

Calibration Record of the Eppley NIP # 17668E6 Pyrheliometer

This page shows the calibration history of the NIP 17668E6. 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.

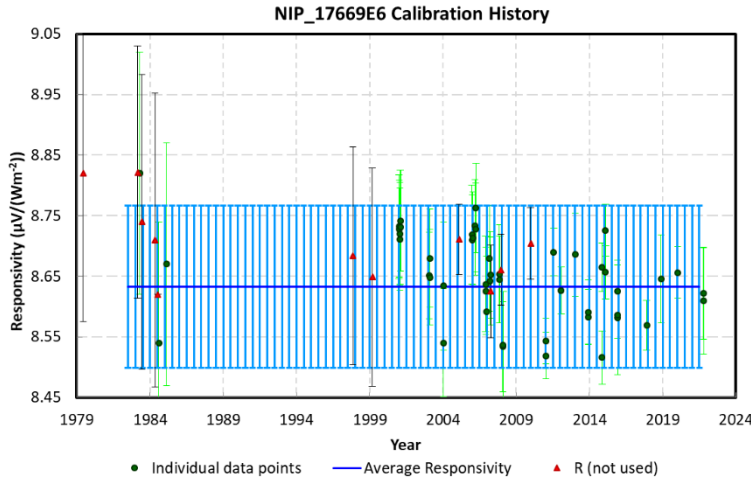


Figure 1: All calibration data plotted against time with long-term trend

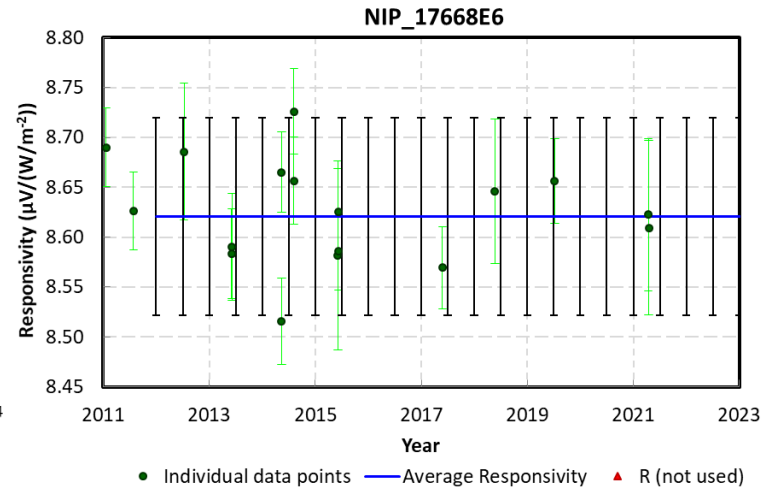


Figure 2: Calibration data plotted against time for 10 year trend

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 17668E6 (N4)

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Reference Instruments	Location	Notes
1	1978/12/10	8.8200	0.2451		-6.00	Reference Instrument	Factory	
2	1982/08/26	8.8218	0.2086		-	NIP_21902E6, R=8.70	Hermiston, OR	
3	1982/10/14	8.8200	0.2000		21.00	NIP_13170E6, R=7.950	EUGENE, OR	

4	1982/12/09	8.7400	0.2429		0.00	Reference Instrument	Factory	
5	1983/11/02	8.7100	0.2421		9.00	Reference Instrument	Factory	
6	1984/01/14	8.6200	0.0000		2.00	NIP_13170E6, R=7.950	EUGENE, OR	
7	1984/02/04	8.5400	0.2000		-	NIP_13170E6, R=7.950	EUGENE, OR	
8	1984/08/14	8.6700	0.2000		-	NIP_17829E6, R=8.19	EUGENE, OR	
9	1997/05/09	8.6840	0.1800		-	Eppley HF 28964 WR=0.9984	NREL, SRRL	
10	1998/09/03	8.6490	0.1800			Eppley HF 31104, WR=.9998	NREL, SRRL	
11	2000/06/29	8.7322	0.0854	44.85	26.42	NIP_18948E6, R=8.1358	EUGENE, OR	
12	2000/07/02	8.7280	0.0800	45.09	24.08	NIP_18948E6, R=8.1358	EUGENE, OR	
13	2000/07/18	8.7116	0.0845	44.98	26.71	NIP_18948E6, R=8.1358	EUGENE, OR	
14	2000/07/24	8.7200	0.0850	44.95	27.36	NIP_18948E6, R=8.1358	EUGENE, OR	
15	2000/08/01	8.7316	0.0937	45.13	27.98	NIP_18948E6, R=8.1358	EUGENE, OR	
16	2000/08/08	8.7417	0.0834	45.26	22.72	NIP_18948E6, R=8.1358	EUGENE, OR	
17	2002/07/24	8.6512	0.0717	44.95	29.01	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
18	2002/08/06	8.6796	0.0810	44.73	22.54	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
19	2002/08/08	8.6480	0.0788	44.72	22.69	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
20	2003/07/11	8.5405	0.0891	45.03	29.81	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
21	2003/07/16	8.6340	0.1055	45.04	29.01	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
22	2004/08/09	8.7112	0.0582	45.00		Eppley HF 31104,	NREL, SRRL	

23	2005/06/23	8.7188	0.0815	45.28	24.43	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
24	2005/06/30	8.7094	0.0757	44.88	25.83	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
25	2005/07/13	8.7127	0.0768	44.96	26.72	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
26	2005/09/08	8.7336	0.0758	45.01	24.19	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
27	2005/09/18	8.7278	0.0757	45.12	20.22	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
28	2005/09/29	8.7629	0.0734	47.75	24.89	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
29	2006/05/29	8.6373	0.0791	45.78	22.33	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
30	2006/06/06	8.6258	0.0723	44.95	27.22	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
31	2006/06/17	8.5916	0.0916	44.94	20.05	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
32	2006/09/01	8.6792	0.0872	45.05	25.32	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
33	2006/09/05	9.3361	0.0847	44.97	26.15	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
34	2006/09/08	9.3154	0.0825	44.89	24.37	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
35	2006/09/22	8.6421	0.0725	45.22	23.30	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
36	2006/09/29	8.6524	0.0715	46.76	24.17	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	

37	2006/10/07	8.6252	0.0764	50.30	19.76	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
38	2007/05/08	8.6541	0.0814	45.00	24.91	NIP_18948E6, R=8.1358, Schenk, R=14.9679	EUGENE, OR	
39	2007/05/17	8.6444	0.0716	44.97	23.70	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
40	2007/06/16	8.6606	0.0587			-	NREL, SRRL	
41	2007/07/31	8.5343	0.0742	45.25	25.72	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
42	2007/08/10	8.5370	0.0883	44.79	23.12	NIP_18948E6, R=8.1358, Schenk, R=14.89	EUGENE, OR	
43	2009/06/24	8.7043	0.0593			Reference Instruments	NREL, SRRL	
44	2010/07/14	8.5188	0.0382	44.81	35.55	ACR	EUGENE, OR	
45	2010/07/15	8.5436	0.0376	45.05	30.36	ACR	EUGENE, OR	
47	2011/07/28	8.6264	0.0391	45.05	33.74	ACR	EUGENE, OR	
46	2011/07/29	8.6901	0.0397	44.51	29.42	ACR	EUGENE, OR	
48	2012/07/11	8.6858	0.0684	44.89	25.00	ACR	EUGENE, OR	
49	2013/06/04	8.5833	0.0448	45.29	25.41	ACR	EUGENE, OR	
50	2013/06/05	8.5902	0.0535	44.90	20.91	ACR	EUGENE, OR	
51	2014/05/13	8.5158	0.0434	44.92	25.58	ACR	EUGENE, OR	
52	2014/05/14	8.6653	0.0399	45.45	21.38	ACR	EUGENE, OR	
53	2014/08/06	8.6567	0.0437	44.63	29.05	ACR	EUGENE, OR	
54	2014/08/07	8.7262	0.0428	45.15	21.78	ACR	EUGENE, OR	
55	2015/06/05	8.5820	0.0947	44.77	23.32	ACR	EUGENE, OR	
56	2015/06/06	8.6258	0.0432	44.73	21.63	ACR	EUGENE, OR	
57	2015/06/07	8.5861	0.0392	47.02	30.72	ACR	EUGENE, OR	
58	2017/05/26	8.5695	0.0411	45.01	22.79	ACR, R=1.0005	EUGENE, OR	
59	2018/05/22	8.6459	0.0728	45.00	22.00	ACR, R=1.0002	EUGENE, OR	
60	2019/07/08	8.6563	0.0427	44.85	26.63	ACR, R=1.00034	EUGENE, OR	