

Calibration History of the Eppley PSP # 24314F3 Pyranometer

This page shows the calibration history of the PSP 24314F3. 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 & 2). 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.

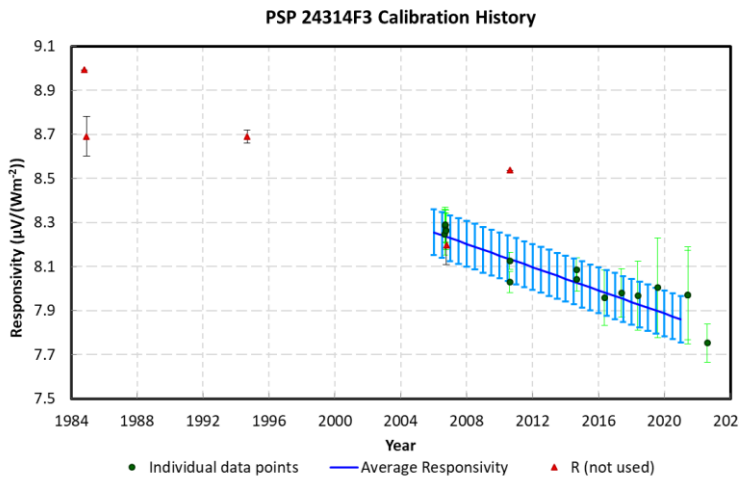


Figure 1: All calibration data plotted against time with long-term trend

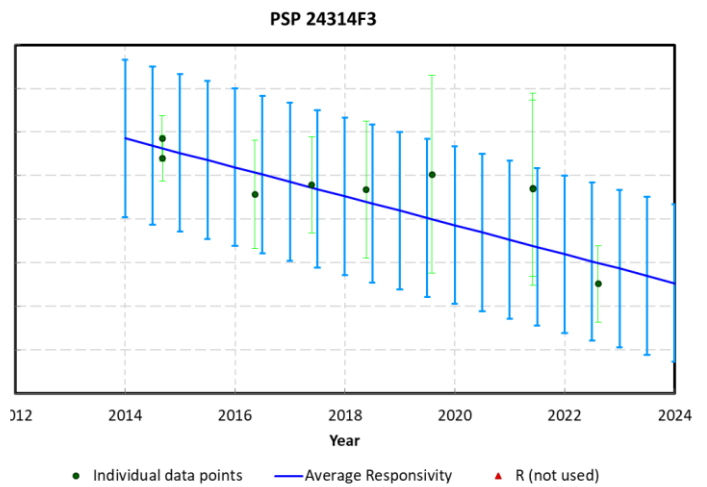


Figure 2: Calibration trend over the past 10 years

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 24314F3 P12

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Reference Instruments	Location	Notes
1	1984/10/12	8.9932			25.00	Factory	Factory	
2	1984/12/04	8.6907	0.0900		5.00	PSP_13365F3 R=8.25	Eugene, OR	
3	1994/09/01	8.6900	0.0290		21.90	NIP_18948E6 R=8.069, PSP17518 R=8.101	Eugene, OR	
4	2006/09/01	8.2478	0.0967	45.05	25.32	NIP_18948E6 R=8.13580,	Eugene, OR	

						Schenk_1315 R=14.89		
5	2006/09/05	8.2825	0.0761	44.97	26.15	NIP_18948E6 R=8.13580, Schenk_1315 R=14.89	Eugene, OR	
6	2006/09/08	8.2902	0.0795	44.89	24.37	NIP_18948E6 R=8.13580, Schenk_1315 R=14.89	Eugene, OR	
7	2006/09/22	8.2658	0.0902	45.22	23.30	NIP_18948E6 R=8.13580, Schenk_1315 R=14.89	Eugene, OR	
8	2006/09/29	8.2609	0.0795	46.76	24.17	NIP_18948E6 R=8.13580, Schenk_1315 R=14.89	Eugene, OR	
9	2006/10/07	8.1977	0.0891	50.30	19.76	NIP_18948E6 R=8.13580, Schenk_1315 R=14.89	Eugene, OR	
10	2010/08/13	8.0299	0.0485	44.93	33.74	ACR, Schenk_1315 R=14.89	Eugene, OR	
11	2010/08/16	8.1248	0.0392	44.56	23.08	ACR, Schenk_1315 R=14.89	Eugene, OR	
12	2014/09/04	8.0857	0.0524	44.96	27.22	ACR, Schenk_1315 R=14.89	Eugene, OR	
13	2014/09/05	8.0403	0.0524	45.08	24.25	ACR, Schenk_1315 R=14.89	Eugene, OR	
14	2016/05/11	7.9571	0.1248	45.00	23.50	ACR R=1.00069, Schenk_1315 R=14.89	Eugene, OR	
15	2017/05/26	7.9785	0.1104	45.01	22.79	ACR R=1.0005, Schenk_1315 R=14.89	Eugene, OR	
16	2018/05/22	7.9678	0.1574	45.00	22.00	ACR R=1.0002, Schenk_1315 R=14.9111	Eugene, OR	
17	2019/08/01	8.0030	0.2269	45.12	25.74	ACR R=1.00034, CMP22_120363 R=9.6981	Eugene, OR	
18	2021/06/02	7.9707	0.2022	44.93	27.10	ACR R=1.00038, CMP22_120363 R=9.7005	Eugene, OR	

19	2021/06/03	7.9690	0.2206	45.10	25.46	ACR R=1.00038, CMP22_120363 R=9.7005	Eugene, OR	
20	2022/08/11	7.7518	0.0874	45.04	-	ACR R=1.00038, CMP22_120365 R=8.9202	Eugene, OR	