1 **Table S1** – Individual extraterrestrial calibration results ($I_{o.415\ nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 415 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2012. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

Date	slope	σ_slope	intercept	σ_intercept	$I_{o.415\ nm}$	σ_Io.λ (%)	R^2	N
20-feb-12	-0.3702	0.0048	0.378	0.014	1.429	1.38	-0.9902	63
22-apr-12	-0.4534	0.0050	0.457	0.014	1.600	1.36	-0.9968	73
17-may-12	-0.4083	0.0048	0.422	0.013	1.564	1.34	-0.9999	71
16-jun-12	-0.4217	0.0055	0.482	0.016	1.674	1.62	-0.9965	65
17-jun-12	-0.3959	0.0053	0.409	0.016	1.556	1.56	-0.9998	65
19-jun-12	-0.3816	0.0052	0.385	0.015	1.520	1.54	-0.9919	64
20-jun-12	-0.3783	0.0049	0.445	0.014	1.615	1.43	-0.9999	64
21-jun-12	-0.3895	0.0052	0.422	0.015	1.578	1.54	-0.9999	64
22-jun-12	-0.3970	0.0055	0.397	0.016	1.539	1.63	-0.9988	64
25-jun-12	-0.4321	0.0056	0.510	0.017	1.724	1.66	-0.9998	63
03-jul-12	-0.4302	0.0060	0.438	0.018	1.604	1.82	-0.9961	62
04-jul-12	-0.4261	0.0058	0.477	0.017	1.668	1.74	-0.9996	62
08-jul-12	-0.4282	0.0062	0.432	0.019	1.594	1.87	-0.9990	61
11-jul-12	-0.4253	0.0063	0.395	0.019	1.536	1.91	-0.9995	61
24-jul-12	-0.4298	0.0060	0.442	0.018	1.606	1.78	-0.9951	61
01-aug-12	-0.4491	0.0062	0.438	0.018	1.597	1.84	-0.9997	62
02-aug-12	-0.4271	0.0061	0.367	0.018	1.486	1.80	-0.9996	63
03-aug-12	-0.4712	0.0062	0.493	0.018	1.685	1.81	-0.9993	63
04-aug-12	-0.4157	0.0056	0.422	0.016	1.570	1.63	-0.9999	63
21-dec-12	-0.4402	0.0045	0.484	0.012	1.569	1.22	-0.9998	78

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1 **Table S2** – Individual extraterrestrial calibration results ($I_{o.610nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 610 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2012. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

Date	*slope*	*σ_slope*	*intercept*	*$\sigma\_intercept$*	*$I_{o.610\,nm}$*	*$\sigma\_Io.\lambda$ (%)*		*R^2*	*N*
17-may-12	-0.1688	0.0011	0.4038	0.0030	1.5351	0.3008	-0.9994		71
17-jun-12	-0.1456	0.0010	0.3882	0.0029	1.5248	0.2932	-0.9996		65
20-jun-12	-0.1395	0.0010	0.4107	0.0029	1.5601	0.2860	-0.9997		64
21-jun-12	-0.1554	0.0011	0.4067	0.0032	1.5540	0.3196	-0.9996		64
25-jun-12	-0.1752	0.0013	0.4567	0.0036	1.6341	0.3637	-0.9994		63
04-jul-12	-0.1575	0.0012	0.4220	0.0034	1.5786	0.3382	-0.9991		62
08-jul-12	-0.1566	0.0012	0.3946	0.0036	1.5356	0.3550	-0.9975		61
11-jul-12	-0.1555	0.0012	0.3820	0.0035	1.5159	0.3518	-0.9990		61
01-aug-12	-0.1680	0.0013	0.4045	0.0035	1.5435	0.3501	-0.9989		62
02-aug-12	-0.1512	0.0011	0.3617	0.0032	1.4784	0.3208	-0.9992		63
03-aug-12	-0.1749	0.0012	0.4351	0.0035	1.5904	0.3492	-0.9987		63
04-aug-12	-0.1493	0.0010	0.4017	0.0029	1.5378	0.2948	-0.9994		63
06-aug-12	-0.1814	0.0015	0.3830	0.0040	1.5081	0.4010	-0.9980		64
21-dec-12	-0.1846	0.0011	0.4626	0.0029	1.5365	0.2890	-0.9989		78

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Date	slope	σ_slope	intercept	$\sigma\_intercept$	$I_{o.670\,nm}$	$\sigma\_Io.\lambda$ (%)		R^2	N
17-may-12	-0.1264	0.0008	0.3109	0.0022	1.3989	0.2245	-0.9991		71
17-jun-12	-0.1022	0.0007	0.2996	0.0021	1.3955	0.2070	-0.9995		65
20-jun-12	-0.0983	0.0007	0.3213	0.0021	1.4266	0.2099	-0.9994		64
21-jun-12	-0.1133	0.0008	0.3171	0.0023	1.4208	0.2303	-0.9994		64
25-jun-12	-0.1280	0.0009	0.3579	0.0026	1.4804	0.2633	-0.9993		63
04-jul-12	-0.1118	0.0008	0.3290	0.0024	1.4384	0.2389	-0.9987		62
08-jul-12	-0.1104	0.0008	0.3059	0.0024	1.4052	0.2443	-0.9958		61
11-jul-12	-0.1093	0.0008	0.2959	0.0024	1.3908	0.2367	-0.9986		61
01-aug-12	-0.1192	0.0008	0.3137	0.0024	1.4095	0.2405	-0.9986		62
02-aug-12	-0.1049	0.0007	0.2791	0.0021	1.3612	0.2136	-0.9992		63
03-aug-12	-0.1221	0.0008	0.3357	0.0024	1.4400	0.2406	-0.9981		63
04-aug-12	-0.1025	0.0007	0.3110	0.0021	1.4043	0.2072	-0.9991		63
05-aug-12	-0.1573	0.0012	0.3753	0.0032	1.4971	0.3228	-0.9936		63
06-aug-12	-0.1260	0.0009	0.2863	0.0026	1.3692	0.2614	-0.9958		64
21-dec-12	-0.1380	0.0008	0.3686	0.0022	1.3988	0.2182	-0.9979		78

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1 **Table S4** – Individual extraterrestrial calibration results ($I_{o.870nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 870 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2012. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

Date	slope	σ_slope	intercept	$\sigma\_intercept$	$I_{o.870\,nm}$	$\sigma\_Io.\lambda\,(\%)$	R^2	N
21-jun-12	-0.0697	0.0022	-0.1695	0.0069	0.8734	0.6889	-0.9991	64
25-jun-12	-0.0758	0.0022	-0.1466	0.0070	0.8939	0.6981	-0.9990	63
17-jun-12	-0.0549	0.0019	-0.1882	0.0062	0.8568	0.6234	-0.9989	65
04-jul-12	-0.0609	0.0021	-0.1750	0.0067	0.8689	0.6724	-0.9982	62
11-jul-12	-0.0574	0.0022	-0.2010	0.0071	0.8462	0.7086	-0.9981	61
20-jun-12	-0.0548	0.0019	-0.1719	0.0061	0.8712	0.6092	-0.9981	64
01-aug-12	-0.0607	0.0023	-0.2257	0.0074	0.8219	0.7372	-0.9977	62
03-aug-12	-0.0577	0.0021	-0.2184	0.0069	0.8274	0.6878	-0.9977	63
17-may-12	-0.0846	0.0022	-0.1685	0.0066	0.8661	0.6614	-0.9976	71
02-aug-12	-0.0523	0.0022	-0.2436	0.0070	0.8071	0.7041	-0.9975	63
21-dec-12	-0.0845	0.0020	-0.1808	0.0060	0.8075	0.6016	-0.9960	78
04-aug-12	-0.0480	0.0021	-0.2328	0.0066	0.8153	0.6583	-0.9959	63
07-aug-12	-0.1091	0.0030	-0.2187	0.0095	0.8260	0.9477	-0.9955	64
08-jul-12	-0.0609	0.0022	-0.1850	0.0071	0.8601	0.7077	-0.9935	61
06-aug-12	-0.0579	0.0023	-0.2594	0.0074	0.7933	0.7404	-0.9928	64

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1 **Table S5** – Individual extraterrestrial calibration results ($I_{o.415nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 415 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2015. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

Date	slope	σ_slope	intercept	$\sigma\_intercept$	$I_{o\,.415\,nm}$	$\sigma\_Io.\lambda$ (%)	R^2	N
19-feb-15	-0.3732	0.0048	0.4156	0.0137	1.482	1.37	-0.9991	62
27-mar-15	-0.4088	0.0046	0.4331	0.0126	1.537	1.26	-0.9989	69
07-apr-15	-0.4877	0.0054	0.5114	0.0147	1.673	1.47	-0.9985	71
04-jun-15	-0.4702	0.0058	0.5161	0.0168	1.728	1.68	-0.9970	68
24-jun-15	-0.3492	0.0048	0.3686	0.0142	1.496	1.42	-0.9998	63
01-jul-15	-0.3973	0.0054	0.4447	0.0161	1.615	1.61	-0.9995	62
02-jul-15	-0.3674	0.0052	0.3627	0.0158	1.488	1.58	-0.9999	62
06-jul-15	-0.4053	0.0058	0.4322	0.0173	1.595	1.73	-0.9992	61
10-jul-15	-0.4335	0.0060	0.4700	0.0181	1.656	1.81	-0.9995	61
11-jul-15	-0.4288	0.0060	0.4639	0.0180	1.645	1.80	-0.9999	61
12-jul-15	-0.4461	0.0064	0.4460	0.0194	1.616	1.94	-0.9998	61
20-jul-15	-0.3916	0.0057	0.3756	0.0173	1.504	1.73	-0.9898	61
28-jul-15	-0.4503	0.0060	0.4921	0.0178	1.687	1.78	-0.9995	62
29-jul-15	-0.4352	0.0061	0.4298	0.0181	1.585	1.81	-0.9968	62
30-jul-15	-0.4181	0.0058	0.4204	0.0171	1.570	1.71	-0.9987	62
01-aug-15	-0.4394	0.0059	0.4727	0.0175	1.653	1.75	-0.9982	62
07-aug-15	-0.4309	0.0055	0.4584	0.0161	1.626	1.61	-0.9999	64
23-aug-15	-0.4409	0.0053	0.4282	0.0148	1.567	1.48	-0.9993	69
05-sep-15	-0.4386	0.0053	0.3290	0.0141	1.410	1.41	-0.9994	74
09-sep-15	-0.4114	0.0042	0.4448	0.0111	1.580	1.11	-0.9998	75
10-sep-15	-0.4993	0.0058	0.3722	0.0154	1.468	1.54	-0.9983	76
22-sep-15	-0.4809	0.0053	0.4357	0.0140	1.554	1.40	-0.9997	75

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1 **Table S6** – Individual extraterrestrial calibration results ($I_{o.610\ nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 610 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2015. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

Date	slope	σ_slope	intercept	$\sigma\_intercept$	$I_{o.610\ nm}$	$\sigma\_Io.\lambda$ (%)	R^2	N
19-feb-15	-0.1317	0.0009	0.3922	0.0027	1.448	0.271	-0.9912	62
24-jun-15	-0.1242	0.0008	0.3946	0.0026	1.536	0.263	-0.9989	63
01-jul-15	-0.1519	0.0010	0.4458	0.0031	1.617	0.315	-0.9982	62
02-jul-15	-0.1328	0.0009	0.3949	0.0028	1.537	0.280	-0.9994	62
06-jul-15	-0.1682	0.0013	0.4376	0.0037	1.603	0.374	-0.9979	61
10-jul-15	-0.1661	0.0012	0.4380	0.0035	1.604	0.351	-0.9980	61
11-jul-15	-0.1664	0.0012	0.4306	0.0036	1.592	0.362	-0.9995	61
12-jul-15	-0.1826	0.0015	0.4223	0.0043	1.578	0.429	-0.9995	61
28-jul-15	-0.1708	0.0012	0.4391	0.0035	1.600	0.354	-0.9964	62
30-jul-15	-0.1625	0.0012	0.4226	0.0033	1.573	0.334	-0.9931	62
01-aug-15	-0.1694	0.0012	0.4432	0.0035	1.605	0.351	-0.9924	62
02-aug-15	-0.1930	0.0015	0.4536	0.0041	1.621	0.409	-0.9976	62
07-aug-15	-0.1751	0.0012	0.4378	0.0034	1.593	0.343	-0.9994	64
23-aug-15	-0.1827	0.0012	0.4352	0.0032	1.579	0.323	-0.9987	69
05-sep-15	-0.1792	0.0012	0.3892	0.0029	1.498	0.290	-0.9979	74
09-sep-15	-0.1666	0.0010	0.4602	0.0026	1.604	0.264	-0.9993	75
22-sep-15	-0.1910	0.0012	0.4303	0.0030	1.546	0.299	-0.9991	75

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1 **Table S7** – Individual extraterrestrial calibration results ($I_{o.670nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 670 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2015. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

Date	slope	σ_slope	intercept	$\sigma\_intercept$	$I_{o.670\,nm}$	$\sigma\_Io.\lambda$ (%)	R^2	N
24-jun-15	-0.0857	0.0006	0.3032	0.0019	1.4014	0.1937	-0.9978	63
01-jul-15	-0.1101	0.0007	0.3515	0.0023	1.4712	0.2346	-0.9972	62
02-jul-15	-0.0925	0.0006	0.3058	0.0020	1.4054	0.2035	-0.9992	62
06-jul-15	-0.1262	0.0009	0.3430	0.0028	1.4587	0.2777	-0.9966	61
10-jul-15	-0.1193	0.0008	0.3349	0.0025	1.4464	0.2492	-0.9971	61
11-jul-15	-0.1218	0.0009	0.3329	0.0026	1.4435	0.2607	-0.9995	61
12-jul-15	-0.1348	0.0011	0.3190	0.0031	1.4234	0.3108	-0.9992	61
15-jul-15	-0.1539	0.0013	0.3316	0.0039	1.4409	0.3860	-0.9987	61
28-jul-15	-0.1228	0.0009	0.3356	0.0025	1.4428	0.2533	-0.9947	62
02-aug-15	-0.1436	0.0010	0.3555	0.0029	1.4697	0.2931	-0.9966	62
07-aug-15	-0.1295	0.0009	0.3401	0.0025	1.4448	0.2508	-0.9992	64
08-aug-15	-0.1639	0.0013	0.3615	0.0034	1.4756	0.3435	-0.9990	64
10-aug-15	-0.1734	0.0015	0.3402	0.0041	1.4434	0.4096	-0.9997	64
23-aug-15	-0.1379	0.0009	0.3415	0.0024	1.4373	0.2419	-0.9983	69
24-aug-15	-0.1618	0.0014	0.2831	0.0036	1.3552	0.3605	-0.9981	69
05-sep-15	-0.1334	0.0008	0.3008	0.0021	1.3710	0.2134	-0.9972	74
09-sep-15	-0.1227	0.0007	0.3635	0.0020	1.4564	0.2012	-0.9987	75
22-sep-15	-0.1407	0.0009	0.3318	0.0022	1.4006	0.2190	-0.9987	75

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1 **Table S8** – Individual extraterrestrial calibration results ($I_{o.870nm}$) applying Langley Plot technique to
2 measurements of solar direct-normal irradiance at 870 nm from a MFRSR operating at T0e site in Central
3 Amazônia for the year 2015. The individual uncertainty [$\sigma\_Io.\lambda$] used to obtain the relative error [$\sigma\_Io.\lambda$
4 **(%)**] was estimated from the **intercept** and its respective uncertainty (**$\sigma\_intercept$**) derived from the least
5 square regression method.

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Date	slope	σ_slope	intercept	$\sigma\_intercept$	$I_{o\,.870\,nm}$	$\sigma\_Io.\lambda$ (%)	R^2	N
24-jun-15	-0.0400	0.0022	-0.2766	0.0071	0.7848	0.7127	-0.9905	63
02-jul-15	-0.0427	0.0022	-0.2725	0.0073	0.7883	0.7319	-0.9926	62
06-jul-15	-0.0787	0.0028	-0.2246	0.0089	0.8269	0.8900	-0.9970	61
10-jul-15	-0.0624	0.0025	-0.2554	0.0083	0.8015	0.8325	-0.9955	61
11-jul-15	-0.0675	0.0026	-0.2503	0.0086	0.8056	0.8573	-0.9988	61
12-jul-15	-0.0788	0.0029	-0.2584	0.0094	0.7990	0.9402	-0.9992	61
15-jul-15	-0.0910	0.0031	-0.2462	0.0099	0.8085	0.9921	-0.9941	61
28-jul-15	-0.0642	0.0025	-0.2525	0.0080	0.8013	0.8028	-0.9911	62
02-aug-15	-0.0789	0.0027	-0.2350	0.0085	0.8143	0.8550	-0.9908	62
07-aug-15	-0.0730	0.0025	-0.2428	0.0079	0.8066	0.7936	-0.9984	64
08-aug-15	-0.0963	0.0028	-0.2252	0.0089	0.8207	0.8909	-0.9981	64
10-aug-15	-0.1048	0.0031	-0.2374	0.0096	0.8101	0.9618	-0.9992	64
12-aug-15	-0.1131	0.0032	-0.2505	0.0100	0.7989	0.9961	-0.9963	65
23-aug-15	-0.0810	0.0024	-0.2353	0.0074	0.8074	0.7358	-0.9958	69
24-aug-15	-0.0937	0.0028	-0.2684	0.0085	0.7807	0.8459	-0.9962	69
05-sep-15	-0.0775	0.0023	-0.2590	0.0068	0.7832	0.6835	-0.9967	74
09-sep-15	-0.0695	0.0020	-0.2176	0.0058	0.8145	0.5786	-0.9958	75
22-sep-15	-0.0796	0.0022	-0.2417	0.0065	0.7893	0.6504	-0.9976	75
23-sep-15	-0.1127	0.0026	-0.2062	0.0075	0.8174	0.7452	-0.9982	75
24-sep-15	-0.1109	0.0028	-0.2627	0.0081	0.7721	0.8102	-0.9962	75

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