

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.12611e-01	9.14356e-01	9.16891e-01	9.18341e-01	9.19399e-01	9.20136e-01	9.20572e-01	9.20808e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Total Uncertainty ^(d)	1.2e-04	1.2e-04	1.0e-04	8.4e-05	8.0e-05	7.2e-05	7.0e-05	6.8e-05
Degrees of Freedom	24.2	22.9	22.7	25.6	34.3	41.7	32.3	28.6
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.5e-08	6.9e-08	4.5e-08	3.1e-08	2.1e-08	1.4e-08	9.8e-09	7.6e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.5e-05	1.2e-05	5.2e-06	4.0e-06	4.3e-06	5.0e-06	4.4e-06	5.3e-06
Total Type B Uncertainty	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Degrees of Freedom	20.8	20.5	20.1	20.2	20.2	20.4	20.3	20.3

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.1056 4e-01	6.0919 0e-01	6.2285 3e-01	6.1065 8e-01	6.3816 3e-01	5.7782 1e-01	5.0291 2e-01	4.5452 3e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.4e-04	3.8e-05	2.8e-05	2.0e-05	1.9e-05	1.9e-05	1.9e-05	2.1e-05
Type B Uncertainty ^(c)	5.2e-04	1.4e-04	1.3e-04	7.5e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	32.0	27.8	22.2	27.8	26.6	25.2	26.1	33.9
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.4e-06	2.1e-05	1.1e-05	5.9e-06	3.9e-06	7.6e-06
Wavelength	4.6e-04	2.6e-05	4.0e-06	1.5e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.0e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.7e-05	2.1e-05	9.1e-06	6.8e-06	7.7e-06	8.0e-06	6.2e-06	6.7e-06
Total Type B Uncertainty	5.2e-04	1.4e-04	1.3e-04	7.5e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.1	24.0	20.5	24.4	22.8	23.7	23.9	25.5

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1917 2e-02	9.6444 5e-02	9.2855 3e-02	7.7821 4e-02	1.6253 5e-01	1.5127 1e-01	1.0373 2e-01	7.7278 3e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.6e-05	1.3e-05	4.2e-06	5.6e-06	1.6e-05	5.5e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.3e-05	4.9e-05	1.8e-05	2.0e-05	5.4e-05	3.4e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.6e-05	5.1e-05	1.9e-05	2.0e-05	5.6e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.3	53.0	62.4	105.1	26.2	43.0	37.2	47.5
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.5e-06	1.8e-05	7.3e-06	1.6e-05	1.3e-05	6.0e-06	2.9e-06	4.5e-06
Wavelength	8.7e-05	3.7e-05	1.3e-05	7.4e-06	5.2e-05	1.9e-05	1.4e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.0e-07	2.1e-06	2.1e-06	1.9e-06	2.8e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.9e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.1e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.3e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.2e-06	4.3e-06	1.8e-06	1.1e-06	2.5e-06	2.7e-06	1.6e-06	1.5e-06
Total Type B Uncertainty	9.3e-05	4.9e-05	1.8e-05	2.0e-05	5.4e-05	3.4e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.5	46.5	56.6	91.8	22.2	40.8	35.1	41.2

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.6352 9e-04	5.1612 3e-03	8.3743 7e-03	8.2788 6e-03	2.6373 3e-02	3.2085 6e-02	2.2431 7e-02	1.6596 9e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-06	1.9e-06	5.4e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.3e-06
Total Uncertainty ^(d)	2.7e-06	7.3e-06	2.8e-06	4.4e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.8	45.9	57.2	105.7	39.0	33.0	53.3	71.7
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.5e-08	2.1e-06	1.3e-06	3.2e-06	4.4e-06	2.3e-06	1.1e-06	1.5e-06
Wavelength	2.4e-06	5.6e-06	8.7e-07	1.7e-06	1.2e-05	2.7e-06	3.1e-06	9.8e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.9e-07	3.8e-07	9.2e-07	1.1e-06	8.2e-07	6.5e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	4.9e-08	4.7e-07	6.9e-07	6.8e-07	1.6e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	4.0e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.5e-08	1.7e-07	1.2e-07	8.8e-08	3.0e-07	4.3e-07	2.6e-07	2.3e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.3e-06
Degrees of Freedom	20.1	40.3	53.1	95.6	34.9	30.9	41.0	58.1

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Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.35419e-05	3.35677e-04	9.30795e-04	9.95066e-04	5.02310e-03	9.64596e-03	8.41428e-03	7.11060e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	8.6e-07	4.6e-07	2.7e-07	3.4e-07	1.3e-06	1.7e-06	2.0e-06	1.0e-06
Type B Uncertainty ^(c)	1.5e-07	6.7e-07	2.9e-07	6.6e-07	3.5e-06	1.4e-06	1.2e-06	1.6e-06
Total Uncertainty ^(d)	8.7e-07	8.1e-07	3.9e-07	7.5e-07	3.8e-06	2.2e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	63.7	88.9	101.9	33.6	60.5	45.9	118.8
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NRC Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.6e-09	2.1e-07	2.2e-07	5.7e-07	1.2e-06	9.7e-07	5.0e-07	1.2e-06
Wavelength	1.5e-07	5.4e-07	1.2e-07	3.1e-07	3.2e-06	3.1e-07	7.6e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.9e-09	3.3e-08	7.9e-08	8.4e-08	3.2e-07	5.4e-07	4.9e-07	4.3e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.6e-09	4.6e-08	1.1e-07	1.2e-07	4.6e-07	7.7e-07	6.9e-07	6.0e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.3e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	6.8e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	7.0e-10	1.4e-08	1.7e-08	1.4e-08	7.4e-08	1.6e-07	1.3e-07	1.3e-07
Total Type B Uncertainty	1.5e-07	6.7e-07	2.9e-07	6.6e-07	3.5e-06	1.4e-06	1.2e-06	1.6e-06
Degrees of Freedom	19.1	39.5	96.1	76.8	26.2	66.1	50.4	98.7

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Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.1289 1e-01	9.1453 6e-01	9.1693 0e-01	9.1837 1e-01	9.1936 8e-01	9.2011 8e-01	9.2048 3e-01	9.2073 6e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.6e-04	1.5e-04	1.1e-04	8.4e-05	7.6e-05	6.7e-05	7.0e-05	7.3e-05
Total Uncertainty ^(d)	1.6e-04	1.5e-04	1.1e-04	8.9e-05	8.6e-05	8.1e-05	7.8e-05	7.9e-05
Degrees of Freedom	46.4	43.6	29.3	32.0	44.8	59.3	45.2	44.8
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.3e-08	6.7e-08	4.4e-08	3.1e-08	2.1e-08	1.4e-08	1.1e-08	8.2e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.1e-04	9.5e-05	4.0e-05	3.0e-05	3.3e-05	3.8e-05	3.4e-05	4.0e-05
Total Type B Uncertainty	1.6e-04	1.5e-04	1.1e-04	8.4e-05	7.6e-05	6.7e-05	7.0e-05	7.3e-05
Degrees of Freedom	43.0	40.8	26.4	25.9	29.1	36.1	31.5	35.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0794 7e-01	6.0722 3e-01	6.2086 8e-01	6.0855 0e-01	6.3615 2e-01	5.7551 5e-01	5.0018 5e-01	4.5160 8e-01
Number of Measurements	4	3	3	4	4	4	4	4
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-04	3.8e-05	2.7e-05	1.7e-05	1.7e-05	1.6e-05	1.6e-05	1.8e-05
Type B Uncertainty ^(c)	5.2e-04	1.3e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.2e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	31.8	27.1	22.1	26.6	25.2	24.6	25.3	30.7
Date	06-Aug-2013	19-Aug-2013	19-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.5e-06	2.1e-05	1.1e-05	5.9e-06	3.8e-06	7.5e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.4e-06	7.9e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.2e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.4e-04	1.3e-04	1.3e-04	7.2e-05	6.6e-05	1.0e-04	8.3e-05	4.9e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.2e-05	1.5e-05	6.4e-06	4.7e-06	5.4e-06	5.6e-06	4.3e-06	4.6e-06
Total Type B Uncertainty	5.2e-04	1.3e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.2e-05
Degrees of Freedom	28.9	23.4	20.4	24.1	22.5	23.5	23.7	24.8

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.13949e-02	9.48019e-02	9.12011e-02	7.63597e-02	1.60290e-01	1.49267e-01	1.02194e-01	7.60254e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.5e-05	1.3e-05	4.2e-06	5.5e-06	1.6e-05	5.4e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.1e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.5e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.8	53.4	62.8	105.9	26.2	42.6	36.8	46.6
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.2e-06	1.6e-05	1.3e-05	6.0e-06	2.9e-06	4.4e-06
Wavelength	8.5e-05	3.6e-05	1.3e-05	7.3e-06	5.1e-05	1.8e-05	1.3e-05	5.3e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.9e-07	2.1e-06	2.1e-06	1.9e-06	2.7e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.8e-06	3.7e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.4e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.1e-06	4.2e-06	1.7e-06	1.1e-06	2.4e-06	2.6e-06	1.6e-06	1.4e-06
Total Type B Uncertainty	9.1e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.9	46.9	57.1	92.6	22.2	40.5	34.8	40.5

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.4347 4e-04	4.9765 1e-03	8.1035 5e-03	8.0118 0e-03	2.5732 1e-02	3.1357 6e-02	2.1873 7e-02	1.6154 4e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.1e-06	1.8e-06	5.3e-07	9.9e-07	3.3e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.4e-06	6.9e-06	2.7e-06	4.1e-06	1.4e-05	9.2e-06	6.2e-06	3.3e-06
Total Uncertainty ^(d)	2.6e-06	7.2e-06	2.8e-06	4.3e-06	1.4e-05	9.4e-06	6.7e-06	3.5e-06
Degrees of Freedom	30.1	46.8	55.0	105.6	39.6	32.5	51.8	69.2
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.1e-08	2.1e-06	1.3e-06	3.1e-06	4.3e-06	2.3e-06	1.0e-06	1.5e-06
Wavelength	2.3e-06	5.4e-06	8.4e-07	1.6e-06	1.2e-05	2.6e-06	3.1e-06	9.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.7e-08	2.5e-07	3.8e-07	3.7e-07	9.0e-07	1.0e-06	8.0e-07	6.4e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	4.7e-08	4.5e-07	6.7e-07	6.6e-07	1.6e-06	1.9e-06	1.4e-06	1.1e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	5.5e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.5e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.7e-08	2.1e-07	1.4e-07	1.0e-07	3.7e-07	5.1e-07	3.2e-07	2.8e-07
Total Type B Uncertainty	2.4e-06	6.9e-06	2.7e-06	4.1e-06	1.4e-05	9.2e-06	6.2e-06	3.3e-06
Degrees of Freedom	21.2	41.3	51.3	95.6	35.5	30.5	40.1	56.4

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.3645 5e-05	3.4154 1e-04	9.4328 8e-04	1.0083 0e-03	5.0735 8e-03	9.7313 2e-03	8.4915 3e-03	7.1789 2e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	8.6e-07	4.6e-07	2.7e-07	3.5e-07	1.3e-06	1.8e-06	2.1e-06	1.0e-06
Type B Uncertainty ^(c)	1.5e-07	6.8e-07	2.9e-07	6.7e-07	3.5e-06	1.4e-06	1.3e-06	1.6e-06
Total Uncertainty ^(d)	8.8e-07	8.2e-07	4.0e-07	7.6e-07	3.8e-06	2.3e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	62.6	89.3	102.1	33.6	60.6	45.9	118.4
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (PTB Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.7e-09	2.2e-07	2.2e-07	5.8e-07	1.3e-06	9.9e-07	5.1e-07	1.2e-06
Wavelength	1.5e-07	5.5e-07	1.2e-07	3.1e-07	3.3e-06	3.2e-07	7.7e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.9e-09	3.3e-08	8.0e-08	8.5e-08	3.3e-07	5.5e-07	4.9e-07	4.3e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.6e-09	4.7e-08	1.1e-07	1.2e-07	4.6e-07	7.7e-07	7.0e-07	6.1e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.2e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	6.6e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	6.8e-10	1.4e-08	1.6e-08	1.3e-08	7.2e-08	1.6e-07	1.2e-07	1.2e-07
Total Type B Uncertainty	1.5e-07	6.8e-07	2.9e-07	6.7e-07	3.5e-06	1.4e-06	1.3e-06	1.6e-06
Degrees of Freedom	19.1	38.5	96.5	77.0	26.2	66.1	50.4	98.5

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.1271 9e-01	9.1441 2e-01	9.1691 9e-01	9.1837 6e-01	9.1940 7e-01	9.2015 6e-01	9.2054 9e-01	9.2083 2e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.5e-04	1.4e-04	1.0e-04	8.3e-05	7.4e-05	6.5e-05	6.8e-05	7.1e-05
Total Uncertainty ^(d)	1.5e-04	1.4e-04	1.1e-04	8.8e-05	8.5e-05	7.9e-05	7.6e-05	7.6e-05
Degrees of Freedom	45.7	41.0	27.8	30.5	42.5	56.2	42.5	41.8
Date	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.4e-08	6.8e-08	4.5e-08	3.1e-08	2.1e-08	1.4e-08	1.0e-08	7.3e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.0e-04	8.3e-05	3.5e-05	2.6e-05	2.9e-05	3.3e-05	2.9e-05	3.5e-05
Total Type B Uncertainty	1.5e-04	1.4e-04	1.0e-04	8.3e-05	7.4e-05	6.5e-05	6.8e-05	7.1e-05
Degrees of Freedom	41.8	38.1	25.0	24.6	27.0	33.1	29.0	32.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.08938e-01	6.07500e-01	6.21465e-01	6.09368e-01	6.37051e-01	5.76756e-01	5.01776e-01	4.53374e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-04	3.8e-05	2.7e-05	2.0e-05	1.9e-05	1.9e-05	1.8e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.4e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.1e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	32.1	28.8	22.4	28.1	27.1	25.4	26.3	34.7
Date	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.5e-06	2.1e-05	1.1e-05	6.0e-06	4.0e-06	7.6e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.5e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	2.4e-05	2.9e-05	1.2e-05	9.2e-06	1.0e-05	1.1e-05	8.4e-06	9.1e-06
Total Type B Uncertainty	5.1e-04	1.4e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.3	24.9	20.7	24.8	23.3	23.9	24.1	26.3

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1605 6e-02	9.5367 5e-02	9.1859 7e-02	7.7001 3e-02	1.6104 3e-01	1.4994 1e-01	1.0275 2e-01	7.6502 7e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.6e-05	1.3e-05	4.2e-06	5.6e-06	1.6e-05	5.4e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.2e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.5e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.6	52.5	61.8	105.1	26.1	42.3	36.7	46.2
Date	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.3e-06	1.6e-05	1.3e-05	6.0e-06	3.0e-06	4.5e-06
Wavelength	8.6e-05	3.6e-05	1.3e-05	7.3e-06	5.1e-05	1.9e-05	1.4e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.9e-07	2.1e-06	2.1e-06	1.9e-06	2.8e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.9e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.3e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.0e-07	3.8e-07	1.5e-07	9.6e-08	2.2e-07	2.3e-07	1.4e-07	1.3e-07
Total Type B Uncertainty	9.2e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.7	46.1	56.1	91.8	22.1	40.1	34.7	40.0

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.9832 2e-04	5.4837 7e-03	8.8503 9e-03	8.7501 6e-03	2.7484 3e-02	3.3362 0e-02	2.3417 8e-02	1.7386 7e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-06	2.0e-06	5.7e-07	1.1e-06	3.6e-06	1.8e-06	2.6e-06	1.3e-06
Type B Uncertainty ^(c)	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.4e-05	9.3e-06	6.3e-06	3.4e-06
Total Uncertainty ^(d)	3.0e-06	7.7e-06	2.9e-06	4.5e-06	1.5e-05	9.5e-06	6.8e-06	3.6e-06
Degrees of Freedom	27.6	44.4	62.0	106.0	38.0	34.1	56.3	77.1
Date	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	9.4e-08	2.3e-06	1.4e-06	3.4e-06	4.6e-06	2.5e-06	1.1e-06	1.6e-06
Wavelength	2.7e-06	6.0e-06	9.2e-07	1.8e-06	1.2e-05	2.8e-06	3.3e-06	1.0e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	3.0e-08	2.8e-07	4.0e-07	4.0e-07	9.5e-07	1.1e-06	8.4e-07	6.8e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	5.3e-08	4.9e-07	7.2e-07	7.1e-07	1.7e-06	2.0e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.6e-06	2.1e-06	2.0e-06	5.6e-06	8.3e-06	4.9e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.1e-08	1.3e-07	8.6e-08	6.4e-08	2.2e-07	3.1e-07	1.9e-07	1.7e-07
Total Type B Uncertainty	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.4e-05	9.3e-06	6.3e-06	3.4e-06
Degrees of Freedom	19.1	38.8	57.4	95.6	34.0	31.8	42.7	62.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.17085e-05	3.10168e-04	8.66093e-04	9.26654e-04	4.75690e-03	9.19765e-03	8.01131e-03	6.75836e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	7.4e-07	4.2e-07	2.5e-07	3.2e-07	1.3e-06	1.7e-06	1.9e-06	9.8e-07
Type B Uncertainty ^(c)	1.3e-07	6.6e-07	2.7e-07	6.3e-07	3.3e-06	1.3e-06	1.2e-06	1.5e-06
Total Uncertainty ^(d)	7.5e-07	7.8e-07	3.6e-07	7.1e-07	3.6e-06	2.1e-06	2.3e-06	1.8e-06
Degrees of Freedom	27.6	67.4	89.6	109.2	33.6	60.9	46.2	120.2
Date	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013	05-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (LNE-INM Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.0e-09	2.0e-07	2.1e-07	5.3e-07	1.2e-06	9.4e-07	4.9e-07	1.1e-06
Wavelength	1.3e-07	5.0e-07	1.1e-07	2.8e-07	3.1e-06	3.0e-07	7.2e-07	9.6e-08
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.6e-09	3.1e-08	7.4e-08	7.9e-08	3.1e-07	5.2e-07	4.7e-07	4.1e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.3e-09	4.3e-08	1.0e-07	1.1e-07	4.4e-07	7.4e-07	6.6e-07	5.8e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.7e-07	0.0e+00	1.3e-07	0.0e+00	0.0e+00	0.0e+00	7.5e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	5.5e-10	1.2e-08	1.4e-08	1.1e-08	6.4e-08	1.4e-07	1.1e-07	1.1e-07
Total Type B Uncertainty	1.3e-07	6.6e-07	2.7e-07	6.3e-07	3.3e-06	1.3e-06	1.2e-06	1.5e-06
Degrees of Freedom	19.1	43.4	96.4	83.9	26.3	65.2	50.3	98.3

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.12617e-01	9.14332e-01	9.16836e-01	9.18316e-01	9.19359e-01	9.20093e-01	9.20506e-01	9.20764e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.4e-04	1.3e-04	1.0e-04	8.2e-05	7.3e-05	6.3e-05	6.7e-05	6.9e-05
Total Uncertainty ^(d)	1.5e-04	1.4e-04	1.1e-04	8.7e-05	8.4e-05	7.8e-05	7.5e-05	7.5e-05
Degrees of Freedom	44.1	38.7	26.8	29.6	41.1	54.0	40.7	39.7
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.5e-08	6.9e-08	4.5e-08	3.1e-08	2.1e-08	1.4e-08	1.0e-08	8.0e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	9.0e-05	7.5e-05	3.2e-05	2.4e-05	2.6e-05	3.0e-05	2.7e-05	3.2e-05
Total Type B Uncertainty	1.4e-04	1.3e-04	1.0e-04	8.2e-05	7.3e-05	6.3e-05	6.7e-05	6.9e-05
Degrees of Freedom	40.1	35.8	24.1	23.7	25.8	31.0	27.5	30.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.1001 4e-01	6.0848 4e-01	6.2231 9e-01	6.1021 7e-01	6.3780 3e-01	5.7755 5e-01	5.0266 7e-01	4.5430 8e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-04	3.8e-05	2.8e-05	2.0e-05	1.9e-05	1.9e-05	1.9e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.4e-04	1.3e-04	7.5e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	32.0	28.1	22.3	27.9	26.7	25.3	26.2	34.2
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.5e-06	2.1e-05	1.1e-05	6.1e-06	4.1e-06	7.7e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.5e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.0e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.9e-05	2.4e-05	1.0e-05	7.5e-06	8.5e-06	8.9e-06	6.8e-06	7.4e-06
Total Type B Uncertainty	5.1e-04	1.4e-04	1.3e-04	7.5e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.2	24.2	20.5	24.5	23.0	23.8	24.0	25.8

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1209 0e-02	9.4296 5e-02	9.0810 7e-02	7.6060 2e-02	1.5972 0e-01	1.4870 8e-01	1.0175 1e-01	7.5663 6e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.5e-05	1.3e-05	4.1e-06	5.5e-06	1.6e-05	5.4e-06	4.6e-06	3.9e-06
Type B Uncertainty ^(c)	9.1e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.4e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.9	53.3	62.9	106.1	26.2	42.4	36.7	46.3
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.2e-06	1.6e-05	1.3e-05	6.1e-06	3.0e-06	4.5e-06
Wavelength	8.4e-05	3.6e-05	1.3e-05	7.3e-06	5.1e-05	1.8e-05	1.3e-05	5.3e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.8e-07	2.1e-06	2.1e-06	1.9e-06	2.7e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.8e-06	3.7e-06	3.4e-06	5.0e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.4e-05	2.6e-05	9.8e-06	7.5e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	9.8e-07	3.6e-06	1.5e-06	9.2e-07	2.1e-06	2.3e-06	1.4e-06	1.2e-06
Total Type B Uncertainty	9.1e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	25.0	46.9	57.1	92.8	22.2	40.4	34.7	40.3

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.6145 5e-04	5.1387 9e-03	8.3429 7e-03	8.2477 3e-03	2.6280 6e-02	3.1973 6e-02	2.2343 6e-02	1.6526 1e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.1e-06	1.9e-06	5.4e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Total Uncertainty ^(d)	2.7e-06	7.3e-06	2.8e-06	4.3e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.9	46.1	57.3	106.1	39.2	33.1	53.3	71.8
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.6e-08	2.1e-06	1.3e-06	3.2e-06	4.4e-06	2.4e-06	1.1e-06	1.6e-06
Wavelength	2.4e-06	5.6e-06	8.6e-07	1.7e-06	1.2e-05	2.6e-06	3.1e-06	9.8e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.8e-07	3.8e-07	9.2e-07	1.1e-06	8.1e-07	6.5e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	4.9e-08	4.6e-07	6.8e-07	6.8e-07	1.6e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	4.2e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.4e-08	1.6e-07	1.1e-07	8.3e-08	2.9e-07	4.0e-07	2.5e-07	2.2e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Degrees of Freedom	20.2	40.5	53.3	96.0	35.0	31.0	41.1	58.4

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.3627 2e-05	3.4752 0e-04	9.5660 3e-04	1.0226 6e-03	5.1282 2e-03	9.8231 9e-03	8.5739 3e-03	7.2511 8e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	8.6e-07	4.7e-07	2.7e-07	3.5e-07	1.4e-06	1.8e-06	2.1e-06	1.0e-06
Type B Uncertainty ^(c)	1.5e-07	6.8e-07	3.0e-07	6.8e-07	3.6e-06	1.4e-06	1.3e-06	1.6e-06
Total Uncertainty ^(d)	8.7e-07	8.3e-07	4.0e-07	7.7e-07	3.8e-06	2.3e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	61.6	89.7	102.4	33.7	61.3	46.3	118.7
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (MKEH Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.7e-09	2.2e-07	2.3e-07	5.9e-07	1.3e-06	1.0e-06	5.4e-07	1.2e-06
Wavelength	1.5e-07	5.6e-07	1.2e-07	3.1e-07	3.3e-06	3.2e-07	7.7e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.9e-09	3.4e-08	8.1e-08	8.6e-08	3.3e-07	5.5e-07	4.9e-07	4.3e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.6e-09	4.7e-08	1.1e-07	1.2e-07	4.6e-07	7.8e-07	7.0e-07	6.1e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.1e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	6.4e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	7.9e-10	1.7e-08	1.9e-08	1.6e-08	8.5e-08	1.9e-07	1.5e-07	1.5e-07
Total Type B Uncertainty	1.5e-07	6.8e-07	3.0e-07	6.8e-07	3.6e-06	1.4e-06	1.3e-06	1.6e-06
Degrees of Freedom	19.1	37.4	97.1	77.3	26.3	66.9	51.3	98.9

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.12740e-01	9.14426e-01	9.16916e-01	9.18372e-01	9.19414e-01	9.20169e-01	9.20536e-01	9.20849e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.4e-04	1.3e-04	1.0e-04	8.2e-05	7.2e-05	6.2e-05	6.5e-05	6.8e-05
Total Uncertainty ^(d)	1.4e-04	1.3e-04	1.1e-04	8.7e-05	8.3e-05	7.7e-05	7.4e-05	7.3e-05
Degrees of Freedom	41.7	36.1	25.9	28.8	39.7	51.7	39.0	37.5
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.4e-08	6.8e-08	4.5e-08	3.1e-08	2.1e-08	1.4e-08	1.0e-08	7.2e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	8.0e-05	6.7e-05	2.8e-05	2.1e-05	2.3e-05	2.7e-05	2.4e-05	2.8e-05
Total Type B Uncertainty	1.4e-04	1.3e-04	1.0e-04	8.2e-05	7.2e-05	6.2e-05	6.5e-05	6.8e-05
Degrees of Freedom	37.6	33.2	23.2	23.0	24.6	28.9	26.0	28.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0970 1e-01	6.0890 2e-01	6.2240 8e-01	6.1001 0e-01	6.3747 8e-01	5.7689 9e-01	5.0169 8e-01	4.5320 9e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-04	3.8e-05	2.8e-05	2.0e-05	1.9e-05	1.9e-05	1.8e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.4e-04	1.3e-04	7.5e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	32.0	27.9	22.2	27.8	26.6	25.2	26.1	33.9
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.6e-06	2.1e-05	1.1e-05	6.1e-06	4.1e-06	7.8e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.5e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.8e-05	2.2e-05	9.3e-06	6.9e-06	7.8e-06	8.2e-06	6.3e-06	6.8e-06
Total Type B Uncertainty	5.1e-04	1.4e-04	1.3e-04	7.5e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.2	24.0	20.5	24.5	22.9	23.7	23.9	25.6

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1768 4e-02	9.6083 3e-02	9.2452 7e-02	7.7429 6e-02	1.6204 3e-01	1.5079 7e-01	1.0332 5e-01	7.6938 4e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.6e-05	1.3e-05	4.2e-06	5.6e-06	1.6e-05	5.5e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.2e-05	4.9e-05	1.8e-05	2.0e-05	5.3e-05	3.4e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.6e-05	5.0e-05	1.9e-05	2.0e-05	5.6e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.5	53.0	62.7	105.7	26.2	42.9	37.1	47.4
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.5e-06	1.8e-05	7.4e-06	1.6e-05	1.3e-05	6.2e-06	3.1e-06	4.6e-06
Wavelength	8.6e-05	3.7e-05	1.3e-05	7.4e-06	5.1e-05	1.9e-05	1.4e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.0e-07	2.1e-06	2.1e-06	1.9e-06	2.8e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.9e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.3e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	9.9e-07	3.6e-06	1.5e-06	9.3e-07	2.1e-06	2.3e-06	1.4e-06	1.2e-06
Total Type B Uncertainty	9.2e-05	4.9e-05	1.8e-05	2.0e-05	5.3e-05	3.4e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.6	46.5	56.9	92.4	22.2	40.7	35.1	41.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0094 1e-04	5.5165 5e-03	8.8960 0e-03	8.7930 3e-03	2.7585 3e-02	3.3472 1e-02	2.3501 1e-02	1.7454 3e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-06	2.0e-06	5.8e-07	1.1e-06	3.6e-06	1.8e-06	2.6e-06	1.3e-06
Type B Uncertainty ^(c)	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.5e-05	9.3e-06	6.3e-06	3.4e-06
Total Uncertainty ^(d)	3.0e-06	7.7e-06	2.9e-06	4.6e-06	1.5e-05	9.5e-06	6.8e-06	3.6e-06
Degrees of Freedom	27.6	44.3	63.0	106.3	38.0	34.4	56.8	78.4
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	9.6e-08	2.3e-06	1.4e-06	3.5e-06	4.7e-06	2.5e-06	1.2e-06	1.7e-06
Wavelength	2.7e-06	6.0e-06	9.2e-07	1.8e-06	1.2e-05	2.8e-06	3.3e-06	1.0e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	3.0e-08	2.8e-07	4.0e-07	4.0e-07	9.5e-07	1.1e-06	8.4e-07	6.8e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	5.4e-08	4.9e-07	7.2e-07	7.1e-07	1.7e-06	2.0e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.6e-06	2.1e-06	1.9e-06	5.6e-06	8.3e-06	4.9e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.4e-08	1.6e-07	1.1e-07	8.2e-08	2.8e-07	3.9e-07	2.4e-07	2.2e-07
Total Type B Uncertainty	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.5e-05	9.3e-06	6.3e-06	3.4e-06
Degrees of Freedom	19.1	38.7	58.3	95.9	34.0	32.1	43.1	63.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.20207e-05	3.31180e-04	9.19567e-04	9.83144e-04	4.97727e-03	9.57294e-03	8.35065e-03	7.05713e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	7.6e-07	4.5e-07	2.6e-07	3.4e-07	1.3e-06	1.7e-06	2.0e-06	1.0e-06
Type B Uncertainty ^(c)	1.3e-07	6.7e-07	2.8e-07	6.6e-07	3.5e-06	1.4e-06	1.3e-06	1.6e-06
Total Uncertainty ^(d)	7.7e-07	8.1e-07	3.9e-07	7.4e-07	3.7e-06	2.2e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	64.5	90.0	104.4	33.7	61.2	46.4	119.7
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMIJ Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.2e-09	2.1e-07	2.2e-07	5.7e-07	1.2e-06	1.0e-06	5.3e-07	1.2e-06
Wavelength	1.3e-07	5.3e-07	1.2e-07	3.0e-07	3.2e-06	3.1e-07	7.5e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.7e-09	3.2e-08	7.8e-08	8.3e-08	3.2e-07	5.4e-07	4.8e-07	4.2e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.3e-09	4.6e-08	1.1e-07	1.2e-07	4.5e-07	7.6e-07	6.9e-07	6.0e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.4e-07	0.0e+00	7.1e-08	0.0e+00	0.0e+00	0.0e+00	6.9e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	5.3e-10	1.2e-08	1.4e-08	1.1e-08	6.3e-08	1.4e-07	1.1e-07	1.1e-07
Total Type B Uncertainty	1.3e-07	6.7e-07	2.8e-07	6.6e-07	3.5e-06	1.4e-06	1.3e-06	1.6e-06
Degrees of Freedom	19.1	40.3	96.8	79.2	26.3	65.5	50.7	99.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.12715e-01	9.14399e-01	9.16918e-01	9.18370e-01	9.19408e-01	9.20159e-01	9.20543e-01	9.20787e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.9e-05	5.7e-05	6.2e-05	6.2e-05
Total Uncertainty ^(d)	1.2e-04	1.2e-04	1.0e-04	8.4e-05	8.0e-05	7.2e-05	7.0e-05	6.8e-05
Degrees of Freedom	26.3	24.3	23.0	25.9	34.9	42.7	33.0	29.5
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.4e-08	6.8e-08	4.5e-08	3.1e-08	2.1e-08	1.4e-08	1.0e-08	7.8e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	2.9e-05	2.4e-05	1.0e-05	7.6e-06	8.2e-06	9.5e-06	8.4e-06	1.0e-05
Total Type B Uncertainty	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.9e-05	5.7e-05	6.2e-05	6.2e-05
Degrees of Freedom	22.7	21.8	20.4	20.4	20.6	21.2	20.8	21.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0862 4e-01	6.0800 2e-01	6.2161 3e-01	6.0918 1e-01	6.3675 9e-01	5.7614 1e-01	5.0088 0e-01	4.5231 5e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	1.3e-04	3.8e-05	2.7e-05	2.0e-05	1.9e-05	1.9e-05	1.8e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.4e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.1e-05	1.1e-04	8.8e-05	5.6e-05
Degrees of Freedom	32.2	29.1	22.4	28.2	27.2	25.5	26.3	34.7
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	9.9e-06	2.1e-05	8.4e-06	2.1e-05	1.1e-05	5.9e-06	3.7e-06	7.4e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.4e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	2.5e-05	3.0e-05	1.3e-05	9.7e-06	1.1e-05	1.1e-05	8.8e-06	9.5e-06
Total Type B Uncertainty	5.1e-04	1.4e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.3	25.1	20.7	24.8	23.4	24.0	24.1	26.3

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1708 9e-02	9.5687 1e-02	9.2114 5e-02	7.7197 9e-02	1.6147 3e-01	1.5041 8e-01	1.0314 3e-01	7.6827 0e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	2.6e-05	1.3e-05	4.2e-06	5.6e-06	1.6e-05	5.4e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.2e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.6e-05	5.0e-05	1.9e-05	2.0e-05	5.6e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.5	52.5	61.5	104.7	26.1	42.3	36.8	46.2
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.2e-06	1.6e-05	1.3e-05	5.9e-06	2.7e-06	4.4e-06
Wavelength	8.6e-05	3.7e-05	1.3e-05	7.4e-06	5.1e-05	1.9e-05	1.4e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.0e-07	2.1e-06	2.1e-06	1.9e-06	2.8e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.9e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.3e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	4.9e-07	1.8e-06	7.2e-07	4.6e-07	1.0e-06	1.1e-06	6.8e-07	6.0e-07
Total Type B Uncertainty	9.2e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.6	46.1	55.7	91.4	22.1	40.2	34.7	40.0

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.6267 6e-04	5.1751 5e-03	8.3992 9e-03	8.3061 6e-03	2.6439 4e-02	3.2187 5e-02	2.2521 3e-02	1.6674 2e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	1.2e-06	1.9e-06	5.4e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.3e-06
Total Uncertainty ^(d)	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.8	45.9	57.2	105.6	38.9	33.0	53.4	71.8
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.4e-08	2.1e-06	1.3e-06	3.3e-06	4.4e-06	2.3e-06	1.0e-06	1.5e-06
Wavelength	2.4e-06	5.6e-06	8.7e-07	1.7e-06	1.2e-05	2.7e-06	3.2e-06	9.9e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.9e-07	3.8e-07	9.2e-07	1.1e-06	8.2e-07	6.6e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	4.9e-08	4.7e-07	6.9e-07	6.8e-07	1.6e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	4.1e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.6e-08	1.9e-07	1.3e-07	9.7e-08	3.3e-07	4.7e-07	2.9e-07	2.6e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.3e-06
Degrees of Freedom	20.1	40.3	53.2	95.4	34.8	30.9	41.0	58.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.0763 8e-05	3.1635 3e-04	8.8357 3e-04	9.4502 2e-04	4.8289 0e-03	9.3231 6e-03	8.1264 9e-03	6.8601 7e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	6.8e-07	4.3e-07	2.5e-07	3.3e-07	1.3e-06	1.7e-06	2.0e-06	9.9e-07
Type B Uncertainty ^(c)	1.2e-07	6.6e-07	2.7e-07	6.4e-07	3.4e-06	1.4e-06	1.2e-06	1.6e-06
Total Uncertainty ^(d)	6.9e-07	7.9e-07	3.7e-07	7.2e-07	3.6e-06	2.2e-06	2.3e-06	1.8e-06
Degrees of Freedom	27.6	66.6	88.7	107.1	33.6	60.3	45.8	119.6
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (KRISS Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	3.6e-09	2.0e-07	2.1e-07	5.4e-07	1.2e-06	9.3e-07	4.6e-07	1.2e-06
Wavelength	1.2e-07	5.1e-07	1.1e-07	2.9e-07	3.1e-06	3.0e-07	7.3e-07	9.7e-08
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.5e-09	3.1e-08	7.6e-08	8.0e-08	3.1e-07	5.3e-07	4.7e-07	4.1e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.1e-09	4.4e-08	1.1e-07	1.1e-07	4.4e-07	7.5e-07	6.7e-07	5.9e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.6e-07	0.0e+00	1.2e-07	0.0e+00	0.0e+00	0.0e+00	7.3e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	6.2e-10	1.5e-08	1.8e-08	1.4e-08	8.0e-08	1.8e-07	1.4e-07	1.4e-07
Total Type B Uncertainty	1.2e-07	6.6e-07	2.7e-07	6.4e-07	3.4e-06	1.4e-06	1.2e-06	1.6e-06
Degrees of Freedom	19.1	42.5	95.7	81.8	26.2	65.8	49.9	98.3

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.12950e-01	9.14611e-01	9.17032e-01	9.18467e-01	9.19499e-01	9.20216e-01	9.20636e-01	9.20834e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.6e-04	1.5e-04	1.1e-04	8.4e-05	7.5e-05	6.7e-05	6.9e-05	7.3e-05
Total Uncertainty ^(d)	1.6e-04	1.5e-04	1.1e-04	8.9e-05	8.6e-05	8.1e-05	7.7e-05	7.8e-05
Degrees of Freedom	46.4	43.3	29.0	31.7	44.4	58.8	44.7	44.3
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.2e-08	6.6e-08	4.4e-08	3.0e-08	2.0e-08	1.3e-08	9.2e-09	7.3e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.1e-04	9.3e-05	3.9e-05	3.0e-05	3.2e-05	3.7e-05	3.3e-05	3.9e-05
Total Type B Uncertainty	1.6e-04	1.5e-04	1.1e-04	8.4e-05	7.5e-05	6.7e-05	6.9e-05	7.3e-05
Degrees of Freedom	42.9	40.5	26.2	25.7	28.7	35.7	31.1	34.6

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.09460e-01	6.07348e-01	6.21344e-01	6.09337e-01	6.36902e-01	5.76698e-01	5.01664e-01	4.53176e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-04	3.8e-05	2.7e-05	2.0e-05	1.9e-05	1.9e-05	1.8e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.4e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.2e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.1e-05	1.1e-04	8.8e-05	5.6e-05
Degrees of Freedom	32.1	29.5	22.5	28.3	27.4	25.6	26.5	35.2
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.5e-06	2.1e-05	1.1e-05	6.0e-06	4.0e-06	7.7e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.5e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	2.7e-05	3.3e-05	1.4e-05	1.0e-05	1.2e-05	1.2e-05	9.5e-06	1.0e-05
Total Type B Uncertainty	5.1e-04	1.4e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.2e-05
Degrees of Freedom	28.3	25.5	20.8	25.0	23.6	24.1	24.2	26.7

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1136 5e-02	9.4140 6e-02	9.0610 5e-02	7.5842 1e-02	1.5943 9e-01	1.4842 7e-01	1.0150 3e-01	7.5444 2e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.5e-05	1.3e-05	4.1e-06	5.5e-06	1.6e-05	5.4e-06	4.6e-06	3.9e-06
Type B Uncertainty ^(c)	9.0e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.4e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	29.0	53.4	62.9	106.2	26.2	42.4	36.6	46.2
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.2e-06	1.6e-05	1.3e-05	6.0e-06	3.0e-06	4.4e-06
Wavelength	8.4e-05	3.6e-05	1.3e-05	7.2e-06	5.1e-05	1.8e-05	1.3e-05	5.3e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.8e-07	2.1e-06	2.1e-06	1.9e-06	2.7e-06	2.7e-06	2.2e-06	1.8e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.8e-06	3.7e-06	3.4e-06	5.0e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.4e-05	2.6e-05	9.8e-06	7.5e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.0e-06	3.9e-06	1.6e-06	9.8e-07	2.2e-06	2.4e-06	1.5e-06	1.3e-06
Total Type B Uncertainty	9.0e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	25.1	47.0	57.1	92.9	22.2	40.3	34.6	40.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.65340e-04	5.19145e-03	8.41787e-03	8.31994e-03	2.64662e-02	3.21842e-02	2.25061e-02	1.66559e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-06	1.9e-06	5.5e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.3e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Total Uncertainty ^(d)	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.7	45.8	57.9	106.1	39.0	33.2	53.8	72.6
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.7e-08	2.2e-06	1.4e-06	3.3e-06	4.5e-06	2.4e-06	1.1e-06	1.6e-06
Wavelength	2.4e-06	5.7e-06	8.7e-07	1.7e-06	1.2e-05	2.7e-06	3.2e-06	9.8e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.9e-07	3.8e-07	9.2e-07	1.1e-06	8.2e-07	6.5e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	5.0e-08	4.7e-07	6.9e-07	6.8e-07	1.7e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.8e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.5e-08	1.8e-07	1.2e-07	9.2e-08	3.2e-07	4.5e-07	2.8e-07	2.4e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.3e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Degrees of Freedom	20.0	40.2	53.9	95.9	34.9	31.1	41.3	58.9

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.3134 6e-05	3.4594 8e-04	9.5552 9e-04	1.0211 6e-03	5.1220 6e-03	9.8147 2e-03	8.5668 9e-03	7.2447 2e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	8.3e-07	4.7e-07	2.7e-07	3.5e-07	1.4e-06	1.8e-06	2.1e-06	1.0e-06
Type B Uncertainty ^(c)	1.4e-07	6.8e-07	2.9e-07	6.8e-07	3.6e-06	1.4e-06	1.3e-06	1.6e-06
Total Uncertainty ^(d)	8.4e-07	8.2e-07	4.0e-07	7.7e-07	3.8e-06	2.3e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	61.8	89.2	102.2	33.6	60.5	46.0	117.5
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (VNIIOFI Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.5e-09	2.2e-07	2.3e-07	5.9e-07	1.3e-06	1.0e-06	5.3e-07	1.2e-06
Wavelength	1.4e-07	5.6e-07	1.2e-07	3.1e-07	3.3e-06	3.2e-07	7.7e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.8e-09	3.4e-08	8.1e-08	8.6e-08	3.3e-07	5.5e-07	4.9e-07	4.3e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.5e-09	4.7e-08	1.1e-07	1.2e-07	4.6e-07	7.8e-07	7.0e-07	6.1e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.1e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	6.5e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	3.7e-10	8.1e-09	9.4e-09	7.6e-09	4.2e-08	9.2e-08	7.1e-08	7.1e-08
Total Type B Uncertainty	1.4e-07	6.8e-07	2.9e-07	6.8e-07	3.6e-06	1.4e-06	1.3e-06	1.6e-06
Degrees of Freedom	19.1	37.6	96.3	77.1	26.3	65.2	50.1	97.6

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.1297 7e-01	9.1461 6e-01	9.1703 8e-01	9.1844 5e-01	9.1947 9e-01	9.2020 7e-01	9.2058 5e-01	9.2088 9e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.4e-04	1.3e-04	1.0e-04	8.2e-05	7.3e-05	6.3e-05	6.7e-05	6.9e-05
Total Uncertainty ^(d)	1.5e-04	1.4e-04	1.1e-04	8.7e-05	8.4e-05	7.8e-05	7.5e-05	7.5e-05
Degrees of Freedom	44.2	38.7	26.8	29.6	41.1	54.0	40.8	39.7
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.2e-08	6.6e-08	4.3e-08	3.0e-08	2.0e-08	1.3e-08	9.7e-09	6.8e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	9.0e-05	7.5e-05	3.2e-05	2.4e-05	2.6e-05	3.0e-05	2.7e-05	3.2e-05
Total Type B Uncertainty	1.4e-04	1.3e-04	1.0e-04	8.2e-05	7.3e-05	6.3e-05	6.7e-05	6.9e-05
Degrees of Freedom	40.2	35.8	24.1	23.7	25.8	31.1	27.5	30.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0719 6e-01	6.0647 1e-01	6.2029 9e-01	6.0802 8e-01	6.3576 1e-01	5.7520 2e-01	4.9991 8e-01	4.5138 0e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.3e-04	3.8e-05	2.7e-05	2.0e-05	1.9e-05	1.9e-05	1.8e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.3e-04	1.3e-04	7.5e-05	6.7e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	32.1	27.3	22.1	27.6	26.3	25.1	26.0	33.4
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.5e-06	2.1e-05	1.1e-05	6.0e-06	4.0e-06	7.6e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.4e-06	7.9e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.4e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.2e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.4e-05	1.7e-05	7.2e-06	5.3e-06	6.1e-06	6.3e-06	4.9e-06	5.2e-06
Total Type B Uncertainty	5.1e-04	1.3e-04	1.3e-04	7.5e-05	6.7e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.3	23.5	20.4	24.3	22.6	23.6	23.8	25.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1432 0e-02	9.4874 3e-02	9.1384 3e-02	7.6568 4e-02	1.6049 0e-01	1.4946 6e-01	1.0237 7e-01	7.6192 5e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.6e-05	1.3e-05	4.2e-06	5.6e-06	1.6e-05	5.4e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.1e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.5e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.7	52.7	62.0	105.4	26.1	42.2	36.7	46.0
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.2e-06	1.6e-05	1.3e-05	6.0e-06	3.0e-06	4.5e-06
Wavelength	8.5e-05	3.6e-05	1.3e-05	7.3e-06	5.1e-05	1.9e-05	1.3e-05	5.3e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.9e-07	2.1e-06	2.1e-06	1.9e-06	2.7e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.8e-06	3.7e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.3e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	2.6e-07	9.4e-07	3.8e-07	2.4e-07	5.5e-07	5.9e-07	3.6e-07	3.2e-07
Total Type B Uncertainty	9.1e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.9	46.2	56.2	92.1	22.2	40.1	34.7	40.0

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.64900e-04	5.18478e-03	8.41033e-03	8.31548e-03	2.64593e-02	3.21940e-02	2.25204e-02	1.66710e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-06	1.9e-06	5.4e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Total Uncertainty ^(d)	2.7e-06	7.4e-06	2.8e-06	4.4e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.7	45.8	57.8	106.0	38.9	33.2	53.7	72.4
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.6e-08	2.2e-06	1.4e-06	3.3e-06	4.4e-06	2.4e-06	1.1e-06	1.6e-06
Wavelength	2.4e-06	5.7e-06	8.7e-07	1.7e-06	1.2e-05	2.7e-06	3.2e-06	9.9e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.9e-07	3.8e-07	9.2e-07	1.1e-06	8.2e-07	6.6e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	5.0e-08	4.7e-07	6.9e-07	6.8e-07	1.7e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.9e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.1e-08	1.3e-07	8.8e-08	6.6e-08	2.3e-07	3.2e-07	2.0e-07	1.7e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Degrees of Freedom	20.0	40.2	53.7	95.9	34.8	31.0	41.3	58.7

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.25296e-05	3.25940e-04	9.05339e-04	9.68153e-04	4.91931e-03	9.47465e-03	8.26132e-03	6.97775e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	7.9e-07	4.4e-07	2.6e-07	3.3e-07	1.3e-06	1.7e-06	2.0e-06	1.0e-06
Type B Uncertainty ^(c)	1.4e-07	6.7e-07	2.8e-07	6.5e-07	3.4e-06	1.4e-06	1.2e-06	1.6e-06
Total Uncertainty ^(d)	8.0e-07	8.0e-07	3.8e-07	7.3e-07	3.7e-06	2.2e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	65.3	89.7	105.6	33.6	61.3	46.4	120.4
Date	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013	07-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMC-A*STAR Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.3e-09	2.1e-07	2.2e-07	5.6e-07	1.2e-06	9.7e-07	5.1e-07	1.2e-06
Wavelength	1.4e-07	5.3e-07	1.1e-07	3.0e-07	3.2e-06	3.1e-07	7.5e-07	9.9e-08
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.7e-09	3.2e-08	7.7e-08	8.2e-08	3.2e-07	5.3e-07	4.8e-07	4.2e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.4e-09	4.5e-08	1.1e-07	1.2e-07	4.5e-07	7.6e-07	6.8e-07	6.0e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.5e-07	0.0e+00	9.3e-08	0.0e+00	0.0e+00	0.0e+00	7.0e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	7.7e-10	1.7e-08	1.9e-08	1.6e-08	8.6e-08	1.9e-07	1.5e-07	1.5e-07
Total Type B Uncertainty	1.4e-07	6.7e-07	2.8e-07	6.5e-07	3.4e-06	1.4e-06	1.2e-06	1.6e-06
Degrees of Freedom	19.1	41.1	96.9	80.3	26.3	66.6	51.1	99.8

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.1289 2e-01	9.1454 5e-01	9.1700 2e-01	9.1844 5e-01	9.1944 5e-01	9.2018 4e-01	9.2061 9e-01	9.2083 3e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.2e-04	1.2e-04	1.0e-04	7.9e-05	6.9e-05	5.7e-05	6.2e-05	6.3e-05
Total Uncertainty ^(d)	1.2e-04	1.2e-04	1.0e-04	8.5e-05	8.1e-05	7.3e-05	7.1e-05	6.9e-05
Degrees of Freedom	28.4	25.7	23.3	26.2	35.4	43.8	33.6	30.4
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.3e-08	6.7e-08	4.4e-08	3.0e-08	2.1e-08	1.4e-08	9.4e-09	7.3e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	3.8e-05	3.1e-05	1.3e-05	1.0e-05	1.1e-05	1.3e-05	1.1e-05	1.3e-05
Total Type B Uncertainty	1.2e-04	1.2e-04	1.0e-04	7.9e-05	6.9e-05	5.7e-05	6.2e-05	6.3e-05
Degrees of Freedom	24.7	23.2	20.7	20.7	21.0	22.1	21.4	21.9

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0771 5e-01	6.0726 7e-01	6.2084 4e-01	6.0847 8e-01	6.3605 5e-01	5.7525 5e-01	4.9992 9e-01	4.5134 6e-01
Number of Measurements	3	2	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	1.3e-04	4.7e-05	2.7e-05	2.0e-05	1.9e-05	1.9e-05	1.8e-05	2.1e-05
Type B Uncertainty ^(c)	5.1e-04	1.3e-04	1.3e-04	7.5e-05	6.7e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	32.1	28.9	22.0	27.3	25.9	24.9	25.8	32.8
Date	04-Aug-2013	23-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	9.8e-06	2.0e-05	8.3e-06	2.1e-05	1.1e-05	5.7e-06	3.3e-06	7.3e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.4e-06	7.9e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.4e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.2e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	5.5e-06	6.8e-06	2.9e-06	2.1e-06	2.4e-06	2.5e-06	2.0e-06	2.1e-06
Total Type B Uncertainty	5.1e-04	1.3e-04	1.3e-04	7.5e-05	6.7e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.2	23.0	20.3	24.0	22.3	23.4	23.6	24.6

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier:--C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1663 0e-02	9.5746 7e-02	9.2087 2e-02	7.7115 4e-02	1.6141 8e-01	1.5022 0e-01	1.0289 6e-01	7.6589 4e-02
Number of Measurements	4	4	4	4	4	4	4	4
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	2.2e-05	1.1e-05	3.6e-06	4.8e-06	1.4e-05	4.7e-06	4.1e-06	3.5e-06
Type B Uncertainty ^(c)	9.3e-05	4.9e-05	1.8e-05	2.0e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.6e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.4	51.4	60.1	102.5	25.1	41.5	36.0	43.6
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.1e-06	1.6e-05	1.3e-05	5.8e-06	2.5e-06	4.3e-06
Wavelength	8.6e-05	3.7e-05	1.3e-05	7.4e-06	5.1e-05	1.9e-05	1.4e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.0e-07	2.1e-06	2.1e-06	1.9e-06	2.8e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.9e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.6e-05	2.7e-05	1.0e-05	7.9e-06	0.0e+00	2.7e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	5.3e-07	1.9e-06	7.9e-07	5.0e-07	1.1e-06	1.2e-06	7.4e-07	6.5e-07
Total Type B Uncertainty	9.3e-05	4.9e-05	1.8e-05	2.0e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	25.5	46.6	55.8	92.2	22.1	39.9	34.5	39.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.85265e-04	5.38556e-03	8.70311e-03	8.60492e-03	2.71538e-02	3.29820e-02	2.31258e-02	1.71534e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	1.2e-06	2.0e-06	5.6e-07	1.1e-06	3.5e-06	1.8e-06	2.6e-06	1.3e-06
Type B Uncertainty ^(c)	2.6e-06	7.3e-06	2.8e-06	4.3e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Total Uncertainty ^(d)	2.9e-06	7.6e-06	2.8e-06	4.5e-06	1.5e-05	9.5e-06	6.7e-06	3.6e-06
Degrees of Freedom	27.6	44.8	59.6	105.3	38.2	33.5	54.8	74.4
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.8e-08	2.2e-06	1.4e-06	3.4e-06	4.5e-06	2.3e-06	9.4e-07	1.5e-06
Wavelength	2.6e-06	5.9e-06	9.0e-07	1.8e-06	1.2e-05	2.7e-06	3.2e-06	1.0e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.9e-08	2.7e-07	4.0e-07	3.9e-07	9.4e-07	1.1e-06	8.3e-07	6.7e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	5.2e-08	4.8e-07	7.1e-07	7.0e-07	1.7e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.7e-06	2.1e-06	2.0e-06	5.6e-06	8.3e-06	4.9e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.8e-08	2.1e-07	1.4e-07	1.1e-07	3.6e-07	5.1e-07	3.2e-07	2.8e-07
Total Type B Uncertainty	2.6e-06	7.3e-06	2.8e-06	4.3e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Degrees of Freedom	19.1	39.2	55.2	95.0	34.1	31.3	41.7	59.8

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.2854 3e-05	3.5046 4e-04	9.6435 2e-04	1.0308 7e-03	5.1605 2e-03	9.8773 8e-03	8.6229 0e-03	7.2934 6e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
Type A Uncertainty ^(b)	8.1e-07	4.8e-07	2.7e-07	3.6e-07	1.4e-06	1.8e-06	2.1e-06	1.1e-06
Type B Uncertainty ^(c)	1.4e-07	6.8e-07	2.9e-07	6.9e-07	3.6e-06	1.4e-06	1.2e-06	1.6e-06
Total Uncertainty ^(d)	8.3e-07	8.3e-07	4.0e-07	7.7e-07	3.9e-06	2.3e-06	2.4e-06	1.9e-06
Degrees of Freedom	27.6	60.9	87.2	101.1	33.4	58.7	44.9	115.1
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NPL Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.3e-09	2.2e-07	2.2e-07	5.9e-07	1.3e-06	9.6e-07	4.5e-07	1.2e-06
Wavelength	1.4e-07	5.7e-07	1.2e-07	3.2e-07	3.3e-06	3.2e-07	7.8e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.8e-09	3.4e-08	8.2e-08	8.6e-08	3.3e-07	5.5e-07	5.0e-07	4.3e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.5e-09	4.8e-08	1.1e-07	1.2e-07	4.7e-07	7.8e-07	7.0e-07	6.2e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.0e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	6.3e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	4.4e-10	9.9e-09	1.1e-08	9.3e-09	5.0e-08	1.1e-07	8.6e-08	8.7e-08
Total Type B Uncertainty	1.4e-07	6.8e-07	2.9e-07	6.9e-07	3.6e-06	1.4e-06	1.2e-06	1.6e-06
Degrees of Freedom	19.1	36.7	94.1	76.1	26.1	64.3	48.2	95.5

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.12738e-01	9.14450e-01	9.16950e-01	9.18389e-01	9.19413e-01	9.20181e-01	9.20586e-01	9.20867e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.6e-04	1.5e-04	1.1e-04	8.5e-05	7.6e-05	6.8e-05	7.0e-05	7.4e-05
Total Uncertainty ^(d)	1.7e-04	1.5e-04	1.1e-04	9.0e-05	8.7e-05	8.2e-05	7.8e-05	8.0e-05
Degrees of Freedom	46.3	44.3	29.9	32.5	45.6	60.3	46.1	45.8
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.4e-08	6.8e-08	4.4e-08	3.1e-08	2.1e-08	1.4e-08	9.7e-09	7.0e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.2e-04	9.9e-05	4.2e-05	3.2e-05	3.4e-05	4.0e-05	3.5e-05	4.2e-05
Total Type B Uncertainty	1.6e-04	1.5e-04	1.1e-04	8.5e-05	7.6e-05	6.8e-05	7.0e-05	7.4e-05
Degrees of Freedom	43.0	41.5	27.0	26.4	29.8	37.1	32.4	36.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.0894 1e-01	6.0810 2e-01	6.2168 9e-01	6.0925 1e-01	6.3683 2e-01	5.7624 7e-01	5.0100 7e-01	4.5246 2e-01
Number of Measurements	4	3	3	4	4	4	4	4
Temperature	23.4	23.3	23.3	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-04	3.8e-05	2.7e-05	1.7e-05	1.7e-05	1.6e-05	1.6e-05	1.8e-05
Type B Uncertainty ^(c)	5.2e-04	1.3e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.2e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	31.8	27.1	22.1	26.6	25.1	24.6	25.3	30.8
Date	06-Aug-2013	20-Aug-2013	20-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.0e-05	8.3e-06	2.1e-05	1.1e-05	6.0e-06	4.0e-06	7.7e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.4e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.1e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.4e-04	1.3e-04	1.3e-04	7.2e-05	6.6e-05	1.0e-04	8.3e-05	4.9e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.1e-05	1.4e-05	5.9e-06	4.4e-06	5.0e-06	5.2e-06	4.0e-06	4.3e-06
Total Type B Uncertainty	5.2e-04	1.3e-04	1.3e-04	7.6e-05	6.8e-05	1.1e-04	8.6e-05	5.2e-05
Degrees of Freedom	28.9	23.3	20.4	24.1	22.4	23.5	23.7	24.8

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.15249e-02	9.51026e-02	9.15991e-02	7.67570e-02	1.60742e-01	1.49702e-01	1.02563e-01	7.63412e-02
Number of Measurements	4	4	4	4	4	4	4	4
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.2e-05	1.1e-05	3.6e-06	4.8e-06	1.4e-05	4.7e-06	4.0e-06	3.5e-06
Type B Uncertainty ^(c)	9.2e-05	4.9e-05	1.8e-05	2.0e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.5e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.5	51.5	60.6	103.3	25.1	41.6	36.0	43.9
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.3e-06	1.6e-05	1.3e-05	6.1e-06	3.0e-06	4.5e-06
Wavelength	8.5e-05	3.6e-05	1.3e-05	7.3e-06	5.1e-05	1.9e-05	1.3e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.9e-07	2.1e-06	2.1e-06	1.9e-06	2.7e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.8e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.6e-05	2.7e-05	1.0e-05	7.9e-06	0.0e+00	2.7e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.00E-20	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Total Type B Uncertainty	9.2e-05	4.9e-05	1.8e-05	2.0e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	25.6	46.7	56.3	93.0	22.1	40.0	34.5	39.4

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.6308 4e-04	5.1644 9e-03	8.3797 6e-03	8.2850 1e-03	2.6390 6e-02	3.2122 4e-02	2.2465 7e-02	1.6627 9e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-06	1.9e-06	5.4e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Total Uncertainty ^(d)	2.7e-06	7.3e-06	2.8e-06	4.4e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.8	45.9	57.6	106.1	39.0	33.2	53.7	72.4
Date	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013	04-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.7e-08	2.1e-06	1.4e-06	3.3e-06	4.4e-06	2.4e-06	1.1e-06	1.6e-06
Wavelength	2.4e-06	5.6e-06	8.7e-07	1.7e-06	1.2e-05	2.7e-06	3.1e-06	9.8e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.9e-07	3.8e-07	9.2e-07	1.1e-06	8.2e-07	6.5e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	4.9e-08	4.7e-07	6.9e-07	6.8e-07	1.6e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	4.0e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	9.9e-09	1.2e-07	8.0e-08	5.9e-08	2.1e-07	2.9e-07	1.8e-07	1.6e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Degrees of Freedom	20.1	40.3	53.6	96.0	34.9	31.0	41.2	58.7

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.4293 1e-05	3.5807 8e-04	9.8266 5e-04	1.0499 2e-03	5.2334 5e-03	1.0001 4e-02	8.7343 0e-03	7.3909 8e-03
Number of Measurements	4	4	4	4	4	4	4	4
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	7.8e-07	4.2e-07	2.4e-07	3.1e-07	1.2e-06	1.6e-06	1.8e-06	9.3e-07
Type B Uncertainty ^(c)	1.6e-07	7.3e-07	3.0e-07	7.2e-07	3.7e-06	1.5e-06	1.3e-06	1.7e-06
Total Uncertainty ^(d)	8.0e-07	8.4e-07	3.9e-07	7.8e-07	3.9e-06	2.1e-06	2.2e-06	1.9e-06
Degrees of Freedom	28.1	61.7	103.1	106.0	31.8	70.9	52.4	125.4
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NIST Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.9e-09	2.3e-07	2.3e-07	6.0e-07	1.3e-06	1.0e-06	5.4e-07	1.3e-06
Wavelength	1.6e-07	5.8e-07	1.2e-07	3.2e-07	3.4e-06	3.2e-07	7.9e-07	1.0e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.0e-09	3.5e-08	8.3e-08	8.8e-08	3.3e-07	5.6e-07	5.0e-07	4.4e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.7e-09	4.9e-08	1.2e-07	1.2e-07	4.7e-07	7.9e-07	7.1e-07	6.2e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.7e-07	0.0e+00	1.5e-07	0.0e+00	0.0e+00	0.0e+00	8.1e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.0e-09	2.1e-08	2.4e-08	1.9e-08	1.0e-07	2.3e-07	1.8e-07	1.8e-07
Total Type B Uncertainty	1.6e-07	7.3e-07	3.0e-07	7.2e-07	3.7e-06	1.5e-06	1.3e-06	1.7e-06
Degrees of Freedom	19.1	40.7	97.2	83.4	26.3	68.1	51.7	99.8

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

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Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --A

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	9.1261 3e-01	9.1431 8e-01	9.1681 1e-01	9.1826 2e-01	9.1927 7e-01	9.2001 2e-01	9.2044 1e-01	9.2066 7e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	3.2e-05	2.7e-05	2.5e-05	2.9e-05	4.2e-05	4.5e-05	3.4e-05	2.8e-05
Type B Uncertainty ^(c)	1.2e-04	1.2e-04	1.0e-04	7.9e-05	6.9e-05	5.7e-05	6.2e-05	6.3e-05
Total Uncertainty ^(d)	1.2e-04	1.2e-04	1.0e-04	8.5e-05	8.1e-05	7.3e-05	7.1e-05	6.9e-05
Degrees of Freedom	28.9	26.1	23.4	26.3	35.5	44.0	33.8	30.7
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --A

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
Wavelength	3.3e-06	1.2e-06	4.2e-07	2.6e-06	3.9e-07	3.7e-07	1.4e-06	4.5e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	8.5e-08	6.9e-08	4.6e-08	3.2e-08	2.2e-08	1.5e-08	1.1e-08	8.9e-09
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.6e-06	1.5e-06	1.4e-06	1.4e-06	1.5e-06	1.5e-06	1.5e-06	1.6e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	1.1e-04	1.1e-04	9.9e-05	7.9e-05	6.8e-05	5.6e-05	6.1e-05	6.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	4.0e-05	3.3e-05	1.4e-05	1.0e-05	1.1e-05	1.3e-05	1.2e-05	1.4e-05
Total Type B Uncertainty	1.2e-04	1.2e-04	1.0e-04	7.9e-05	6.9e-05	5.7e-05	6.2e-05	6.3e-05
Degrees of Freedom	25.2	23.5	20.8	20.8	21.1	22.3	21.5	22.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --B

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	4.1123 5e-01	6.0890 5e-01	6.2270 9e-01	6.1066 1e-01	6.3808 5e-01	5.7796 5e-01	5.0305 4e-01	4.5464 1e-01
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.4e-04	3.8e-05	2.8e-05	2.0e-05	1.9e-05	1.9e-05	1.9e-05	2.1e-05
Type B Uncertainty ^(c)	5.2e-04	1.4e-04	1.3e-04	7.5e-05	6.7e-05	1.1e-04	8.6e-05	5.1e-05
Total Uncertainty ^(d)	5.3e-04	1.4e-04	1.4e-04	7.8e-05	7.0e-05	1.1e-04	8.8e-05	5.5e-05
Degrees of Freedom	31.9	27.7	22.2	27.7	26.5	25.2	26.1	33.9
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --B

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	1.0e-05	2.1e-05	8.5e-06	2.1e-05	1.1e-05	6.0e-06	4.0e-06	7.7e-06
Wavelength	4.6e-04	2.6e-05	3.9e-06	1.5e-06	8.0e-06	2.8e-05	2.3e-05	1.1e-05
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	6.3e-06	4.8e-06	4.7e-06	4.8e-06	4.5e-06	5.2e-06	5.8e-06	6.1e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	6.3e-06	5.3e-06	5.1e-06	5.2e-06	5.0e-06	5.6e-06	6.0e-06	6.3e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	2.3e-04	1.3e-04	1.3e-04	7.2e-05	6.5e-05	1.0e-04	8.2e-05	4.8e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.7e-05	2.0e-05	8.7e-06	6.5e-06	7.3e-06	7.7e-06	5.9e-06	6.4e-06
Total Type B Uncertainty	5.2e-04	1.4e-04	1.3e-04	7.5e-05	6.7e-05	1.1e-04	8.6e-05	5.1e-05
Degrees of Freedom	28.1	23.9	20.5	24.4	22.8	23.7	23.9	25.5

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --C

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	2.1537 3e-02	9.5154 7e-02	9.1661 3e-02	7.6818 8e-02	1.6086 5e-01	1.4982 1e-01	1.0267 6e-01	7.6436 9e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	2.6e-05	1.3e-05	4.2e-06	5.6e-06	1.6e-05	5.4e-06	4.7e-06	4.0e-06
Type B Uncertainty ^(c)	9.2e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Total Uncertainty ^(d)	9.5e-05	5.0e-05	1.9e-05	2.0e-05	5.5e-05	3.4e-05	2.8e-05	1.5e-05
Degrees of Freedom	28.6	52.7	61.9	105.3	26.1	42.3	36.8	46.3
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --C

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	2.4e-06	1.7e-05	7.2e-06	1.6e-05	1.3e-05	6.0e-06	2.9e-06	4.5e-06
Wavelength	8.5e-05	3.6e-05	1.3e-05	7.3e-06	5.1e-05	1.9e-05	1.4e-05	5.4e-06
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	7.9e-07	2.1e-06	2.1e-06	1.9e-06	2.8e-06	2.7e-06	2.2e-06	1.9e-06
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	1.4e-06	3.8e-06	3.8e-06	3.4e-06	5.1e-06	4.9e-06	4.0e-06	3.4e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	3.3e-05	2.6e-05	9.7e-06	7.4e-06	0.0e+00	2.6e-05	2.3e-05	1.2e-05
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	5.4e-07	2.0e-06	8.0e-07	5.0e-07	1.1e-06	1.2e-06	7.5e-07	6.6e-07
Total Type B Uncertainty	9.2e-05	4.8e-05	1.8e-05	1.9e-05	5.3e-05	3.3e-05	2.7e-05	1.4e-05
Degrees of Freedom	24.8	46.3	56.2	92.0	22.2	40.2	34.7	40.2

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --D

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	3.6286 2e-04	5.1652 6e-03	8.3852 5e-03	8.2934 1e-03	2.6408 0e-02	3.2154 6e-02	2.2501 6e-02	1.6659 3e-02
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	1.2e-06	1.9e-06	5.4e-07	1.0e-06	3.4e-06	1.7e-06	2.5e-06	1.2e-06
Type B Uncertainty ^(c)	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Total Uncertainty ^(d)	2.7e-06	7.3e-06	2.8e-06	4.4e-06	1.4e-05	9.4e-06	6.7e-06	3.6e-06
Degrees of Freedom	28.8	46.0	57.6	106.0	39.0	33.2	53.8	72.9
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --D

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	8.6e-08	2.1e-06	1.3e-06	3.3e-06	4.4e-06	2.4e-06	1.1e-06	1.6e-06
Wavelength	2.4e-06	5.6e-06	8.7e-07	1.7e-06	1.2e-05	2.7e-06	3.2e-06	9.8e-07
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	2.8e-08	2.6e-07	3.9e-07	3.8e-07	9.2e-07	1.1e-06	8.2e-07	6.5e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	4.9e-08	4.7e-07	6.9e-07	6.8e-07	1.6e-06	1.9e-06	1.5e-06	1.2e-06
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	4.0e-07	3.7e-06	2.1e-06	2.0e-06	5.7e-06	8.3e-06	5.0e-06	2.4e-06
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	1.8e-08	2.2e-07	1.5e-07	1.1e-07	3.8e-07	5.4e-07	3.3e-07	2.9e-07
Total Type B Uncertainty	2.5e-06	7.1e-06	2.8e-06	4.2e-06	1.4e-05	9.3e-06	6.2e-06	3.4e-06
Degrees of Freedom	20.1	40.4	53.5	95.8	34.9	31.1	41.3	59.1

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :

Measurement Results

Results of Step 1 of the comparison. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --E

Measurement Results

Wavelength (nm)	380	400	500	600	700	800	900	1000
Spectral Transmittance ^(a)	1.1599 2e-05	3.2595 4e-04	9.0520 3e-04	9.6767 0e-04	4.9178 5e-03	9.4726 5e-03	8.2606 1e-03	6.9774 0e-03
Number of Measurements	3	3	3	3	3	3	3	3
Temperature	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Type A Uncertainty ^(b)	7.3e-07	4.4e-07	2.6e-07	3.3e-07	1.3e-06	1.7e-06	2.0e-06	1.0e-06
Type B Uncertainty ^(c)	1.3e-07	6.7e-07	2.8e-07	6.5e-07	3.4e-06	1.4e-06	1.2e-06	1.6e-06
Total Uncertainty ^(d)	7.4e-07	8.0e-07	3.8e-07	7.3e-07	3.7e-06	2.2e-06	2.3e-06	1.9e-06
Degrees of Freedom	27.6	65.3	89.2	105.4	33.6	60.8	46.1	119.8
Date	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013	06-Aug-2013

^(a)**Spectral transmittance.** The value of the spectral transmittance of the central 17 mm diameter of the filter as measured by the participant laboratory. ^(b)**Type A Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to reproducibility of the measurement. ^(c)**Type B Uncertainty.** The uncertainties associated with the spectral transmittance values attributed to all type B sources. ^(d)**Total Uncertainty.** The total uncertainty of the measurement of spectral transmittance for a coverage factor of k=1.

Type B Uncertainty Budget^(a)

Measurement results for Step 1. All uncertainties should be reported as absolute uncertainties.

Laboratory: MSL (NMISA Set)

Filter Identifier: --E

Wavelength (nm)	380	400	500	600	700	800	900	1000
Nonlinearity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	4.0e-09	2.1e-07	2.2e-07	5.6e-07	1.2e-06	9.7e-07	5.1e-07	1.2e-06
Wavelength	1.3e-07	5.3e-07	1.1e-07	3.0e-07	3.2e-06	3.1e-07	7.5e-07	9.9e-08
Stray Light	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beam Size & Position	1.6e-09	3.2e-08	7.7e-08	8.2e-08	3.2e-07	5.3e-07	4.8e-07	4.2e-07
Inter-reflection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Obliquity	2.3e-09	4.5e-08	1.1e-07	1.2e-07	4.5e-07	7.6e-07	6.8e-07	6.0e-07
Polarization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filter Drift & Instability	0.0e+00	3.5e-07	0.0e+00	9.3e-08	0.0e+00	0.0e+00	0.0e+00	7.0e-07
Bandwidth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non Parallel Filter Surfaces	5.5e-10	1.3e-08	1.5e-08	1.2e-08	6.7e-08	1.5e-07	1.1e-07	1.2e-07
Total Type B Uncertainty	1.3e-07	6.7e-07	2.8e-07	6.5e-07	3.4e-06	1.4e-06	1.2e-06	1.6e-06
Degrees of Freedom	19.1	41.1	96.3	80.2	26.3	65.7	50.4	99.0

^(a) Please record any uncertainties considered negligible as zero (rather than e.g. < some value) ^(b) Add lines to the table as necessary, itemising other components of uncertainty considered

Signature :

Date :