EDUCE- flagging report for spectral data from Ispra, Italy

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FP17 : Flagging results for Ispra, Italy:

Measurements details :

Location: Ispra, Italy
Elevation (m): 214
Instrument name: Brewer #066
Instrument type: Brewer MK IV
Wavelength range (nm): 280-325
Lat, Long: 45.814, 8.627
Date on which data was extracted: 04.12.02 (*1992 - 2001)*
Date on which slit function was extracted/received : 16.10.2002
Years of submitted data : 7 complete, 1 incomplete, 1 very sparse
No spectra (per year): 1904 (*1992*), 1853 (*1993*), 6708 (*1994*), 9245 (*1995*), 9715 (*1996*), 12713 (*1997*), 11249 (*1999*), 34 (*2000*), 243 (*2001*)
No spectra (total submitted) : 53664
Slit width (FWHM) (nm) : 0.66
SHIC version for analysis : 3_093

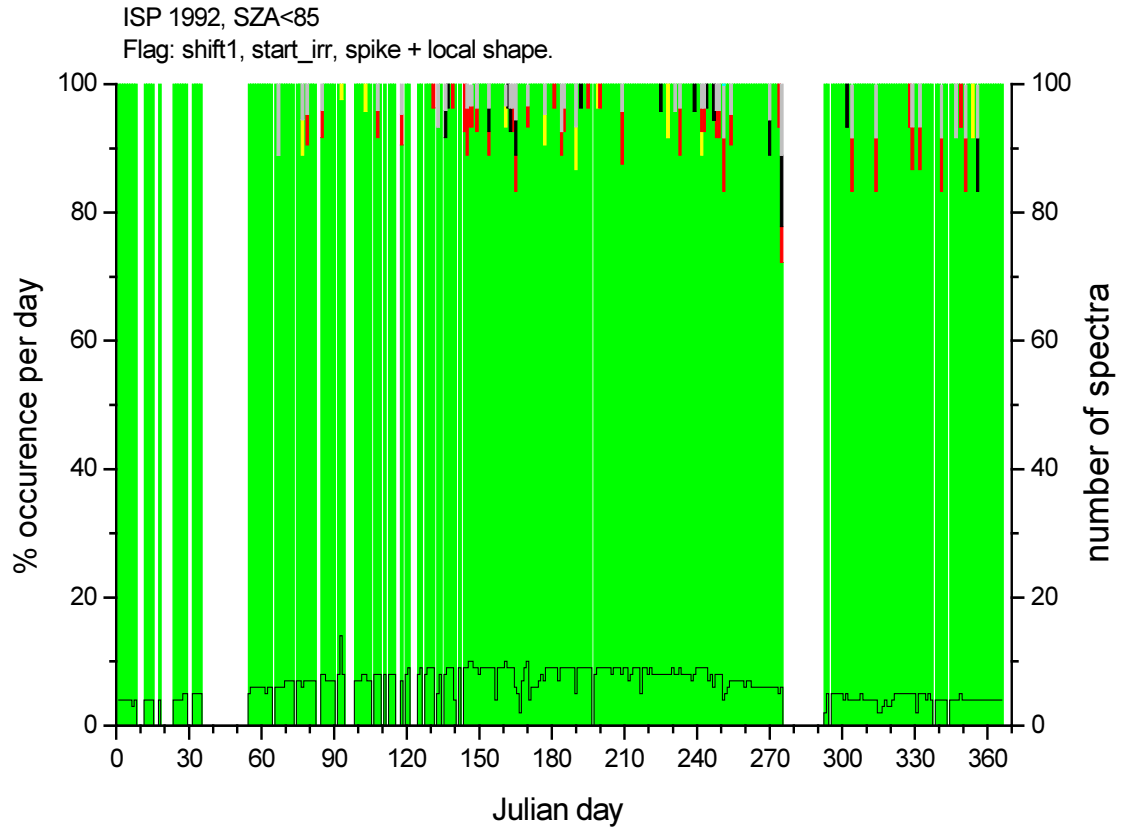
Special comments: The 2000 dataset is not analysed due to annual coverage being < 5% in the currently submitted form. A high number of measurements are taken each day for the 1997 and 1999 datsets. Very few flags detected for the later datasets.

Responsible operator/PI: Julian Gröbner: Julian.Groebner@jrc.it

Operator comments: All data will be resubmitted in the near future as the spectra have now been temperature and cosine corrected and homogenised so as to be traceable to the primary standard of PTB. The data prior to 1994 has a larger uncertainty due to the calibration of the instrument being performed only once per year.

Tables of flagging statistics:

1992:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	97.7	0	0	0	2.3	0	1859	0	0	0	44	0	1903
start_irradiance_flag*	99	0.3	0.3	0.4	0	0	1884	6	6	7	0	0	1903
Spike+local_shape	95.5	0.3	1.9	0.5	0	1.9	1853	5	36	9	0	37	1940

Comments :

High annual coverage (approximately 90%): high potential for use in climatological studies.

Overall data quality impression : a high fraction of potential high quality spectra.

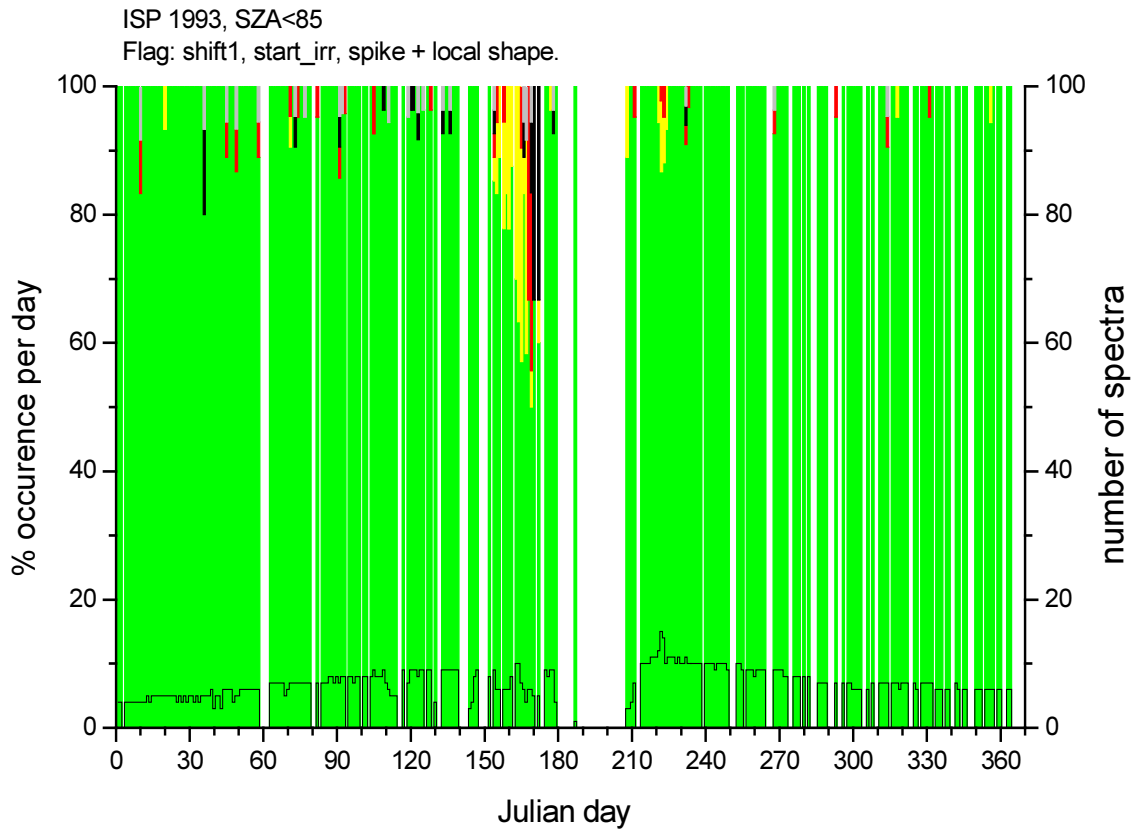
A few black flags exist in some of the chosen flagging categories (with red flags < 2%). The percentage grey flags is 2.3% for the Shift1 flag.

The shift1 flag indicates that the instrument has some undefined calibration errors in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

37 (1.9%) spectra with spikes are reported.

The distribution of errors is uniform throughout the year, although the incidence of flags is slightly larger during the summer.

1993:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	94.3	3.2	0.6	0.6	1.2	0	1747	60	12	11	23	0	1853
start_irradiance_flag*	99.1	0.3	0.2	0.4	0	0	1837	5	3	8	0	0	1853
Spike+local_shape	97.2	0.3	1.2	0.4	0	0.9	1818	5	23	7	0	17	1870

Comments :

High annual coverage (approximately 90%): high potential for use in climatological studies.

Overall data-quality impression : a high fraction of potential high quality spectra.

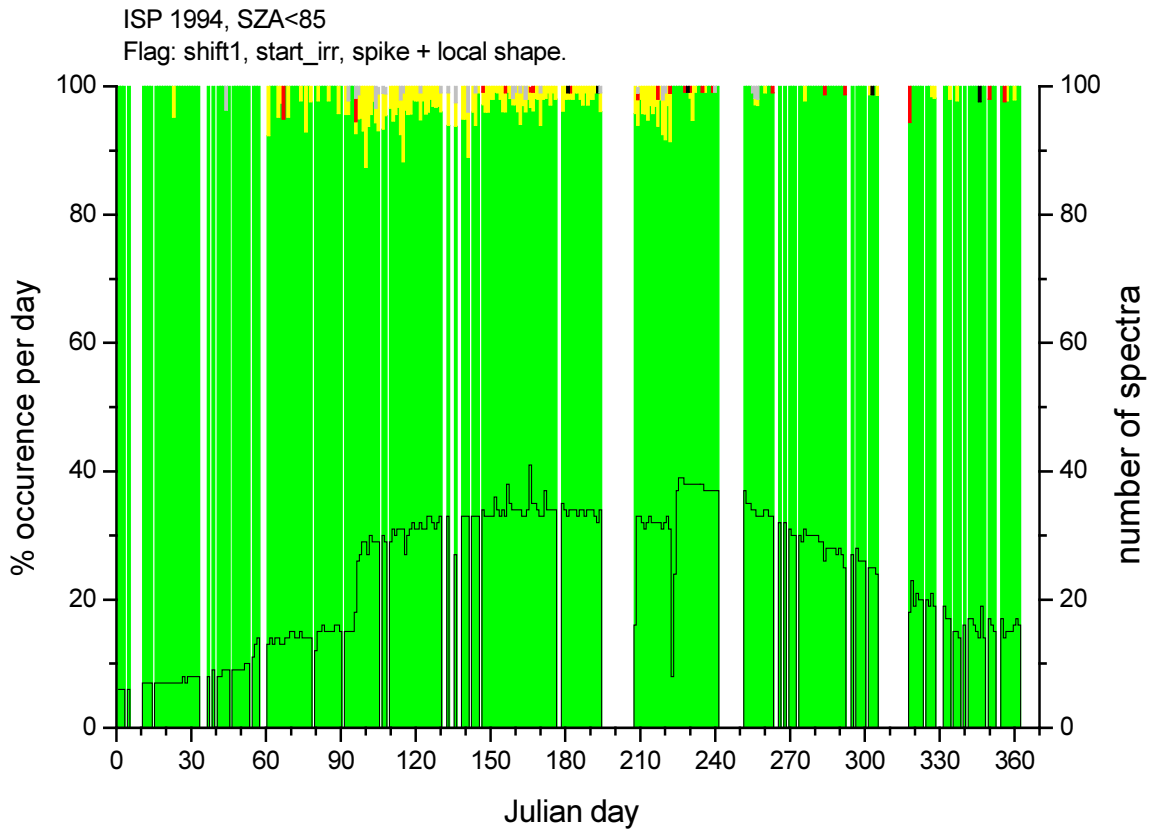
Some black flags exist in all of the chosen flagging categories (with red flags < 1.5%). The percentage grey flags exceeds 1% for the Shift1 flag.

The shift1 flag indicates that the instrument some non-critical calibration errors in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

17 (0.9%) spectra with spikes are reported.

The distribution of errors is non-uniform throughout the year, where the increase in flags between Julian Days 152-182 suggests some non-critical misalignment of the instrument occured for a short period. The number of flags in the second half of the dataset is very low.

1994:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	94.7	4.4	0.2	0	0.6	0	6354	297	16	0	41	0	6708
start_irradiance_flag*	99.8	0.2	0	0	0	0	6692	16	0	0	0	0	6708
Spike+local_shape	99	0.8	0.1	0.1	0	0	6642	52	9	5	0	0	6708

Comments :

High annual coverage (approximately 90%): high potential for use in climatological studies.

Overall data quality impression : a very high fraction of potential high quality spectra.

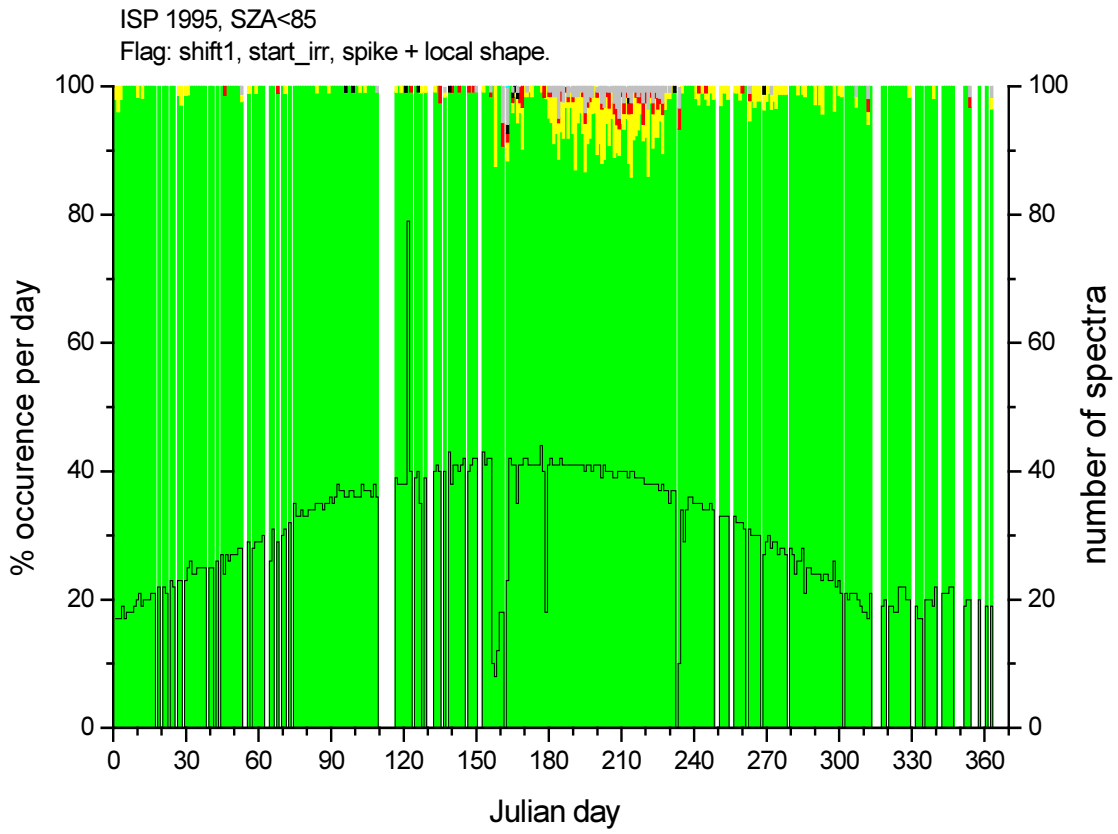
A few black flags occur in the spike and local shape flagging category (with red flags < 0.25%). The percentage grey flags is 0.6% for the Shift1 flag.

The shift1 flag indicates that the instrument has some undefined calibration errors in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

No spectra with spikes are reported.

The distribution of errors is non uniform throughout the year, where most yellow flags occur between Julian days 100 and 220, suggesting that the instrument was recalibrated after this date. The numer of measurements taken per day increases substantially compared to previous years.

1995:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	98.5	0.1	0.1	0	1.3	0	9103	12	6	0	122	0	9243
start_irradiance_flag*	99.5	0.4	0.1	0	0	0	9199	35	7	2	0	0	9243
Spike+local_shape	94.8	4.3	0.8	0.1	0	0	8765	396	71	10	1	2	9245

Comments :

Full annual coverage (approximately 95%): excellent potential for use in climatological studies.

Overall data-quality impression : a very high fraction of potential high quality spectra.

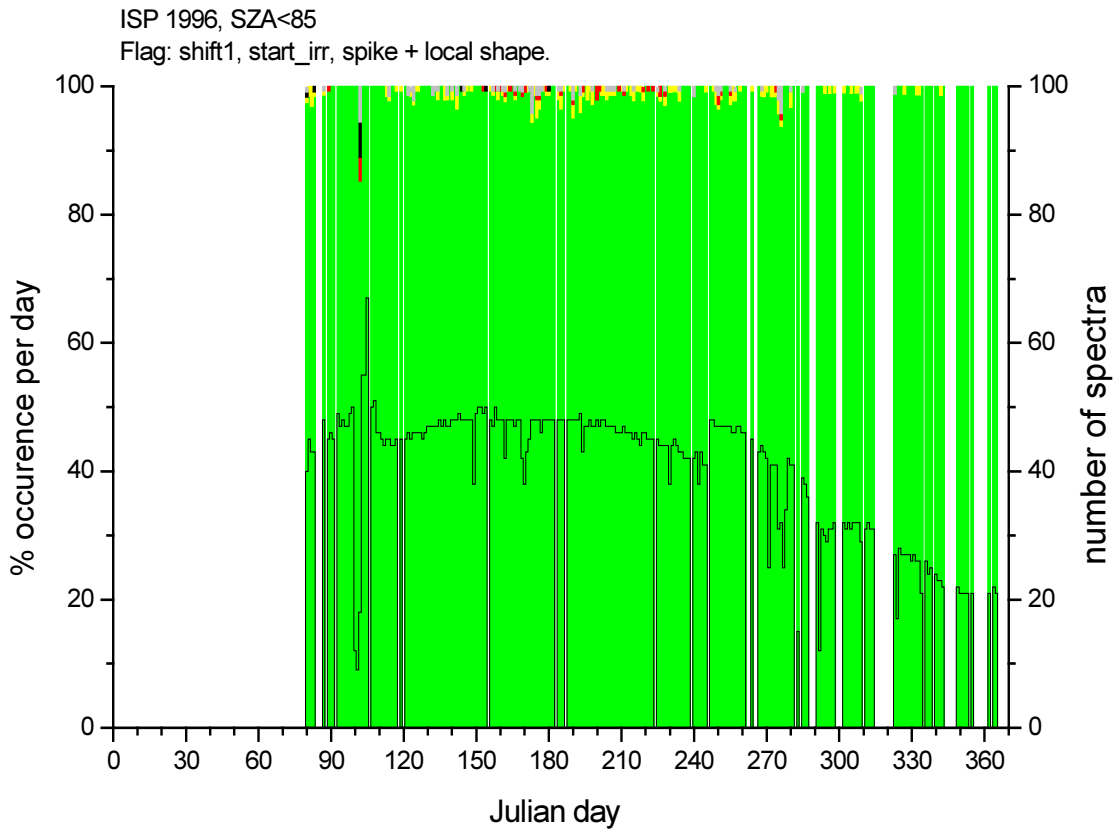
A few black flags exist in some of the chosen flagging categories (with red flags < 1%). The percentage grey flags exceeds 1% for the Shift1 flag.

The shift1 flag indicates that the instrument is well calibrated in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

2 (<0.1%) spectra with spikes are reported.

The distribution of errors is non uniform throughout the year, where most flags occur during the summer of this year.

1996:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	99.2	0	0	0	0.8	0	9630	0	0	0	77	0	9707
start_irradiance_flag*	99.6	0.3	0	0	0	0	9667	33	4	3	0	0	9707
Spike+local_shape	98.4	1.2	0.3	0.1	0	0	9553	117	31	5	1	1	9708

Comments :

Moderate annual coverage (approximately 75%): medium potential for use in climatological studies.

Overall data-quality impression : a very high fraction of potential high quality spectra.

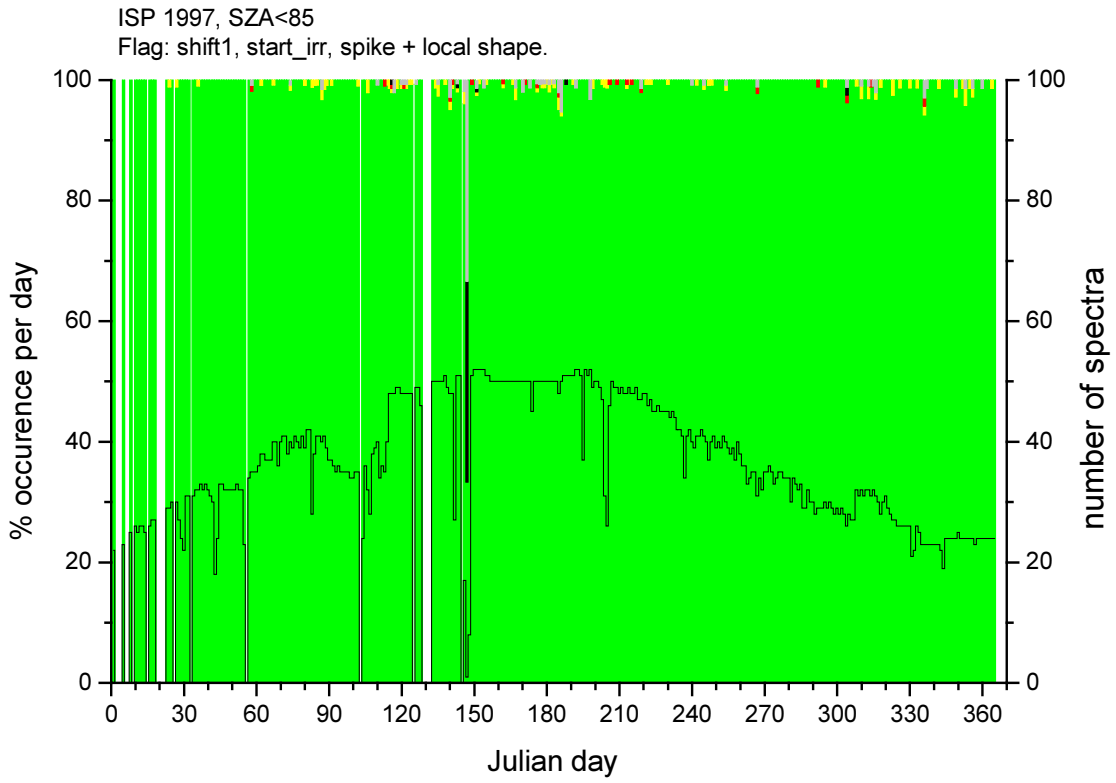
No black flags exist in any of the chosen flagging categories (with red flags < 0.5%). The percentage grey flags is 0.8% for the Shift1 flag.

The shift1 flag indicates that the instrument is well calibrated in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

1 (<0.1%) spectrum with a spike is reported.

The distribution of errors is fairly non uniform throughout the year, with grey and yellow flags occur during the summer period.

1997:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	99.4	0	0	0	0.6	0	12640	1	0	0	72	0	12713
start_irradiance_flag*	99.9	0.1	0	0	0	0	12695	14	3	1	0	0	12713
Spike+local_shape	99.1	0.7	0.1	0	0	0	12604	84	18	5	2	2	12715

Comments :

Full annual coverage (approximately 98%): excellent potential for use in climatological studies.

Overall data-quality impression : a very high fraction of potential high quality spectra.

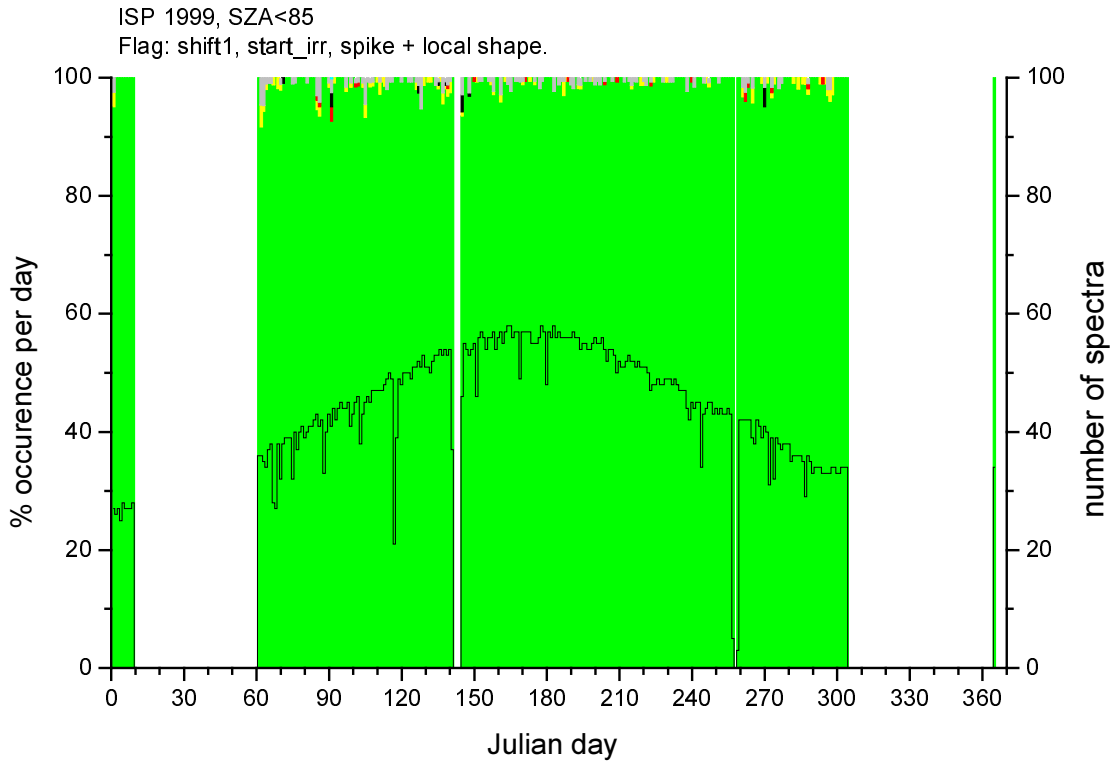
A few black flags exist in some of the chosen flagging categories (with red flags < 0.2%). The percentage grey flags is 0.6% for the Shift1 flag.

The shift1 flag indicates that the instrument is well calibrated in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

2 (<0.1%) spectra with spikes are reported.

The distribution of errors is fairly uniform throughout the year, with only a few flags occurring across a large dataset. Again, the number of measurements per day increases slightly compared to the previous year.

1999:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	98.4	0	0	0	1.6	0	11068	0	0	0	178	0	11246
start_irradiance_flag*	99.8	0.1	0	0.1	0	0	11227	7	2	8	2	0	11246
Spike+local_shape	98.9	0.8	0.2	0.1	0	0	11124	93	19	9	1	3	11249

Comments :

Moderate annual coverage (approximately 70%): medium potential for use in climatological studies.

Overall data-quality impression : a very high fraction of high quality spectra.

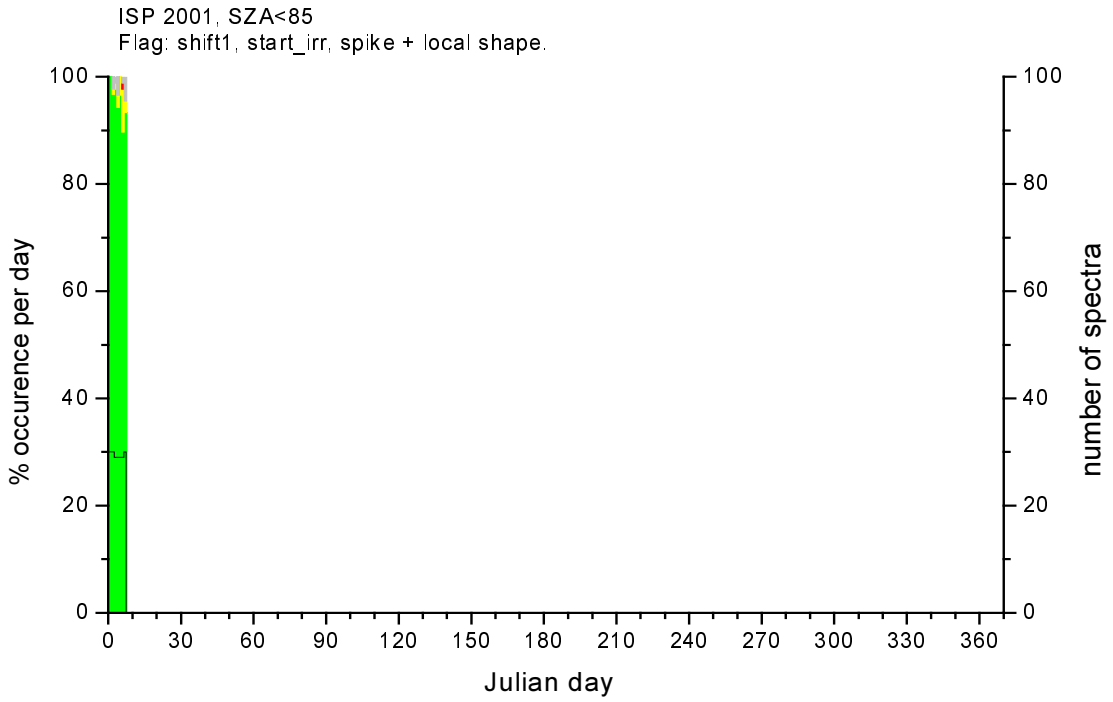
A few black flags exist in some of the chosen flagging categories (with red flags < 0.25%). The percentage grey flags is 1.6% for the Shift1 flag.

The shift1 flag indicates that the instrument is well calibrated in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

3 (<0.1%) spectra with spikes are reported.

The distribution of errors is fairly uniform throughout the dataset, again with only a few flags occurring across a large dataset.

2001:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
Shift1_flagging*	94.7	0	0	0	5.3	0	195	0	0	0	11	0	206
start_irradiance_flag*	100	0	0	0	0	0	206	0	0	0	0	0	206
Spike+local_shape	91.7	7.8	0.5	0	0	0	189	16	1	0	0	0	206

Comments :

Low annual coverage (approximately 5%): limited potential for use in climatological studies.

Overall data-quality impression : a useful fraction of potential high quality spectra.

No black flags exist in any of the chosen flagging categories (with red flags < 0.6%). The percentage grey flags is 5.3% for the Shift1 flag.

The shift1 flag indicates that the instrument has some undefined calibration errors in the UVB region of the spectrum compared to an extra-terrestial solar spectrum.

No spectra with spikes are reported.

The distribution of errors is fairly uniform throughout the dataset.