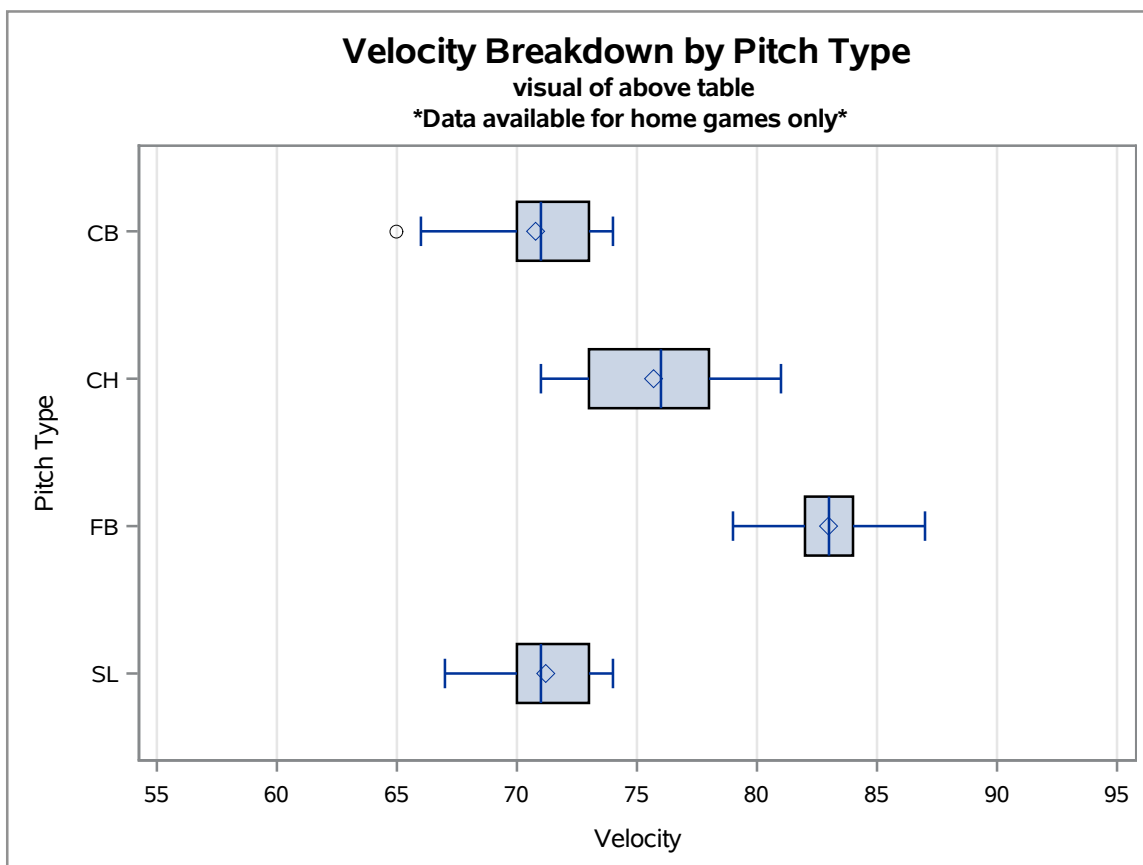


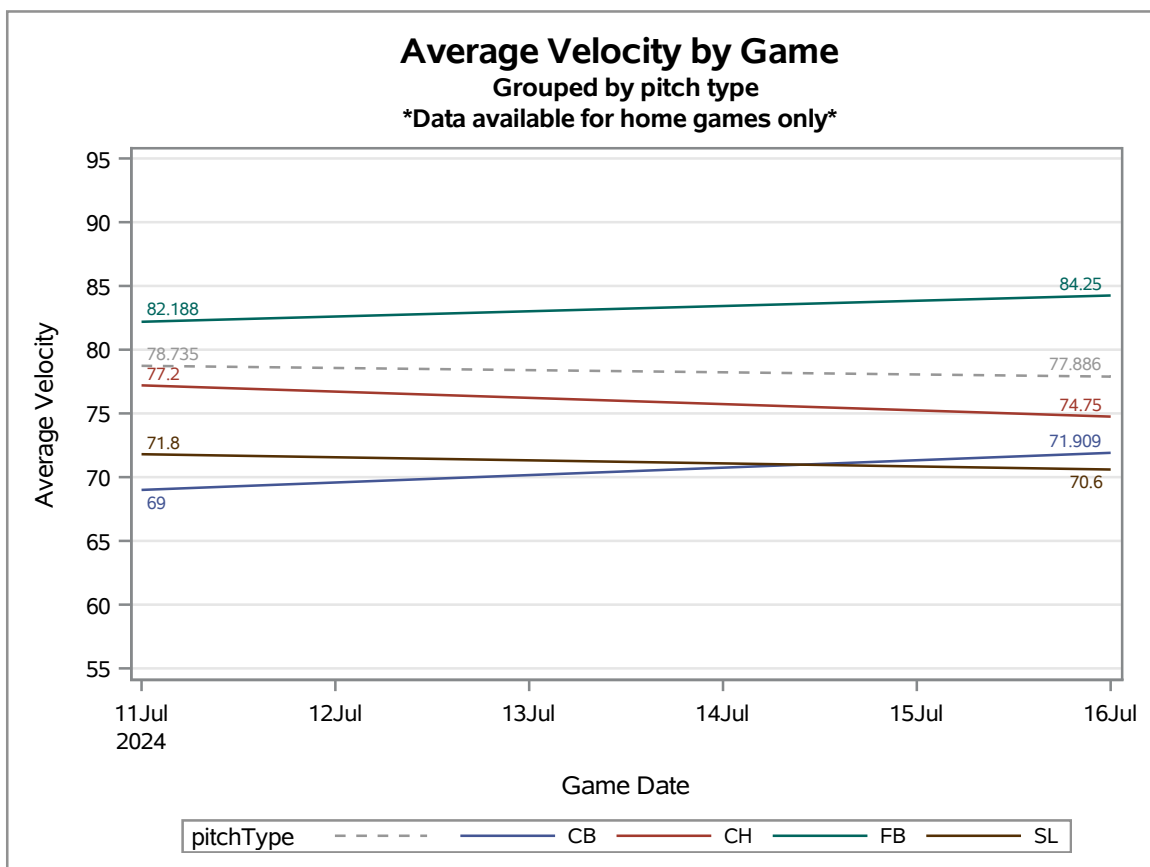
Velocity Breakdown by Pitch Type

Data available for home games only

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Analysis Variable : velocity					
pitchType	N Obs	N	Minimum	Mean	Maximum
CB	18	18	65.0	70.8	74.0
CH	13	13	71.0	75.7	81.0
FB	52	52	79.0	83.0	87.0
SL	10	10	67.0	71.2	74.0





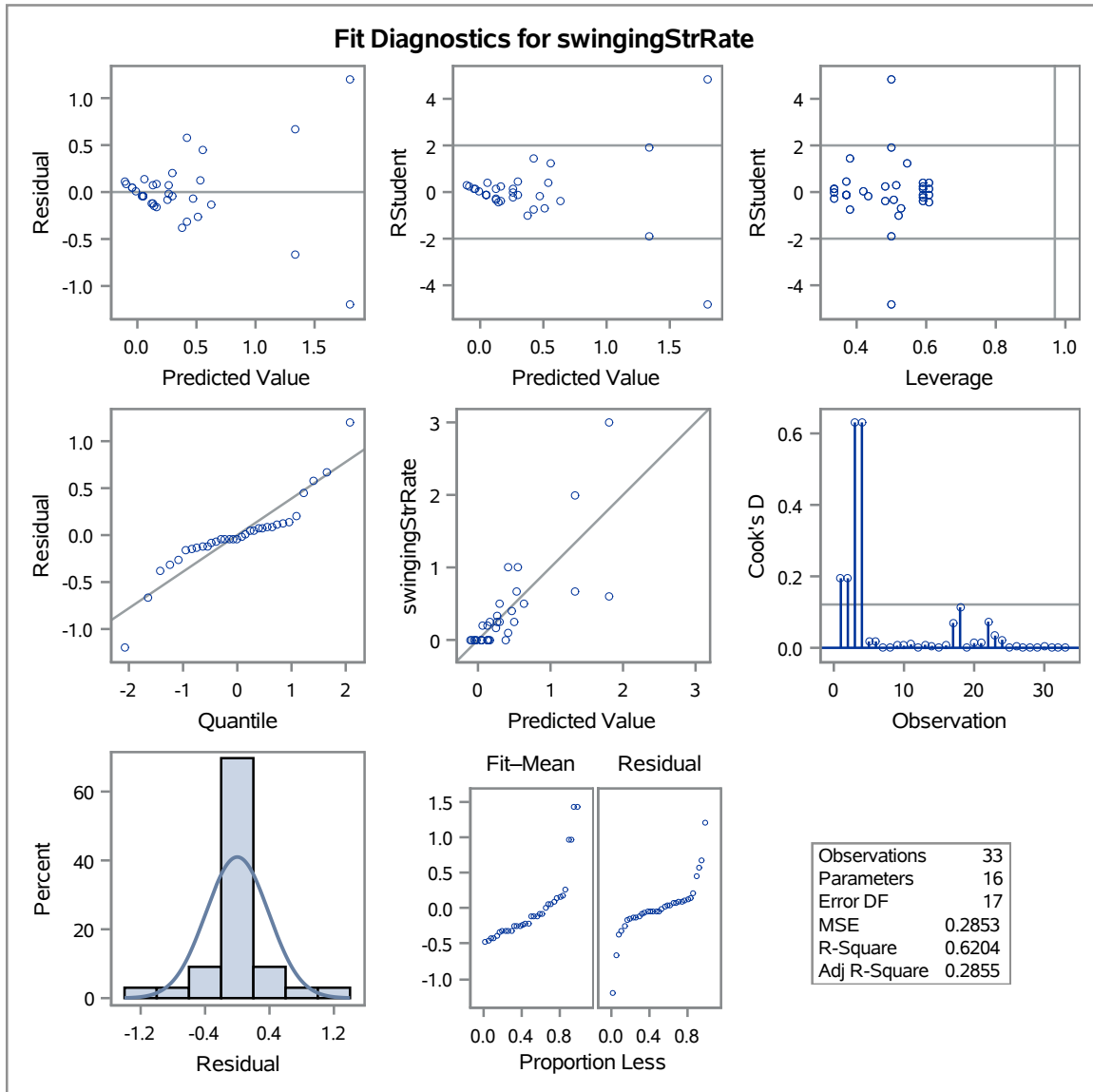
Dependent Variable: swingingStrRate

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	7.92803536	0.52853569	1.85	0.1112
Error	17	4.85031481	0.28531264		
Corrected Total	32	12.77835017			

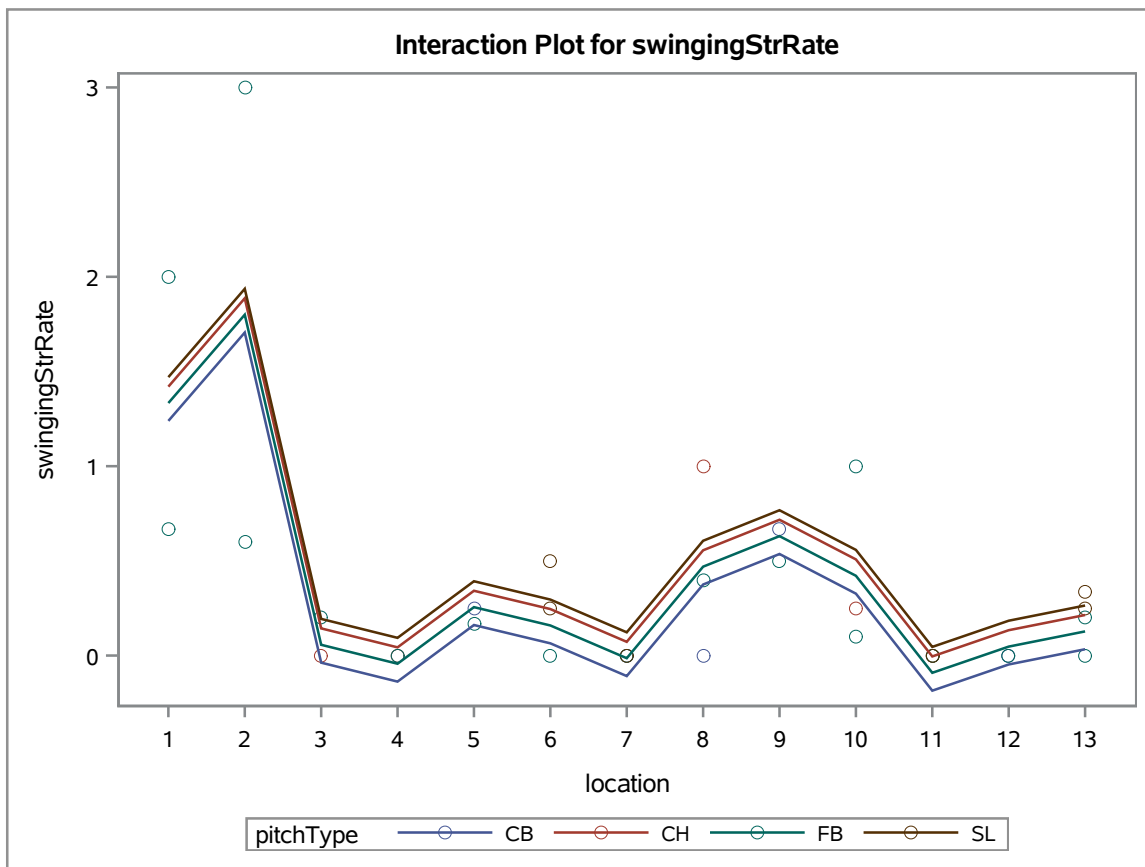
R-Square	Coeff Var	Root MSE	swingingStrRate Mean
0.620427	142.9203	0.534147	0.373737

Source	DF	Type III SS	Mean Square	F Value	Pr > F
location	12	7.13494488	0.59457874	2.08	0.0811
pitchType	3	0.11281019	0.03760340	0.13	0.9398

Dependent Variable: swingingStrRate



Dependent Variable: swingingStrRate



Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

pitchType	swingingStrRate LSMEAN	LSMEAN Number
CB	0.30193850	1
CH	0.48278547	2
FB	0.39625996	3
SL	0.53300202	4

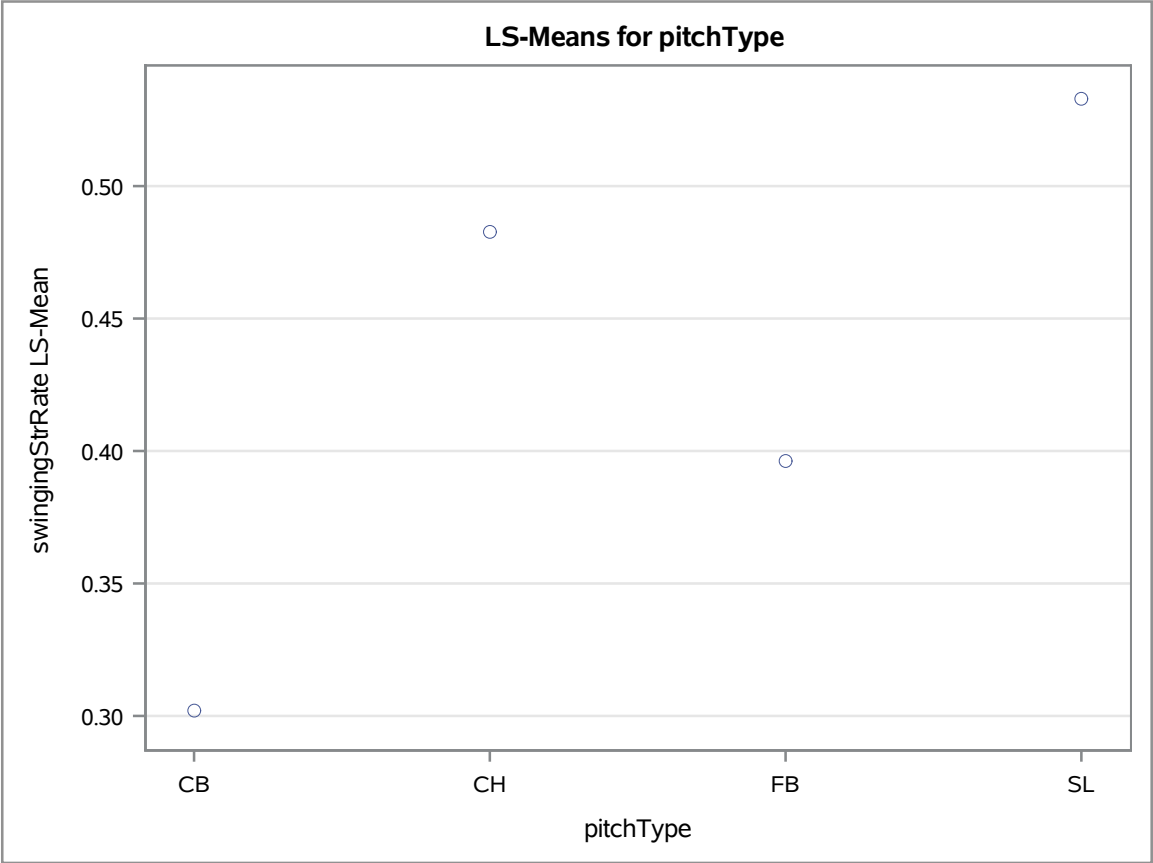
Least Squares Means for effect pitchType Pr > t for H0: LSMean(i)=LSMean(j) Dependent Variable: swingingStrRate				
i/j	1	2	3	4
1		0.9767	0.9909	0.9455
2	0.9767		0.9946	0.9995
3	0.9909	0.9946		0.9706
4	0.9455	0.9995	0.9706	

pitchType	swingingStrRate LSMEAN	95% Confidence Limits	
CB	0.301939	-0.293494	0.897371
CH	0.482785	-0.201204	1.166775
FB	0.396260	0.112454	0.680066
SL	0.533002	-0.056559	1.122563

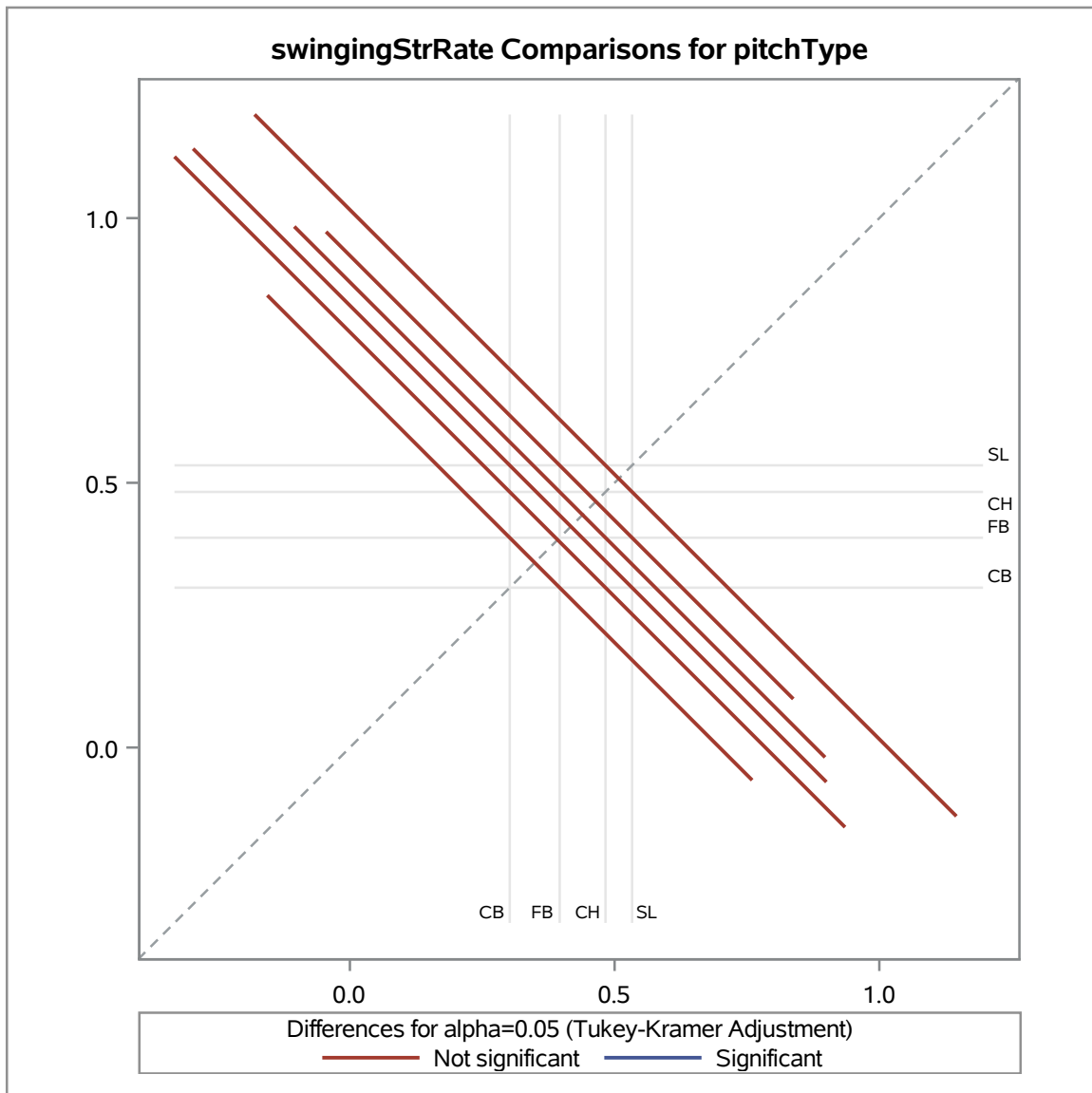
Least Squares Means for Effect pitchType				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
1	2	-0.180847	-1.447422	1.085729
1	3	-0.094321	-1.010137	0.821494
1	4	-0.231064	-1.427368	0.965241
2	3	0.086526	-0.916036	1.089087

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	-0.050217	-1.375853	1.275420
3	4	-0.136742	-1.019244	0.745760



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

Pitch Location	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
1	4	2	2	50.00%
2	6	5	3	50.00%
3	6	5	1	16.67%
4	2	1	0	0.00%
5	10	7	2	20.00%
6	7	4	1	14.29%
7	3	0	0	0.00%
8	7	6	3	42.86%
9	5	3	3	60.00%
10	15	2	1	6.67%
11	7	1	0	0.00%
12	7	0	0	0.00%
13	17	3	1	5.88%

Swing and Miss Data by Pitch Type

Pitch Type	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
CB	18	5	3	16.67%
CH	13	3	1	7.69%
FB	55	27	11	20.00%
SL	10	4	2	20.00%

Regression Analysis of Velocity by Pitch Type

Data available for home games only

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Dependent Variable: velocity

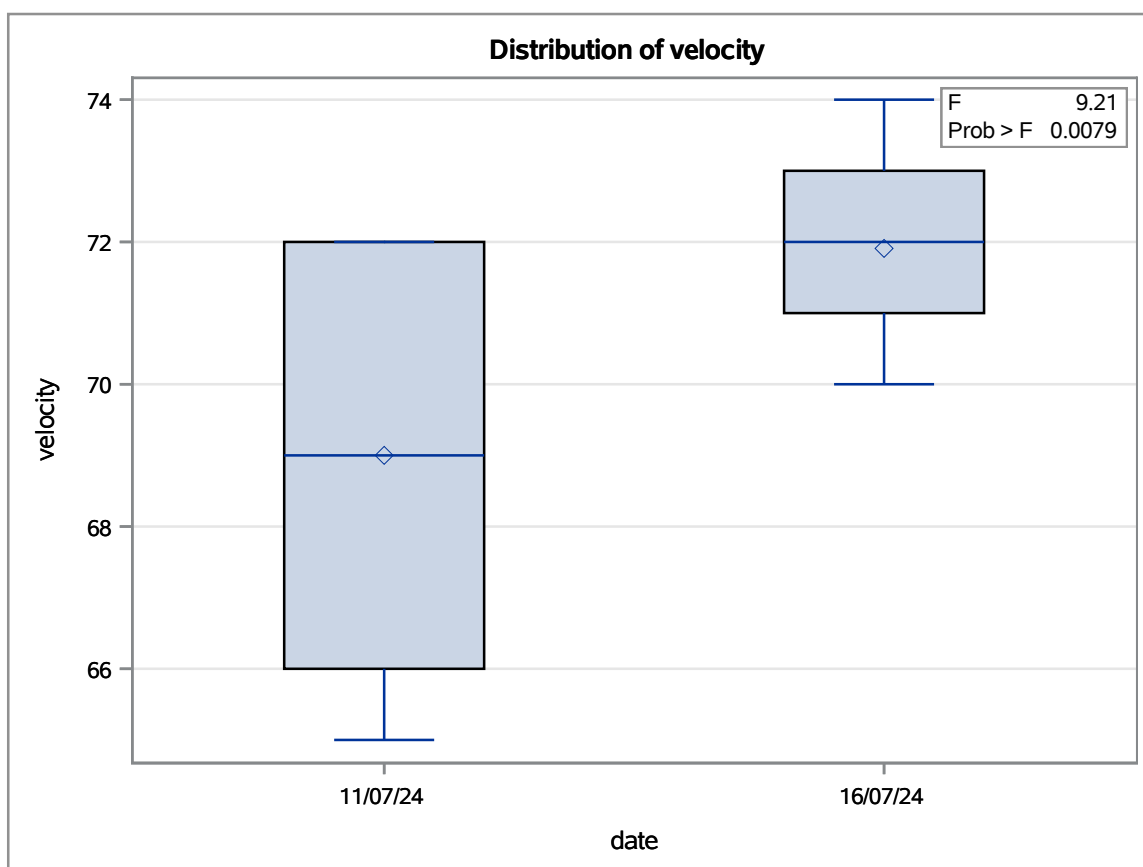
pitchType=CB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	36.20202020	36.20202020	9.21	0.0079
Error	16	62.90909091	3.93181818		
Corrected Total	17	99.11111111			

R-Square	Coeff Var	Root MSE	velocity Mean
0.365267	2.801559	1.982881	70.77778

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	36.20202020	36.20202020	9.21	0.0079

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	36.20202020	36.20202020	9.21	0.0079



Data available for home games only

Dependent Variable: velocity

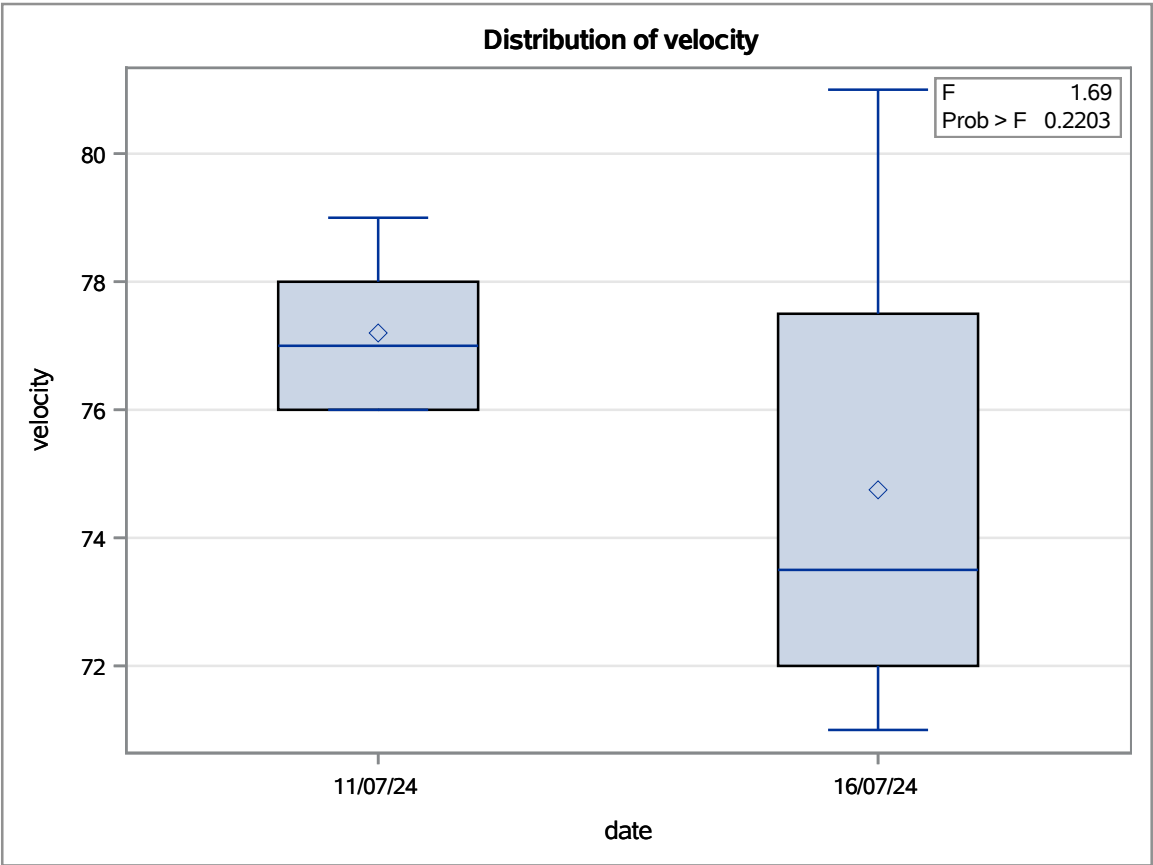
pitchType=CH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	18.4692308	18.4692308	1.69	0.2203
Error	11	120.3000000	10.9363636		
Corrected Total	12	138.7692308			

R-Square	Coeff Var	Root MSE	velocity Mean
0.133093	4.369027	3.307017	75.69231

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	18.46923077	18.46923077	1.69	0.2203

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	18.46923077	18.46923077	1.69	0.2203



Regression Analysis of Velocity by Pitch Type

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Data available for home games only

Dependent Variable: velocity

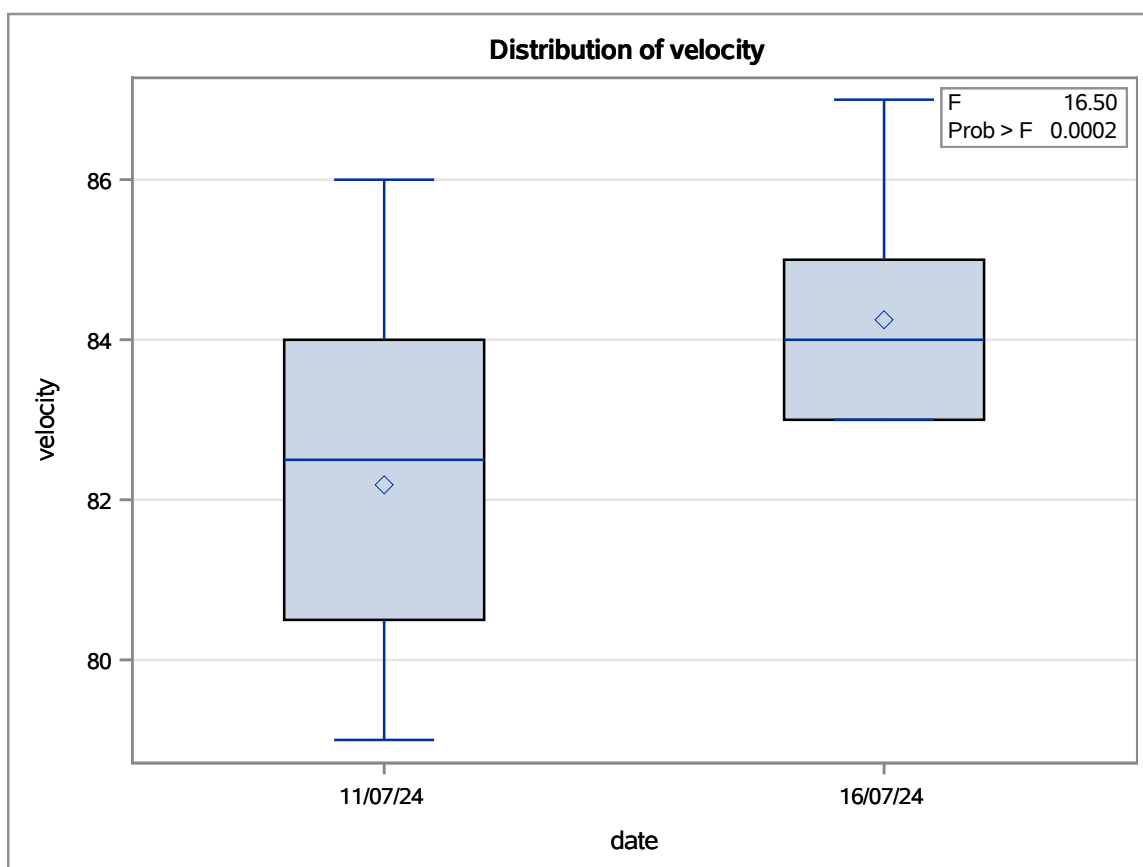
pitchType=FB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	52.3557692	52.3557692	16.50	0.0002
Error	50	158.6250000	3.1725000		
Corrected Total	51	210.9807692			

R-Square	Coeff Var	Root MSE	velocity Mean
0.248154	2.146463	1.781151	82.98077

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	52.35576923	52.35576923	16.50	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	52.35576923	52.35576923	16.50	0.0002



Data available for home games only

Dependent Variable: velocity

pitchType=SL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.60000000	3.60000000	0.63	0.4516
Error	8	46.00000000	5.75000000		
Corrected Total	9	49.60000000			

R-Square	Coeff Var	Root MSE	velocity Mean
0.072581	3.367859	2.397916	71.20000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	3.60000000	3.60000000	0.63	0.4516

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	3.60000000	3.60000000	0.63	0.4516

