

Calibration History of the Eppley NIP # 18948E6 Pyrheliometer

This page shows the calibration history of the NIP 18948E6. 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.

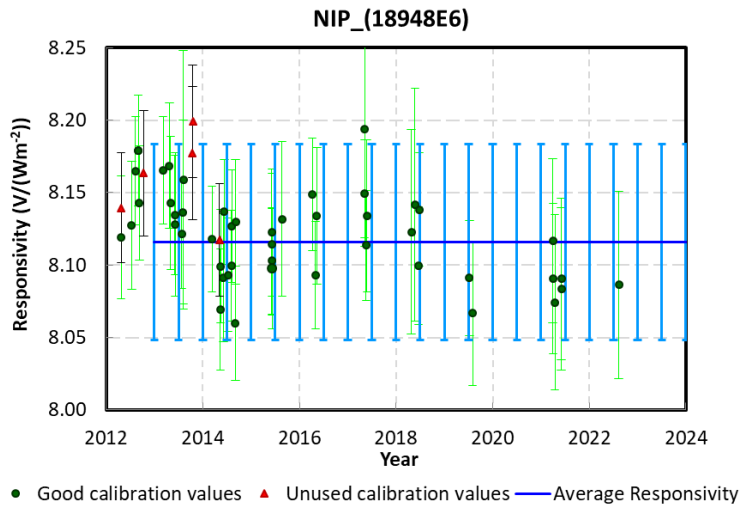
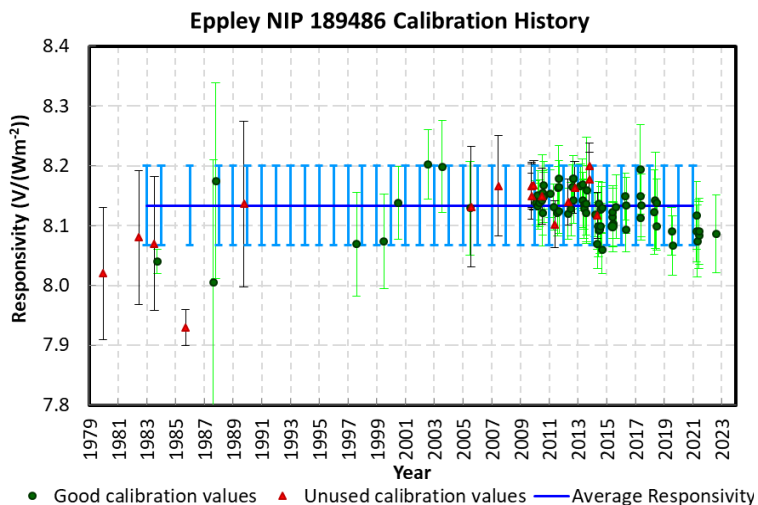


Figure 1: All calibration data plotted against time with long-term trend

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 18948E6

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Reference Instruments	Location	Notes
1	1979/12/15	8.0200	0.1110		0.00	Factory	Factory	
2	1982/06/09	8.0800	0.1120		14.00	Factory	Factory	
3	1983/07/08	8.0700	0.1120		24.00	Factory	Factory	
4	1983/09/20	8.0400	0.0200		-	NIP_13170E6 R=7.95	Eugene, OR	

5	1985/09/12	7.9300	0.0300			-	NIP_21902E6 R=8.64	Burns, OR	
6	1987/08/17	8.0050	0.2050			-	NIP_13170E6 R=7.95	Eugene, OR	Water damage
7	1987/09/01								Water damage
8	1987/10/18	8.1750	0.1635				NIP_13170E6 R=7.95	Eugene, OR	Water damage
9	1989/10/01	8.1360	0.1383			-	NREL	NREL, SRRL	
10	1997/08/07	8.0694	0.0870				NREL Borcal	Eugene, OR	
11	1999/07/01	8.0766	0.0790	45.00	23.70		NIP_17668E6 R=8.684	Eugene, OR	
12	2000/07/01	8.1340	0.0610	45.00	24.54		NIP_17668E6 R=8.649	Eugene, OR	
13	2002/07/24	8.1989	0.0115	45.00	26.68		NIP_17668E6 R=8.649	Eugene, OR	
14	2003/07/17	8.1950	0.0768	45.47	28.07		NIP_17668E6 R=8.649	Eugene, OR	
15	2005/06/30	8.1469	0.0786	45.00		-	NIP_17668E6 R=8.7112	Eugene, OR	
16	2005/07/28	8.1316	0.1012		25.00		ACR, B & W	NREL, SRRL	
17	2007/06/16	8.1666	0.0845				NREL	NREL, SRRL	
18	2009/10/07	8.1497	0.0387	55.44	18.93		ACR, R =---	Eugene, OR	
19	2009/10/08	8.1667	0.0391	50.47	18.82		ACR, R =---	Eugene, OR	
20	2009/10/11	8.1667	0.0367	51.83	13.08		ACR, R =---	Eugene, OR	
21	2009/12/04	8.1671	0.0411	67.45	5.87		ACR, R =---	Eugene, OR	
22	2010/01/27	8.1381	0.0376	45.87	25.82		ACR	Eugene, OR	
23	2010/03/18	8.1322	0.0385	45.10	11.99		ACR	Eugene, OR	
24	2010/03/19	8.1502	0.0414	44.94	14.87		ACR	Eugene, OR	
25	2010/04/18	8.1375	0.0392	44.72	13.02		ACR	Eugene, OR	
26	2010/06/28	8.1488	0.0468	39.59	24.36		ACR	Eugene, OR	

27	2010/07/06	8.1426	0.0760	44.42	26.00	ACR	Eugene, OR	
28	2010/07/14	8.1207	0.0366	44.81	36.55	ACR	Eugene, OR	
29	2010/07/15	8.1553	0.0371	45.05	31.36	ACR	Eugene, OR	
30	2010/08/13	8.1471	0.0416	44.93	49.74	ACR	Eugene, OR	
31	2010/08/16	8.1670	0.0397	44.56	31.08	ACR	Eugene, OR	
32	2011/01/21	8.1538	0.0400	44.51	30.42	ACR	Eugene, OR	
33	2011/04/22	8.1312	0.0390	45.56	17.73	ACR	Eugene, OR	
34	2011/05/19	8.1021	0.0392	35.53	17.54	ACR	Eugene, OR	
35	2011/07/28	8.1216	0.0388	45.05	34.74	ACR	Eugene, OR	
36	2011/08/19	8.1627	0.0367	44.35	25.43	ACR	Eugene, OR	
37	2011/09/01	8.1779	0.0558	45.11	21.00	ACR	Eugene, OR	
38	2011/09/03	8.1238	0.0375	44.50	35.86	ACR	Eugene, OR	
39	2011/09/06	8.1650	0.0438	44.79	27.72	ACR	Eugene, OR	
40	2012/05/22	8.1396	0.0380	37.86	24.37	ACR	Eugene, OR	
41	2012/05/23	8.1194	0.0424	44.93	21.04	ACR	Eugene, OR	
42	2012/07/11	8.1276	0.0442	44.89	25.00	ACR	Eugene, OR	
43	2012/08/09	8.1650	0.0374	45.49	33.11	ACR	Eugene, OR	
44	2012/08/31	8.1791	0.0383	44.89	17.18	ACR	Eugene, OR	
45	2012/09/01	8.1791	0.0383	44.89	17.18	ACR	Eugene, OR	
46	2012/09/07	8.1428	0.0393	48.58	38.72	ACR	Eugene, OR	

47	2012/10/10	8.1635	0.0432	51.20	17.42	ACR	Eugene, OR	
48	2013/03/07	8.1655	0.0372	49.15	9.78	ACR	Eugene, OR	
49	2013/04/23	8.1686	0.0432	44.76	14.00	ACR	Eugene, OR	
50	2013/05/03	8.1428	0.0458	44.86	19.00	ACR	Eugene, OR	
51	2013/06/04	8.1347	0.0413	45.29	25.41	ACR	Eugene, OR	
52	2013/06/05	8.1279	0.0495	44.90	20.91	ACR	Eugene, OR	
53	2013/07/25	8.1218	0.0381	45.44	32.26	ACR	Eugene, OR	
54	2013/08/05	8.1366	0.0633	44.84	31.10	ACR	Eugene, OR	
55	2013/08/06	8.1588	0.0893	44.99	23.77	ACR	Eugene, OR	
56	2013/10/15	8.1773	0.0458	52.89	14.48	ACR	Eugene, OR	
57	2013/10/16	8.1993	0.0389	54.82	13.70	ACR	Eugene, OR	
58	2014/03/12	8.1178	0.0366	47.26	12.65	ACR	Eugene, OR	
59	2014/05/07	8.1173	0.0387	51.88	10.20	ACR	Eugene, OR	
60	2014/05/13	8.0692	0.0417	44.92	25.58	ACR	Eugene, OR	
61	2014/05/14	8.0993	0.0393	45.45	21.38	ACR	Eugene, OR	
62	2014/06/05	8.0914	0.0442	45.02	17.82	ACR	Eugene, OR	
63	2014/06/11	8.1367	0.0363	44.85	17.13	ACR	Eugene, OR	
64	2014/07/10	8.0933	0.0394	45.10	25.12	ACR	Eugene, OR	
65	2014/08/06	8.0994	0.0383	44.63	29.05	ACR	Eugene, OR	
66	2014/08/07	8.1266	0.0389	45.15	21.78	ACR	Eugene, OR	

67	2014/09/04	8.0597	0.0395	44.96	27.22	ACR	Eugene, OR	
68	2014/09/05	8.1298	0.0431	45.08	24.25	ACR	Eugene, OR	
69	2015/06/05	8.1142	0.0489	44.77	23.32	ACR	Eugene, OR	
70	2015/06/06	8.1225	0.0437	44.73	21.63	ACR	Eugene, OR	
71	2015/06/07	8.1029	0.0367	47.02	30.72	ACR	Eugene, OR	
72	2015/06/08	8.0976	0.0414	45.01	26.97	ACR	Eugene, OR	
73	2015/08/22	8.1317	0.0534	45.24	22.61	ACR, R =1.0000, Schenk_1315 R=14.89	Eugene, OR	
74	2016/04/07	8.1486	0.0387	45.02	19.79	ACR, WRR=1.00069	Eugene, OR	
75	2016/05/01	8.0931	0.0370	44.99	23.84	ACR, WRR=1.00069	Eugene, OR	
76	2016/05/11	8.1341	0.0471	45.00	23.50	ACR, WRR=1.00069	Eugene, OR	
77	2016/05/08	8.1939	0.0749	44.81	16.60	ACR, R=1.0005	Eugene, OR	
78	2016/05/09	8.1496	0.0370	44.80	17.53	ACR, R=1.0005	Eugene, OR	
79	2017/05/19	8.1135	0.0379	45.03	24.17	ACR, R=1.0005	Eugene, OR	
80	2017/05/26	8.1341	0.0525	45.01	22.79	ACR, R=1.0005	Eugene, OR	
81	2018/04/25	8.1230	0.0708	44.99	22.45	ACR, R=1.0002	Eugene, OR	
82	2018/05/22	8.1418	0.0803	45.00	22.00	ACR, R=1.0002	Eugene, OR	
83	2018/06/19	8.0995	0.0406	45.13	28.10	ACR, R=1.0002	Eugene, OR	
84	2018/06/26	8.1382	0.0392	45.34	23.04	ACR, R=1.0002	Eugene, OR	
85	2019/07/08	8.0910	0.0398	44.85	26.63	ACR, R=1.00034	Eugene, OR	
86	2019/08/01	8.0668	0.0498	45.12	25.74	ACR, R=1.00034	Eugene, OR	

87	2021/03/30	8.1168	0.0565	44.35	10.05	ACR, R=1.00038	Eugene, OR	
88	2021/04/01	8.0907	0.0517	44.78	19.80	ACR, R=1.00038	Eugene, OR	
89	2021/04/16	8.0743	0.0603	44.94		ACR, R=1.00038	Eugene, OR	
90	2021/06/02	8.0837	0.0560	44.93	27.10	ACR, R=1.00038	Eugene, OR	
91	2021/06/03	8.0905	0.0558	45.10	25.46	ACR, R=1.00038	Eugene, OR	
92	2022/08/22	8.0865	0.0647	44.89		ACR, R=1.00038	Eugene, OR	