

Supplementary material

Grassland and forest understorey biomass emissions from prescribed fires in southeastern United States – RxCADRE 2012

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Table S1. Smoke sample ΔX , MCE, and EF and fire-average (± 1 standard deviation) MCE and EF ΔX are average of the individual 2 s data points. An entry of 'NA' indicates that the measured ΔX was not above the detection limit

Sample	Altitude (m asl)	Est. emission time (ssm)	<i>n</i>	ΔCO_2 (ppmv)	ΔCO (ppmv)	ΔCH_4 (ppmv)	MCE	EFCO ₂ (g kg ⁻¹)	EFCO (g kg ⁻¹)	EFCH ₄ (g kg ⁻¹)
Fire L1G 4 November 2012										
LG101	353	46519	14	7.281	0.442	NA	0.943	1727	66.7	NA
LG102	337	46809	14	0.525	0.071	NA	0.881	1614	138.3	NA
LG103	615	46865	10	2.112	0.154	NA	0.932	1707	79.4	NA
LG104	616	47678	11	2.519	0.085	NA	0.967	1773	38.2	NA
LG105	629	47820	26	1.878	0.051	NA	0.974	1783	30.6	NA
LG106	647	47424	29	8.312	0.426	0.013	0.951	1741	56.8	1.01
LG107	646	47420	29	9.009	0.424	0.013	0.955	1748	52.4	0.95
LG108	1333	48228	24	10.530	0.531	0.026	0.952	1741	55.9	1.56
LG109	1391	48372	16	3.118	0.116	0.011	0.964	1762	41.7	2.27
L1G10	1271	48563	24	6.338	0.286	0.023	0.957	1748	50.2	2.27
L1G11	1102	48773	22	7.076	0.364	0.015	0.951	1740	57.0	1.35
L1G12	947	48973	25	4.704	0.237	0.008	0.952	1743	55.9	1.02
L1G13	622	49337	22	1.261	0.056	NA	0.957	1753	49.7	NA
L1G14	622	49337	22	1.297	0.061	0.004	0.955	1746	52.0	2.04
L1G15	330	49478	22	1.643	0.081	0.014	0.953	1733	54.6	5.25
L1G16	941	49635	30	4.036	0.203	0.007	0.952	1743	55.7	1.14
L1G17	941	49636	20	5.875	0.300	0.010	0.951	1741	56.6	1.07
L1G18	955	50032	28	2.211	0.113	0.007	0.951	1739	56.8	1.92
L1G19	943	50227	49	1.375	0.065	0.003	0.955	1747	52.3	1.48
L1G20	943	50135	37	1.647	0.081	0.005	0.953	1742	54.7	1.78
L1G21	945	50673	42	2.756	0.126	0.011	0.956	1746	50.9	2.50
L1G22	930	50673	13	2.887	0.135	0.008	0.955	1747	52.0	1.75
L1G23	950	50690	25	2.977	0.140	0.008	0.955	1747	52.3	1.68
L1G24	951	50846	49	1.908	0.086	0.007	0.957	1748	50.0	2.44

L1G25	936	51401	54	2.151	0.099	0.006	0.956	1748	51.0	1.76
L1G26	294	51160	8	8.179	0.365	0.011	0.957	1753	49.7	0.83
L1G27	277	50933	7	1.978	0.166	NA	0.923	1694	90.4	NA
L1G28	150	51321	10	9.435	0.613	0.011	0.939	1719	71.1	0.76
L1G29	151	51238	21	5.180	0.335	NA	0.939	1722	70.8	NA
L1G30	149	51433	9	4.550	0.234	NA	0.951	1746	57.1	NA
Average							0.950±0.016	1738±29	58.4±18.9	1.75±0.96
Fire L2G 10 November 10 2012										
L2G01	605	46354	26	7.030	0.325	0.011	0.956	1750	51.5	0.99
L2G02	757	46525	26	9.151	0.467	0.016	0.951	1738	58.7	1.13
L2G03	925	46882	24	11.220	0.642	0.027	0.946	1726	65.5	1.49
L2G04	1067	46991	32	12.254	0.650	0.032	0.950	1732	61.5	1.66
L2G05	1232	47113	23	6.980	0.346	0.019	0.953	1738	57.6	1.73
L2G06	1390	47494	27	12.079	0.595	0.029	0.953	1741	55.7	1.53
L2G07	1531	47838	20	1.635	0.062	0.006	0.963	1757	44.7	2.47
L2G08	915	49301	27	4.077	0.218	NA	0.949	1736	60.9	NA
L2G09	915	51225	52	2.666	0.129	NA	0.954	1746	53.9	NA
L2G10	917	51890	49	3.215	0.160	NA	0.953	1742	56.9	NA
Average							0.953±0.005	1740±9	56.7±5.8	1.57±0.48
Fire L2F 11 November 2012										
L2F01	598	44586	11	7.461	0.518	0.029	0.935	1708	75.5	2.39
L2F02	450	44833	13	4.591	0.275	0.009	0.943	1726	65.9	1.23
L2F03	305	45039	24	8.373	0.693	0.024	0.924	1689	89.0	1.74
L2F04	151	45309	21	4.477	0.258	0.016	0.946	1728	63.3	2.22
L2F05	918	46082	13	13.418	1.338	0.066	0.909	1660	105.3	2.97
L2F06	916	46373	15	8.516	0.714	0.040	0.923	1684	89.9	2.89
L2F07	606	47340	26	5.243	0.429	0.027	0.924	1687	87.9	3.15
L2F08	621	48334	28	2.116	0.278	0.015	0.884	1610	134.7	4.17
L2F09	299	48815	25	3.781	0.374	0.021	0.910	1660	104.6	3.40
L2F10	145	49090	22	2.382	0.292	0.012	0.891	1626	127.0	2.98

L2F11	449	49060	22	2.264	0.206	0.013	0.917	1672	96.7	3.43
L2F12	915	49323	24	2.711	0.275	0.022	0.908	1652	106.8	4.95
L2F13	300	49715	22	0.689	0.102	0.005	0.871	1587	149.7	4.15
L2F14	307	51348	28	1.897	0.214	0.012	0.899	1638	117.6	3.89
L2F15	302	51131	26	1.317	0.156	0.013	0.894	1625	122.7	5.82
L2F16	306	50831	31	1.738	0.217	0.017	0.889	1616	128.5	5.74
L2F17	303	50700	20	4.854	0.518	0.047	0.904	1642	111.5	5.73
L2F18	458	51002	17	3.217	0.356	0.019	0.900	1642	115.6	3.59
L2F19	616	51158	10	3.715	0.339	0.023	0.916	1671	96.9	3.84
L2F20	298	50870	24	4.115	0.388	0.034	0.914	1663	99.8	5.00
L2F21	439	51573	13	6.165	0.580	0.044	0.914	1665	99.7	4.30
L2F22	441	51708	19	4.041	0.380	0.033	0.914	1663	99.4	4.97
L2F23	451	51962	23	3.028	0.452	0.030	0.870	1581	150.2	5.74
L2F24	431	52455	24	2.470	0.306	0.024	0.890	1618	127.4	5.63
L2F25	450	52815	29	1.908	0.192	0.016	0.909	1653	105.9	5.13
L2F26	436	53252	28	1.931	0.239	0.018	0.890	1617	127.6	5.62
L2F27	453	53481	27	2.243	0.229	0.019	0.907	1650	107.4	5.16
L2F28	289	53426	16	1.772	0.214	0.025	0.892	1616	124.1	8.14
L2F29	290	53643	26	2.078	0.186	0.015	0.918	1672	95.2	4.36
L2F30	283	53823	21	2.403	0.295	0.030	0.891	1615	126.2	7.38
Average							0.906±0.019	1651±36.6	108.4±21.4	4.32±1.58