

Calibration History of the Eppley NIP # 21149E6 Pyrheliometer

This page shows the calibration history of the NIP 21149E6. The responsivity used to transform the irradiance voltage data into Wm^{-2} is a running average of the responsivity obtained over the years. This reduces the variation of the responsivities associated with the calibration random uncertainties (See Figs 1 & 2). The responsivity values used are in the comprehensive format file or the site files. The responsivity measured during specific calibrations are listed in Table 1.

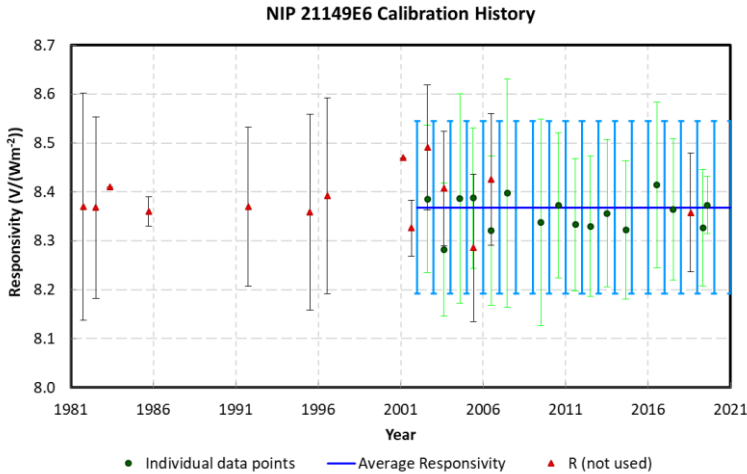


Figure 1: All calibration data plotted against time with long-term trend

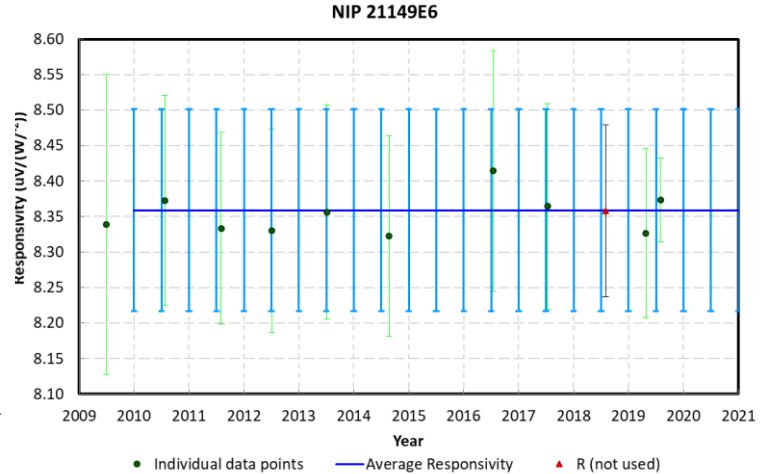


Figure 2: Calibration data plotted against time for 10 year trend

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 History for NIP 211496 (N7)

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Reference Instruments	Location	Notes
1	1981/09/29	8.3700	0.2326			Factory	Factory	
2	1982/07/07	8.3680	0.1858			NIP_18948E6, R=8.08	Burns, OR	
3	1983/05/14	8.4100	0.0000			Factory	Factory	
4	1985/09/19	8.3600	0.0300			NIP_13170E6, R=7.950	Eugene, OR	

5	1991/10/01	8.3700	0.1626			NIP_18948E6, R=8.113	Eugene, OR	
6	1995/06/29	8.3590	0.2000			NIP_17009E6, R=8.344	Hermiston, OR	
7	1996/07/20	8.3920	0.2000			NIP_17009E6, R=8.344	Hermiston, OR	
8	2001/02/21	8.4700			0.00	Standard 7149D	Factory	
9	2001/08/26	8.3263	0.1124	45.00	30.78	ACR, B & W	NREL, SRRL	
14	2002/08/13	8.3855	0.1504	44.86	28.01	NIP_17688E6, R=8.6194	Twin Falls, ID	
15	2003/08/13	8.2819	0.1356	45.01	23.98	NIP_17688E6, R=8.6194	Twin Falls, ID	
16	2004/07/29	8.3868	0.2137	44.92	26.71	NIP_23928E6, R=8.268	Twin Falls, ID	
17	2005/05/25	8.3876	0.1438	44.95	17.12	NIP_17688E6, R=8.7112	Twin Falls, ID	
18	2006/06/28	8.3209	0.1523	44.58	27.79	NIP_17688E6, R=8.7112	Twin Falls, ID	
19	2007/06/20	8.3982	0.2336	45.08	27.29	NIP_17009E6, R=8.4262	Twin Falls, ID	
20	2009/06/30	8.3385	0.2114	44.83	26.99	NIP_23385E6, R=8.554	Twin Falls, ID	
21	2010/07/24	8.3725	0.1482	44.92	26.42	NIP_17688E6, R=8.6194	Twin Falls, ID	
22	2011/08/03	8.3333	0.1351	44.83	27.75	NIP_17688E6, R=8.6194)	Twin Falls, ID	
23	2012/07/04	8.3301	0.1432	45.13	18.38	NIP_17668E6, R=8.6194	Twin Falls, ID	
24	2013/07/05	8.3564	0.1510	44.22	23.71	NIP_17668E6, R=8.6194	Twin Falls, ID	
25	2014/08/23	8.3225	0.1412	44.97	18.02	NIP_17688E6, R=8.6194)	Twin Falls, ID	
26	2016/07/14	8.4142	0.1697	44.95	---	NIP_17668E6, R =8.6345	Twin Falls, ID	
27	2017/07/11	8.3644	0.1445	45.00	28.88	NIP_17668E6, R=8.6303	Twin Falls, ID	
28	2018/08/02	8.3579	0.1210	45.04	25.66	NIP_17668, R=8.6091	Twin Falls, ID	
29	2019/04/25	8.3266	0.1195	45.27	17.96	NIP_17668, R=8.6091	Twin Falls, ID	
30	2019/08/01	8.3732	0.0590	45.12	25.74	ACR, R=1.00034	Eugene, OR	

