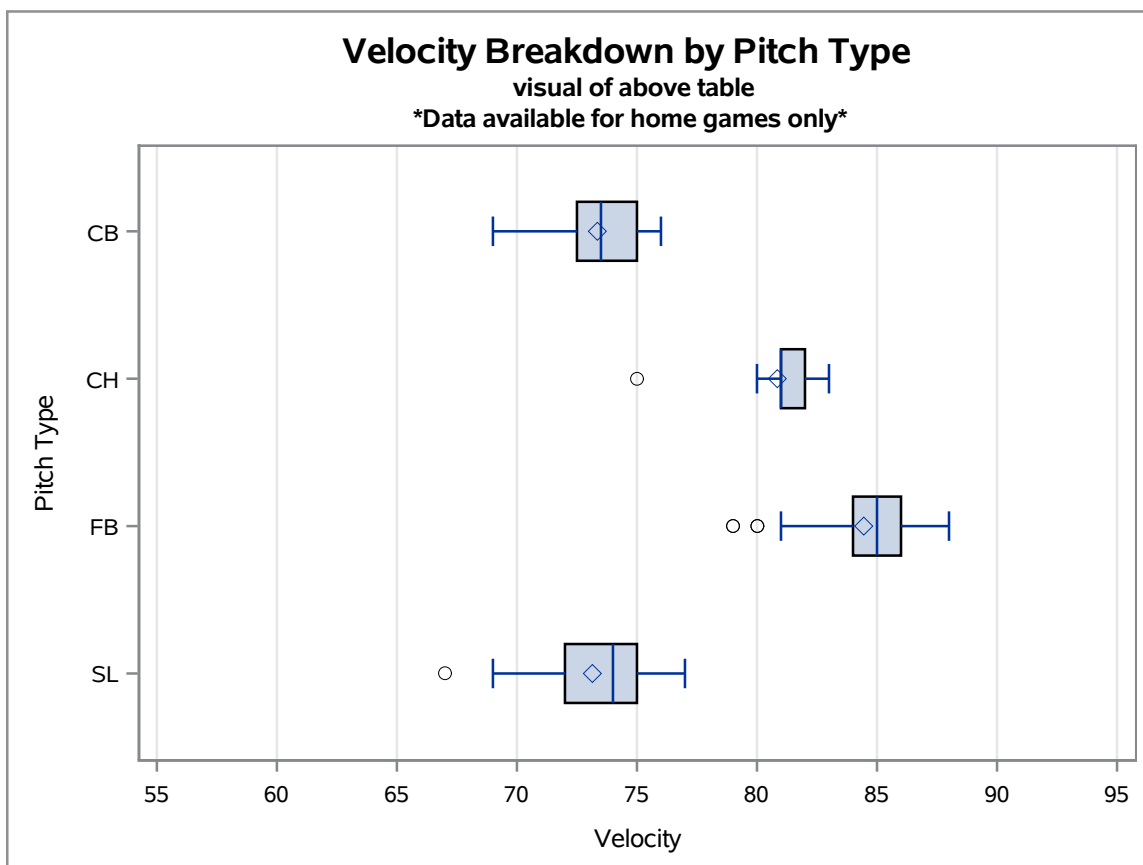


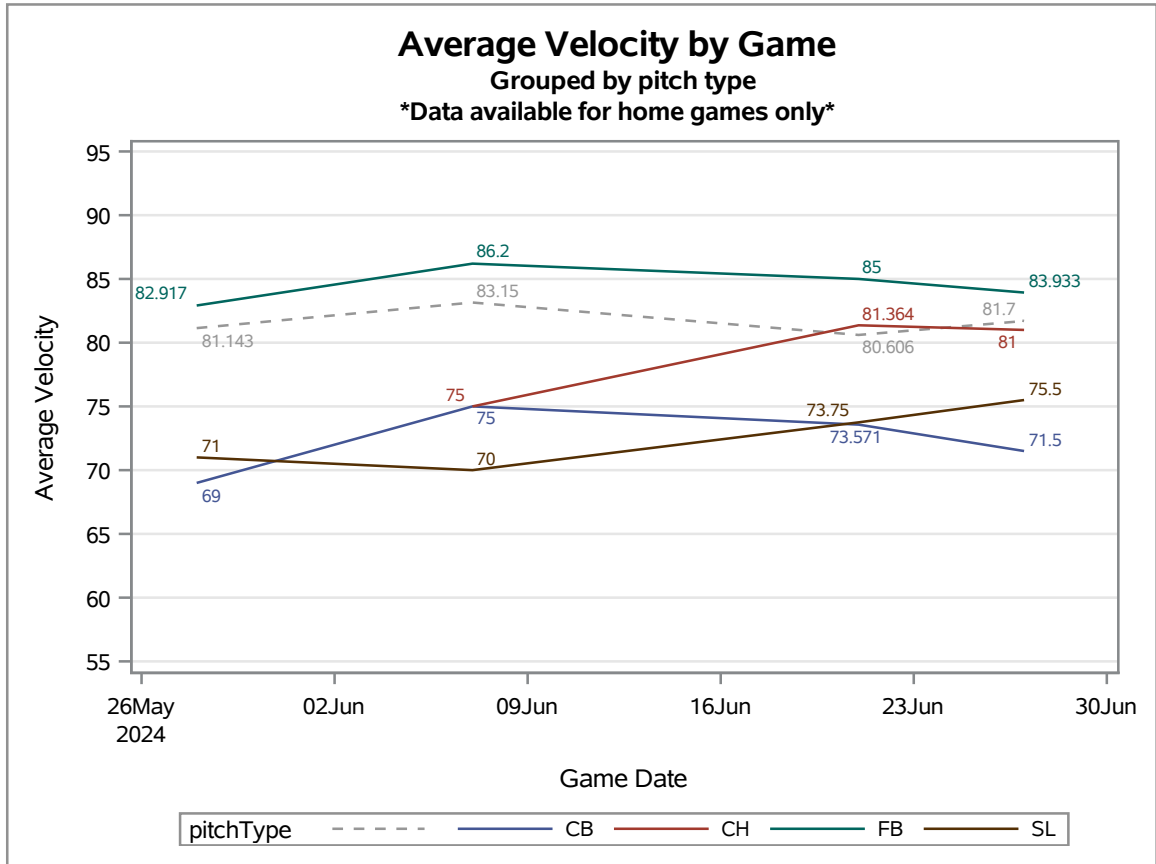
Velocity Breakdown by Pitch Type

Data available for home games only

1

Analysis Variable : velocity					
pitchType	N Obs	N	Minimum	Mean	Maximum
CB	20	20	69.0	73.4	76.0
CH	13	13	75.0	80.8	83.0
FB	87	87	79.0	84.4	88.0
SL	14	14	67.0	73.1	77.0





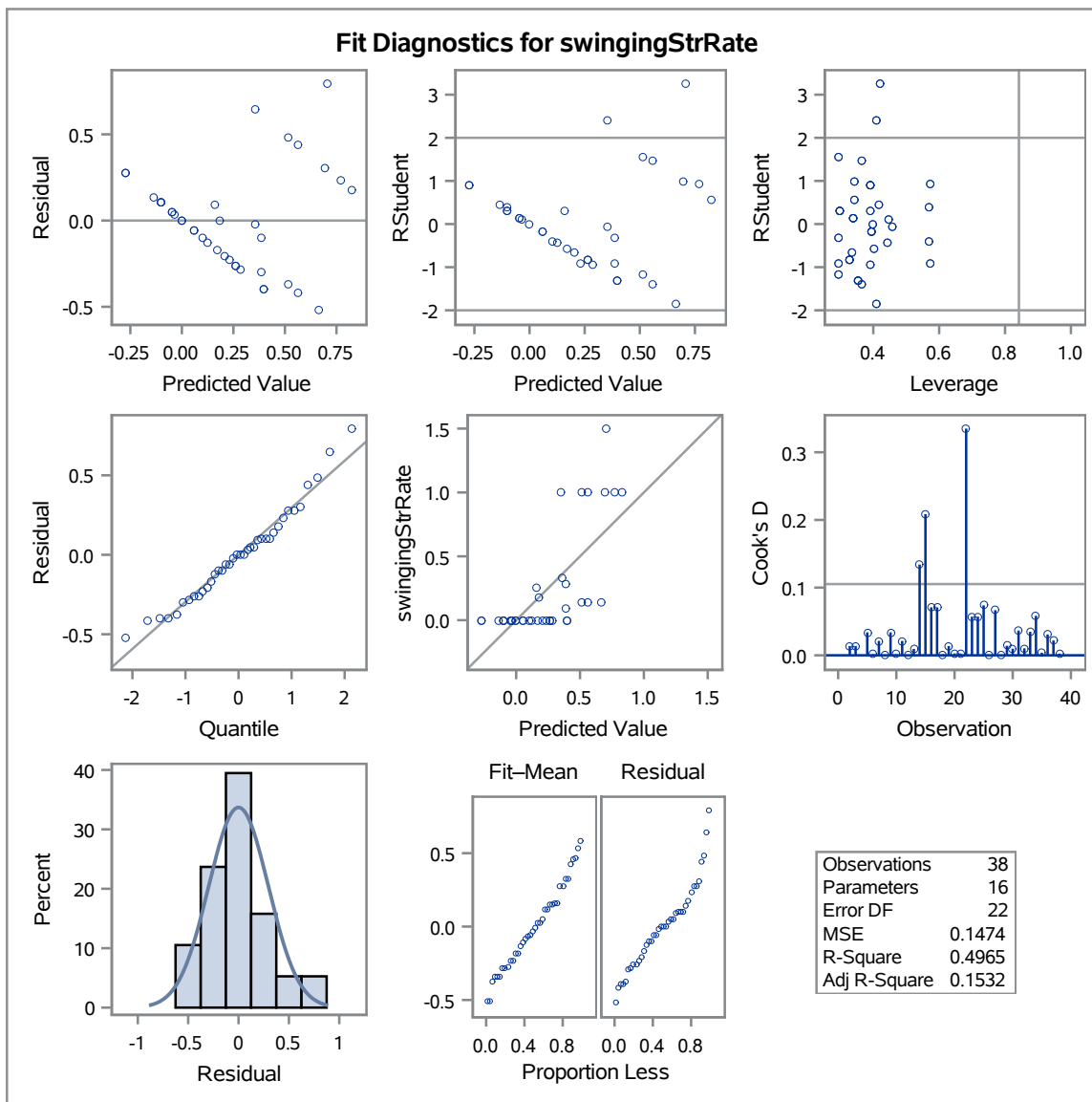
Dependent Variable: swingingStrRate

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	3.19886991	0.21325799	1.45	0.2102
Error	22	3.24388954	0.14744952		
Corrected Total	37	6.44275945			

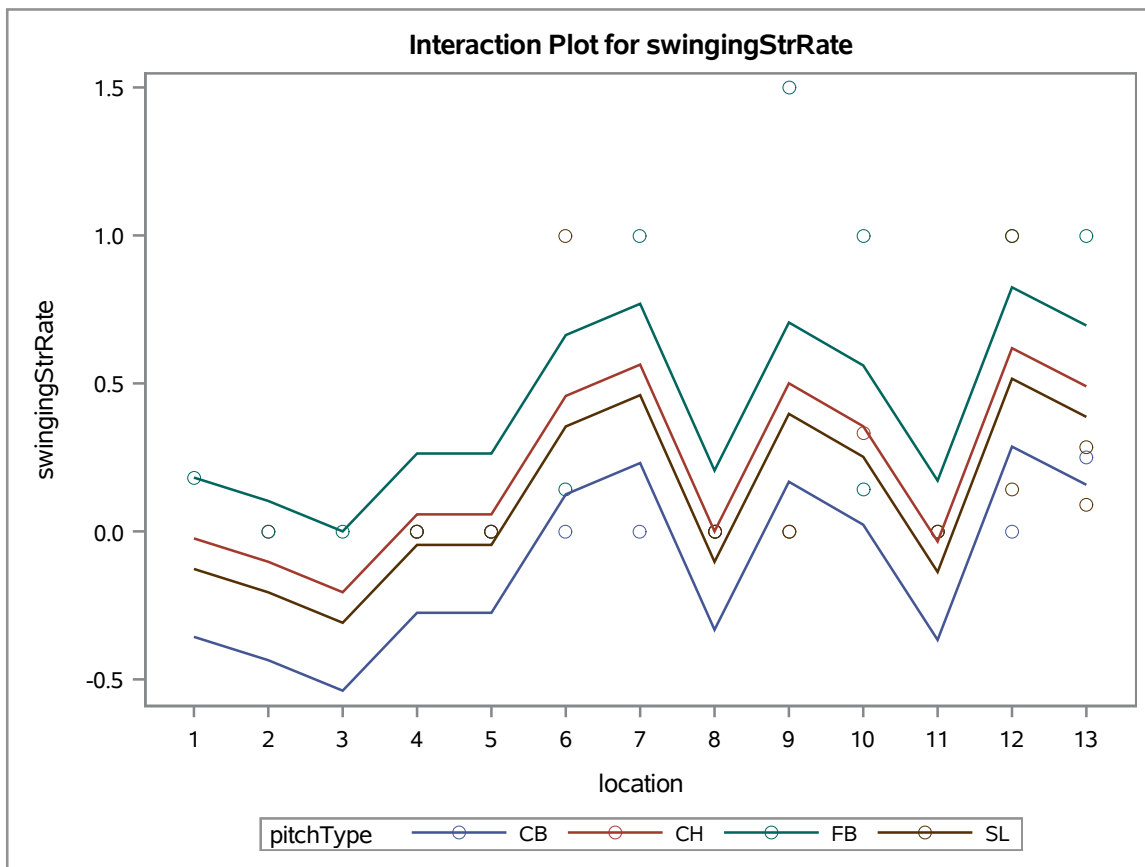
R-Square	Coeff Var	Root MSE	swingingStrRate Mean
0.496506	160.8724	0.383992	0.238693

Source	DF	Type III SS	Mean Square	F Value	Pr > F
location	12	2.26230945	0.18852579	1.28	0.2973
pitchType	3	1.10965450	0.36988483	2.51	0.0853

Dependent Variable: swingingStrRate



Dependent Variable: swingingStrRate



Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

pitchType	swingingStrRate LSMEAN	LSMEAN Number
CB	-0.12219782	1
CH	0.21033825	2
FB	0.41591863	3
SL	0.10717000	4

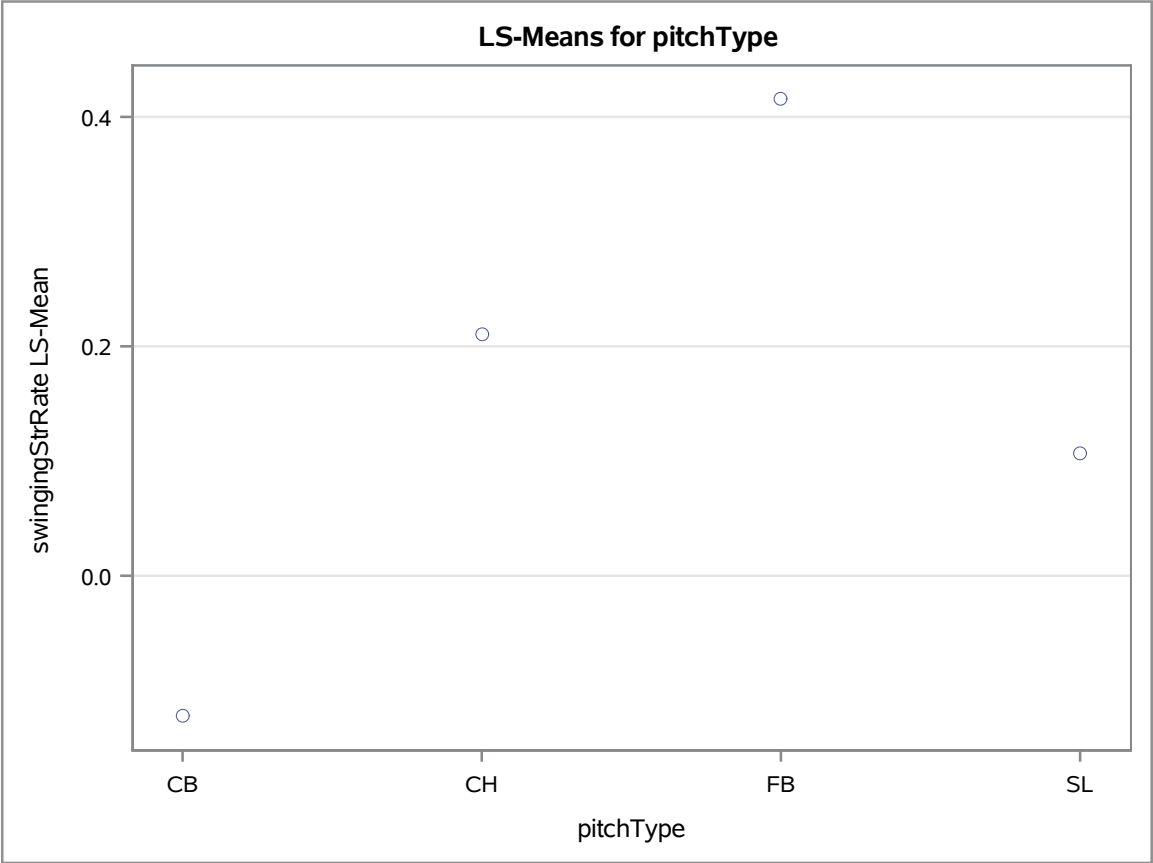
Least Squares Means for effect pitchType Pr > t for H0: LSMean(i)=LSMean(j) Dependent Variable: swingingStrRate				
i/j	1	2	3	4
1		0.5642	0.0716	0.6938
2	0.5642		0.7421	0.9642
3	0.0716	0.7421		0.2934
4	0.6938	0.9642	0.2934	

pitchType	swingingStrRate LSMEAN	95% Confidence Limits	
CB	-0.122198	-0.489511	0.245115
CH	0.210338	-0.155788	0.576465
FB	0.415919	0.200520	0.631318
SL	0.107170	-0.168148	0.382488

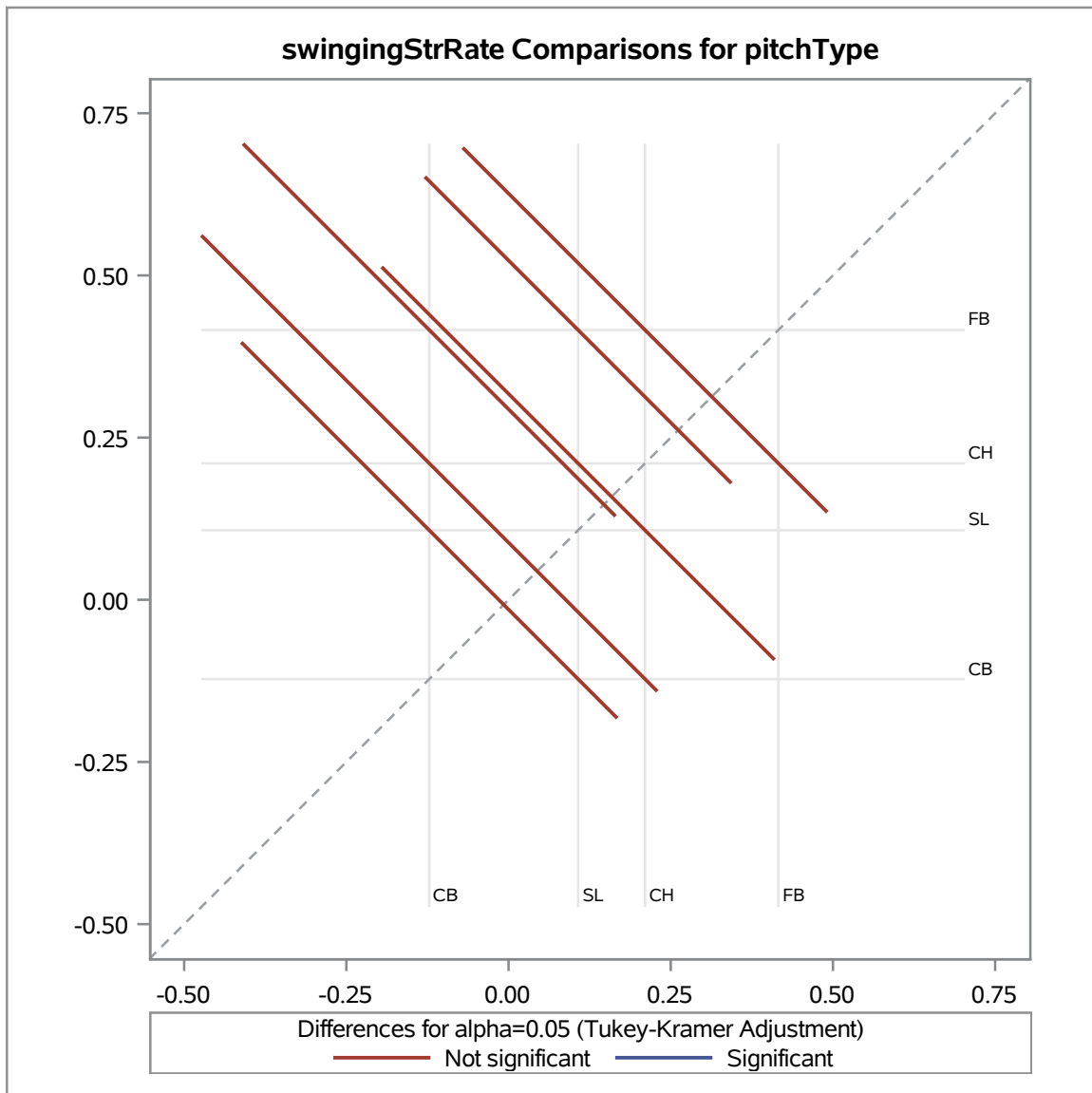
Least Squares Means for Effect pitchType				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
1	2	-0.332536	-1.035337	0.370265
1	3	-0.538116	-1.112327	0.036094
1	4	-0.229368	-0.808868	0.350132
2	3	-0.205580	-0.767584	0.356424

Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for Effect pitchType				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
2	4	0.103168	-0.502391	0.708728
3	4	0.308749	-0.163694	0.781191



Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer



Swinging Strike Rate by Zone

Zones 1-9 are inside strikezone, 10-13 are outside of zone

10

Pitch Location	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
1	11	9	2	18.18%
2	8	8	0	0.00%
3	9	8	0	0.00%
4	12	9	0	0.00%
5	12	6	0	0.00%
6	17	13	3	17.65%
7	3	2	1	33.33%
8	9	6	0	0.00%
9	11	7	3	27.27%
10	11	1	1	9.09%
11	11	0	0	0.00%
12	12	3	2	16.67%
13	38	5	5	13.16%

Swing and Miss Data by Pitch Type

Pitch Type	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
CB	24	7	2	8.33%
CH	18	8	0	0.00%
FB	105	55	11	10.48%
SL	17	7	4	23.53%

Regression Analysis of Velocity by Pitch Type

12

Data available for home games only

Dependent Variable: velocity

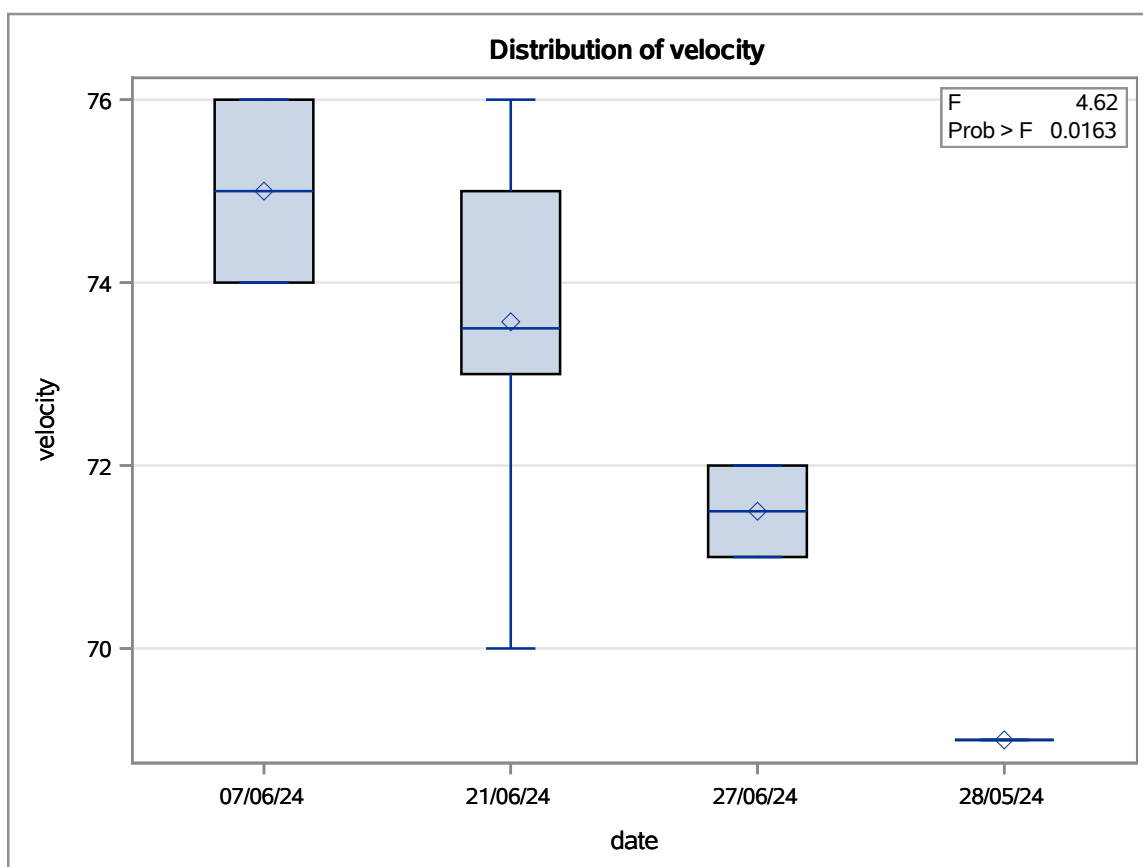
pitchType=CB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	34.62142857	11.54047619	4.62	0.0163
Error	16	39.92857143	2.49553571		
Corrected Total	19	74.55000000			

R-Square	Coeff Var	Root MSE	velocity Mean
0.464405	2.153683	1.579726	73.35000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	3	34.62142857	11.54047619	4.62	0.0163

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	3	34.62142857	11.54047619	4.62	0.0163



Data available for home games only

Dependent Variable: velocity

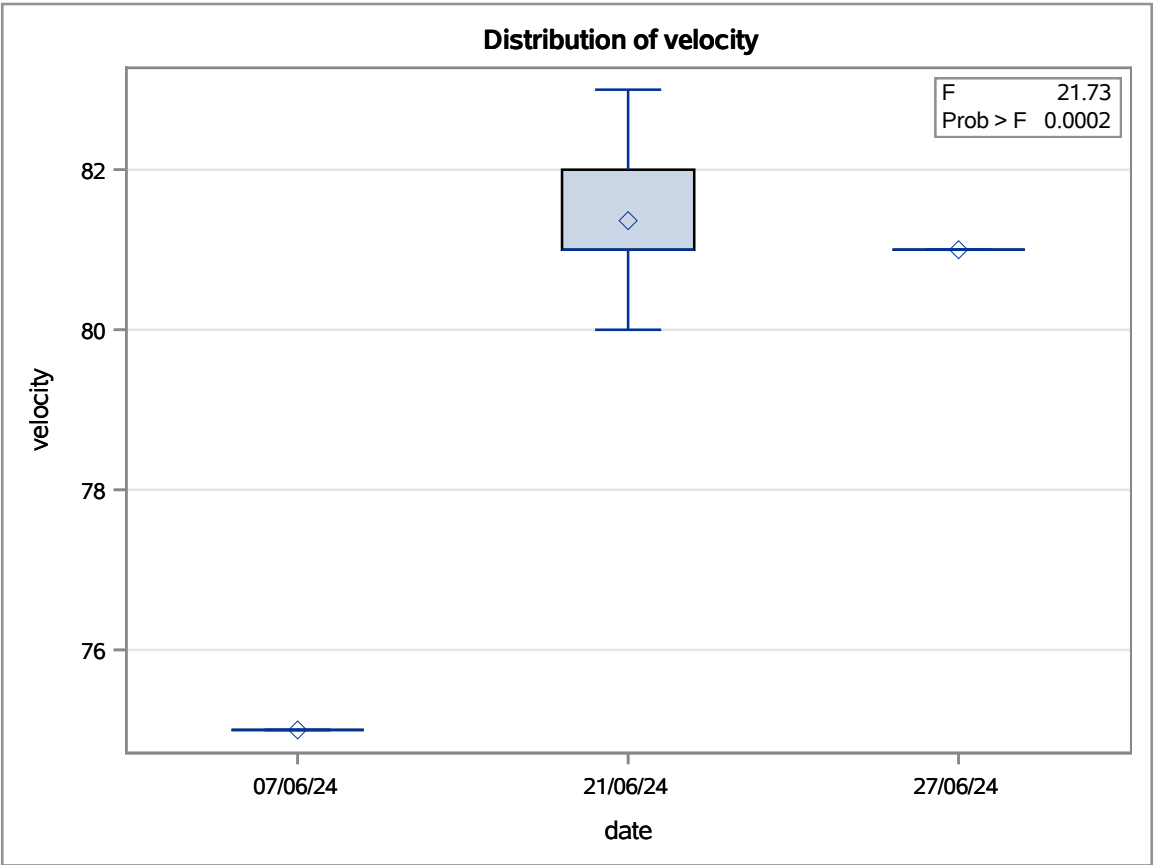
pitchType=CH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	37.14685315	18.57342657	21.73	0.0002
Error	10	8.54545455	0.85454545		
Corrected Total	12	45.69230769			

R-Square	Coeff Var	Root MSE	velocity Mean
0.812978	1.143426	0.924416	80.84615

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	2	37.14685315	18.57342657	21.73	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	2	37.14685315	18.57342657	21.73	0.0002



Regression Analysis of Velocity by Pitch Type

14

Data available for home games only

Dependent Variable: velocity

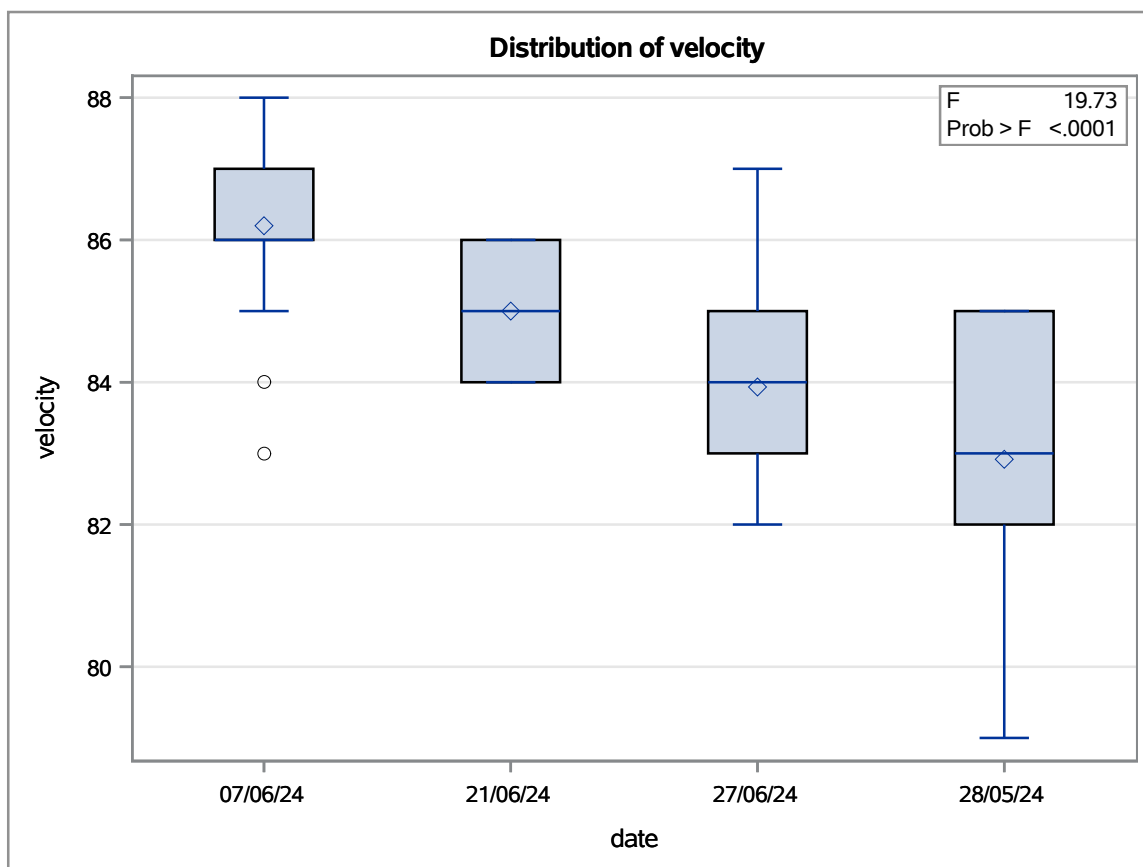
pitchType=FB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	116.3505747	38.7835249	19.73	<.0001
Error	83	163.1666667	1.9658635		
Corrected Total	86	279.5172414			

R-Square	Coeff Var	Root MSE	velocity Mean
0.416255	1.660297	1.402093	84.44828

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	3	116.3505747	38.7835249	19.73	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	3	116.3505747	38.7835249	19.73	<.0001



Data available for home games only

Dependent Variable: velocity

pitchType=SL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	37.7142857	12.5714286	1.96	0.1834
Error	10	64.0000000	6.4000000		
Corrected Total	13	101.7142857			

R-Square	Coeff Var	Root MSE	velocity Mean
0.370787	3.458741	2.529822	73.14286

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	3	37.71428571	12.57142857	1.96	0.1834

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	3	37.71428571	12.57142857	1.96	0.1834

