

Calibration History of the Eppley PSP # 24041F3 Pyranometer

This page shows the calibration history of the PSP 24041F3. 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.

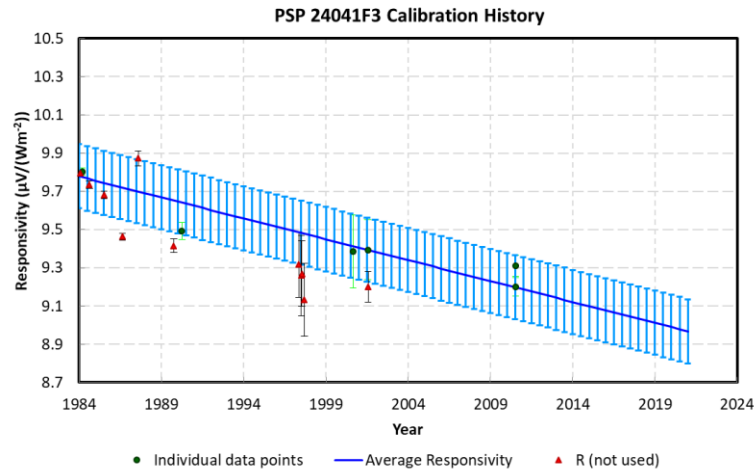


Figure 1: All calibration data plotted against time with long-term trend

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 24041F3

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Reference Instruments	Location	Notes
1	1984/02/01	9.9900			25.00	factory	Factory	
2	1984/03/06	10.2200	0.0200		13.00	PSP_13365F3 R=8.25	Eugene, OR	
3	1984/08/16	10.1500	0.0200			PSP_13365F3 R=8.25	Hood River, OR	
4	1985/07/12	10.1600	0.0200			PSP_13365F3 R=8.25	Hood River, OR	

5	1986/08/16	9.9700	0.0190			PSP_13365F3 R=8.25	Hood River, OR	
6	1987/08/05	10.4600	0.0400			PSP_13365F3 R=8.25	Hood River, OR	
7	1989/10/01	9.3230	0.0350			ACR, B&W	NREL	
8	1990/04/01	9.6980	0.0430			PSP_17853F3 R=7.47	Eugene, OR	
9	1997/05/09	9.3170	0.1700		15.10	NREL HF28964, B&W	NREL	
10	1997/07/01	9.2600	0.2100		23.10	NREL HF28964, B&W	NREL	
11	1997/07/14	9.2700	0.1700		30.90	NREL HF28964, B&W	NREL	
12	1997/09/10	9.1340	0.1900		25.70	NREL HF28964, B&W	NREL	
13	2000/08/28	9.3854	0.1897	44.96	26.08	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
14	2001/07/24	9.2000	0.0800			NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
15	2001/07/18	9.3947	0.1570	44.96	25.80	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
16	2010/07/14	9.3111	0.0550	44.81	28.55	ACR, Schenk R=14.89	Eugene, OR	
17	2010/07/15	9.2008	0.0485	45.05	27.36	ACR, Schenk R=14.89	Eugene, OR	