EDUCE- flagging report for spectral data from Sonnblick, Austria

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FP18 : Flagging results for Sonnblick, Austria:

Measurements details :

Location: Sonnblick, Austria
Elevation (m): 3106
Instrument name: Sonnblick, Bentham
Instrument type: Bentham I
Wavelength range (nm): 280-400
Lat, Long: 47.05, 12.95
Date on which data was extracted : 18.11.02 (*1999, 2000, 2001*), 13.12.02 (*2002)*
Date on which slit function was extracted/received : 27.11.02
Years of submitted data: 2 sparse, 1 complete, 1 incomplete
No spectra (per year): 518 (*1999*), 1554 (*2000*), 7543 (*2001*), 1758 (*2002*)
No spectra (total submitted): 11373
Slit width (FWHM) (nm): 0.74
SHIC version for analysis: 3_093

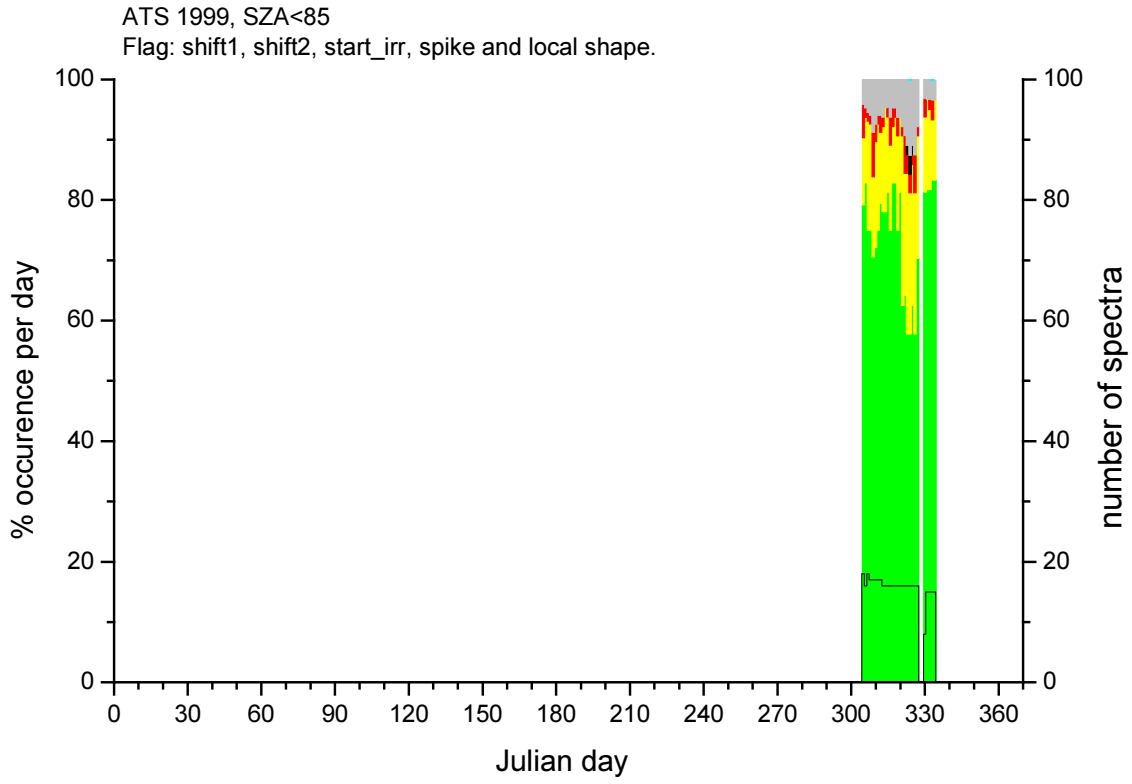
Special comments: Although additional datasets have been submitted to the database (e.g for 1996 – 1998) they were irretrievable at the time of performing the analysis (Jan '03). There is effectively only one year which has extensive annual coverage. Moreover, some of the datasets have a relatively high number of spikes detected.

Responsible operator/PI: Philipp Weihs ; weihs@mail.boku.ac.at

Operator comments: The operator is currently examing individual irradience spectra which have critical and undefined errors associated with them to try and deduce the cause of these flagging results.

Tables of flagging statistics:

1999:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
shift1_flagging	74.2	0	0	0	25.8	0	330	0	0	0	115	0	445
shift2_flagging	99.8	0	0	0	0.2	0	444	0	0	0	1	0	445
Start_irradiance_flag	87.9	9.2	2	0.9	0	0	391	41	9	4	0	0	445
Spike+local_shape flag	33.1	51.9	7.7	0	0	7.3	159	249	37	0	0	35	480
Transmission_2	58.7	36.2	4.7	0	0.4	0	261	161	21	0	2	0	445

Comments :

Low annual coverage (approximately 12%): limited potential for use in climatological studies.

Overall data quality impression : a significant part of the spectra is of questionable quality, with 25.8% of spectra having undefined errors associated with the shift1 category.

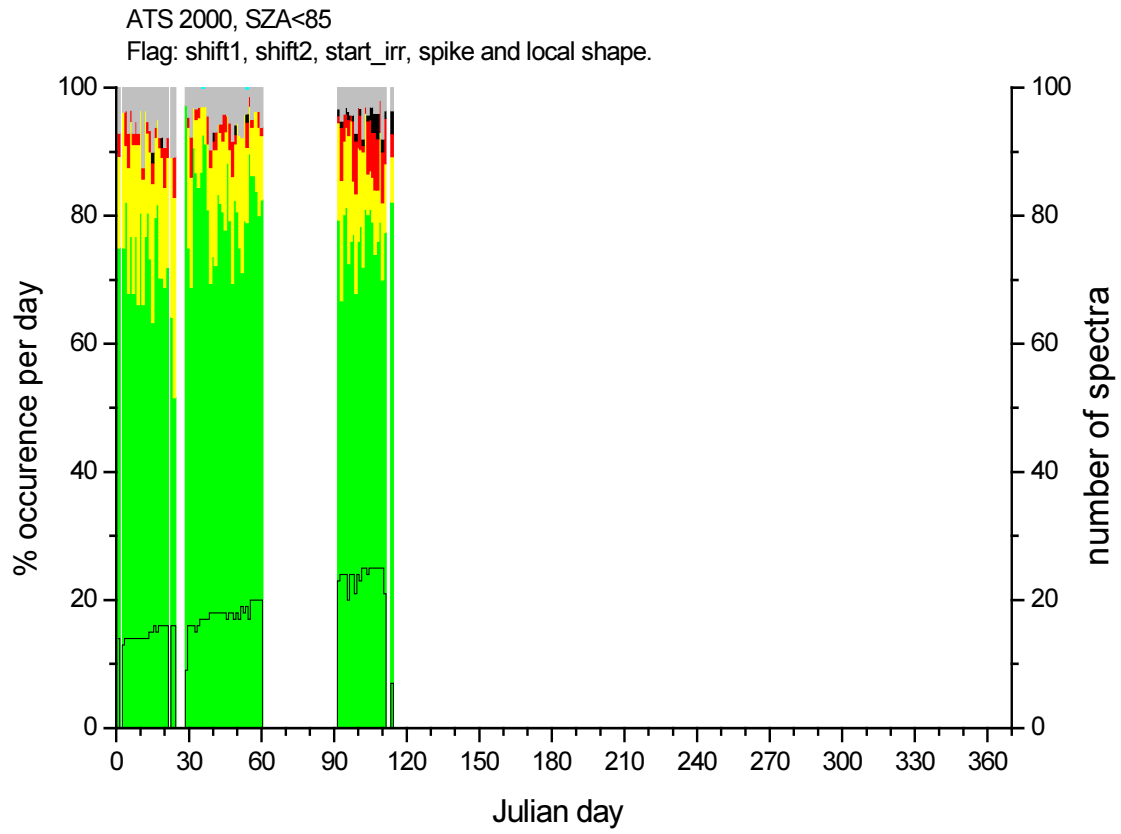
A few black flags occur in the start irradiance flagging categories (with red flags < 8%). The percentage yellow flags exceeds 35% for the transmission_2 flag.

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

35 (7.3%) spectra with spikes are reported.

The distribution of errors is uniform throughout the dataset, with an high incidence of yellow flags. A moderate fraction of the spectra have erroneous spikes present.

2000:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
shift1_flagging	75.8	3.7	0	0	20.5	0	1036	51	0	0	280	0	1367
shift2_flagging	99.6	0.1	0.1	0	0.2	0	1362	1	1	0	3	0	1367
Start_irradiance_flag	76.2	13.1	8.4	2.2	0.1	0	1042	179	115	30	1	0	1367
Spike+local_shape flag	54	35.8	4.1	0.1	0	6	785	521	60	1	0	88	1455
Transmission_2	53.4	41.3	5	0.1	0.2	0	730	565	68	1	3	0	1367

Comments :

Limited annual coverage (approximately 25%): some potential for use in climatological studies.

Overall data-quality impression : data of questionable quality, with 20.5% of spectra having undefined errors associated with the shift1 category.

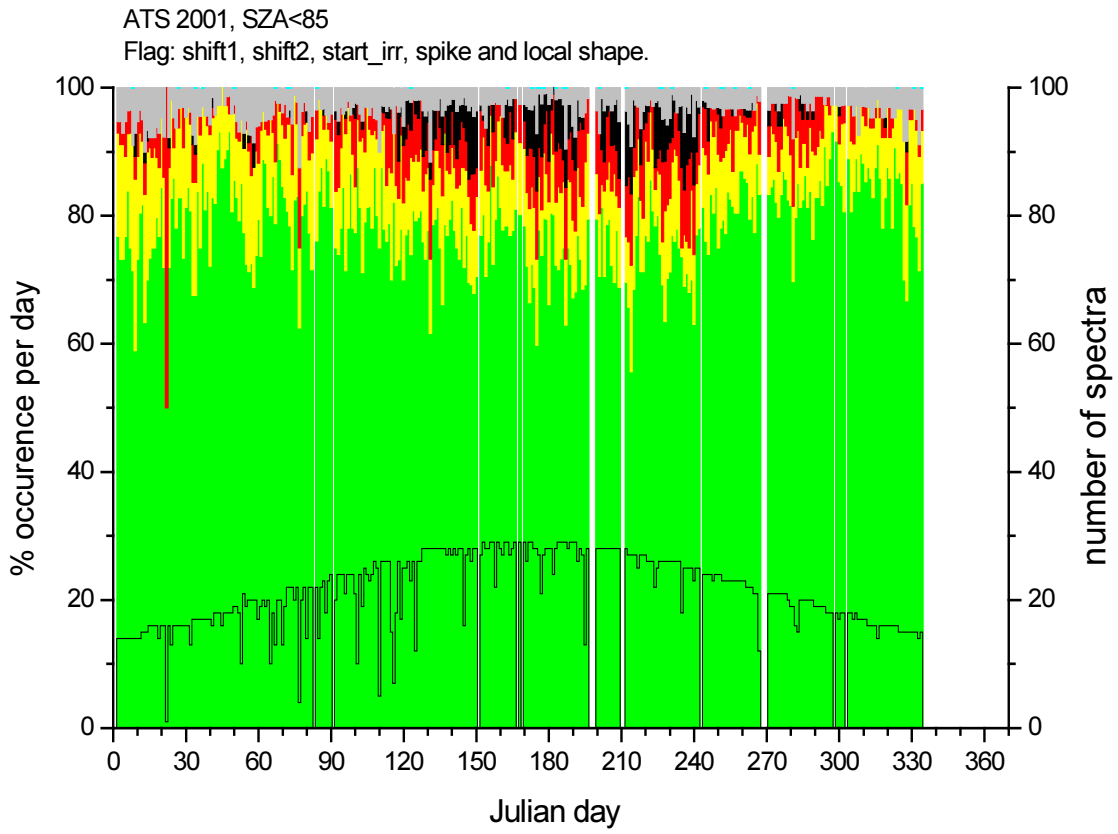
Black flags occur in some of the chosen flagging categories (with red flags < 9%). The percentage yellow flags exceeds 40% for the transmission_2 flag.

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

88 (6%) spectra with spikes are reported.

The distribution of errors is uniform throughout the dataset, with an high incidence of yellow flags. A significant fraction of the spectra have erroneous spikes present.

2001:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
shift1_flagging	84.6	1.5	0	0	13.9	0	5744	104	1	0	944	0	6793
shift2_flagging	99.4	0	0	0	0.5	0	6754	1	1	0	37	0	6793
Start_irradiance_flag	67.5	10.7	12.4	9.4	0	0	4584	726	843	639	1	0	6793
Spike+local_shape flag	54.5	28.6	6.5	0	0	10.3	4130	2168	490	2	3	784	7577
Transmission_2	67.7	26.5	5.6	0	0	0	4602	1803	382	3	3	0	6793

Comments :

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

Overall data quality impression : a considerable fraction of spectra has questionable quality, with 13.9% of spectra having undefined errors associated with the shift1 flag.

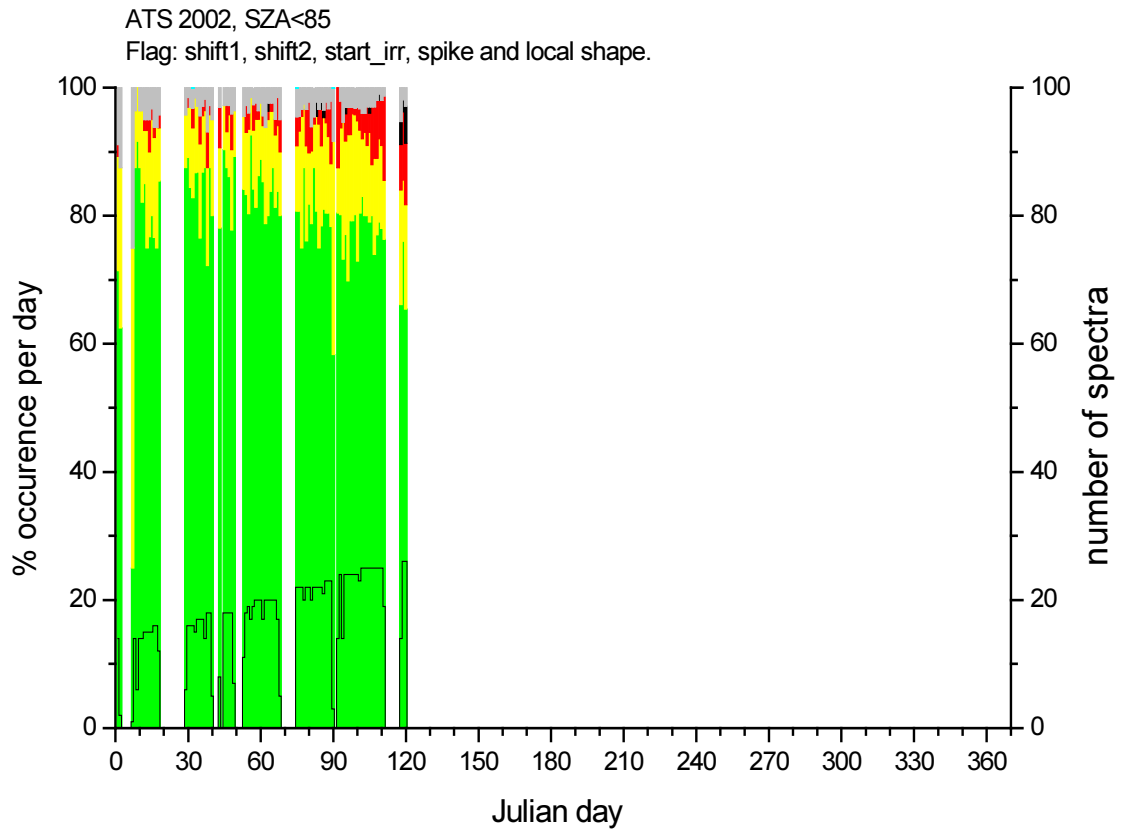
Black flags occur in some of the chosen flagging categories (with red flags < 13%). The percentage yellow flags exceeds 25% for the transmission_2 flag.

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

784 (10.3%) spectra with spikes are reported.

The distribution of errors is fairly non-uniform throughout the year, with more black flags occurring during the summer. A significant fraction of the spectra have erroneous spikes present.

2002:



flag	Green %	Yellow %	Red %	Black %	Grey %	Cor. %	Green	Yellow	Red	Black	Grey	Cor.	Num
shift1_flagging	82	4.8	0	0	13.3	0	1290	75	0	0	209	0	1574
shift2_flagging	99.9	0	0	0	0.1	0	1573	0	0	0	1	0	1574
Start_irradiance_flag	78.4	13	7.5	1.1	0	0	1234	204	118	18	0	0	1574
Spike+local_shape flag	56.9	30.1	6	0	0	7	963	510	101	0	0	118	1692
Transmission_2	55	36	8.9	0.1	0	0	865	567	140	2	0	0	1574

Comments :

Limited annual coverage (approximately 25%): some potential for use in climatological studies.

Overall data quality impression : a considerable fraction of spectra has questionable quality, with 13.3% of spectra having undefined errors associated with the shift1 flag.

Black flags occur in some of the chosen flagging categories (with red flags < 9%). The percentage yellow flags exceeds 35% for the transmission_2 flag.

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

118 (7%) spectra with spikes are reported.

The distribution of errors is fairly non-uniform throughout the year, with more undefined errors occurring at the start of the dataset. A moderate fraction of the spectra have erroneous spikes present.