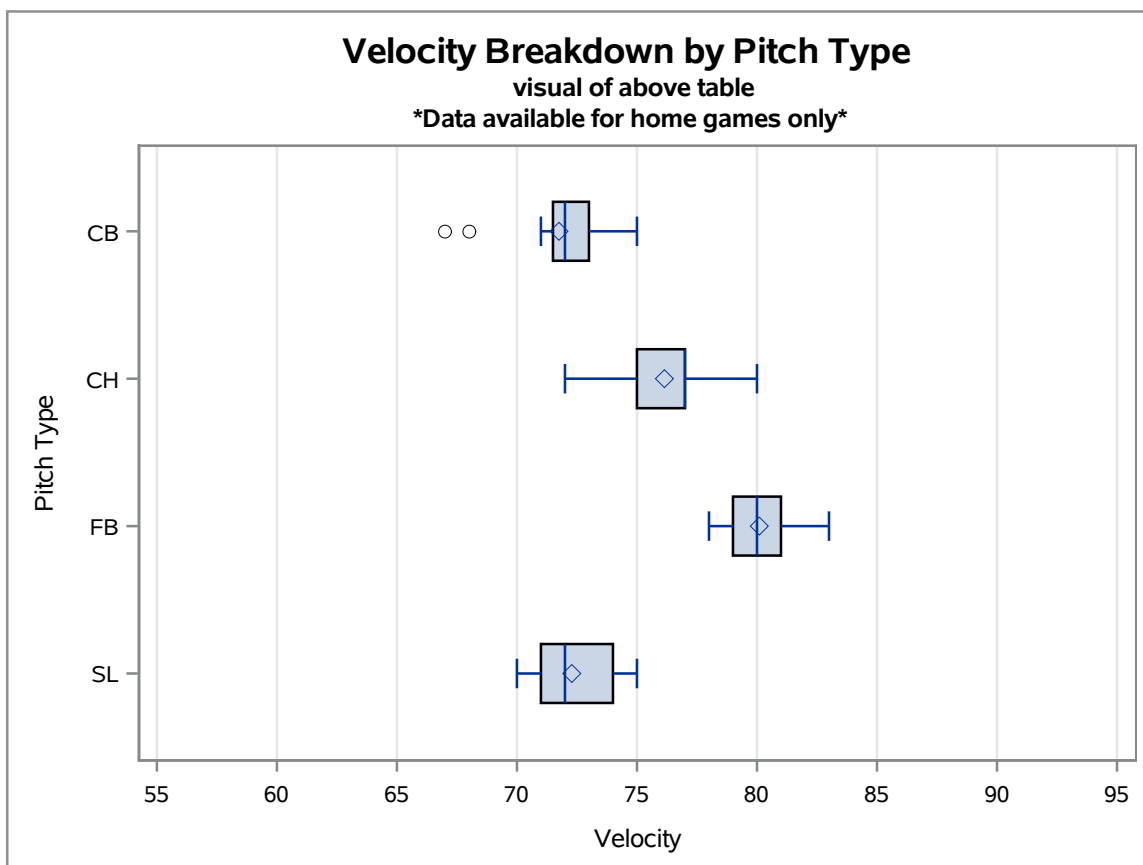


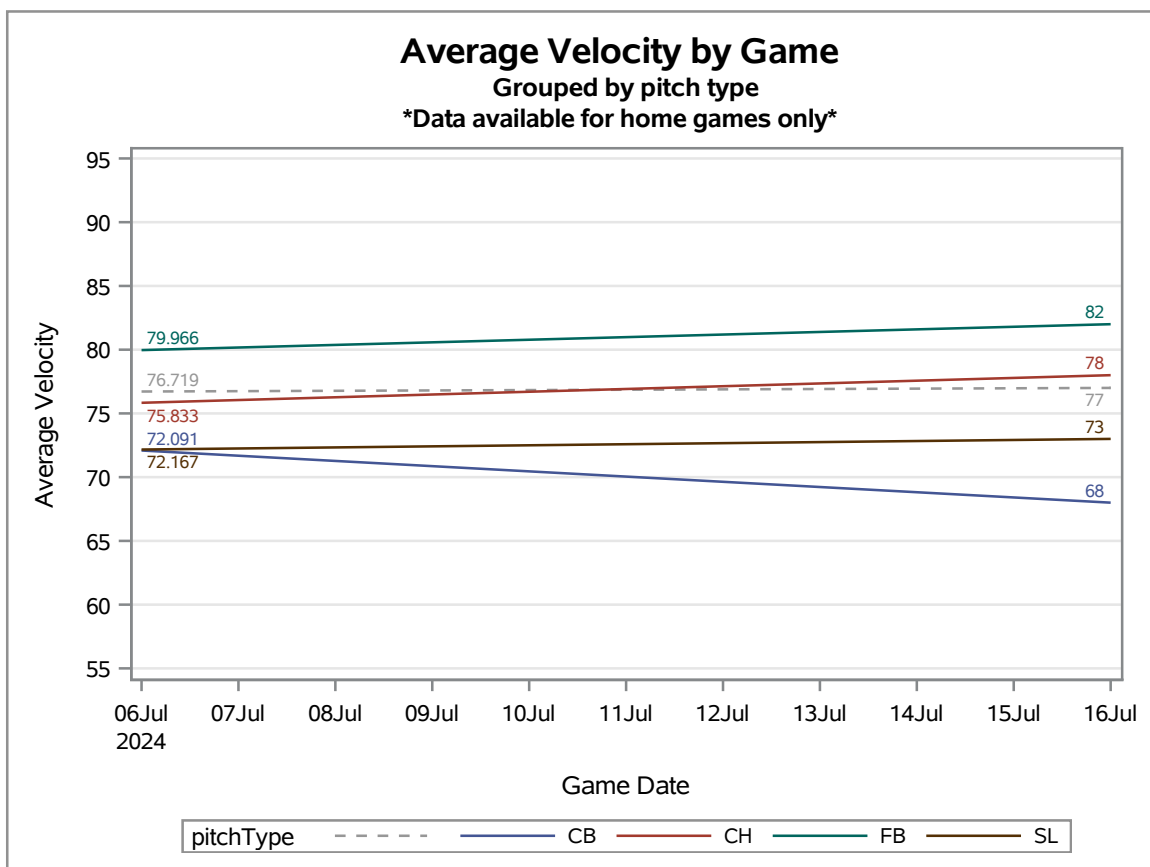
# Velocity Breakdown by Pitch Type

\*Data available for home games only\*

1

Analysis Variable : velocity					
pitchType	N Obs	N	Minimum	Mean	Maximum
CB	12	12	67.0	71.8	75.0
CH	21	21	72.0	76.1	80.0
FB	31	31	78.0	80.1	83.0
SL	7	7	70.0	72.3	75.0





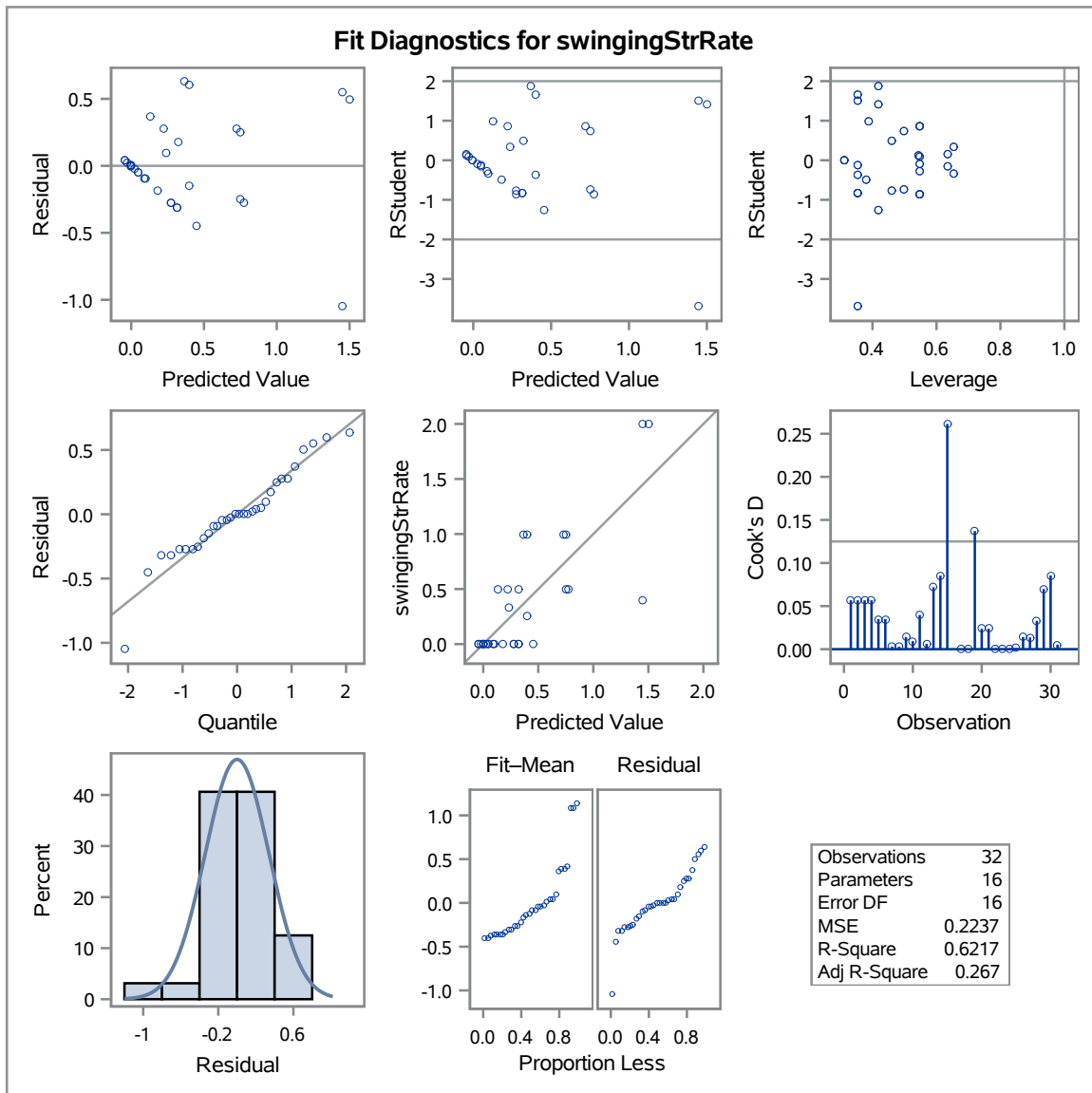
Dependent Variable: swingingStrRate

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	5.88288682	0.39219245	1.75	0.1382
Error	16	3.57988227	0.22374264		
Corrected Total	31	9.46276910			

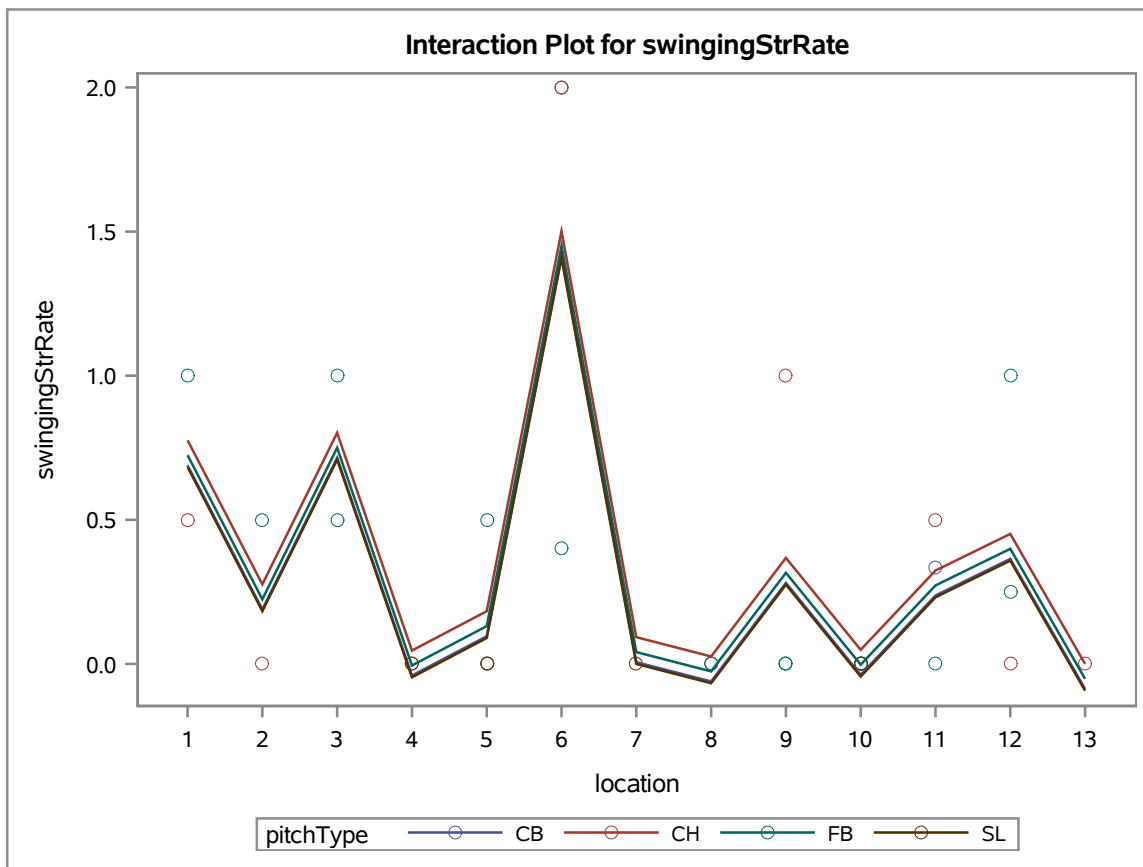
R-Square	Coeff Var	Root MSE	swingingStrRate Mean
0.621688	131.8124	0.473014	0.358854

Source	DF	Type III SS	Mean Square	F Value	Pr > F
location	12	5.08546116	0.42378843	1.89	0.1159
pitchType	3	0.02724736	0.00908245	0.04	0.9887

Dependent Variable: swingingStrRate



Dependent Variable: swingingStrRate



**Least Squares Means**  
**Adjustment for Multiple Comparisons: Tukey-Kramer**

pitchType	swingingStrRate LSMEAN	LSMEAN Number
CB	0.28980083	1
CH	0.37650057	2
FB	0.32474059	3
SL	0.28375311	4

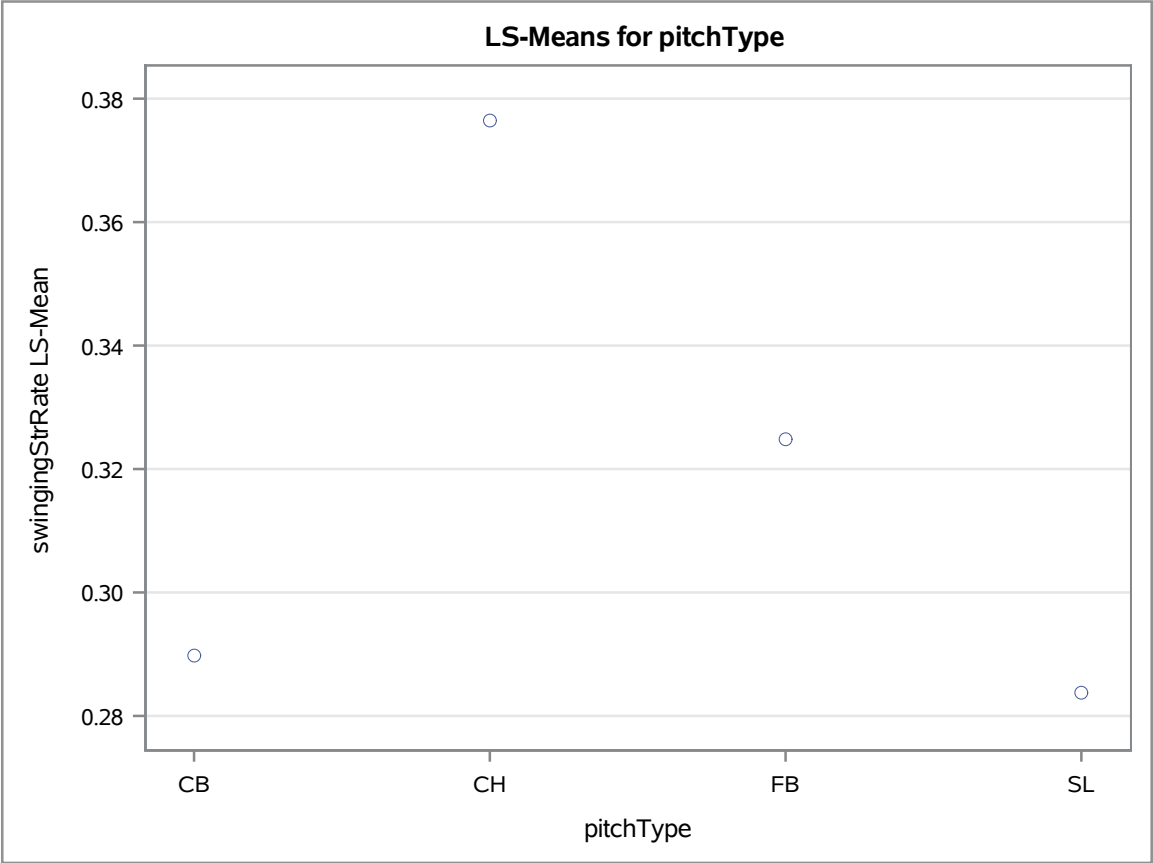
Least Squares Means for effect pitchType Pr >  t  for H0: LSMean(i)=LSMean(j) Dependent Variable: swingingStrRate				
i/j	1	2	3	4
1		0.9966	0.9998	1.0000
2	0.9966		0.9942	0.9932
3	0.9998	0.9942		0.9994
4	1.0000	0.9932	0.9994	

pitchType	swingingStrRate LSMEAN	95% Confidence Limits	
CB	0.289801	-0.538123	1.117724
CH	0.376501	0.054747	0.698254
FB	0.324741	0.014082	0.635399
SL	0.283753	-0.349980	0.917486

Least Squares Means for Effect pitchType				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
1	2	-0.086700	-1.271764	1.098365
1	3	-0.034940	-1.223285	1.153406
1	4	0.006048	-1.382746	1.394841
2	3	0.051760	-0.535823	0.639343

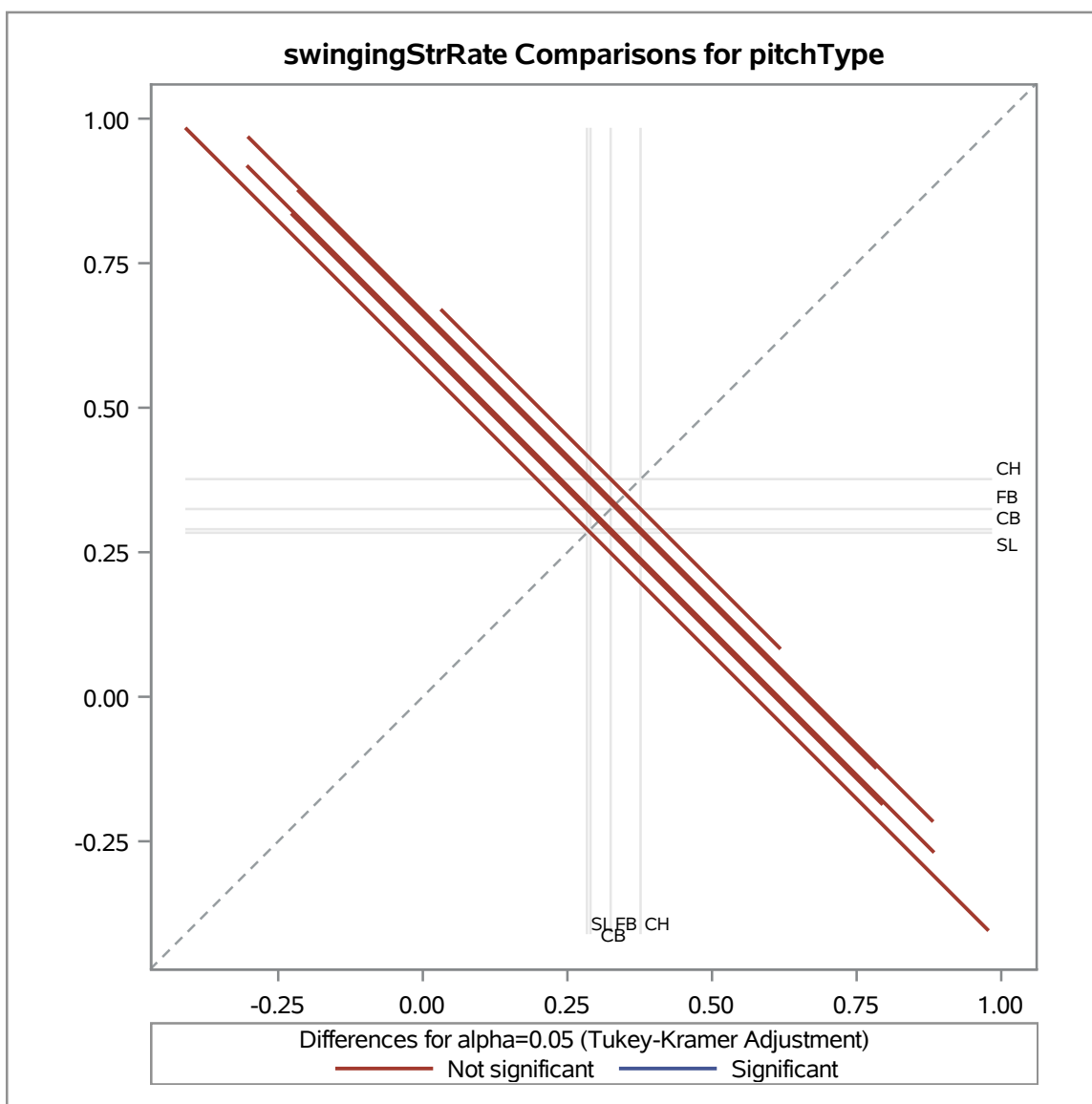
Least Squares Means  
Adjustment for Multiple Comparisons: Tukey-Kramer

Least Squares Means for Effect pitchType				
i	j	Difference Between Means	Simultaneous 95% Confidence Limits for LSMean(i)-LSMean(j)	
2	4	0.092747	-0.908259	1.093754
3	4	0.040987	-0.981825	1.063799





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	4	4	3	75.00%
2	5	5	2	40.00%
3	3	2	1	33.33%
4	4	2	0	0.00%
5	7	6	1	14.29%
6	7	3	2	28.57%
7	2	2	0	0.00%
8	4	2	0	0.00%
9	4	2	1	25.00%
10	14	1	0	0.00%
11	9	3	2	22.22%
12	8	2	1	12.50%
13	1	0	0	0.00%

## Swing and Miss Data by Pitch Type

Pitch Type	Total Pitches	Total Swings	Total Misses	Swinging Strike Rate
CB	12	3	1	8.33%
CH	21	9	3	14.29%
FB	32	18	9	28.13%
SL	7	4	0	0.00%

Regression Analysis of Velocity by Pitch Type

\*Data available for home games only\*

Dependent Variable: velocity

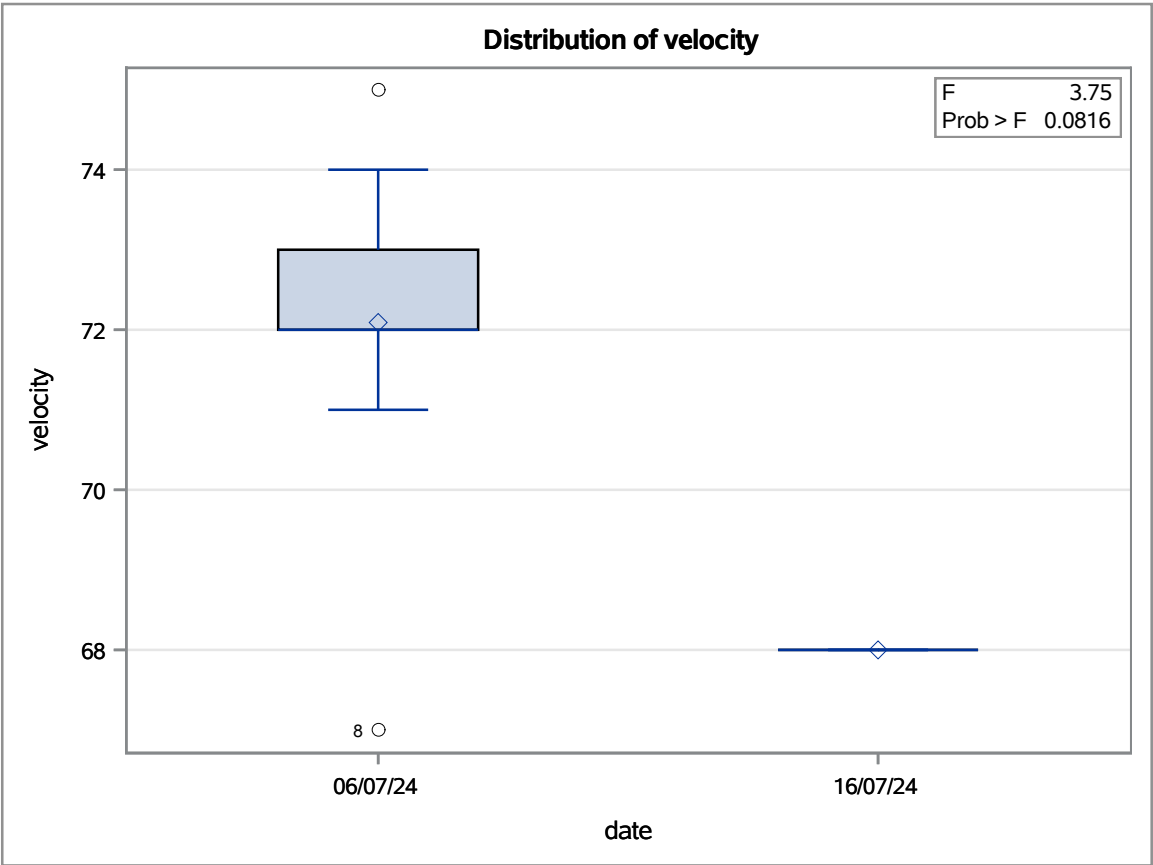
pitchType=CB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	15.34090909	15.34090909	3.75	0.0816
Error	10	40.90909091	4.09090909		
Corrected Total	11	56.25000000			

R-Square	Coeff Var	Root MSE	velocity Mean
0.272727	2.818954	2.022600	71.75000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	15.34090909	15.34090909	3.75	0.0816

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	15.34090909	15.34090909	3.75	0.0816



\*Data available for home games only\*

Dependent Variable: velocity

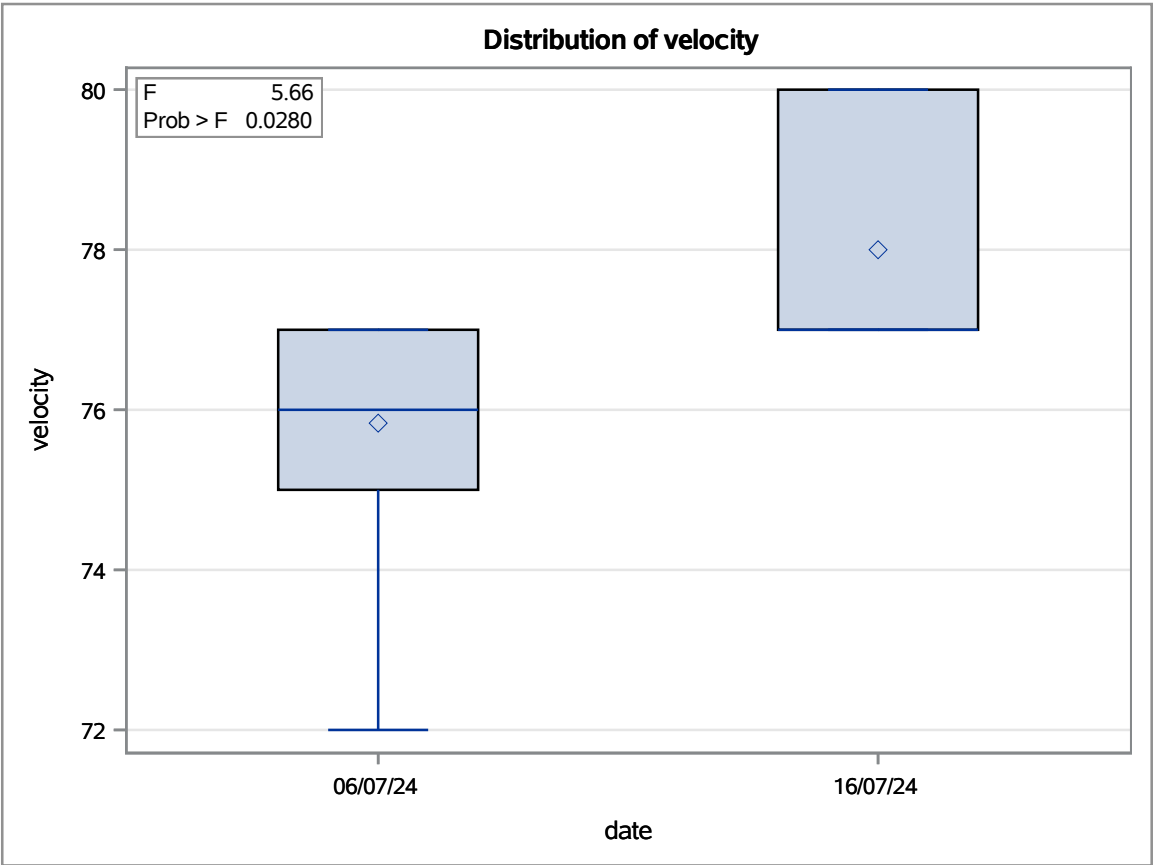
pitchType=CH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	12.07142857	12.07142857	5.66	0.0280
Error	19	40.50000000	2.13157895		
Corrected Total	20	52.57142857			

R-Square	Coeff Var	Root MSE	velocity Mean
0.229620	1.917439	1.459993	76.14286

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	12.07142857	12.07142857	5.66	0.0280

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	12.07142857	12.07142857	5.66	0.0280



# Regression Analysis of Velocity by Pitch Type

\*Data available for home games only\*

14

Dependent Variable: velocity

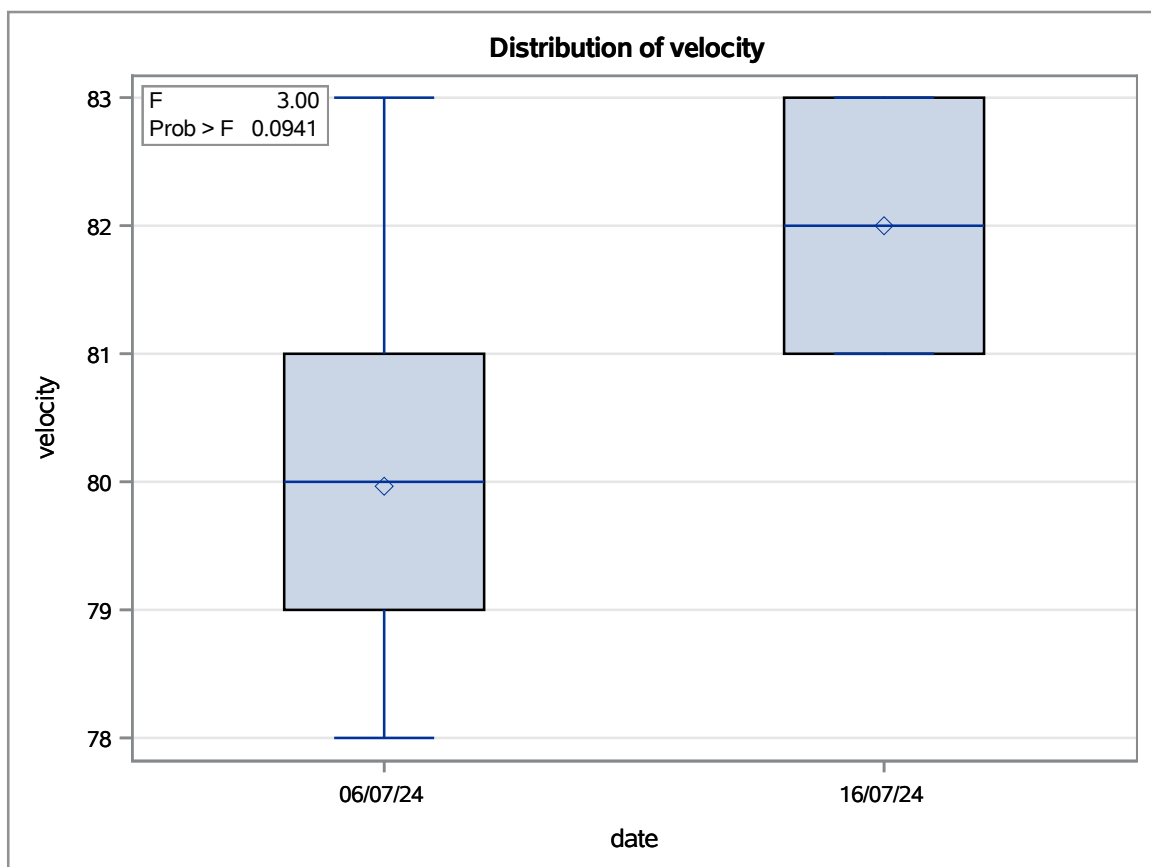
pitchType=FB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.74416018	7.74416018	3.00	0.0941
Error	29	74.96551724	2.58501784		
Corrected Total	30	82.70967742			

R-Square	Coeff Var	Root MSE	velocity Mean
0.093631	2.007321	1.607799	80.09677

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	7.74416018	7.74416018	3.00	0.0941

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	7.74416018	7.74416018	3.00	0.0941



\*Data available for home games only\*

Dependent Variable: velocity

pitchType=SL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.59523810	0.59523810	0.16	0.7074
Error	5	18.83333333	3.76666667		
Corrected Total	6	19.42857143			

R-Square	Coeff Var	Root MSE	velocity Mean
0.030637	2.684888	1.940790	72.28571

Source	DF	Type I SS	Mean Square	F Value	Pr > F
date	1	0.59523810	0.59523810	0.16	0.7074

Source	DF	Type III SS	Mean Square	F Value	Pr > F
date	1	0.59523810	0.59523810	0.16	0.7074

