

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV***The GLIMMIX Procedure***

Model Information	
Data Set	WORK.DS1
Response Variable	F_
Response Distribution	Gaussian
Link Function	Identity
Variance Function	Default
Variance Matrix Blocked By	plot
Estimation Technique	Restricted Maximum Likelihood
Degrees of Freedom Method	Kenward-Roger
Fixed Effects SE Adjustment	Kenward-Roger

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proc glimmix data=ds1 maxopt=20000 pconv=1e-4 /*nobound*/;
where site='TVA';
title 'GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV';
class year avedepthcm plot treatment;
model F_=treatment|avedepthcm|year /dist=normal link=identity /*solution*/ ddfm=kr;
*model F_=avedepthcm|fraction|year /dist=lognormal link=identity /*solution*/ ddfm=kr;
*model F_=avedepthcm|fraction|year /dist=gamma link=log /*solution*/ ddfm=kr;
random year/ subject=avedepthcm(plot) type=ar(1) residual;
*random year/ subject=fraction*avedepthcm(plot) type=arh(1) / residual;
*random year/ subject=treatment*avedepthcm(plot) type=cs residual;
random int avedepthcm /subject=plot /*group=avedepthcm*/;
random _residual_/ group=avedepthcm;
output out=d3b pearson(blup) = resid pred=pred;
lsmeans treatment avedepthcm year year*avedepthcm / ilink cl lines adjust=tukey;
run;

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Class Level Information		
Class	Levels	Values
Year	4	2001 2002 2003 2004
AveDepthcm	4	45 75 7.5 22.5
plot	8	1 2 3 4 5 6 7 8
Treatment	2	ROOTS ROOTS+LITTER

Number of Observations Read	128
Number of Observations Used	113

Dimensions	
G-side Cov. Parameters	2
R-side Cov. Parameters	6
Columns in X	75

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Dimensions	
Columns in Z per Subject	5
Subjects (Blocks in V)	8
Max Obs per Subject	16

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	8
Lower Boundaries	8
Upper Boundaries	1
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
0	0	4	188.50622525	.	80.70209
1	0	3	188.48417869	0.02204656	80.72402
2	0	3	188.44214927	0.04202942	80.76589
3	0	5	188.42844487	0.01370440	80.77955
4	0	5	188.41611685	0.01232802	80.79185
5	0	5	188.40502066	0.01109619	80.80292
6	0	5	188.39503278	0.00998788	80.81288
7	0	5	188.38604257	0.00899021	80.82185
8	0	7	188.30508305	0.08095952	80.90266
9	0	5	188.26658841	0.03849464	80.9411
10	0	5	188.23194432	0.03464409	80.97571
11	0	5	188.20075274	0.03119158	81.00689
12	0	5	188.17266951	0.02808323	81.03497
13	0	5	188.14738575	0.02528376	81.06026
14	0	5	188.12462317	0.02276258	81.08303
15	0	5	188.10413102	0.02049215	81.10354
16	0	5	188.08568336	0.01844766	81.122
17	0	7	187.91945275	0.16623061	81.28857

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Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
18	0	5	187.797132	0.12232075	81.41134
19	0	5	187.68694062	0.11019138	81.52209
20	0	5	187.58763799	0.09930262	81.62202
21	0	5	187.49815553	0.08948246	81.71217
22	0	5	187.41753156	0.08062397	81.79347
23	0	5	187.34489711	0.07263445	81.86678
24	0	5	187.27946697	0.06543014	81.93287
25	0	7	186.68805999	0.59140699	82.53258
26	0	59	-235.7544464	422.44250635	109413.1
27	0	5	-235.7545444	0.00009806	109236.8
28	0	5	-242.9069089	7.15236444	23808.99
29	0	5	-257.4709262	14.56401736	13559.84
30	0	11	-257.7591957	0.28826944	17074.55
31	0	3	-260.5250656	2.76586990	16759.62
32	0	2	-264.6617229	4.13665731	21940.77
33	0	9	-267.6069328	2.94520996	30692.92
34	0	3	-269.7508522	2.14391937	28587.12
35	0	2	-272.8409668	3.09011460	15190.93
36	0	7	-274.9818294	2.14086257	15621.76
37	0	5	-275.1902558	0.20842641	15625.54
38	0	4	-276.7512123	1.56095650	15956.16
39	0	5	-276.8135937	0.06238139	15908.7
40	0	5	-276.8711658	0.05757211	15869.48
41	0	5	-276.9233353	0.05216949	15830.1
42	0	5	-276.9705745	0.04723920	15789.88
43	0	5	-277.0134076	0.04283311	15749.34
44	0	5	-277.0523685	0.03896095	15708.99
45	0	5	-277.0878932	0.03552471	15669.32
46	0	5	-277.1203937	0.03250045	15630.63
47	0	3	-277.415998	0.29560429	15066.78
48	0	5	-277.6136539	0.19765590	14586.24
49	0	4	-278.0985832	0.48492927	13744.15

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Iteration History					
Iteration	Restarts	Evaluations	Objective Function	Change	Max Gradient
50	0	2	-279.0620435	0.96346039	3745.779
51	0	3	-279.373193	0.31114948	17004.66
52	0	4	-280.6002283	1.22703525	4289.341
53	0	3	-280.6193756	0.01914736	4948.619
54	0	4	-280.6793598	0.05998421	5033.245
55	0	3	-280.7025987	0.02323891	2020.843
56	0	2	-280.7131224	0.01052370	4001.787
57	0	2	-280.7268003	0.01367787	116.8854
58	0	3	-280.7280142	0.00121389	115.4816
59	0	3	-280.728234	0.00021975	134.0391
60	0	2	-280.7283668	0.00013285	32.95789
61	0	3	-280.7284156	0.00004875	1.080007
62	0	3	-280.7284156	0.00000000	0.061667

Convergence criterion (GCONV=1E-8) satisfied.

Estimated G matrix is not positive definite.

Fit Statistics	
-2 Res Log Likelihood	-280.73
AIC (smaller is better)	-268.73
AICC (smaller is better)	-267.59
BIC (smaller is better)	-268.25
CAIC (smaller is better)	-262.25
HQIC (smaller is better)	-271.94
Generalized Chi-Square	81.00
Gener. Chi-Square / DF	1.00

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Covariance Parameter Estimates				
Cov Parm	Subject	Group	Estimate	Standard Error
Intercept	plot		0	.
AveDepthcm	plot		0.000017	0.000052
Variance	AveDepthcm(plot)		0	0.000554
AR(1)	AveDepthcm(plot)		-0.1660	.
Residual (VC)		AveDepthcm 45	0.001966	0.000839
Residual (VC)		AveDepthcm 75	0.004681	0.001717
Residual (VC)		AveDepthcm 7.5	0.000229	0.000512
Residual (VC)		AveDepthcm 22.5	0.000918	0.000653

Type III Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
Treatment	1	36.06	4.34	0.0445
AveDepthcm	3	29.03	218.21	<.0001
AveDepthcm*Treatment	3	29.03	1.91	0.1494
Year	3	35.14	5.45	0.0035
Year*Treatment	3	35.14	0.34	0.7955
Year*AveDepthcm	9	38.67	2.09	0.0547
Year*AveDept*Treatme	9	38.67	0.71	0.6960

Treatment Least Squares Means												
Treatment	Estimate	Standard Error	DF	t Value	Pr > t	Alpha	Lower	Upper	Mean	Standard Error Mean	Lower Mean	Upper Mean
ROOTS	1.0467	0.006431	33.55	162.75	<.0001	0.05	1.0336	1.0598	1.0467	0.006431	1.0336	1.0598
ROOTS+LITTER	1.0656	0.006397	38.77	166.57	<.0001	0.05	1.0526	1.0785	1.0656	0.006397	1.0526	1.0785

Differences of Treatment Least Squares Means Adjustment for Multiple Comparisons: Tukey										
Treatment	Treatment	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper
ROOTS	ROOTS+LITTER	-0.01889	0.009071	36.06	-2.08	0.0445	0.0445	0.05	-0.03728	-0.00049

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Differences of Treatment Least Squares Means Adjustment for Multiple Comparisons: Tukey			
Treatment	Treatment	Adj Lower	Adj Upper
ROOTS	ROOTS+LITTER	-0.03728	-0.00049

Tukey Grouping for Treatment Least Squares Means (Alpha=0.05)		
LS-means with the same letter are not significantly different.		
Treatment	Estimate	
ROOTS+LITTER	1.0656	A
ROOTS	1.0467	B

AveDepthcm Least Squares Means												
AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Alpha	Lower	Upper	Mean	Standard Error Mean	Lower Mean	Upper Mean
45	1.0251	0.008599	21.44	119.22	<.0001	0.05	1.0073	1.0430	1.0251	0.008599	1.0073	1.0430
75	0.9218	0.01448	17.19	63.64	<.0001	0.05	0.8913	0.9523	0.9218	0.01448	0.8913	0.9523
7.5	1.1872	0.003300	7.176	359.72	<.0001	0.05	1.1795	1.1950	1.1872	0.003300	1.1795	1.1950
22.5	1.0903	0.005876	16.55	185.56	<.0001	0.05	1.0779	1.1027	1.0903	0.005876	1.0779	1.1027

Differences of AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer										
AveDepthcm	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper
45	75	0.1034	0.01684	28.51	6.14	<.0001	<.0001	0.05	0.06888	0.1378
45	7.5	-0.1621	0.009210	25.76	-17.60	<.0001	<.0001	0.05	-0.1810	-0.1432
45	22.5	-0.06515	0.01041	34.57	-6.26	<.0001	<.0001	0.05	-0.08631	-0.04400
75	7.5	-0.2655	0.01486	18.74	-17.87	<.0001	<.0001	0.05	-0.2966	-0.2343
75	22.5	-0.1685	0.01563	22.46	-10.78	<.0001	<.0001	0.05	-0.2009	-0.1361
7.5	22.5	0.09695	0.006739	17.46	14.39	<.0001	<.0001	0.05	0.08276	0.1111

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Differences of AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer			
AveDepthcm	AveDepthcm	Adj Lower	Adj Upper
45	75	0.05747	0.1492
45	7.5	-0.1872	-0.1370
45	22.5	-0.09353	-0.03678
75	7.5	-0.3059	-0.2250
75	22.5	-0.2111	-0.1259
7.5	22.5	0.07859	0.1153

Tukey-Kramer Grouping for AveDepthcm Least Squares Means (Alpha=0.05)		
LS-means with the same letter are not significantly different.		
AveDepthcm	Estimate	
7.5	1.1872	A
22.5	1.0903	B
45	1.0251	C
75	0.9218	D

Year Least Squares Means												
Year	Estimate	Standard Error	DF	t Value	Pr > t	Alpha	Lower	Upper	Mean	Standard Error Mean	Lower Mean	Upper Mean
2001	1.0613	0.01053	34.81	100.75	<.0001	0.05	1.0399	1.0827	1.0613	0.01053	1.0399	1.0827
2002	1.0370	0.007867	40.55	131.81	<.0001	0.05	1.0211	1.0528	1.0370	0.007867	1.0211	1.0528
2003	1.0466	0.009408	32.67	111.24	<.0001	0.05	1.0274	1.0657	1.0466	0.009408	1.0274	1.0657
2004	1.0796	0.007837	40.19	137.77	<.0001	0.05	1.0638	1.0955	1.0796	0.007837	1.0638	1.0955

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Differences of Year Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
Year	Year	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper	Adj Lower	Adj Upper
2001	2002	0.02437	0.01311	35.34	1.86	0.0714	0.2641	0.05	-0.00224	0.05098	-0.01098	0.05972
2001	2003	0.01476	0.01408	33.09	1.05	0.3022	0.7227	0.05	-0.01389	0.04340	-0.02321	0.05272
2001	2004	-0.01832	0.01309	35.89	-1.40	0.1702	0.5079	0.05	-0.04487	0.008228	-0.05362	0.01697
2002	2003	-0.00961	0.01222	33.98	-0.79	0.4370	0.8601	0.05	-0.03445	0.01523	-0.04257	0.02334
2002	2004	-0.04269	0.01106	38.97	-3.86	0.0004	0.0025	0.05	-0.06506	-0.02032	-0.07250	-0.01288
2003	2004	-0.03308	0.01220	33.87	-2.71	0.0105	0.0484	0.05	-0.05788	-0.00828	-0.06598	-0.00018

Tukey-Kramer Grouping for Year Least Squares Means (Alpha=0.05)			
LS-means with the same letter are not significantly different.			
Year	Estimate		
2004	1.0796		A
			A
2001	1.0613	B	A
		B	
2003	1.0466	B	
		B	
2002	1.0370	B	

Year*AveDepthcm Least Squares Means											
Year	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Alpha	Lower	Upper	Mean	Standard Error Mean
2001	45	1.0617	0.01930	20.34	55.00	<.0001	0.05	1.0215	1.1020	1.0617	0.01930
2001	75	0.8961	0.03428	16.93	26.14	<.0001	0.05	0.8237	0.9684	0.8961	0.03428
2001	7.5	1.1924	0.007139	11.57	167.02	<.0001	0.05	1.1768	1.2081	1.1924	0.007139
2001	22.5	1.0950	0.01330	21.59	82.33	<.0001	0.05	1.0674	1.1226	1.0950	0.01330
2002	45	0.9933	0.01574	20.35	63.09	<.0001	0.05	0.9605	1.0261	0.9933	0.01574
2002	75	0.9019	0.02423	16.93	37.22	<.0001	0.05	0.8507	0.9530	0.9019	0.02423
2002	7.5	1.1812	0.006194	11.31	190.71	<.0001	0.05	1.1676	1.1947	1.1812	0.006194
2002	22.5	1.0715	0.01081	21.57	99.13	<.0001	0.05	1.0491	1.0939	1.0715	0.01081

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Year*AveDepthcm Least Squares Means											
Year	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Alpha	Lower	Upper	Mean	Standard Error Mean
2003	45	1.0078	0.01702	20.34	59.22	<.0001	0.05	0.9723	1.0433	1.0078	0.01702
2003	75	0.8898	0.03129	16.93	28.44	<.0001	0.05	0.8238	0.9559	0.8898	0.03129
2003	7.5	1.1828	0.005543	11.54	213.38	<.0001	0.05	1.1707	1.1949	1.1828	0.005543
2003	22.5	1.1059	0.01081	21.57	102.31	<.0001	0.05	1.0834	1.1283	1.1059	0.01081
2004	45	1.0378	0.01574	20.35	65.91	<.0001	0.05	1.0050	1.0706	1.0378	0.01574
2004	75	0.9994	0.02423	16.93	41.24	<.0001	0.05	0.9483	1.0505	0.9994	0.02423
2004	7.5	1.1926	0.005543	11.54	215.15	<.0001	0.05	1.1804	1.2047	1.1926	0.005543
2004	22.5	1.0888	0.01081	21.57	100.74	<.0001	0.05	1.0664	1.1113	1.0888	0.01081

Year*AveDepthcm Least Squares Means			
Year	AveDepthcm	Lower Mean	Upper Mean
2001	45	1.0215	1.1020
2001	75	0.8237	0.9684
2001	7.5	1.1768	1.2081
2001	22.5	1.0674	1.1226
2002	45	0.9605	1.0261
2002	75	0.8507	0.9530
2002	7.5	1.1676	1.1947
2002	22.5	1.0491	1.0939
2003	45	0.9723	1.0433
2003	75	0.8238	0.9559
2003	7.5	1.1707	1.1949
2003	22.5	1.0834	1.1283
2004	45	1.0050	1.0706
2004	75	0.9483	1.0505
2004	7.5	1.1804	1.2047
2004	22.5	1.0664	1.1113

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
Year	AveDepthcm	Year	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper
2001	45	2001	75	0.1657	0.03934	27.04	4.21	0.0003	0.0117	0.05	0.08496	0.2464
2001	45	2001	7.5	-0.1307	0.02058	24.92	-6.35	<.0001	<.0001	0.05	-0.1731	-0.08831
2001	45	2001	22.5	-0.03326	0.02344	37.14	-1.42	0.1643	0.9852	0.05	-0.08076	0.01423
2001	45	2002	45	0.06847	0.02483	19.41	2.76	0.0124	0.3335	0.05	0.01658	0.1204
2001	45	2002	75	0.1599	0.03098	33.76	5.16	<.0001	0.0007	0.05	0.09690	0.2228
2001	45	2002	7.5	-0.1194	0.02027	24	-5.89	<.0001	<.0001	0.05	-0.1613	-0.07757
2001	45	2002	22.5	-0.00975	0.02212	32.62	-0.44	0.6623	1.0000	0.05	-0.05478	0.03528
2001	45	2003	45	0.05395	0.02565	19.74	2.10	0.0485	0.7521	0.05	0.000396	0.1075
2001	45	2003	75	0.1719	0.03677	28.72	4.68	<.0001	0.0031	0.05	0.09671	0.2472
2001	45	2003	7.5	-0.1210	0.02008	23.53	-6.03	<.0001	<.0001	0.05	-0.1625	-0.07955
2001	45	2003	22.5	-0.04410	0.02212	32.62	-1.99	0.0546	0.8142	0.05	-0.08914	0.000928
2001	45	2004	45	0.02399	0.02483	19.7	0.97	0.3456	0.9997	0.05	-0.02785	0.07583
2001	45	2004	75	0.06235	0.03098	33.76	2.01	0.0522	0.8040	0.05	-0.00063	0.1253
2001	45	2004	7.5	-0.1308	0.02008	23.53	-6.51	<.0001	<.0001	0.05	-0.1723	-0.08933
2001	45	2004	22.5	-0.02709	0.02212	32.62	-1.22	0.2296	0.9965	0.05	-0.07212	0.01794
2001	75	2001	7.5	-0.2964	0.03501	18.25	-8.46	<.0001	<.0001	0.05	-0.3699	-0.2229
2001	75	2001	22.5	-0.1989	0.03677	22	-5.41	<.0001	0.0003	0.05	-0.2752	-0.1227
2001	75	2002	45	-0.09720	0.03772	23.91	-2.58	0.0166	0.4418	0.05	-0.1751	-0.01934
2001	75	2002	75	-0.00580	0.04193	16.81	-0.14	0.8916	1.0000	0.05	-0.09433	0.08273
2001	75	2002	7.5	-0.2851	0.03483	17.96	-8.18	<.0001	<.0001	0.05	-0.3583	-0.2119
2001	75	2002	22.5	-0.1754	0.03594	20.33	-4.88	<.0001	0.0017	0.05	-0.2503	-0.1005
2001	75	2003	45	-0.1117	0.03827	24.99	-2.92	0.0073	0.2512	0.05	-0.1905	-0.03291
2001	75	2003	75	0.006260	0.04633	16.78	0.14	0.8941	1.0000	0.05	-0.09159	0.1041
2001	75	2003	7.5	-0.2867	0.03472	17.82	-8.26	<.0001	<.0001	0.05	-0.3597	-0.2137
2001	75	2003	22.5	-0.2098	0.03594	20.33	-5.84	<.0001	<.0001	0.05	-0.2847	-0.1349
2001	75	2004	45	-0.1417	0.03772	23.91	-3.76	0.0010	0.0392	0.05	-0.2195	-0.06382
2001	75	2004	75	-0.1033	0.04193	16.82	-2.46	0.0248	0.5153	0.05	-0.1919	-0.01479
2001	75	2004	7.5	-0.2965	0.03472	17.82	-8.54	<.0001	<.0001	0.05	-0.3695	-0.2235
2001	75	2004	22.5	-0.1928	0.03594	20.33	-5.36	<.0001	0.0004	0.05	-0.2677	-0.1179
2001	7.5	2001	22.5	0.09744	0.01510	30.91	6.45	<.0001	<.0001	0.05	0.06665	0.1282
2001	7.5	2002	45	0.1992	0.01729	26.84	11.52	<.0001	<.0001	0.05	0.1637	0.2347
2001	7.5	2002	75	0.2906	0.02526	19.52	11.50	<.0001	<.0001	0.05	0.2378	0.3434
2001	7.5	2002	7.5	0.01129	0.009308	5.746	1.21	0.2726	0.9968	0.05	-0.01173	0.03431

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV**The GLIMMIX Procedure**

Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
Year	AveDepthcm	Year	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper
2001	7.5	2002	22.5	0.1209	0.01295	33.09	9.34	<.0001	<.0001	0.05	0.09460	0.1473
2001	7.5	2003	45	0.1847	0.01845	26.05	10.01	<.0001	<.0001	0.05	0.1467	0.2226
2001	7.5	2003	75	0.3026	0.03209	18.51	9.43	<.0001	<.0001	0.05	0.2353	0.3699
2001	7.5	2003	7.5	0.009653	0.008805	13.43	1.10	0.2923	0.9989	0.05	-0.00931	0.02861
2001	7.5	2003	22.5	0.08660	0.01295	33.09	6.69	<.0001	<.0001	0.05	0.06025	0.1129
2001	7.5	2004	45	0.1547	0.01729	26.84	8.95	<.0001	<.0001	0.05	0.1192	0.1902
2001	7.5	2004	75	0.1931	0.02526	19.52	7.64	<.0001	<.0001	0.05	0.1403	0.2458
2001	7.5	2004	7.5	-0.00012	0.008805	11.49	-0.01	0.9889	1.0000	0.05	-0.01940	0.01916
2001	7.5	2004	22.5	0.1036	0.01295	33.09	8.00	<.0001	<.0001	0.05	0.07726	0.1300
2001	22.5	2002	45	0.1017	0.02061	41.3	4.94	<.0001	0.0014	0.05	0.06012	0.1433
2001	22.5	2002	75	0.1931	0.02764	26.75	6.99	<.0001	<.0001	0.05	0.1364	0.2499
2001	22.5	2002	7.5	-0.08615	0.01467	29.27	-5.87	<.0001	<.0001	0.05	-0.1161	-0.05615
2001	22.5	2002	22.5	0.02351	0.01702	21.27	1.38	0.1815	0.9884	0.05	-0.01185	0.05887
2001	22.5	2003	45	0.08721	0.02160	39.89	4.04	0.0002	0.0188	0.05	0.04356	0.1309
2001	22.5	2003	75	0.2052	0.03400	22.99	6.04	<.0001	<.0001	0.05	0.1349	0.2755
2001	22.5	2003	7.5	-0.08779	0.01441	28.37	-6.09	<.0001	<.0001	0.05	-0.1173	-0.05829
2001	22.5	2003	22.5	-0.01084	0.01702	21.24	-0.64	0.5309	1.0000	0.05	-0.04621	0.02452
2001	22.5	2004	45	0.05725	0.02061	41.3	2.78	0.0082	0.3227	0.05	0.01564	0.09886
2001	22.5	2004	75	0.09561	0.02764	26.75	3.46	0.0018	0.0808	0.05	0.03887	0.1524
2001	22.5	2004	7.5	-0.09756	0.01441	28.37	-6.77	<.0001	<.0001	0.05	-0.1271	-0.06807
2001	22.5	2004	22.5	0.006173	0.01702	21.52	0.36	0.7203	1.0000	0.05	-0.02916	0.04151
2002	45	2002	75	0.09140	0.02890	29.75	3.16	0.0036	0.1556	0.05	0.03236	0.1504
2002	45	2002	7.5	-0.1879	0.01692	25.62	-11.11	<.0001	<.0001	0.05	-0.2227	-0.1531
2002	45	2002	22.5	-0.07822	0.01910	37.17	-4.10	0.0002	0.0160	0.05	-0.1169	-0.03954
2002	45	2003	45	-0.01452	0.02309	19.24	-0.63	0.5369	1.0000	0.05	-0.06281	0.03377
2002	45	2003	75	0.1035	0.03503	25.21	2.95	0.0067	0.2357	0.05	0.03135	0.1756
2002	45	2003	7.5	-0.1895	0.01669	25	-11.35	<.0001	<.0001	0.05	-0.2239	-0.1551
2002	45	2003	22.5	-0.1126	0.01910	37.17	-5.89	<.0001	<.0001	0.05	-0.1513	-0.07389
2002	45	2004	45	-0.04448	0.02217	19.52	-2.01	0.0589	0.8074	0.05	-0.09081	0.001839
2002	45	2004	75	-0.00612	0.02890	29.75	-0.21	0.8337	1.0000	0.05	-0.06516	0.05291
2002	45	2004	7.5	-0.1993	0.01669	25	-11.94	<.0001	<.0001	0.05	-0.2337	-0.1649
2002	45	2004	22.5	-0.09556	0.01910	37.17	-5.00	<.0001	0.0012	0.05	-0.1343	-0.05687
2002	75	2002	7.5	-0.2793	0.02501	18.97	-11.17	<.0001	<.0001	0.05	-0.3316	-0.2269

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
Year	AveDepthcm	Year	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper
2002	75	2002	22.5	-0.1696	0.02653	23.65	-6.39	<.0001	<.0001	0.05	-0.2244	-0.1148
2002	75	2003	45	-0.1059	0.02961	31.3	-3.58	0.0012	0.0610	0.05	-0.1663	-0.04556
2002	75	2003	75	0.01206	0.03952	16.8	0.31	0.7640	1.0000	0.05	-0.07140	0.09553
2002	75	2003	7.5	-0.2809	0.02486	18.69	-11.30	<.0001	<.0001	0.05	-0.3330	-0.2288
2002	75	2003	22.5	-0.2040	0.02653	23.65	-7.69	<.0001	<.0001	0.05	-0.2588	-0.1492
2002	75	2004	45	-0.1359	0.02890	29.75	-4.70	<.0001	0.0029	0.05	-0.1949	-0.07685
2002	75	2004	75	-0.09752	0.03421	16.76	-2.85	0.0112	0.2843	0.05	-0.1698	-0.02527
2002	75	2004	7.5	-0.2907	0.02486	18.69	-11.69	<.0001	<.0001	0.05	-0.3428	-0.2386
2002	75	2004	22.5	-0.1870	0.02653	23.65	-7.05	<.0001	<.0001	0.05	-0.2418	-0.1322
2002	7.5	2002	22.5	0.1097	0.01246	31.61	8.80	<.0001	<.0001	0.05	0.08427	0.1350
2002	7.5	2003	45	0.1734	0.01811	24.94	9.57	<.0001	<.0001	0.05	0.1361	0.2107
2002	7.5	2003	75	0.2913	0.03190	18.16	9.13	<.0001	<.0001	0.05	0.2244	0.3583
2002	7.5	2003	7.5	-0.00164	0.008057	4.222	-0.20	0.8483	1.0000	0.05	-0.02355	0.02028
2002	7.5	2003	22.5	0.07531	0.01246	31.61	6.05	<.0001	<.0001	0.05	0.04992	0.1007
2002	7.5	2004	45	0.1434	0.01692	25.62	8.48	<.0001	<.0001	0.05	0.1086	0.1782
2002	7.5	2004	75	0.1818	0.02501	18.97	7.27	<.0001	<.0001	0.05	0.1294	0.2341
2002	7.5	2004	7.5	-0.01142	0.008057	13.29	-1.42	0.1796	0.9854	0.05	-0.02879	0.005953
2002	7.5	2004	22.5	0.09232	0.01246	31.61	7.41	<.0001	<.0001	0.05	0.06693	0.1177
2002	22.5	2003	45	0.06370	0.02016	35.39	3.16	0.0032	0.1565	0.05	0.02279	0.1046
2002	22.5	2003	75	0.1817	0.03310	21	5.49	<.0001	0.0003	0.05	0.1128	0.2505
2002	22.5	2003	7.5	-0.1113	0.01215	30.71	-9.16	<.0001	<.0001	0.05	-0.1361	-0.08651
2002	22.5	2003	22.5	-0.03435	0.01515	20.82	-2.27	0.0341	0.6475	0.05	-0.06587	-0.00283
2002	22.5	2004	45	0.03374	0.01910	37.17	1.77	0.0855	0.9134	0.05	-0.00495	0.07243
2002	22.5	2004	75	0.07210	0.02653	23.65	2.72	0.0121	0.3564	0.05	0.01730	0.1269
2002	22.5	2004	7.5	-0.1211	0.01215	30.71	-9.97	<.0001	<.0001	0.05	-0.1459	-0.09629
2002	22.5	2004	22.5	-0.01734	0.01515	20.97	-1.14	0.2654	0.9983	0.05	-0.04884	0.01417
2003	45	2003	75	0.1180	0.03562	26.44	3.31	0.0027	0.1128	0.05	0.04483	0.1911
2003	45	2003	7.5	-0.1750	0.01790	24.38	-9.78	<.0001	<.0001	0.05	-0.2119	-0.1381
2003	45	2003	22.5	-0.09806	0.02016	35.39	-4.86	<.0001	0.0018	0.05	-0.1390	-0.05715
2003	45	2004	45	-0.02996	0.02309	19.24	-1.30	0.2098	0.9937	0.05	-0.07826	0.01833
2003	45	2004	75	0.008399	0.02961	31.3	0.28	0.7785	1.0000	0.05	-0.05197	0.06876
2003	45	2004	7.5	-0.1848	0.01790	24.38	-10.32	<.0001	<.0001	0.05	-0.2217	-0.1479
2003	45	2004	22.5	-0.08104	0.02016	35.39	-4.02	0.0003	0.0197	0.05	-0.1219	-0.04013

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer												
Year	AveDepthcm	Year	AveDepthcm	Estimate	Standard Error	DF	t Value	Pr > t	Adj P	Alpha	Lower	Upper
2003	75	2003	7.5	-0.2930	0.03178	17.99	-9.22	<.0001	<.0001	0.05	-0.3597	-0.2262
2003	75	2003	22.5	-0.2160	0.03310	21	-6.53	<.0001	<.0001	0.05	-0.2849	-0.1472
2003	75	2004	45	-0.1479	0.03503	25.21	-4.22	0.0003	0.0113	0.05	-0.2201	-0.07583
2003	75	2004	75	-0.1096	0.03952	16.8	-2.77	0.0131	0.3254	0.05	-0.1930	-0.02612
2003	75	2004	7.5	-0.3028	0.03178	17.99	-9.53	<.0001	<.0001	0.05	-0.3695	-0.2360
2003	75	2004	22.5	-0.1990	0.03310	21	-6.01	<.0001	<.0001	0.05	-0.2679	-0.1302
2003	7.5	2003	22.5	0.07695	0.01215	30.71	6.33	<.0001	<.0001	0.05	0.05216	0.1017
2003	7.5	2004	45	0.1450	0.01669	25	8.69	<.0001	<.0001	0.05	0.1107	0.1794
2003	7.5	2004	75	0.1834	0.02486	18.69	7.38	<.0001	<.0001	0.05	0.1313	0.2355
2003	7.5	2004	7.5	-0.00978	0.007569	3.951	-1.29	0.2668	0.9939	0.05	-0.03089	0.01134
2003	7.5	2004	22.5	0.09396	0.01215	30.71	7.74	<.0001	<.0001	0.05	0.06918	0.1187
2003	22.5	2004	45	0.06809	0.01910	37.17	3.57	0.0010	0.0627	0.05	0.02940	0.1068
2003	22.5	2004	75	0.1065	0.02653	23.65	4.01	0.0005	0.0201	0.05	0.05165	0.1613
2003	22.5	2004	7.5	-0.08672	0.01215	30.71	-7.14	<.0001	<.0001	0.05	-0.1115	-0.06194
2003	22.5	2004	22.5	0.01701	0.01515	20.82	1.12	0.2742	0.9986	0.05	-0.01451	0.04854
2004	45	2004	75	0.03836	0.02890	29.75	1.33	0.1944	0.9921	0.05	-0.02067	0.09740
2004	45	2004	7.5	-0.1548	0.01669	25	-9.28	<.0001	<.0001	0.05	-0.1892	-0.1204
2004	45	2004	22.5	-0.05108	0.01910	37.17	-2.67	0.0111	0.3815	0.05	-0.08977	-0.01239
2004	75	2004	7.5	-0.1932	0.02486	18.69	-7.77	<.0001	<.0001	0.05	-0.2453	-0.1411
2004	75	2004	22.5	-0.08944	0.02653	23.65	-3.37	0.0026	0.0989	0.05	-0.1442	-0.03464
2004	7.5	2004	22.5	0.1037	0.01215	30.71	8.54	<.0001	<.0001	0.05	0.07895	0.1285

Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
Year	AveDepthcm	Year	AveDepthcm	Adj Lower	Adj Upper
2001	45	2001	75	0.02175	0.3096
2001	45	2001	7.5	-0.2060	-0.05540
2001	45	2001	22.5	-0.1190	0.05250
2001	45	2002	45	-0.02236	0.1593
2001	45	2002	75	0.04653	0.2732
2001	45	2002	7.5	-0.1936	-0.04524
2001	45	2002	22.5	-0.09070	0.07119
2001	45	2003	45	-0.03990	0.1478

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
Year	AveDepthcm	Year	AveDepthcm	Adj Lower	Adj Upper
2001	45	2003	75	0.03742	0.3064
2001	45	2003	7.5	-0.1945	-0.04757
2001	45	2003	22.5	-0.1250	0.03684
2001	45	2004	45	-0.06684	0.1148
2001	45	2004	75	-0.05099	0.1757
2001	45	2004	7.5	-0.2043	-0.05735
2001	45	2004	22.5	-0.1080	0.05385
2001	75	2001	7.5	-0.4245	-0.1683
2001	75	2001	22.5	-0.3334	-0.06442
2001	75	2002	45	-0.2352	0.04080
2001	75	2002	75	-0.1592	0.1476
2001	75	2002	7.5	-0.4125	-0.1576
2001	75	2002	22.5	-0.3069	-0.04394
2001	75	2003	45	-0.2517	0.02828
2001	75	2003	75	-0.1632	0.1758
2001	75	2003	7.5	-0.4138	-0.1597
2001	75	2003	22.5	-0.3413	-0.07829
2001	75	2004	45	-0.2797	-0.00369
2001	75	2004	75	-0.2567	0.05007
2001	75	2004	7.5	-0.4235	-0.1695
2001	75	2004	22.5	-0.3243	-0.06127
2001	7.5	2001	22.5	0.04221	0.1527
2001	7.5	2002	45	0.1359	0.2624
2001	7.5	2002	75	0.1982	0.3830
2001	7.5	2002	7.5	-0.02276	0.04534
2001	7.5	2002	22.5	0.07356	0.1683
2001	7.5	2003	45	0.1171	0.2522
2001	7.5	2003	75	0.1852	0.4201
2001	7.5	2003	7.5	-0.02256	0.04187
2001	7.5	2003	22.5	0.03921	0.1340
2001	7.5	2004	45	0.09144	0.2179
2001	7.5	2004	75	0.1006	0.2855
2001	7.5	2004	7.5	-0.03234	0.03209

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
Year	AveDepthcm	Year	AveDepthcm	Adj Lower	Adj Upper
2001	7.5	2004	22.5	0.05622	0.1510
2001	22.5	2002	45	0.02633	0.1771
2001	22.5	2002	75	0.09201	0.2943
2001	22.5	2002	7.5	-0.1398	-0.03247
2001	22.5	2002	22.5	-0.03875	0.08577
2001	22.5	2003	45	0.008195	0.1662
2001	22.5	2003	75	0.08080	0.3296
2001	22.5	2003	7.5	-0.1405	-0.03507
2001	22.5	2003	22.5	-0.07310	0.05142
2001	22.5	2004	45	-0.01815	0.1327
2001	22.5	2004	75	-0.00552	0.1967
2001	22.5	2004	7.5	-0.1503	-0.04485
2001	22.5	2004	22.5	-0.05608	0.06843
2002	45	2002	75	-0.01432	0.1971
2002	45	2002	7.5	-0.2498	-0.1260
2002	45	2002	22.5	-0.1481	-0.00836
2002	45	2003	45	-0.09901	0.06997
2002	45	2003	75	-0.02469	0.2316
2002	45	2003	7.5	-0.2506	-0.1285
2002	45	2003	22.5	-0.1824	-0.04271
2002	45	2004	45	-0.1256	0.03663
2002	45	2004	75	-0.1118	0.09960
2002	45	2004	7.5	-0.2604	-0.1382
2002	45	2004	22.5	-0.1654	-0.02569
2002	75	2002	7.5	-0.3708	-0.1878
2002	75	2002	22.5	-0.2667	-0.07255
2002	75	2003	45	-0.2142	0.002408
2002	75	2003	75	-0.1325	0.1567
2002	75	2003	7.5	-0.3719	-0.1900
2002	75	2003	22.5	-0.3010	-0.1069
2002	75	2004	45	-0.2416	-0.03016
2002	75	2004	75	-0.2227	0.02763
2002	75	2004	7.5	-0.3816	-0.1998

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
Year	AveDepthcm	Year	AveDepthcm	Adj Lower	Adj Upper
2002	75	2004	22.5	-0.2840	-0.08989
2002	7.5	2002	22.5	0.06408	0.1552
2002	7.5	2003	45	0.1071	0.2396
2002	7.5	2003	75	0.1746	0.4080
2002	7.5	2003	7.5	-0.03112	0.02784
2002	7.5	2003	22.5	0.02973	0.1209
2002	7.5	2004	45	0.08150	0.2053
2002	7.5	2004	75	0.09026	0.2733
2002	7.5	2004	7.5	-0.04089	0.01806
2002	7.5	2004	22.5	0.04675	0.1379
2002	22.5	2003	45	-0.01005	0.1375
2002	22.5	2003	75	0.06057	0.3028
2002	22.5	2003	7.5	-0.1557	-0.06686
2002	22.5	2003	22.5	-0.08978	0.02107
2002	22.5	2004	45	-0.03613	0.1036
2002	22.5	2004	75	-0.02497	0.1692
2002	22.5	2004	7.5	-0.1655	-0.07663
2002	22.5	2004	22.5	-0.07276	0.03809
2003	45	2003	75	-0.01233	0.2483
2003	45	2003	7.5	-0.2405	-0.1095
2003	45	2003	22.5	-0.1718	-0.02430
2003	45	2004	45	-0.1145	0.05452
2003	45	2004	75	-0.09993	0.1167
2003	45	2004	7.5	-0.2503	-0.1193
2003	45	2004	22.5	-0.1548	-0.00729
2003	75	2003	7.5	-0.4092	-0.1767
2003	75	2003	22.5	-0.3372	-0.09492
2003	75	2004	45	-0.2761	-0.01979
2003	75	2004	75	-0.2542	0.03502
2003	75	2004	7.5	-0.4190	-0.1865
2003	75	2004	22.5	-0.3201	-0.07791
2003	7.5	2003	22.5	0.03250	0.1214
2003	7.5	2004	45	0.08397	0.2061

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Differences of Year*AveDepthcm Least Squares Means Adjustment for Multiple Comparisons: Tukey-Kramer					
Year	AveDepthcm	Year	AveDepthcm	Adj Lower	Adj Upper
2003	7.5	2004	75	0.09246	0.2743
2003	7.5	2004	7.5	-0.03747	0.01791
2003	7.5	2004	22.5	0.04952	0.1384
2003	22.5	2004	45	-0.00178	0.1380
2003	22.5	2004	75	0.009383	0.2035
2003	22.5	2004	7.5	-0.1312	-0.04228
2003	22.5	2004	22.5	-0.03841	0.07244
2004	45	2004	75	-0.06736	0.1441
2004	45	2004	7.5	-0.2159	-0.09375
2004	45	2004	22.5	-0.1209	0.01879
2004	75	2004	7.5	-0.2841	-0.1022
2004	75	2004	22.5	-0.1865	0.007632
2004	7.5	2004	22.5	0.05930	0.1482

Conservative Tukey-Kramer Grouping for Year*AveDepthcm Least Squares Means (Alpha=0.05)					
LS-means with the same letter are not significantly different.					
Year	AveDepthcm	Estimate			
2004	7.5	1.1926		A	
				A	
2001	7.5	1.1924		A	
				A	
2003	7.5	1.1828		A	
				A	
2002	7.5	1.1812		A	
2003	22.5	1.1059		B	
				B	
2001	22.5	1.0950	C	B	
			C	B	
2004	22.5	1.0888	C	B	
			C	B	

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV***The GLIMMIX Procedure***

Conservative Tukey-Kramer Grouping for Year*AveDepthcm Least Squares Means (Alpha=0.05)					
LS-means with the same letter are not significantly different.					
Year	AveDepthcm	Estimate			
2002	22.5	1.0715	C	B	
			C	B	
2001	45	1.0617	C	B	D
			C	B	D
2004	45	1.0378	C	B	D
			C		D
2003	45	1.0078	C	E	D
			C	E	D
2004	75	0.9994	C	E	D
				E	D
2002	45	0.9933		E	D
				E	
2002	75	0.9019		E	
				E	
2001	75	0.8961		E	
				E	
2003	75	0.8898		E	
The LINES display does not reflect all significant comparisons. The following additional pairs are significantly different: (2001 22.5,2003 45), (2004 22.5,2003 45).					

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV

Obs	Site	Treatment	plot	Year	Litter	AveDepthcm	Fraction	delta14C	F_
17	TVA	ROOTS+LITTER	1	2001	ENRICHED	7.5	BULK	.	.
20	TVA	ROOTS+LITTER	8	2001	ENRICHED	7.5	BULK	.	.
22	TVA	ROOTS+LITTER	4	2002	ENRICHED	7.5	BULK	.	.
49	TVA	ROOTS+LITTER	1	2001	ENRICHED	22.5	BULK	.	.
52	TVA	ROOTS+LITTER	8	2001	ENRICHED	22.5	BULK	.	.
73	TVA	ROOTS	2	2003	AMBIENT	45	BULK	.	.
81	TVA	ROOTS+LITTER	1	2001	ENRICHED	45	BULK	.	.
84	TVA	ROOTS+LITTER	8	2001	ENRICHED	45	BULK	.	.
97	TVA	ROOTS	2	2001	AMBIENT	75	BULK	.	.
99	TVA	ROOTS	5	2001	AMBIENT	75	BULK	.	.
105	TVA	ROOTS	2	2003	AMBIENT	75	BULK	.	.
107	TVA	ROOTS	5	2003	AMBIENT	75	BULK	.	.
114	TVA	ROOTS+LITTER	4	2001	ENRICHED	75	BULK	.	.
115	TVA	ROOTS+LITTER	6	2001	ENRICHED	75	BULK	.	.
123	TVA	ROOTS+LITTER	6	2003	ENRICHED	75	BULK	.	.

Obs	BulkPerC	BulkPerN	pred	resid
17	2.7031	0.1287	1.19340	.
20	2.5216	0.1254	1.19132	.
22	2.103	0.11901	1.18726	.
49	0.8287	0.042	1.09081	.
52	0.7819	0.043	1.09234	.
73	.	.	0.98725	.
81	0.4606	0.0198	1.06237	.
84	0.4964	0.0231	1.06190	.
97	.	.	0.84324	.
99	.	.	0.84309	.
105	.	.	0.85014	.
107	.	.	0.84999	.
114	.	.	0.94865	.
115	.	.	0.94925	.
123	.	.	0.92983	.

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV

The UNIVARIATE Procedure
Variable: resid (Pearson
Residual)

Moments			
N	113	Sum Weights	113
Mean	0	Sum Observations	0
Std Deviation	0.84082969	Variance	0.70699457
Skewness	0.03794442	Kurtosis	-0.2241861
Uncorrected SS	79.1833923	Corrected SS	79.1833923
Coeff Variation	.	Std Error Mean	0.0790986

Basic Statistical Measures			
Location		Variability	
Mean	0.00000	Std Deviation	0.84083
Median	-0.06694	Variance	0.70699
Mode	.	Range	3.90100
		Interquartile Range	1.06138

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	0	Pr > t 	1.0000
Sign	M	-1.5	Pr >= M 	0.8509
Signed Rank	S	-5.5	Pr >= S 	0.9875

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.992328	Pr < W	0.7855
Kolmogorov-Smirnov	D	0.051186	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.03483	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.203111	Pr > A-Sq	>0.2500

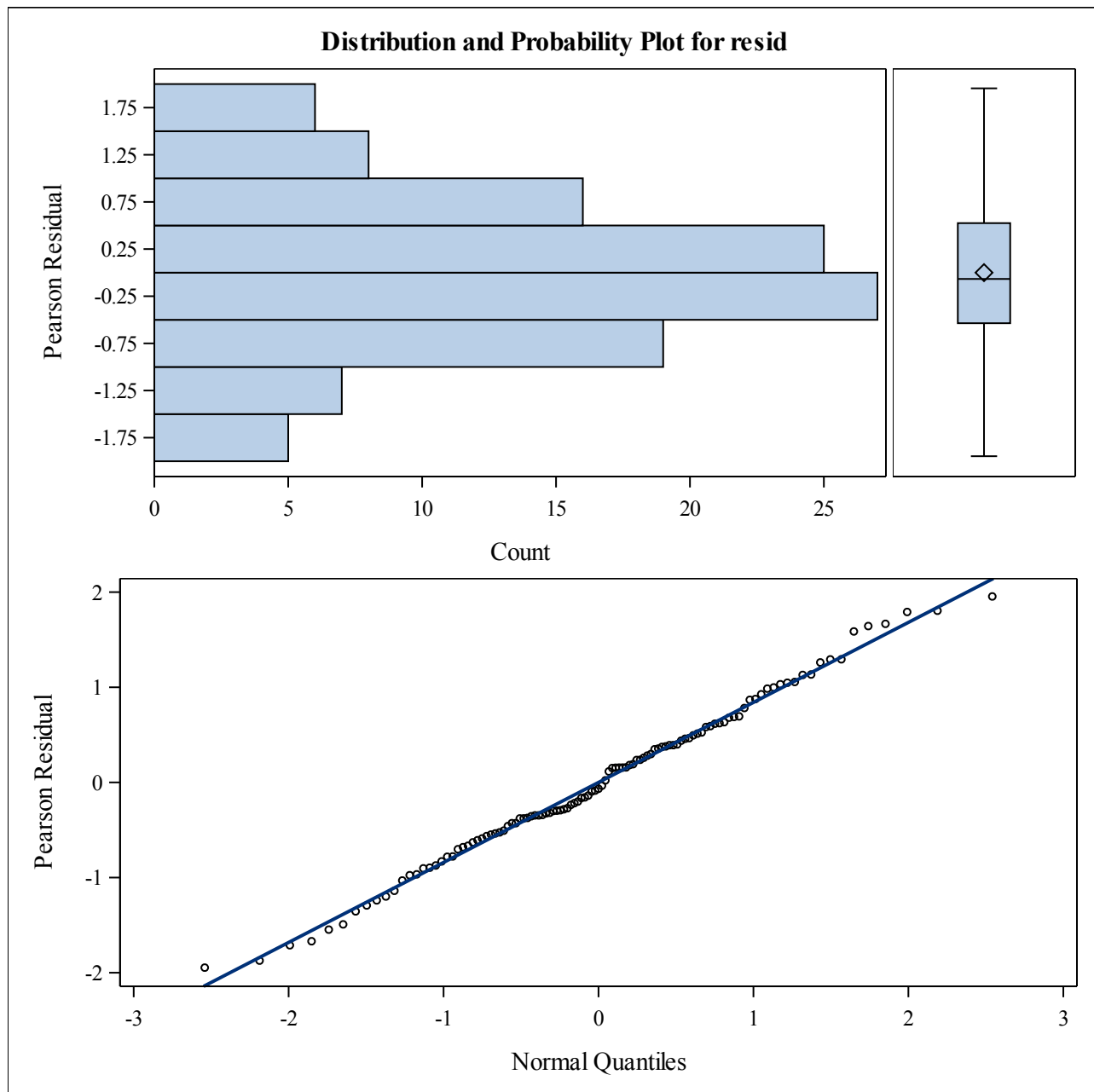
GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV

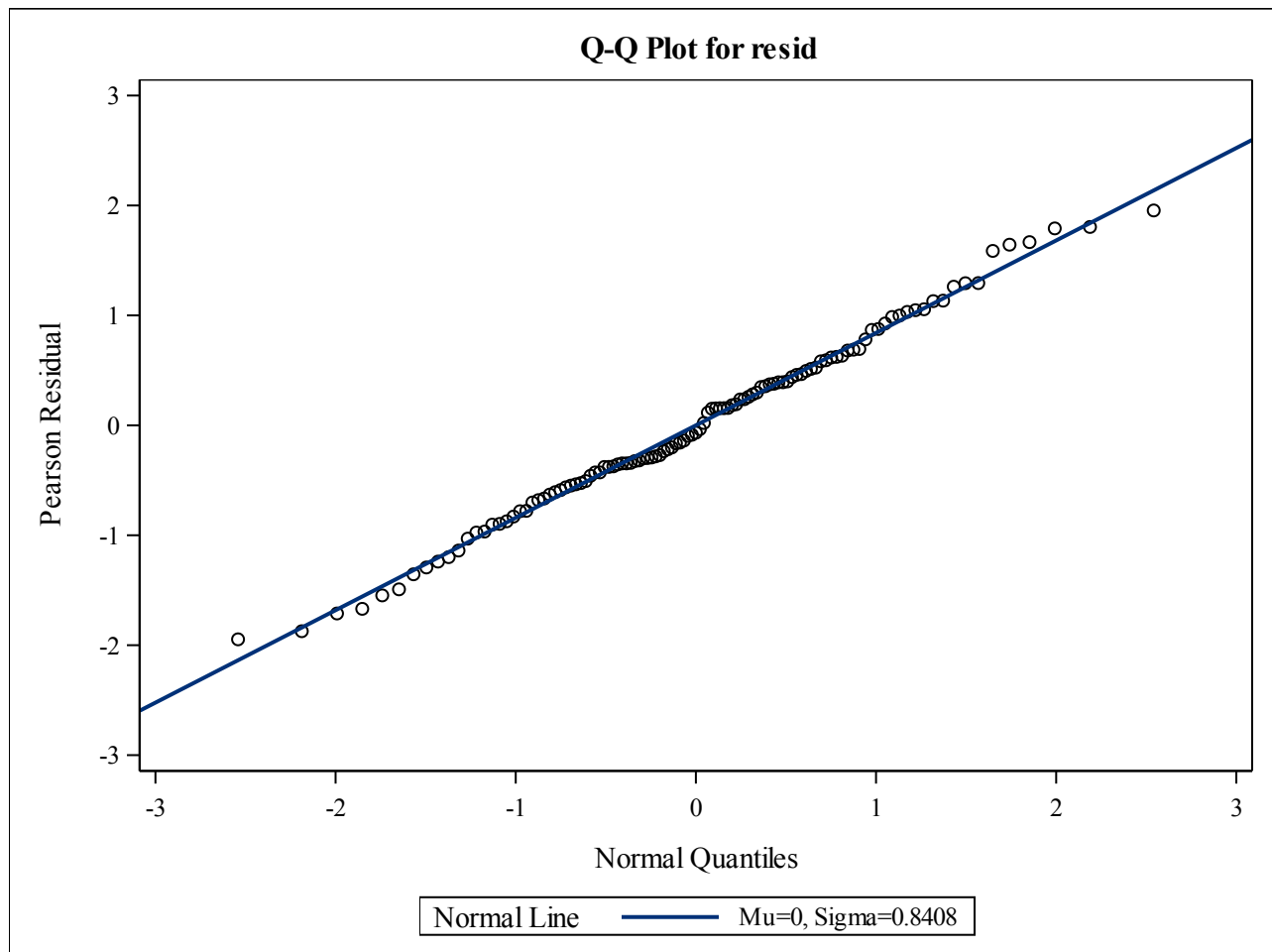
The UNIVARIATE Procedure
Variable: resid (Pearson
Residual)

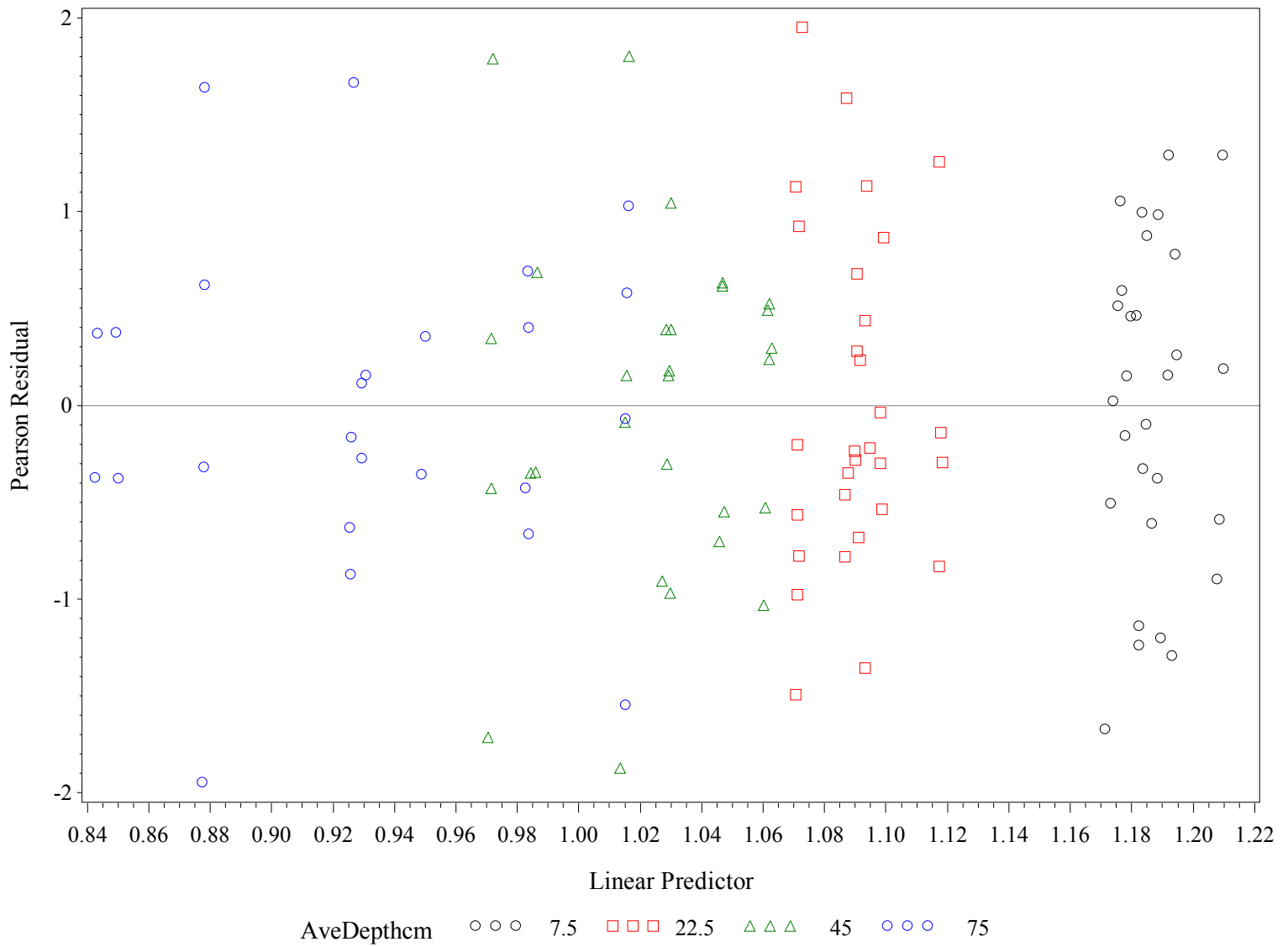
Quantiles (Definition 5)	
Level	Quantile
100% Max	1.9544436
99%	1.8044666
95%	1.5866028
90%	1.0557737
75% Q3	0.5250847
50% Median	-0.0669363
25% Q1	-0.5362904
10%	-1.0307817
5%	-1.4919027
1%	-1.8726475
0% Min	-1.9465601

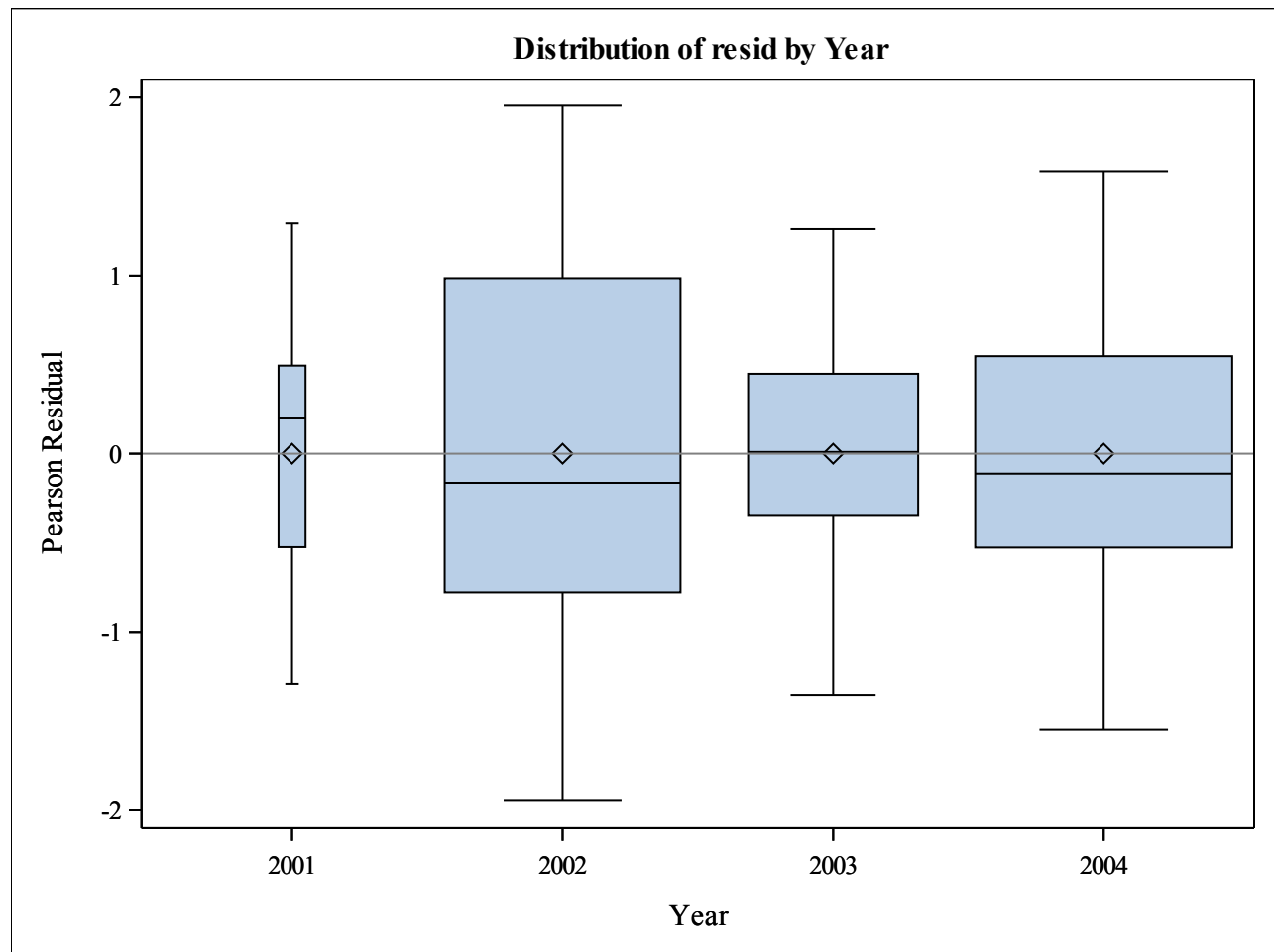
Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
-1.94656	102	1.64310	101
-1.87265	70	1.66658	117
-1.71148	87	1.79136	85
-1.66918	5	1.80447	69
-1.54708	126	1.95444	56

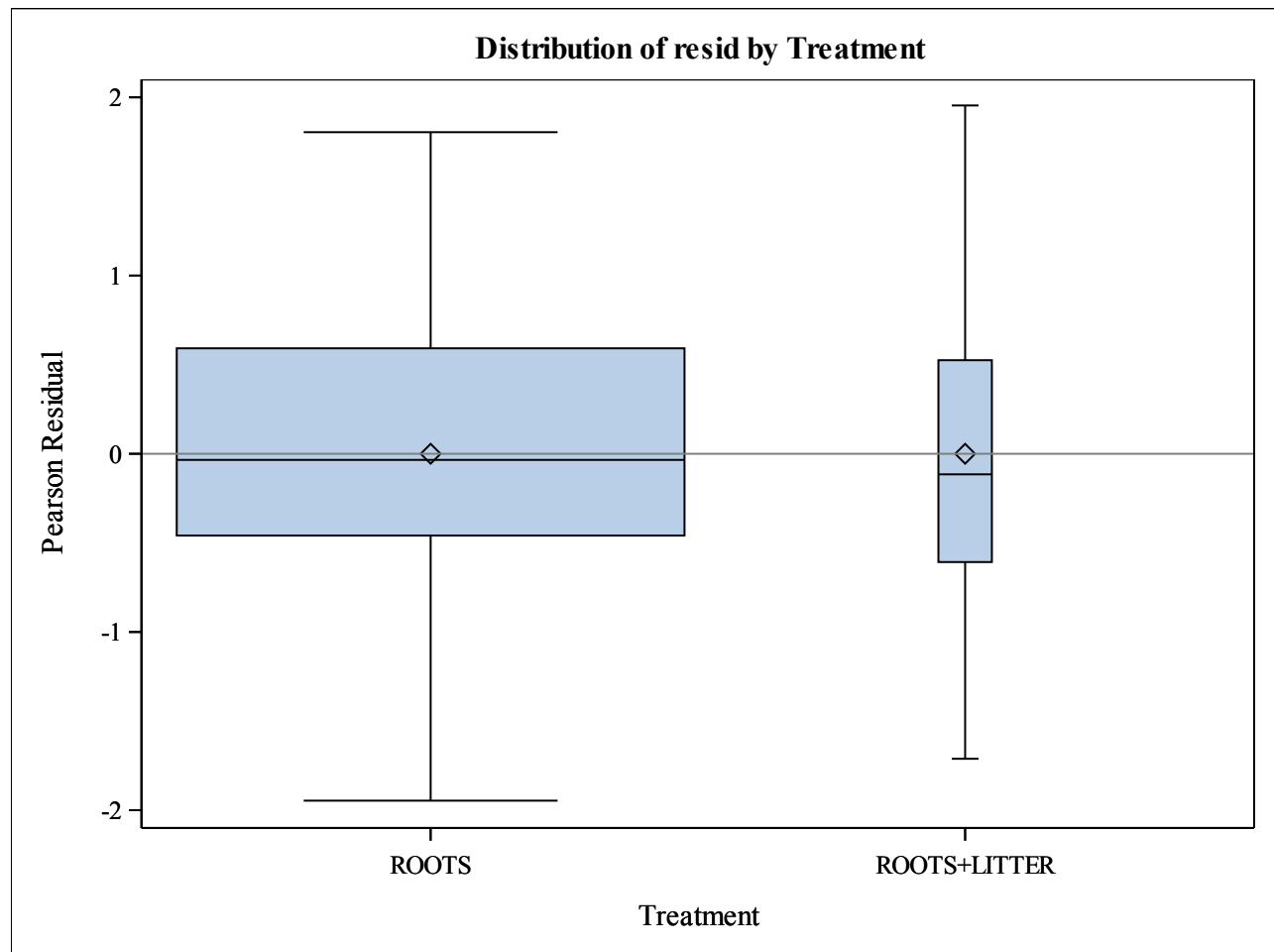
Missing Values			
Missing Value	Count	Percent Of	
		All Obs	Missing Obs
.	15	11.72	100.00

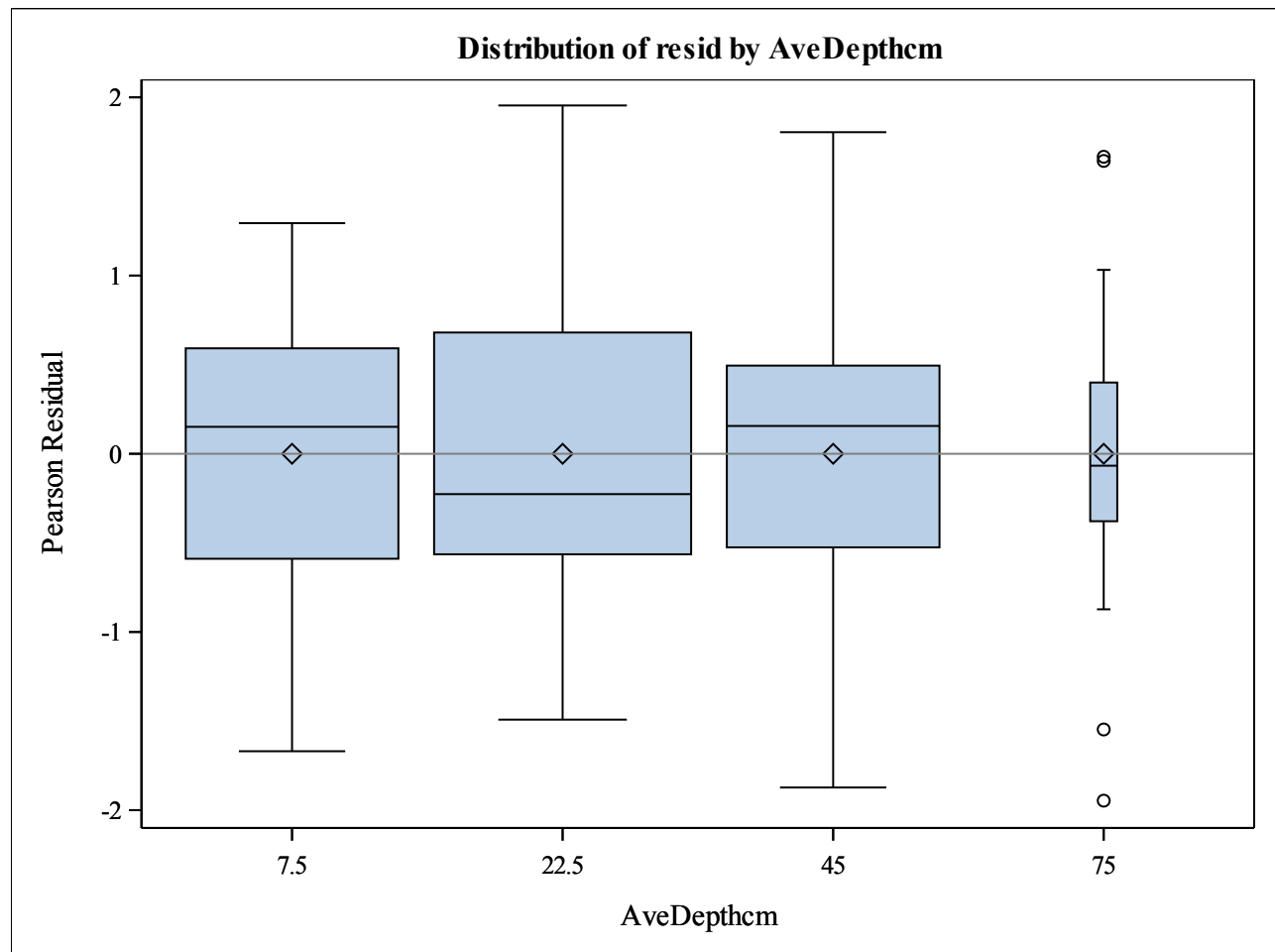
GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV**The UNIVARIATE Procedure**

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV***The UNIVARIATE Procedure***

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV

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GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV***The Mixed Procedure***

Model Information	
Data Set	WORK.D3B
Dependent Variable	ABSRES
Covariance Structure	Variance Components
Subject Effect	plot
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Kenward-Roger
Degrees of Freedom Method	Kenward-Roger

Class Level Information		
Class	Levels	Values
Year	4	2001 2002 2003 2004
plot	8	1 2 3 4 5 6 7 8
AveDepthcm	4	45 75 7.5 22.5
Treatment	2	ROOTS ROOTS+LITTER

Dimensions	
Covariance Parameters	3
Columns in X	11
Columns in Z per Subject	5
Subjects	8
Max Obs per Subject	16

Number of Observations	
Number of Observations Read	128
Number of Observations Used	113
Number of Observations Not Used	15

GLIMMIX run F analysis TVA autoregressive order 1 AR(1) run split-plot design for site TV***The Mixed Procedure***

Iteration History			
Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	167.45707048	
1	3	166.62058551	0.00023676
2	1	166.61734129	0.00000093

Convergence criteria met.

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	plot	0.01009	0.01491	0.68	0.2492
AveDepthcm	plot	0	.	.	.
Residual		0.2187	0.03107	7.04	<.0001

Fit Statistics	
-2 Res Log Likelihood	166.6
AIC (Smaller is Better)	170.6
AICC (Smaller is Better)	170.7
BIC (Smaller is Better)	170.8

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
Year	3	100	4.80	0.0037
AveDepthcm	3	100	0.16	0.9197
Treatment	1	6.14	0.05	0.8246