

Calibration History of the Eppley PSP # 17518F3 Pyranometer

This page shows the calibration history of the PSP 17518F3. The responsivity used to transform the irradiance voltage data into Wm^{-2} is a running average of the calibration responsivities obtained over the years. This reduces the variation of the responsivities associated with the random uncertainty of a given calibration (See Figs 1). The rate of change of the pyranometer responsivity is related to exposure to UV radiation. The responsivity values used are in the comprehensive format files or the site files. The responsivities measured during specific calibrations are listed in Table 1.

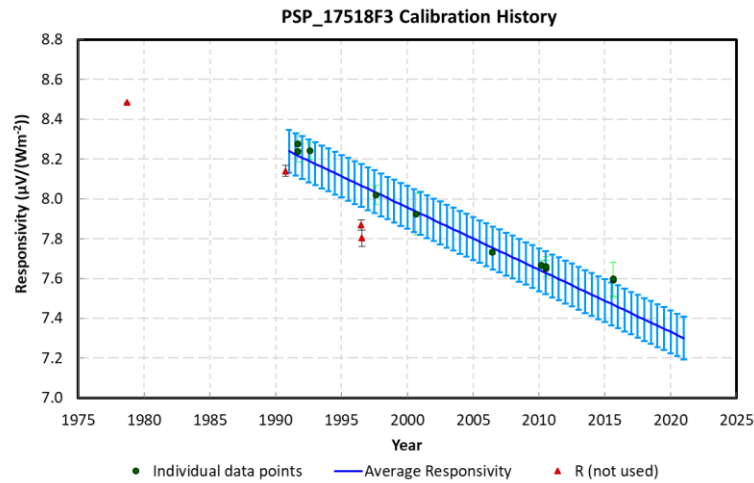


Figure 1: All calibration data plotted against time with long-term trend

Information provided in the Table 1 are:

- Date of calibration
- Responsivity value
- Uncertainty at the 95% level of confidence
- Average SZA over which the calibration value was obtained
- Average temperature during the calibration
- Type of calibration and instruments used
- Location of calibration
- Notes

Table 1: Calibration information for PSP 17518F3

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Calibration Type	Location	Notes
1	1978/09/11	8.6800	0.0000		25.00	factory	Factory	
2	1990/10/01	8.1400	0.0540			NREL	NREL	
3	1991/09/01	8.5160	0.0560			PSP_13192F3 R=7.47	Eugene, OR	
4	1991/09/01	8.2378	0.0530			PSP_13192F3 R=7.47	Eugene, OR	
5	1992/08/09	8.2417	0.0440			PSP_13365F3 R=7.749	Eugene, OR	

6	1996/06/29	7.8689	0.0270			PSP_13365F3 R=7.749	Hermiston, OR	
7	1996/07/20	7.8038	0.0410			PSP_13365F3 R=7.749	Hermiston, OR	
8	1997/08/07	8.0208	0.0490			ACR	Eugene, OR	
9	2000/08/24	7.9236	0.1058	45.06	23.16	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
10	2006/06/21	7.8348	0.0110			NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
11	2010/07/14	7.6688	0.0195			ACR, Schenk_1315 R=14.89	Eugene, OR	
12	2010/07/14	7.6516	0.0396	44.81	28.55	ACR, Schenk_1315 R=14.89	Eugene, OR	
13	2010/07/15	7.6593	0.0492	45.05	24.36	ACR, Schenk_1315 R=14.89	Eugene, OR	
14	2015/08/22	7.5928	0.0880	45.24	22.61	ACR R=1.0, Schenk_1315 R=14.89	Eugene, OR	
15	2015/08/18	7.5970	0.0861	44.99	25.02	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	