EDUCE- flagging report for spectral data from De Bilt, The Netherlands

Authors/evaluators: JE Williams, PN den Outer and H Slaper (RIVM) FP22: Flagging results for De Bilt, Netherlands:

Measurements details :

Location: De Bilt, The Netherlands

Elevation (m): 17

Instrument name: Brewer #100 Instrument type: Bentham MKIII Wavelength range (nm): 290 - 365

Lat, Long: 52.10, 5.18

Date on which data was extracted: 04.10.02 (1994, 1995, 1996, 1997, 1998, 1999), 02.01.03 (2000,

2001)

Date on which slit function was extracted/received: 04.10.02

Years of submitted data: 8

No spectra (per year): 6229 (1994), 5836 (1995), 6297 (1996), 6682 (1997), 7335 (1998), 7269 (1999),

6588 (2000), 6495 (2001)

No spectra (total submitted): 52731 Slit width (FWHM) (nm): 0.55 SHIC version for analysis: 3.093

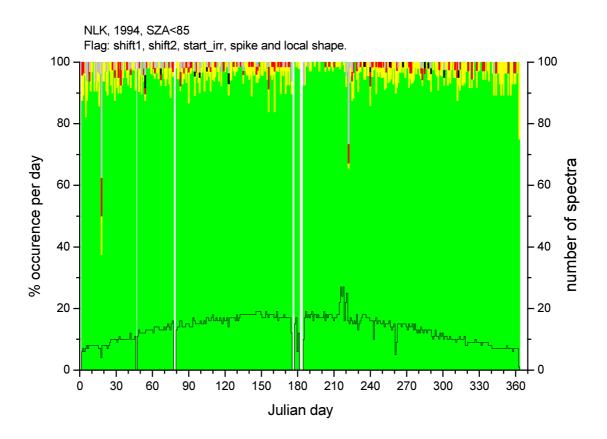
Special Comments: Full annual coverage of high quality measurements for a number of successive years. The flagging results indicate that this instrument is well calibrated.

Responsible operator/PI: Marc Allart; allart@knmi.nl

Operator Comments: No comments received from the operator.

Tables of flagging statistics:

1994:



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	98.5	0	0	0	1.5	0	4686	0	0	0	73	0	4759
Shift2_flagging	99.6	0	0	0	0.4	0	4741	0	0	0	18	0	4759
start_irradiance_flag	99.5	0.1	0.1	0.2	0	0	4736	5	5	11	2	0	4759
Spike+local_shape	83.6	12.4	2.5	0.1	0.2	1.2	4028	599	118	6	8	57	4816
Transmission_2	98.5	1.1	0.2	0	0.2	0	4689	50	11	0	9	0	4759

Comments:

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

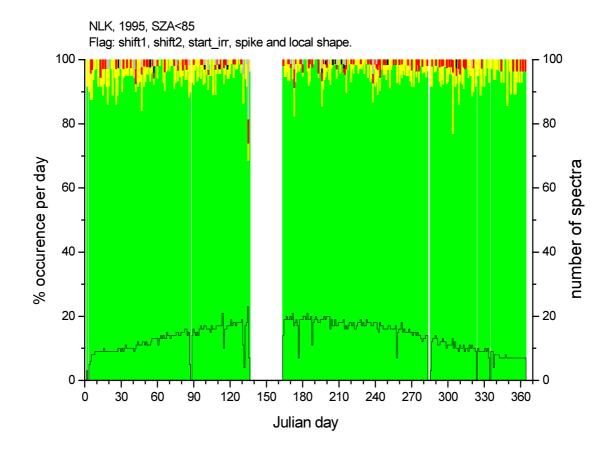
Overall data quality impression: a high fraction of potential high quality spectra.

A few black flags exist in some of the chosen flagging categories (with red flags < 3%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

57 (1.2%) spectra with spikes are reported.

The distribution of errors is fairly uniform throughout the year, with the incidence of grey flags being greater during the first half of the dataset.



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	99.2	0.1	0	0	0.7	0	4433	6	0	0	30	0	4469
Shift2_flagging	99.4	0.2	0	0	0.4	0	4442	9	0	0	18	0	4469
start_irradiance_flag	99.2	0.3	0.2	0.3	0	0	4435	14	7	13	0	0	4469
Spike+local_shape	82.4	13.4	3	0	0	1.2	3728	605	134	1	1	55	4524
Transmission_2	99	0.6	0.2	0	0.2	0	4424	29	7	0	9	0	4469

Comments:

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

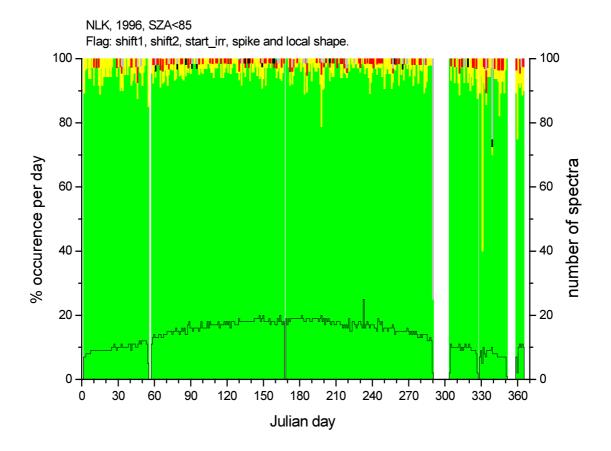
Overall data quality impression: a high fraction of potential high quality spectra.

A few black flags exist in some of the chosen flagging categories (with red flags < 3%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

55 (1.2%) spectra with spikes are reported.

<u>1996:</u>



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	99.2	0.1	0	0	0.7	0	4799	5	0	0	33	0	4837
Shift2_flagging	99.7	0.1	0	0	0.2	0	4823	5	0	0	9	0	4837
start_irradiance_flag	99.2	0.3	0.2	0.3	0	0	4798	13	11	13	2	0	4837
Spike+local_shape	83.8	12.2	2.6	0	0.1	1.3	4106	600	125	2	4	63	4900
Transmission_2	98.7	1	0.2	0	0	0	4773	50	12	0	2	0	4837

Comments:

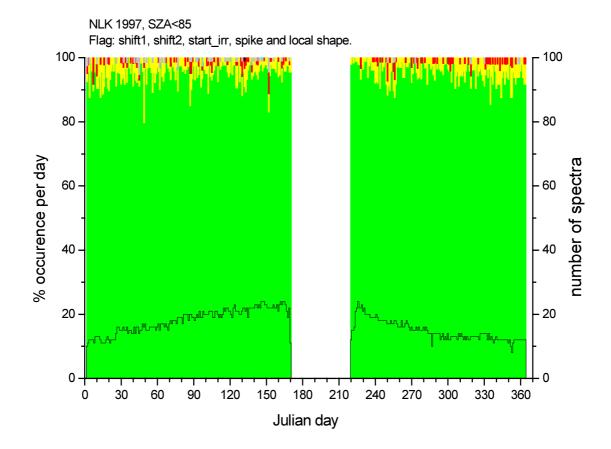
High annual coverage (approximately 95%): high potential for use in climatological studies.

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 < 3%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

63 (1.3%) spectra with spikes are reported.



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	98.9	0.1	0	0	1.1	0	5145	3	0	0	56	0	5204
Shift2_flagging	99.9	0.1	0	0	0.1	0	5197	3	0	0	4	0	5204
start_irradiance_flag	99.8	0.1	0	0	0	0	5195	5	2	1	1	0	5204
Spike+local_shape	81.1	14.9	3	0	0	1	4264	784	156	0	0	53	5257
Transmission_2	98.9	0.9	0.2	0	0	0	5148	45	11	0	0	0	5204

Comments:

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

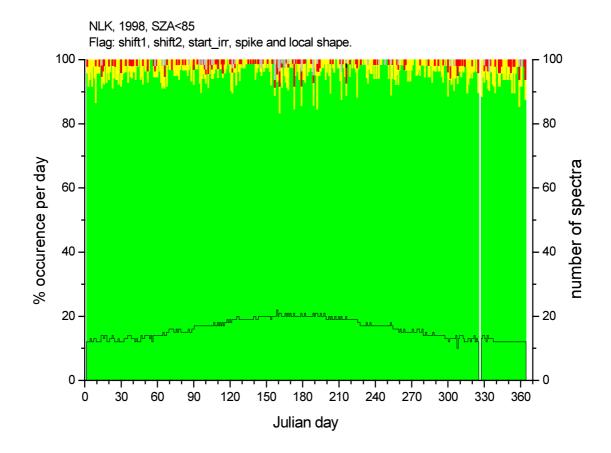
Overall data quality impression: a high fraction of potential high quality spectra.

A few black flags occur for the start irradiance flagging category (with red flags < 3%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

53 (1.0%) spectra with spikes are reported.

<u>1998:</u>



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	99.1	0	0	0	0.9	0	5712	1	0	0	51	0	5764
Shift2_flagging	99.9	0	0	0	0.1	0	5757	1	0	0	6	0	5764
start_irradiance_flag	99.8	0.1	0.1	0	0	0	5751	8	4	1	0	0	5764
Spike+local_shape	83.5	13.2	3	0	0	0.3	4824	764	176	0	0	16	5780
Transmission_2	98.9	0.9	0.2	0	0	0	5702	50	11	0	1	0	5764

Comments:

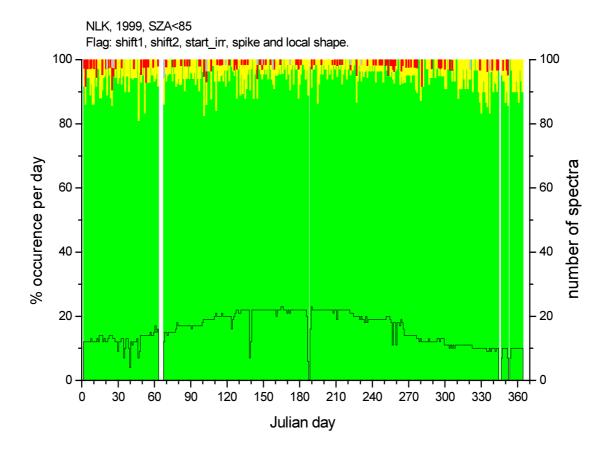
Extensive annual coverage (approximately 99%): excellent potential for use in climatological studies.

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

One black flags occurs in the start irradiance flagging category (with red flags < 3.5%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

62 (1.0%) spectra with spikes are reported.



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	99.7	0	0	0	0.3	0	5709	1	0	0	16	0	5726
Shift2_flagging	100	0	0	0	0	0	5725	0	0	0	1	0	5726
start_irradiance_flag	99.9	0.1	0	0	0	0	5720	5	1	0	0	0	5726
Spike+local_shape	84.8	12.7	2.4	0	0	0.1	4859	728	138	0	1	5	5731
Transmission_2	98.3	1.4	0.3	0	0	0	5626	79	18	1	2	0	5726

Comments:

Extensive annual coverage (approximately 99%): excellent potential for use in climatological studies.

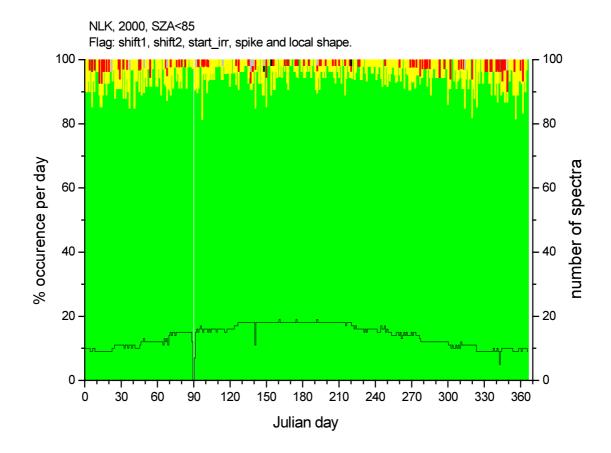
Overall data quality impression: a high fraction of potential high quality spectra.

One black flags occurs in the start irradiance flagging category (with red flags < 3.5%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

62 (1.0%) spectra with spikes are reported.

2000:



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	99.7	0	0	0	0.3	0	5057	0	0	0	14	0	5071
Shift2_flagging	99.9	0	0	0	0.1	0	5067	1	0	0	3	0	5071
start_irradiance_flag	99.8	0.1	0	0	0	0	5061	7	1	2	0	0	5071
Spike+local_shape	84.3	13.5	2.1	0	0	0	4277	684	109	1	0	1	5072
Transmission_2	98.8	1	0.1	0	0	0	5011	53	7	0	0	0	5071

Comments:

Extensive annual coverage (approximately 100%): excellent potential for use in climatological studies.

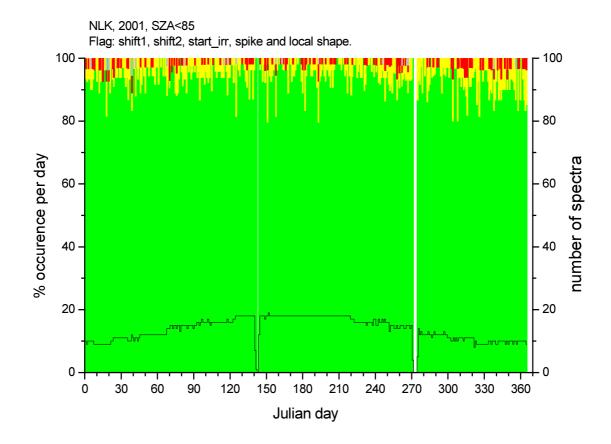
Overall data quality impression: a high fraction of potential high quality spectra.

A few black flags occur in some of the flagging categories (with red flags < 2.5%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

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

2001:



	Green	Yellow	Red	Black	Grey	Cor.	Green	Yellow	Red	Black	Grey	Cor.	Num
flag	%	%	%	%	%	%							
Shift1_flagging	99.6	0	0	0	0.4	0	4987	0	0	0	20	0	5007
Shift2_flagging	100	0	0	0	0	0	5005	0	0	0	2	0	5007
start_irradiance_flag	99.9	0.1	0	0	0	0	5002	5	0	0	0	0	5007
Spike+local_shape	83.1	13.7	3.1	0	0	0.1	4164	687	156	0	0	5	5012
Transmission_2	98.5	1.3	0.1	0	0	0	4934	66	7	0	0	0	5007

Comments:

Extensive annual coverage (approximately 99%): excellent potential for use in climatological studies.

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

No black flags occur in any of the flagging categories (with red flags < 3.5%).

The shift1 and shift2 flags indicate that the instrument is well calibrated in both the UVA and UVB regions of the spectrum compared to an extra-terrestial solar spectrum.

5 (0.1%) spectrum with spikes are reported.