

Source of uncertainty	Standard uncertainty		Correlation fraction			$u$ (TOC) DU
	in $E$ ( $\lambda$ ) %	in exponent %	Full	Unfavourable	Random	
<b>Measurement</b>						
Radiometric calibration	0.55		$1/\sqrt{3}$	$1/\sqrt{3}$	$1/\sqrt{3}$	0.44
250 W lamp stability (1 year)	0.14		1	0	0	0.00
Non-linearity	0.25		0	1	0	0.33
Stability	0.60		1	0	0	0.00
Temperature dependence	0.20		1	0	0	0.00
Measurement noise	0.20		0	0	1	0.06
Wavelength shift	0.10		0	1	0	0.13
<b>Uncertainties related to <math>E</math> (<math>\lambda</math>)</b>						
Extraterrestrial spectrum (Gröbner et al., 2017)	1.00		$1/\sqrt{3}$	$1/\sqrt{3}$	$1/\sqrt{3}$	0.95
<b>Uncertainties related to exponent of Eq. (4)</b>						
O <sub>3</sub> cross section (Weber et al., 2016)		1.5	0.23	0.23	0.95	1.41
Rayleigh scattering (Bodhaine et al., 1999)		0.1	$1/\sqrt{3}$	$1/\sqrt{3}$	$1/\sqrt{3}$	0.09
O <sub>3</sub> layer altitude of 26 km, $u = 0.5$ km			a			0.01
Rayleigh layer altitude of 5 km, $u = 0.5$ km			b			0.00
Temperature of O <sub>3</sub> cross section at 228 K, $u = 1$ K			c			0.28
Station pressure of 772.8 hPa, $u = 1.3$ hPa			d			0.05
					$U$ (TOC)	3.6