

PyCAMA report generated by tropl2-proc

tropl2-proc

2025-11-04 (01:45)

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]	0.610 ± 0.371	19187901	5.000×10^{-3}	0.620	0.700	0.0	1.000
cloud fraction [1]	0.570 ± 0.335	19187901	0.995	0.686	0.554	4.280×10^{-3}	1.000
cloud top height [m]	$(0.385 \pm 0.254) \times 10^4$	19187901	1.425×10^3	3.616×10^3	3.386×10^3	0.0	2.000×10^4
cloud optical thickness [1]	19.0 ± 35.1	19187901	9.77	11.1	9.06	1.000	250
cloud fraction crb [1]	0.570 ± 0.335	19187901	0.995	0.685	0.554	7.255×10^{-3}	1.000
cloud height crb [m]	$(0.294 \pm 0.215) \times 10^4$	19187901	975	2.981×10^3	2.549×10^3	0.0	2.000×10^4
cloud albedo crb [1]	0.622 ± 0.221	19187901	0.995	0.313	0.607	0.0	1.000
surface albedo fitted [1]	0.283 ± 0.350	19187901	2.500×10^{-2}	0.476	6.806×10^{-2}	0.0	1.000
surface albedo fitted crb [1]	0.269 ± 0.335	19187901	1.500×10^{-2}	0.483	5.637×10^{-2}	0.0	1.000
fitted root mean square [1]	$(6.769 \pm 7.997) \times 10^{-4}$	19187901	5.000×10^{-5}	8.542×10^{-4}	4.144×10^{-4}	8.383×10^{-7}	0.248
fitted root mean square crb [1]	$(6.107 \pm 7.344) \times 10^{-4}$	19187901	5.000×10^{-5}	8.164×10^{-4}	3.274×10^{-4}	1.080×10^{-6}	0.244
wavelength shift [nm]	$(9.180 \pm 7.465) \times 10^{-3}$	19187901	9.000×10^{-4}	1.129×10^{-2}	8.655×10^{-3}	-4.534×10^{-2}	0.186
cloud fraction apriori [1]	0.578 ± 0.339	19187901	0.995	0.728	0.568	0.0	1.000
reflectance blue ocra [1]	0.595 ± 0.241	19187901	0.255	0.426	0.580	0.134	2.12
reflectance green ocra [1]	0.547 ± 0.271	19187901	0.185	0.506	0.537	8.087×10^{-2}	2.26
reflectance continuum aband [1]	0.502 ± 0.298	19187901	4.500×10^{-2}	0.518	0.502	9.214×10^{-3}	4.88

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	0.300	0.920	1.000	1.000	1.000	1.000
cloud fraction [1]	2.902×10^{-2}	7.301×10^{-2}	0.114	0.167	0.264	0.950	1.000	1.000	1.000	1.000
cloud top height [m]	274	767	1.089×10^3	1.370×10^3	1.792×10^3	5.408×10^3	6.413×10^3	7.305×10^3	8.582×10^3	1.109×10^4
cloud optical thickness [1]	1.000	2.10	3.22	4.18	5.26	16.3	25.1	37.5	66.3	250
cloud fraction crb [1]	2.851×10^{-2}	7.241×10^{-2}	0.113	0.167	0.264	0.949	1.000	1.000	1.000	1.000
cloud height crb [m]	0.0	297	585	839	1.201×10^3	4.182×10^3	5.113×10^3	5.950×10^3	7.102×10^3	9.236×10^3
cloud albedo crb [1]	5.115×10^{-2}	0.241	0.361	0.426	0.477	0.790	0.873	0.935	1.000	1.000
surface albedo fitted [1]	0.0	8.541×10^{-3}	1.461×10^{-2}	1.974×10^{-2}	2.723×10^{-2}	0.503	0.843	0.918	0.971	1.000
surface albedo fitted crb [1]	0.0	7.537×10^{-3}	1.164×10^{-2}	1.563×10^{-2}	2.187×10^{-2}	0.505	0.799	0.865	0.911	0.960
fitted root mean square [1]	1.586×10^{-5}	3.058×10^{-5}	4.969×10^{-5}	8.009×10^{-5}	1.381×10^{-4}	9.923×10^{-4}	1.348×10^{-3}	1.677×10^{-3}	2.117×10^{-3}	3.108×10^{-3}
fitted root mean square crb [1]	9.524×10^{-6}	1.973×10^{-5}	3.251×10^{-5}	5.180×10^{-5}	9.226×10^{-5}	9.087×10^{-4}	1.275×10^{-3}	1.617×10^{-3}	2.069×10^{-3}	3.002×10^{-3}
wavelength shift [nm]	-6.638×10^{-3}	-4.087×10^{-4}	4.025×10^{-4}	1.370×10^{-3}	3.240×10^{-3}	1.454×10^{-2}	1.700×10^{-2}	1.903×10^{-2}	2.161×10^{-2}	2.712×10^{-2}
cloud fraction apriori [1]	3.354×10^{-2}	6.949×10^{-2}	0.108	0.163	0.266	0.994	1.000	1.000	1.000	1.000
reflectance blue ocra [1]	0.233	0.259	0.286	0.319	0.378	0.803	0.862	0.900	0.946	1.15
reflectance green ocra [1]	0.153	0.175	0.196	0.225	0.286	0.792	0.857	0.896	0.942	1.11
reflectance continuum aband [1]	3.030×10^{-2}	5.496×10^{-2}	9.266×10^{-2}	0.145	0.243	0.761	0.831	0.875	0.931	1.11

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]	0.594 ± 0.391	8134245	0.730	0.770	0.0	1.000	0.220	0.950
cloud fraction [1]	0.578 ± 0.348	8134245	0.734	0.591	4.280×10^{-3}	1.000	0.236	0.971
cloud top height [m]	$(0.415 \pm 0.260) \times 10^4$	8134245	3.676×10^3	3.660×10^3	0.0	2.000×10^4	2.058×10^3	5.734×10^3
cloud optical thickness [1]	26.4 ± 45.5	8134245	16.8	10.7	1.000	250	6.26	23.1
cloud fraction crb [1]	0.577 ± 0.348	8134245	0.734	0.589	8.151×10^{-3}	1.000	0.235	0.969
cloud height crb [m]	$(0.347 \pm 0.221) \times 10^4$	8134245	3.232×10^3	3.135×10^3	0.0	1.968×10^4	1.641×10^3	4.873×10^3
cloud albedo crb [1]	0.589 ± 0.211	8134245	0.261	0.577	0.0	1.000	0.463	0.724
surface albedo fitted [1]	0.151 ± 0.183	8134245	0.184	6.258×10^{-2}	0.0	1.000	2.791×10^{-2}	0.211
surface albedo fitted crb [1]	0.145 ± 0.182	8134245	0.180	5.336×10^{-2}	0.0	1.000	2.240×10^{-2}	0.202
fitted root mean square [1]	$(4.287 \pm 6.040) \times 10^{-4}$	8134245	4.304×10^{-4}	2.294×10^{-4}	8.383×10^{-7}	0.147	9.678×10^{-5}	5.272×10^{-4}
fitted root mean square crb [1]	$(3.720 \pm 5.379) \times 10^{-4}$	8134245	4.034×10^{-4}	1.543×10^{-4}	1.080×10^{-6}	2.261×10^{-2}	5.397×10^{-5}	4.573×10^{-4}
wavelength shift [nm]	$(6.863 \pm 6.714) \times 10^{-3}$	8134245	9.265×10^{-3}	5.787×10^{-3}	-4.534×10^{-2}	6.364×10^{-2}	1.691×10^{-3}	1.096×10^{-2}
cloud fraction apriori [1]	0.581 ± 0.353	8134245	0.770	0.597	0.0	1.000	0.230	1.000
reflectance blue ocra [1]	0.547 ± 0.220	8134245	0.333	0.521	0.134	2.05	0.363	0.696
reflectance green ocra [1]	0.488 ± 0.245	8134245	0.395	0.464	8.087×10^{-2}	2.26	0.269	0.664
reflectance continuum aband [1]	0.441 ± 0.277	8134245	0.400	0.418	9.214×10^{-3}	4.74	0.224	0.624

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]	0.621 ± 0.354	11053656	0.500	0.700	0.0	1.000	0.400	0.900
cloud fraction [1]	0.565 ± 0.324	11053656	0.644	0.535	5.845×10^{-3}	1.000	0.283	0.926
cloud top height [m]	$(0.363 \pm 0.246) \times 10^4$	11053656	3.579×10^3	3.163×10^3	0.0	2.000×10^4	1.623×10^3	5.202×10^3
cloud optical thickness [1]	13.6 ± 23.3	11053656	8.05	8.10	1.000	250	4.89	12.9
cloud fraction crb [1]	0.565 ± 0.324	11053656	0.643	0.536	7.255×10^{-3}	1.000	0.283	0.926
cloud height crb [m]	$(0.255 \pm 0.201) \times 10^4$	11053656	2.676×10^3	2.134×10^3	0.0	2.000×10^4	962	3.638×10^3
cloud albedo crb [1]	0.646 ± 0.225	11053656	0.344	0.640	0.0	1.000	0.487	0.831
surface albedo fitted [1]	0.380 ± 0.407	11053656	0.834	7.515×10^{-2}	0.0	1.000	2.672×10^{-2}	0.861
surface albedo fitted crb [1]	0.360 ± 0.388	11053656	0.790	5.977×10^{-2}	0.0	1.000	2.143×10^{-2}	0.811
fitted root mean square [1]	$(8.596 \pm 8.734) \times 10^{-4}$	11053656	1.049×10^{-3}	6.692×10^{-4}	2.707×10^{-6}	0.248	2.231×10^{-4}	1.272×10^{-3}
fitted root mean square crb [1]	$(7.864 \pm 8.066) \times 10^{-4}$	11053656	1.019×10^{-3}	5.635×10^{-4}	1.442×10^{-6}	0.244	1.694×10^{-4}	1.189×10^{-3}
wavelength shift [nm]	$(1.089 \pm 0.753) \times 10^{-2}$	11053656	1.105×10^{-2}	1.119×10^{-2}	-4.168×10^{-2}	0.186	5.220×10^{-3}	1.627×10^{-2}
cloud fraction apriori [1]	0.576 ± 0.328	11053656	0.678	0.554	0.0	1.000	0.290	0.968
reflectance blue ocra [1]	0.631 ± 0.249	11053656	0.453	0.660	0.154	2.12	0.394	0.846
reflectance green ocra [1]	0.590 ± 0.282	11053656	0.538	0.634	8.953×10^{-2}	2.01	0.305	0.843
reflectance continuum aband [1]	0.546 ± 0.305	11053656	0.548	0.608	1.220×10^{-2}	4.88	0.263	0.811

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]	0.700 ± 0.329	11632965	0.560	0.860	0.0	1.000	0.400	0.960
cloud fraction [1]	0.590 ± 0.354	11632965	0.761	0.617	5.845×10^{-3}	1.000	0.234	0.995
cloud top height [m]	$(0.339 \pm 0.244) \times 10^4$	11632965	3.165×10^3	2.679×10^3	0.0	2.000×10^4	1.522×10^3	4.687×10^3
cloud optical thickness [1]	17.5 ± 27.2	11632965	10.2	10.0	1.000	250	6.66	16.8
cloud fraction crb [1]	0.589 ± 0.354	11632965	0.761	0.616	7.255×10^{-3}	1.000	0.233	0.994
cloud height crb [m]	$(0.269 \pm 0.220) \times 10^4$	11632965	2.985×10^3	2.053×10^3	0.0	2.000×10^4	970	3.954×10^3
cloud albedo crb [1]	0.565 ± 0.190	11632965	0.241	0.548	0.0	1.000	0.454	0.695
surface albedo fitted [1]	0.119 ± 0.238	11632965	3.427×10^{-2}	3.212×10^{-2}	0.0	1.000	1.924×10^{-2}	5.351×10^{-2}
surface albedo fitted crb [1]	0.112 ± 0.234	11632965	2.915×10^{-2}	2.604×10^{-2}	0.0	1.000	1.522×10^{-2}	4.436×10^{-2}
fitted root mean square [1]	$(6.597 \pm 8.267) \times 10^{-4}$	11632965	9.141×10^{-4}	3.502×10^{-4}	8.383×10^{-7}	0.248	9.795×10^{-5}	1.012×10^{-3}
fitted root mean square crb [1]	$(6.402 \pm 7.821) \times 10^{-4}$	11632965	9.128×10^{-4}	3.288×10^{-4}	1.080×10^{-6}	0.244	8.078×10^{-5}	9.935×10^{-4}
wavelength shift [nm]	$(8.950 \pm 7.868) \times 10^{-3}$	11632965	1.200×10^{-2}	8.346×10^{-3}	-4.534×10^{-2}	0.186	2.608×10^{-3}	1.461×10^{-2}
cloud fraction apriori [1]	0.594 ± 0.360	11632965	0.773	0.629	0.0	1.000	0.227	1.000
reflectance blue ocra [1]	0.530 ± 0.214	11632965	0.347	0.493	0.168	2.12	0.346	0.692
reflectance green ocra [1]	0.470 ± 0.242	11632965	0.419	0.432	9.718×10^{-2}	1.96	0.247	0.666
reflectance continuum aband [1]	0.405 ± 0.278	11632965	0.502	0.377	1.157×10^{-2}	4.54	0.141	0.643

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]	0.466 ± 0.384	5925440	0.800	0.600	0.0	1.000	0.0	0.800
cloud fraction [1]	0.510 ± 0.289	5925440	0.422	0.469	4.280×10^{-3}	1.000	0.286	0.708
cloud top height [m]	$(0.469 \pm 0.251) \times 10^4$	5925440	3.231×10^3	4.578×10^3	0.0	2.000×10^4	2.880×10^3	6.111×10^3
cloud optical thickness [1]	15.3 ± 34.1	5925440	7.10	5.71	1.000	250	3.91	11.0
cloud fraction crb [1]	0.511 ± 0.289	5925440	0.423	0.471	8.151×10^{-3}	1.000	0.286	0.709
cloud height crb [m]	$(0.331 \pm 0.200) \times 10^4$	5925440	2.492×10^3	3.083×10^3	0.0	2.000×10^4	1.875×10^3	4.367×10^3
cloud albedo crb [1]	0.721 ± 0.239	5925440	0.356	0.762	0.0	1.000	0.567	0.923
surface albedo fitted [1]	0.609 ± 0.340	5925440	0.694	0.770	0.0	1.000	0.242	0.936
surface albedo fitted crb [1]	0.578 ± 0.316	5925440	0.640	0.740	0.0	1.000	0.238	0.878
fitted root mean square [1]	$(7.688 \pm 7.688) \times 10^{-4}$	5925440	8.196×10^{-4}	5.636×10^{-4}	3.118×10^{-6}	0.147	2.527×10^{-4}	1.072×10^{-3}
fitted root mean square crb [1]	$(6.278 \pm 6.648) \times 10^{-4}$	5925440	7.470×10^{-4}	4.050×10^{-4}	1.728×10^{-6}	3.244×10^{-2}	1.464×10^{-4}	8.934×10^{-4}
wavelength shift [nm]	$(1.025 \pm 0.670) \times 10^{-2}$	5925440	1.012×10^{-2}	9.976×10^{-3}	-3.671×10^{-2}	5.674×10^{-2}	5.029×10^{-3}	1.515×10^{-2}
cloud fraction apriori [1]	0.525 ± 0.291	5925440	0.431	0.489	0.0	1.000	0.300	0.731
reflectance blue ocrs [1]	0.710 ± 0.246	5925440	0.382	0.797	0.134	2.10	0.505	0.887
reflectance green ocrs [1]	0.684 ± 0.273	5925440	0.439	0.794	8.087×10^{-2}	2.26	0.449	0.888
reflectance continuum aband [1]	0.676 ± 0.256	5925440	0.412	0.762	1.745×10^{-2}	4.74	0.453	0.865

3 Granule outlines

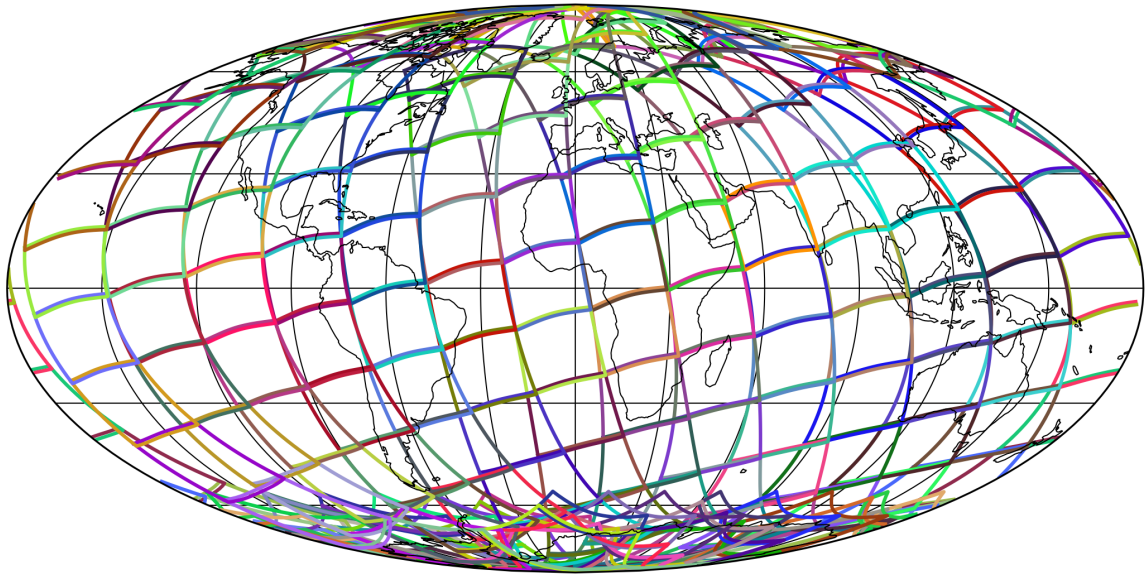


Figure 1: Outline of the granules.

4 Input data monitoring

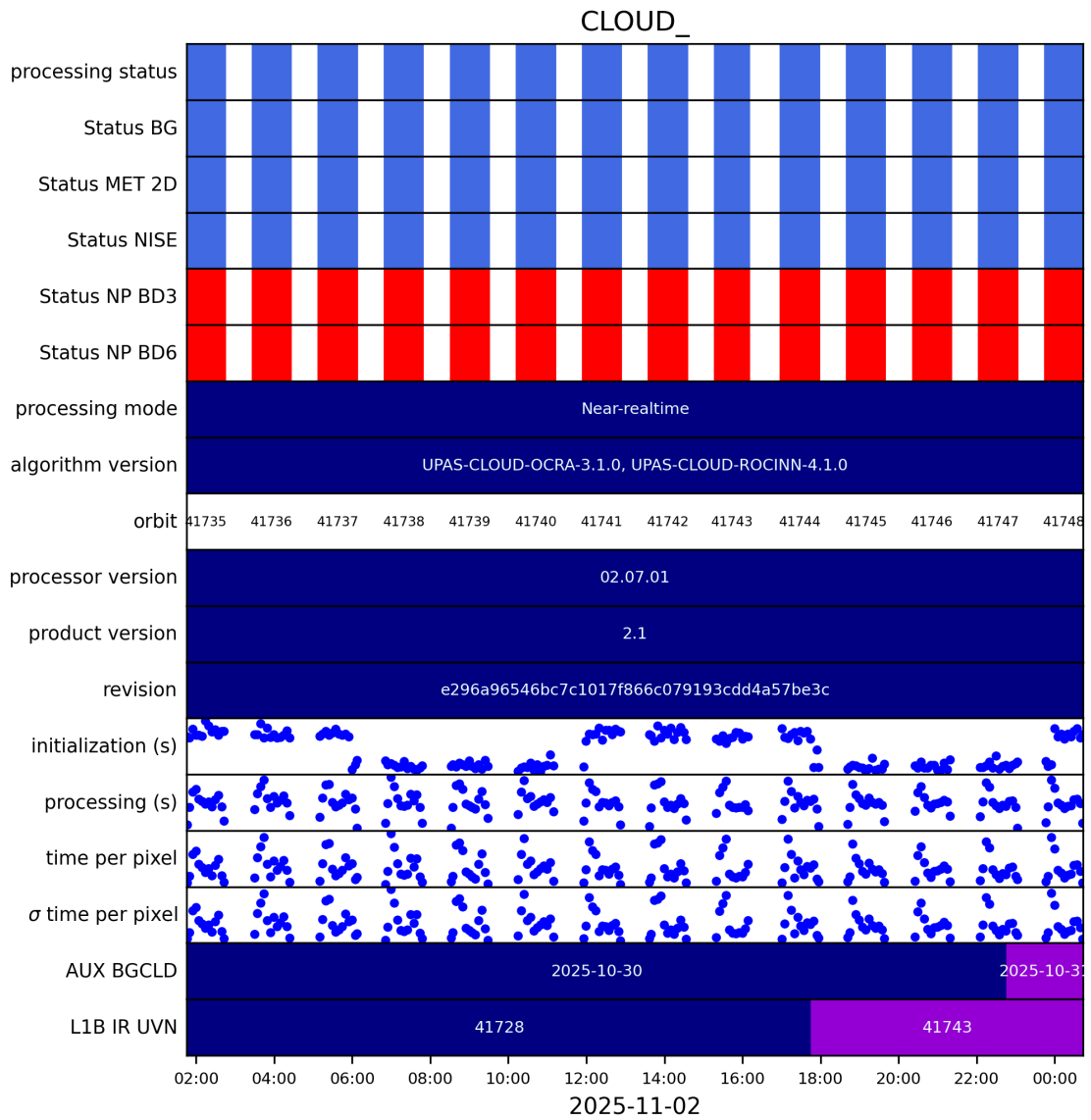


Figure 2: Input data per granule

5 Warnings and errors

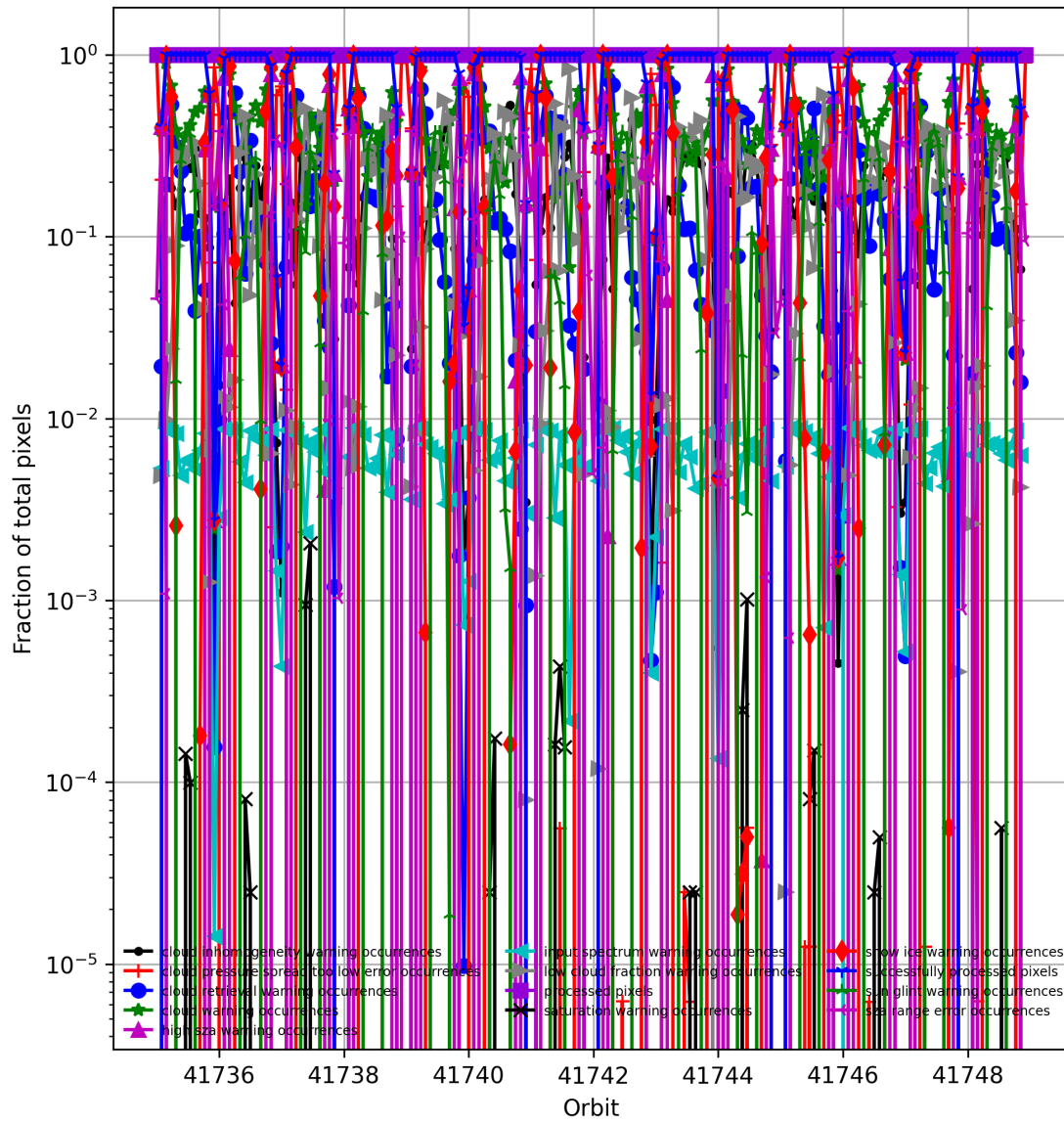


Figure 3: Fraction of pixels with specific warnings and errors during processing

6 World maps

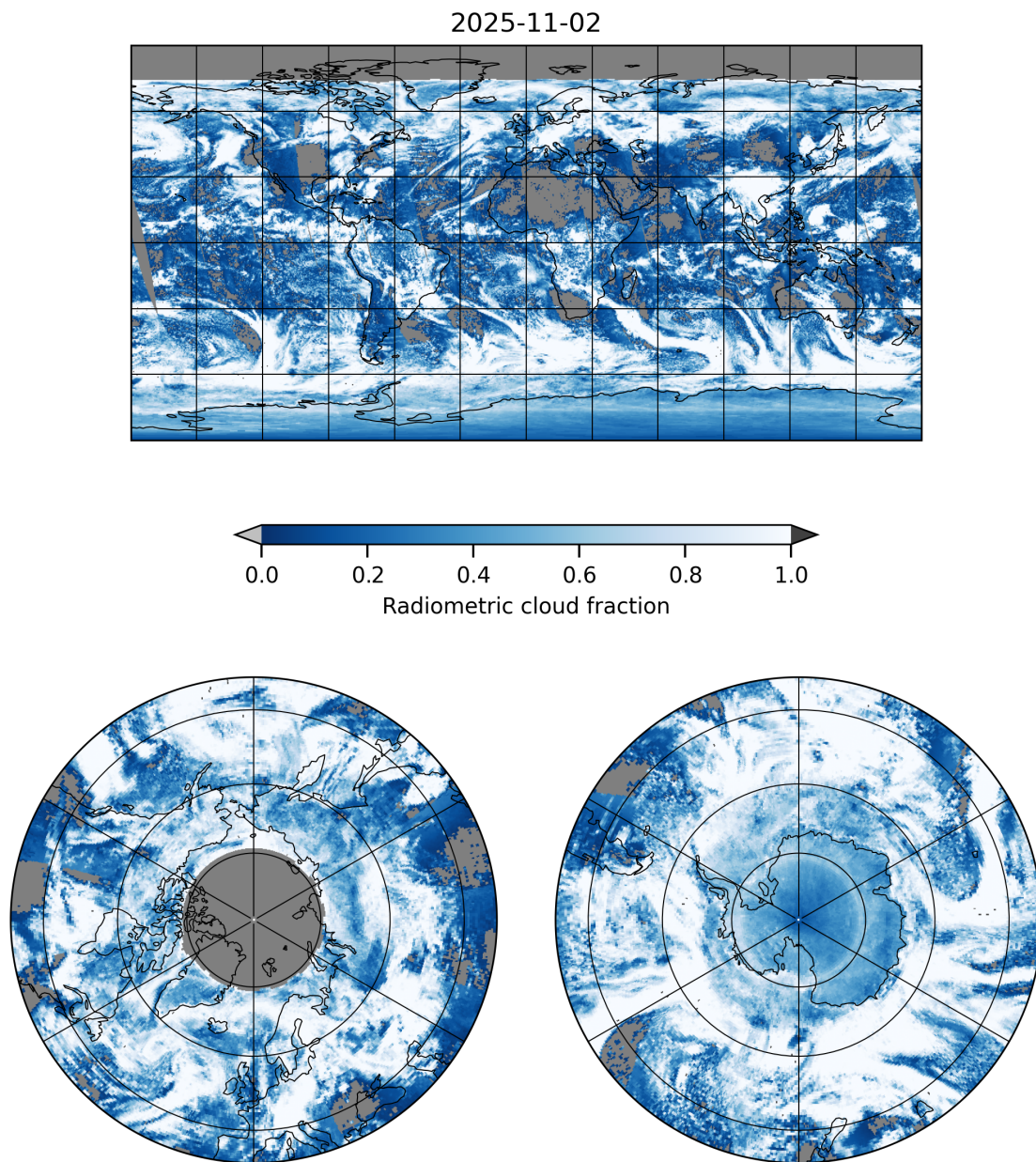


Figure 4: Map of “Radiometric cloud fraction” for 2025-11-02 to 2025-11-03

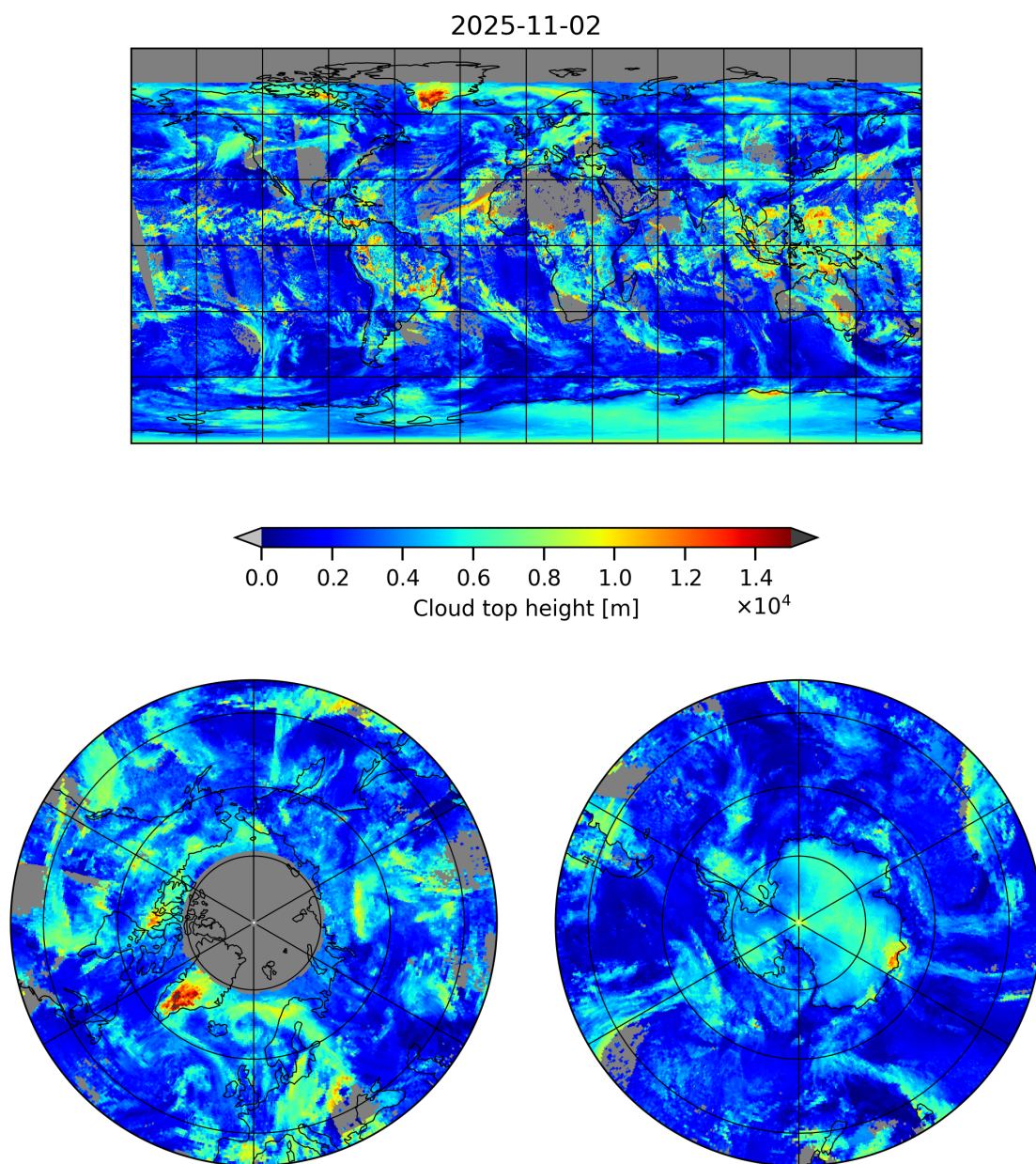


Figure 5: Map of “Cloud top height” for 2025-11-02 to 2025-11-03

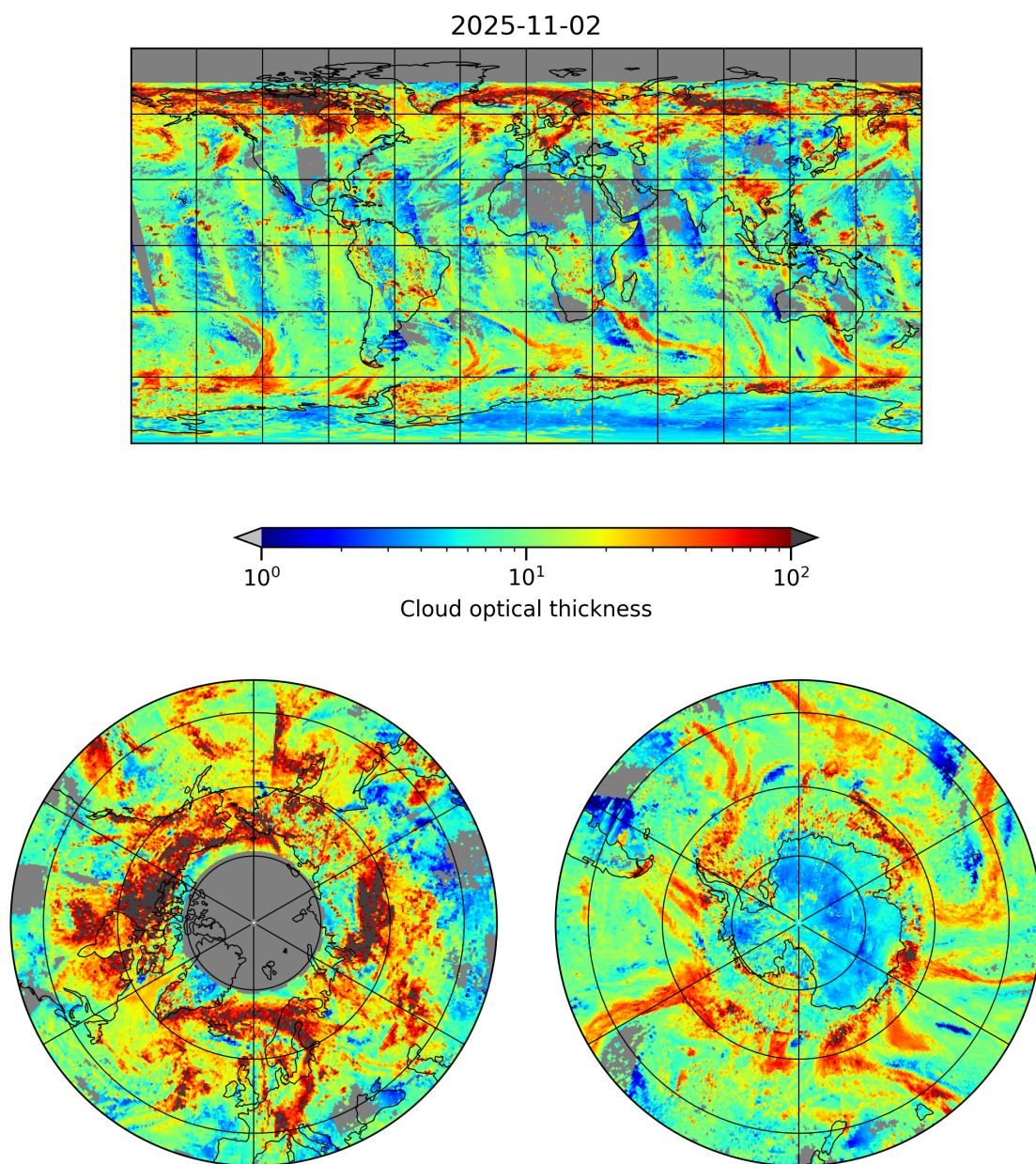


Figure 6: Map of “Cloud optical thickness” for 2025-11-02 to 2025-11-03

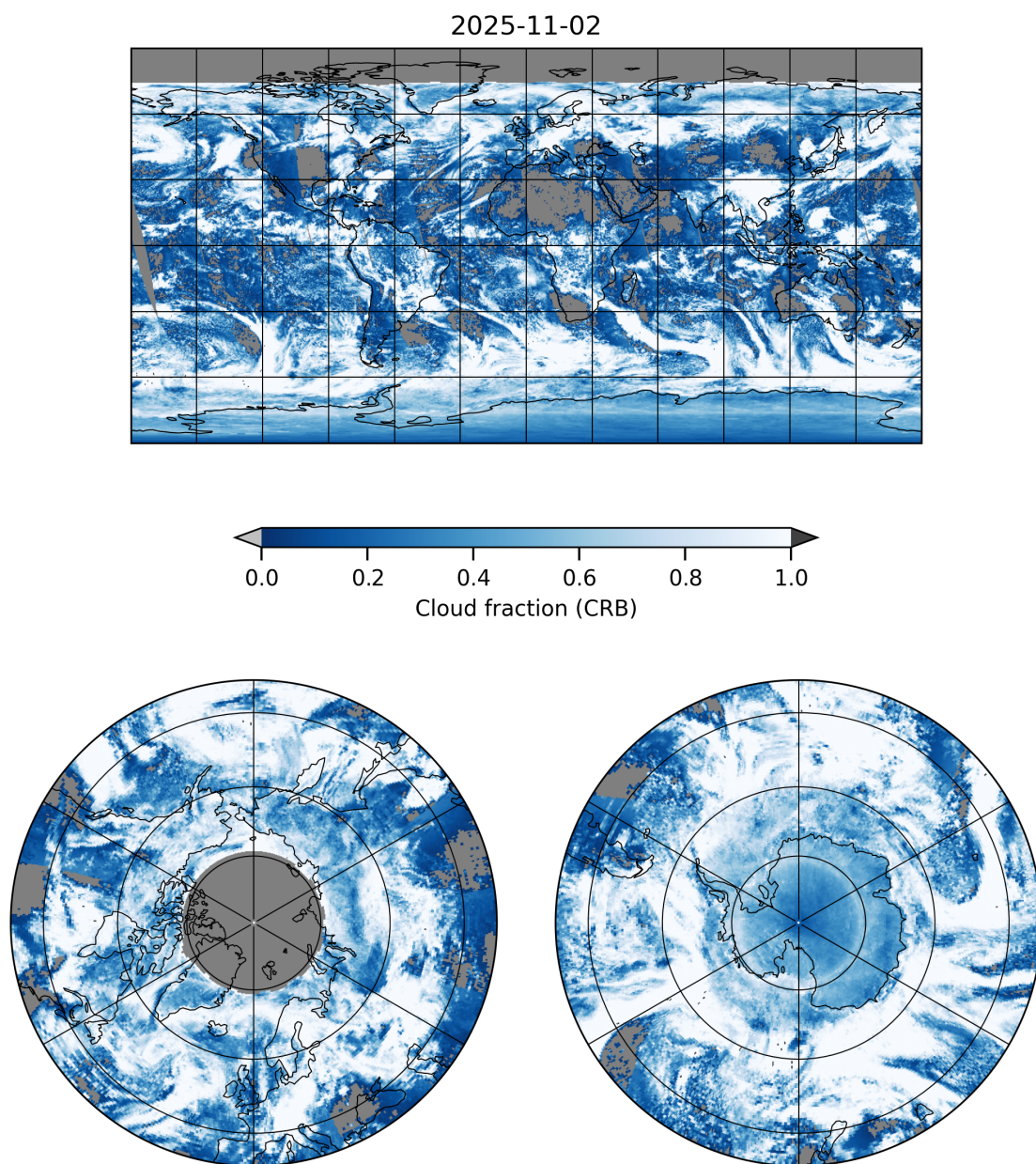


Figure 7: Map of “Cloud fraction (CRB)” for 2025-11-02 to 2025-11-03

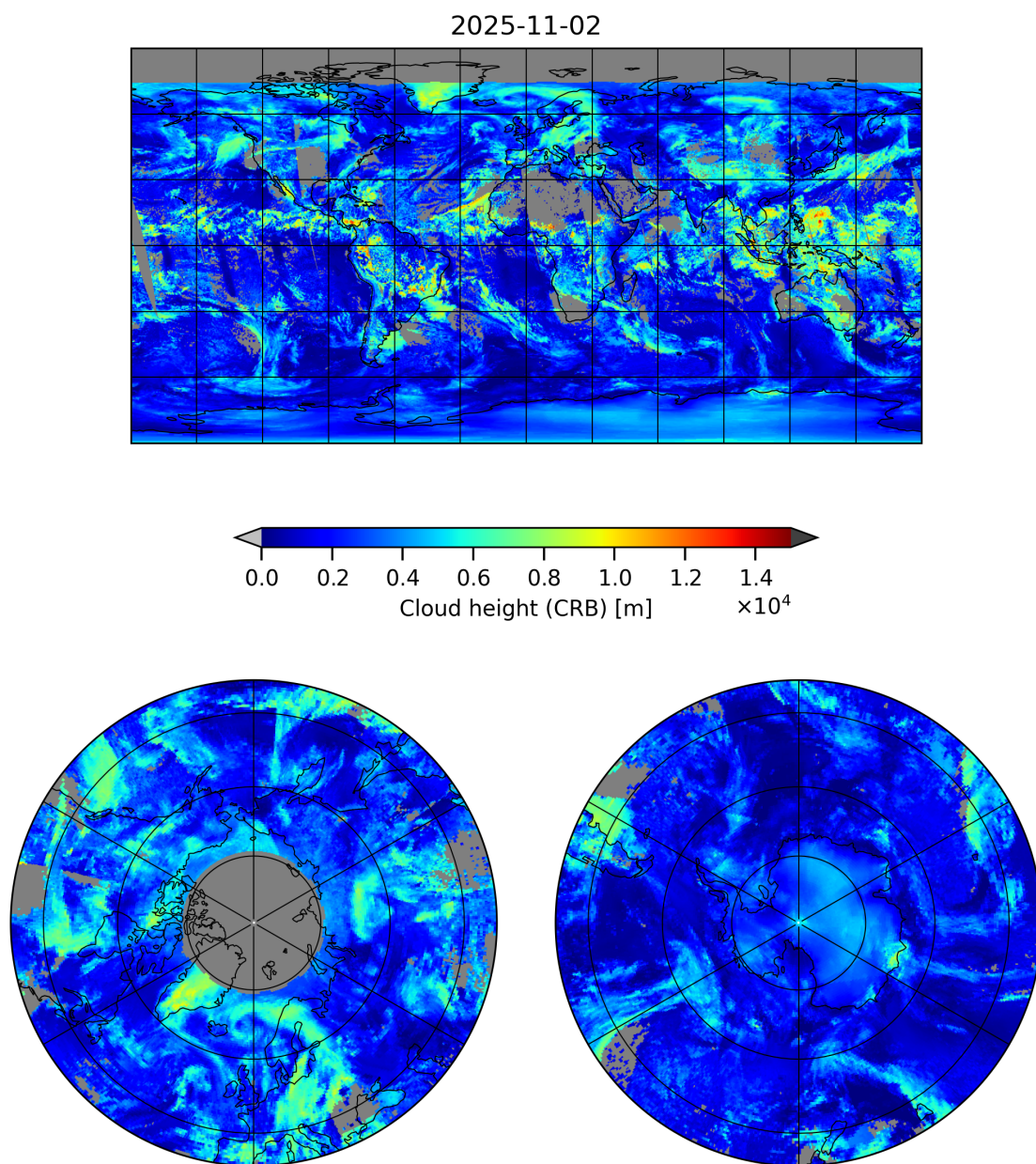


Figure 8: Map of “Cloud height (CRB)” for 2025-11-02 to 2025-11-03

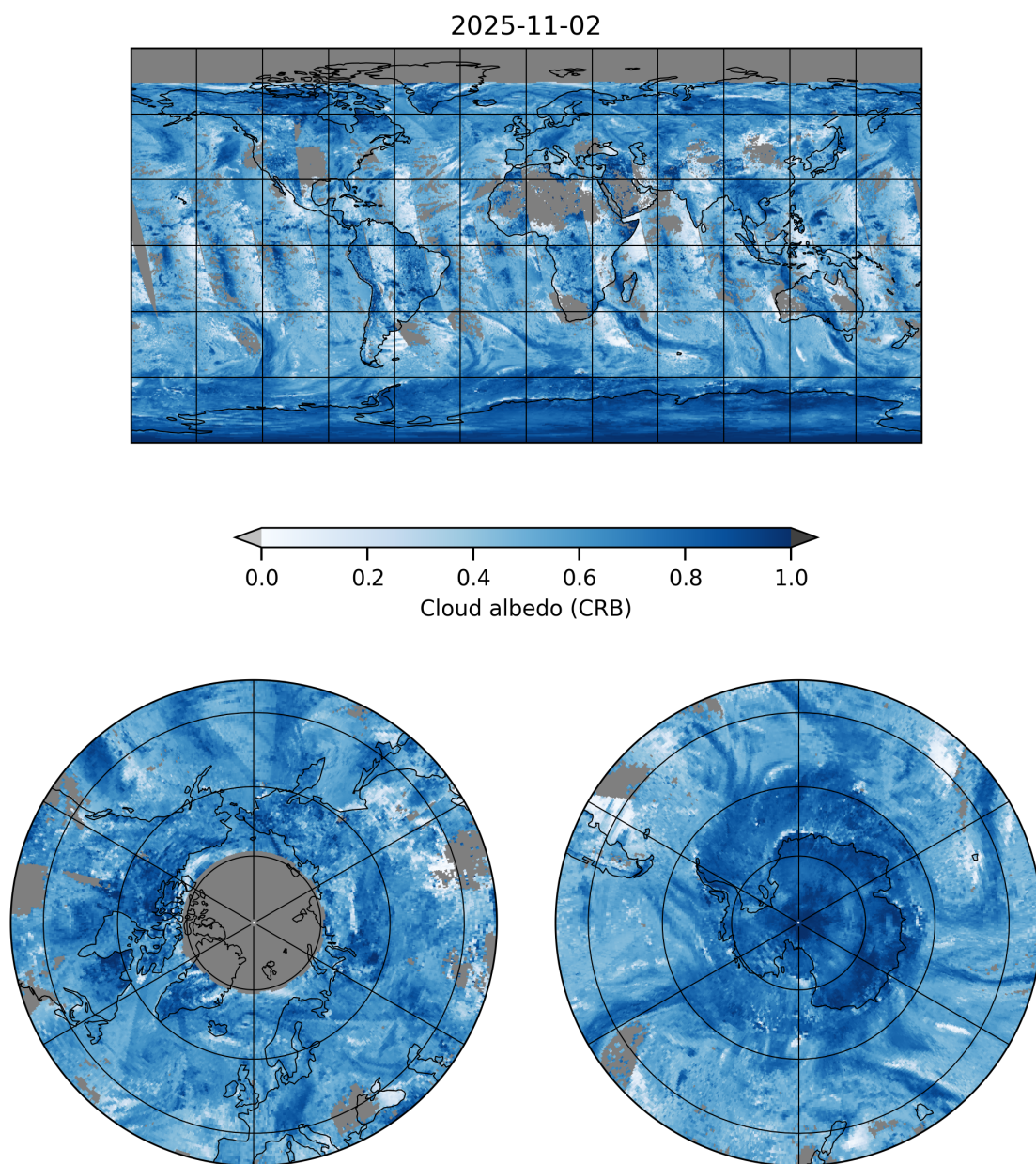


Figure 9: Map of “Cloud albedo (CRB)” for 2025-11-02 to 2025-11-03

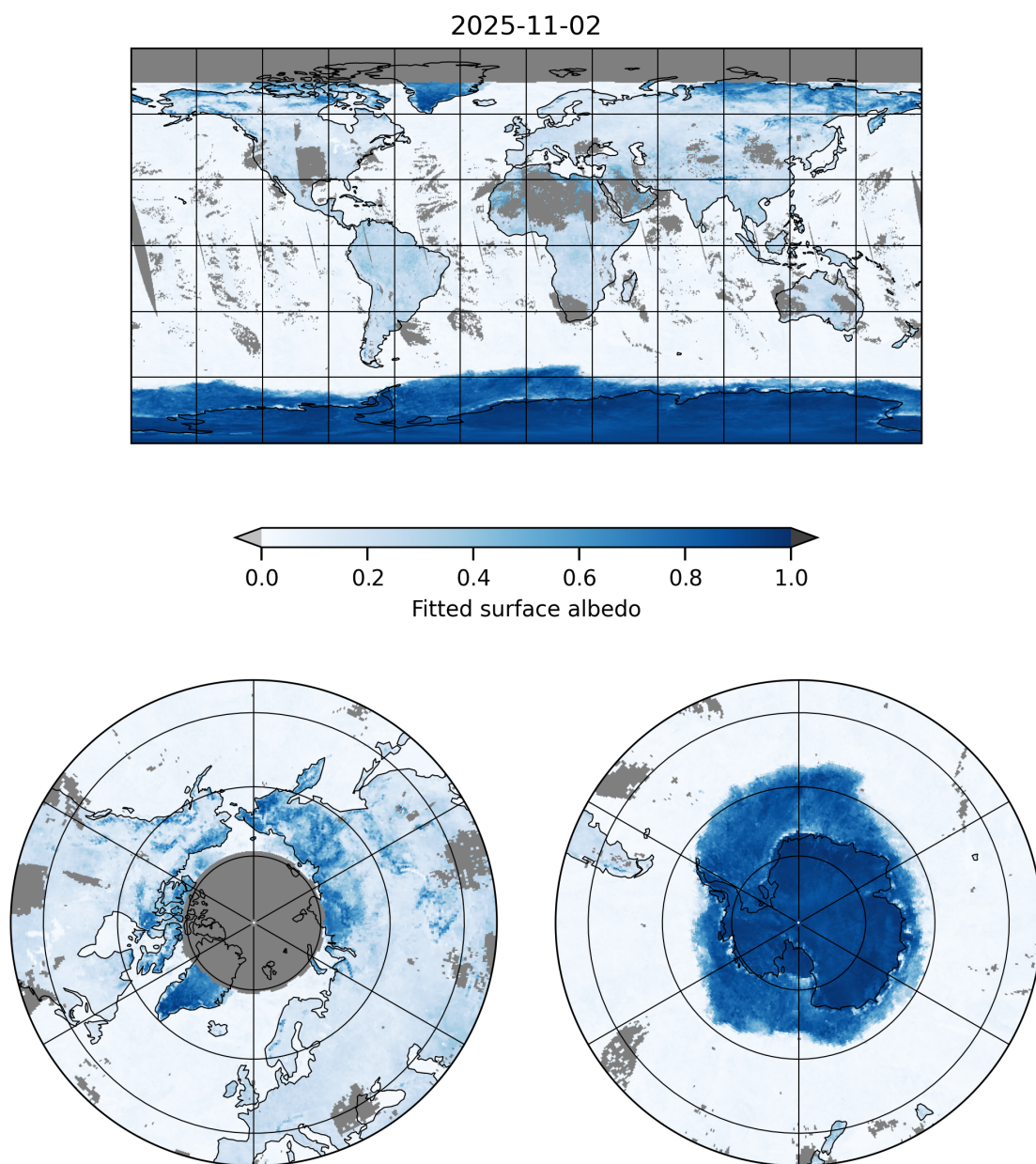


Figure 10: Map of “Fitted surface albedo” for 2025-11-02 to 2025-11-03

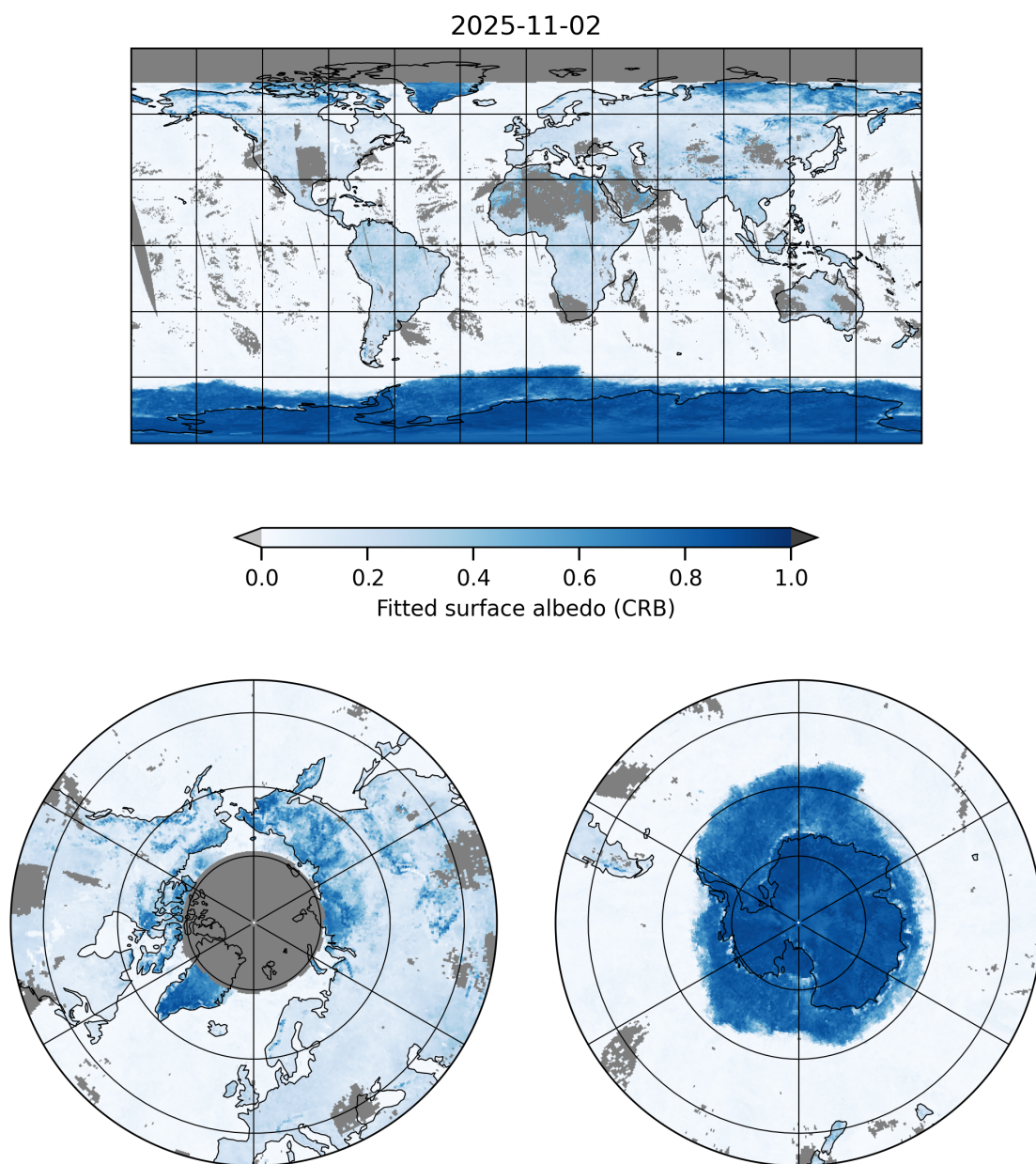


Figure 11: Map of “Fitted surface albedo (CRB)” for 2025-11-02 to 2025-11-03

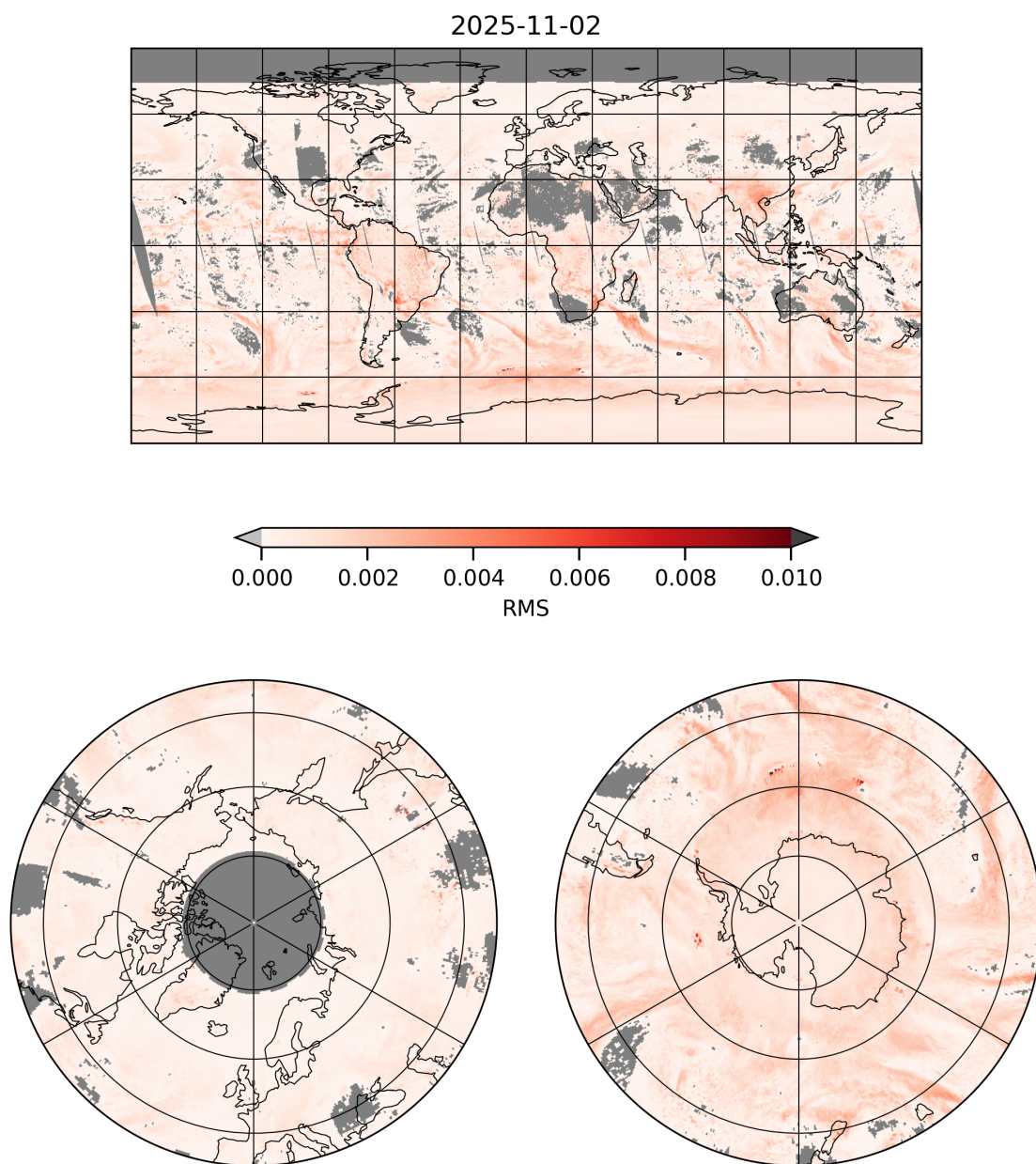


Figure 12: Map of “RMS” for 2025-11-02 to 2025-11-03

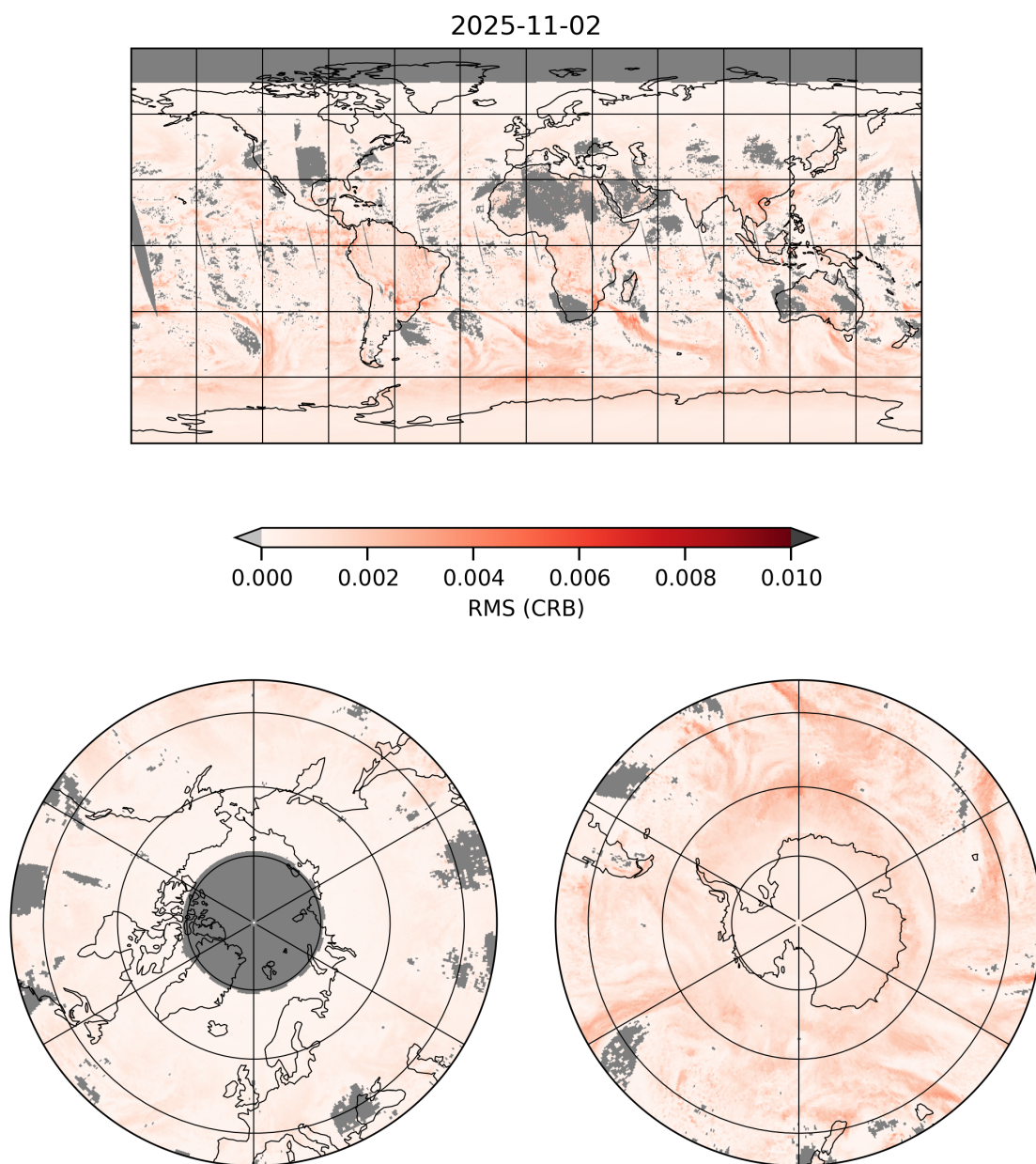


Figure 13: Map of “RMS (CRB)” for 2025-11-02 to 2025-11-03

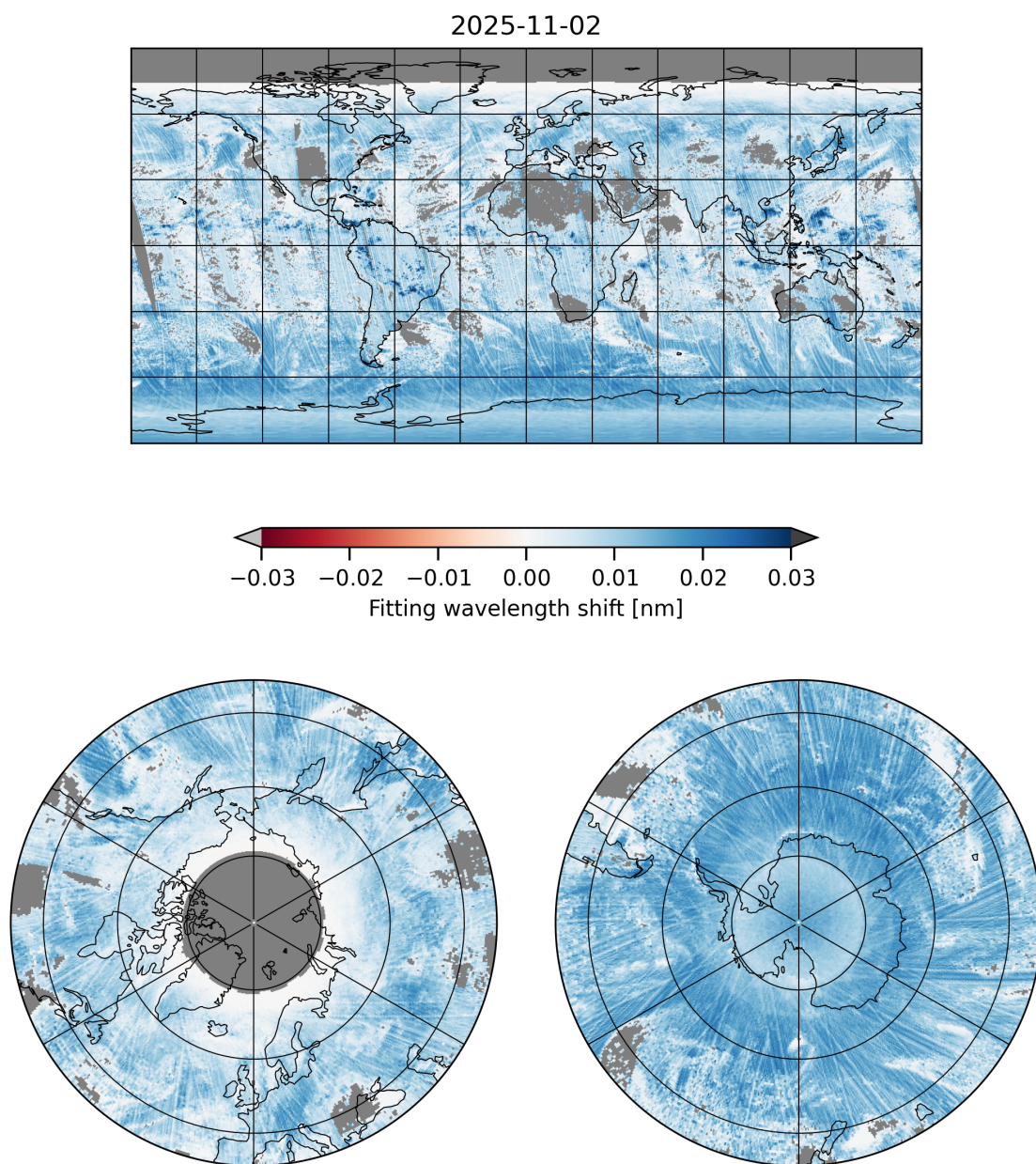


Figure 14: Map of “Fitting wavelength shift” for 2025-11-02 to 2025-11-03

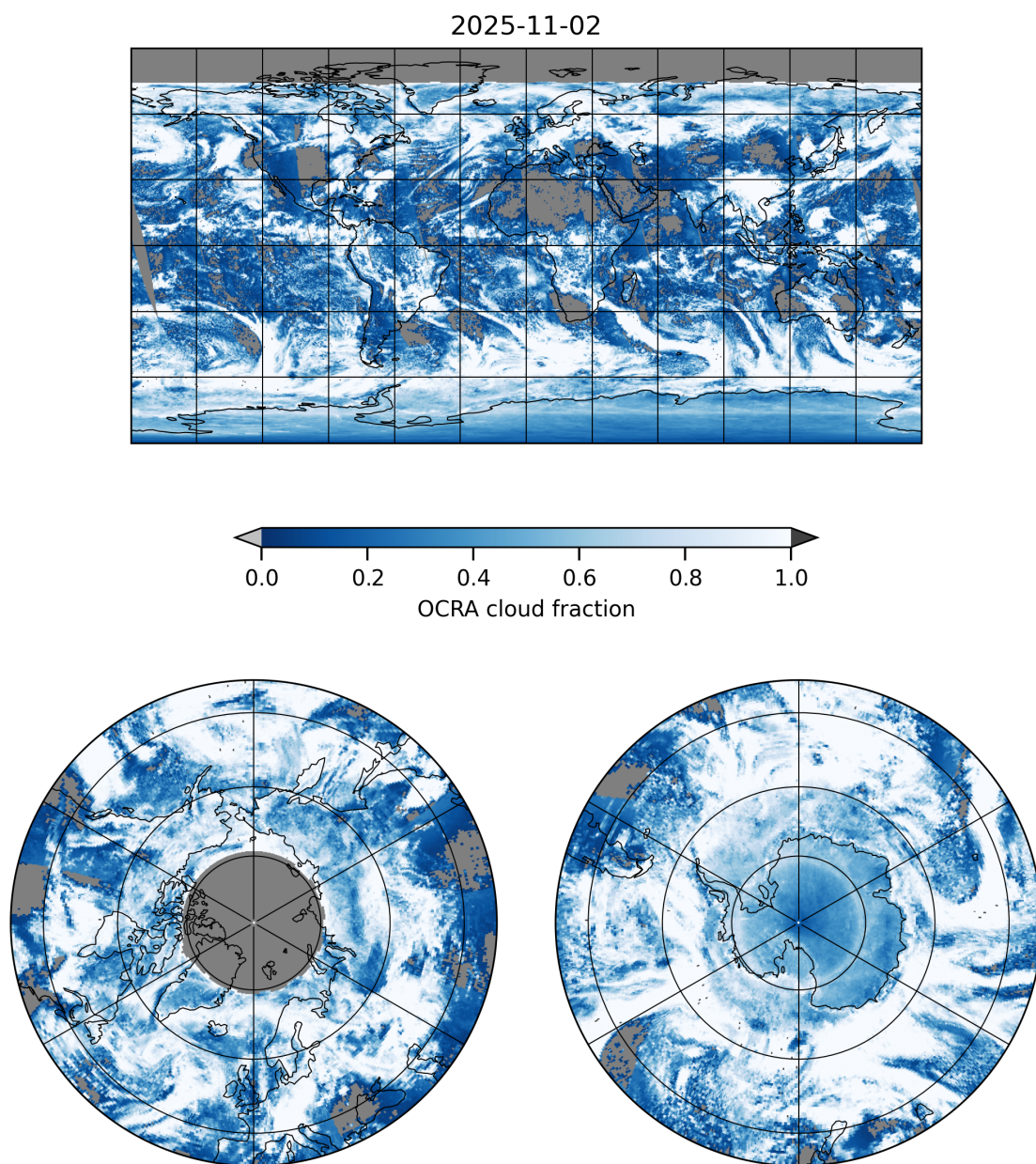


Figure 15: Map of “OCRA cloud fraction” for 2025-11-02 to 2025-11-03

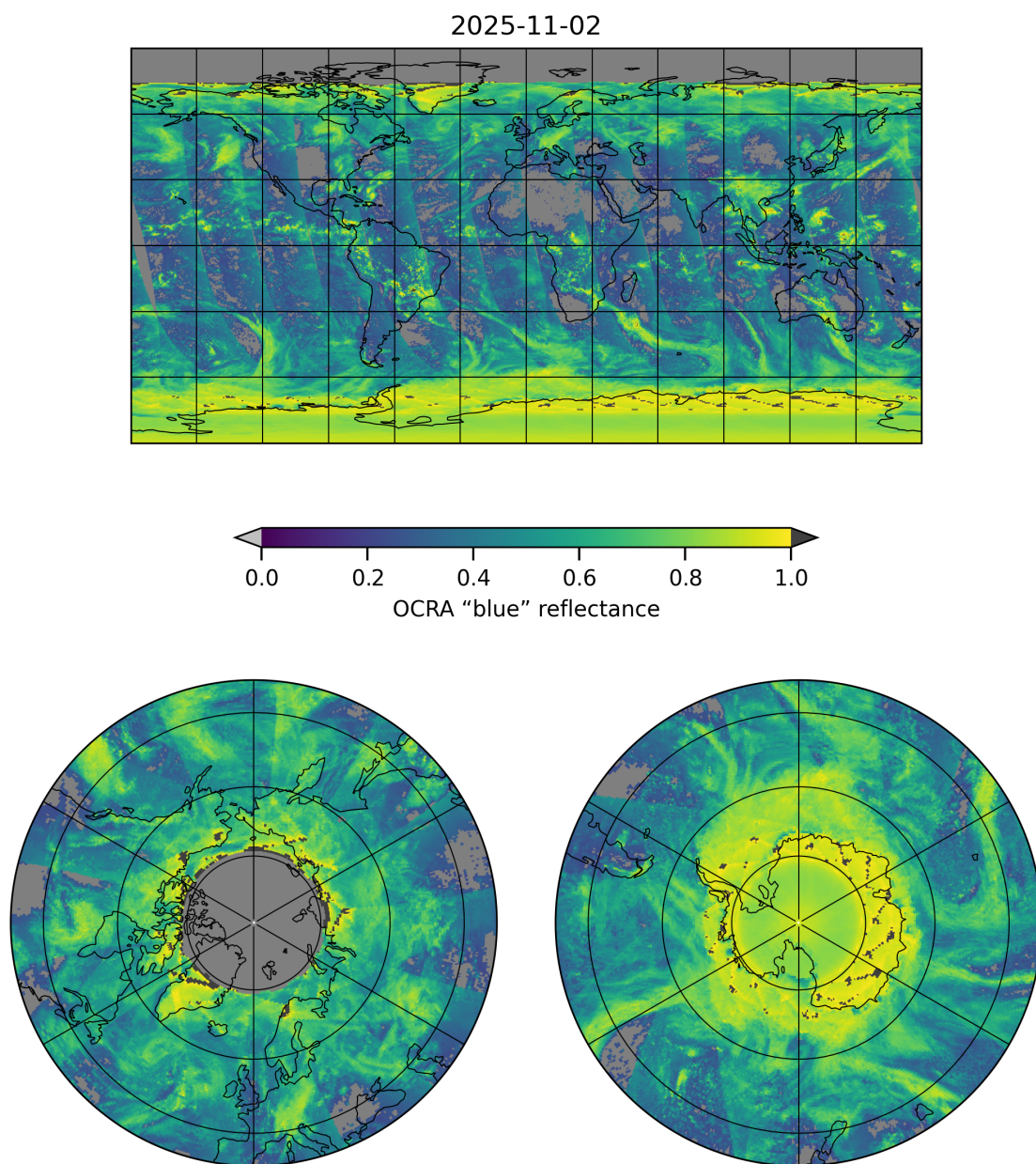


Figure 16: Map of "OCRA "blue" reflectance" for 2025-11-02 to 2025-11-03

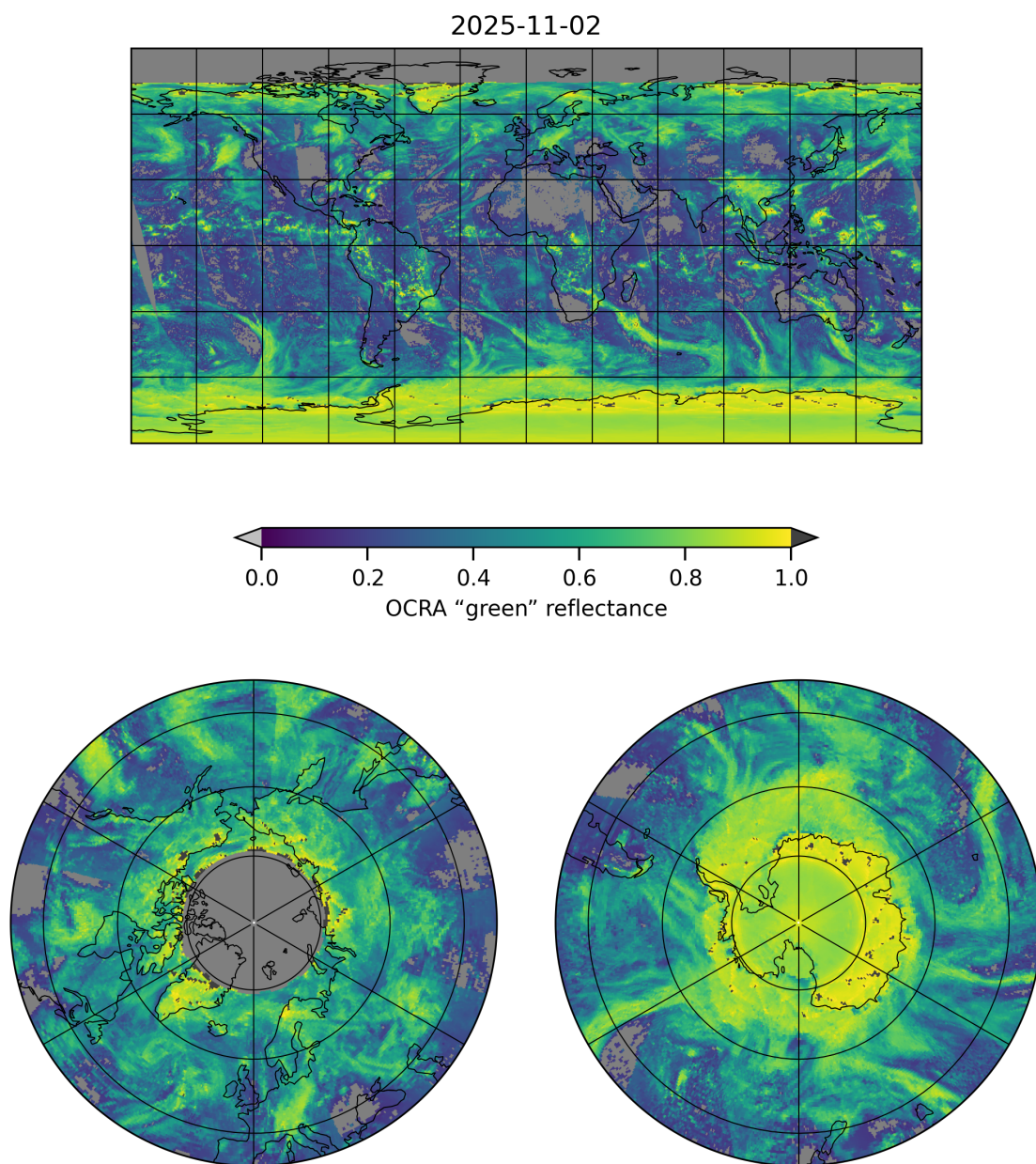


Figure 17: Map of "OCRA "green" reflectance" for 2025-11-02 to 2025-11-03

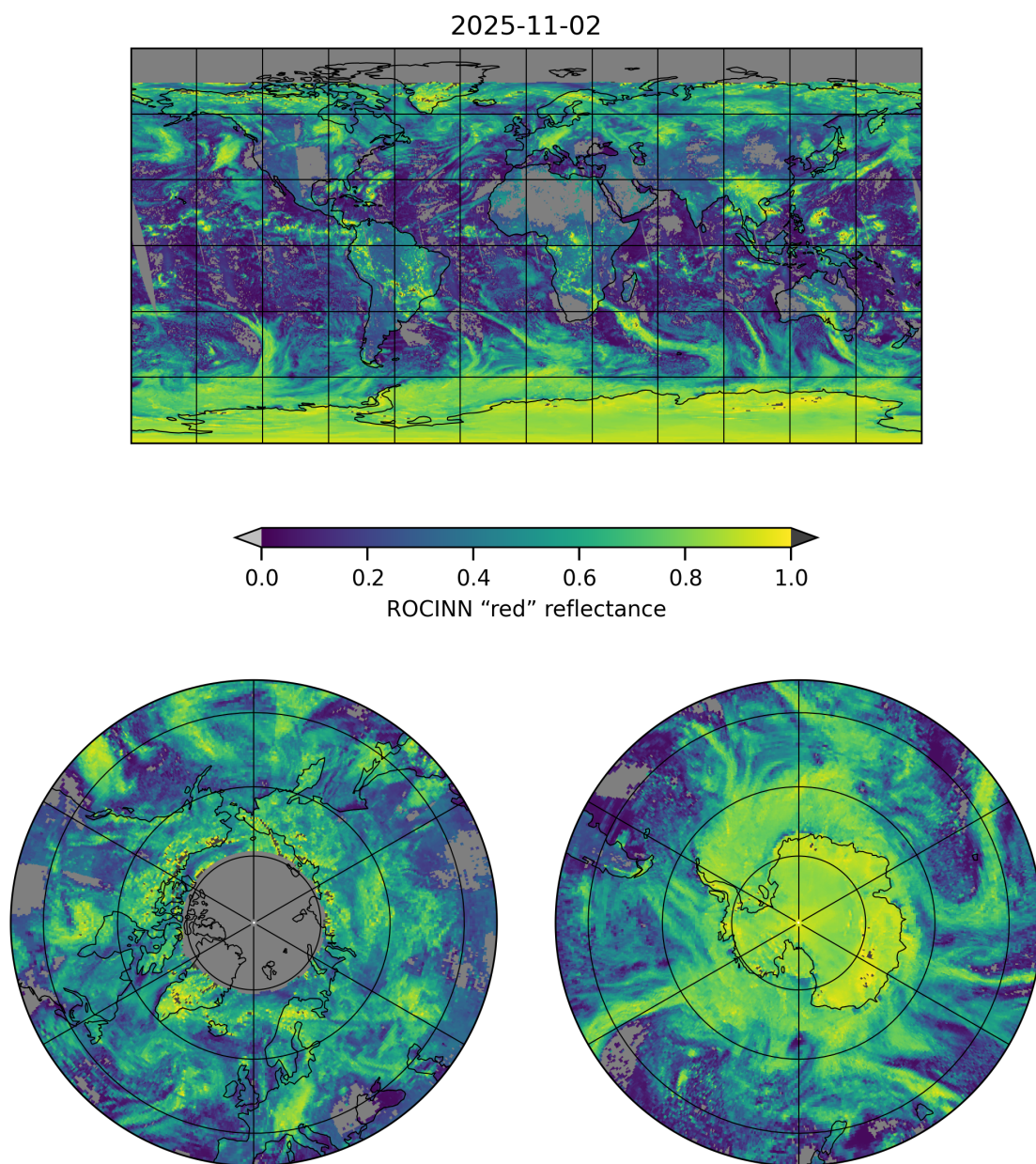


Figure 18: Map of "ROCINN "red" reflectance" for 2025-11-02 to 2025-11-03

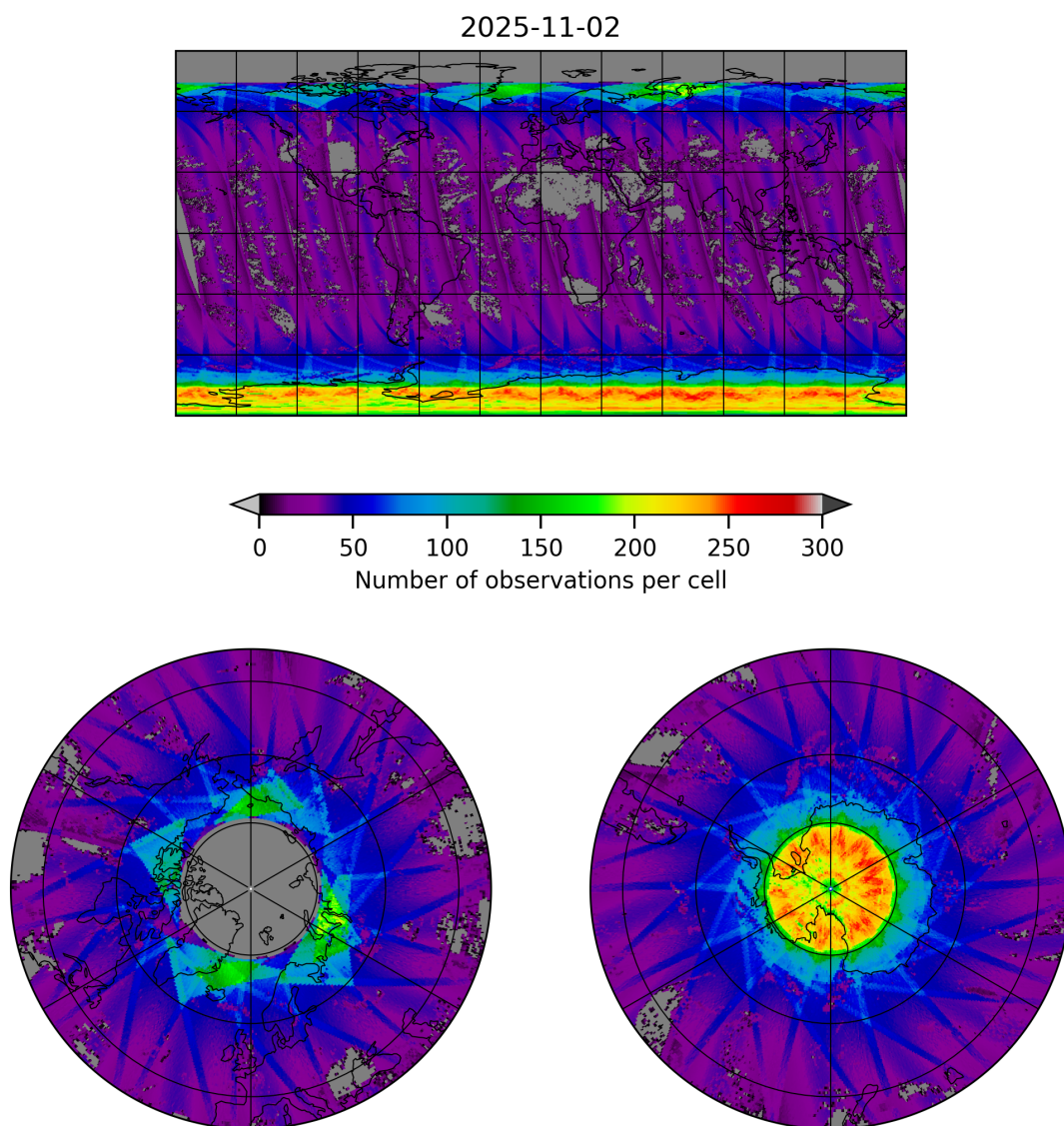


Figure 19: Map of the number of observations for 2025-11-02 to 2025-11-03

7 Zonal average

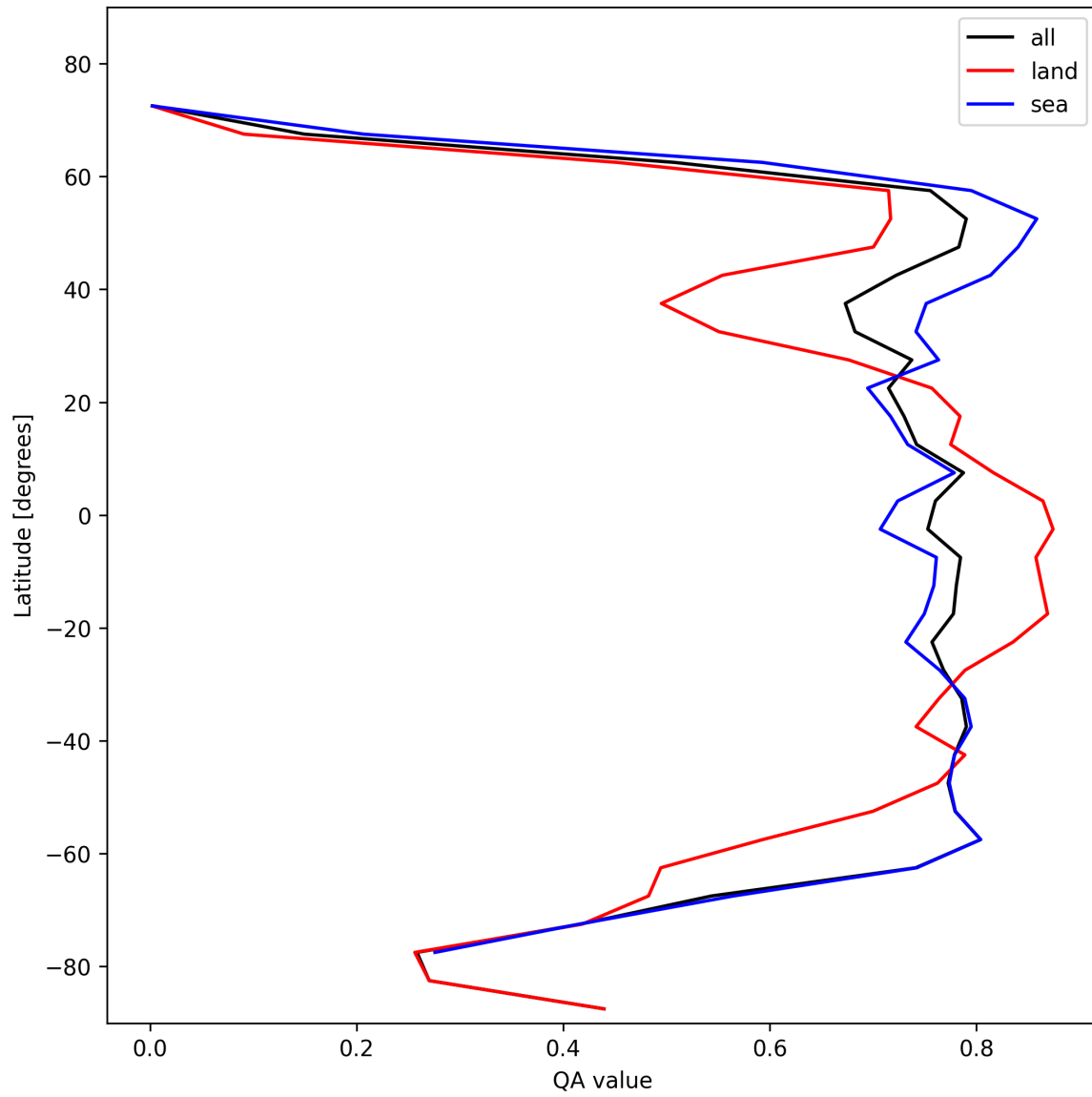


Figure 20: Zonal average of “QA value” for 2025-11-02 to 2025-11-03.

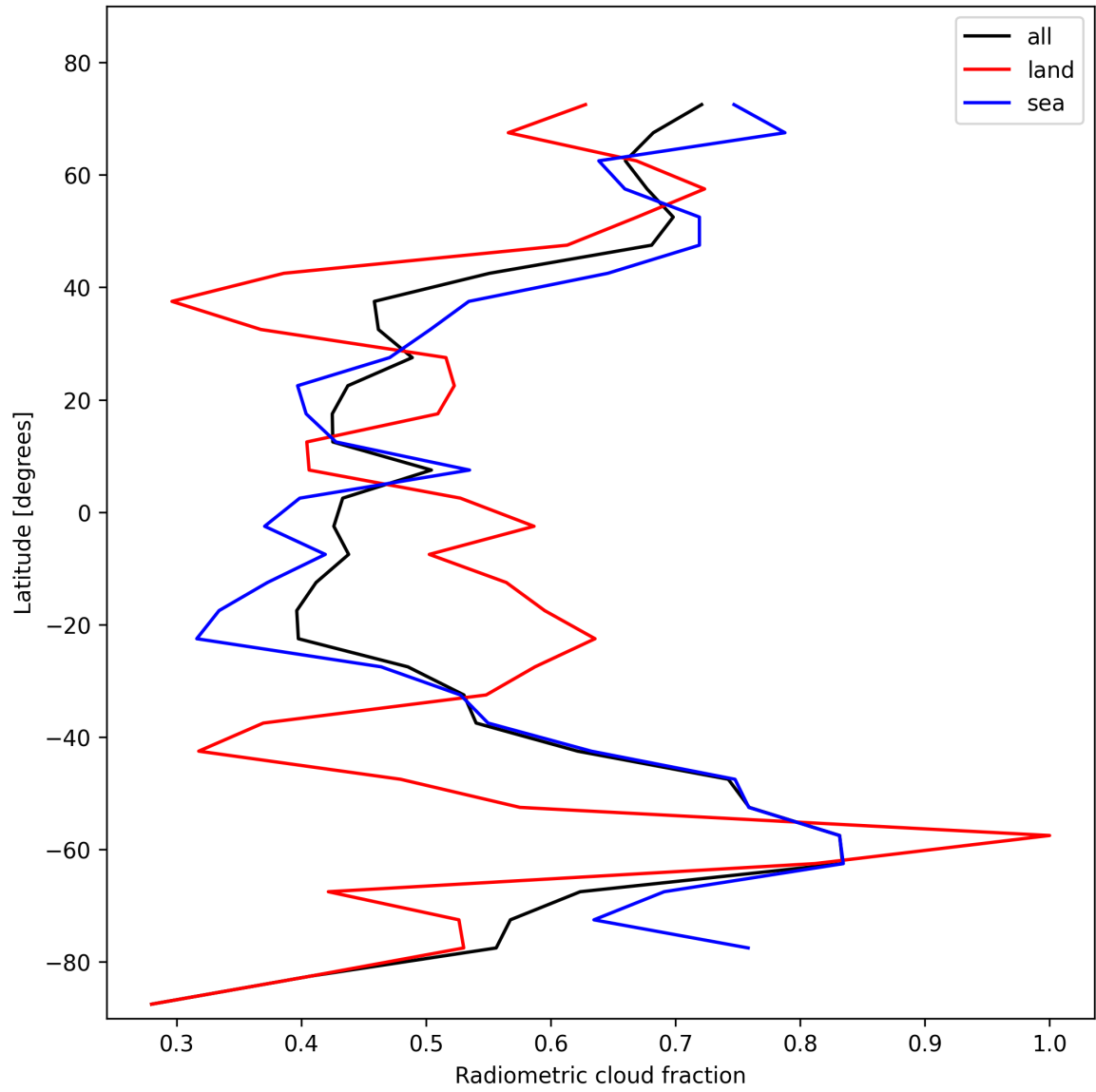


Figure 21: Zonal average of “Radiometric cloud fraction” for 2025-11-02 to 2025-11-03.

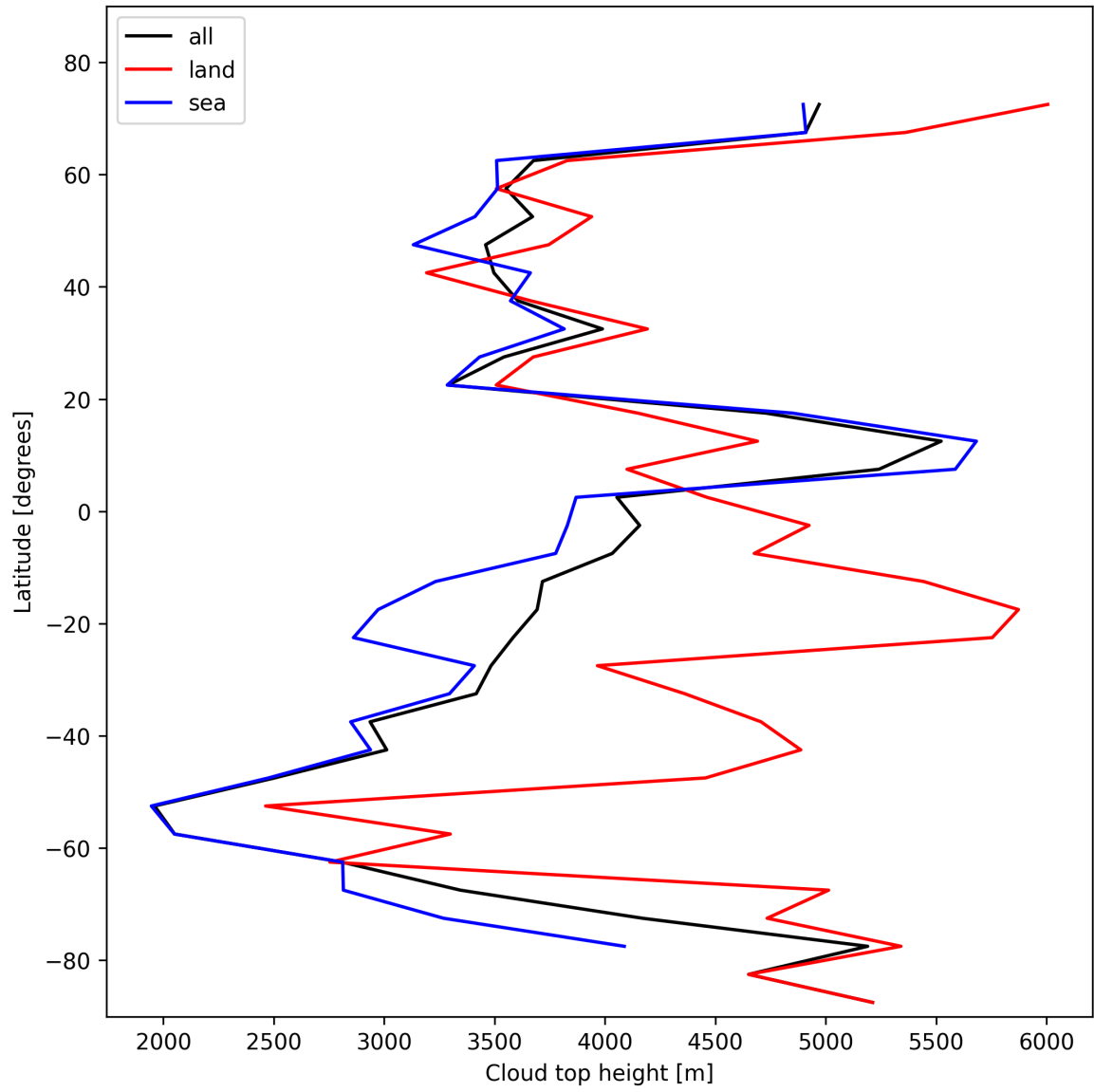


Figure 22: Zonal average of “Cloud top height” for 2025-11-02 to 2025-11-03.

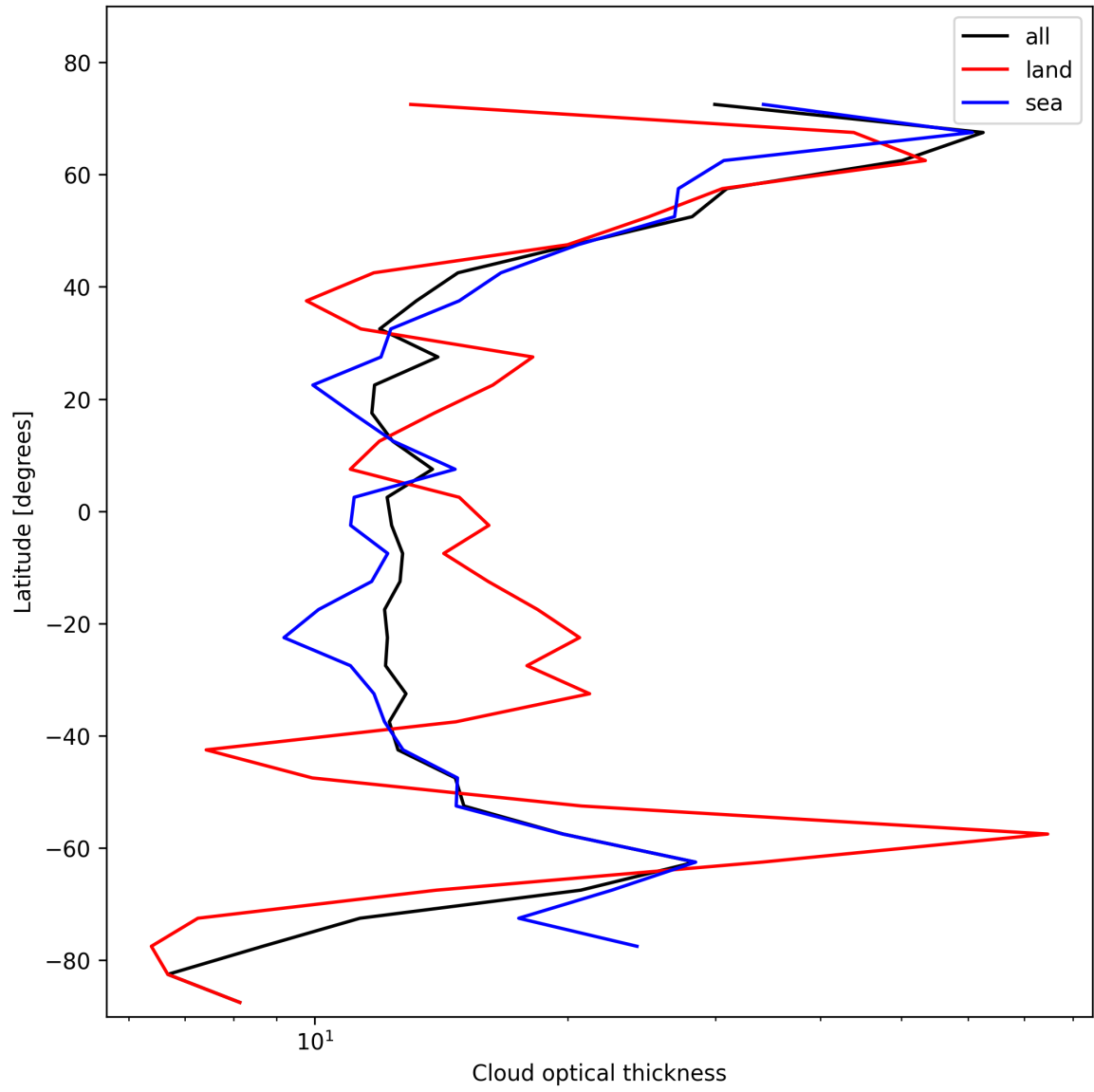


Figure 23: Zonal average of “Cloud optical thickness” for 2025-11-02 to 2025-11-03.

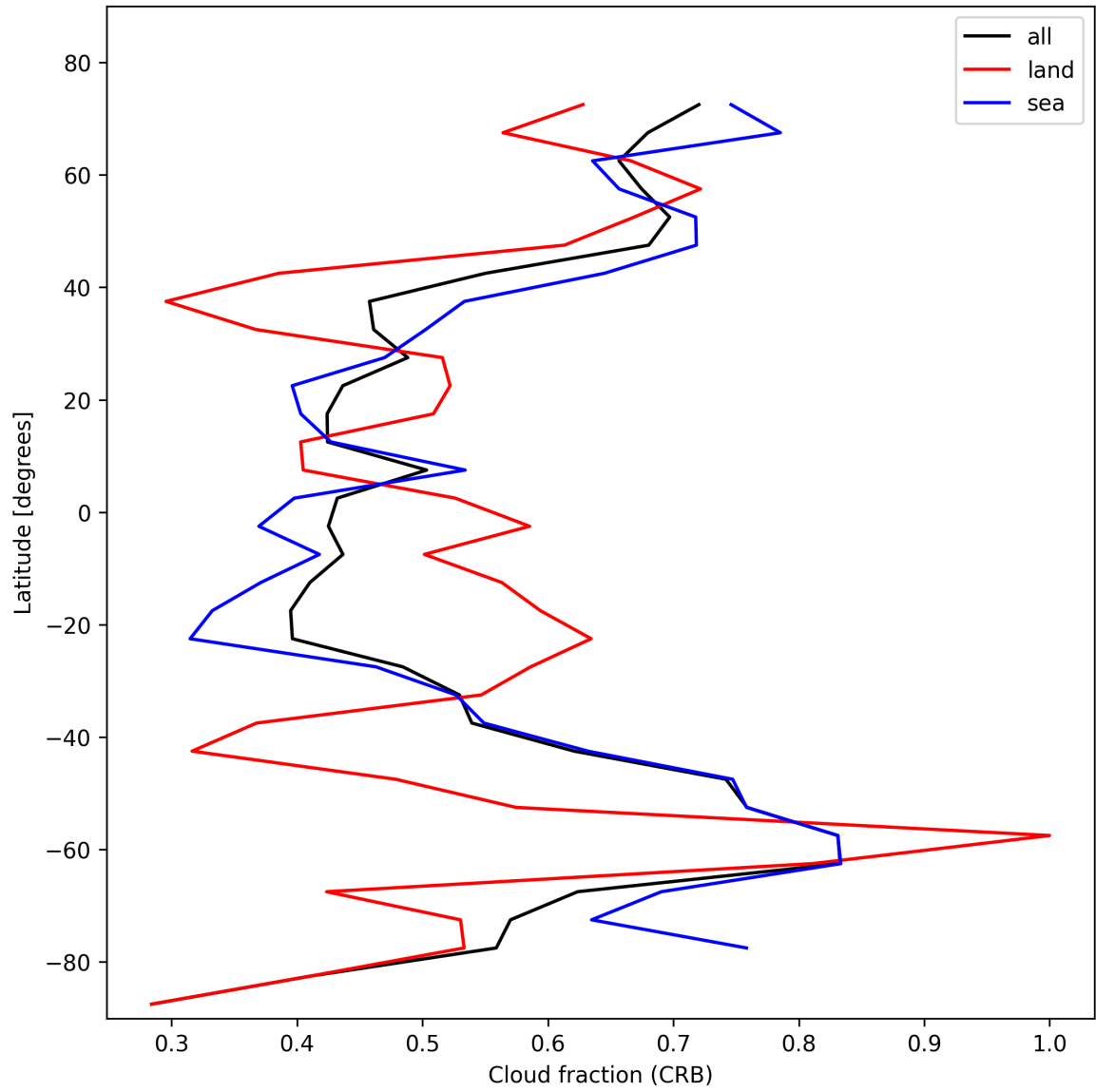


Figure 24: Zonal average of “Cloud fraction (CRB)” for 2025-11-02 to 2025-11-03.

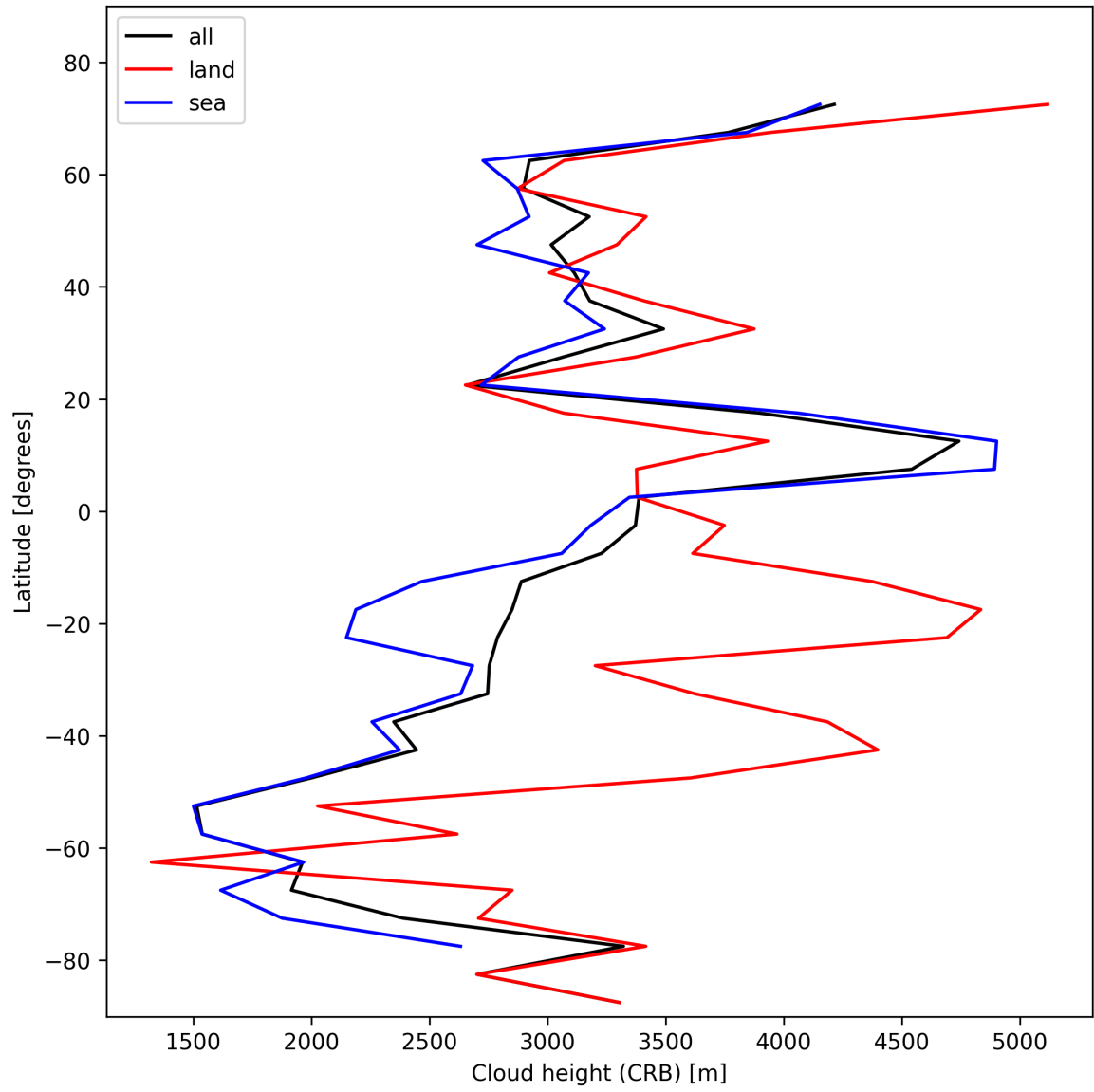


Figure 25: Zonal average of “Cloud height (CRB)” for 2025-11-02 to 2025-11-03.

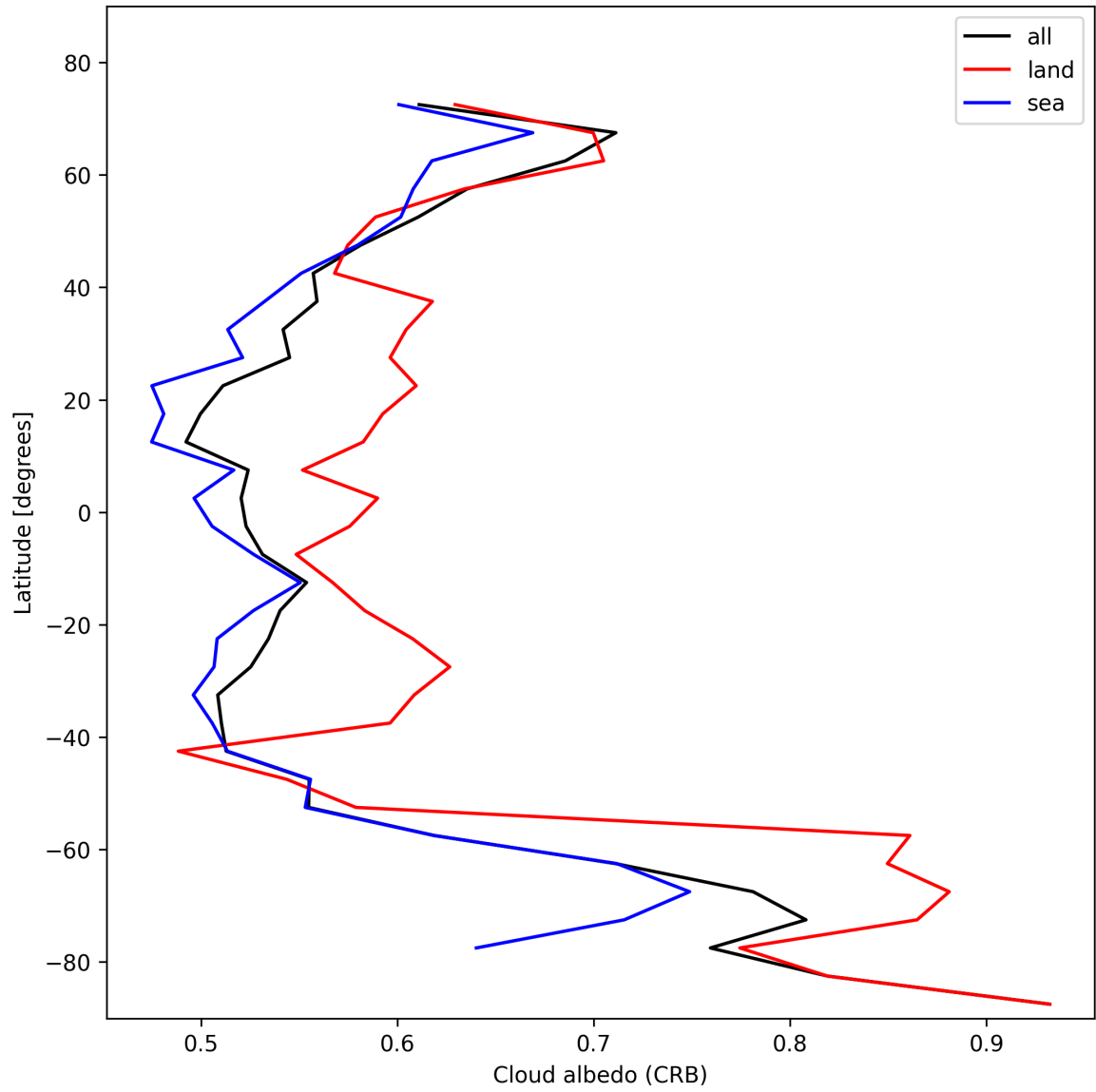


Figure 26: Zonal average of “Cloud albedo (CRB)” for 2025-11-02 to 2025-11-03.

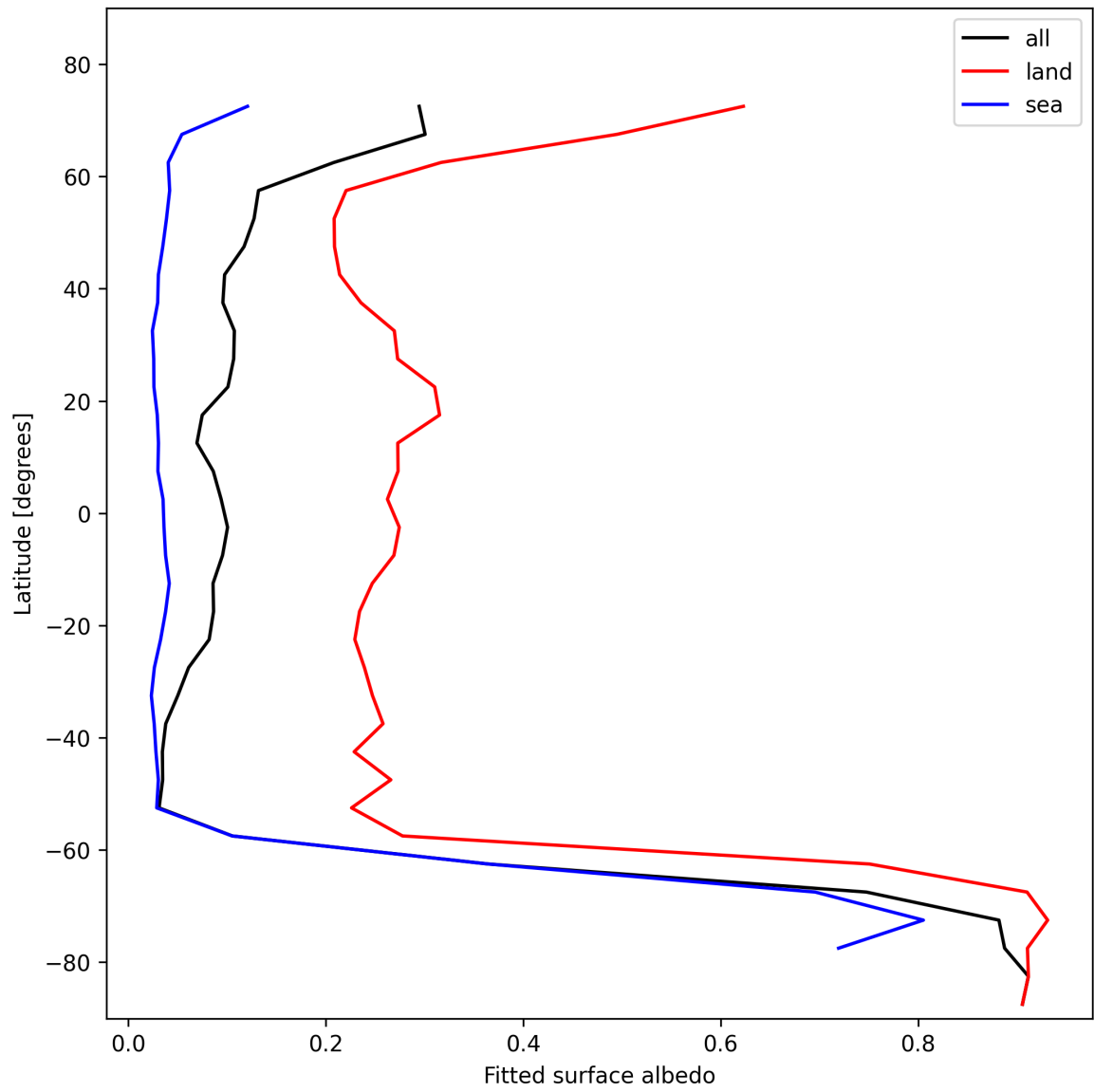


Figure 27: Zonal average of “Fitted surface albedo” for 2025-11-02 to 2025-11-03.

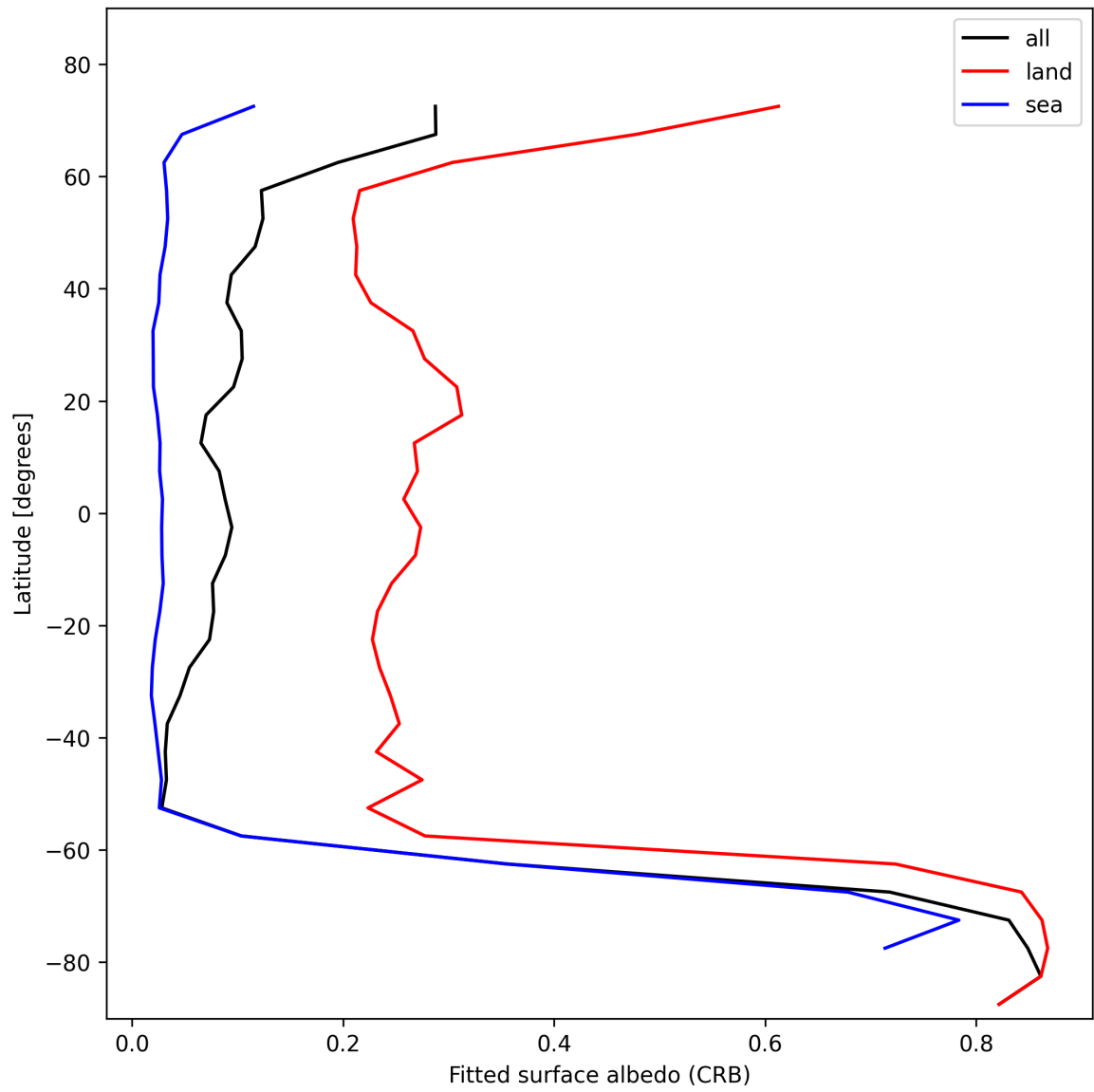


Figure 28: Zonal average of “Fitted surface albedo (CRB)” for 2025-11-02 to 2025-11-03.

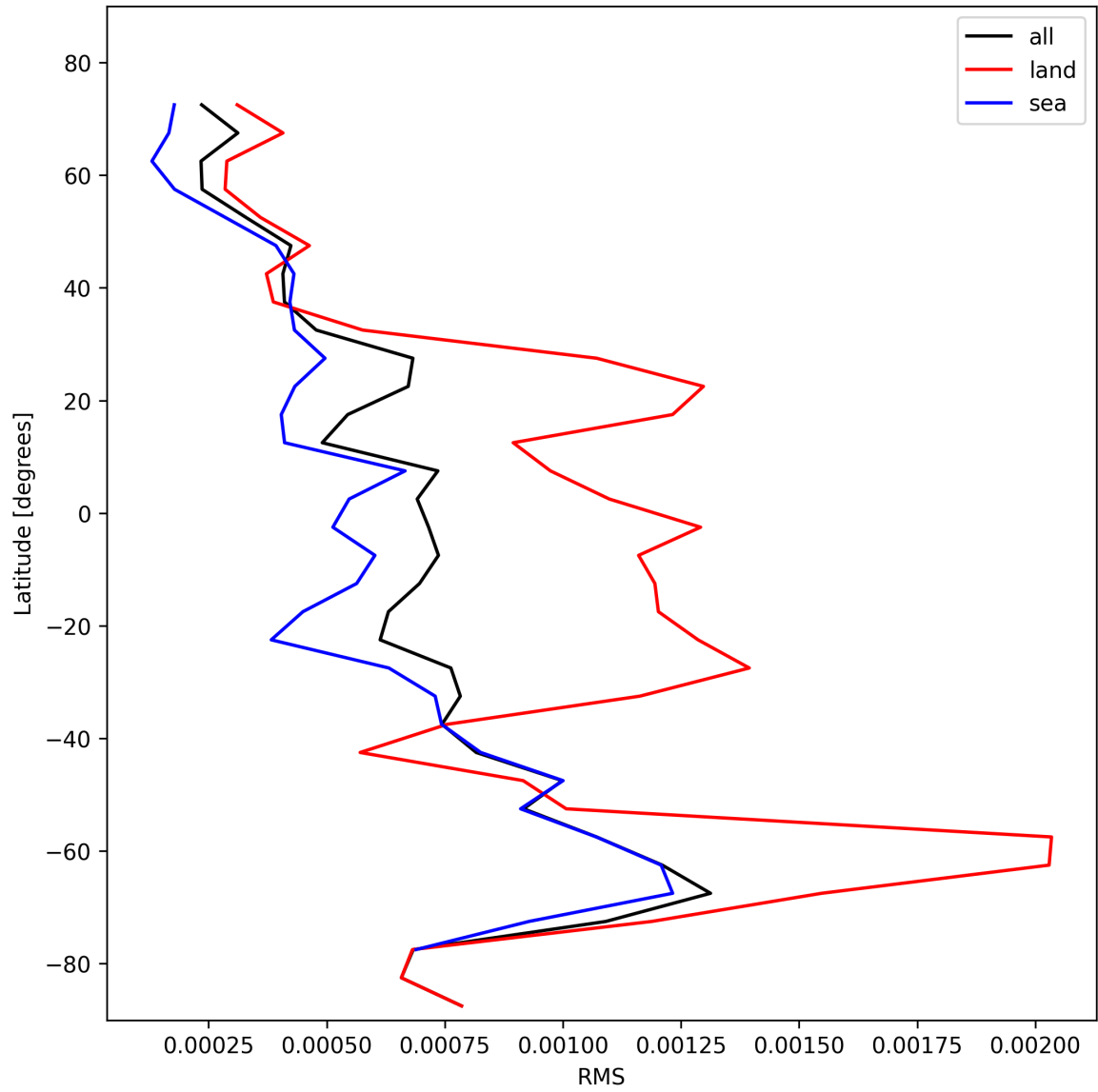


Figure 29: Zonal average of “RMS” for 2025-11-02 to 2025-11-03.

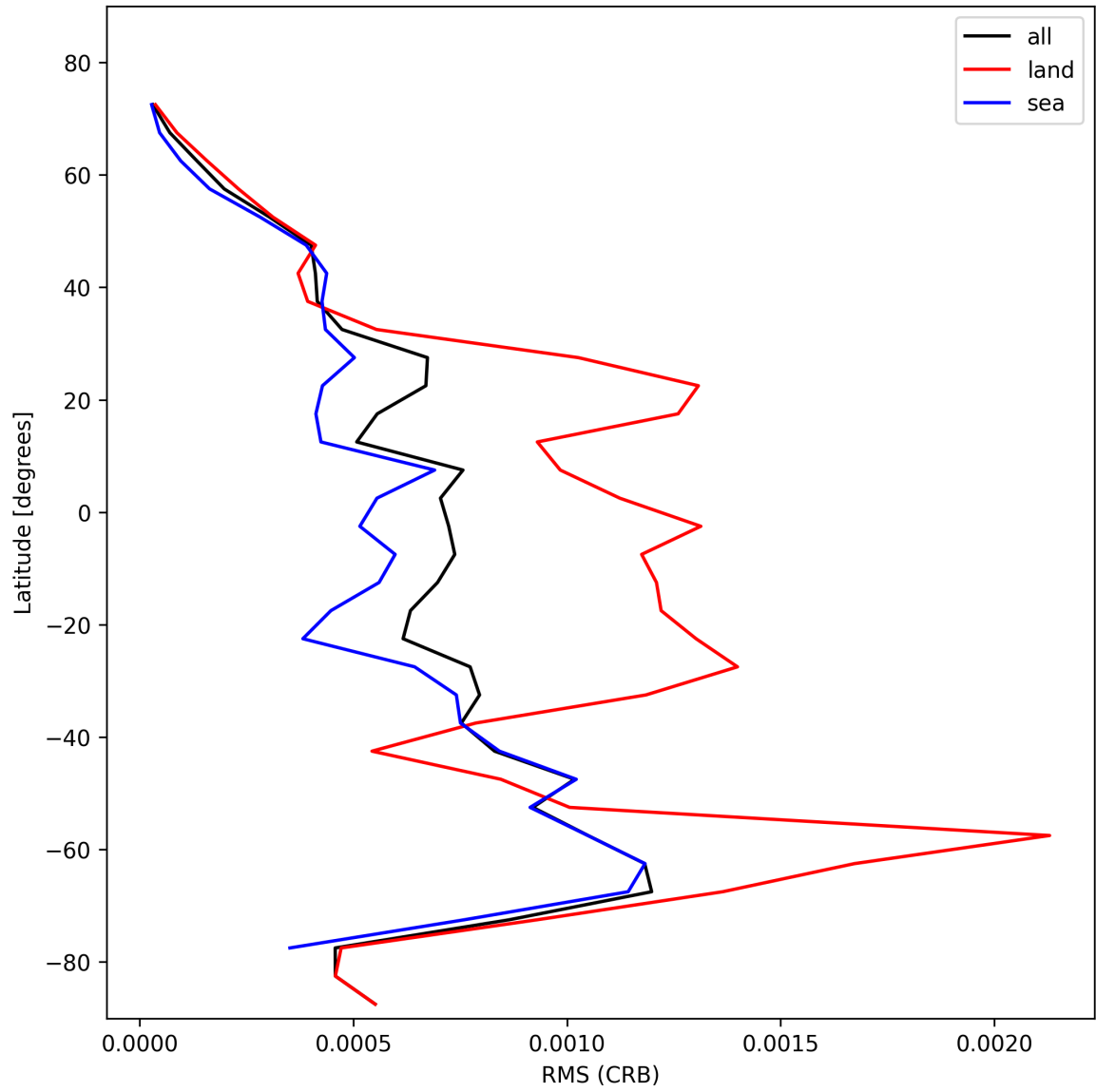


Figure 30: Zonal average of “RMS (CRB)” for 2025-11-02 to 2025-11-03.

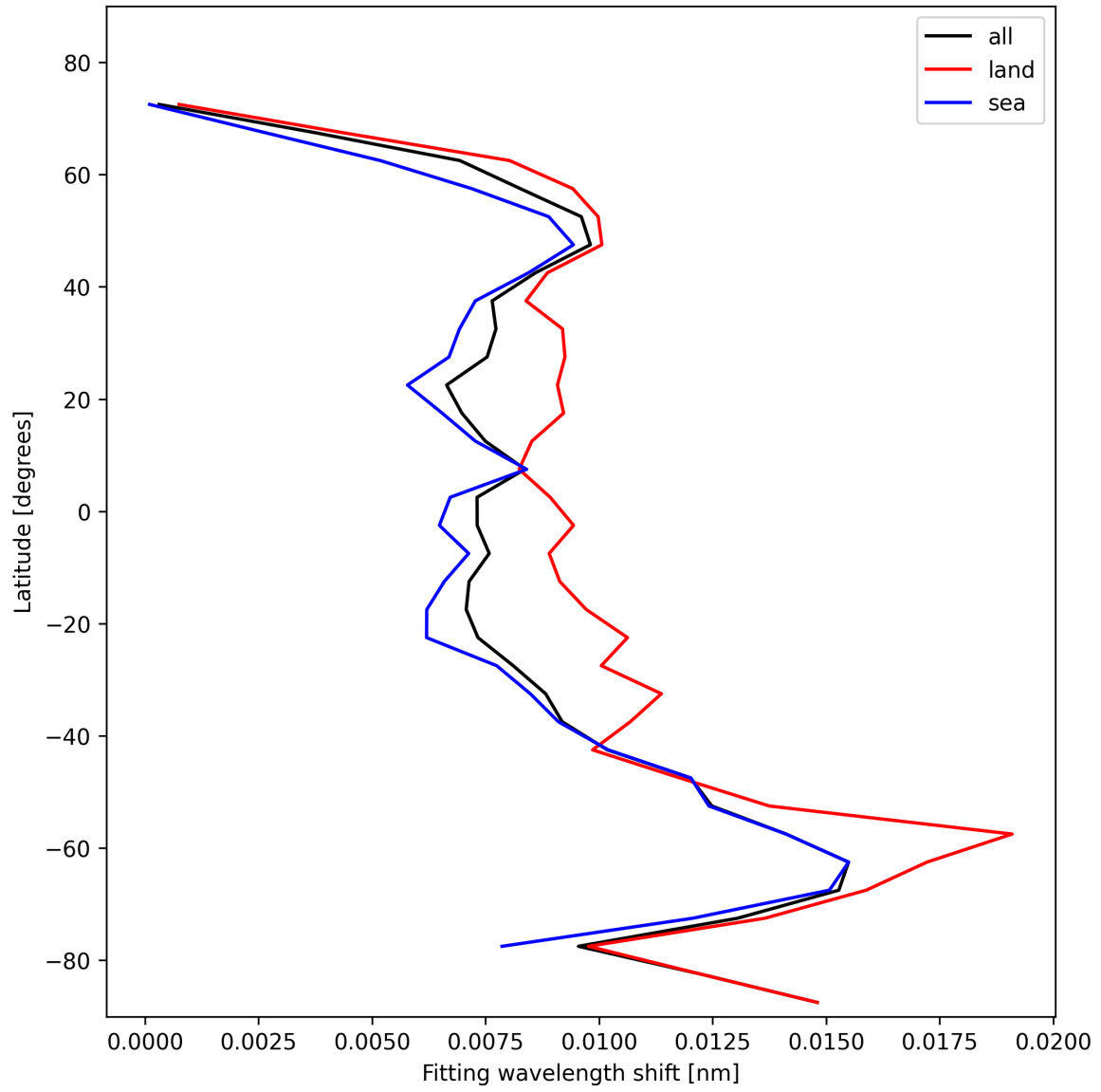


Figure 31: Zonal average of “Fitting wavelength shift” for 2025-11-02 to 2025-11-03.

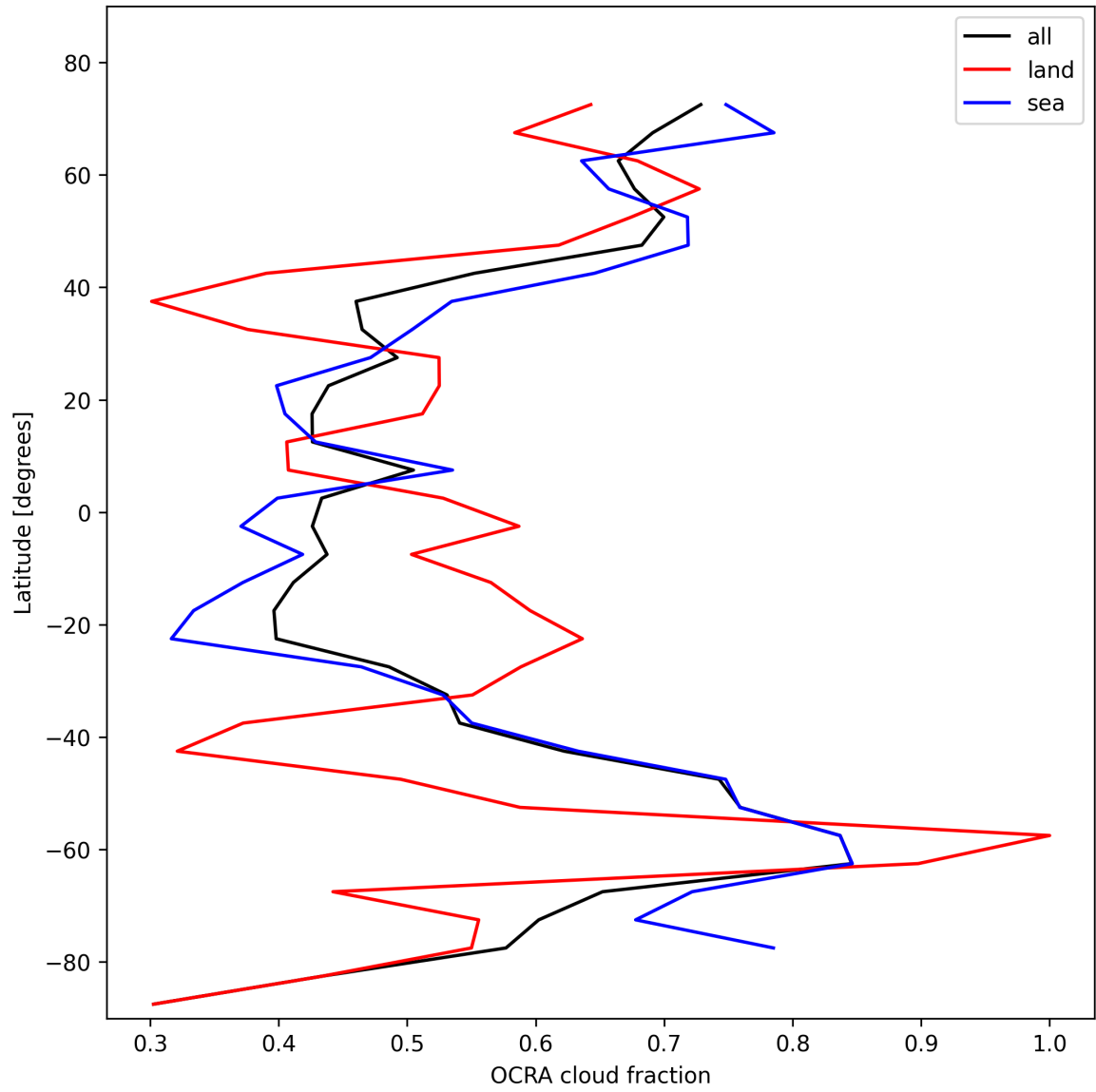


Figure 32: Zonal average of “OCRA cloud fraction” for 2025-11-02 to 2025-11-03.

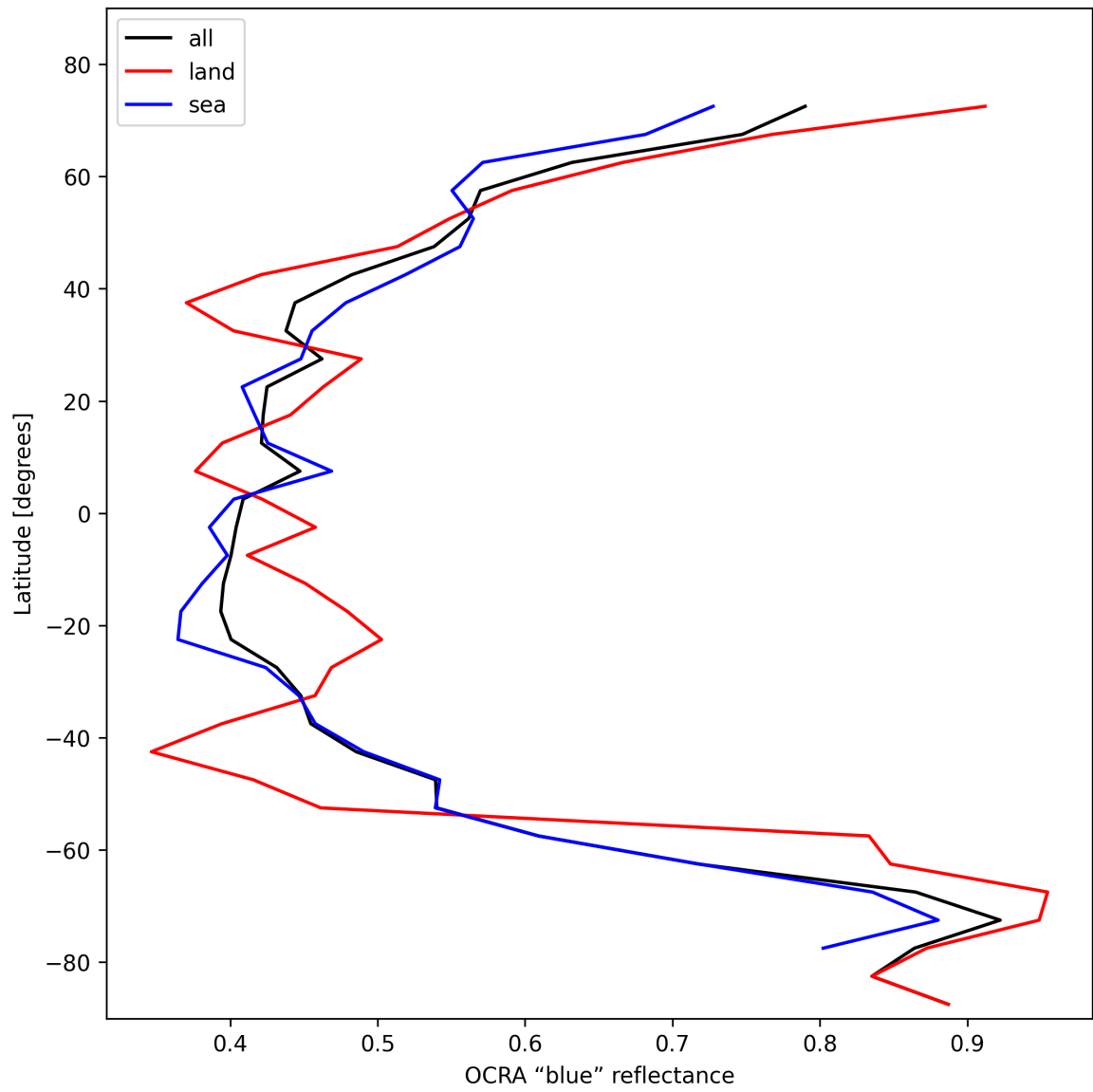


Figure 33: Zonal average of “OCRA “blue” reflectance” for 2025-11-02 to 2025-11-03.

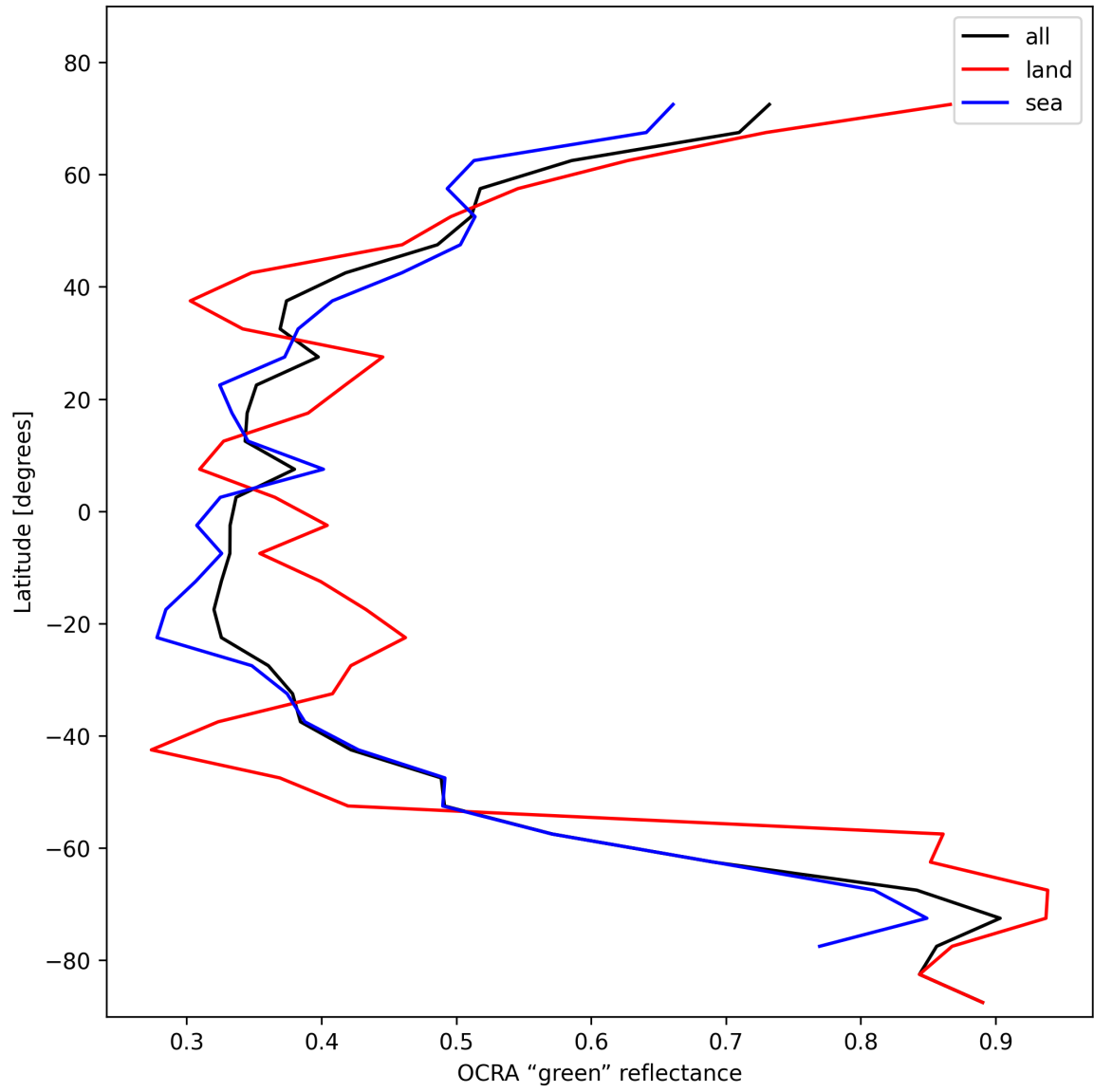


Figure 34: Zonal average of “OCRA “green” reflectance” for 2025-11-02 to 2025-11-03.

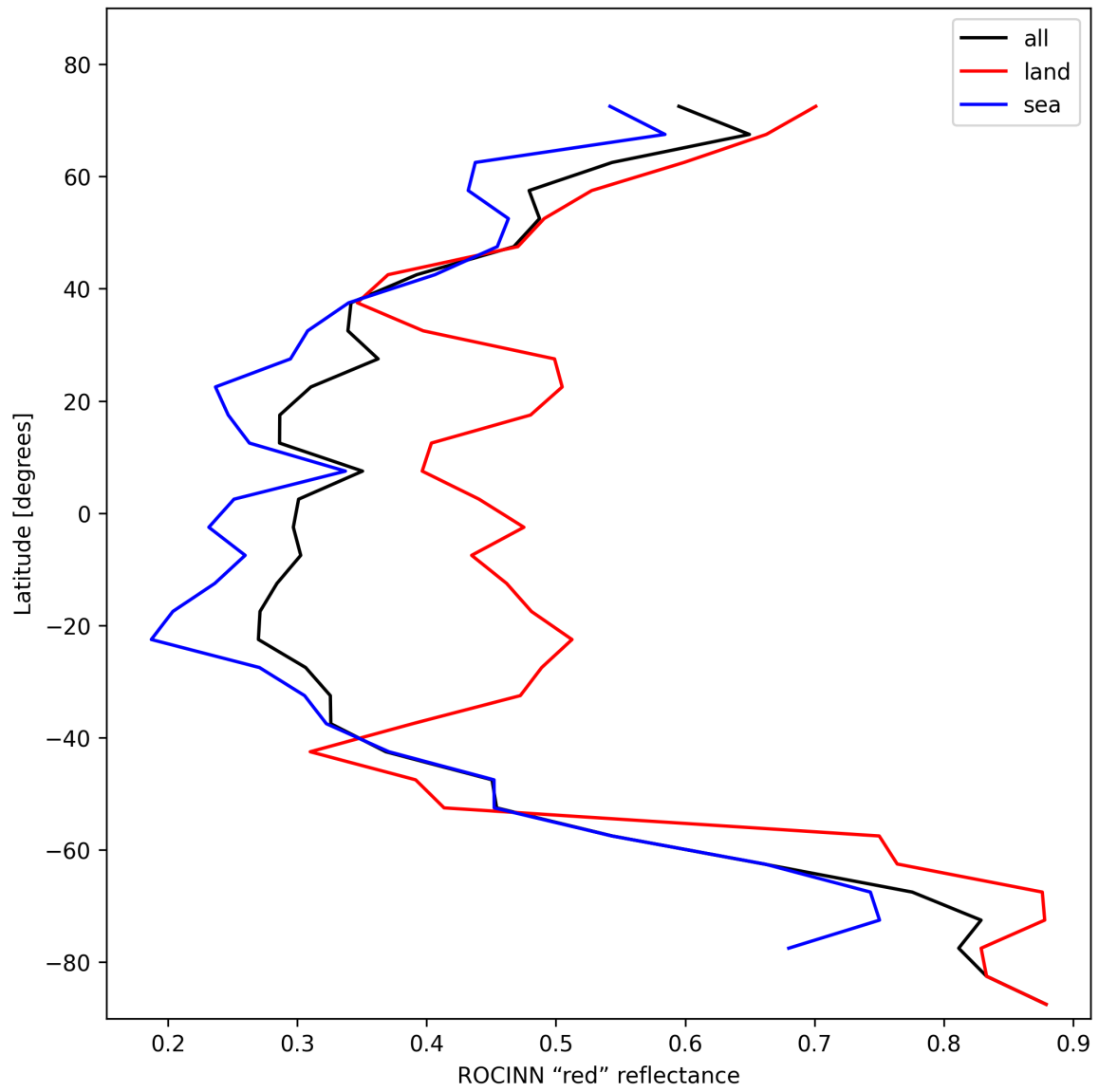


Figure 35: Zonal average of "ROCINN "red" reflectance" for 2025-11-02 to 2025-11-03.

8 Histograms

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

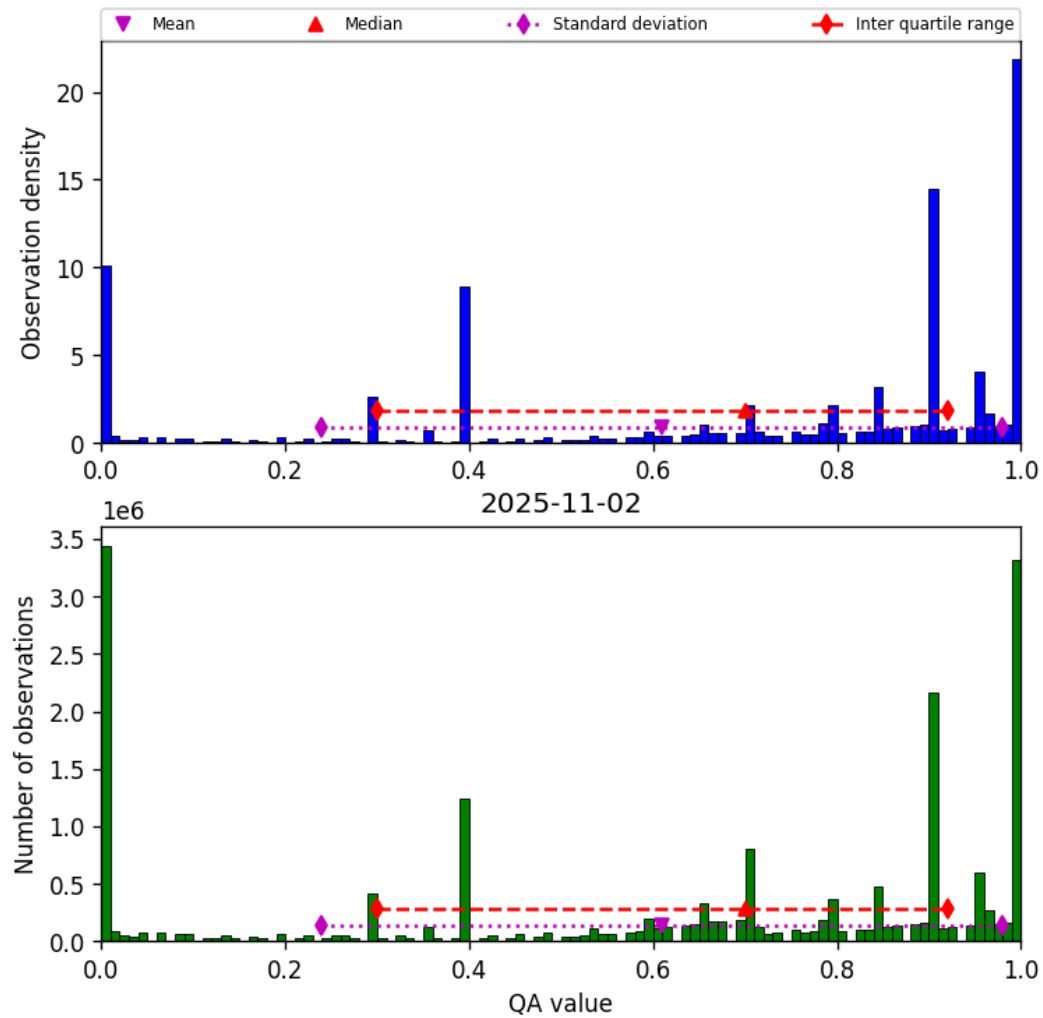


Figure 36: Histogram of “QA value” for 2025-11-02 to 2025-11-03

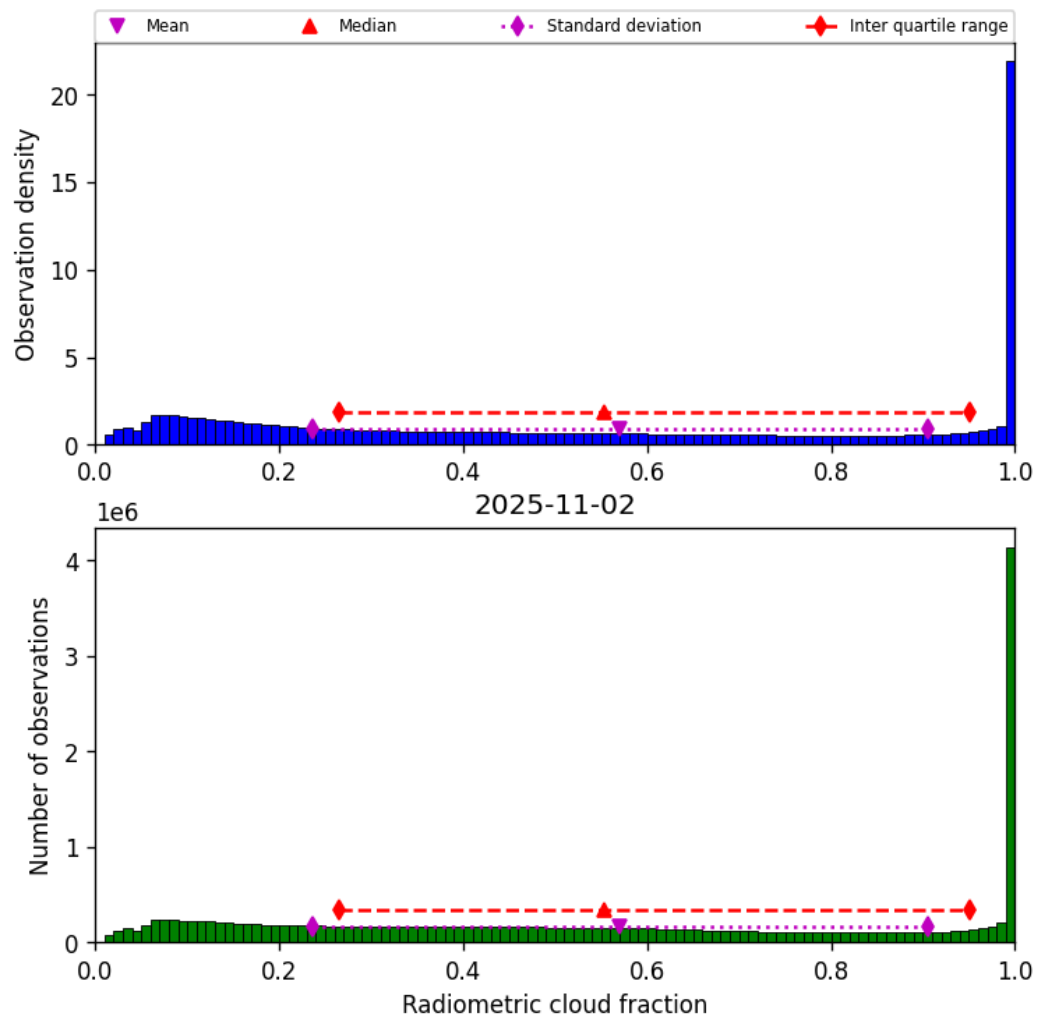


Figure 37: Histogram of “Radiometric cloud fraction” for 2025-11-02 to 2025-11-03

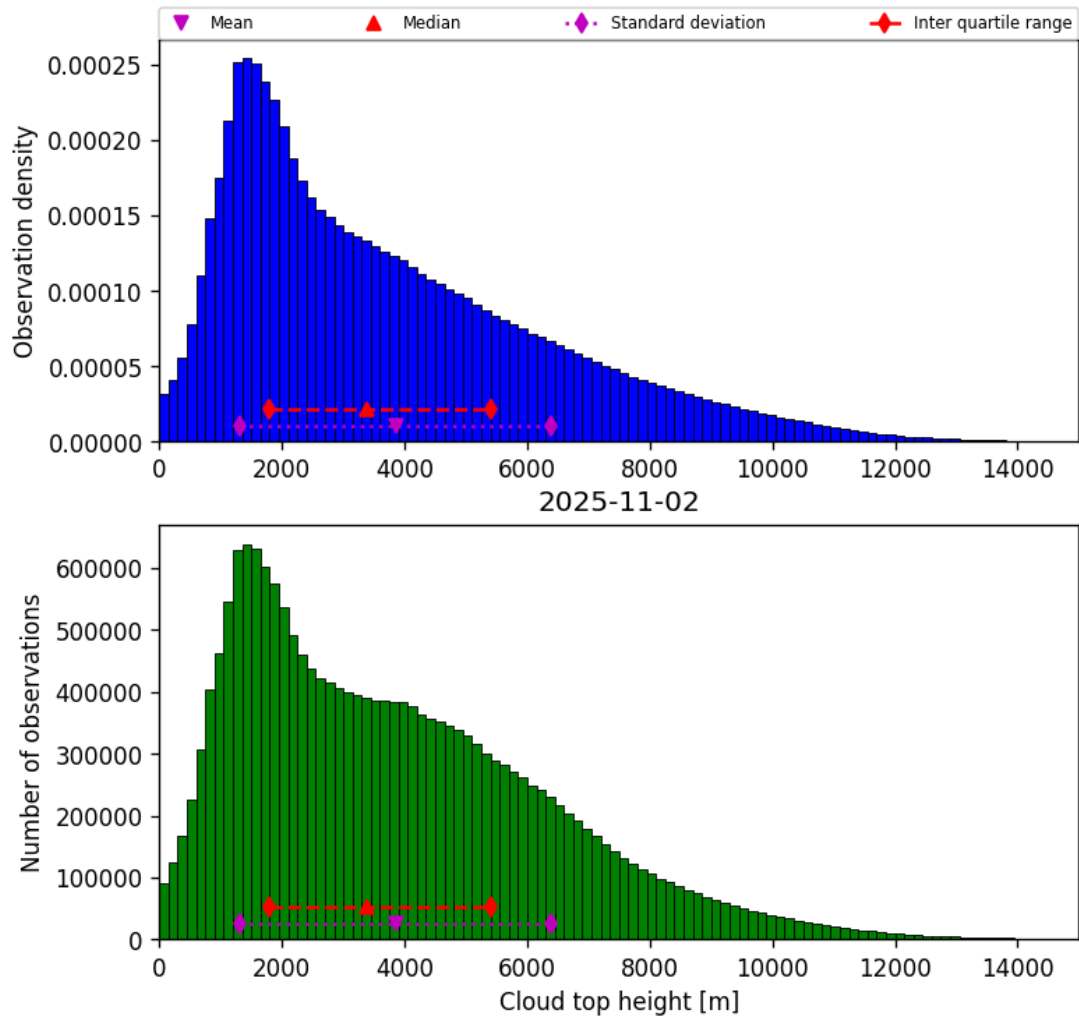


Figure 38: Histogram of “Cloud top height” for 2025-11-02 to 2025-11-03

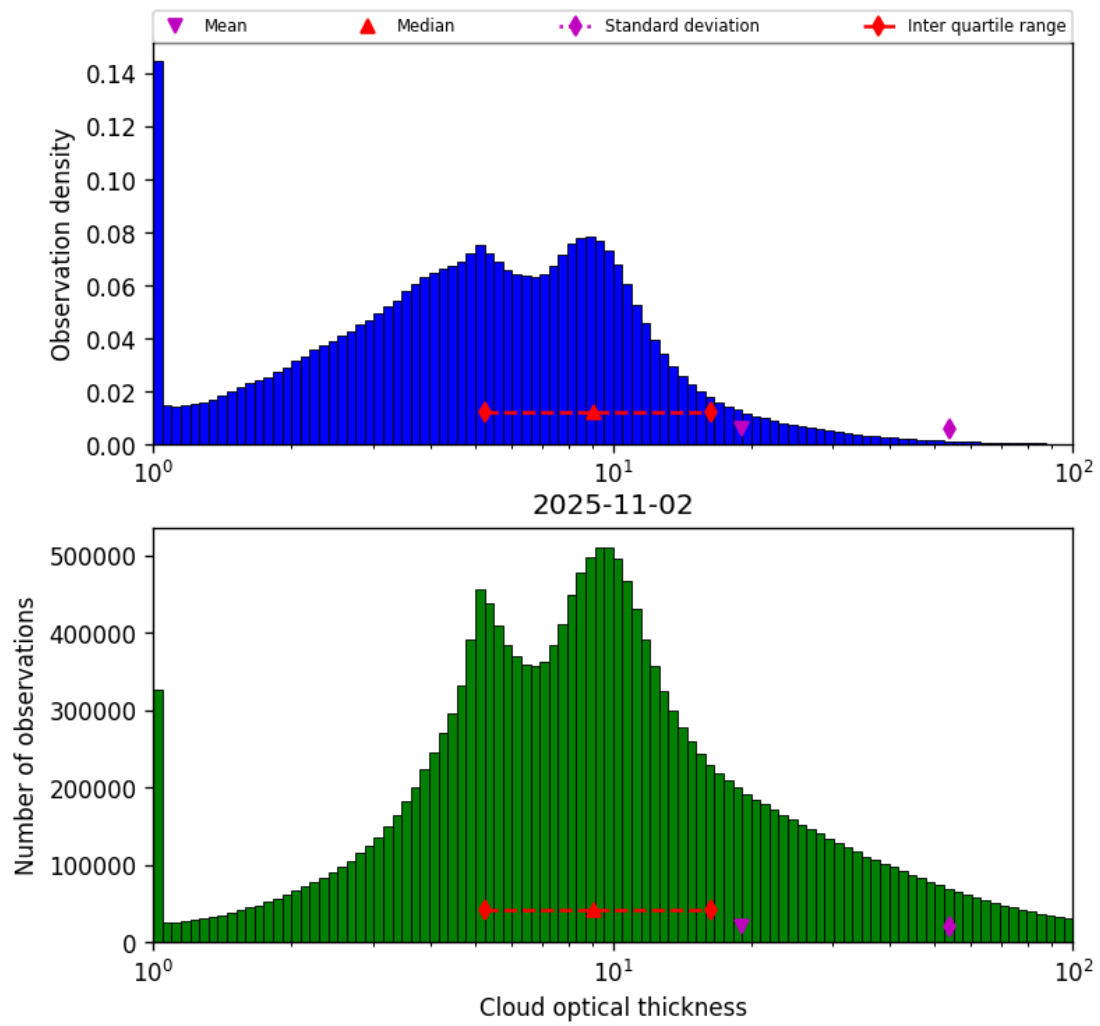


Figure 39: Histogram of “Cloud optical thickness” for 2025-11-02 to 2025-11-03

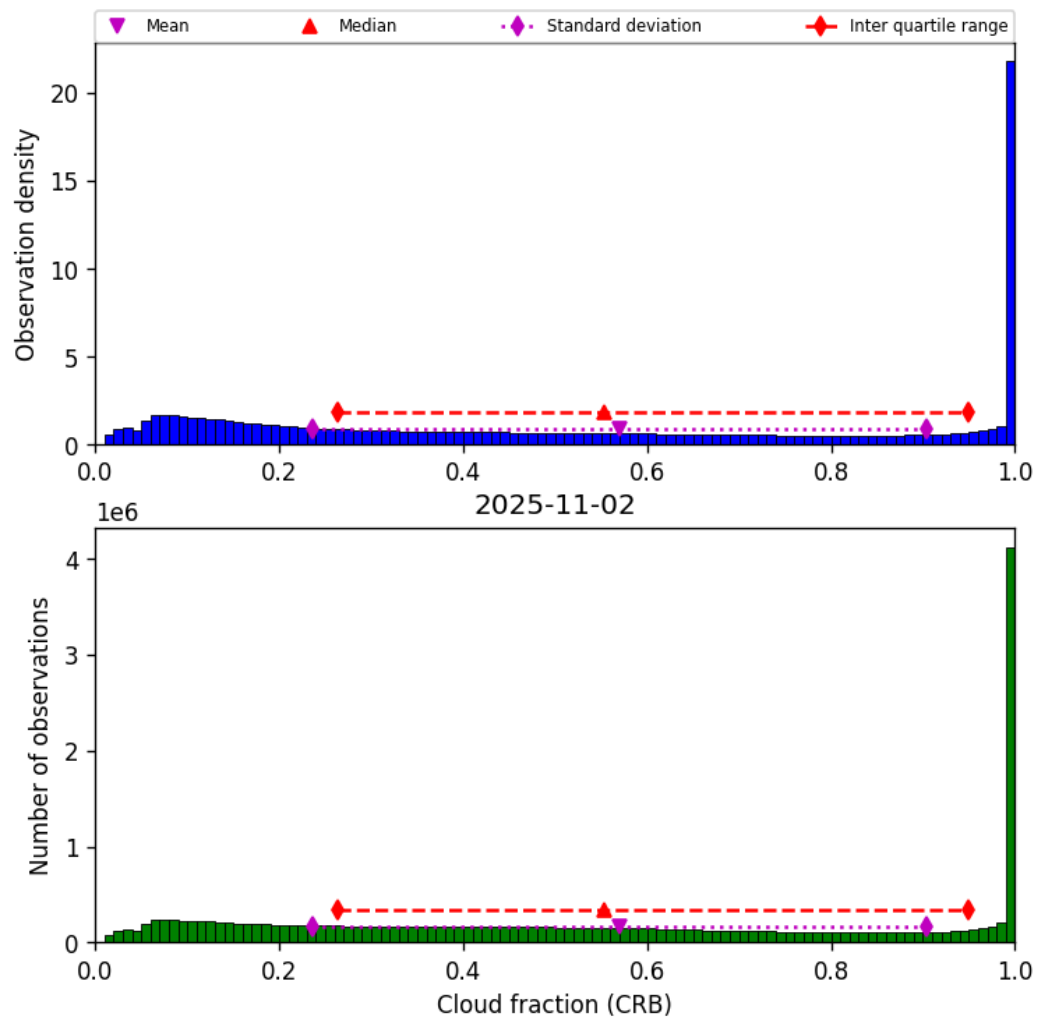


Figure 40: Histogram of “Cloud fraction (CRB)” for 2025-11-02 to 2025-11-03

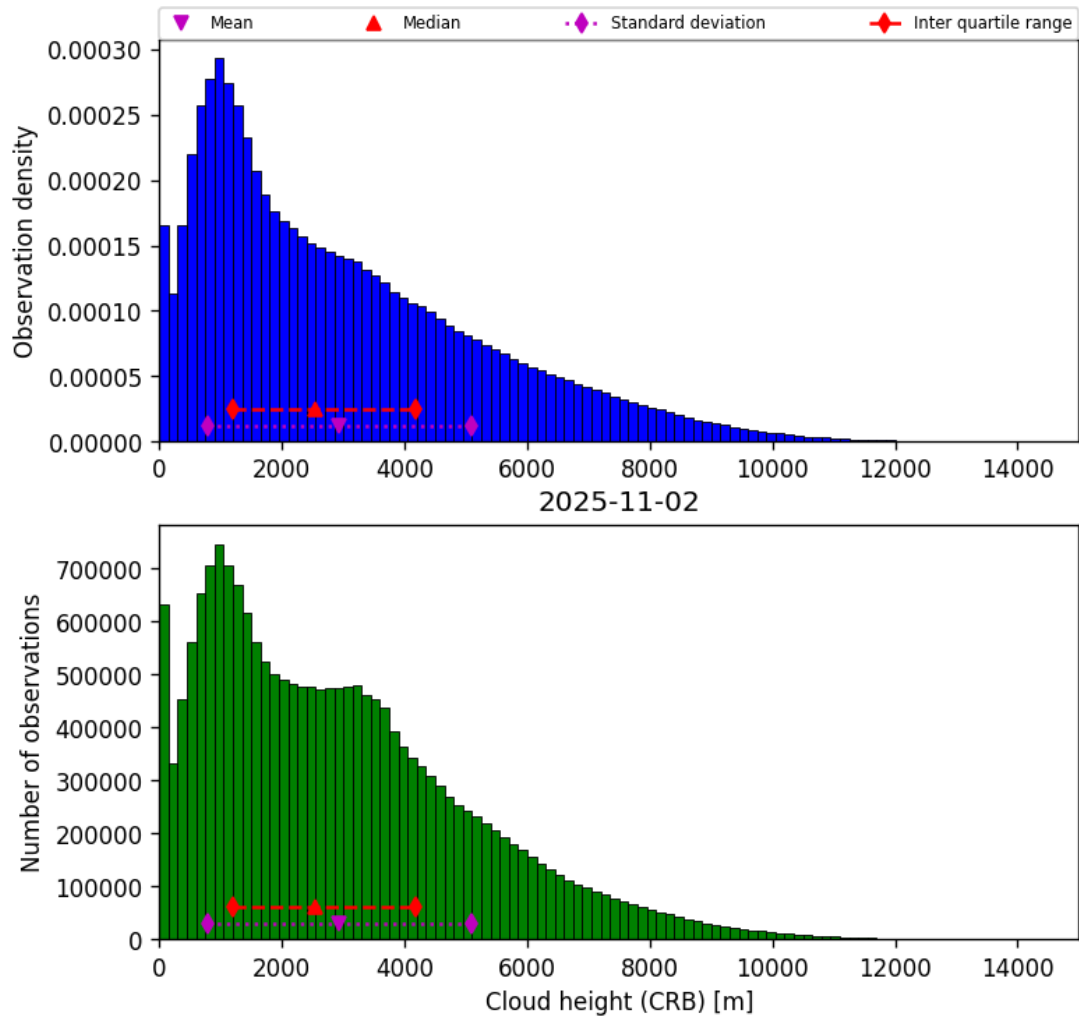


Figure 41: Histogram of “Cloud height (CRB)” for 2025-11-02 to 2025-11-03

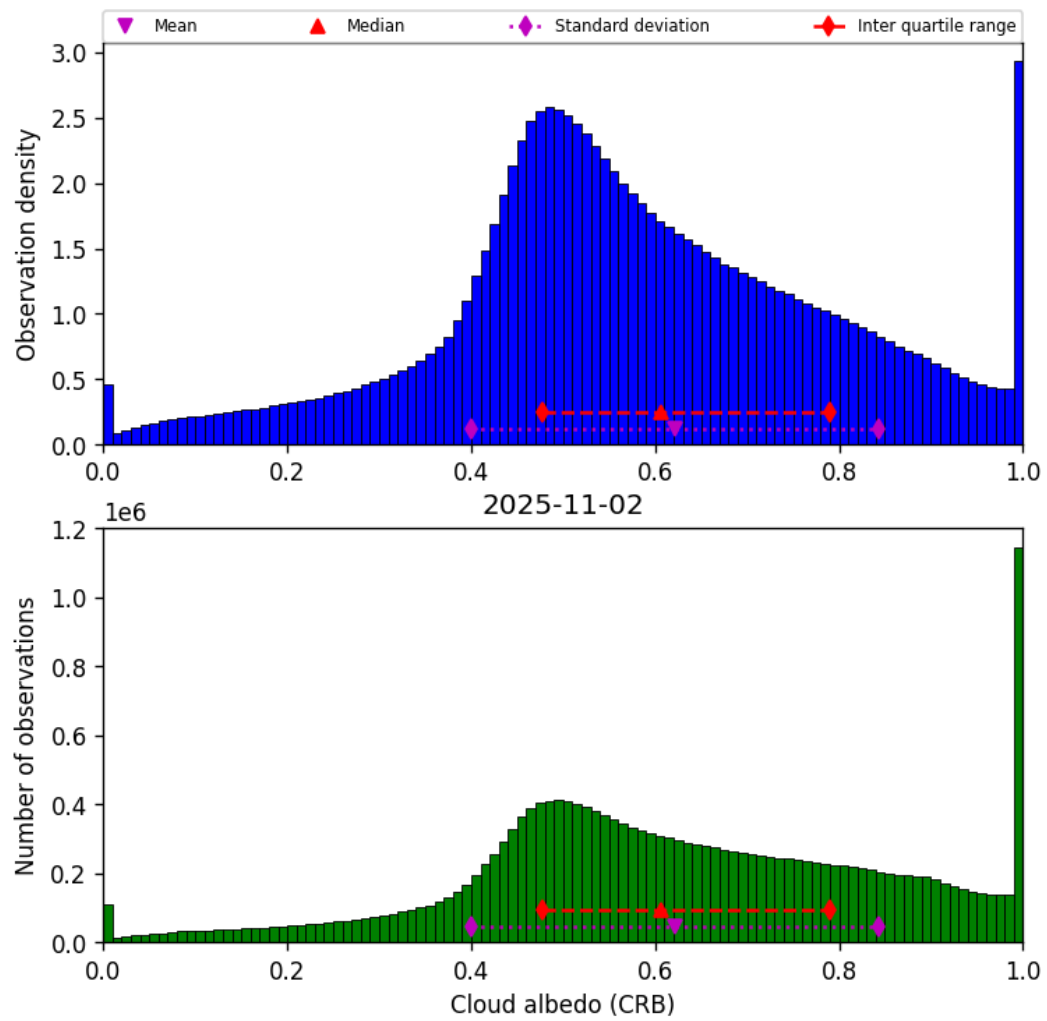


Figure 42: Histogram of “Cloud albedo (CRB)” for 2025-11-02 to 2025-11-03

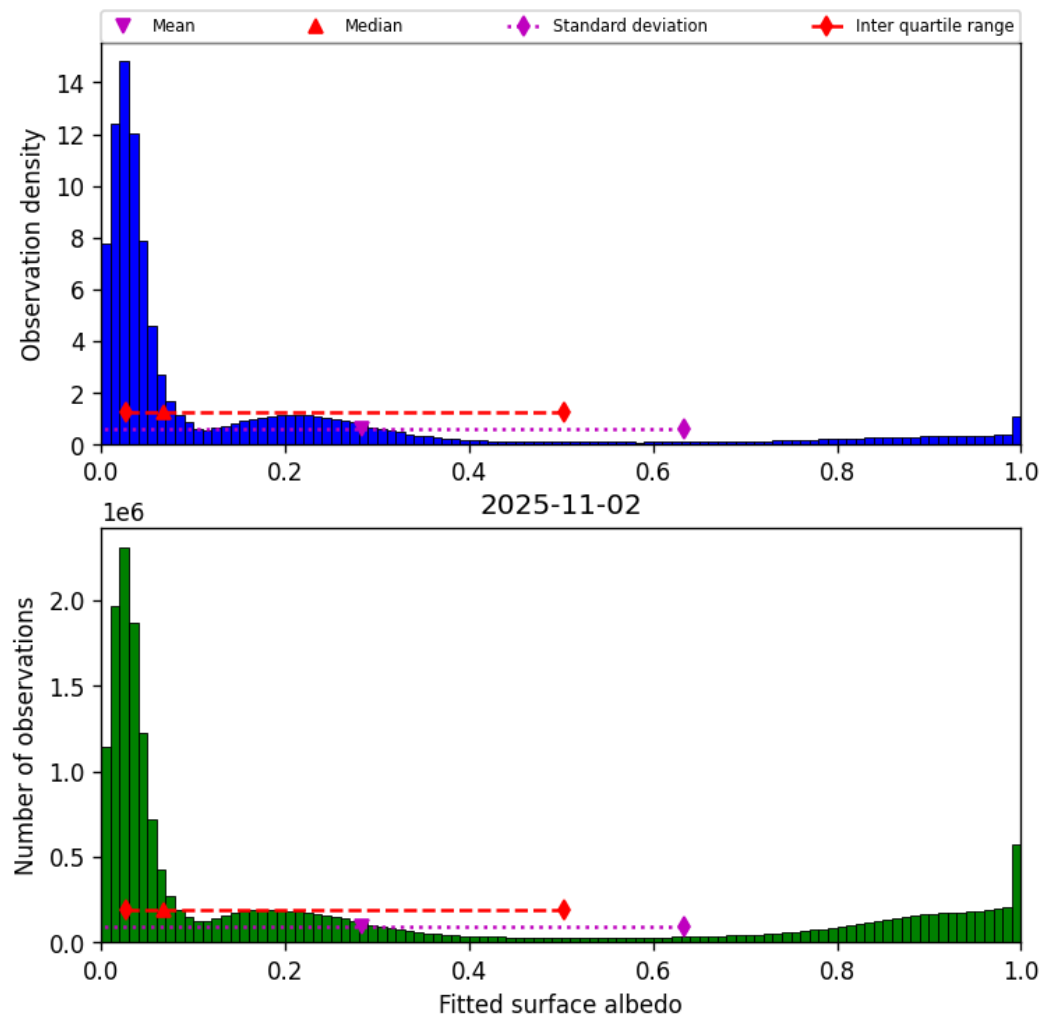


Figure 43: Histogram of “Fitted surface albedo” for 2025-11-02 to 2025-11-03

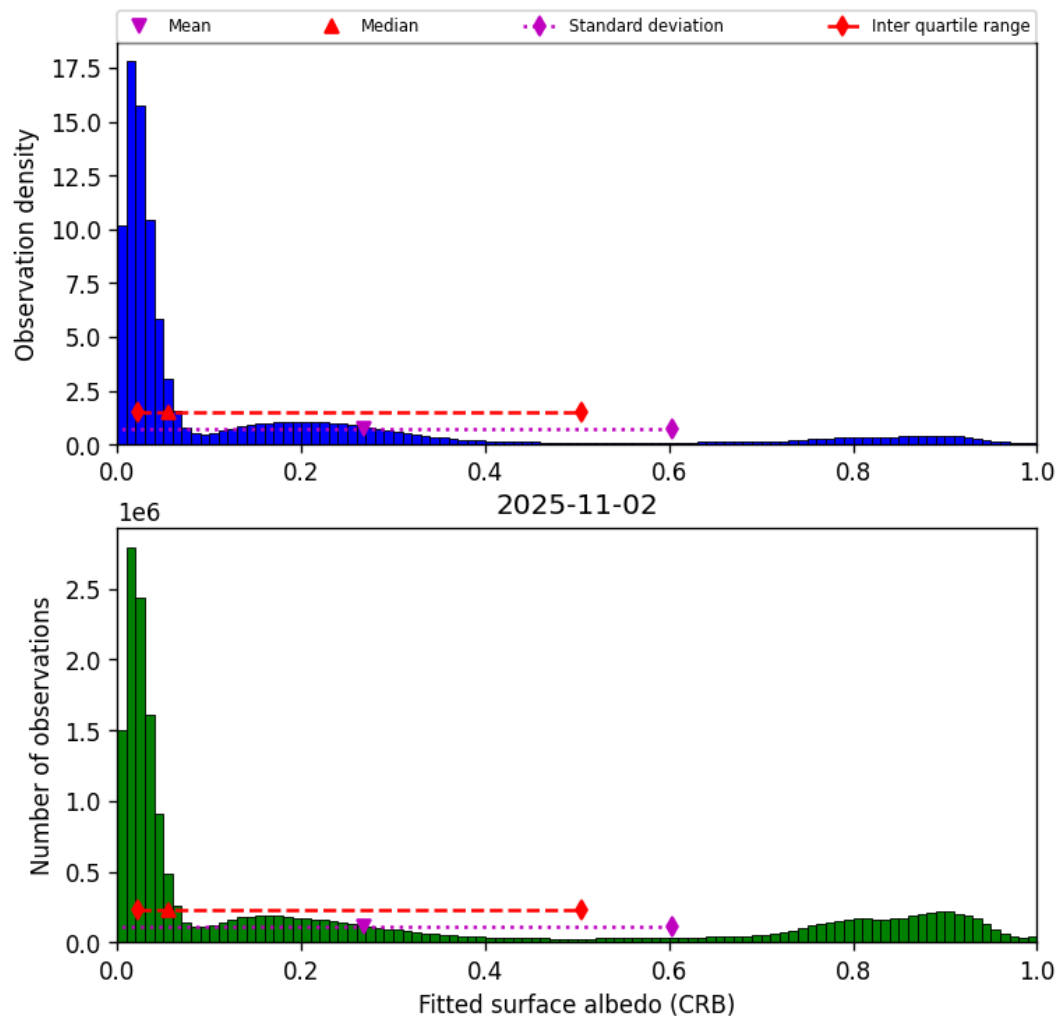


Figure 44: Histogram of “Fitted surface albedo (CRB)” for 2025-11-02 to 2025-11-03

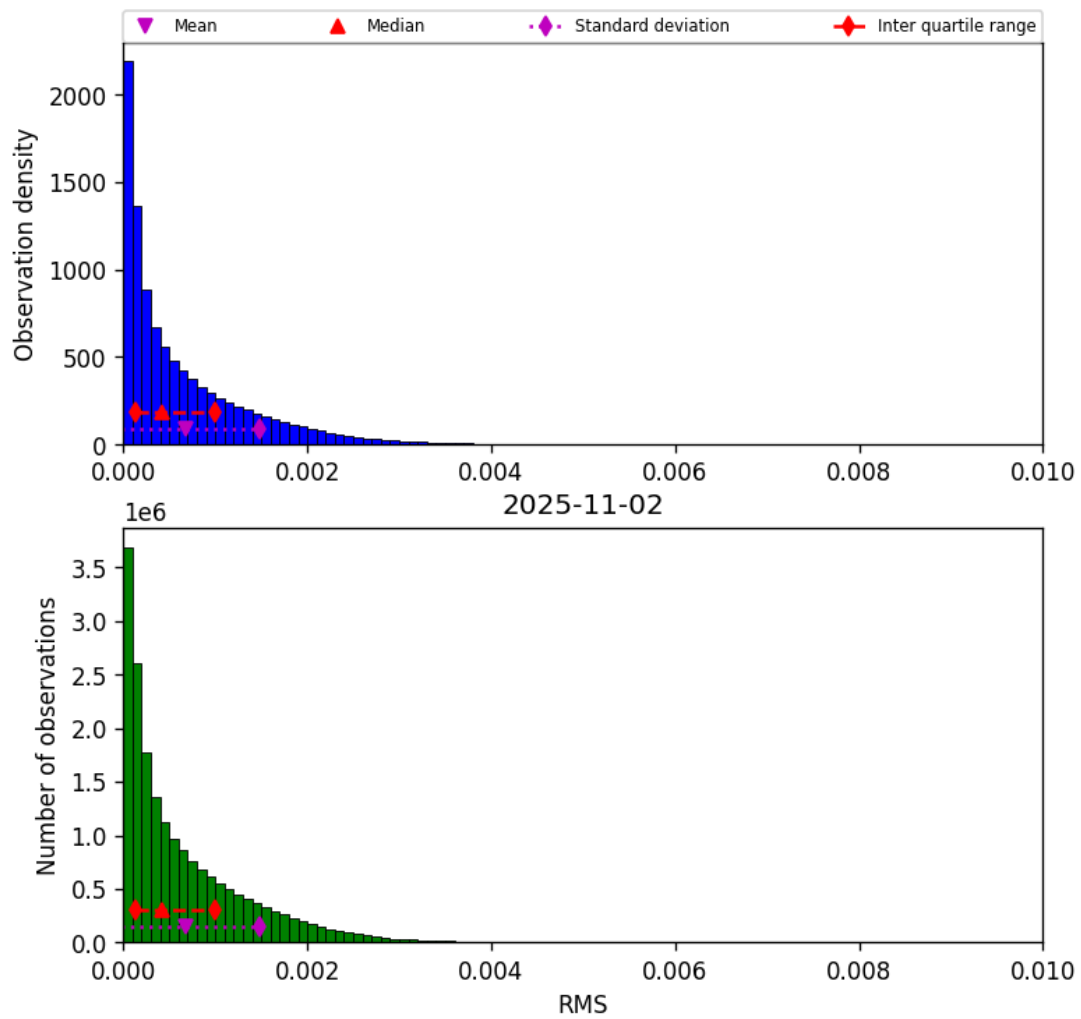


Figure 45: Histogram of “RMS” for 2025-11-02 to 2025-11-03

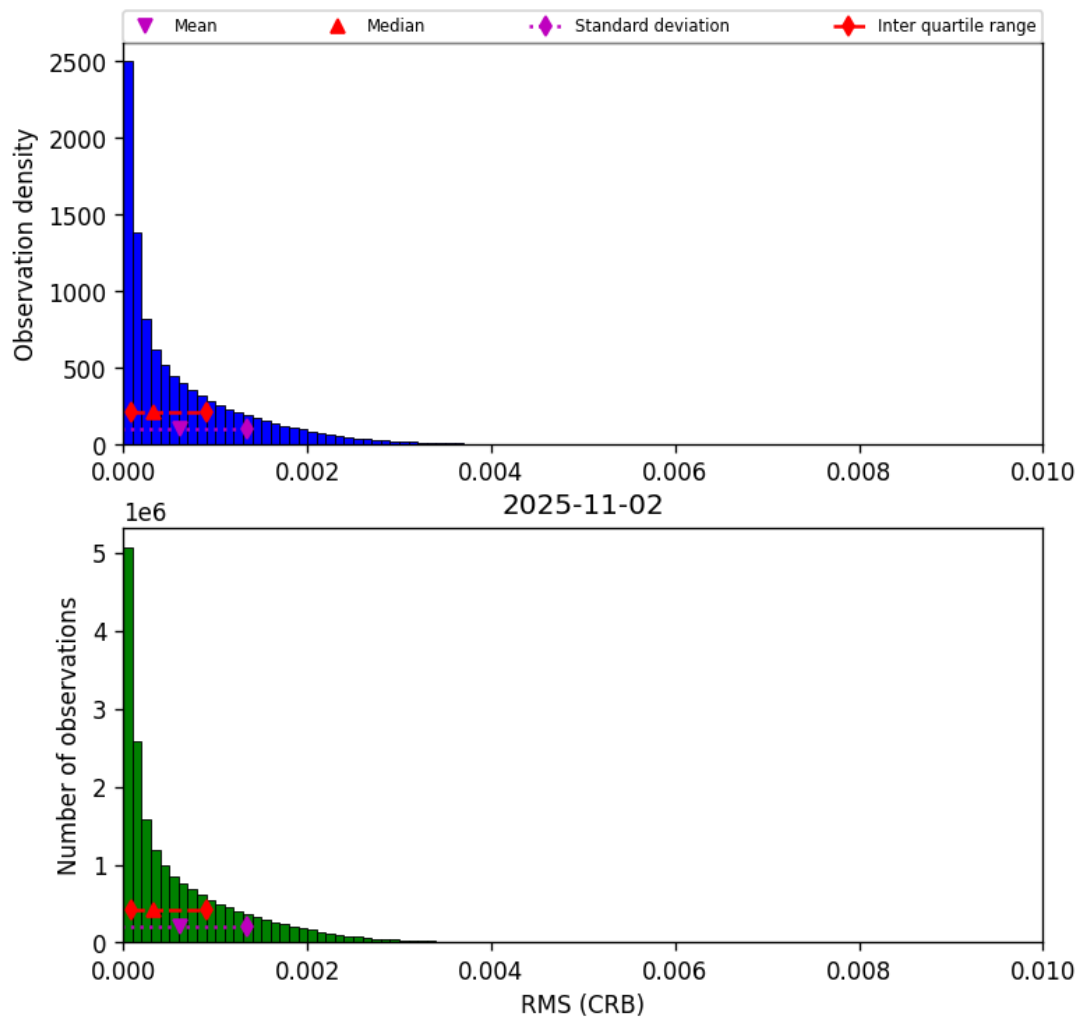


Figure 46: Histogram of “RMS (CRB)” for 2025-11-02 to 2025-11-03

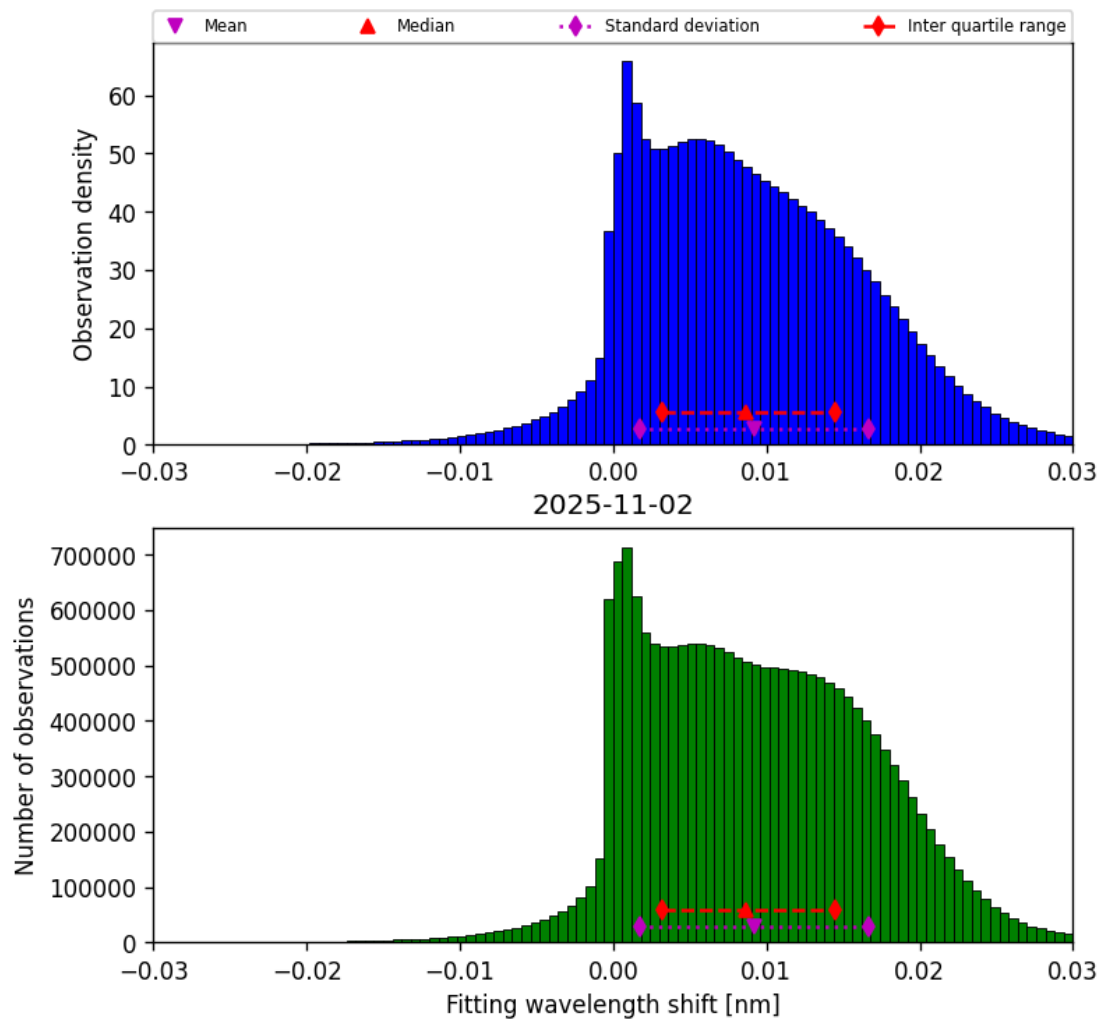


Figure 47: Histogram of “Fitting wavelength shift” for 2025-11-02 to 2025-11-03

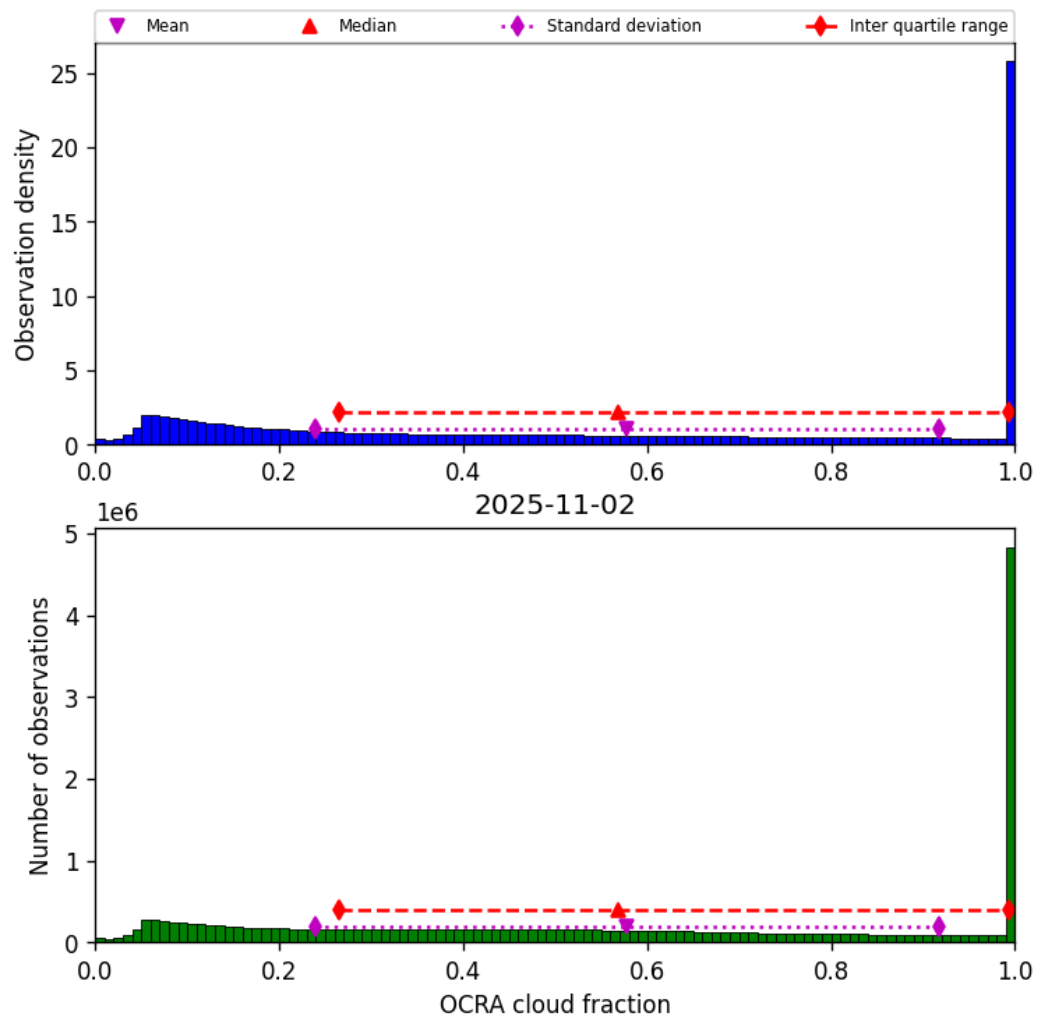


Figure 48: Histogram of “OCRA cloud fraction” for 2025-11-02 to 2025-11-03

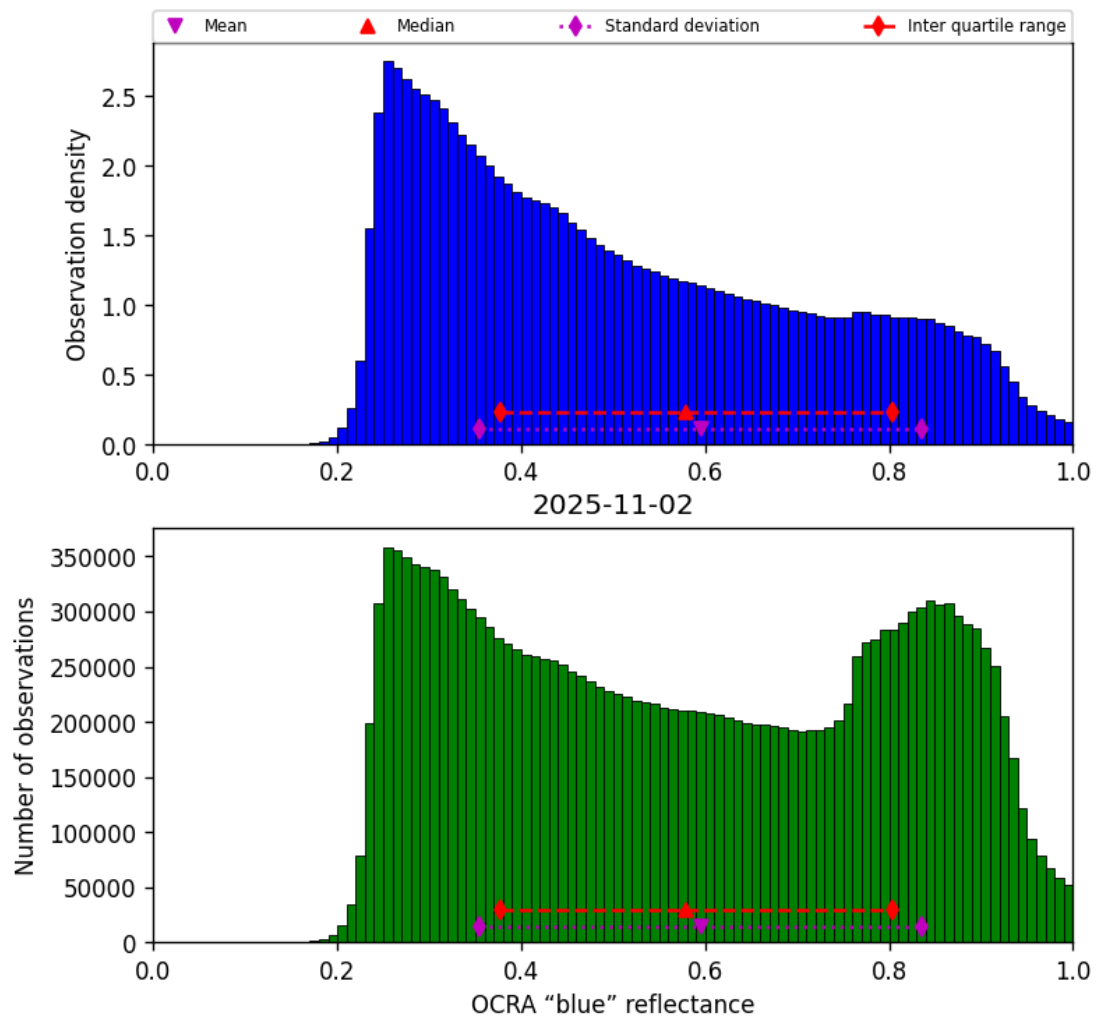


Figure 49: Histogram of “OCRA “blue” reflectance” for 2025-11-02 to 2025-11-03

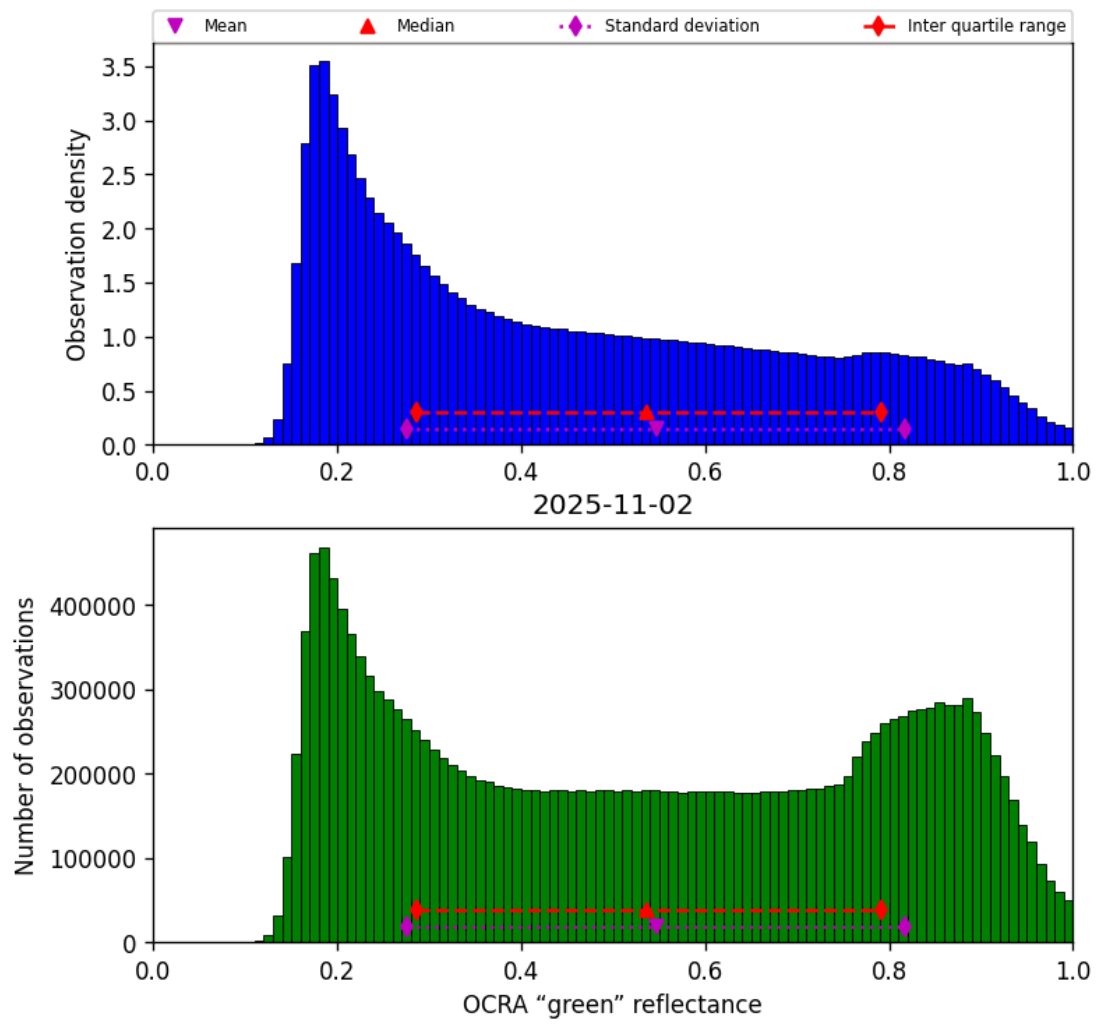


Figure 50: Histogram of “OCRA “green” reflectance” for 2025-11-02 to 2025-11-03

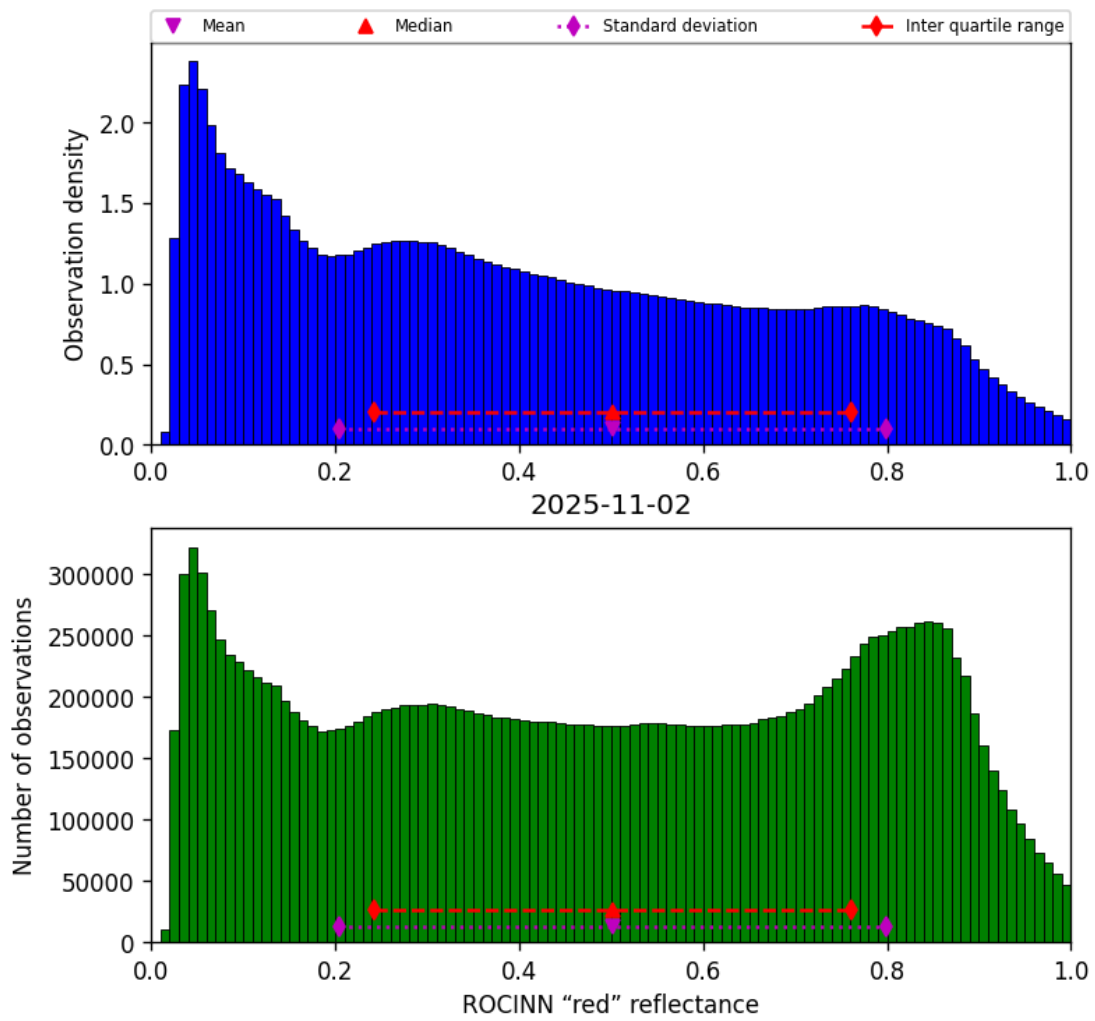


Figure 51: Histogram of “ROCINN “red” reflectance” for 2025-11-02 to 2025-11-03

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.

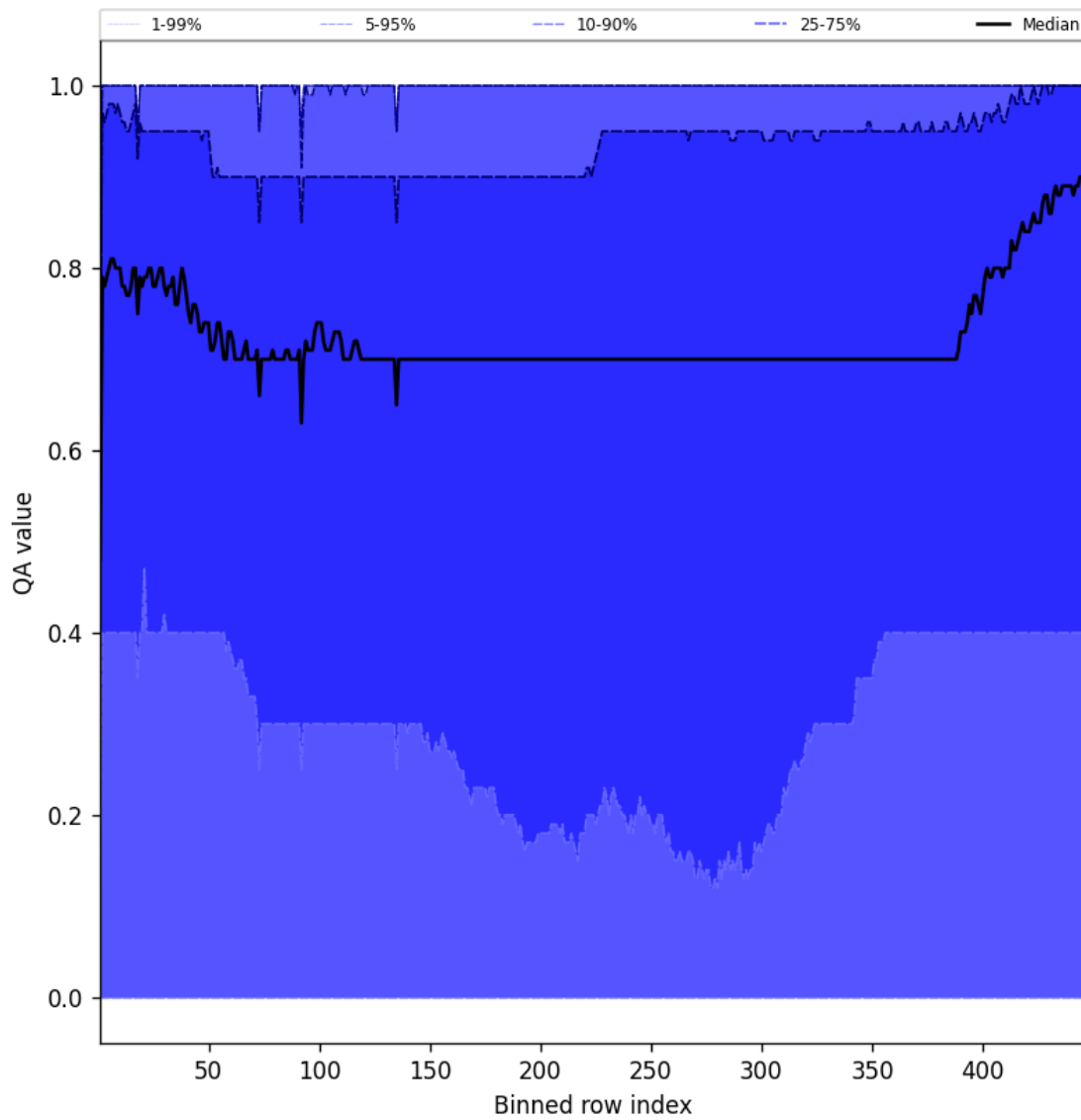


Figure 52: Along track statistics of “QA value” for 2025-11-02 to 2025-11-03

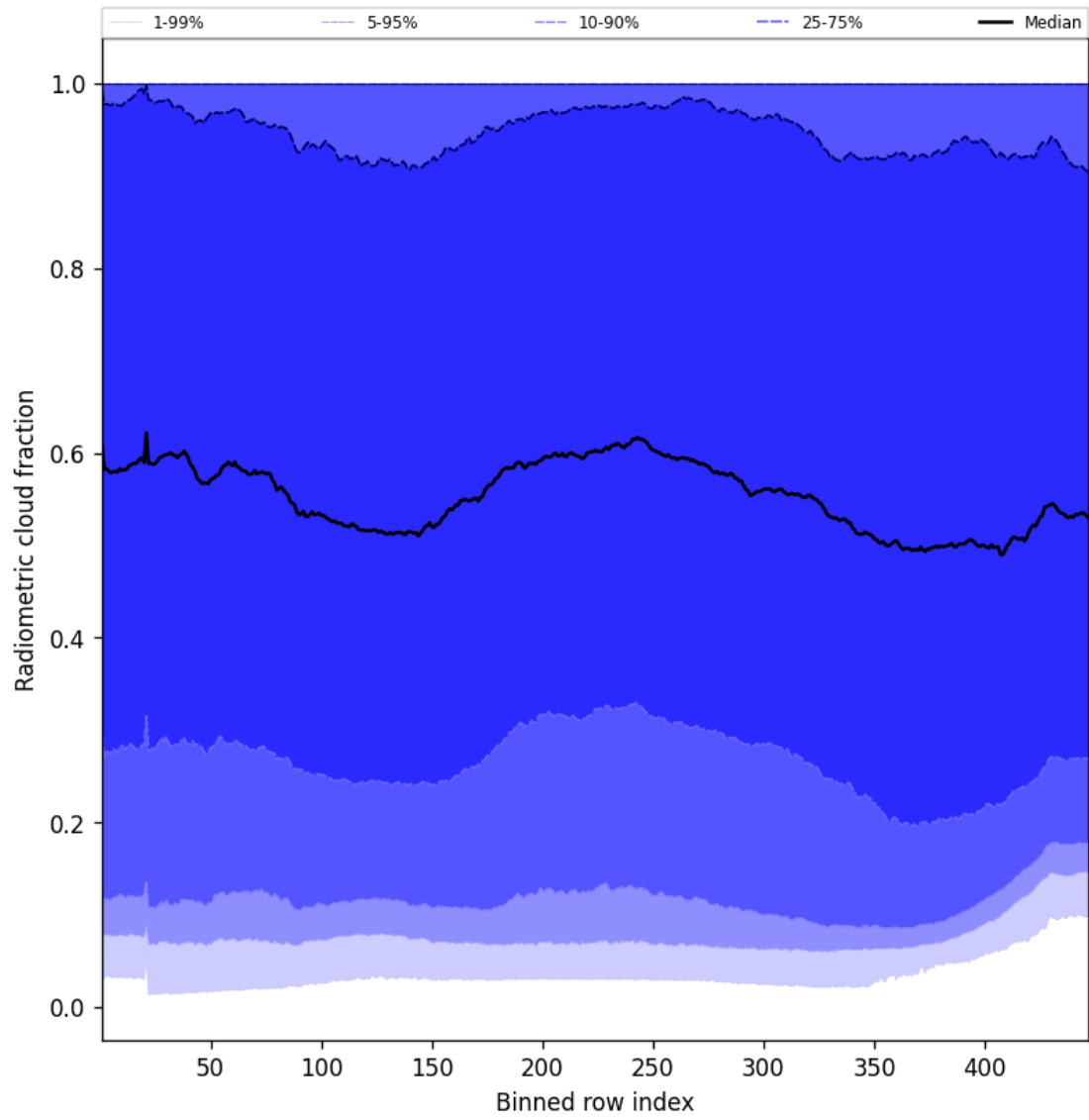


Figure 53: Along track statistics of “Radiometric cloud fraction” for 2025-11-02 to 2025-11-03

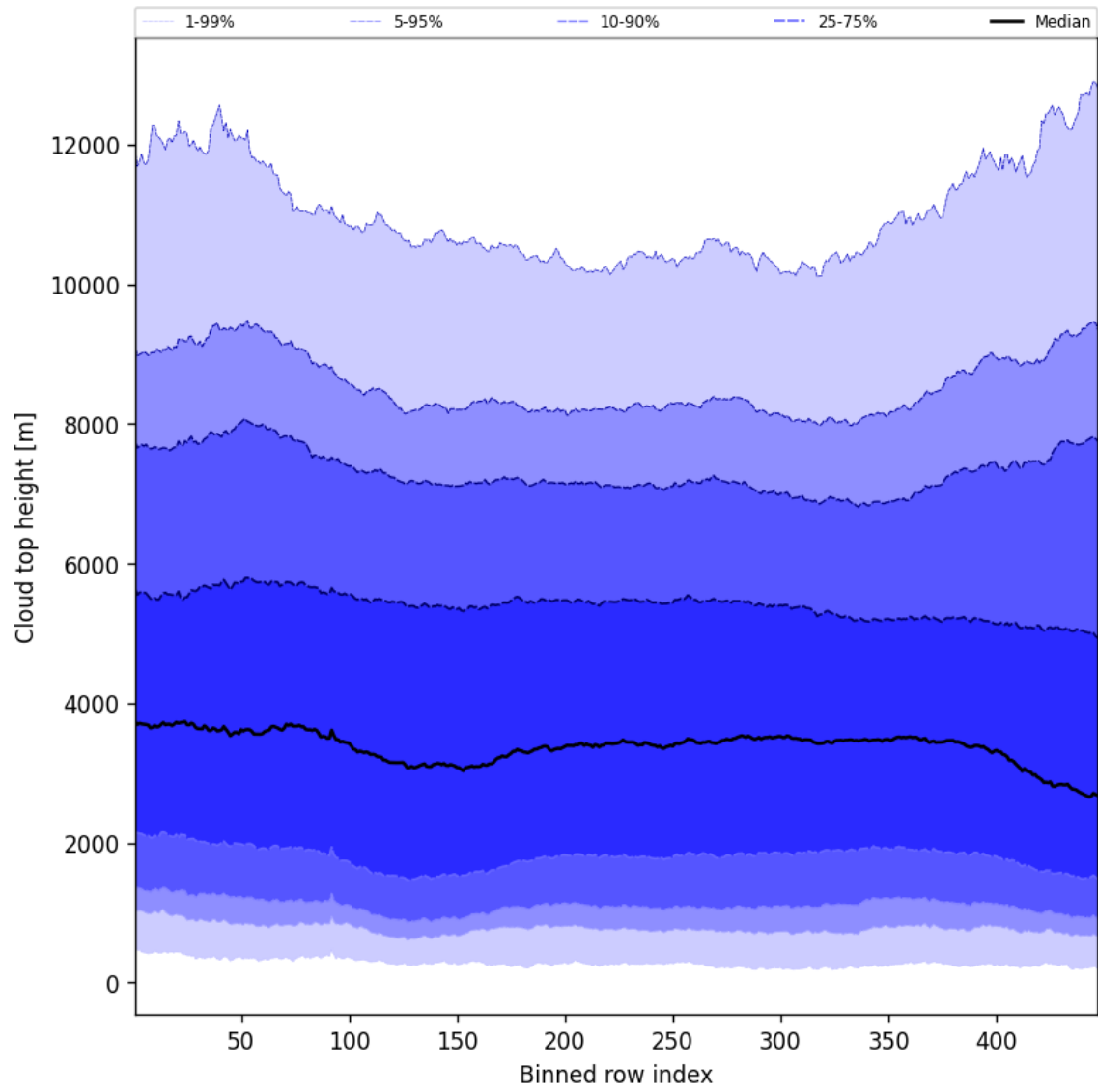


Figure 54: Along track statistics of “Cloud top height” for 2025-11-02 to 2025-11-03

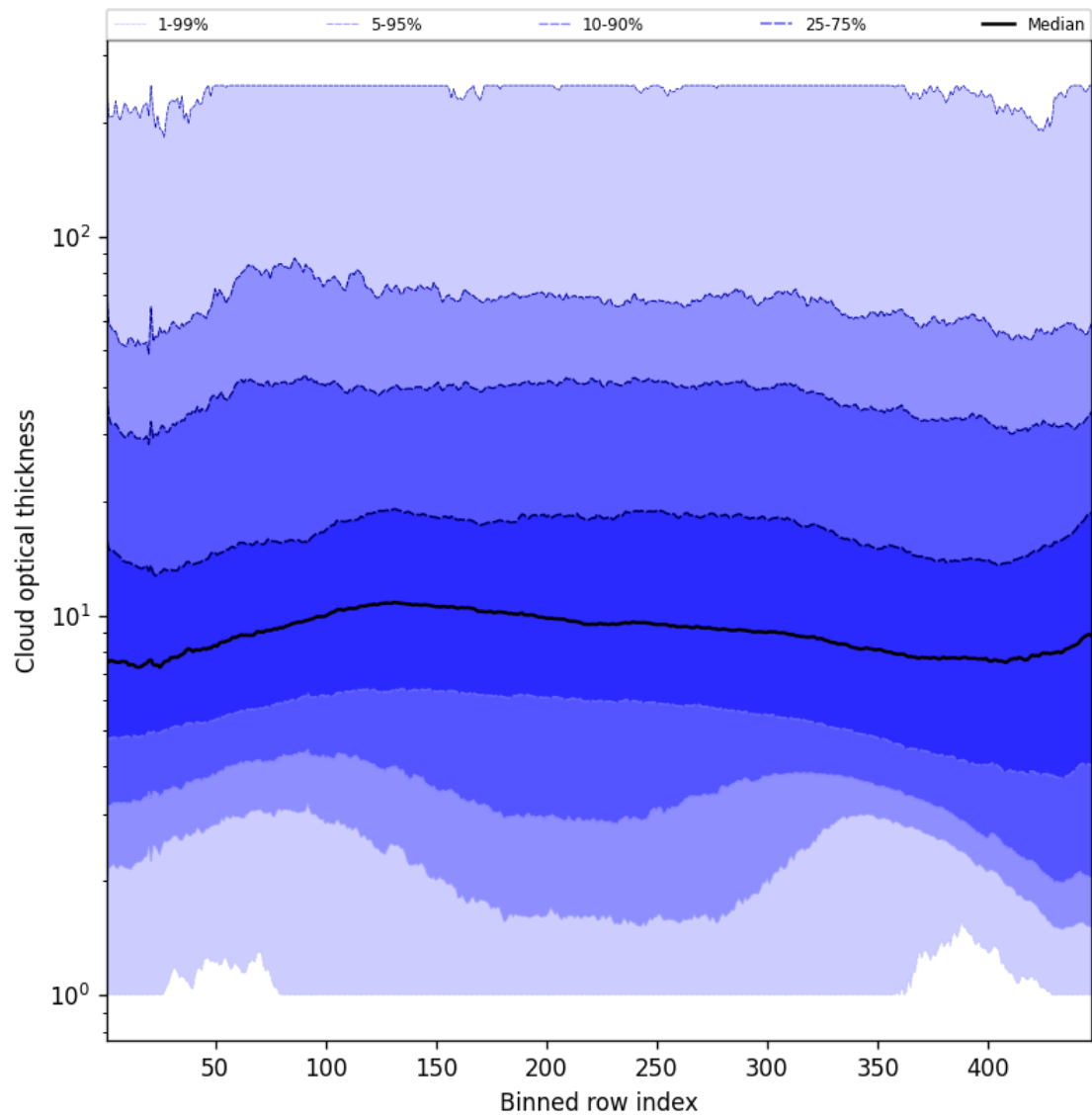


Figure 55: Along track statistics of “Cloud optical thickness” for 2025-11-02 to 2025-11-03

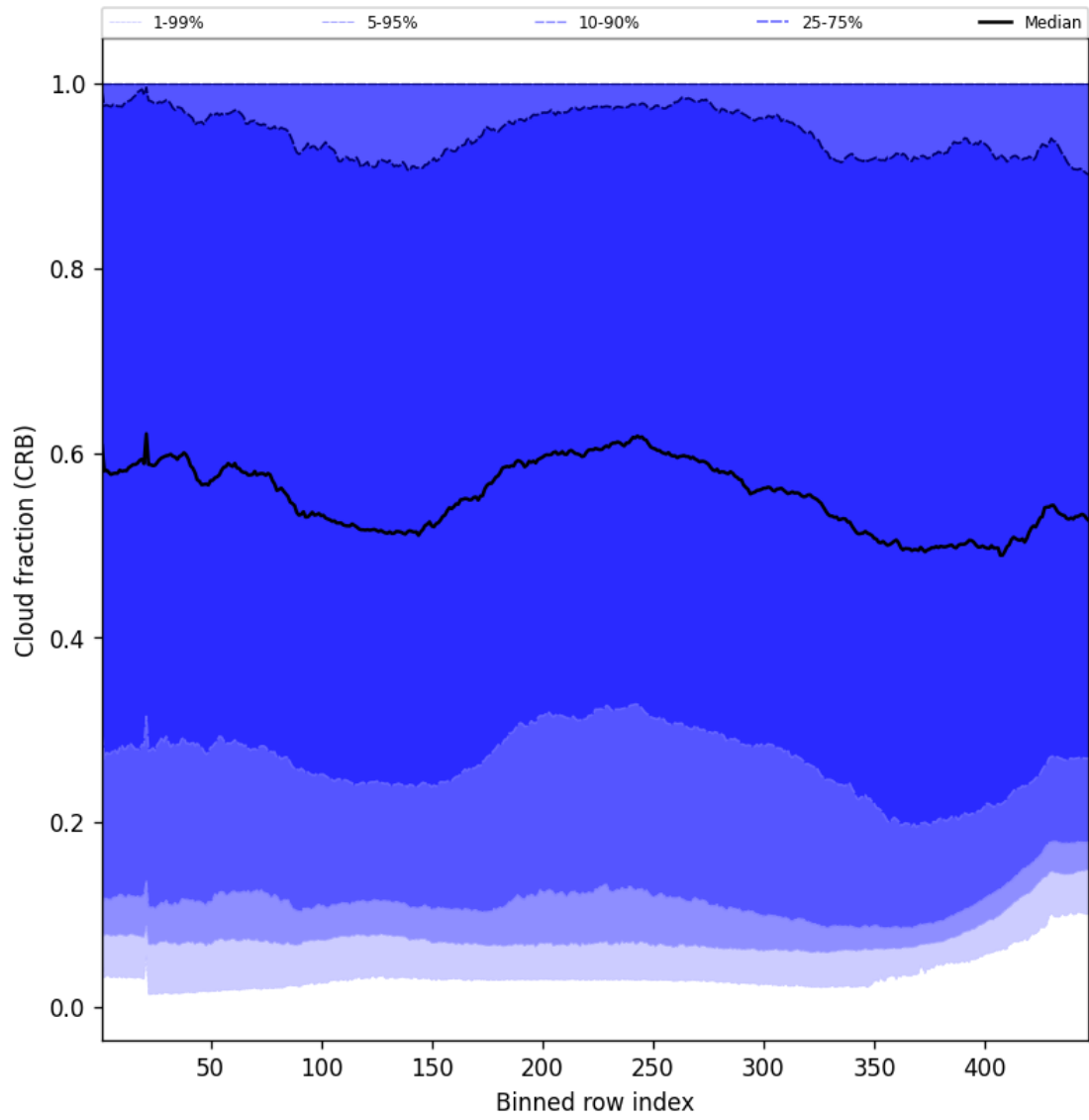


Figure 56: Along track statistics of “Cloud fraction (CRB)” for 2025-11-02 to 2025-11-03

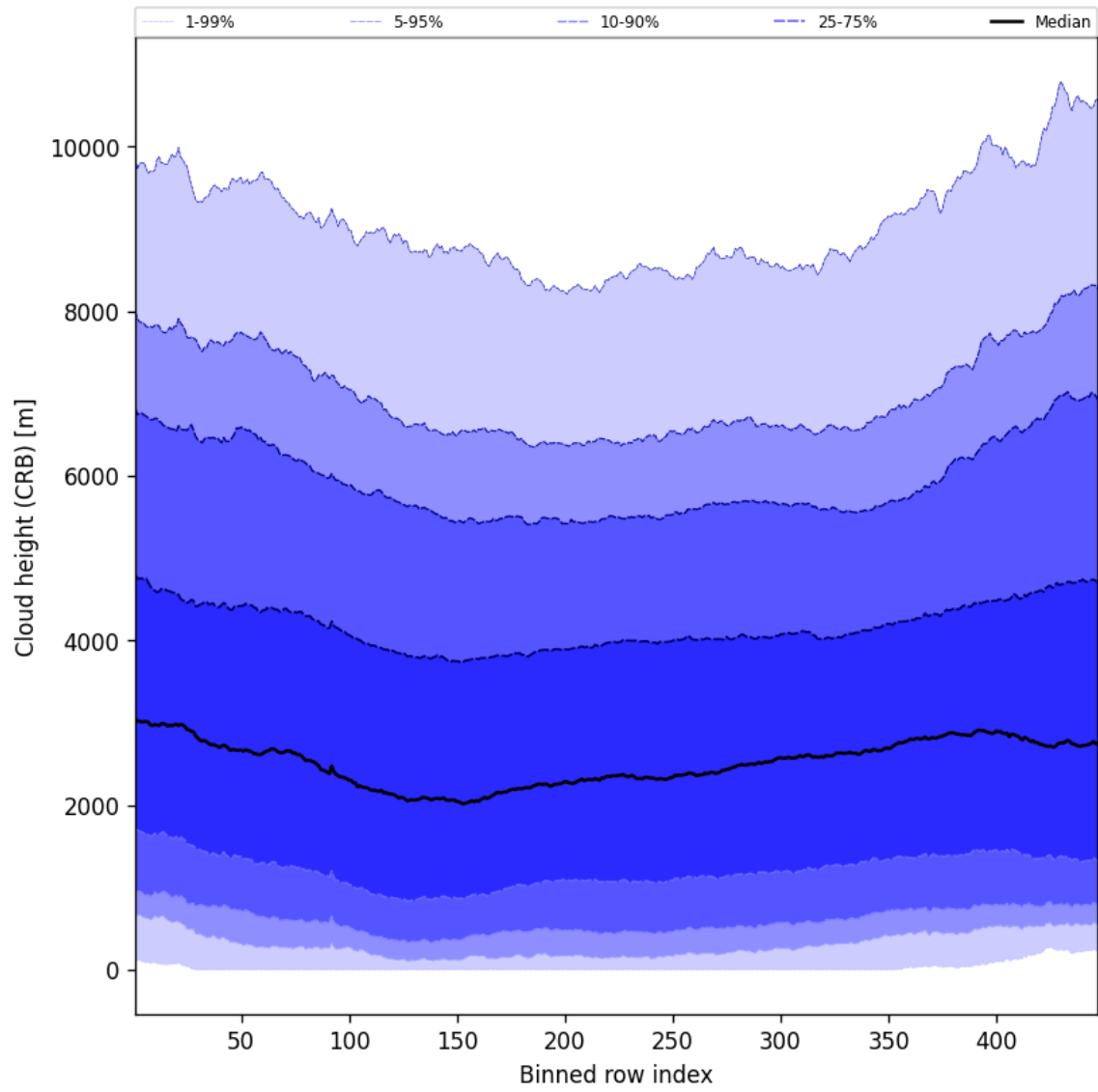


Figure 57: Along track statistics of “Cloud height (CRB)” for 2025-11-02 to 2025-11-03

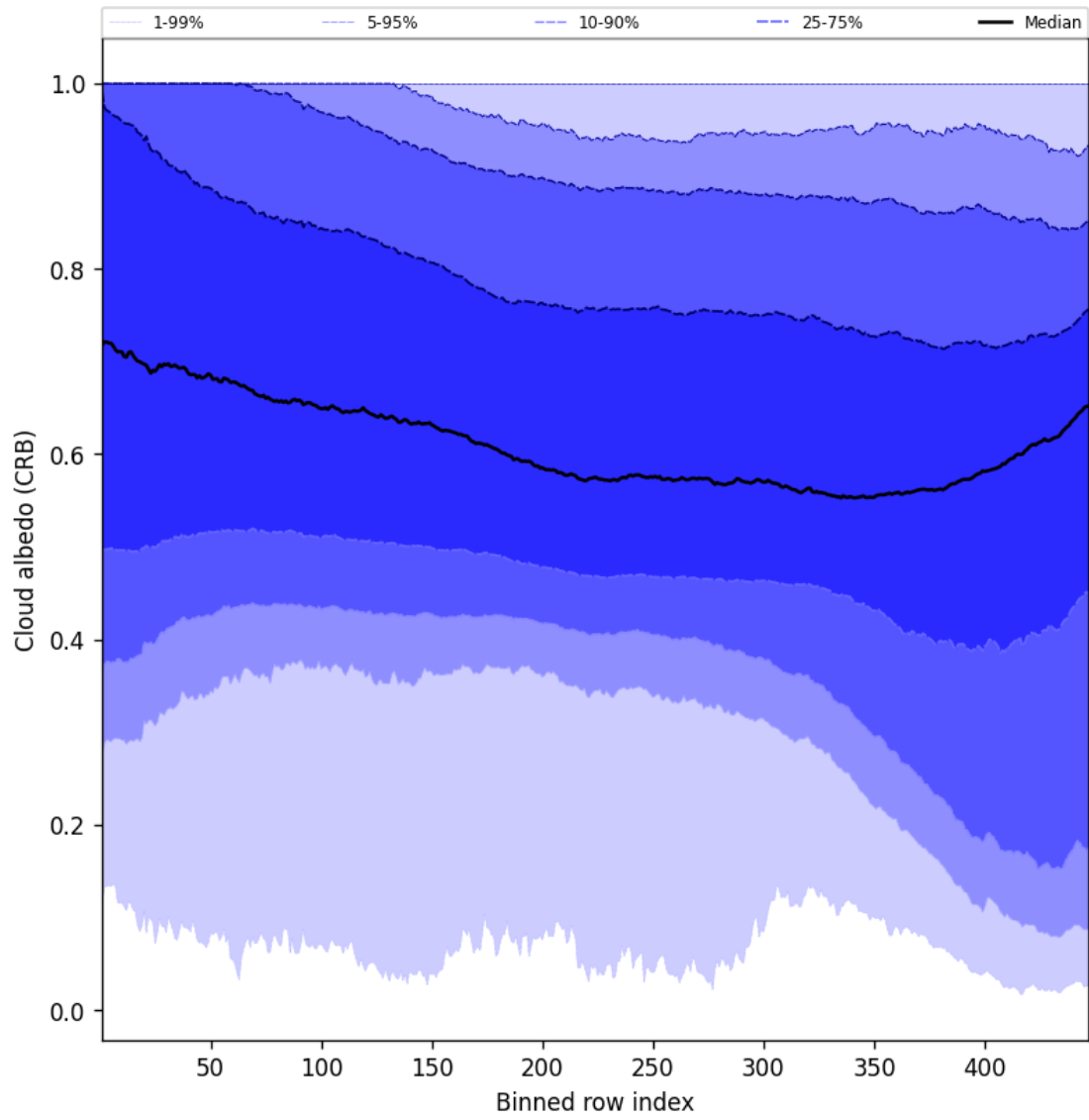


Figure 58: Along track statistics of “Cloud albedo (CRB)” for 2025-11-02 to 2025-11-03

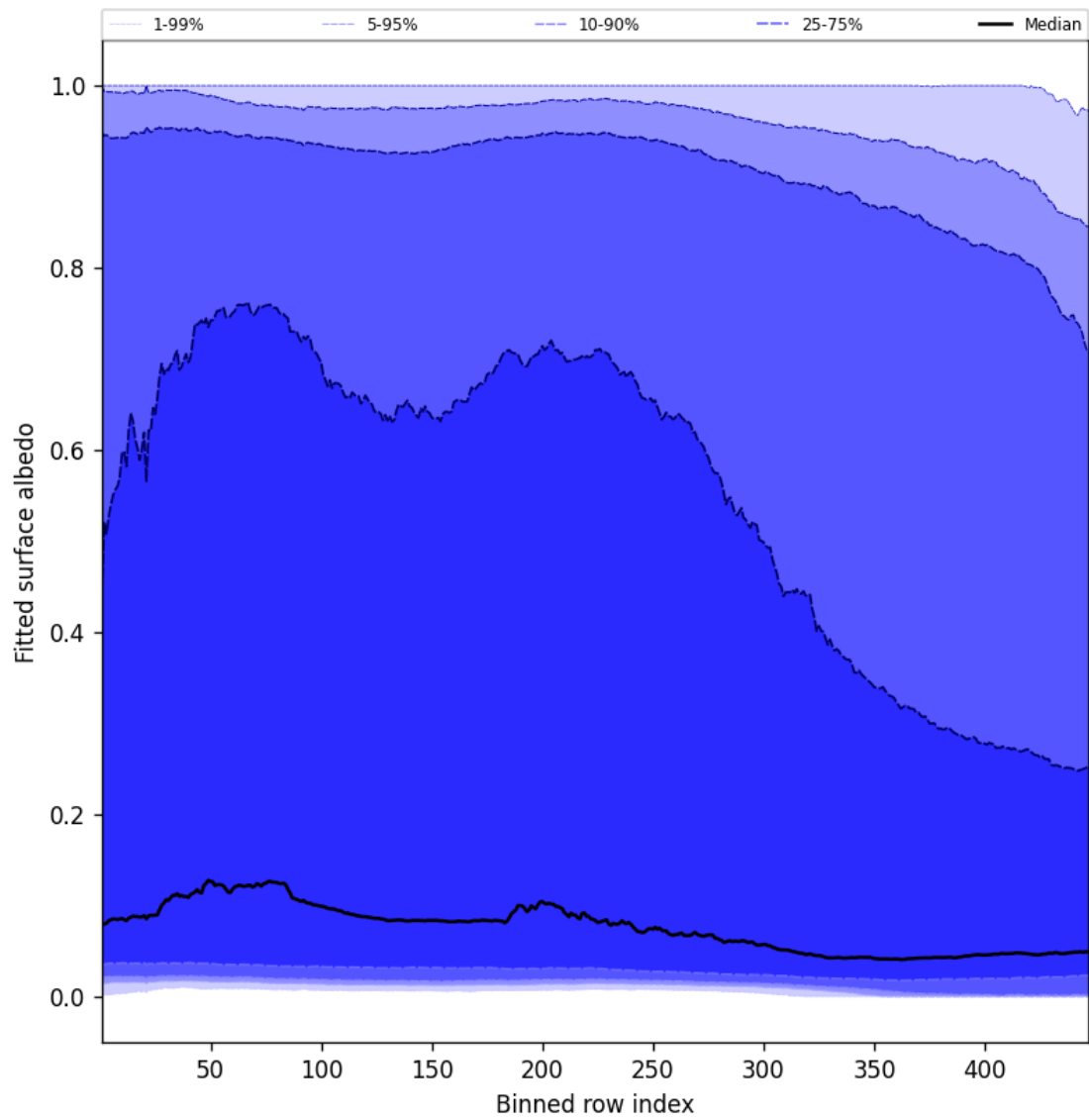


Figure 59: Along track statistics of “Fitted surface albedo” for 2025-11-02 to 2025-11-03

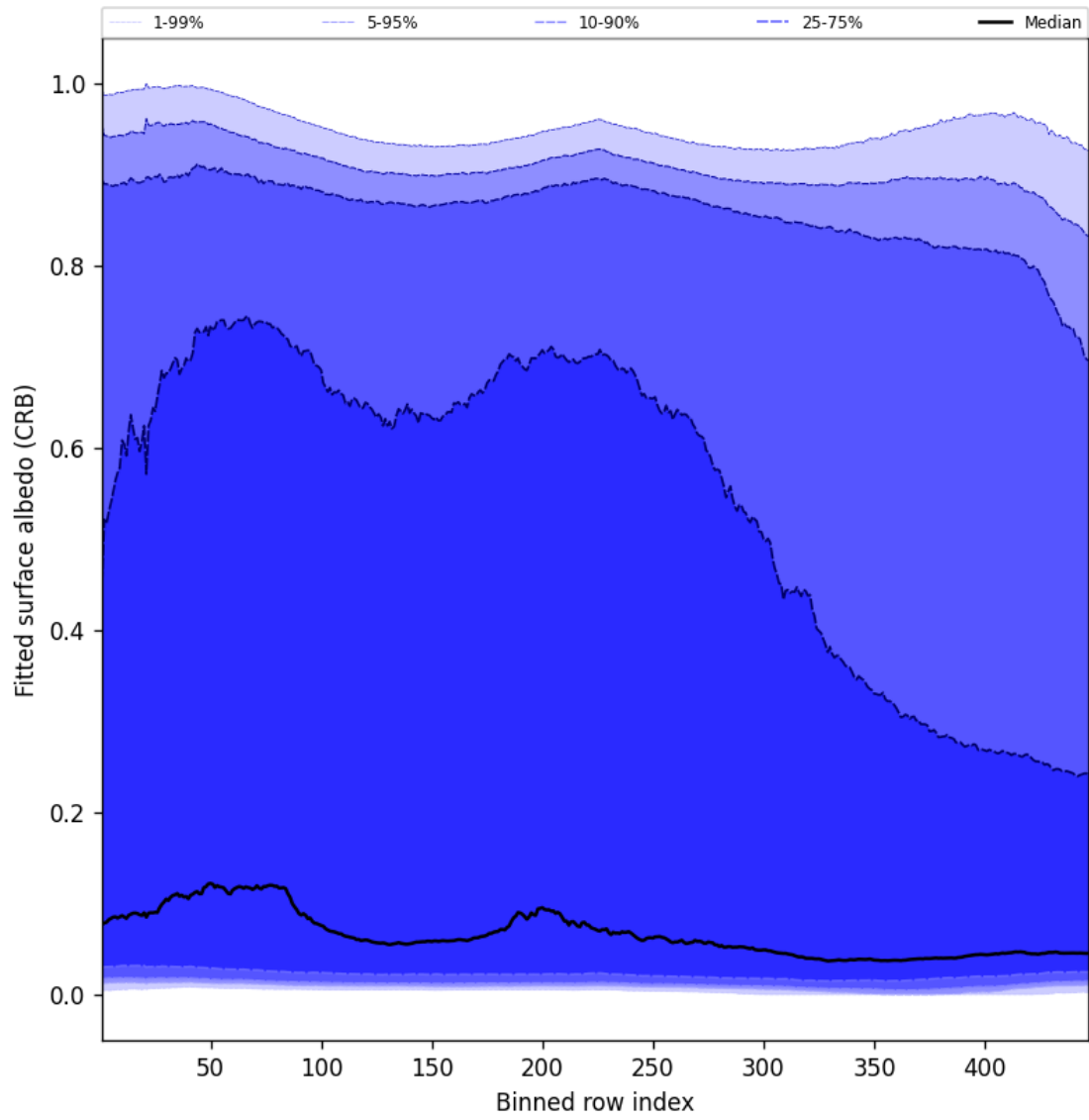


Figure 60: Along track statistics of “Fitted surface albedo (CRB)” for 2025-11-02 to 2025-11-03

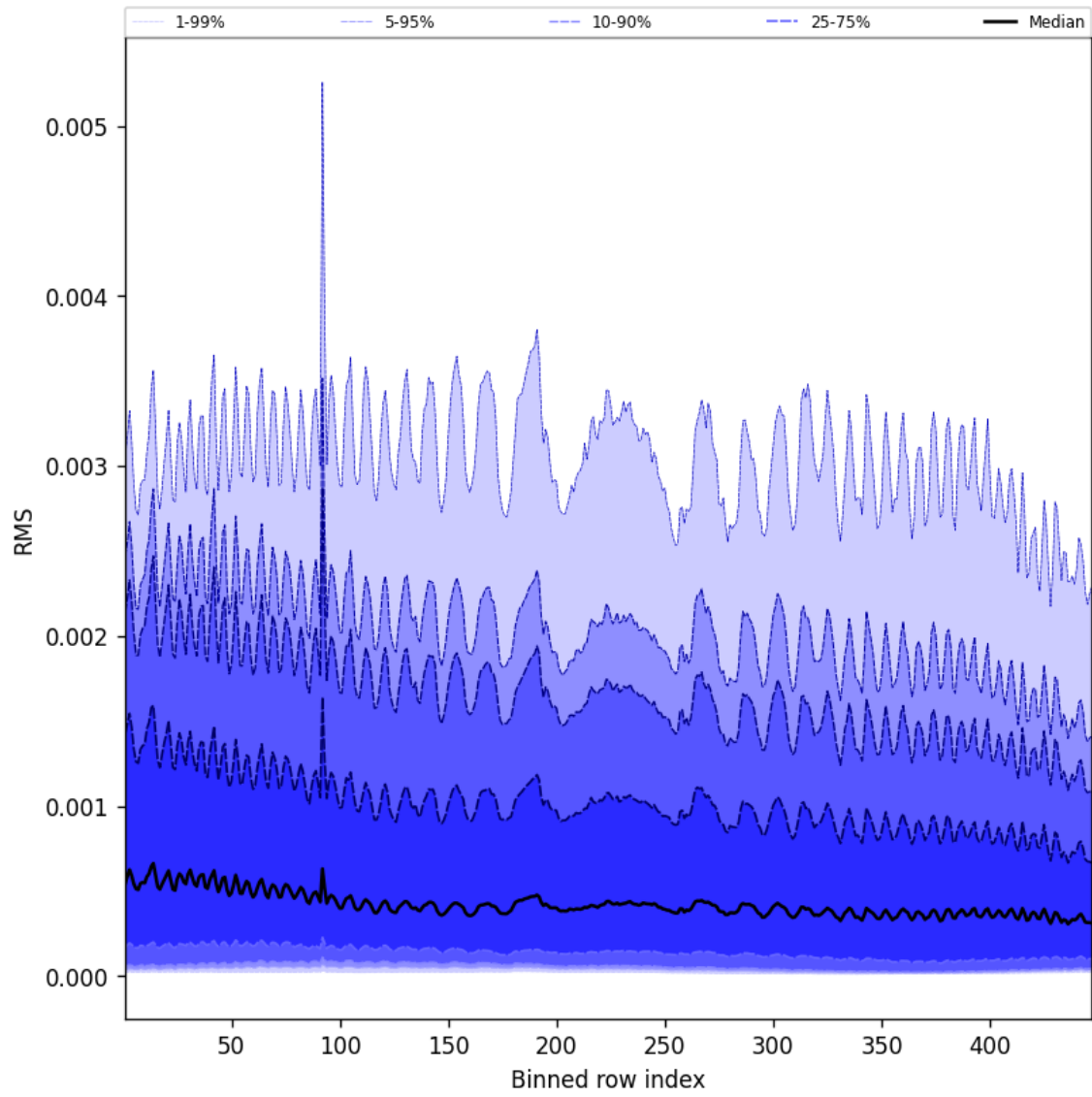


Figure 61: Along track statistics of “RMS” for 2025-11-02 to 2025-11-03

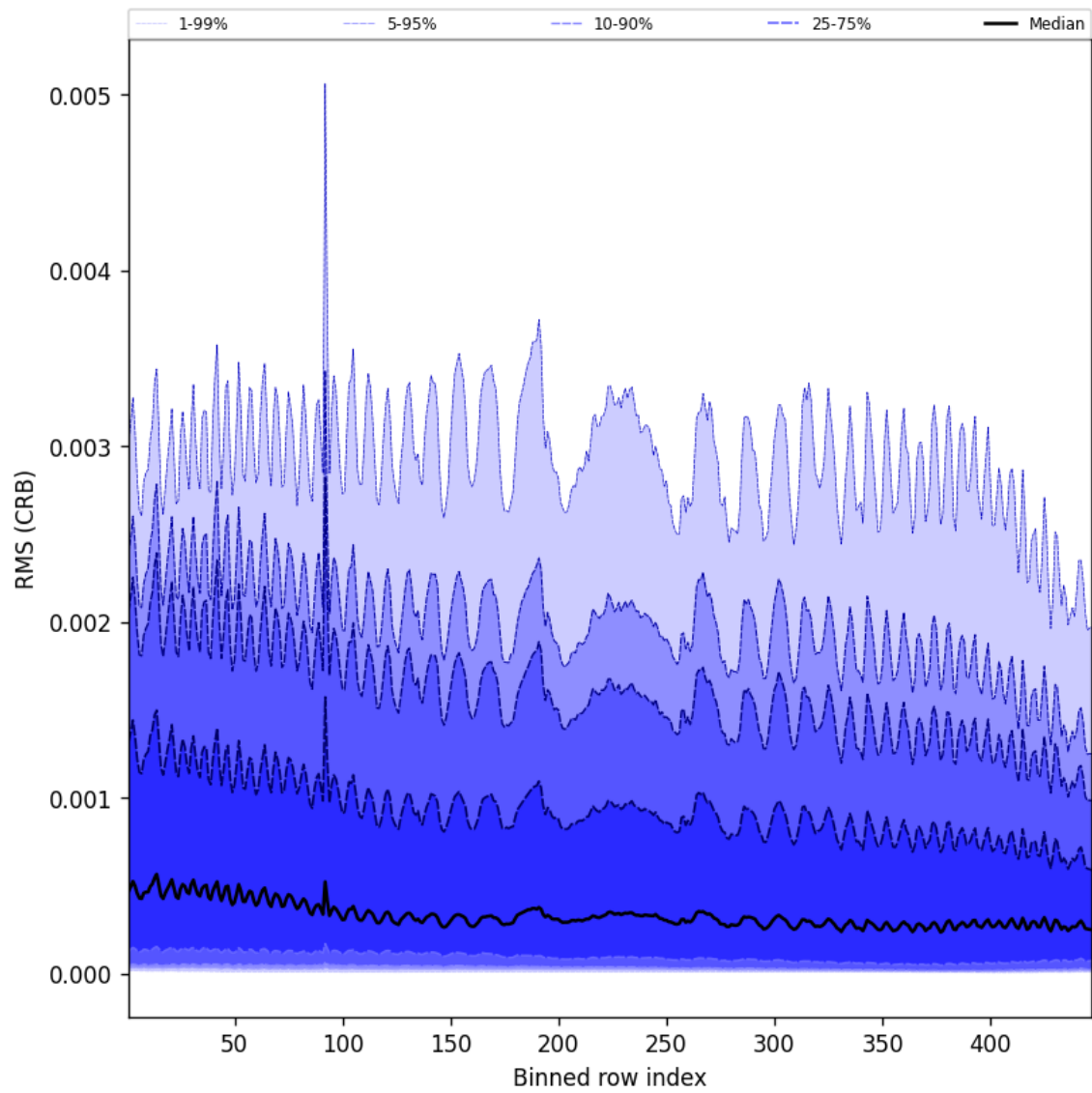


Figure 62: Along track statistics of “RMS (CRB)” for 2025-11-02 to 2025-11-03

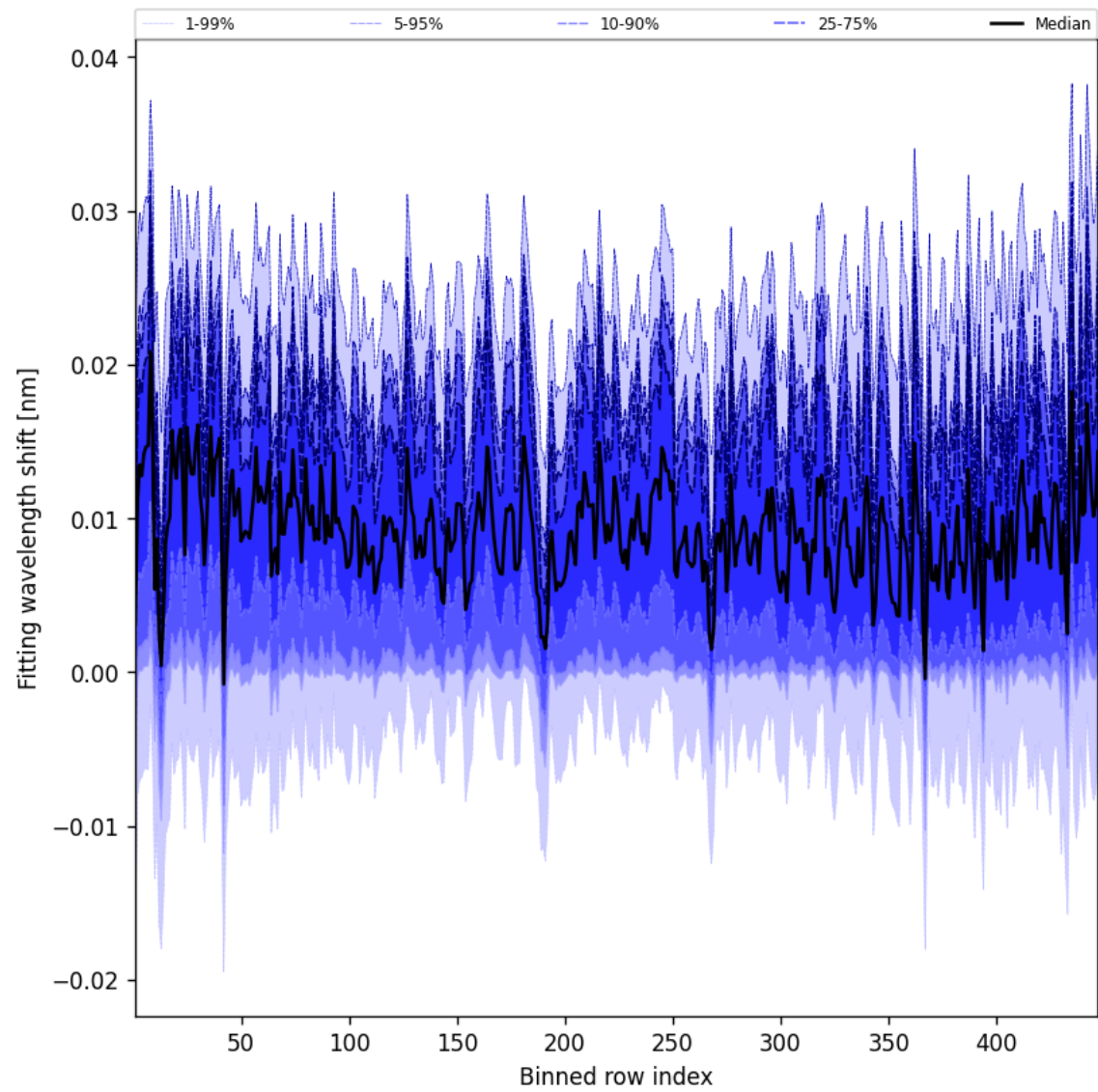


Figure 63: Along track statistics of “Fitting wavelength shift” for 2025-11-02 to 2025-11-03

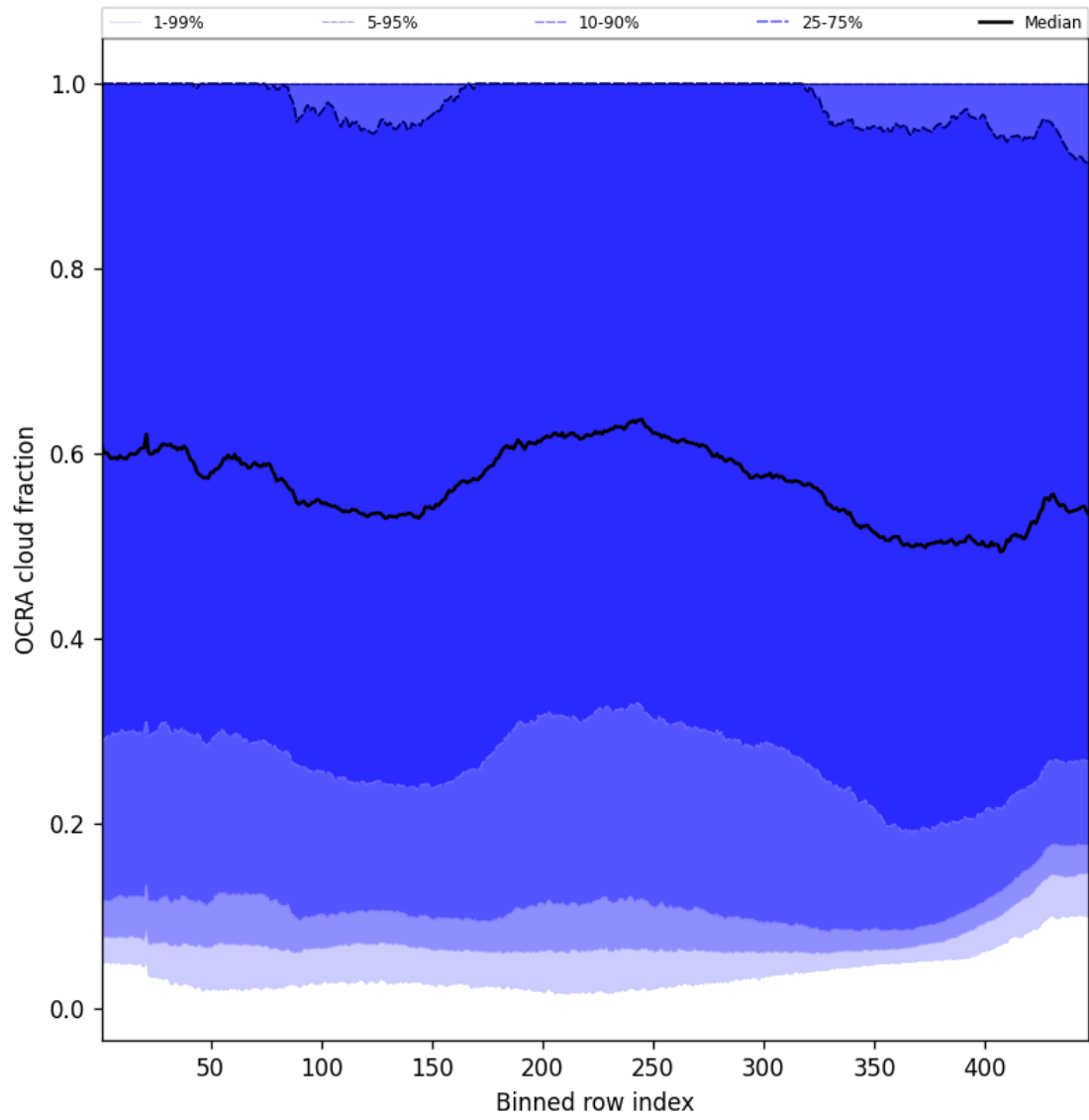


Figure 64: Along track statistics of “OCRA cloud fraction” for 2025-11-02 to 2025-11-03

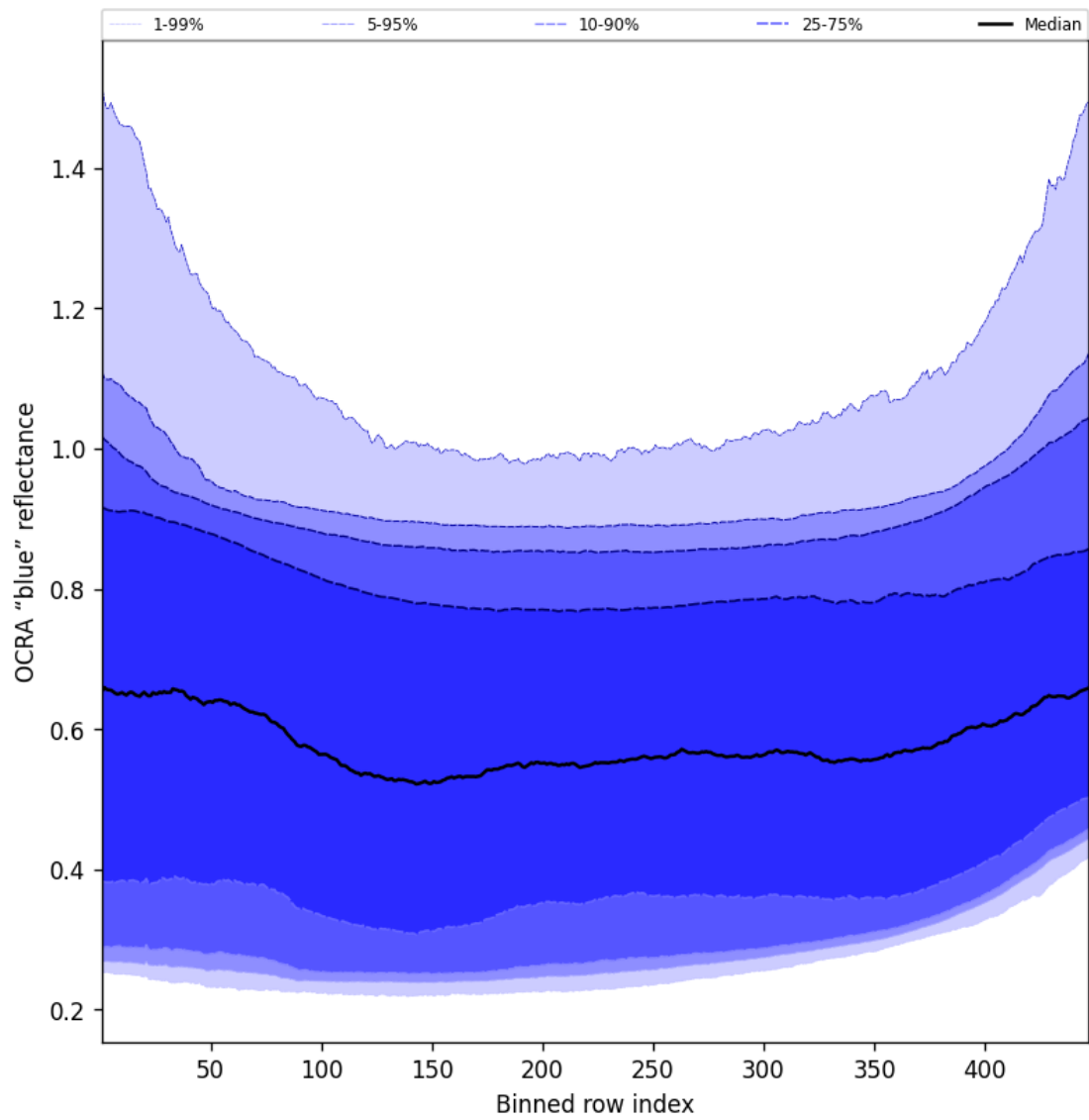


Figure 65: Along track statistics of “OCRA “blue” reflectance” for 2025-11-02 to 2025-11-03

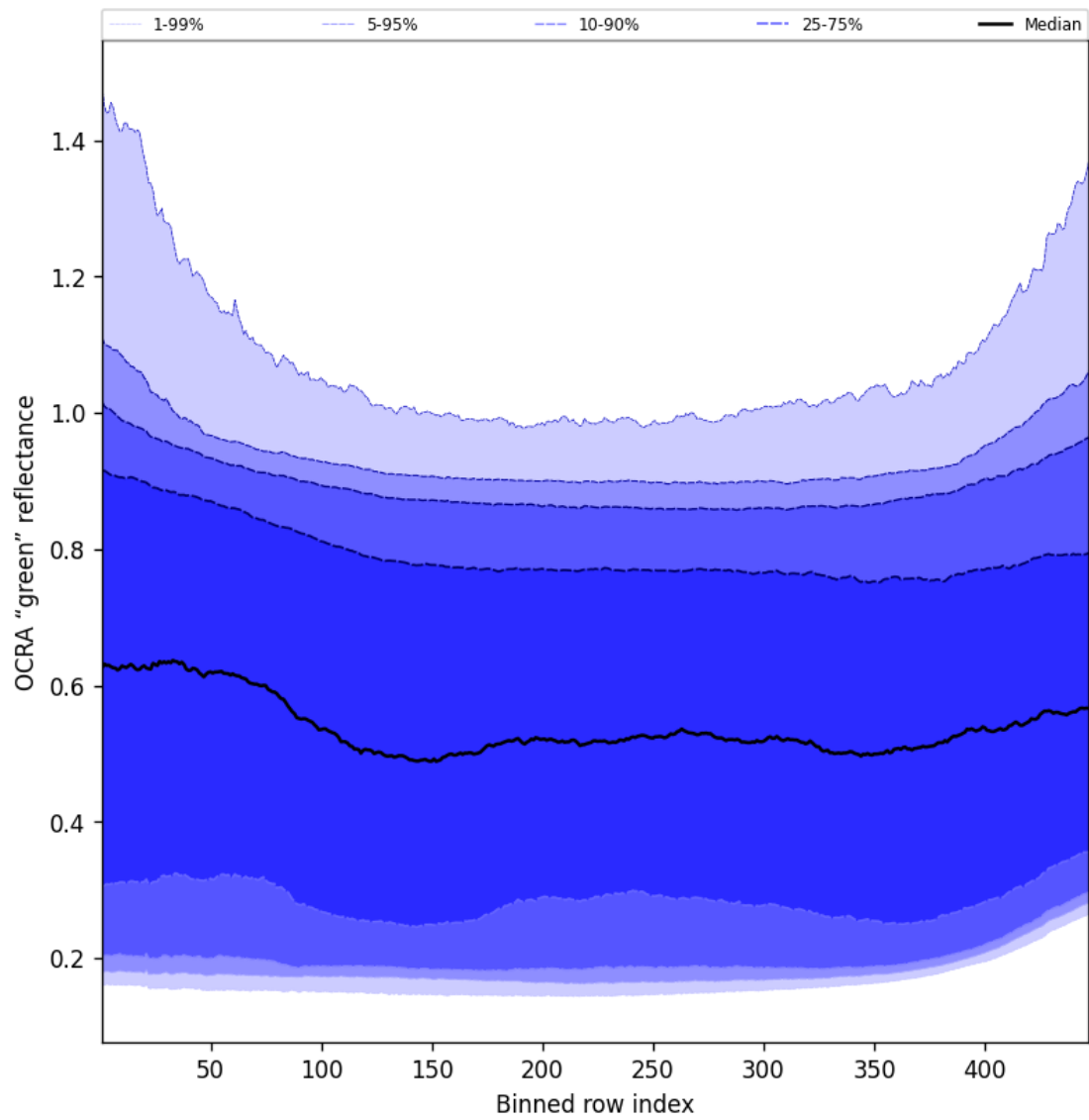


Figure 66: Along track statistics of “OCRA “green” reflectance” for 2025-11-02 to 2025-11-03

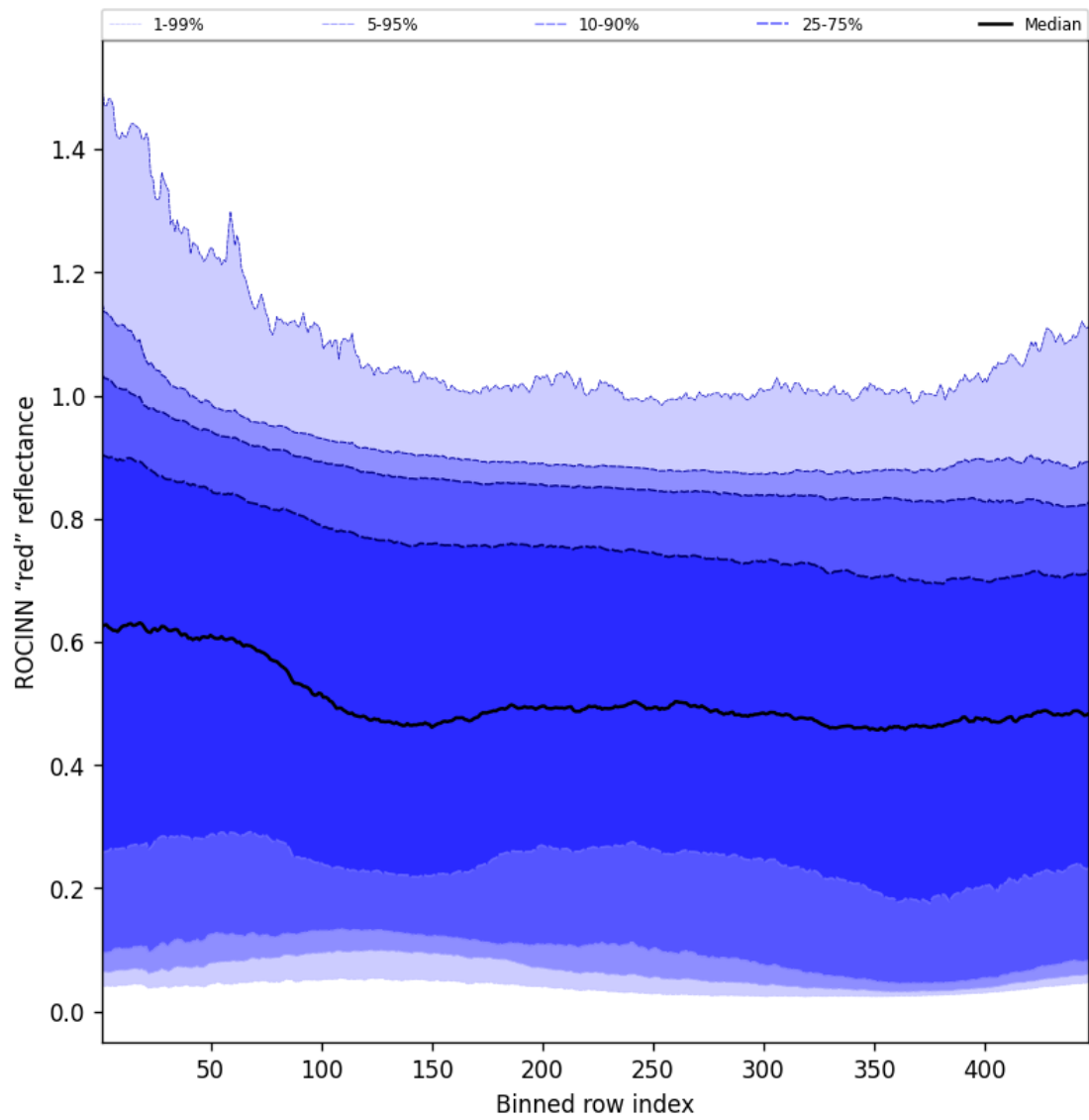


Figure 67: Along track statistics of "ROCINN "red" reflectance" for 2025-11-02 to 2025-11-03

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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Maarten Sneep (maarten.sneep@knmi.nl).