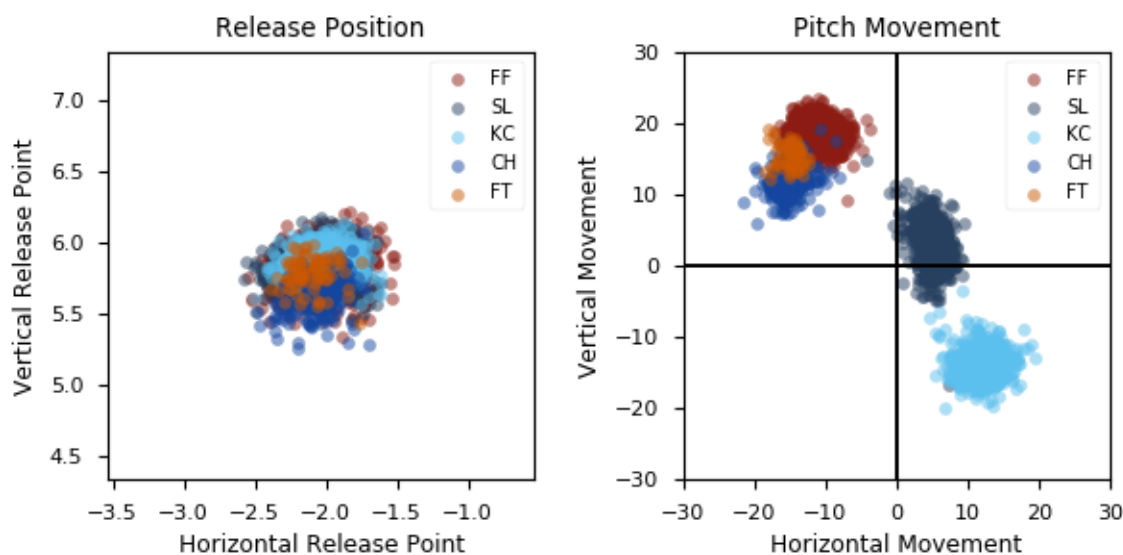


Arsenal Report for Gerrit Cole

2019-3-20 to 2019-9-30



Arsenal

Pitch Type	% Thrown	Velocity (mph)	Spin Rate (rpm)	Horizontal Break (in)	Vertical Break (in)	xwOBA	wOBA	SwStr%
FF	51.6	97.1	2530.0	-11.4	18.4	0.38	0.264	17.0
SL	23.2	89.2	2622.0	4.9	3.0	0.332	0.232	20.1
KC	15.4	82.6	2901.0	11.7	-14.0	0.371	0.273	8.5
CH	7.4	88.6	1870.0	-15.3	11.9	0.308	0.291	18.4
FT	2.4	97.1	2508.0	-15.1	15.5	0.312	0.292	6.2

- Pitch Type - FF: Four-Seam Fastball, FT: Two-Seam Fastball, SL: Slider, FC: Cutter, FS: Splitter, KC: Knuckle-curve, CH: Changeup, FO: Forkball, SC: Screwball, KN: Knuckleball, EP: Eephus
- Velocity - recorded in miles per hour at release.
- Spin Rate - recorded in revolutions per minute at release.
- Horizontal Break - horizontal movement, in inches, of the pitch between the release point and home plate, as compared to a theoretical pitch thrown at the same speed with no spin-induced movement.
- Vertical Break - vertical movement, in inches, of the pitch between the release point and home plate, as compared to a theoretical pitch thrown at the same speed with no spin-induced movement.
- xwOBA - formulated using exit velocity, launch angle and, on certain types of batted balls, Sprint Speed.
- wOBA - a statistic, based on linear weights, designed to measure a player's overall offensive contributions per plate appearance.
- SwStr% - measures swing and miss rate based on pitch type. EX: (FF Swings and Misses)/(Total # of FF Thrown) * 100.