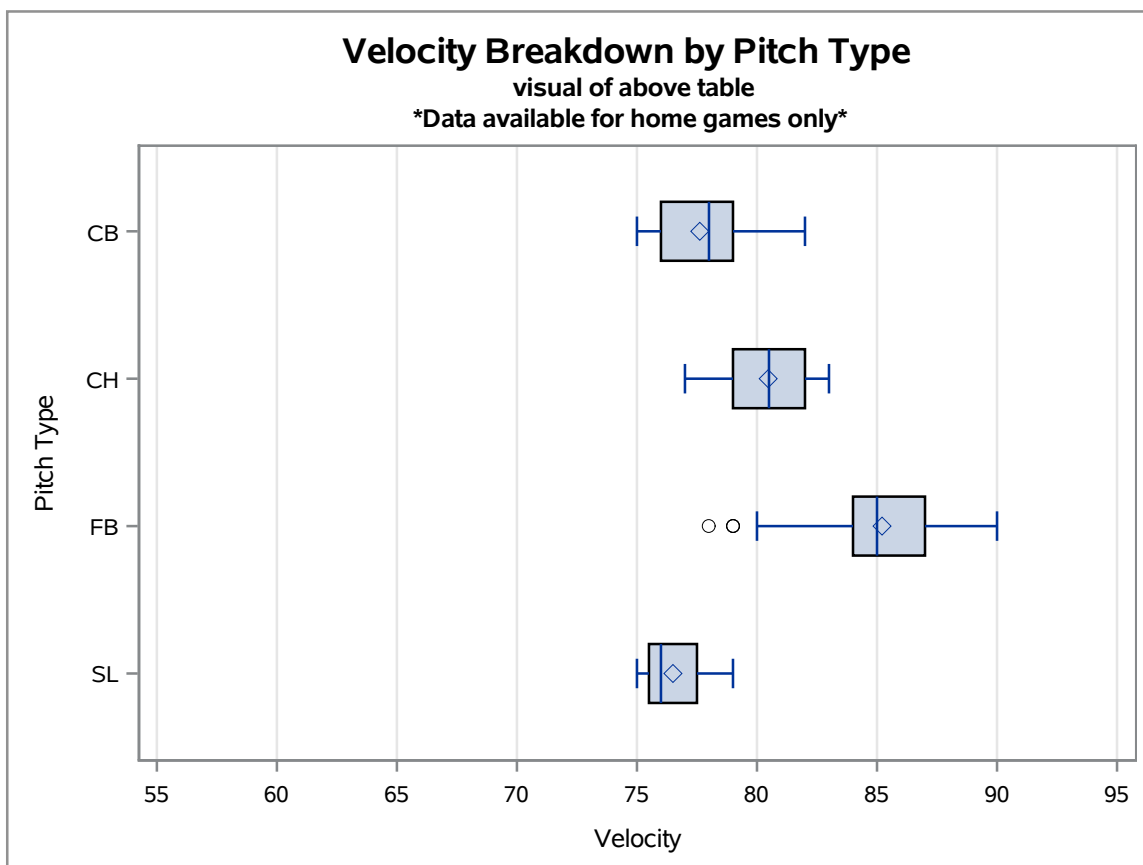


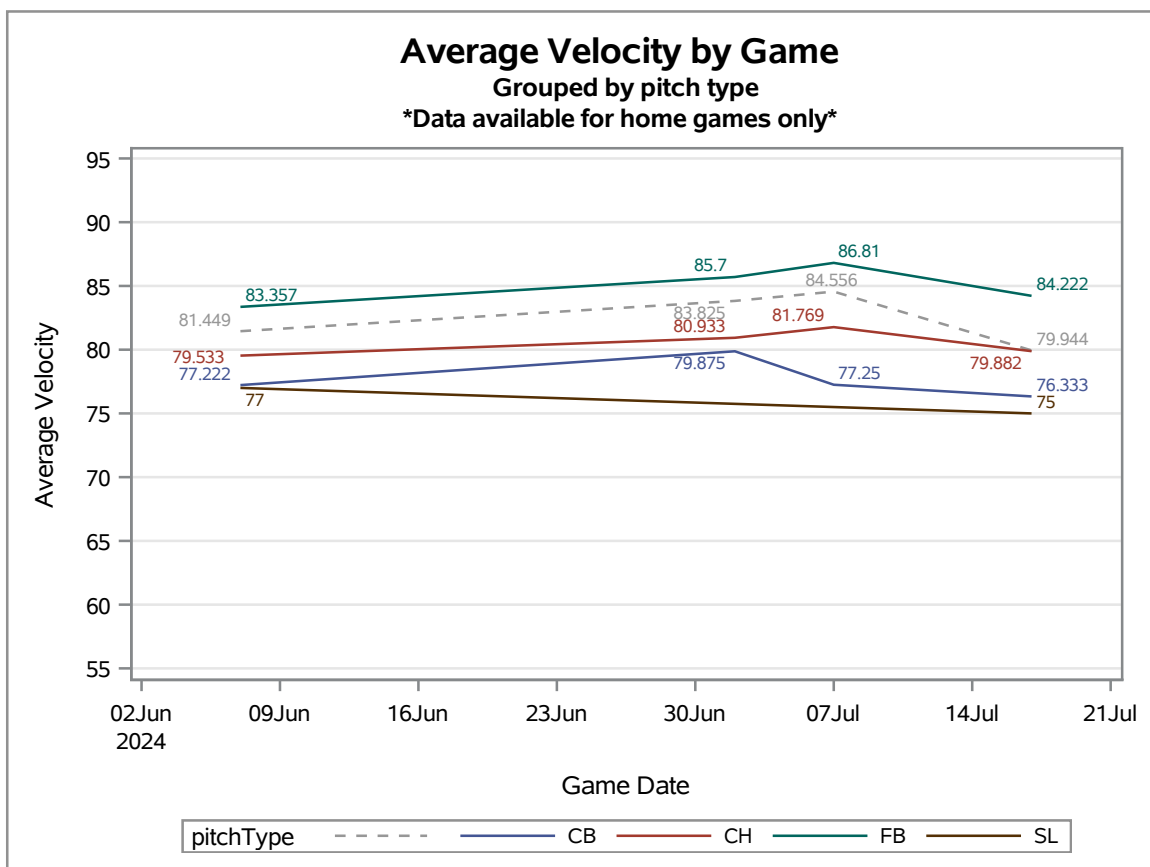
Velocity Breakdown by Pitch Type

Data available for home games only

1

Analysis Variable : velocity					
pitchType	N Obs	N	Minimum	Mean	Maximum
CB	34	34	75.0	77.6	82.0
CH	60	60	77.0	80.5	83.0
FB	133	133	78.0	85.2	90.0
SL	4	4	75.0	76.5	79.0





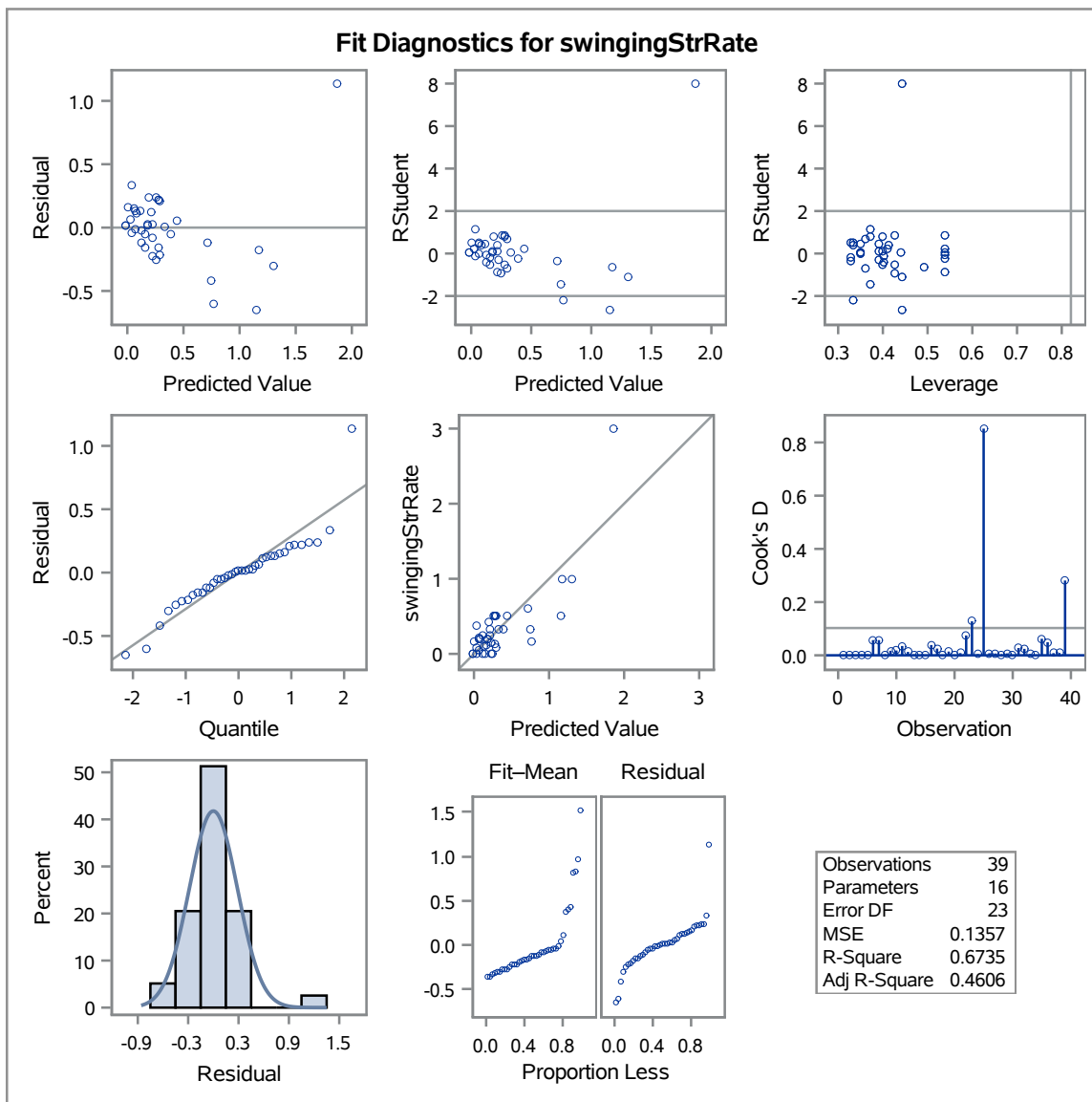
Dependent Variable: swingingStrRate

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	6.43771169	0.42918078	3.16	0.0064
Error	23	3.12060536	0.13567849		
Corrected Total	38	9.55831705			

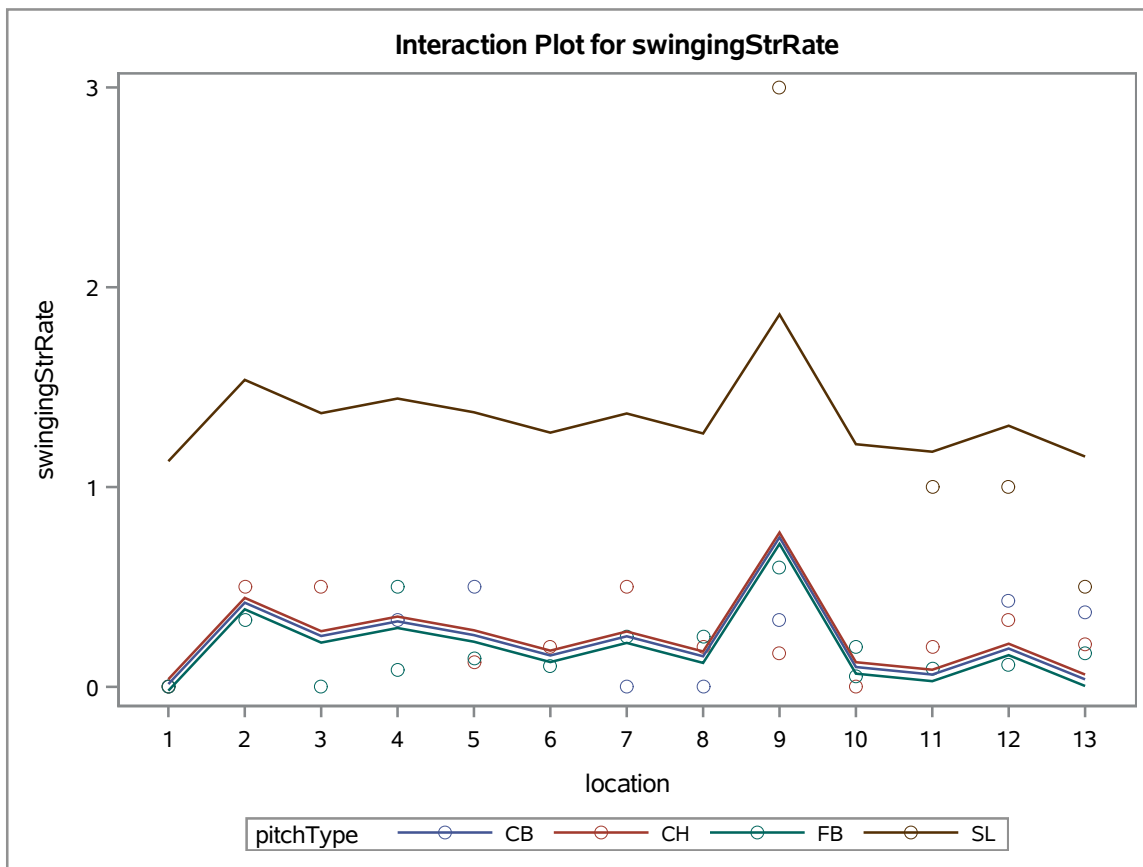
R-Square	Coeff Var	Root MSE	swingingStrRate Mean
0.673519	108.0229	0.368346	0.340989

Source	DF	Type III SS	Mean Square	F Value	Pr > F
location	12	1.61371195	0.13447600	0.99	0.4857
pitchType	3	3.67077064	1.22359021	9.02	0.0004

Dependent Variable: swingingStrRate



Dependent Variable: swingingStrRate



Least Squares Means
Adjustment for Multiple Comparisons: Tukey-Kramer

pitchType	swingingStrRate LSMEAN	LSMEAN Number
CB	0.22907351	1
CH	0.25315372	2
FB	0.19595826	3
SL	1.34427360	4

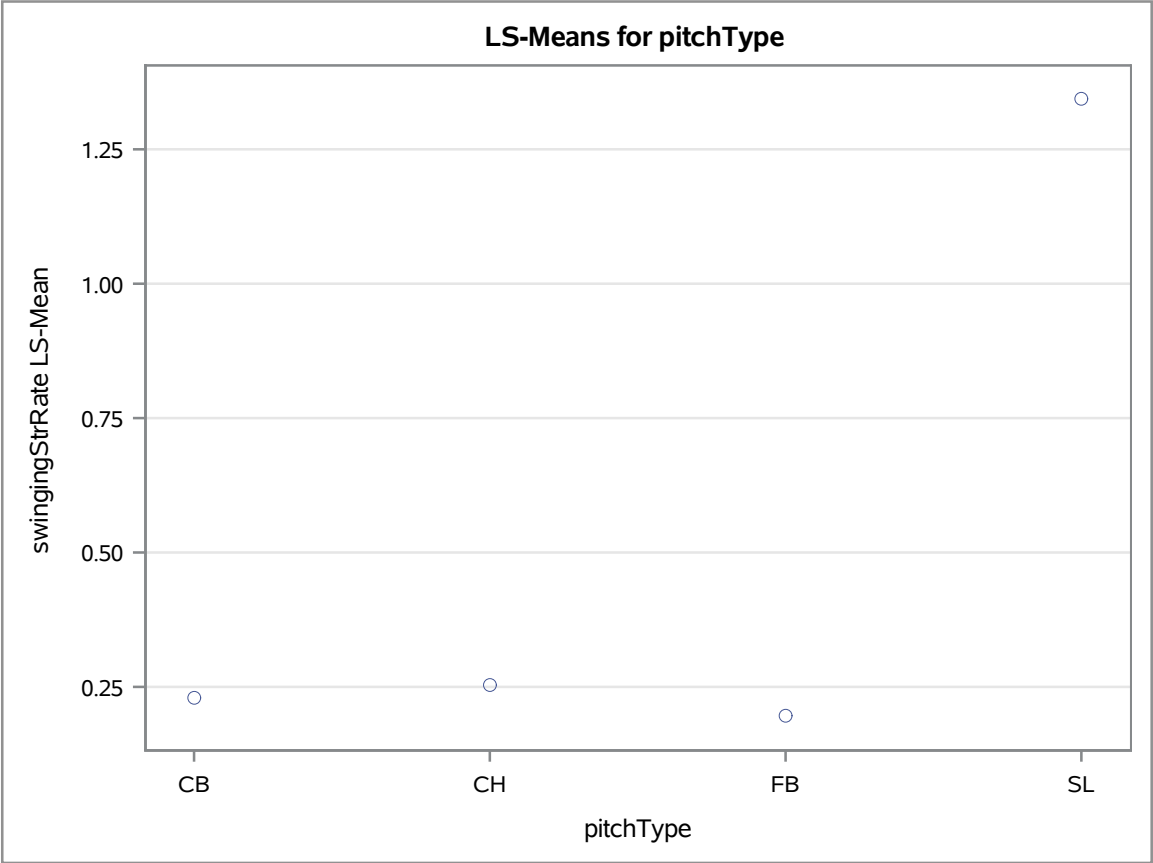
Least Squares Means for effect pitchType Pr > t for H0: LSMean(i)=LSMean(j) Dependent Variable: swingingStrRate				
i/j	1	2	3	4
1		0.9992	0.9977	0.0010
2	0.9992		0.9786	0.0005
3	0.9977	0.9786		0.0003
4	0.0010	0.0005	0.0003	

pitchType	swingingStrRate LSMEAN	95% Confidence Limits	
CB	0.229074	-0.086267	0.544414
CH	0.253154	0.030188	0.476120
FB	0.195958	0.000458	0.391458
SL	1.344274	0.915429	1.773119

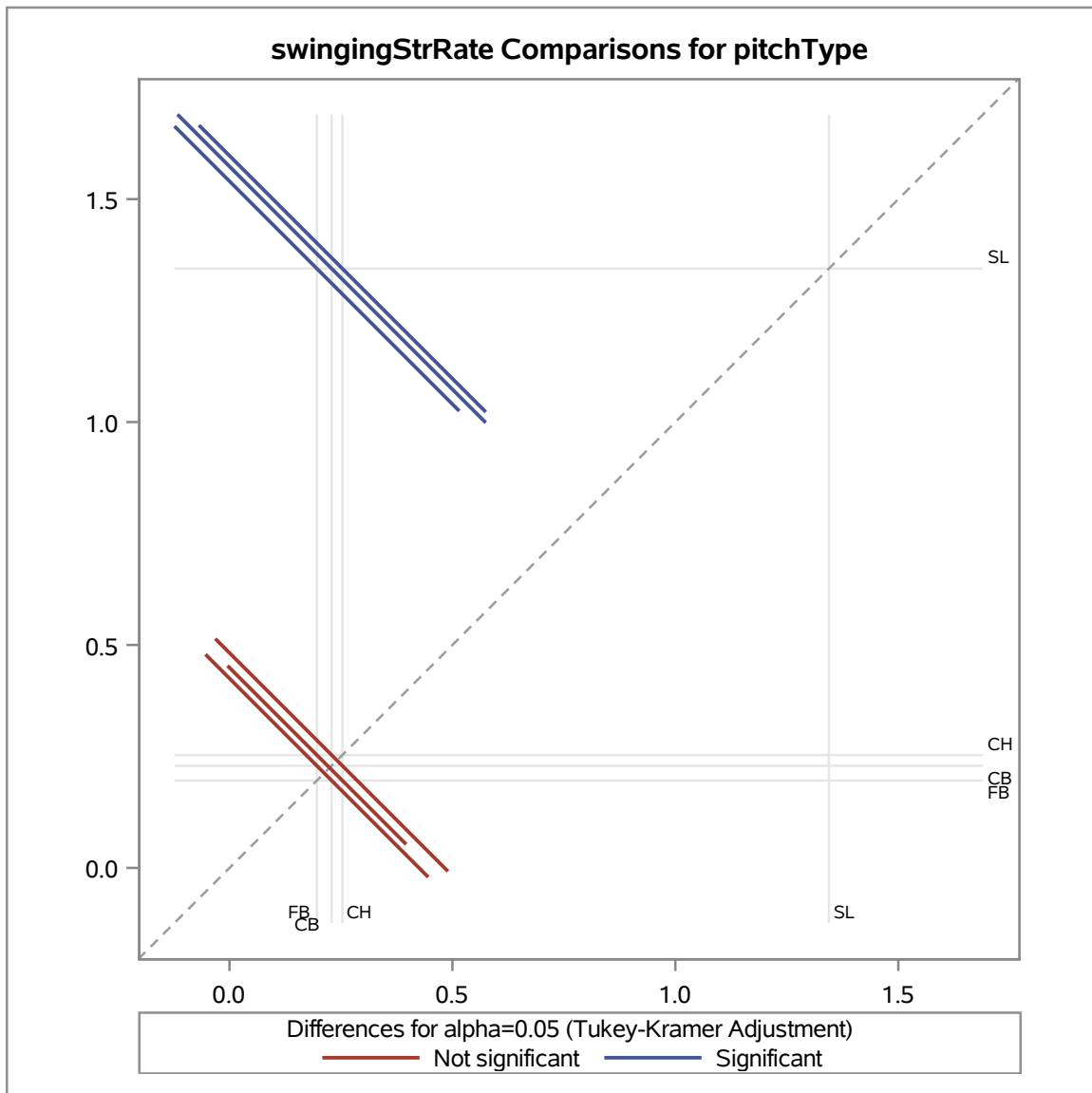
Least Squares Means for Effect pitchType				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
1	2	-0.024080	-0.545776	0.497616
1	3	0.033115	-0.466411	0.532641
1	4	-1.115200	-1.806597	-0.423803
2	3	0.057195	-0.343331	0.457722

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	-1.091120	-1.734415	-0.447824
3	4	-1.148315	-1.787070	-0.509561



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

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Pitch Location	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
1	7	4	0	0.00%
2	8	8	3	37.50%
3	7	6	1	14.29%
4	17	7	2	11.76%
5	19	15	4	21.05%
6	24	12	3	12.50%
7	9	8	2	22.22%
8	17	14	3	17.65%
9	15	11	5	33.33%
10	25	3	1	4.00%
11	17	4	2	11.76%
12	33	7	7	21.21%
13	42	10	10	23.81%

Swing and Miss Data by Pitch Type

Pitch Type	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
CB	35	20	10	28.57%
CH	63	32	13	20.63%
FB	136	56	19	13.97%
SL	6	1	1	16.67%

Regression Analysis of Velocity by Pitch Type

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Data available for home games only

Dependent Variable: velocity

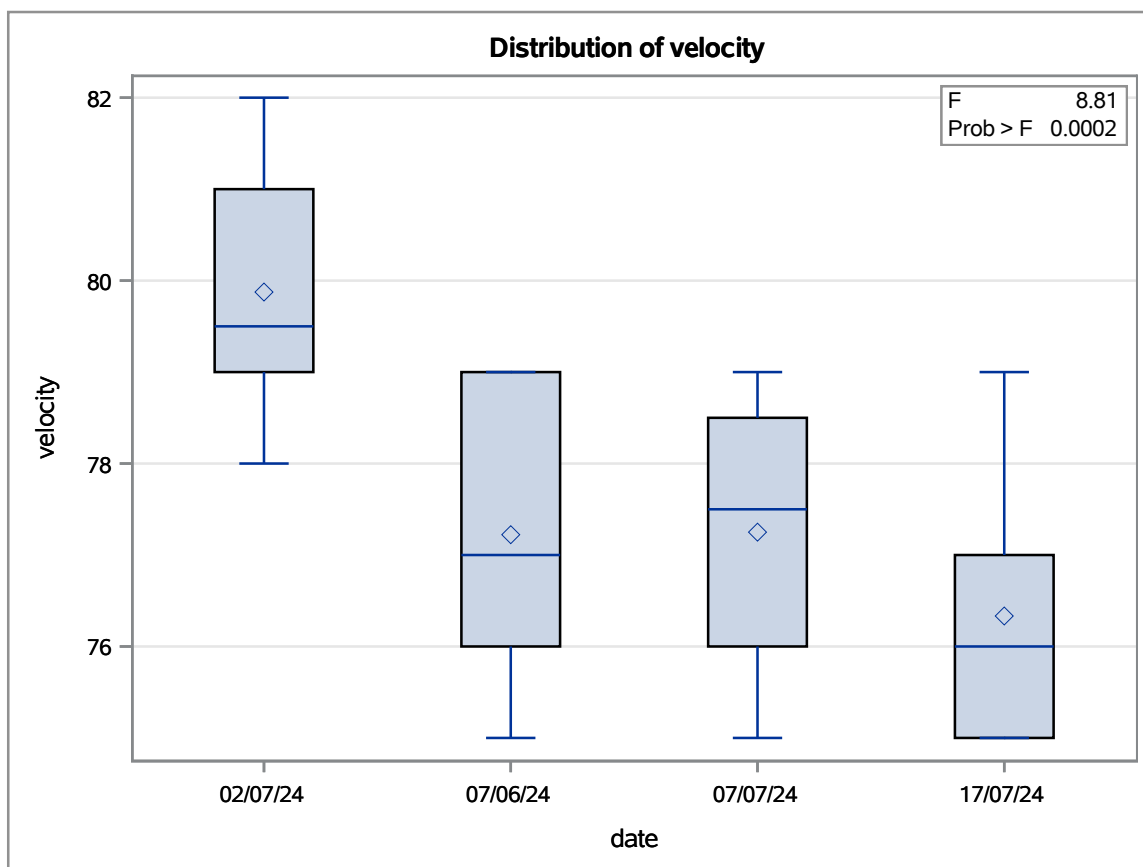
pitchType=CB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	58.0988562	19.3662854	8.81	0.0002
Error	30	65.9305556	2.1976852		
Corrected Total	33	124.0294118			

R-Square	Coeff Var	Root MSE	velocity Mean
0.468428	1.909951	1.482459	77.61765

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	3	58.09885621	19.36628540	8.81	0.0002

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	3	58.09885621	19.36628540	8.81	0.0002



Regression Analysis of Velocity by Pitch Type

13

Data available for home games only

Dependent Variable: velocity

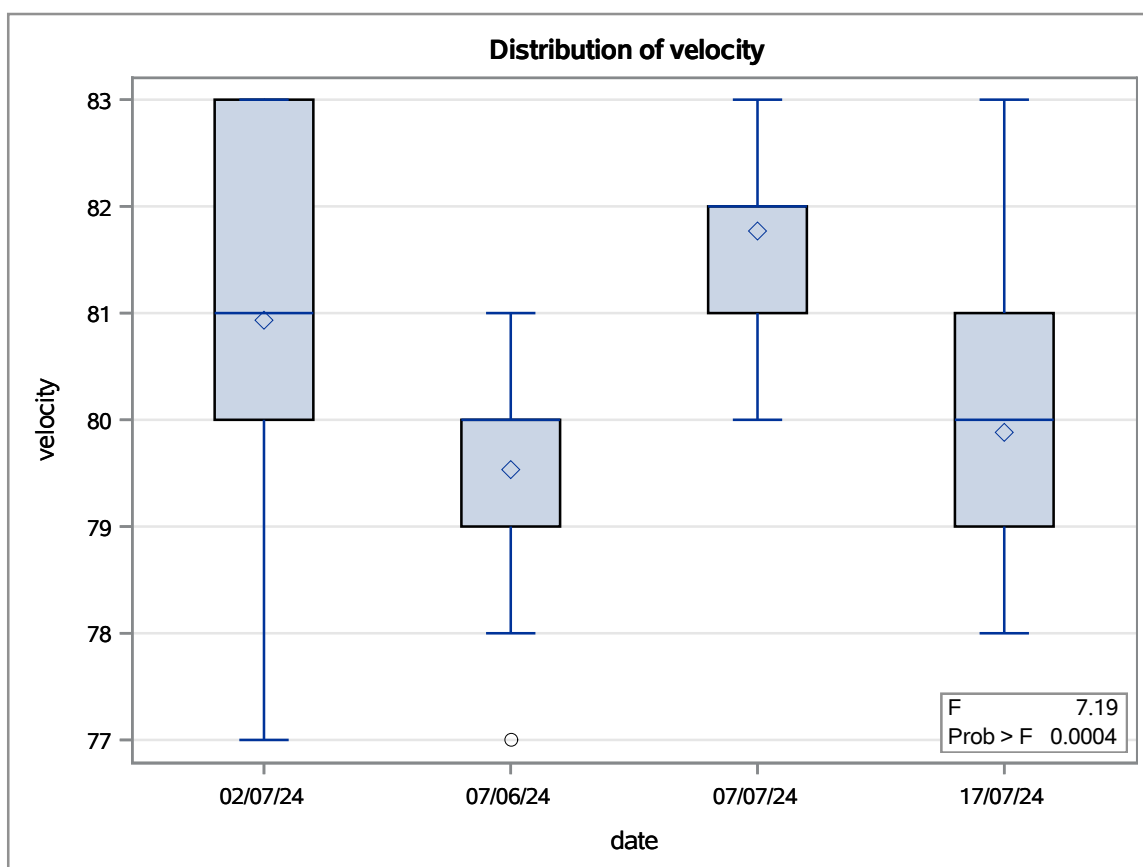
pitchType=CH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	44.1942685	14.7314228	7.19	0.0004
Error	56	114.7390649	2.0489119		
Corrected Total	59	158.9333333			

R-Square	Coeff Var	Root MSE	velocity Mean
0.278068	1.778876	1.431402	80.46667

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	3	44.19426848	14.73142283	7.19	0.0004

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	3	44.19426848	14.73142283	7.19	0.0004



Regression Analysis of Velocity by Pitch Type

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Data available for home games only

Dependent Variable: velocity

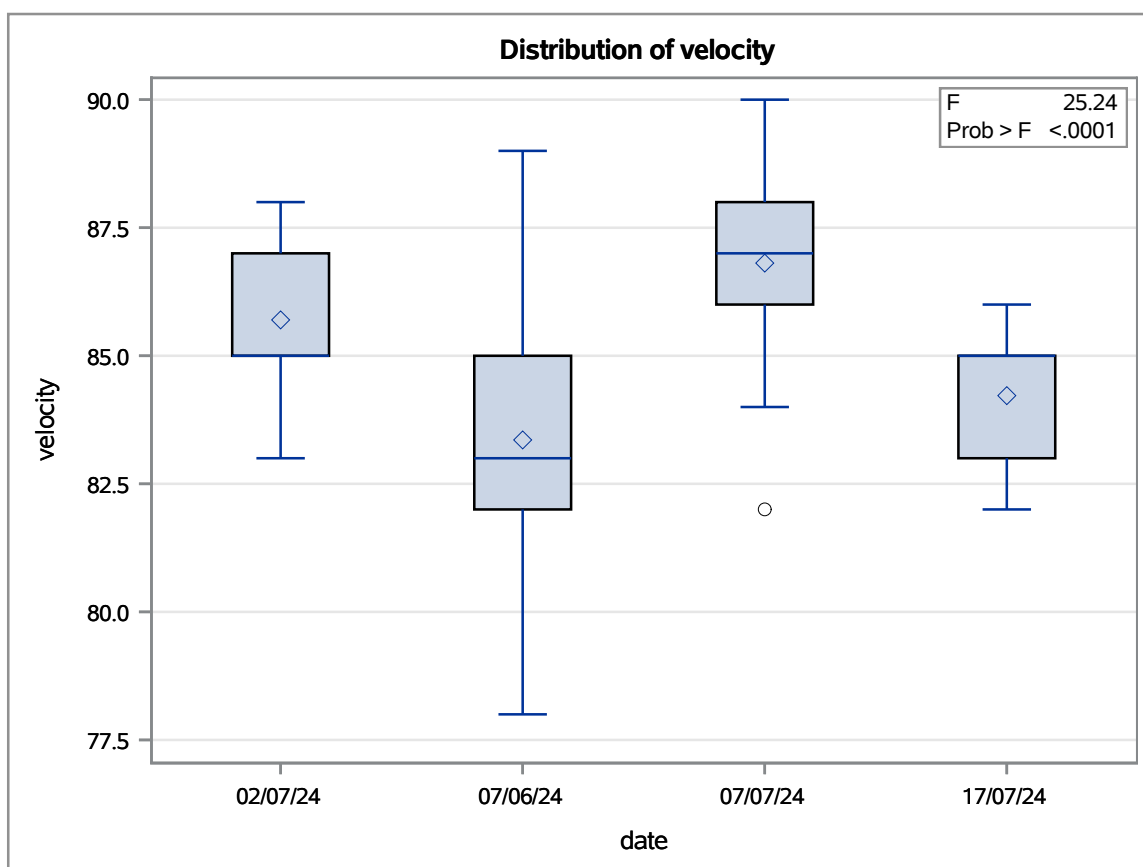
pitchType=FB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	270.0306600	90.0102200	25.24	<.0001
Error	129	460.0746032	3.5664698		
Corrected Total	132	730.1052632			

R-Square	Coeff Var	Root MSE	velocity Mean
0.369852	2.216287	1.888510	85.21053

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	3	270.0306600	90.0102200	25.24	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	3	270.0306600	90.0102200	25.24	<.0001



Data available for home games only

Dependent Variable: velocity

pitchType=SL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.00000000	3.00000000	1.00	0.4226
Error	2	6.00000000	3.00000000		
Corrected Total	3	9.00000000			

R-Square	Coeff Var	Root MSE	velocity Mean
0.333333	2.264119	1.732051	76.50000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	3.00000000	3.00000000	1.00	0.4226

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	3.00000000	3.00000000	1.00	0.4226

