

The [↑]“Perfect”[↑] Release Point

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Research Question:

Just how important is a Major League Baseball pitcher's release point?

Our research question is looking into what are the most effective release points for different types of pitchers throughout a 9 inning baseball game:

- Starters: Pitching innings 1 - 5
- Relievers: Pitching innings 6 - 8
- Closers: Pitching 9th inning (esp. important for a save opportunity)

Hypothesis: In terms of effectiveness, we believe:

1. Starters are more likely to have an overhead release point - as it requires less motion in a pitcher's windup to go five innings (able to conserve greater energy)
2. Relievers are more likely to have a side arm release point - allowing for better pitch movement (for sliders, cutters and 4 seam fastballs)
3. Closers are more likely to have a unique style (submarine, sidearm or overhead) with only pitching the 9th inning - greater emphasis on pitch velocity

Collecting Data:

- Our primary data source is using baseball savant (known as Statcast)
 - Statcast is state of the art ball tracking technology that collected data across all MLB pitchers since 2015.
- We are able to use Statcast's extensive filters to pull data on different types of pitchers (such as their release point, spin rate, strike zone %, etc.) for all 9 innings

Pitch Type:	<input type="text"/>	PA Result:	<input type="text"/>	Season Type:	<input type="text" value="Regular Season"/>
Pitch Result:	<input type="text"/>	Gameday Zones:	<input type="text"/>	Venue:	<input type="text"/>
Batted Ball Location:	<input type="text"/>	Attack Zones:	<input type="text"/>	Batted Ball Direction:	<input type="text"/>
Count:	<input type="text"/>	Season:	<input type="text" value="2021"/>	Situation:	<input type="text"/>
Player Type:	<input type="text" value="Pitcher"/>	Outs:	<input type="text"/>	Opponent:	<input type="text"/>
Pitcher Handedness:	<input type="text"/>	Batter Handedness:	<input type="text"/>	Quality of Contact:	<input type="text"/>
Game Date >=	<input type="text"/>	Game Date <=	<input type="text"/>	IF Alignment:	<input type="text"/>
Team:	<input type="text"/>	Position:	<input type="text"/>	OF Alignment:	<input type="text"/>
Runners On:	<input type="text"/>	Home or Away:	<input type="text"/>	Batters:	<input type="text" value="Enter Player Name..."/>
Flags:	<input type="text"/>	Batted Ball Type:	<input type="text"/>	Pitchers:	<input type="text" value="Enter Player Name..."/>
Metric Range:	<input type="text"/>				
Inning:	<input type="text" value="5 (5)"/>	Min # of Total Pitches:	<input type="text" value="25 Pitches"/>	Min # of Results:	<input type="text" value="None"/>
Group By:	<input type="text" value="Player Name"/>	Sort By:	<input type="text" value="Vertical Release Point"/>	Sort Order:	<input type="text" value="Desc"/>
Min PA:	<input type="text" value="None"/>				

Search Results						Save Search	
Rk.	Player	Pitches	Total	Pitch %	RP 2 (t)		
1	Fairbanks, Pete	22	774	2.8	6.97	Graphs	
2	Stripling, Ross	1519	1686	90.1	6.97	Graphs	
3	Wells, Tyler	136	894	15.2	6.95	Graphs	
4	Biagini, Joe	16	41	39.0	6.94	Graphs	
5	Evans, Demarcus	112	522	21.5	6.91	Graphs	
6	Flexen, Chris	2333	2811	83.0	6.87	Graphs	
7	Guerra, Javy	13	148	8.8	6.84	Graphs	
8	Holloway, Jordan	520	664	78.3	6.81	Graphs	
9	Webb, Tyler	99	392	25.3	6.80	Graphs	
10	Farrell, Luke	215	473	45.5	6.72	Graphs	
11	Montgomery, Jordan	2329	2570	90.6	6.70	Graphs	
12	Gombet, Austin	1624	1851	87.7	6.69	Graphs	
13	Klobosits, Gabe	55	194	28.4	6.68	Graphs	
14	Kinley, Tyler	72	1143	6.3	6.64	Graphs	
15	Martin, Brett	45	918	4.9	6.64	Graphs	
16	Rodriguez, Jeffy	60	412	14.6	6.61	Graphs	
17	Ponce de Leon, Daniel	274	653	42.0	6.60	Graphs	
18	Smyly, Drew	1942	2139	90.8	6.60	Graphs	
19	Snell, Blake	2123	2347	90.5	6.60	Graphs	
20	Peralta, Willy	1407	1554	90.5	6.59	Graphs	

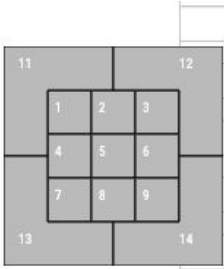
Planned Analyses:

- We plan to analyze pitchers across all teams within the MLB and categorize them as a starter, reliever, and closer based on their MLB position
 - Example: Giants Tyler Rodgers is a reliever, while Phillies Zach Wheeler is a starter
- After categorizing pitchers by type (starter, etc.) and release point, we'll be observing their strike out success rate within/outside the strike zone

Zone

<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 8
<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 9
<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 11
<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 12
<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 13
<input checked="" type="checkbox"/> 6	<input type="checkbox"/> 14
<input checked="" type="checkbox"/> 7	

Group Select:
Pitches In Zone | Pitches Out of Zone | Clear



Enter

The diagram shows a 3x3 grid of boxes numbered 1 through 9, representing the strike zone. This grid is centered within a larger 3x3 grid of boxes numbered 11 through 14, representing the outside zone. The boxes are arranged as follows: 11 (top-left), 12 (top-right), 13 (bottom-left), 14 (bottom-right), and 1-9 in the center.

Strike zone = Boxes 1 through 9

Outside zone = Boxes 11 through 14

- Different release points can keep a hitter off balance and cause them to swing at bad pitches outside the zone

Planned Analyses (Continued):

- For **starters** → an effective starter is likely able to make it through six innings, and allow less than three runs — leading to a **quality start**
- For **relievers** → an effective reliever is able to get “**out of trouble**” with men on base (usually caused by the starter who was taken out of the game)
 - We plan on analyzing when runners are in scoring position (2nd and 3rd base) and a reliever is able to get of the inning without any runners scoring that inning.
- For **closers** → looking at save conversion ratios: **saves/save opportunities**

Runners On: Runner On 3rd (2) ▼ Home or Away: [

Flags:

Metric Range:

Inning:

Group By:

Min PA:

Runner On

<input type="checkbox"/> No Runners	<input checked="" type="checkbox"/> Runner On 3rd
<input type="checkbox"/> RISP	<input type="checkbox"/> Runner Not On 1st
<input type="checkbox"/> Runner On Base	<input type="checkbox"/> Runner Not On 2nd
<input type="checkbox"/> Runner On 1st	<input type="checkbox"/> Runner Not On 3rd
<input checked="" type="checkbox"/> Runner On 2nd	

* In order to select only runner on 1st, etc..., You would select runner on 1st and runner not on 2nd/3rd