Table S1: Values of the paramaters used to calculate the modelled emissions with L+T or T algorithms, standardised emissions factors for *L+T* algorithm (EF_{L+T}), specific standardised emissions factors for *T* algorithm (EF_T) and experimental coefficient β. Means ± se, n = 5.

Table S1:

		Spring			Summer			Autumn		
Compounds	**Treatment**	**EF_{L+T}**	**EF_T**	**β**	**EF_{L+T}**	**EF_T**	**β**	**EF_{L+T}**	**EF_T**	**β**
Isoprene	**ND**	28.5 ± 4.6			118.0 ± 8.4			6.4 ± 1.1		
	AD	17.8 ± 2.4			84.8± 9.0			12.0 ± 2.8		
MACR+MVK+ISOPOOH	**ND**	0.2 ± 0.03	0.7 ± 0.15	0.5 ± 0.01	0.3 ± 0.02	0.4 ± 0.1	0.5 ± 0.1	0.1 ± 0.01	1.6 ± 0.3	0.7 ± 0.1
	AD	0.1 ± 0.01	0.9 ± 0.28	0.6 ± 0.04	0.2 ± 0.03	0.2 ± 0.04	0.6 ± 0.1	0.1 ± 0.02	5.0 ± 1.6	0.9 ± 0.03
Methanol	**ND**	1.0 ± 0.2	2.6 ± 0.8	0.3 ± 0.1	0.7 ± 0.04	0.9 ± 0.04	0.3 ± 0.04	0.3 ± 0.1	1.1 ± 0.3	0.4 ± 0.1
	AD	0.8 ± 0.1	2.2 ± 0.2	0.3 ± 0.04	0.5 ± 0.1	0.6 ± 0.04	0.3 ± 0.1	0.4 ± 0.1	1.4 ± 0.4	0.4 ± 0.04
Acetone	**ND**	0.6 ± 0.2	1.8 ± 0.5	0.4 ± 0.01	0.9 ± 0.1	1.1 ± 0.2	0.4 ± 0.1	0.6 ± 0.2	2.4 ± 0.6	0.4 ± 0.03
	AD	0.5 ± 0.1	2.1 ± 0.4	0.5 ± 0.02	0.4 ± 0.03	0.5 ± 0.1	0.3 ± 0.1	0.8 ± 0.3	4.3 ± 1.8	0.5 ± 0.1
Formaldehyde	**ND**	0.3 ± 0.1	0.8 ± 0.2	0.4 ± 0.02	0.3 ± 0.03	0.4 ± 0.1	0.4 ± 0.1	0.4 ± 0.1	1.6 ± 0.4	0.4 ± 0.04
	AD	0.2 ± 0.02	1.3 ± 0.2	0.5 ± 0.03	0.2 ± 0.03	0.2 ± 0.1	0.4 ± 0.2	0.6 ± 0.1	2.7 ± 0.7	0.5 ± 0.02
Acetaldehyde	**ND**	2.4 ± 0.7	9.4 ± 2.7	0.5 ± 0.03	1.7 ± 0.4	1.6 ± 0.3	0.4 ± 0.1	2.5 ± 0.6	34.0 ± 3.1	0.7 ± 0.02
	AD	2.1 ± 0.9	7.9 ± 4.2	0.5 ± 0.1	0.9 ± 0.1	0.9 ± 0.1	0.5 ± 0.1	2.5 ± 0.7	37.8 ± 4.3	0.7 ± 0.1

Figure S1: Diurnal pattern of photosynthetic active radiations (PAR) and temperatures in spring, summer and autumn. Values are mean ± SE, n=5

Figure S2: Diurnal pattern of MACR+MVK+ISOPOOH emissions rates, where points represent measured emissions, the yellow line correspond to modelled emissions rates according to the *L+T* algorithm (ER_{L+T}) and dotted line is modelled emissions rates according to *T* algorithm (ER_T). Values are mean ± SE, n=5. R^2 and slope (sl) of correlations between measured and modelled emissions were presented in the yellow frame for *L+T* and in the white frame for *T*. Correlations were obtained without forcing data through the origin.

Figure S3: Diurnal pattern of acetone emissions rates where points represent measured emissions, yellow line correspond to modelled emissions rates according to the *L+T* algorithm (ER_{L+T}) and dotted line is modelled emissions rates according to *T* algorithm (ER_T). Values are mean ± SE, n=5. R^2 and slope (sl) of correlations between measured and modelled emissions were presented in the yellow frame for *L+T* and in the white frame for *T*. Correlations were obtained without forcing data through the origin.

Figure S4: Diurnal pattern of formaldehyde emissions rates where points represent measured emissions, yellow line correspond to modelled emissions rates according to the *L+T* algorithm (ER_{L+T}) and dotted line is modelled emissions rates according to *T* algorithm (ER_T). Values are mean ± SE, n=5. R^2 and slope (sl) of correlations between measured and modelled emissions were presented in yellow frame for *L+T* and in white frame for *T*. Correlations were obtained without forcing data through the origin.

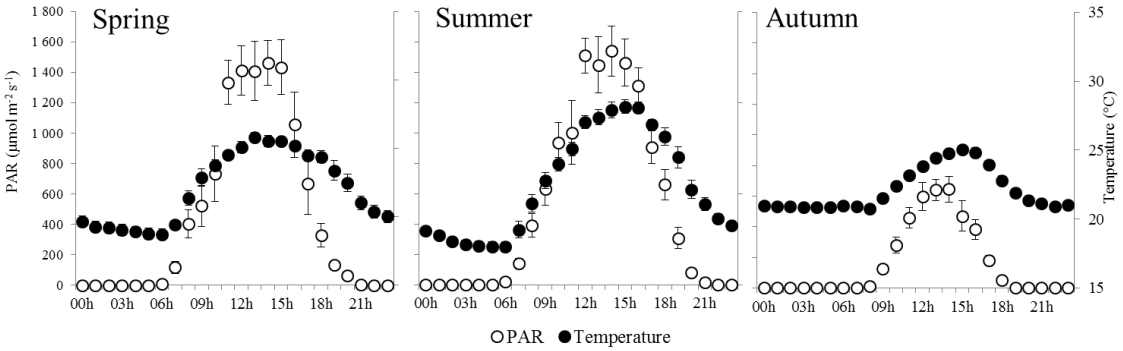
Spring
Summer
Autumn
PAR (µmol m-2 s-1)
Temperature (°C)
1 800
1 600
1 400
1 200
1 000
800
600
400
200
0
35
30
25
20
15
00h 03h 06h 09h 12h 15h 18h 21h
PAR
Temperature

Figure S1:

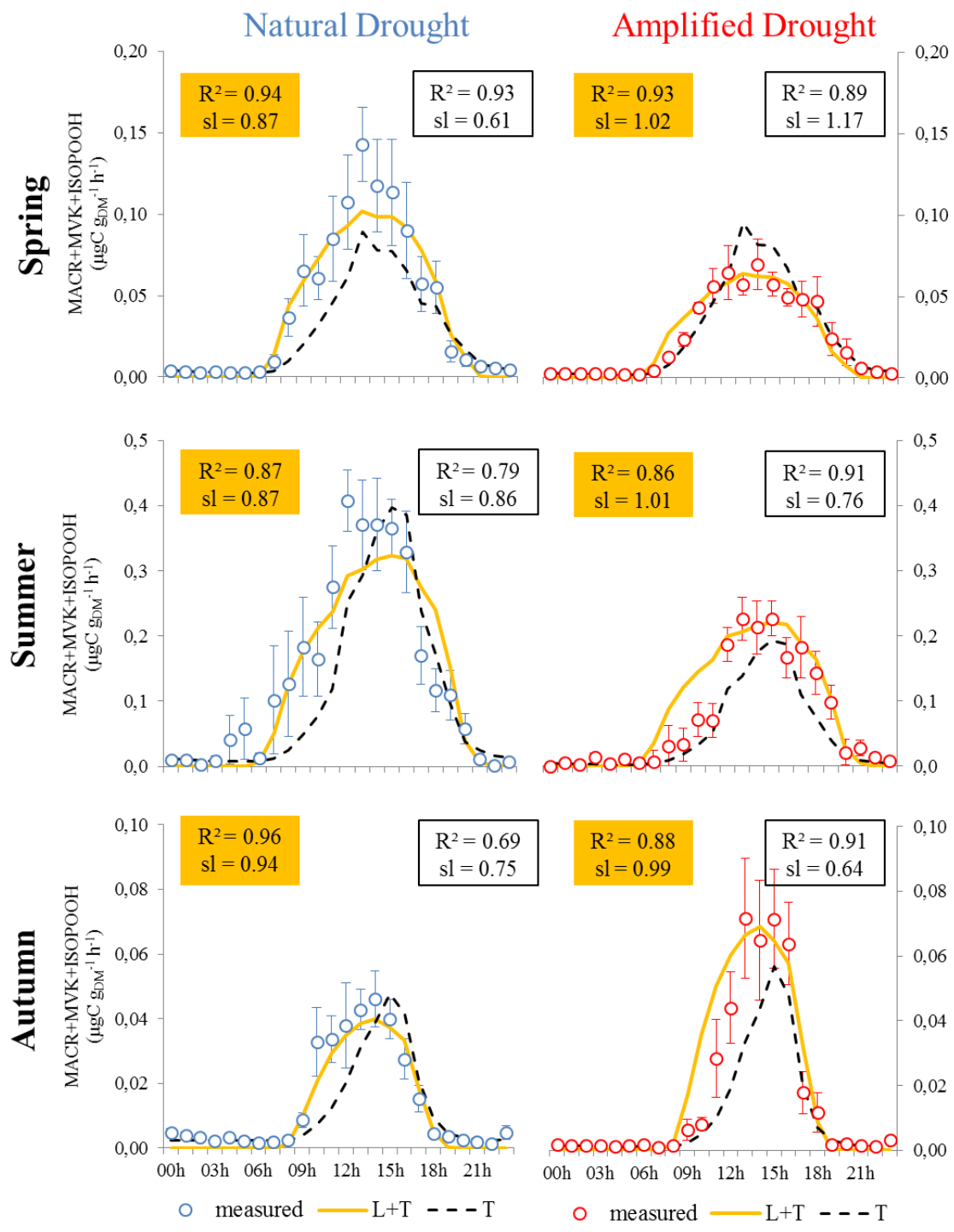
Natural Drought
Amplified Drought
Spring
Summer
Autumn
MACR+MVK+ISOPOOH (µgC gDM-1 h-1)
R² = 0.94 sl = 0.87
R² = 0.93 sl = 0.61
R² = 0.93 sl = 1.02
R² = 0.89 sl = 1.17
R² = 0.87 sl = 0.87
R² = 0.79 sl = 0.86
R² = 0.86 sl = 1.01
R² = 0.91 sl = 0.76
R² = 0.96 sl = 0.94
R² = 0.69 sl = 0.75
R² = 0.88 sl = 0.99
R² = 0.91 sl = 0.64
00h 03h 06h 09h 12h 15h 18h 21h
measured
L+T
T

Figure S2:

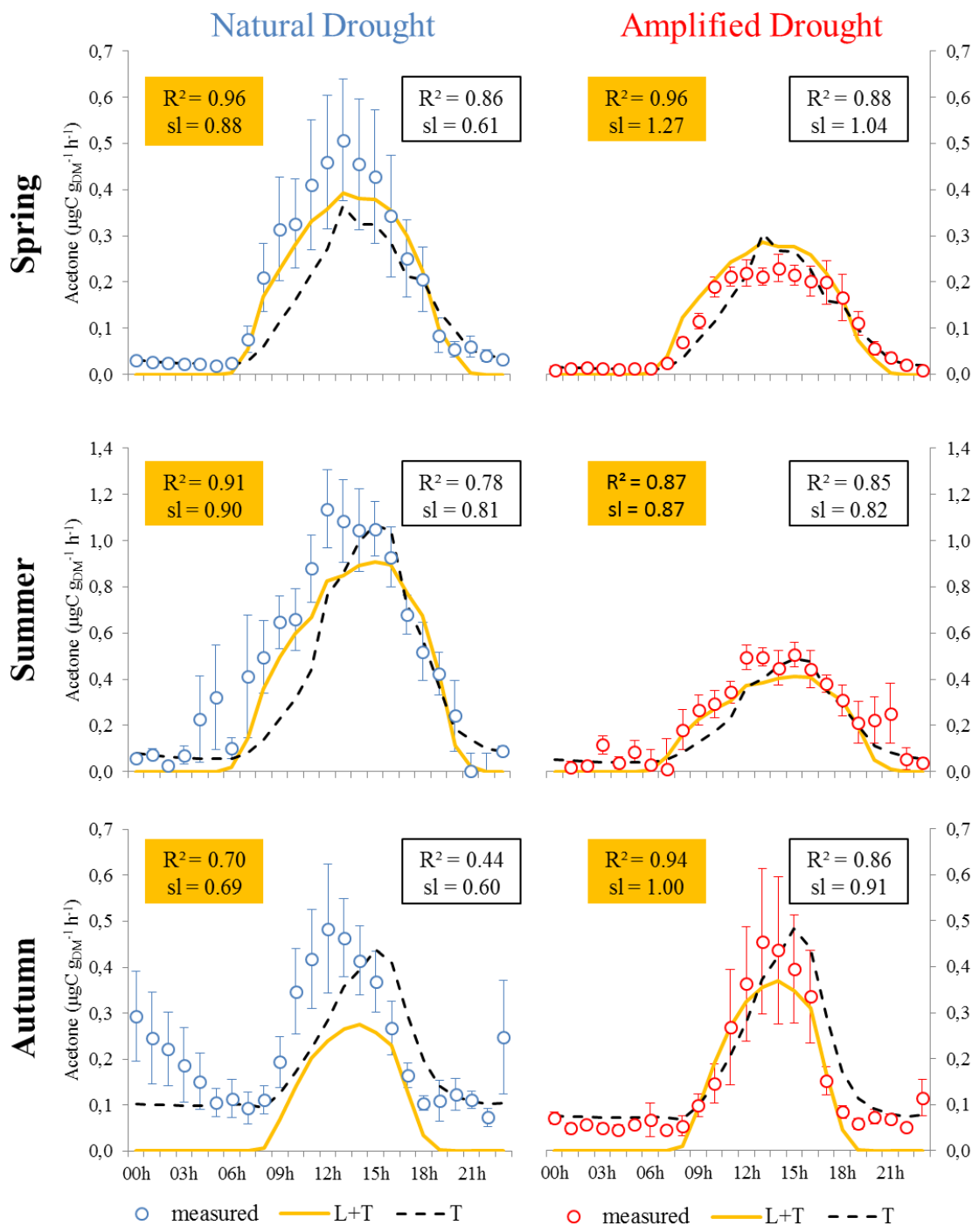
Natural Drought
Amplified Drought
Spring
Summer
Autumn
Acetone (µgC gDM-1 h-1)
R² = 0.96
sl = 0.88
R² = 0.86
sl = 0.61
R² = 0.96
sl = 1.27
R² = 0.88
sl = 1.04
R² = 0.91
sl = 0.90
R² = 0.78
sl = 0.81
R² = 0.87
sl = 0.87
R² = 0.85
sl = 0.82
R² = 0.70
sl = 0.69
R² = 0.44
sl = 0.60
R² = 0.94
sl = 1.00
R² = 0.86
sl = 0.91
00h 03h 06h 09h 12h 15h 18h 21h
measured
L+T
T

Figure S3:

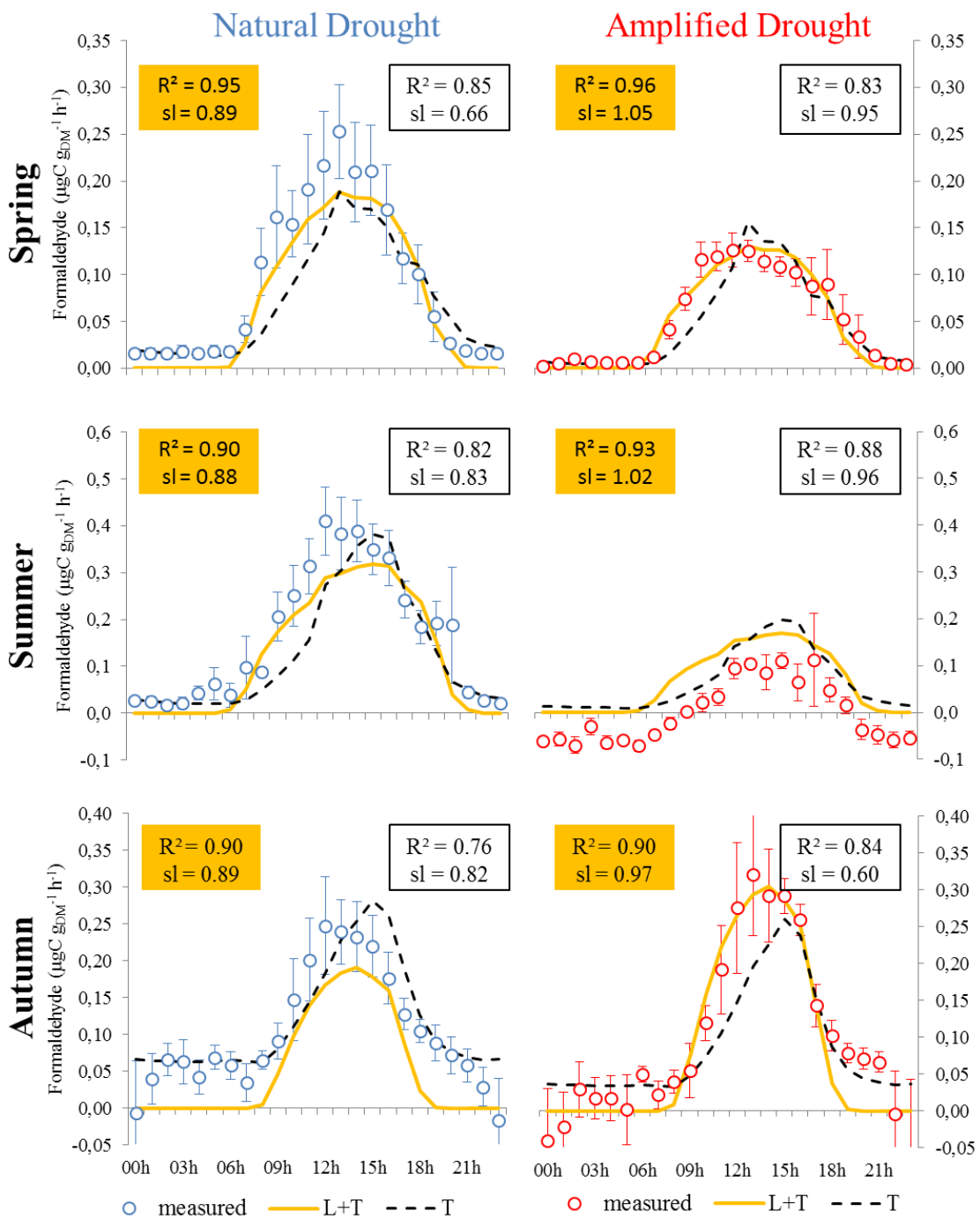
Natural Drought
Amplified Drought
Spring
Summer
Autumn
Formaldehyde (µgC gDM-1 h-1)
R² = 0.95
sl = 0.89
R² = 0.85
sl = 0.66
R² = 0.96
sl = 1.05
R² = 0.83
sl = 0.95
R² = 0.90
sl = 0.88
R² = 0.82
sl = 0.83
R² = 0.93
sl = 1.02
R² = 0.88
sl = 0.96
R² = 0.90
sl = 0.89
R² = 0.76
sl = 0.82
R² = 0.90
sl = 0.97
R² = 0.84
sl = 0.60
00h 03h 06h 09h 12h 15h 18h 21h
measured
L+T
T

Figure S4: