**Pitch type:**

* FA: Fastball
* FF: Four-Seam Fastball
* FT: Two-seam Fastball
* FC: Cutter (Cut Fastball)
* FS: Splitter
* PO: Pitch Out
* FO : Pitch Out
* SI: Sinker
* SL: Slider
* CU: Curveball
* KC: Knuckle-curve
* EP: Eephus
* CH: Changeup
* SC: Screwball
* KN: Knuckleball
* AB: Automatic Ball
* IN: Intentional Walk
* UN: Unknow
* <NA>: unidentified

**Des type:**

* Automatic Ball
* Ball
* Ball in Dirt
* Called strike
* Foul
* Foul (Runner Going)
* Foul Bunt
* Foul Tip
* Hit By Pitch
* In Play, no out
* In Play, out(s)
* In Play, run(s)
* Intent Ball
* Missed Bunt
* Pitchout
* Swinging Pitchout
* Swinging Strike
* Swinging Strike (Blocked)

**Pitch Table**

1. **des:** outcome
2. **des\_es**: outcomes in Spanish
3. **id**: unique identification number per pitch within a game.
4. **type**: b = ball, s = strike/Fouls, x = ball in play
5. **tfs**: time stamp
6. **tfs\_zulu**: Spanish time stamp
7. **x**: old horizontal location of the pitch as it crosses over home plate, from gameday
8. **y**: old Vertical location of the pitch as it crosses over home plate, from gameday
9. **sv\_id**: time stamp of when the pitch was first was first detected in the air, YYMMDD\_hhmmss
10. **start\_speed**: speed when thrown (mph), best for velocity
11. **end\_speed**: speed over the plate (mph)
12. **sz\_top**: distance in feet to the top of batters rulebook strike zone
13. **sz\_bot**: distance in feet to the bottom of batters rulebook strike zone
14. **pfx\_x**: horizontal movement of the pitch, in inches, from release to home plate
15. **pfx\_z**: vertical movement of the pitch, in inches, from release to home plate
16. **px**: horizontal distance in feet from the centre of home plate, as the ball crosses home plate
17. **pz**: vertical distance in feet from the centre of home plate, as the ball crosses home plate
18. **x0**: horizontal distance in feet, measured at the initial point.
19. **y0**: distance in feet from home plate to where pitchf/x starts to measure initial parameters ,constant of 50 feet.
20. **z0**: vertical distance in feet, measured at the initial point.
21. **vx0**: horizontal velocity of the pitch at release, in feet per second
22. **vy0**: forward velocity of the pitch at release, in feet per second
23. **vz0**: vertical velocity of the pitch at release, in feet per second
24. **ax**: horizontal acceleration of the pitch at release, in feet per second
25. **ay**: forward acceleration of the pitch at release, in feet per second
26. **az**: : vertical acceleration of the pitch at release, in feet per second
27. **break\_y**: distance from home plate, in feet, to where the pitch achieves its greatest deviation
28. **break\_angle**: the angle, in degrees, from the vertical to the straight line path from the release point to where the pitch crossed
29. **break\_length**: the distance, in inches, between the trajectory of the pitch at any point between the release point and the front of home plate
30. **pitch\_type**: most probable pitch type
31. **type\_confidence**: the value of weight to the probability the pitch type is correct
32. **zone**: the part of the strike zone the ball crosses home plate in
33. **nasty**: how hard a ball is to hit
34. **spin\_dir**:
35. **spin\_rate**: How many times a ball spins from released till it crosses home plate
36. **cc**: auto generated comment, based on strike zone
37. **mt**:
38. **url**: link to data file
39. **inning\_side**: top or bottom
40. **inning**: inning number
41. **next**:
42. **num**:
43. **on\_1b**: id number of player on 1st base, if any
44. **on\_2b**: id number of player on 2nd base, if any
45. **on\_3b**: id number of player on 3rd base, if any
46. **count**: count, balls-strikes, (0-0, 0-1, 0-2, 1-0, 1-1, 1-2, 2-0, 2-1, 2-2, 3-0, 3-1, 3-2)
47. **gameday\_link**: link to gameday data
48. **event\_num**:
49. **play\_guid**:

**At bat**

1. **pitcher**: pitcher id number
2. **batter**: batter id number
3. **num**:
4. **b**: balls
5. **s**: strikes
6. **o**: outs
7. **start\_tfs**: start time, on east coast, EST
8. **start\_tfs\_zulu**:
9. **stand**: left or right handed batting
10. **b\_height**: batter height
11. **p\_throws**: pitcher left or right throwing
12. **atbat\_des**: at bat outcome (detailed)
13. **atbat\_des\_es**: at bat outcome in Spanish (detailed)
14. **event**: single, double, sac bunt,…
15. **score**: (doesn’t work)
16. **home\_team\_runs**: home team runs
17. **away\_team\_runs**: away team runs
18. **url**: link to data file
19. **inning\_side**: top or bottom
20. **inning**: inning
21. **next**:
22. **event2**:
23. **event3**:
24. **batter\_name**: batter name
25. **pitcher\_name**: pitcher name
26. **event4**:
27. **gameday\_link**: link to gameday data
28. **date**: date
29. **event\_num**:
30. **event\_es**: event in Spanish
31. **event2\_es**:
32. **event3\_es**:
33. **event4\_es**:

**action:**

**po:**

**runner:**

Info:

* <https://www.fangraphs.com/tht/tht-live/gameday-pitchf-x-changes-for-2010/>
* <https://fastballs.wordpress.com/2007/08/02/glossary-of-the-gameday-pitch-fields/>
* <https://www.baseballprospectus.com/news/article/30465/pitching-backward-what-we-know-about-spin-rate/>