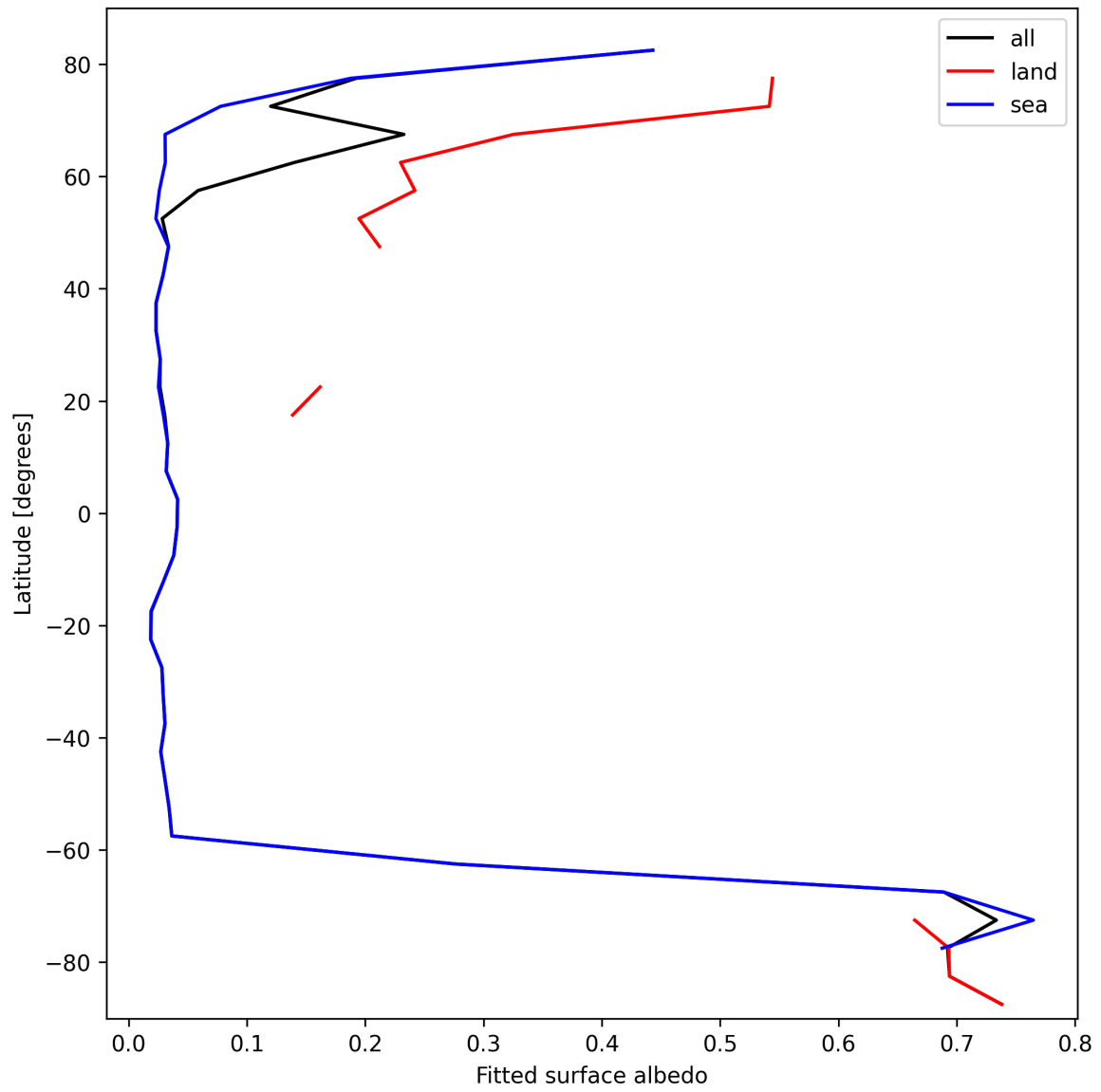


Figure 27: Zonal average of “Fitted surface albedo” for 2025-10-02 to 2025-10-03.

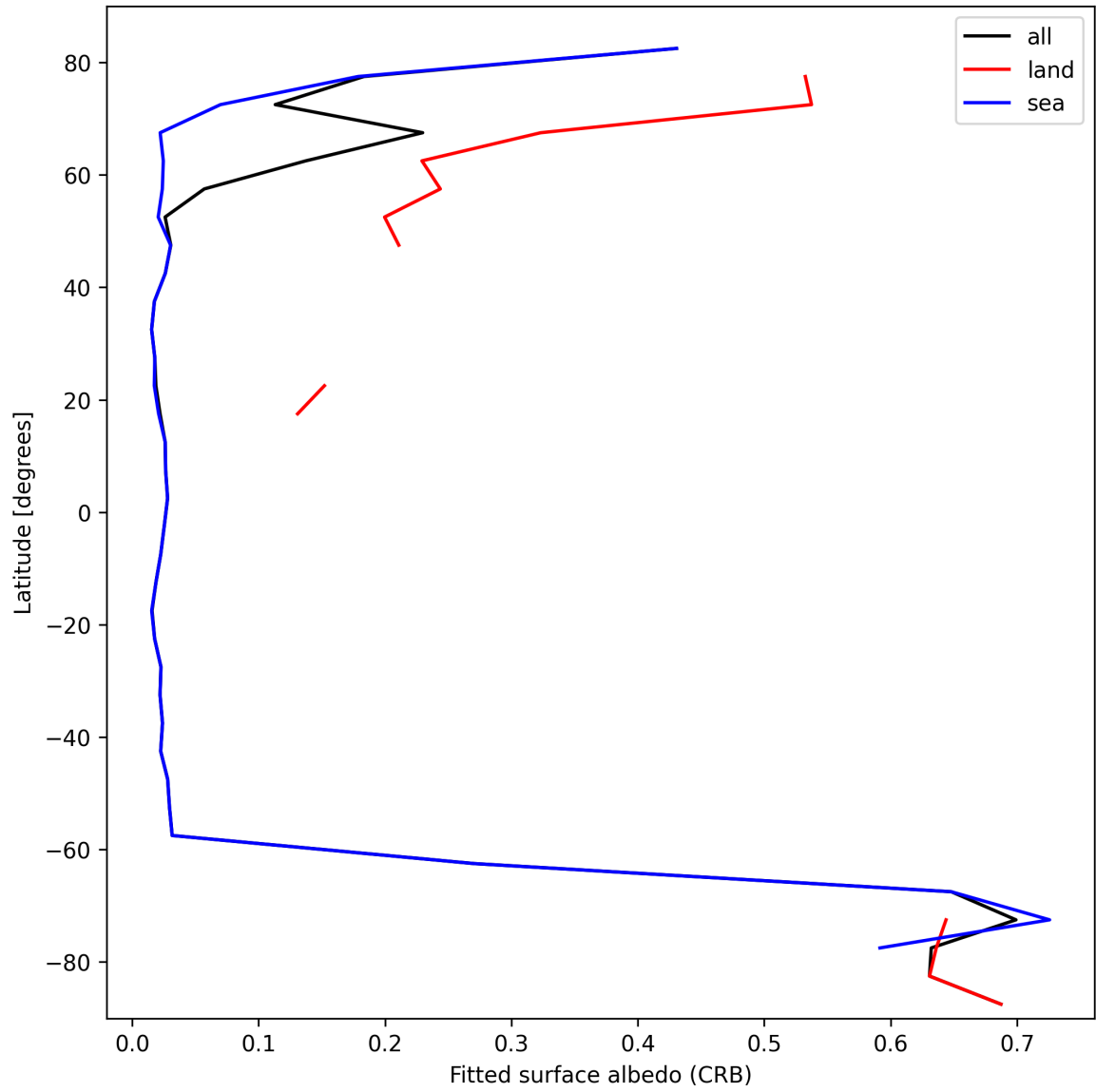


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-10-02 to 2025-10-03.

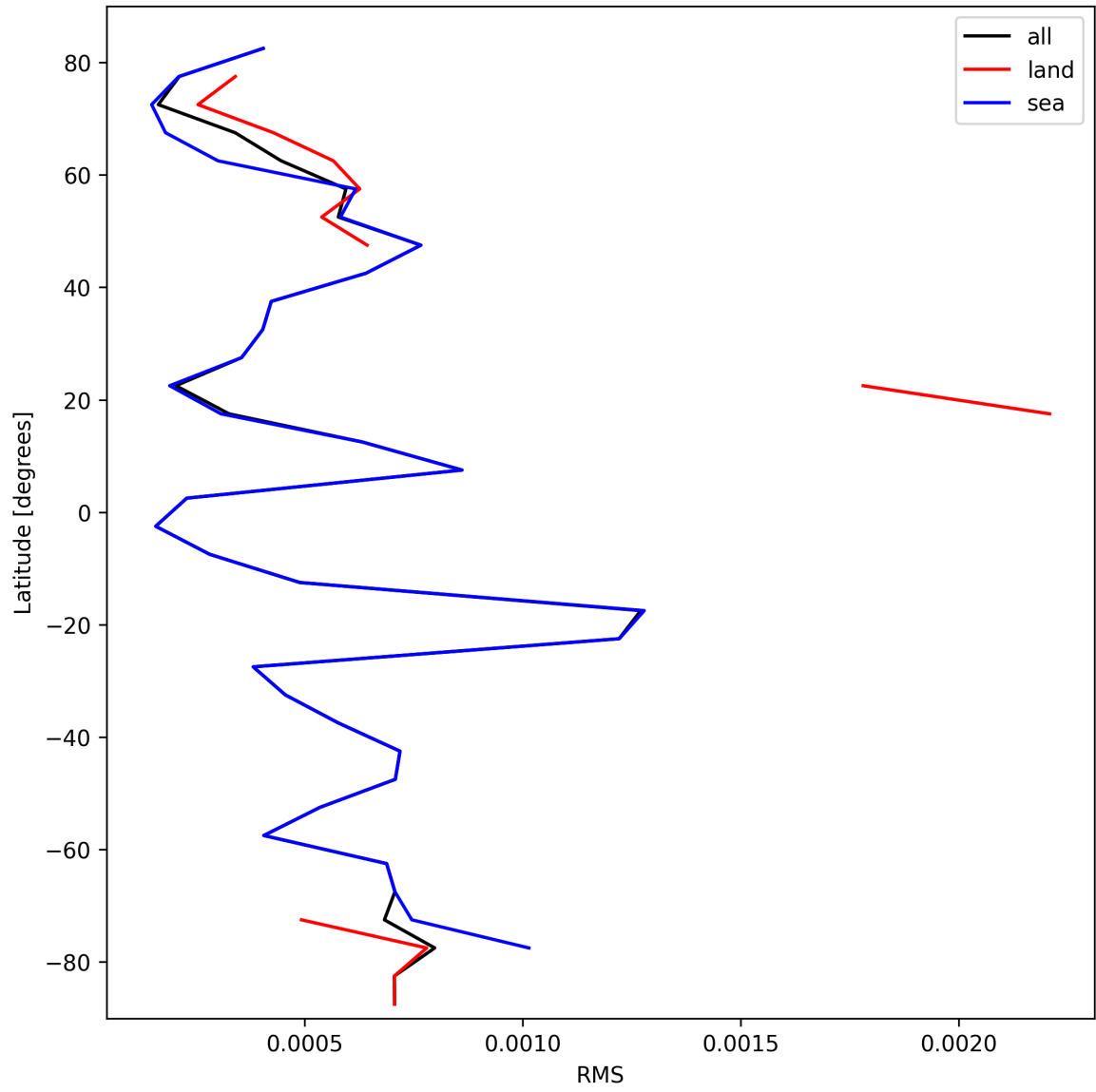


Figure 29: Zonal average of “RMS” for 2025-10-02 to 2025-10-03.

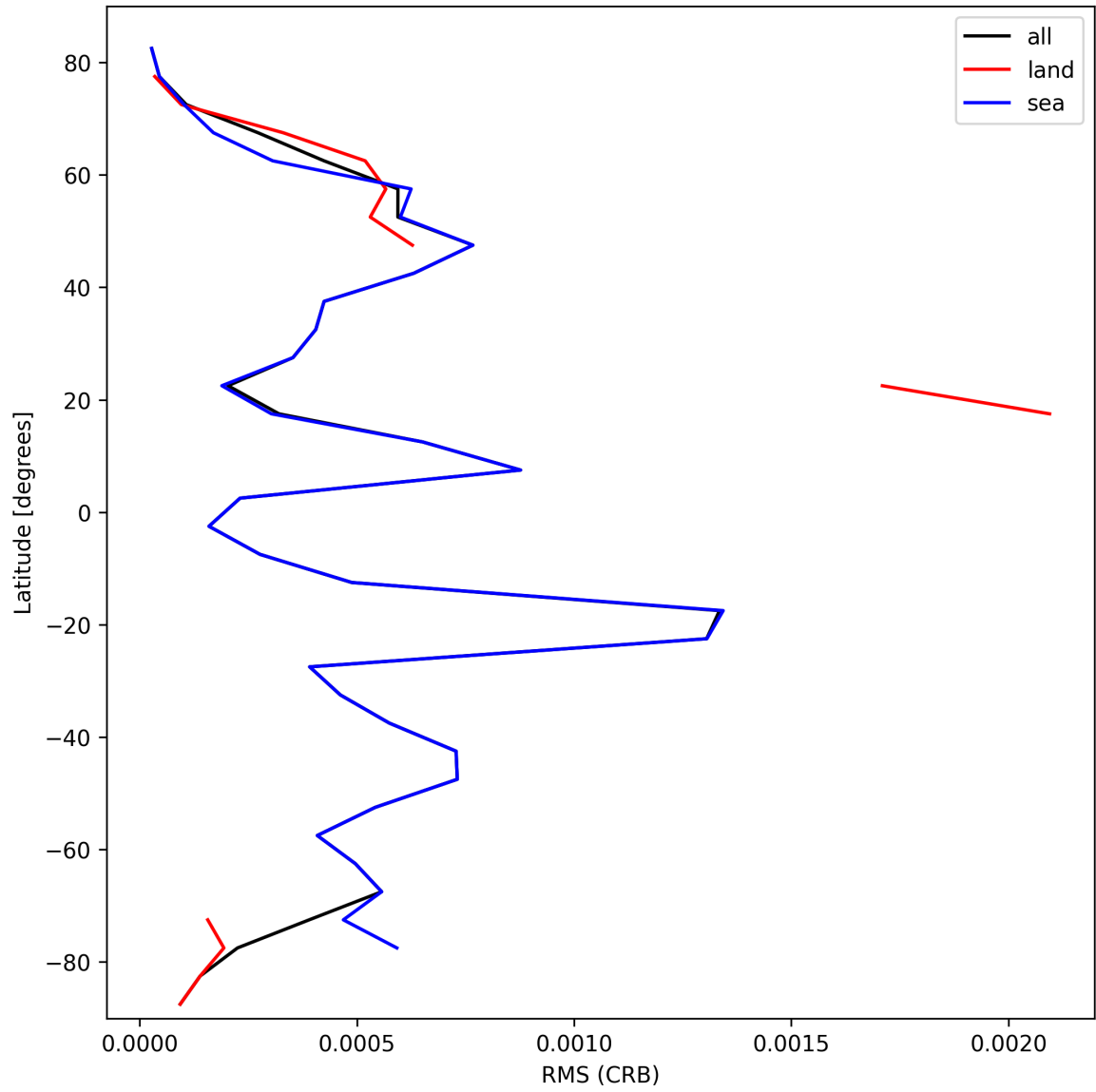


Figure 30: Zonal average of “RMS (CRB)” for 2025-10-02 to 2025-10-03.

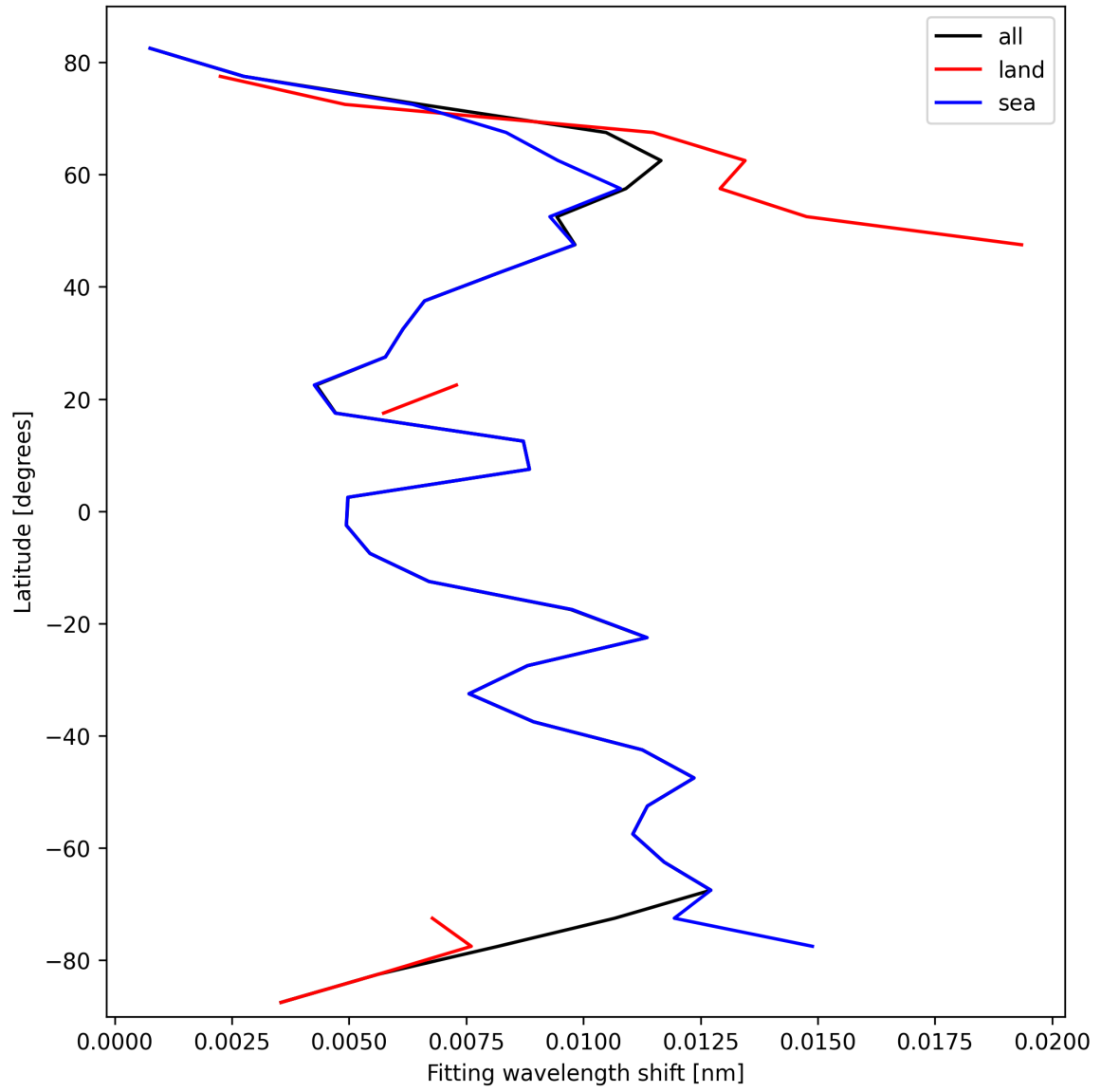


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-10-02 to 2025-10-03.

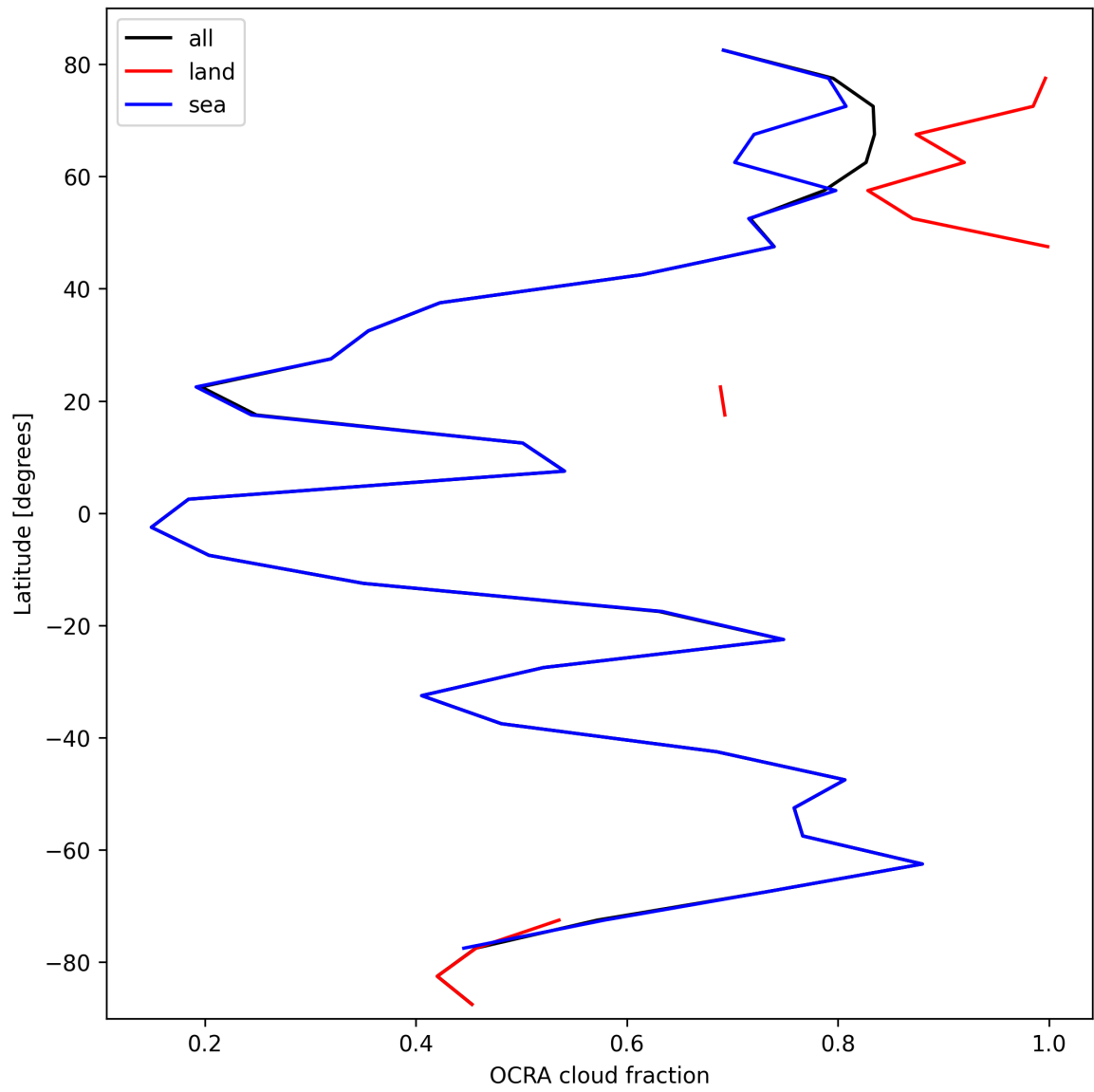


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-10-02 to 2025-10-03.

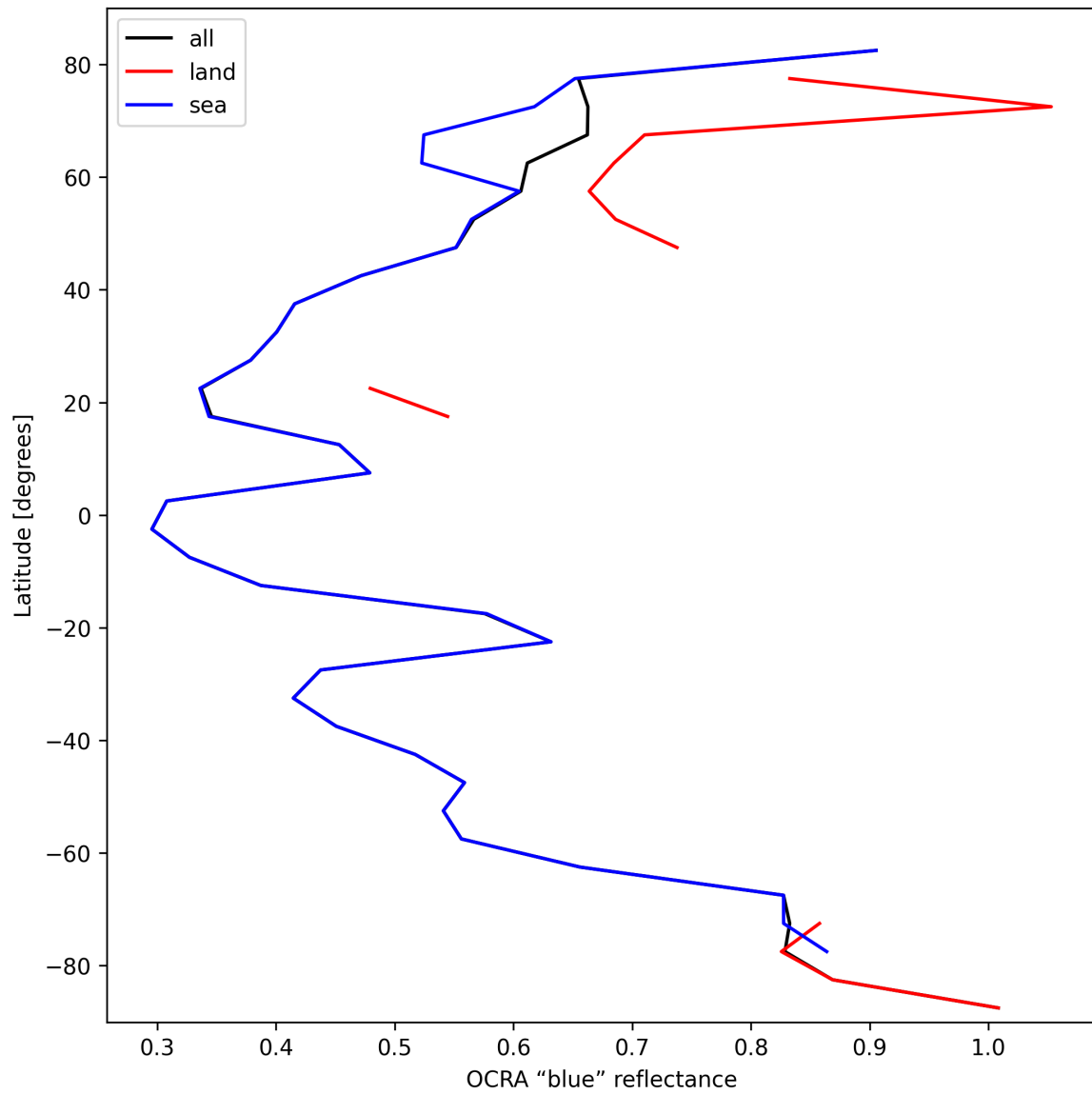


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-10-02 to 2025-10-03.

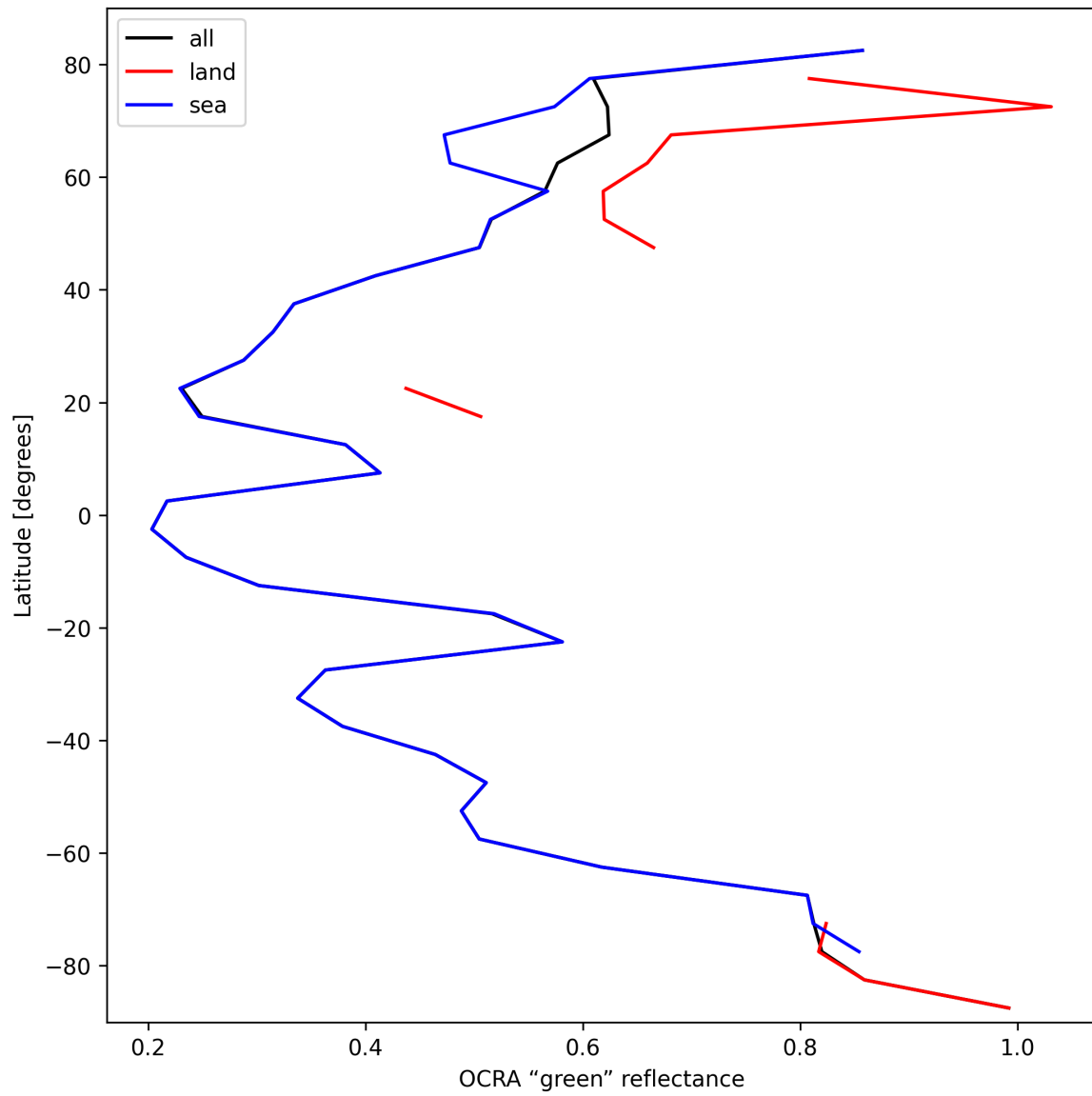


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-10-02 to 2025-10-03.

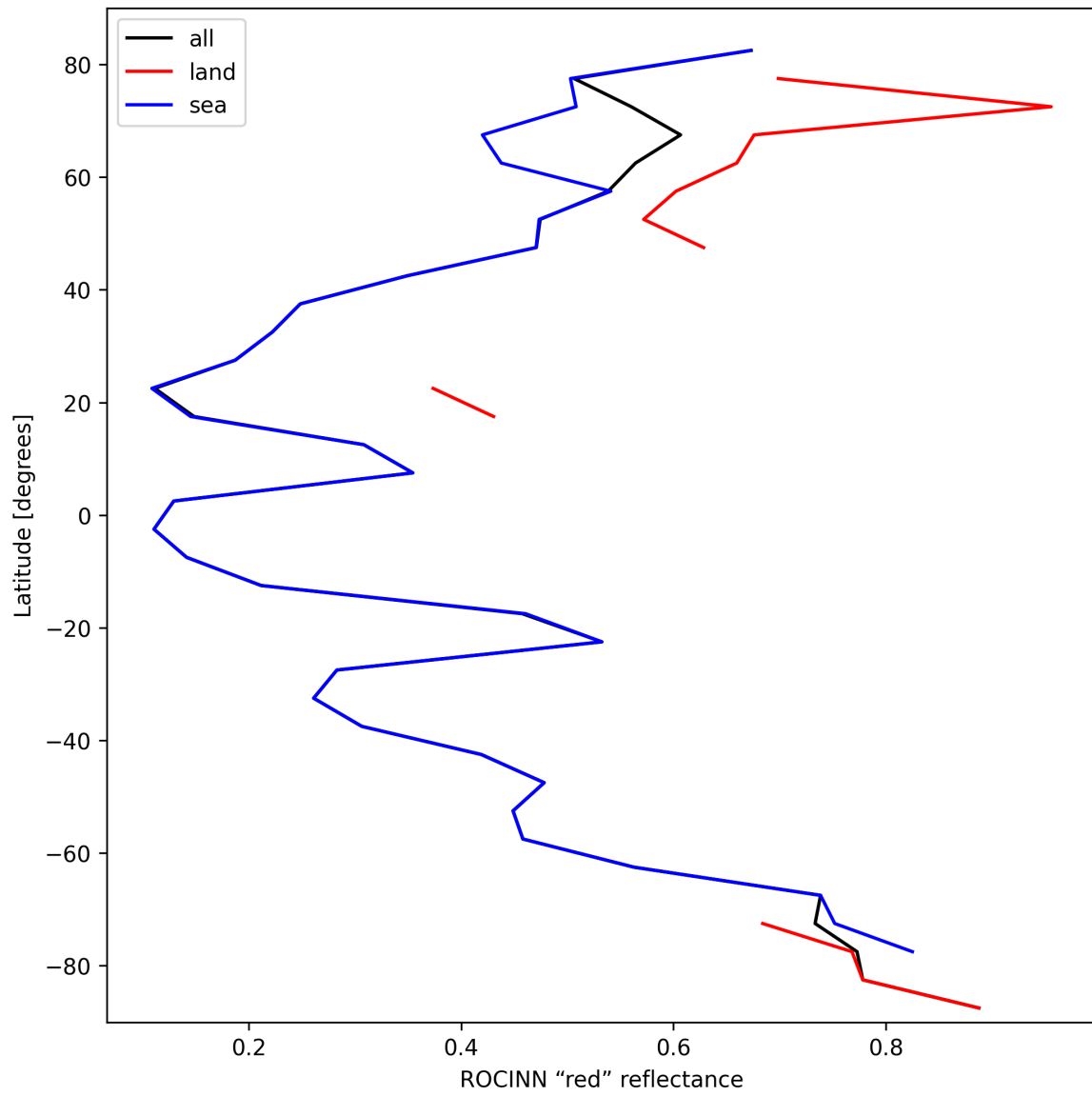


Figure 35: Zonal average of “ROCINN “red” reflectance” for 2025-10-02 to 2025-10-03.

8 Histograms

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

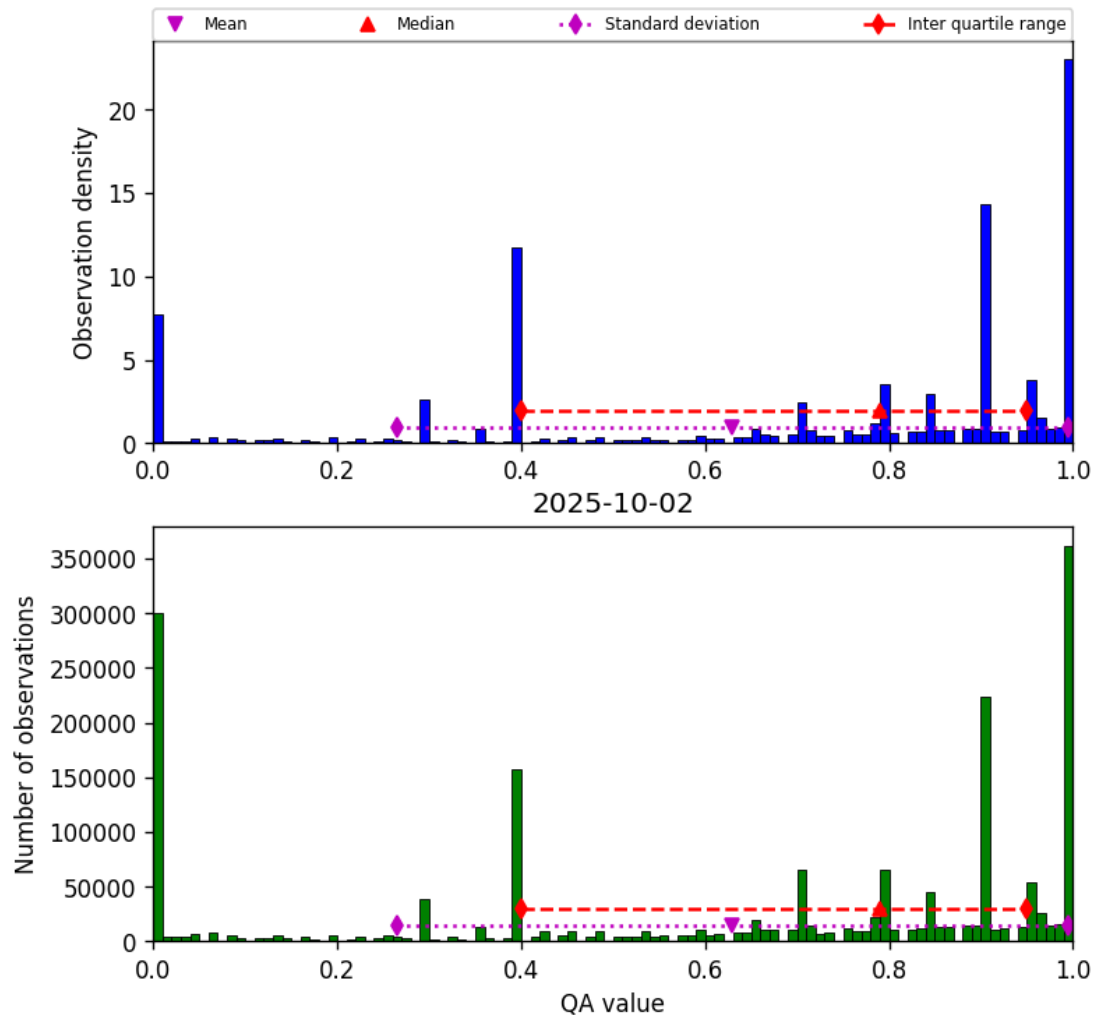


Figure 36: Histogram of “QA value” for 2025-10-02 to 2025-10-03

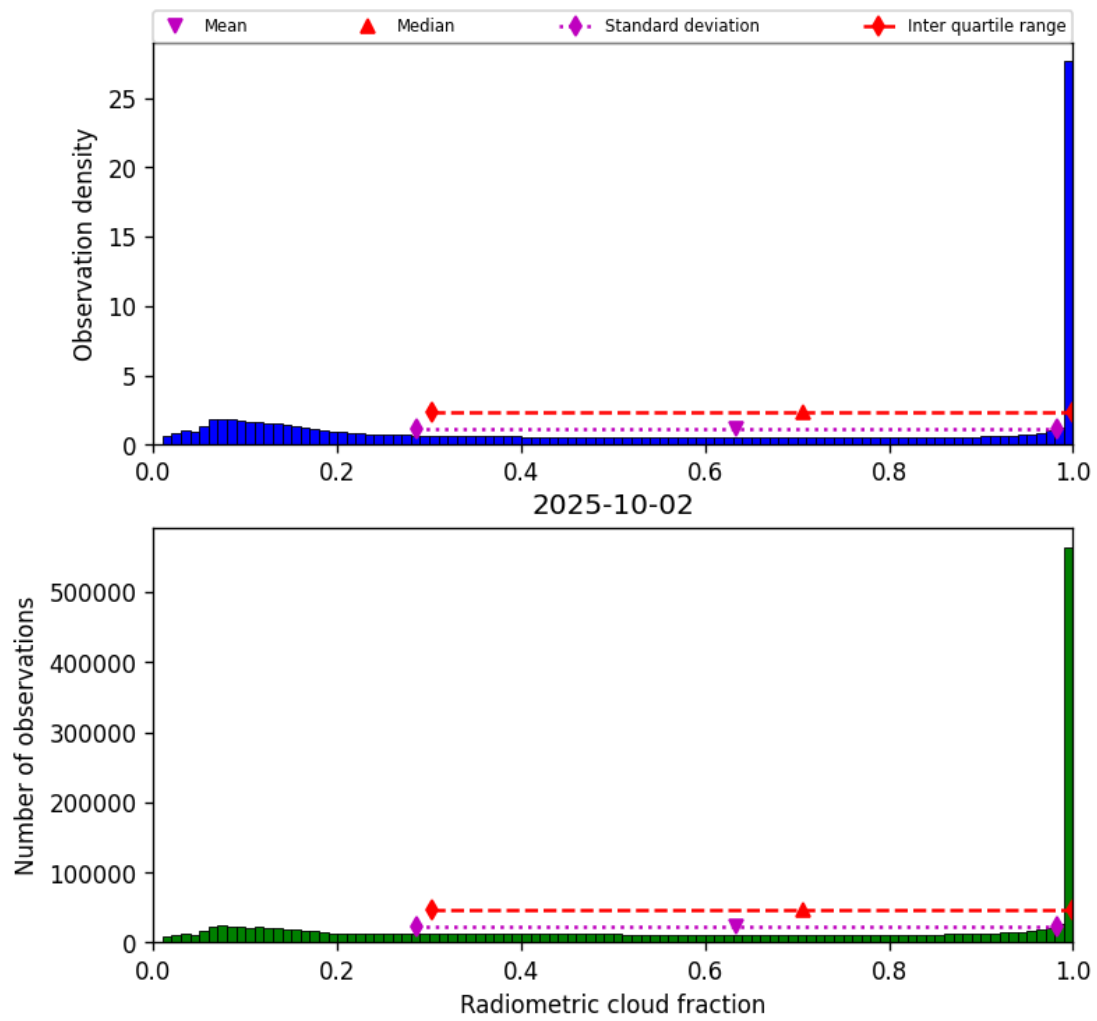


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-10-02 to 2025-10-03

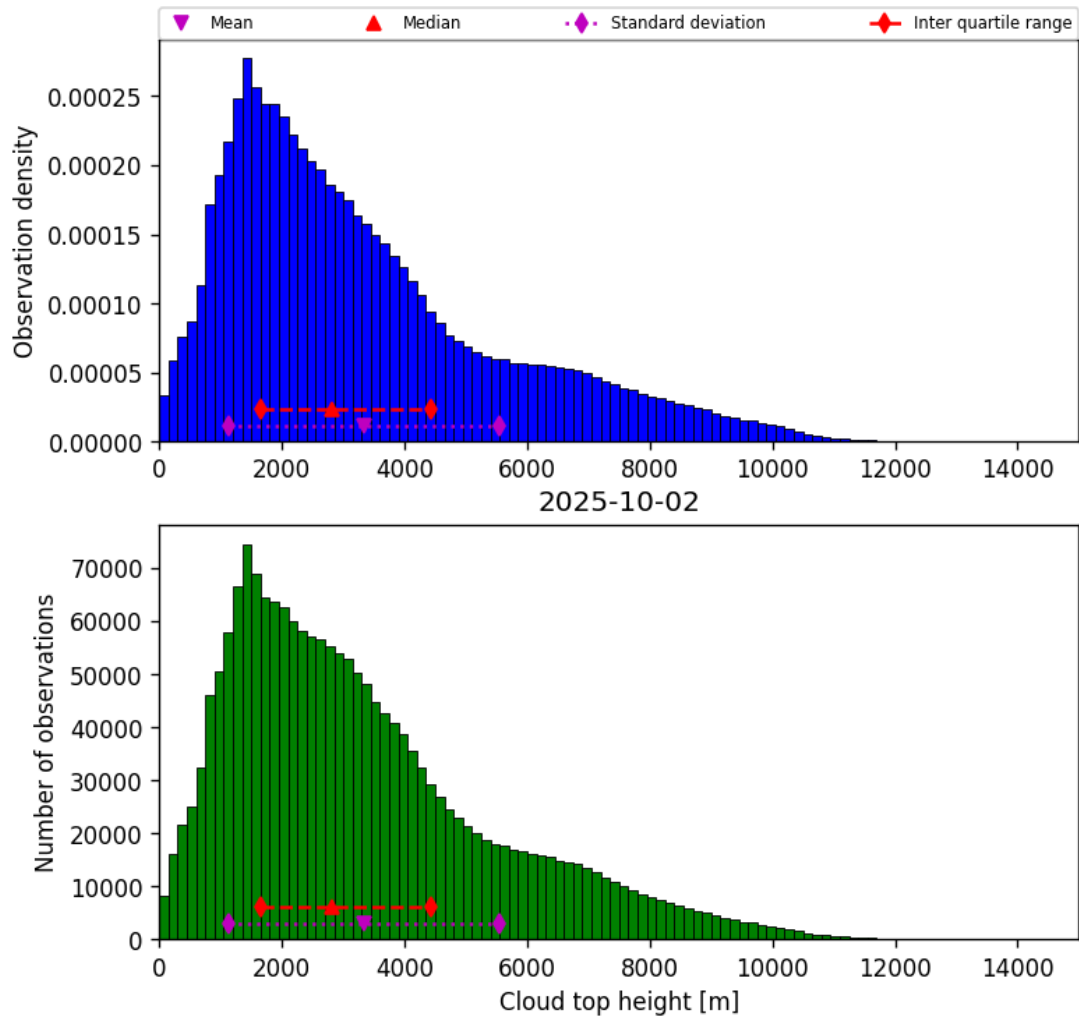


Figure 38: Histogram of “Cloud top height” for 2025-10-02 to 2025-10-03

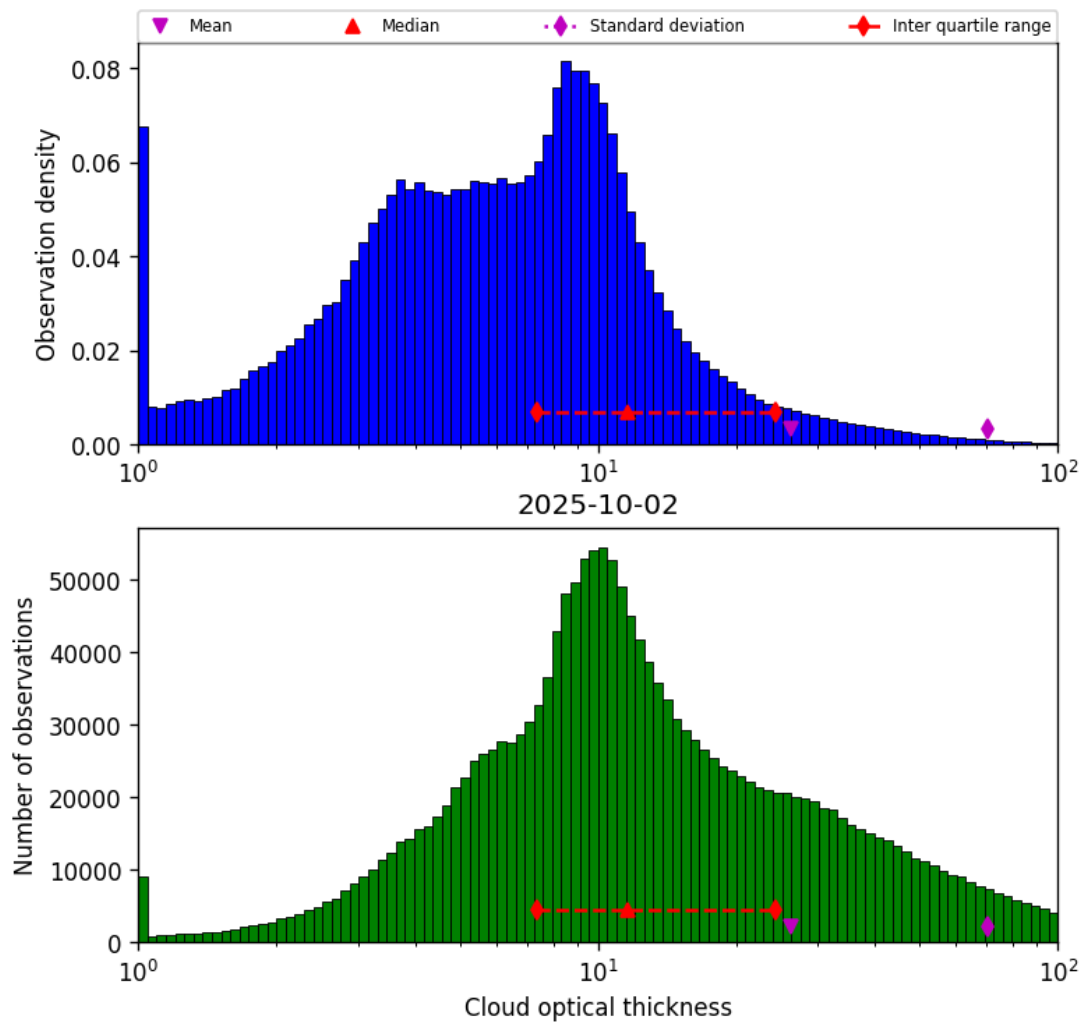


Figure 39: Histogram of “Cloud optical thickness” for 2025-10-02 to 2025-10-03

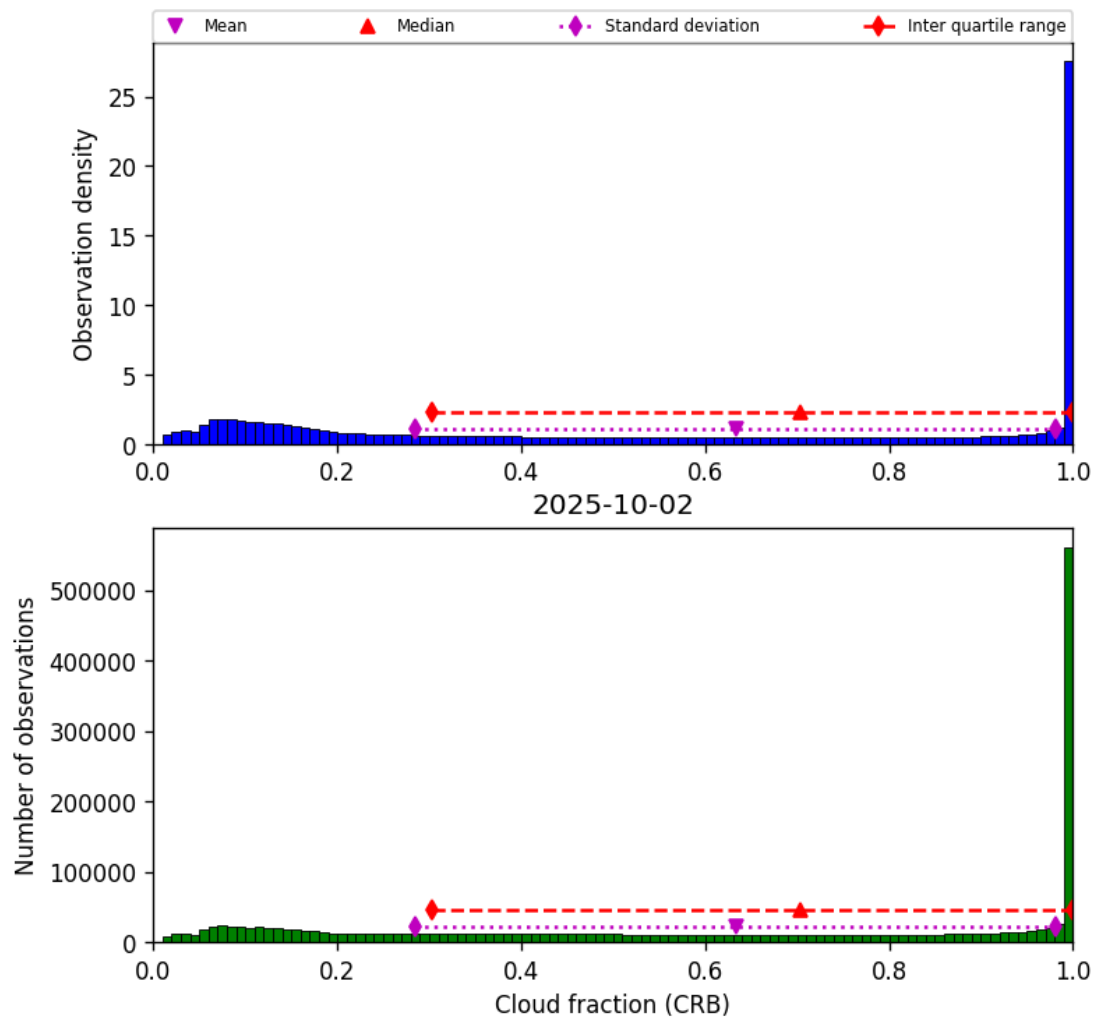


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-10-02 to 2025-10-03

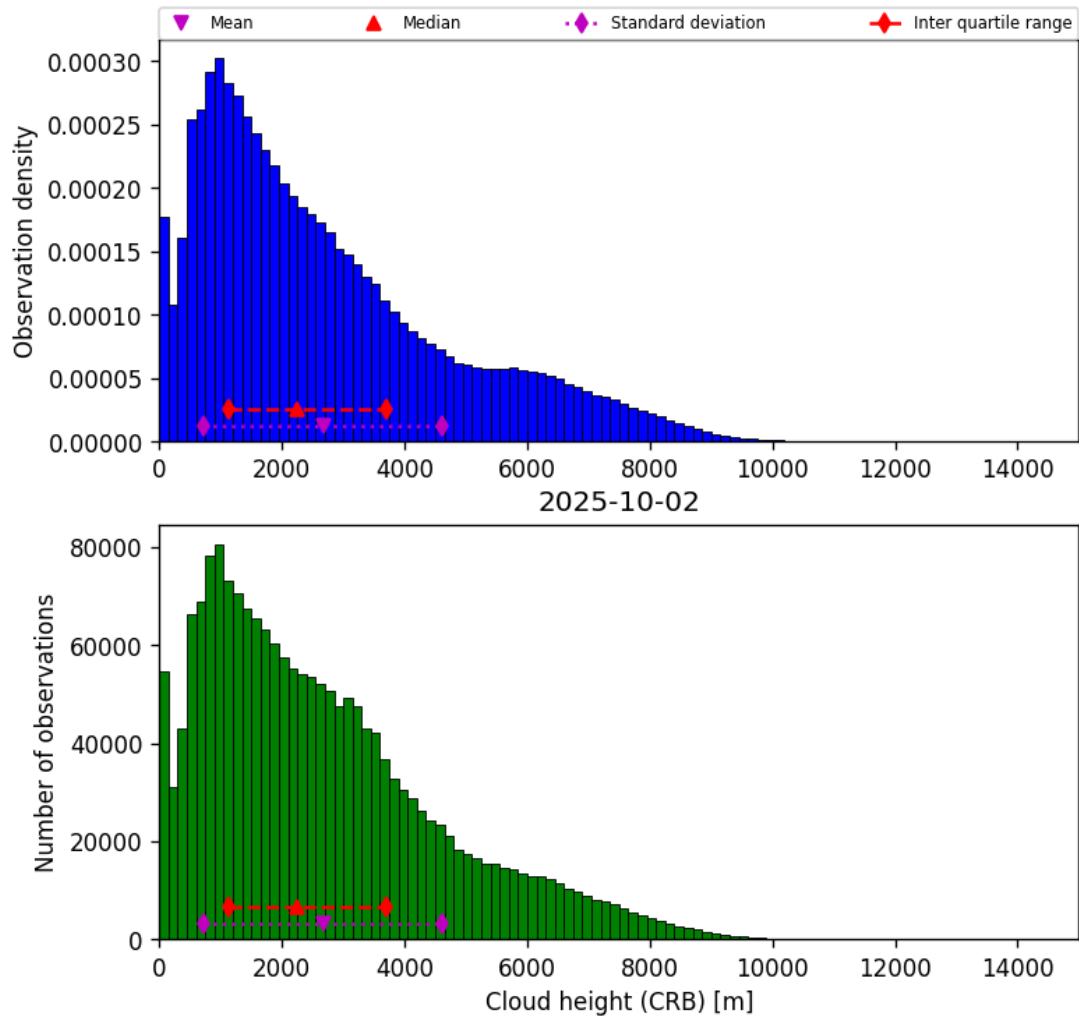


Figure 41: Histogram of “Cloud height (CRB)” for 2025-10-02 to 2025-10-03

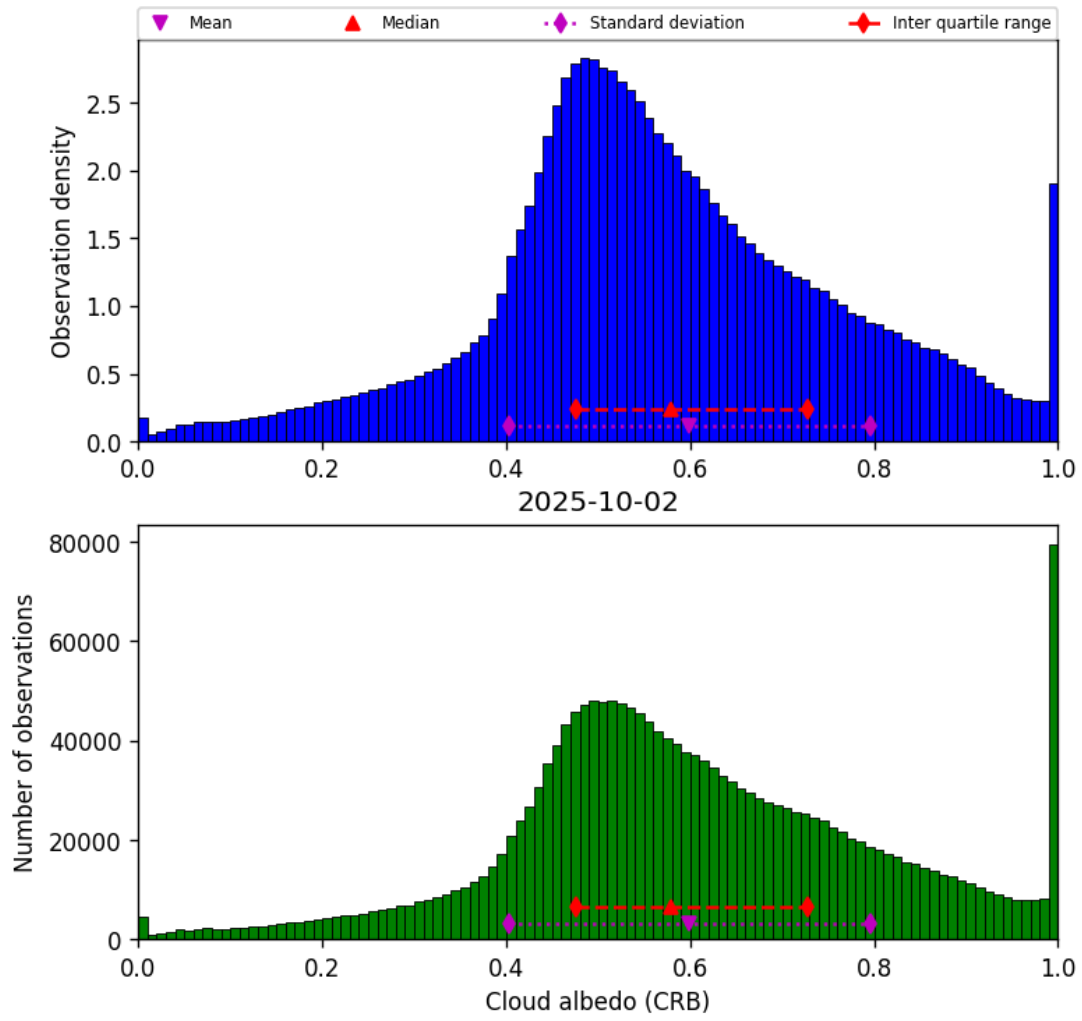


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-10-02 to 2025-10-03

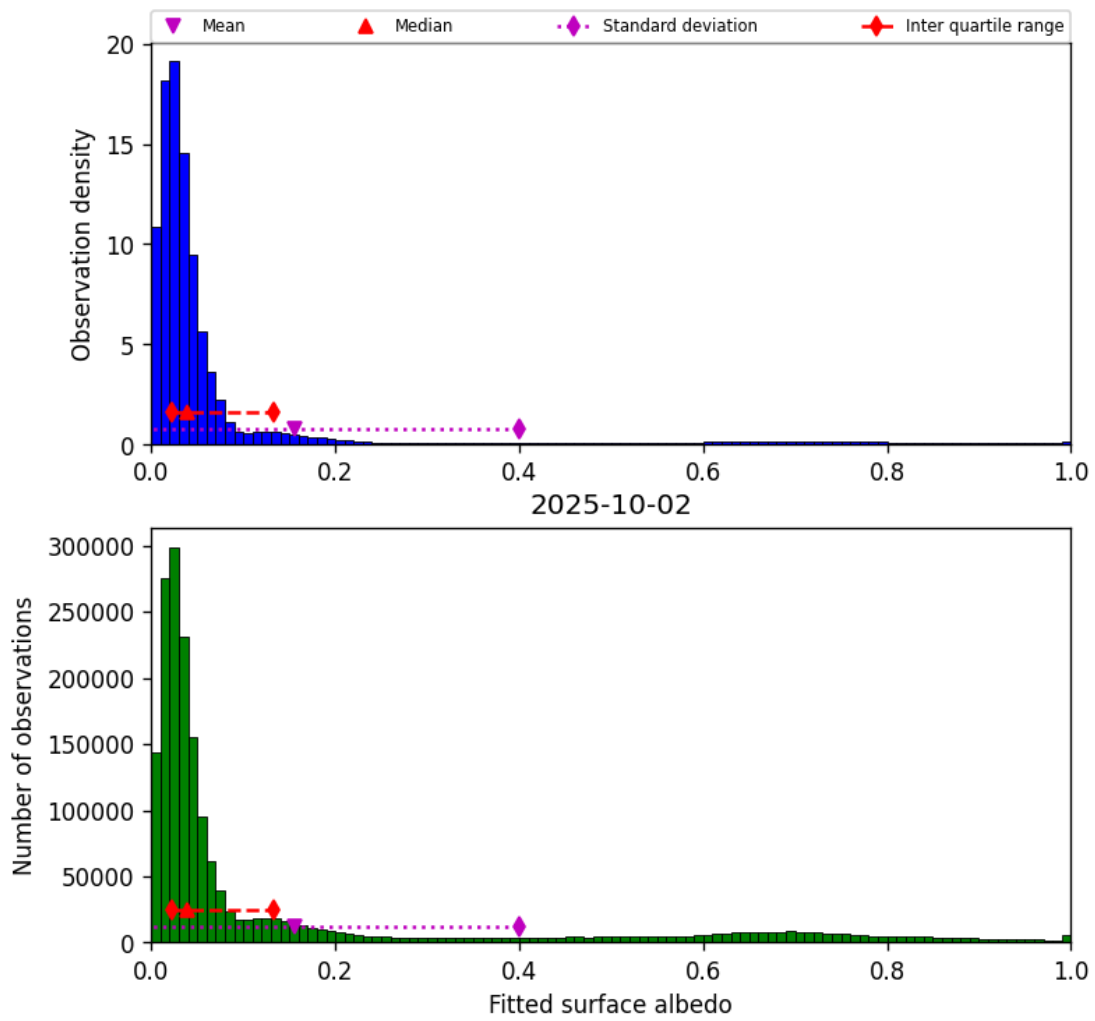


Figure 43: Histogram of “Fitted surface albedo” for 2025-10-02 to 2025-10-03

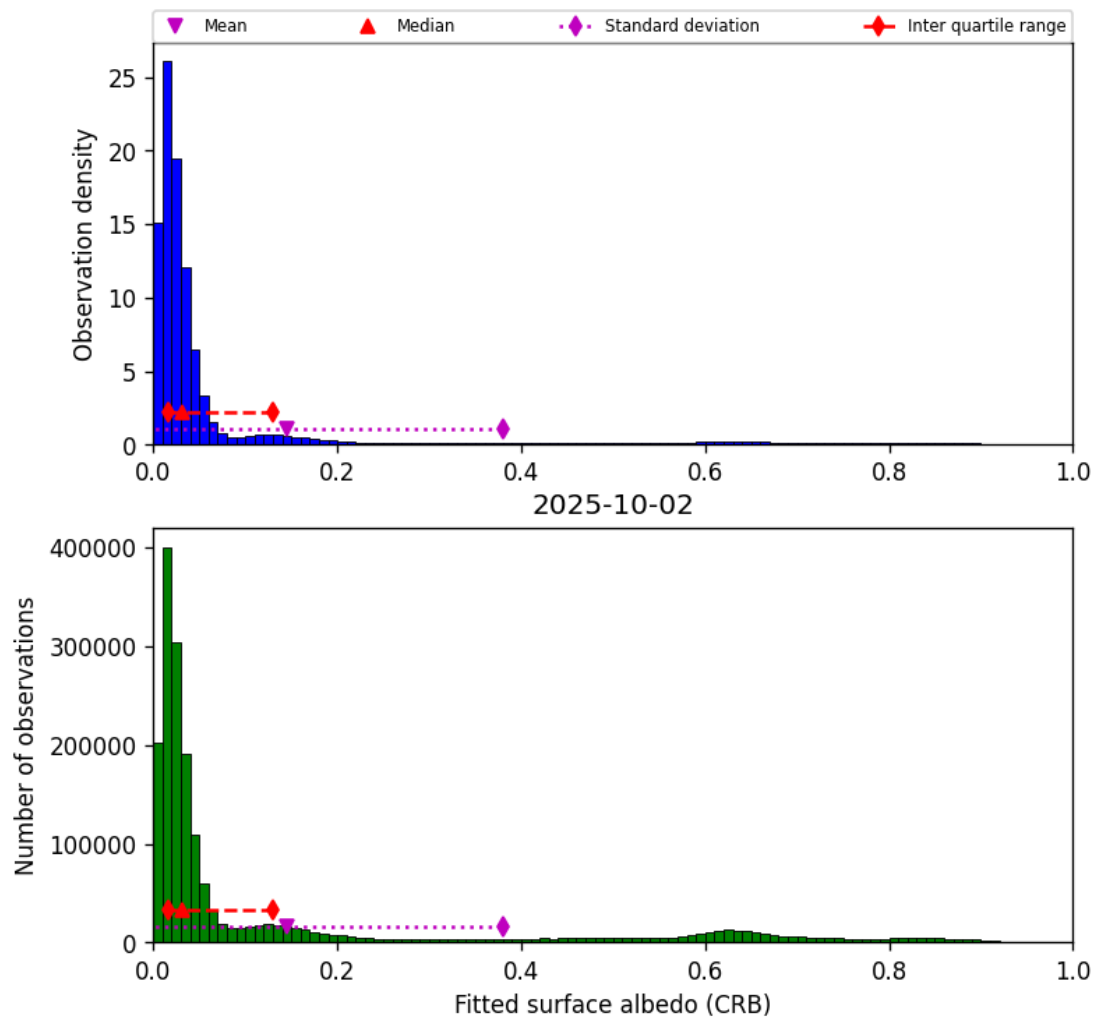


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-10-02 to 2025-10-03

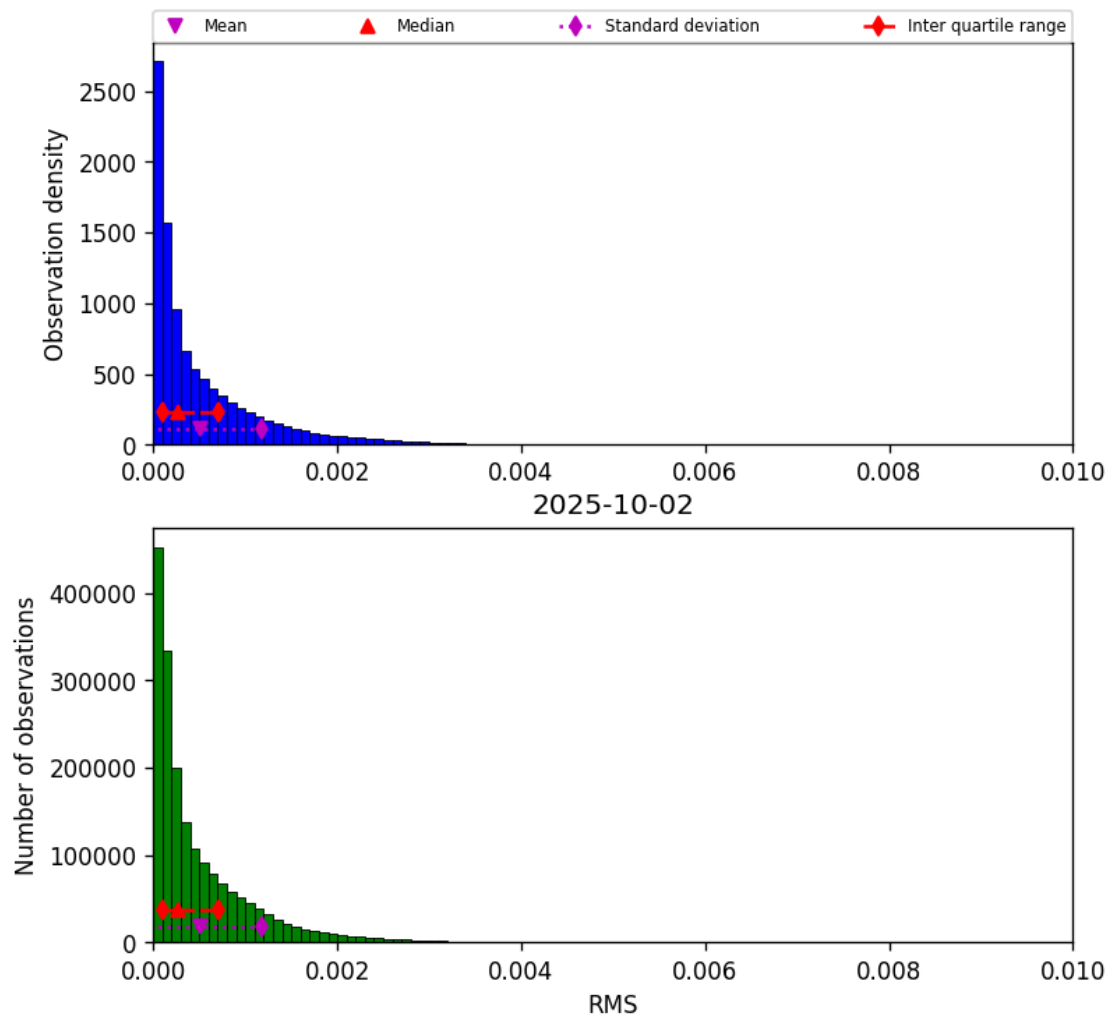


Figure 45: Histogram of “RMS” for 2025-10-02 to 2025-10-03

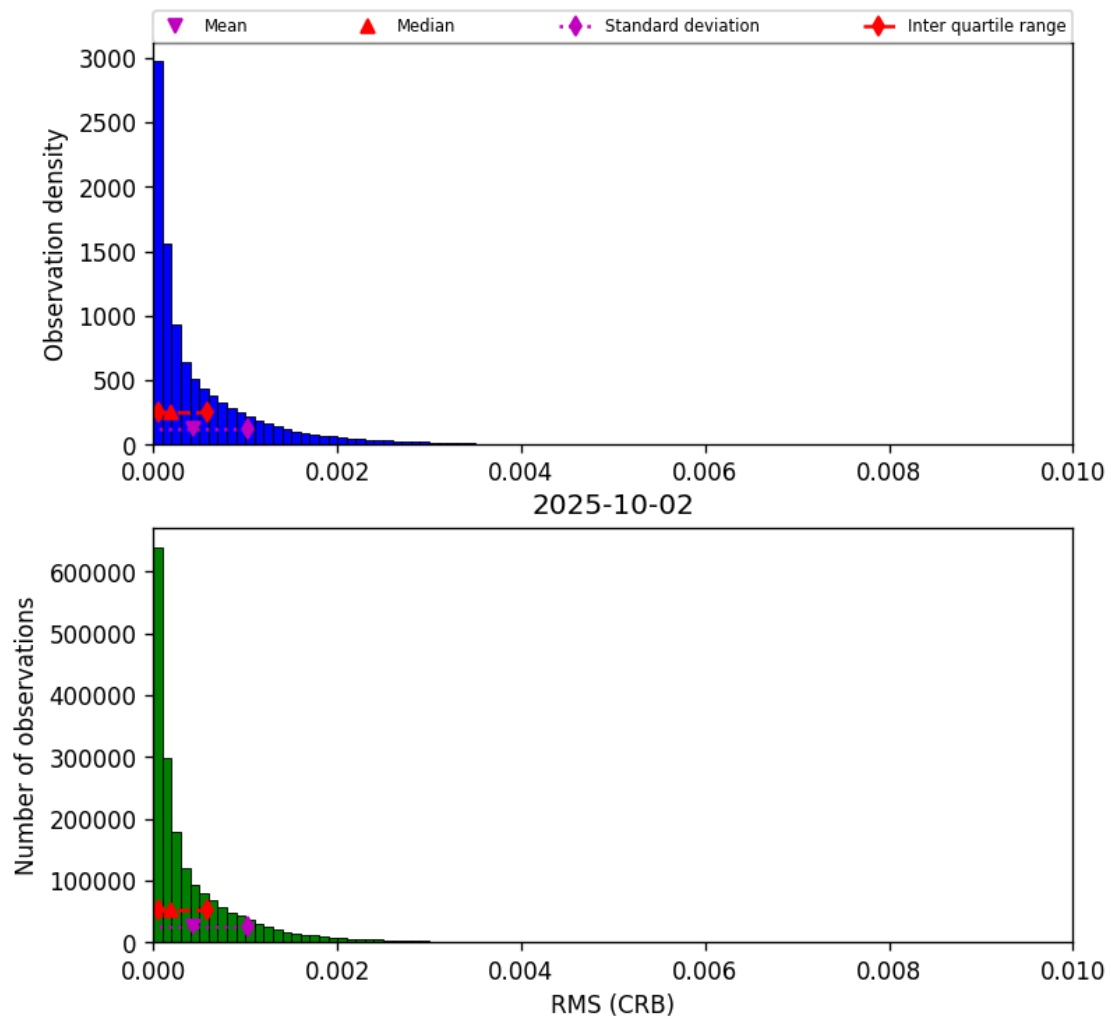


Figure 46: Histogram of “RMS (CRB)” for 2025-10-02 to 2025-10-03

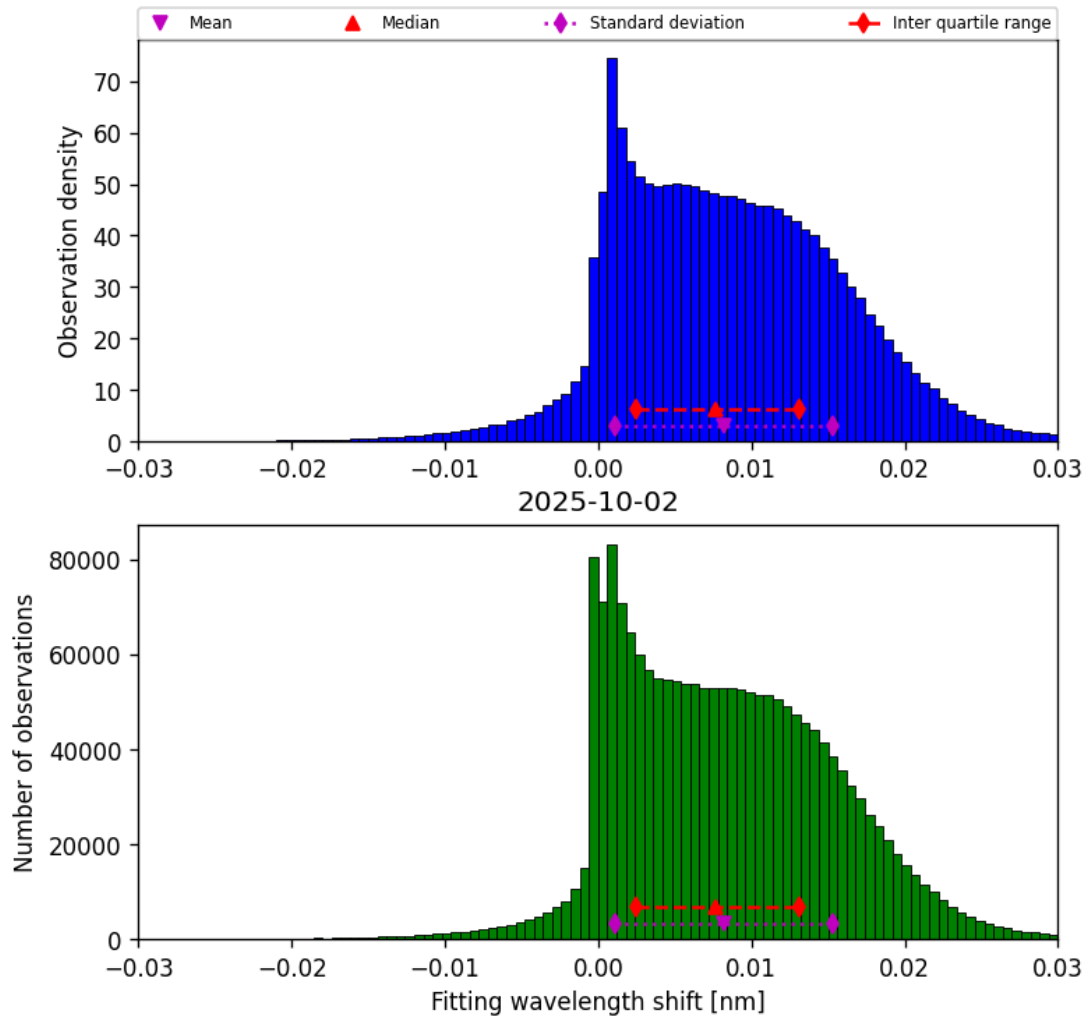


Figure 47: Histogram of “Fitting wavelength shift” for 2025-10-02 to 2025-10-03

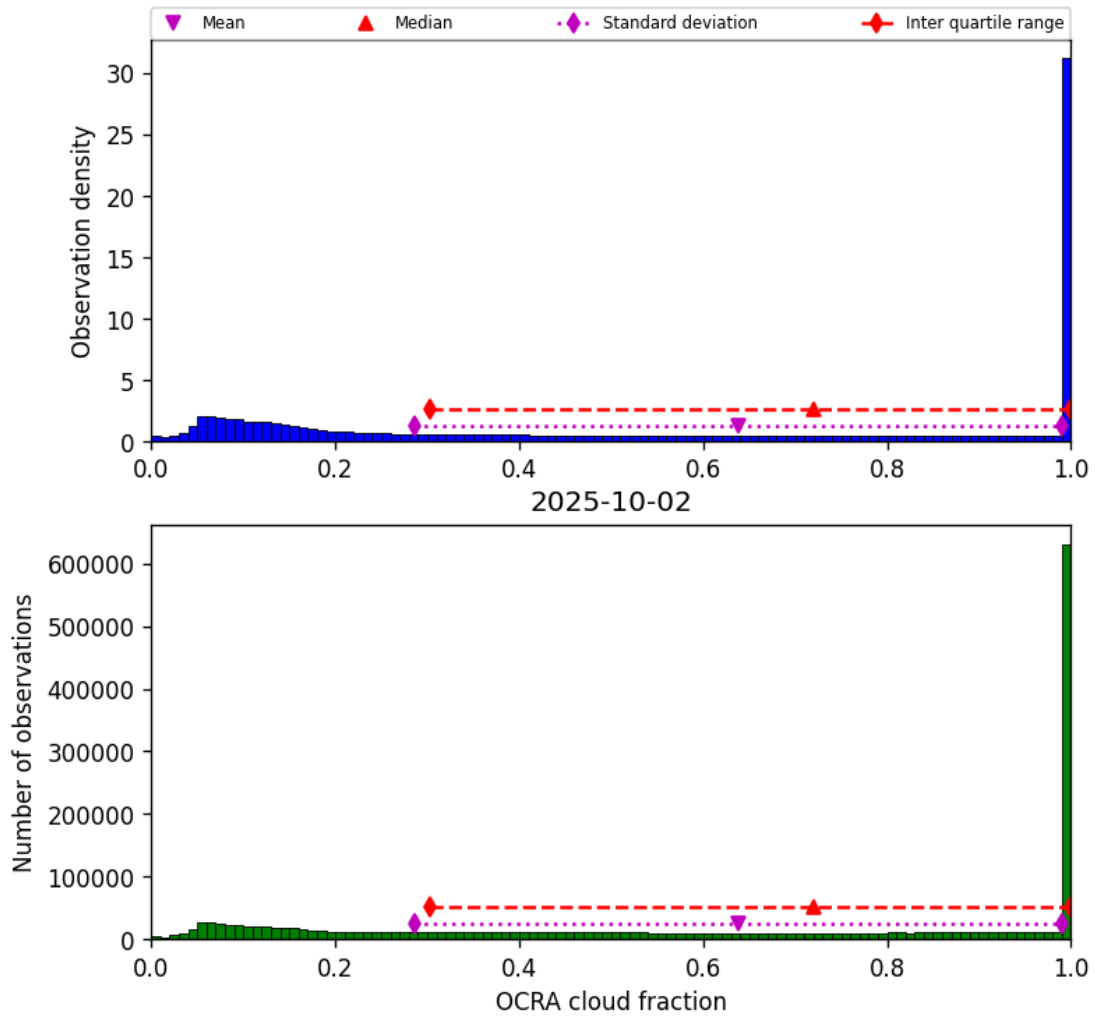


Figure 48: Histogram of “OCRA cloud fraction” for 2025-10-02 to 2025-10-03

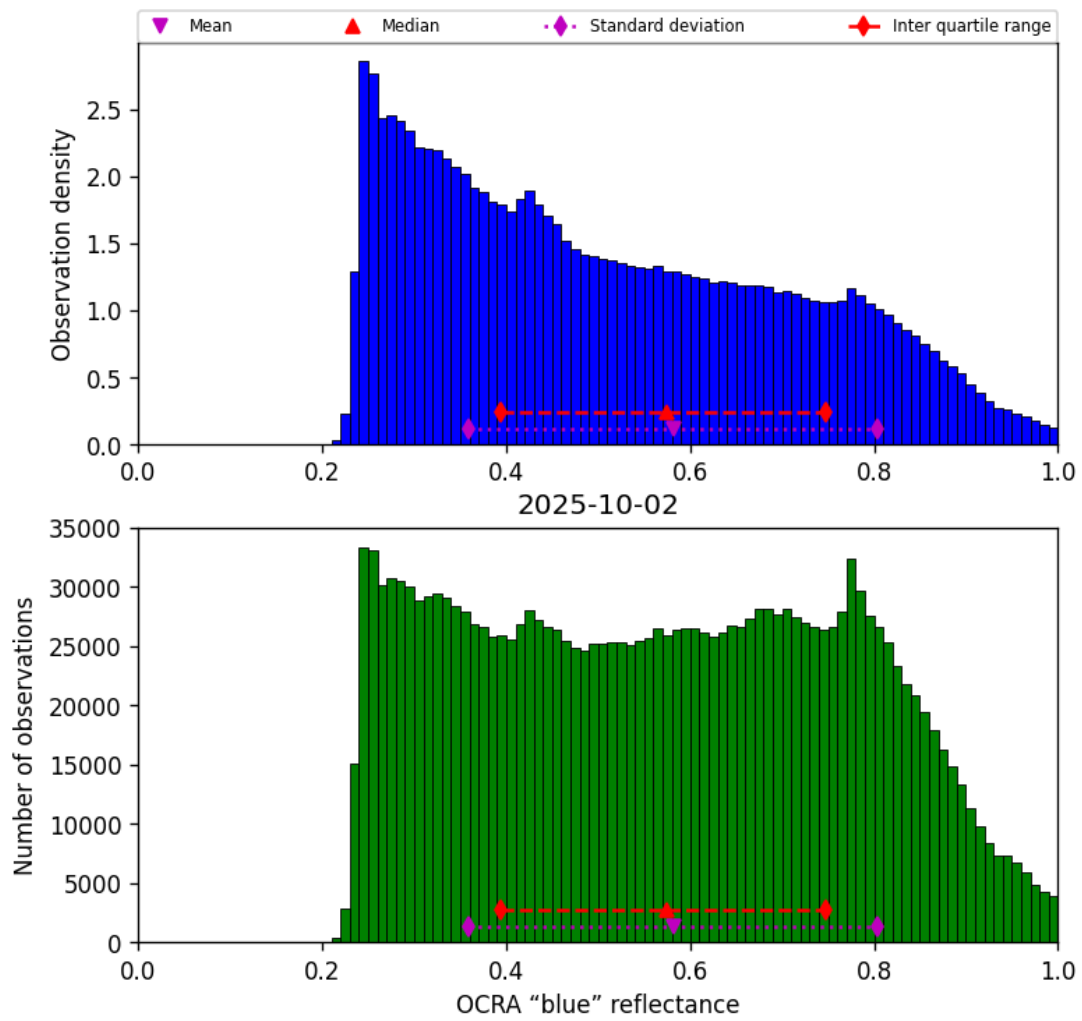


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-10-02 to 2025-10-03

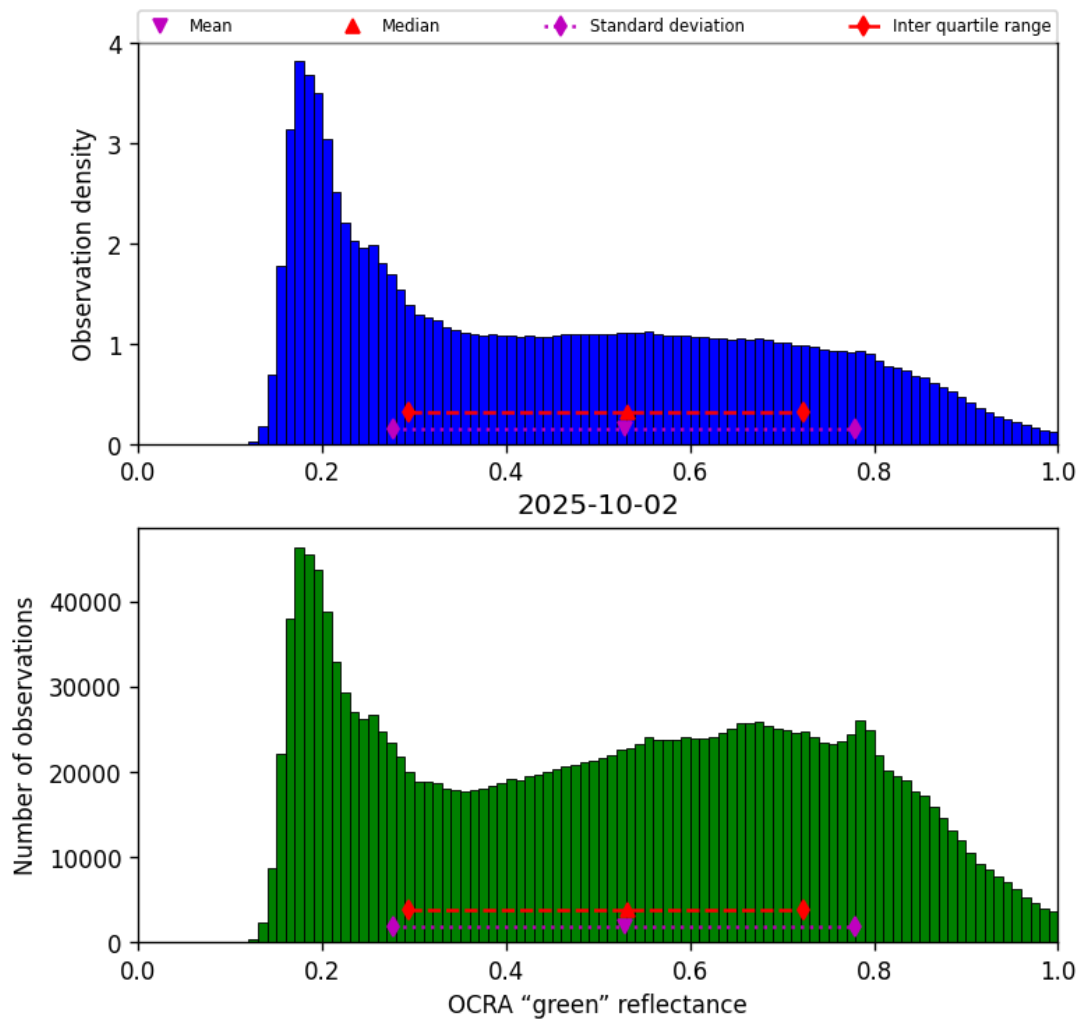


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-10-02 to 2025-10-03

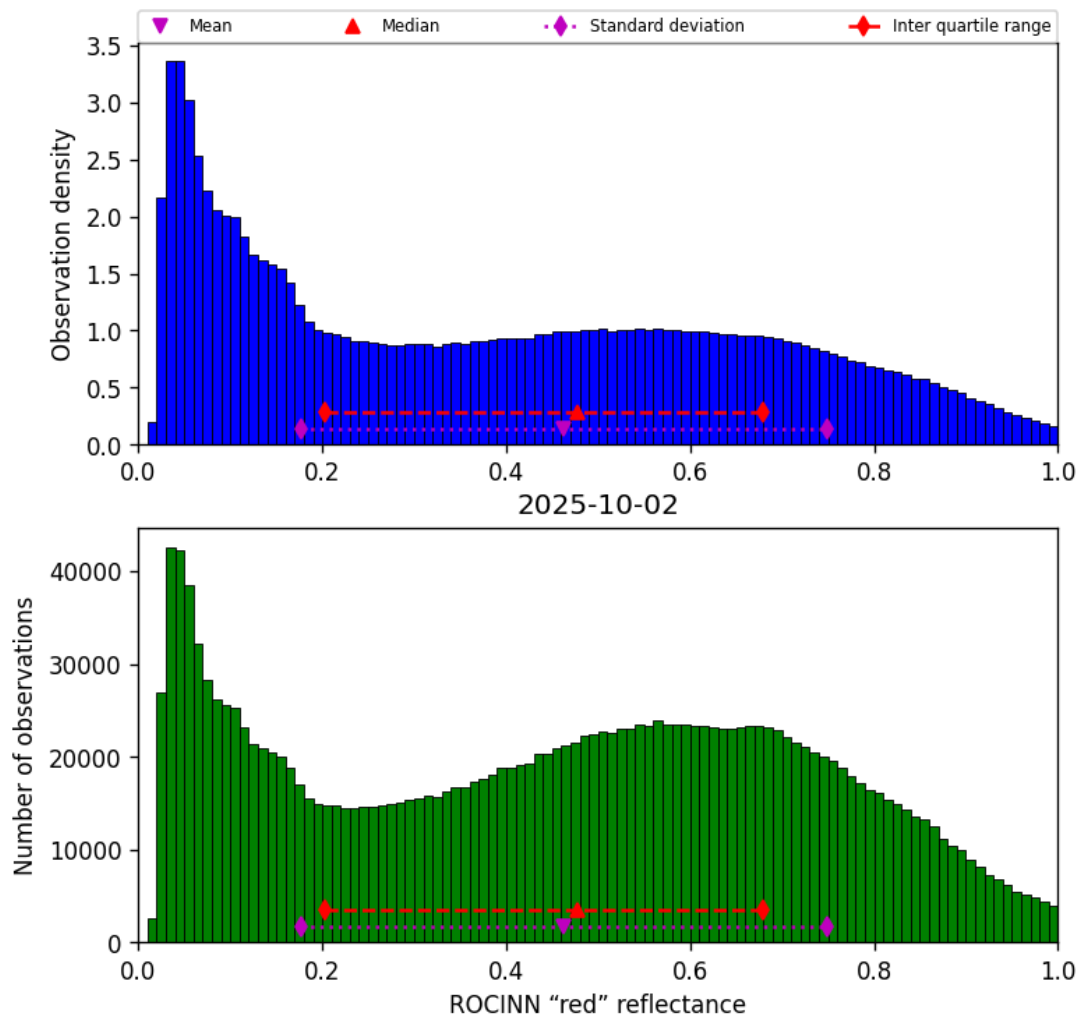


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-10-02 to 2025-10-03

9 Along track statistics

The TROPOMI instrument uses different binned detector rows for different viewing directions. In this section statistics are presented for each of the binned rows in the instrument.

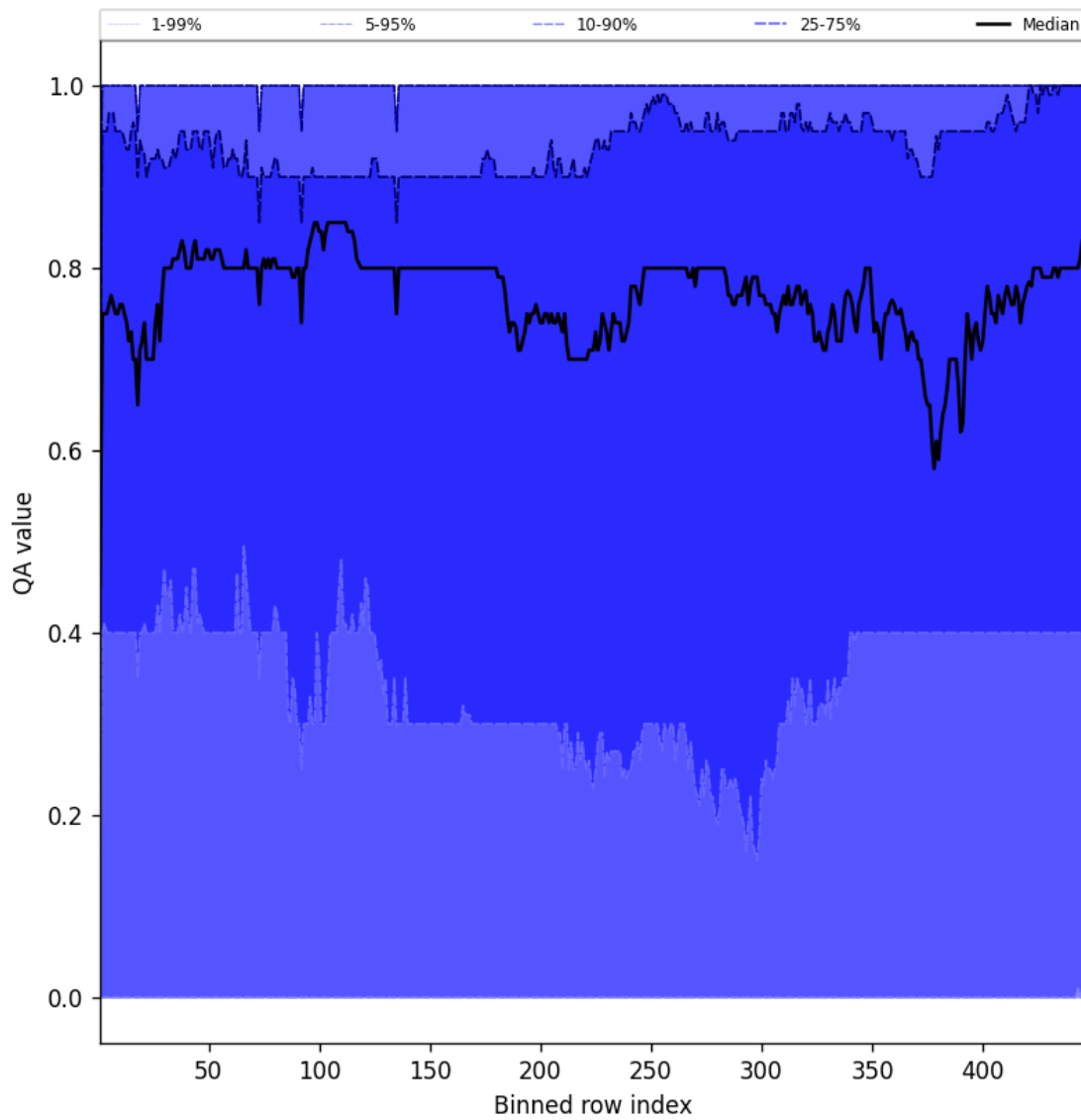


Figure 52: Along track statistics of “QA value” for 2025-10-02 to 2025-10-03

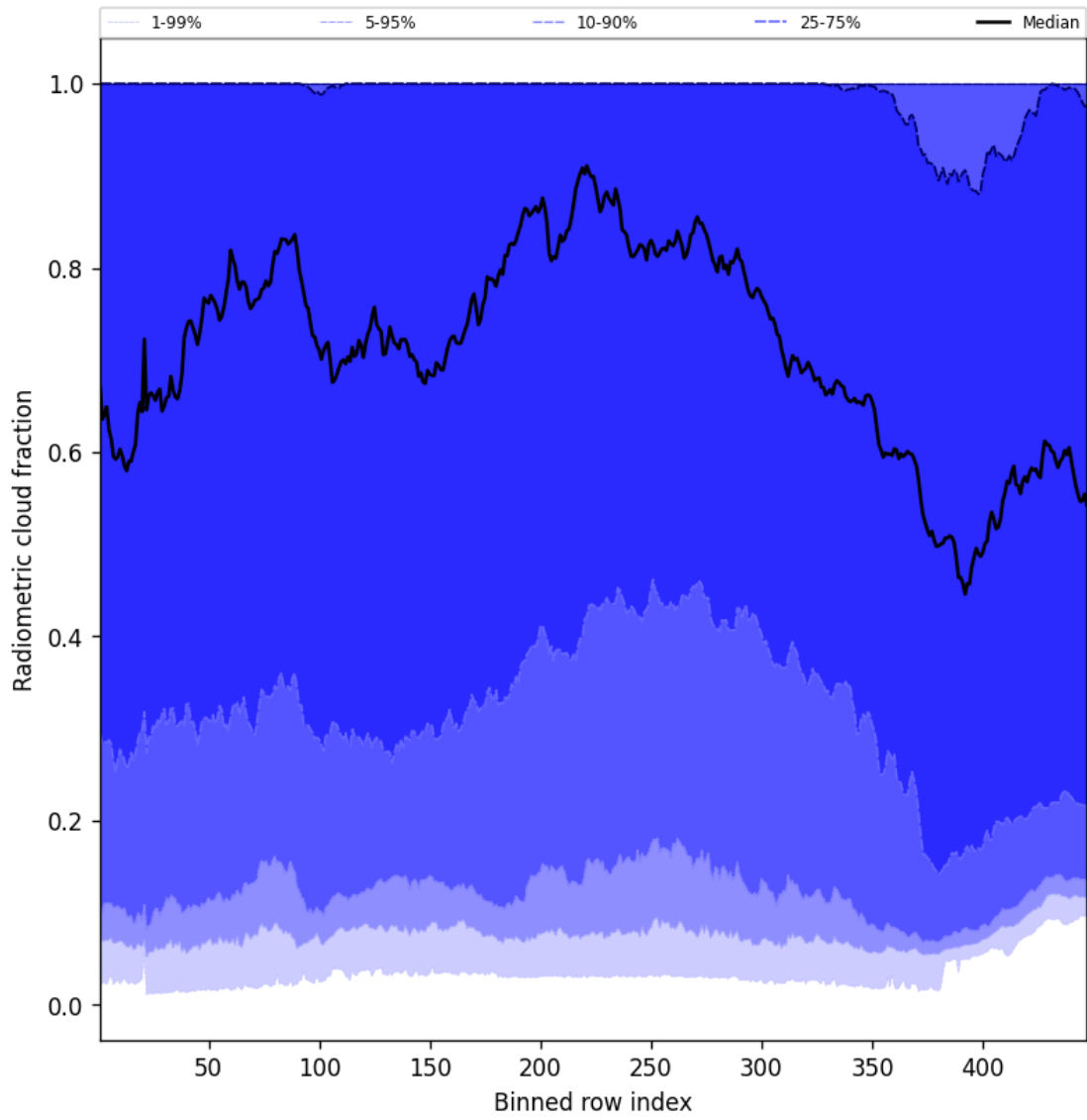


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-10-02 to 2025-10-03

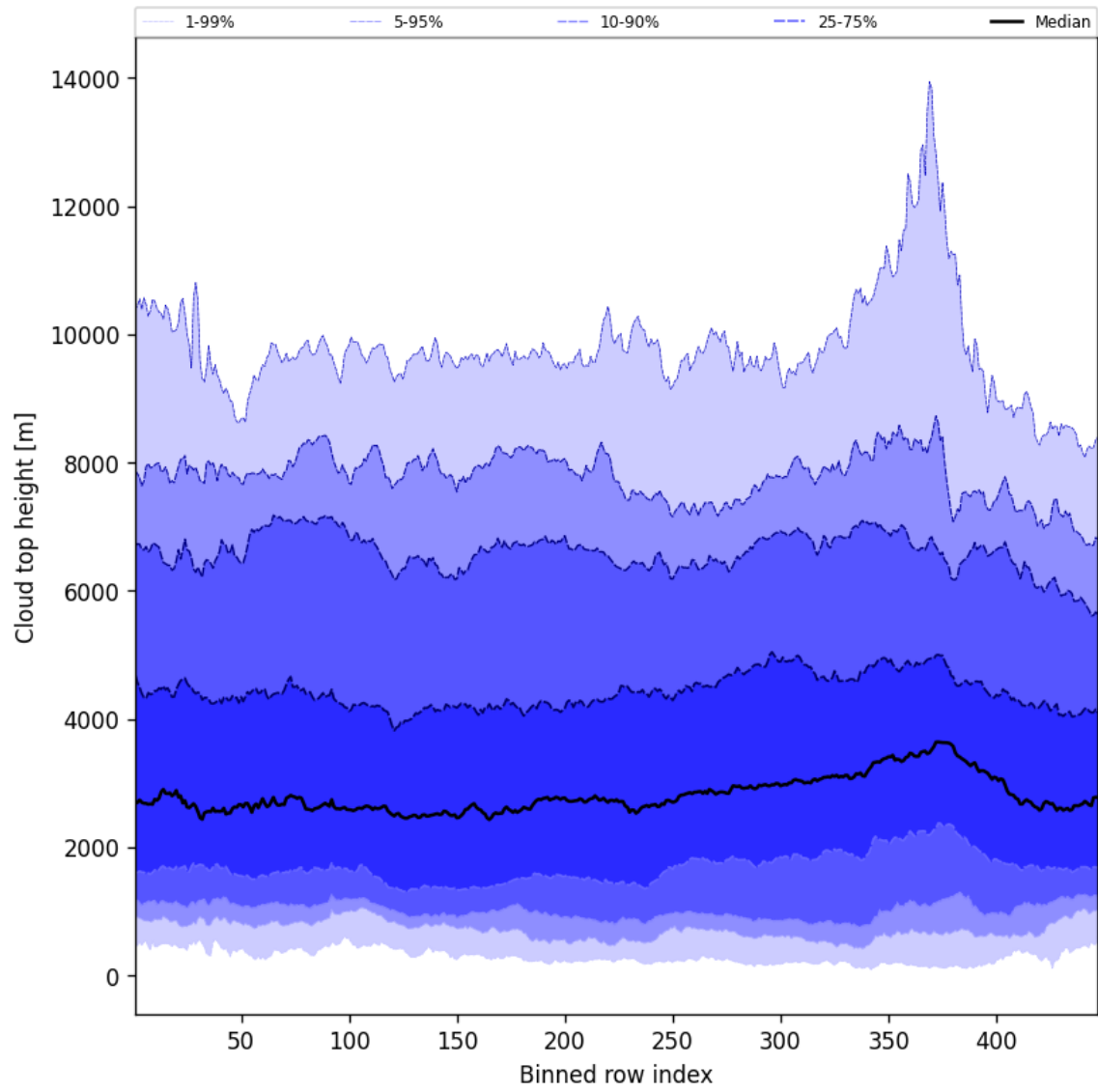


Figure 54: Along track statistics of “Cloud top height” for 2025-10-02 to 2025-10-03

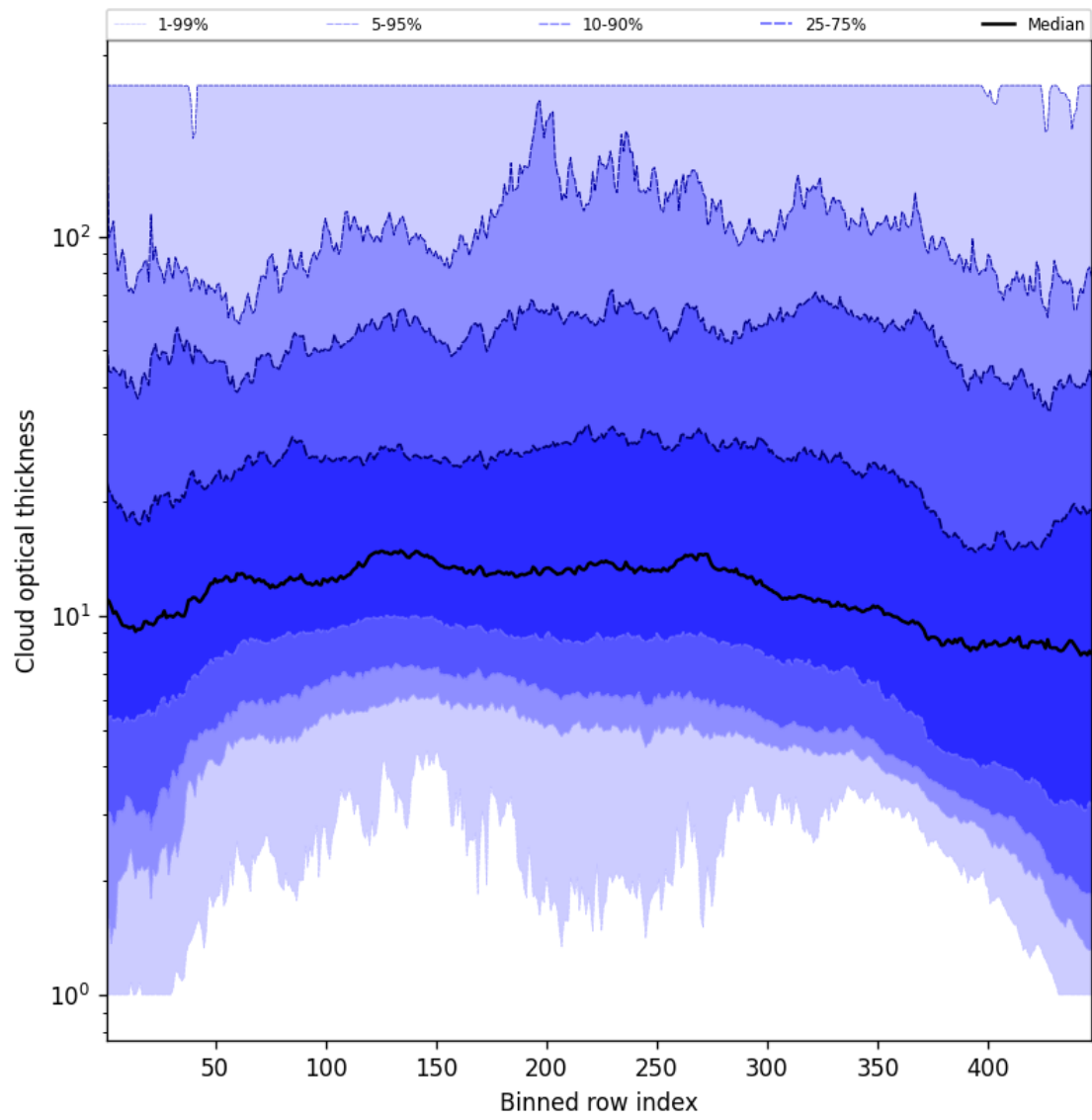


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-10-02 to 2025-10-03

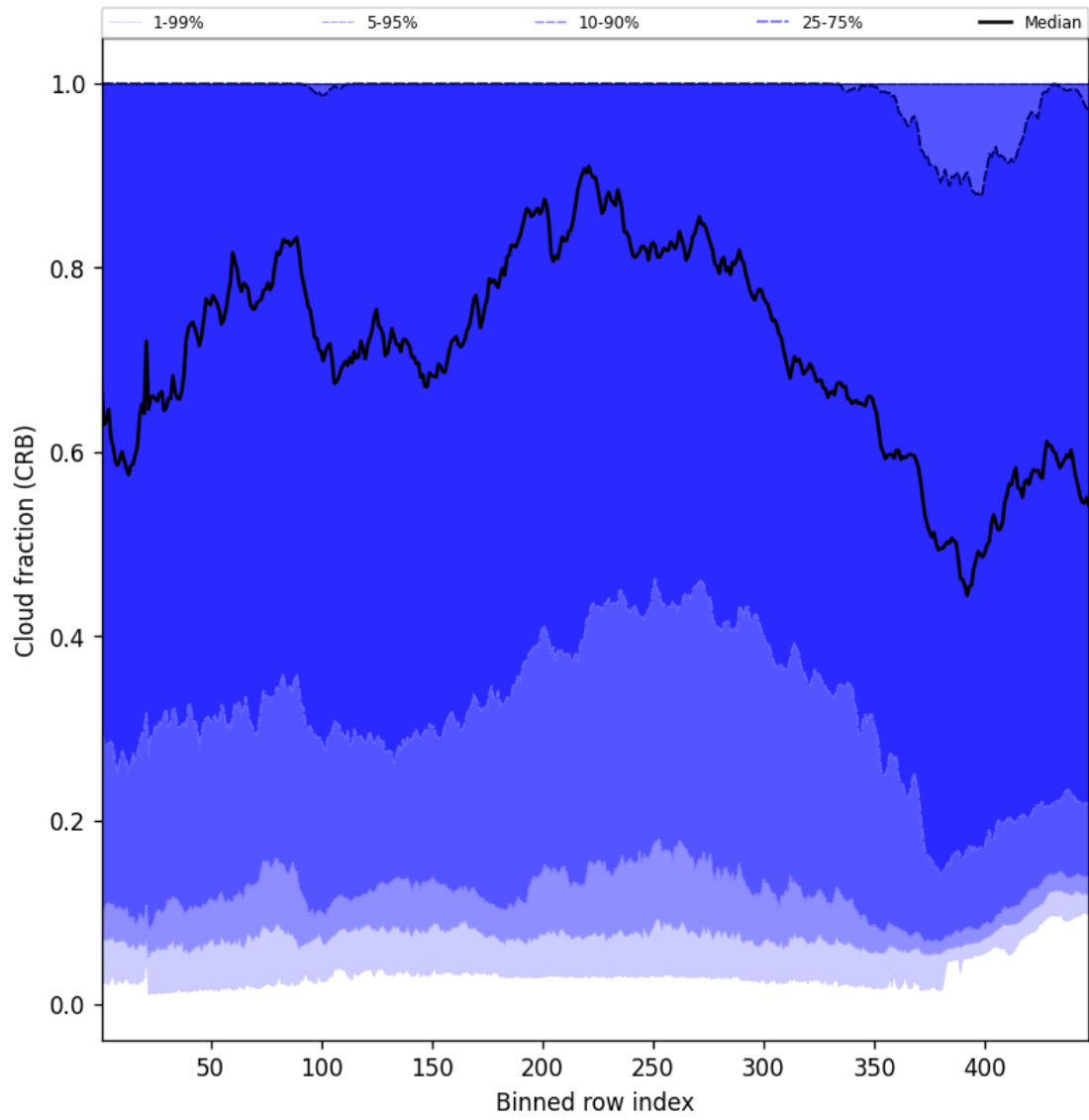


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-10-02 to 2025-10-03

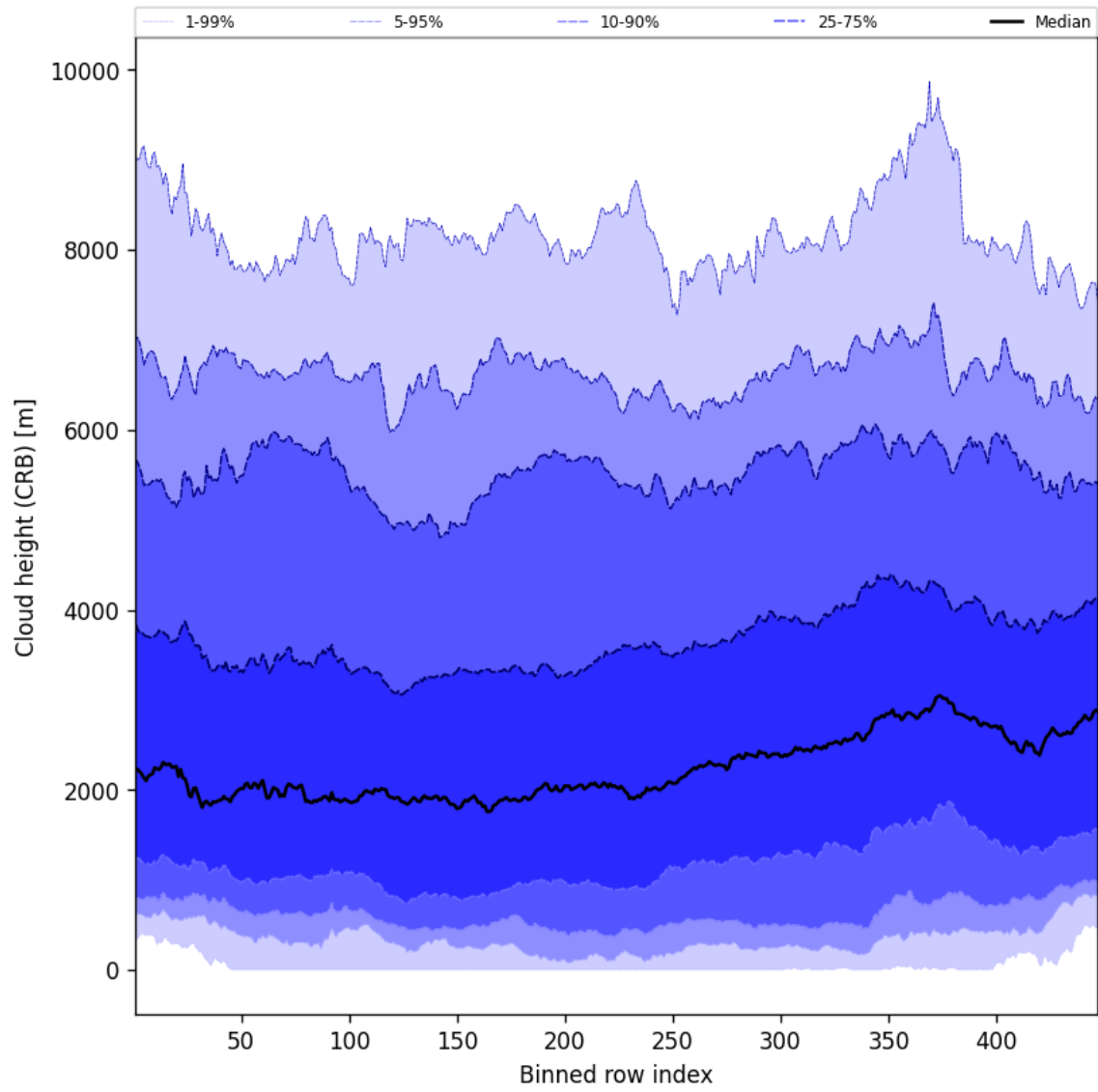


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-10-02 to 2025-10-03

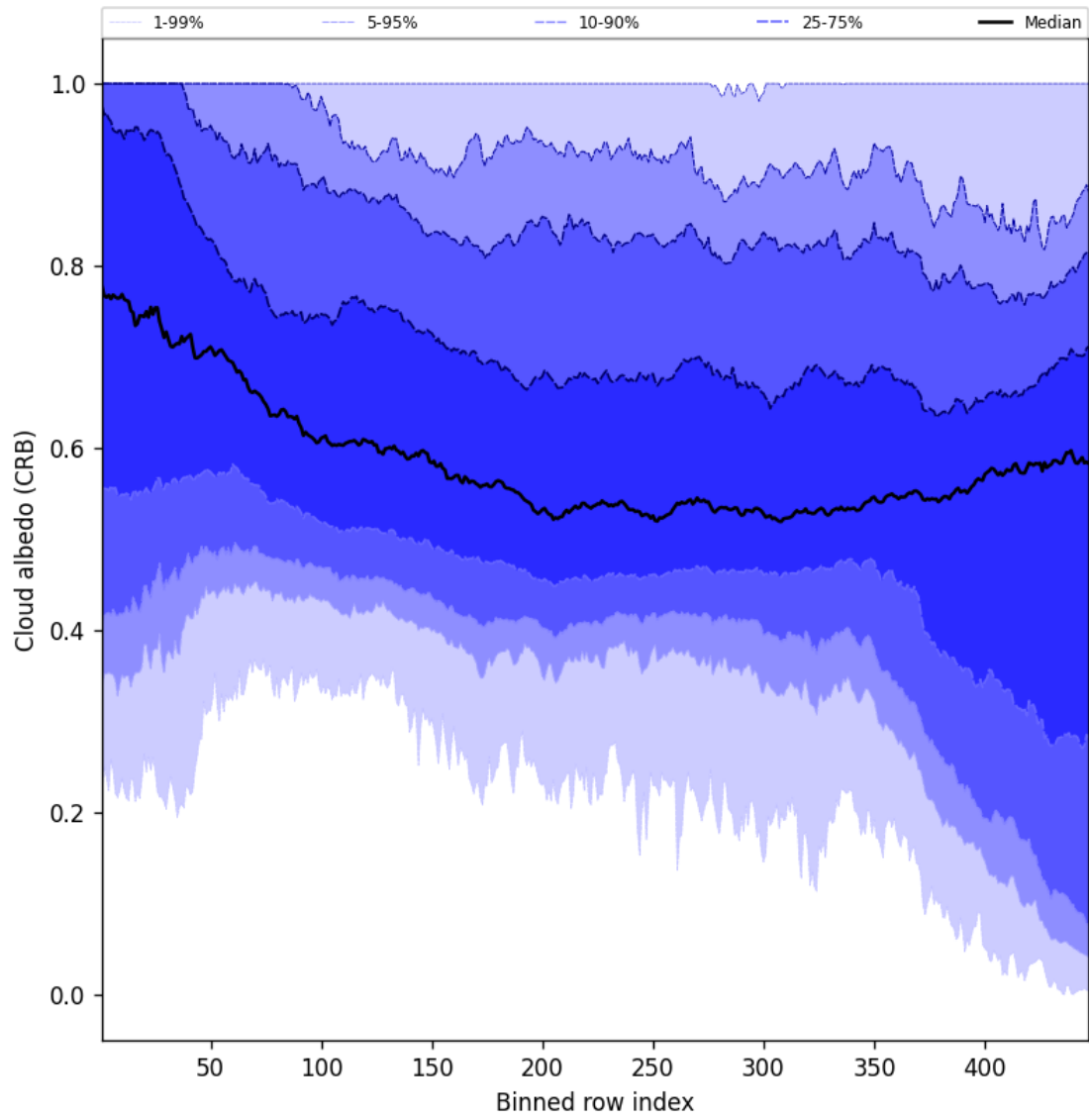


Figure 58: Along track statistics of "Cloud albedo (CRB)" for 2025-10-02 to 2025-10-03

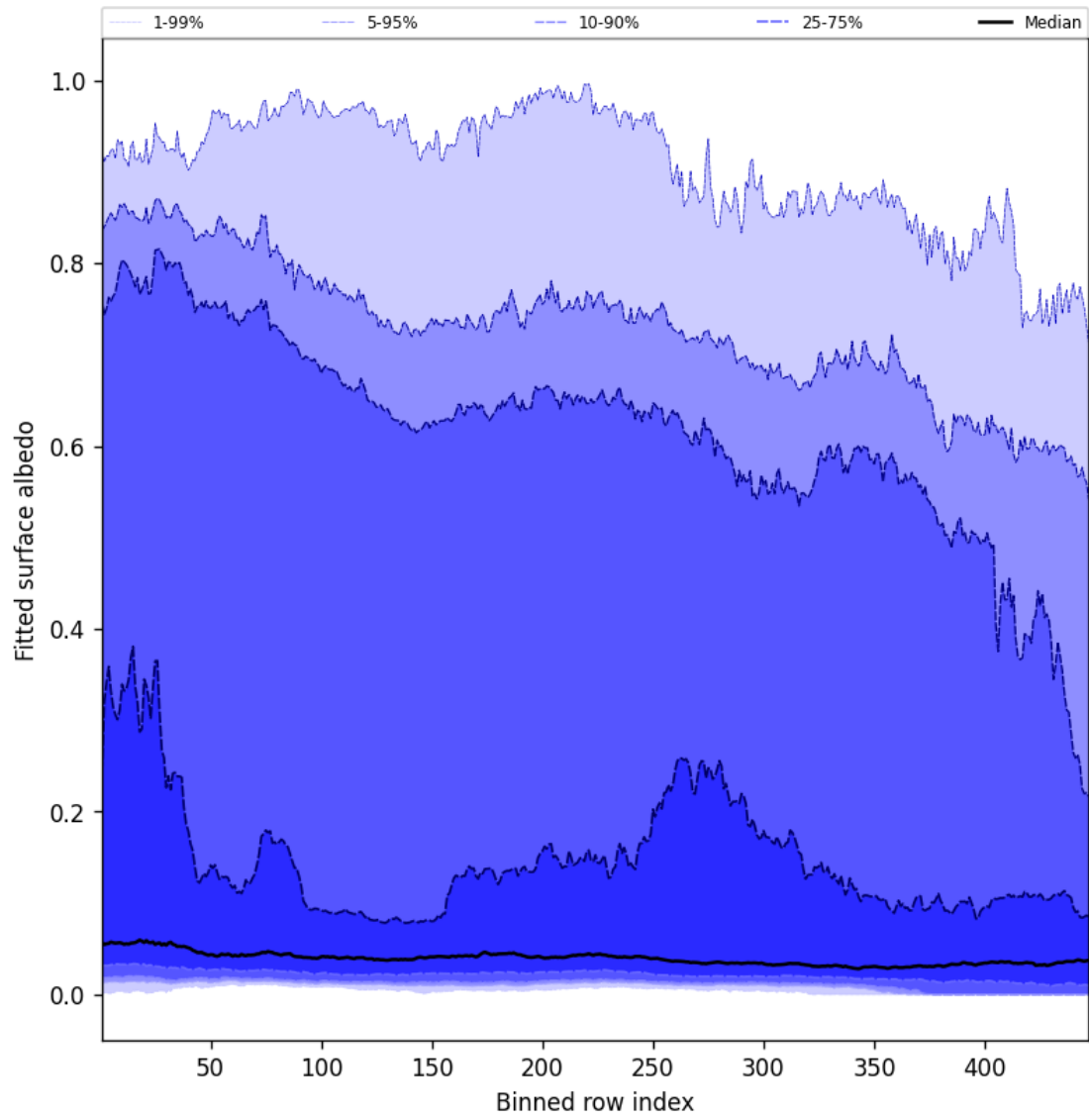


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-10-02 to 2025-10-03

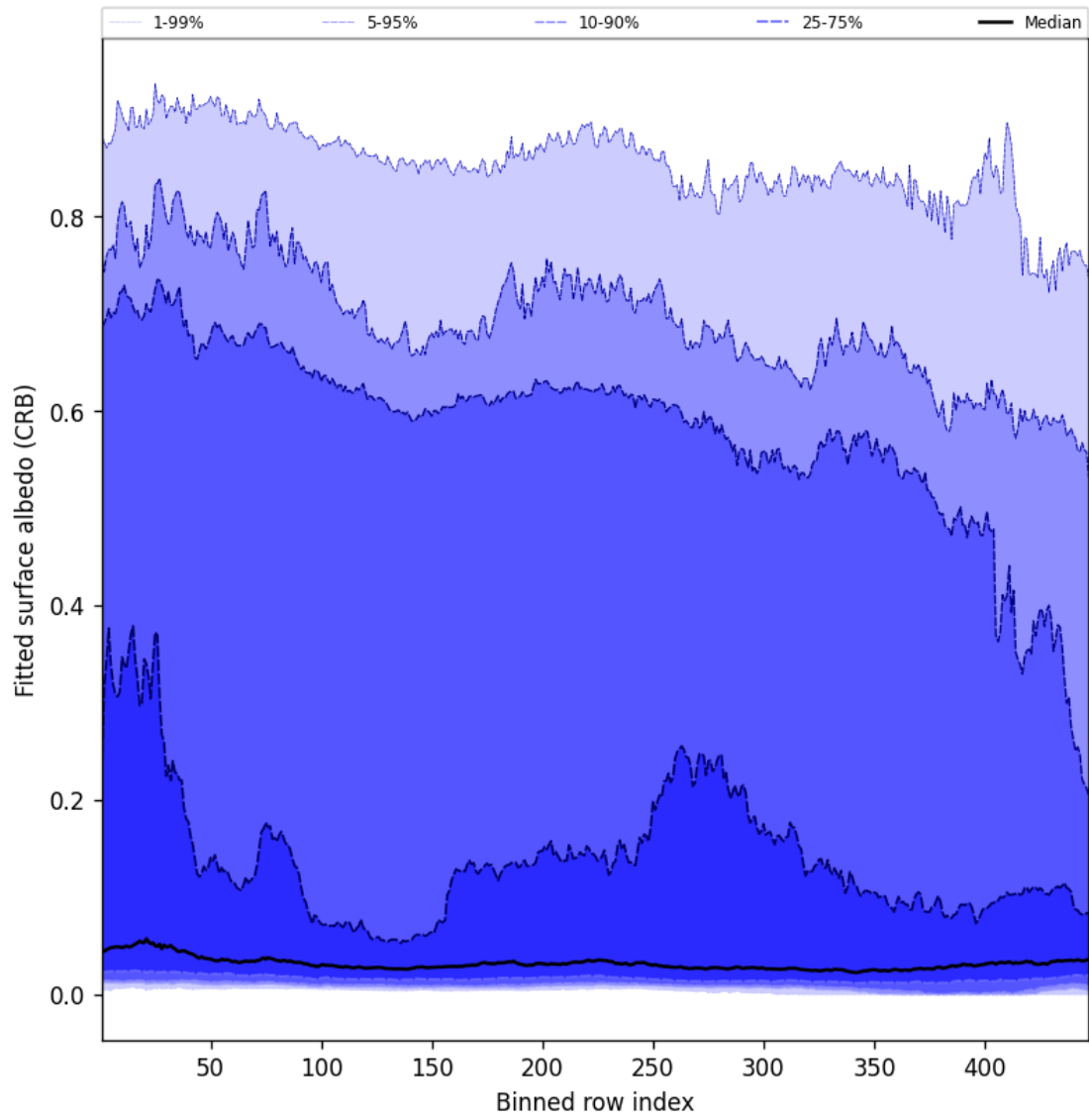


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-10-02 to 2025-10-03

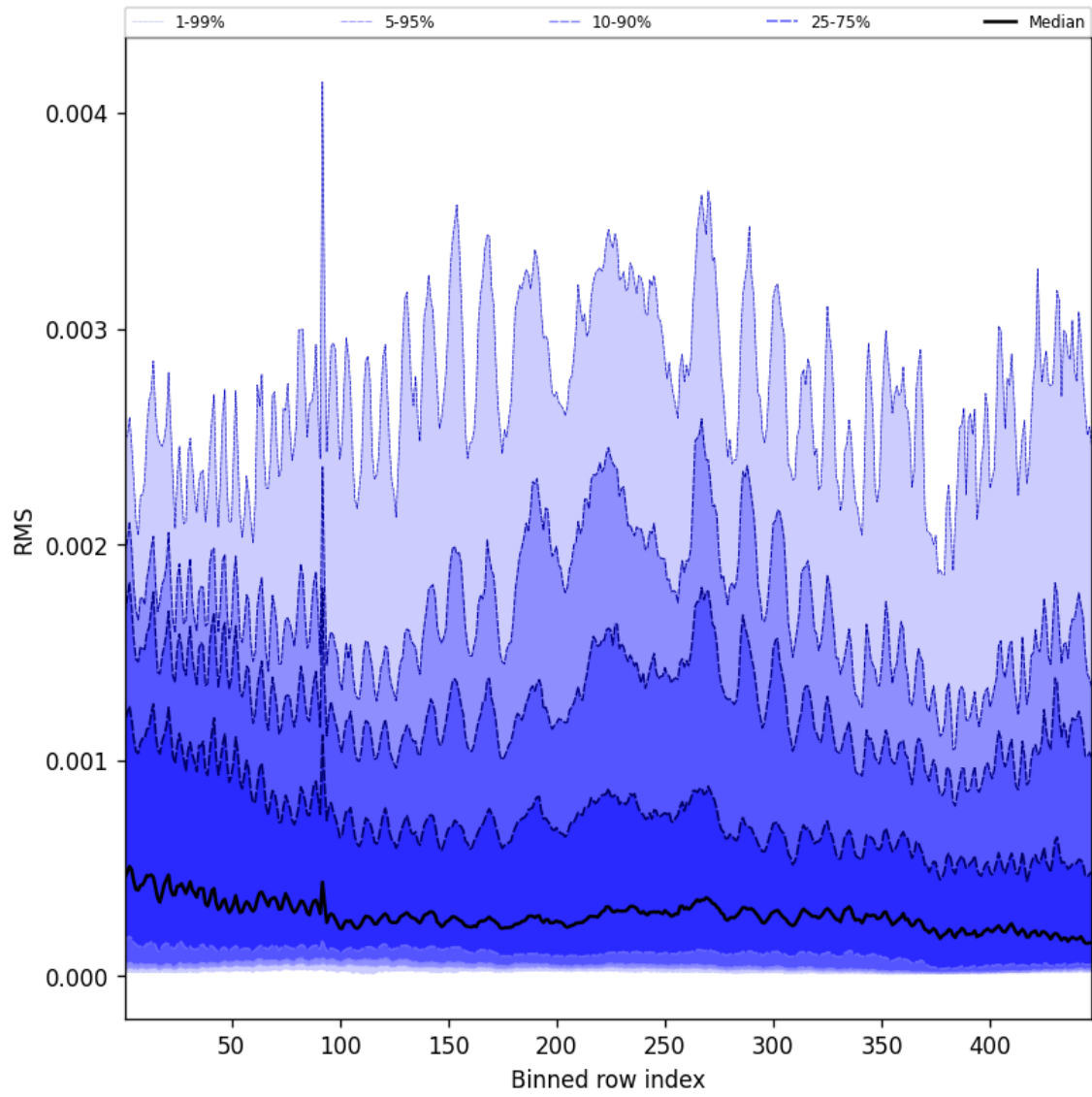


Figure 61: Along track statistics of “RMS” for 2025-10-02 to 2025-10-03

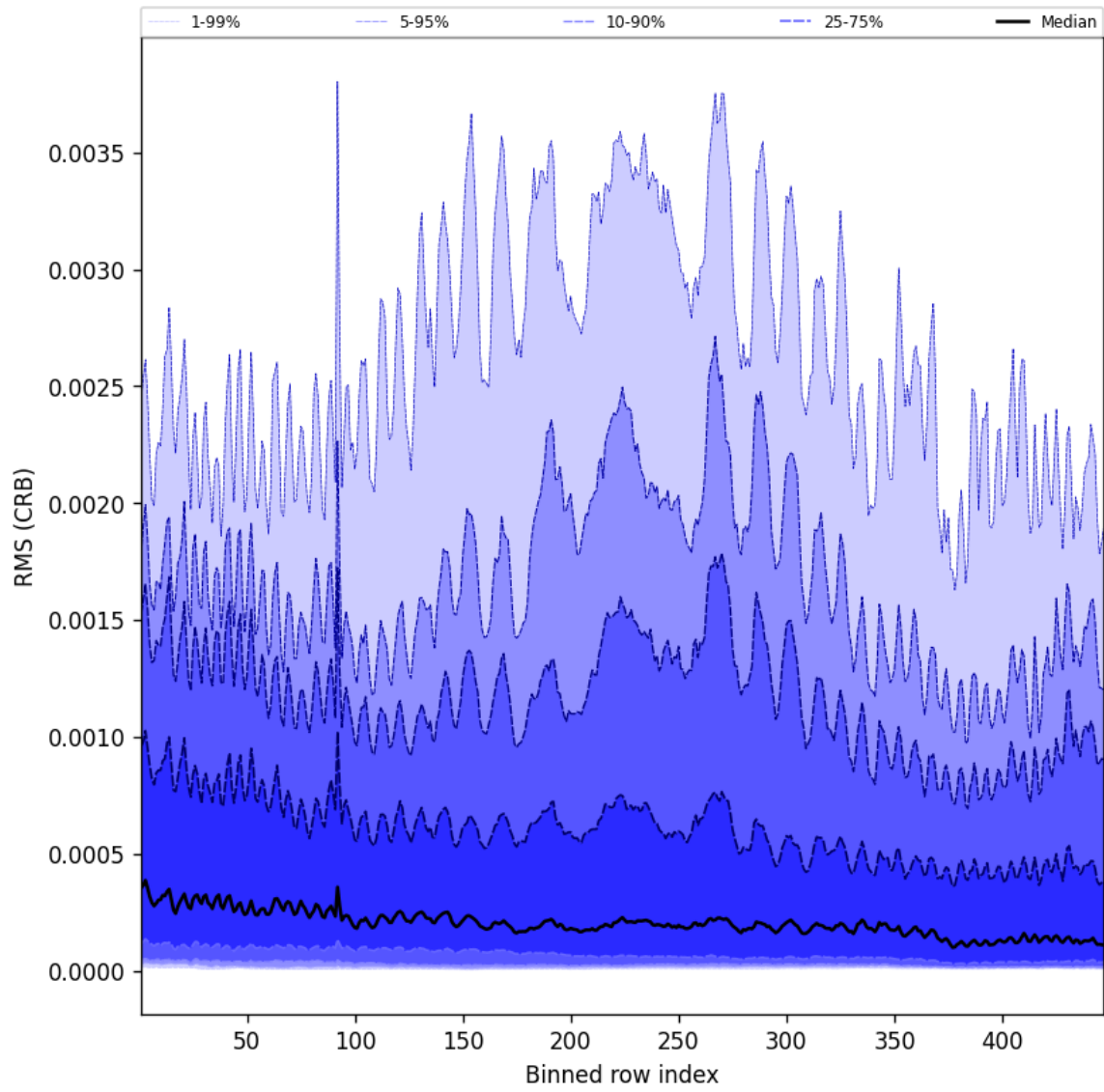


Figure 62: Along track statistics of “RMS (CRB)” for 2025-10-02 to 2025-10-03

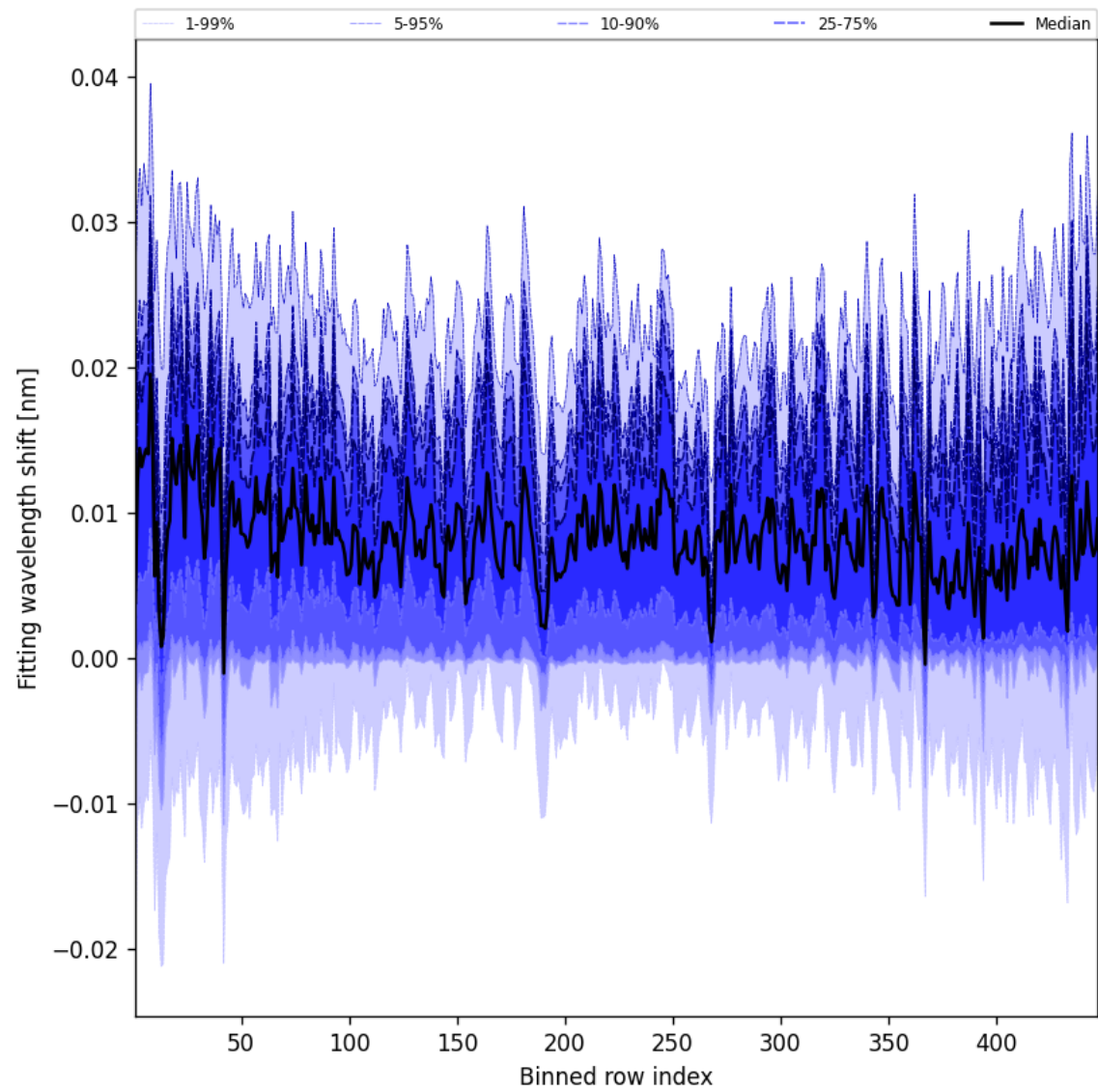


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-10-02 to 2025-10-03

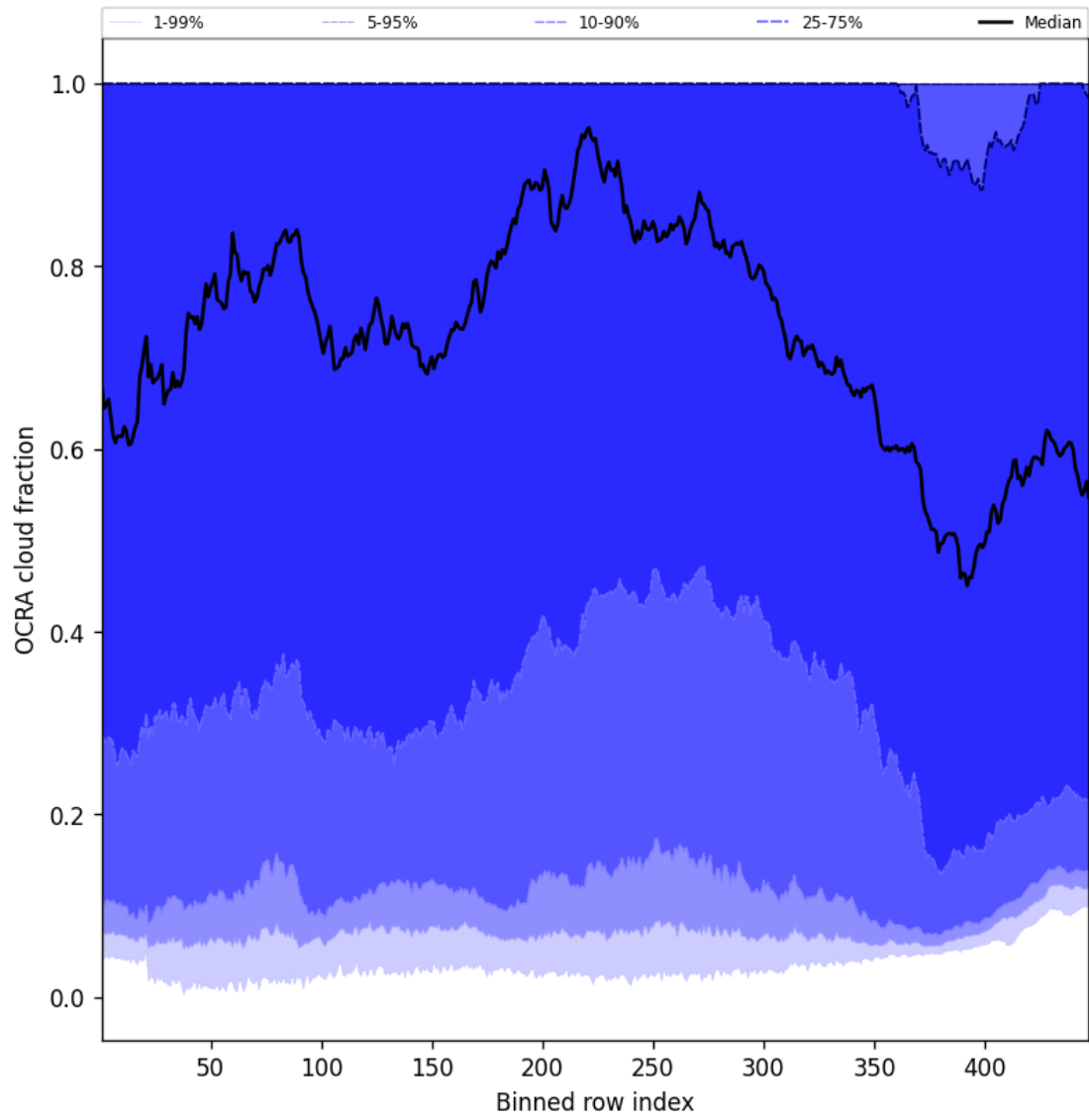


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-10-02 to 2025-10-03

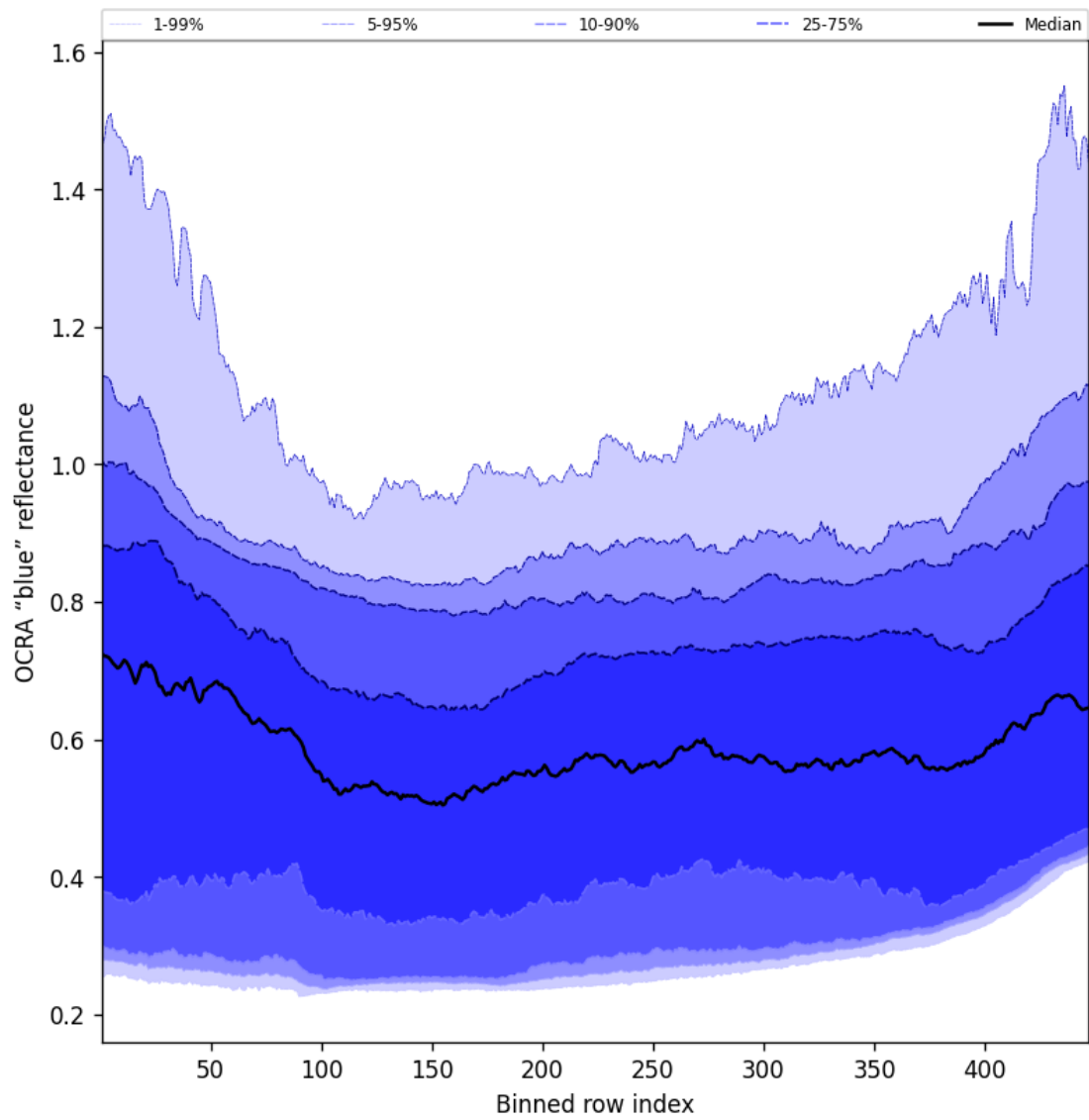


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-10-02 to 2025-10-03

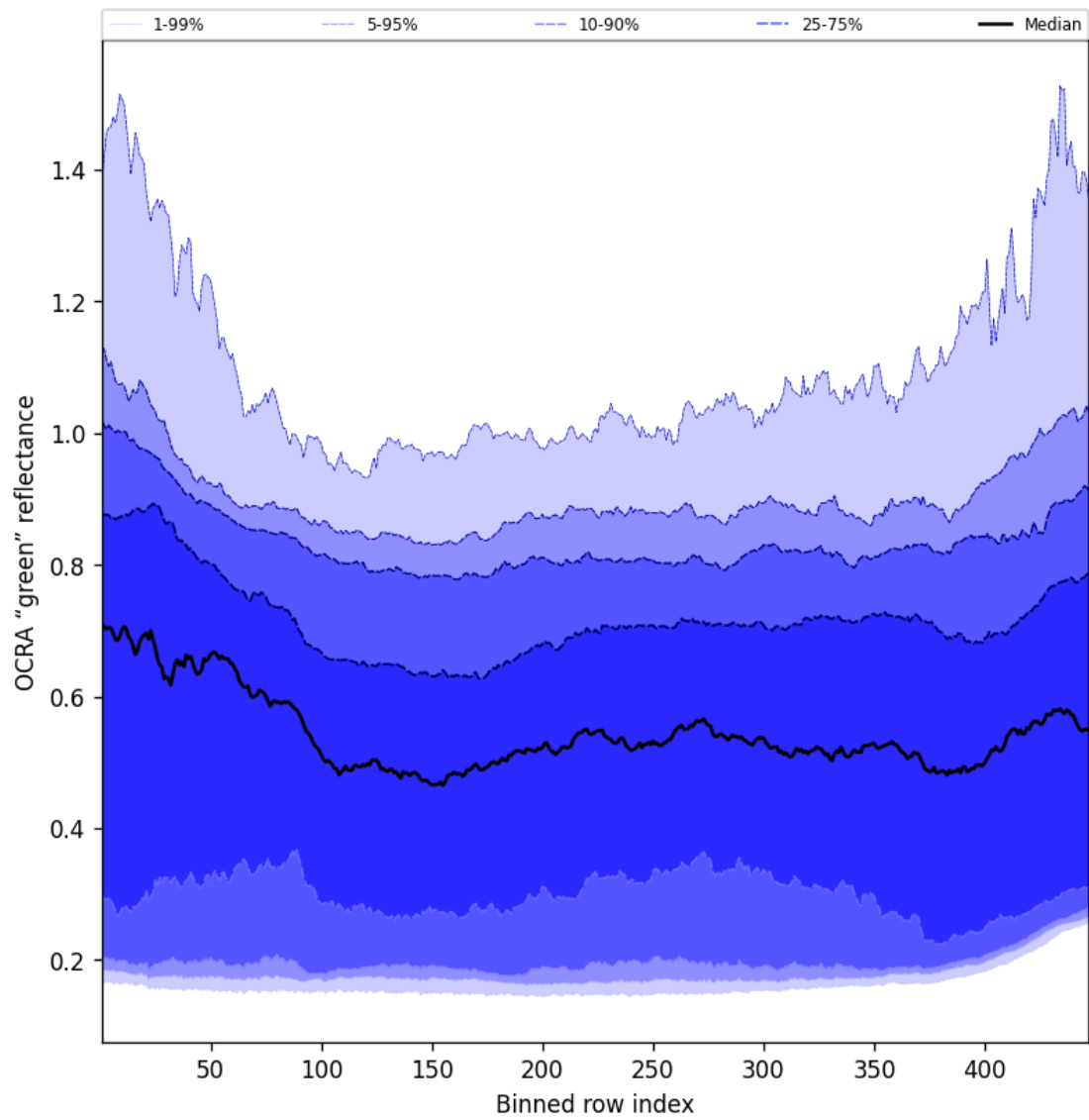


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-10-02 to 2025-10-03

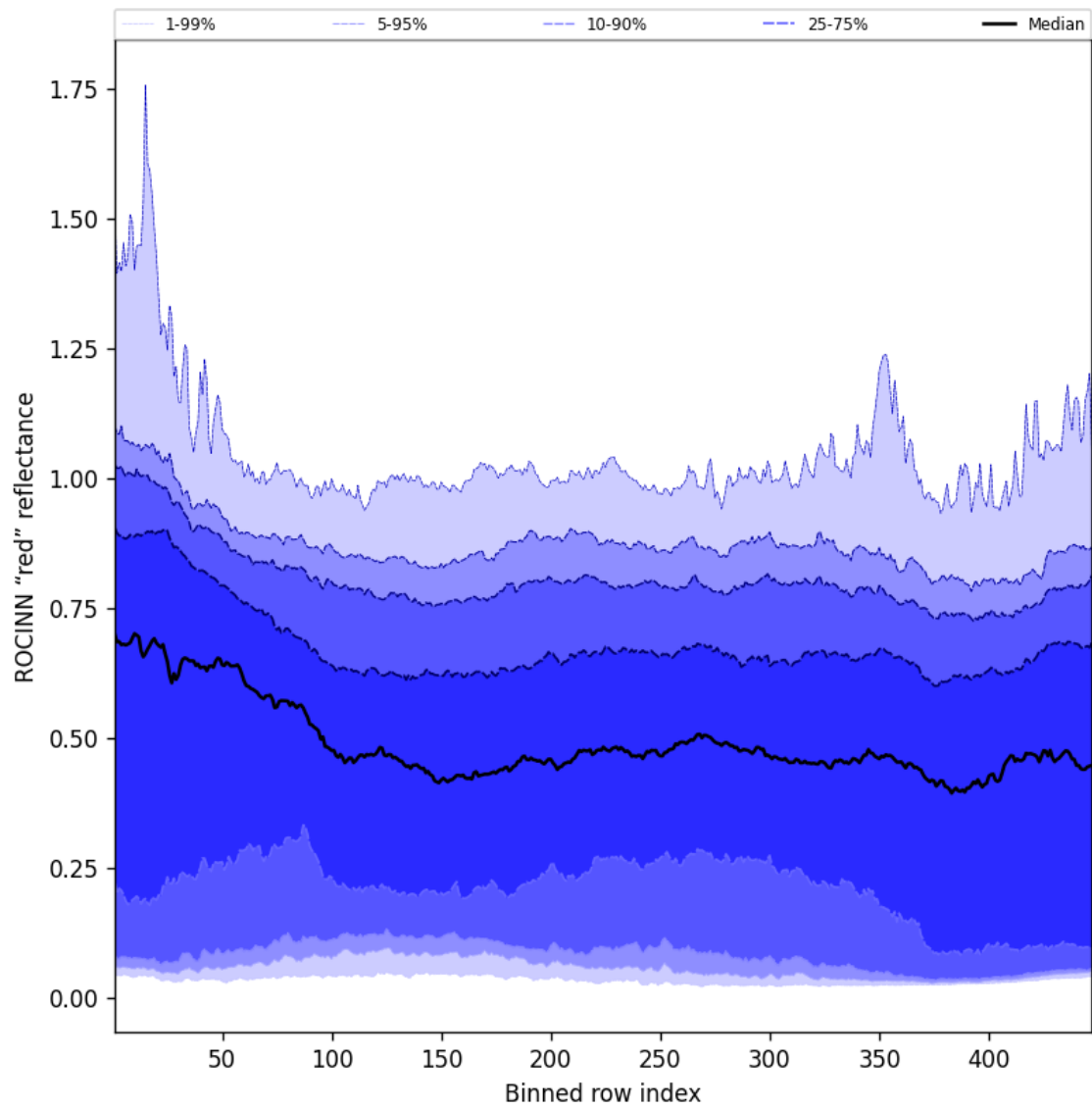


Figure 67: Along track statistics of “ROCINN “red” reflectance” for 2025-10-02 to 2025-10-03

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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