Pitch f/x Data Glossary

Pitchf/x data from all 2013-2015 regular season MLB games

Abbrev	Description	Example/Note
game_id	Unique identifier for each game	2014/03/31/atlmlb-milmlb-1
game_date	Date of game	31-Mar-14
year	Year the game was played in	2014
sv_pitch_id	Unique identifier for each pitch within a game	140331_142423
at_bat_number	At bat number of the game	22 (22nd AB in the game)
pitch_number	Pitch number of the PA	3 (3rd pitch of PA)
inning	Inning the pitch occurs in	3
top_inning_sw	Indicator for top of inning (i.e. visitors batting)	Y(Top), N (Bottom)
event_type	Summary of event result on pitch	swinging_strike
event_result	Result of PA	strikeout
pre_balls	Number of balls before pitch	3
pre_strikes	Number of strikes before pitch	1
pre_outs	Number of outs before PA	1
batter_id	Unique identifier of the batter	
bat_side	Side of the plate the batter hit from on pitch	R (Right), L (Left)
pitcher_id	Unique identifer of pitcher	
throws	Arm the pitcher used to throw pitch	R (Right), L (Left)
initial_speed	Velocity of the pitch	mph
plate_speed	Velocity of the pitch as it crosses the plate	mph
pitch_type	Classified pitch type - most likely pitch type	See table on right
break_x	Horizontal movement of pitch (along x axis)	Catcher's perspective (in.) - neg. to left of C
break_z	Vert mvmt of pitch in relation to a ball w/ no spin	in.
plate_x	Pitch horizontal location from center of plate	Catcher's perspective
plate_z	Pitch height above ground at home plate	Catcher's perspective
init_pos_x	Horizontal location of pitch at 50 ft from home	L (negative) / R (positive)
init_pos_y	50 feet	50 feet
init_pos_z	Pitch height at 50 feet from home plate	ft.
init_vel_x	Velocity along x axis at 50 ft from home	ft/sec; Catcher's perspective
init_vel_y	Velocity along y axis at 50 ft from home	ft/sec; Catcher's perspective
init_vel_z	Velocity along z axis at 50 ft from home	ft/sec; Catcher's perspective
init_accel_x	Pitch acceleration at intial point along x axis	ft/sec; Catcher's perspective
init_accel_y	Pitch acceleration at intial point along y axis	ft/sec; Catcher's perspective
init_accel_z	Pitch acceleration at intial point along z axis	ft/sec; Catcher's perspective
HitTrajectory	Ball in play type	U (not in play), fly_ball, etc.
PlaybyPlay	Description of the play	
Runneron1st_ID	Unique identifier of runner on 1st base	
Runneron2nd_ID	Unique identifier of runner on 2nd base	
Runneron3rd_ID	Unique identifier of runner on 3rd base	

Abbrev	Pitch Type
FA	Fastball
FF	Four-Seam Fastball
FT	Two-seam Fastball
SI	Sinker
FS	Splitter
FC	Cutter
FO/PO	Pitch Out
CU/CB	Curveball
KC	Knuckle-curve
EP	Eephus
CH	Changeup
SC	Screwball
KN	Knuckleball
AB	Auto. Ball
UN/XX	Unidentified
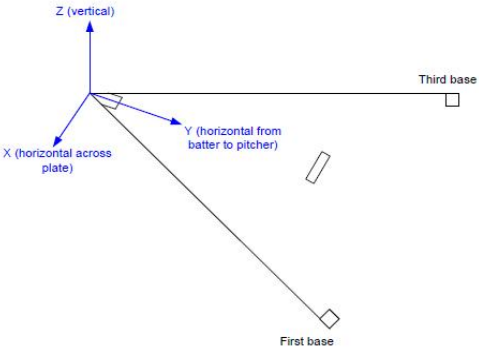
Game Context Data

***Data on the weather, playing surface, and other context variables**

Abbrev	Description	Example/Note
game_id	Unique identifier for each game	2014/03/31/atlmlb-milmlb-1
League	League of home team	AL/NL
Day/Night	Indicator of day or night game	Day ('D') /Night ('N')
PlayingSurface	Surface Game was played on	Grass ('G')/Turf ('T')
Weather	Summary of weather conditions	"Partly Cloudy
WindSpeed	Speed of the wind	mph
WindDirection	Wind Direction	"Out to CF"
Temperature	Game time temperature	Farenheit

League Averages

***All league averages are calculated as the total number of the numerator divided by the total number of the denominator**

Abbrev	Description	Example/Note
League	League that the average is for	AL
Year	Year that the average is for	2014
PA/G	Plate Appearances per Game	
Runs/PA	Runs per game	
1B/BIP	Singles per Ball in Play	
2B/BIP	Doubles per Ball in Play	
3B/BIP	Triples per Ball in Play	
HR/BIP	Home Runs per Ball in Play	
BIP/PA	Balls in Play per Plate Appearance	
BB/PA	Walks per Plate Appearance	
UBB/PA	Uninentional Walks per Plate Appearance	
IBB/PA	Intentional Wals Per Plate Appearance	
SO/PA	Strikeouts per Plate Appearance	
HBP/PA	Hit By Pitches per Plate Appearance	
AVG	Batting Average	
OBP	On Base Percentage	
wOBA	weighted On Base Average	

Batter Splits Glossary

These data are performance data for batters over 2013-2015 split by player, team, year, and pitcher handedness. Therefore, if a player is traded during the season, he will have two rows in that year.

Abbrev	Description	Example/Note
batter_id	Unique batter identifier	joins to pitchf/x data
Name	Player name <Last, First>	Machado, Manny
birth_date	Player date of birth	yyyy-mm-dd
org	Team code - unique identifier	BAL
League	Player's league	AL/NL
Situation	vs. LHP or RHP	"vs Right"
AB	Numberof at bats	
PA	Number of plate appearances	
Year	Near of performance	2013-2015
1B	Number of singles	
2B	Number of doubles	
3B	Number of triples	
HR	Number of home runs	
BB	Number of unintentional walks	
HBP	Number of pitches that hit batter	
IBB	Number of intentional walks	
SO	Number of strikeouts	
AVG	Batting Average	H/AB
SLG	Slugging Average	(Total Bases)/AB
OBP	On Base Percentage	(H + BB + HBP)/PA
wOBA	Weighted On Base Average	see Fangraphs

Pitcher Splits Glossary

These data are performance data for pitchers over 2013-2015 split by player, team, year, and batter handedness. Therefore, if a player is traded during the season, he will have two rows in that year.

Abbrev	Description	Example/Note
pitcher_id	Unique pitcher identifier	joins to pitchf/x data
Name	Player name <Last, First>	Machado, Manny
birth_date	Player date of birth	yyyy-mm-dd
org	Organization code	BAL
League	Player's league	AL/NL
Situation	vs. LHB or RHB	"vs Right"
TBF	Number of batters faced	
Year	Year of performance	2013-2015
1B	Number of singles	
2B	Number of doubles	
3B	Number of triples	
HR	Number of home runs	
BB	Number of unintentional walks	
HBP	Number of pitches that hit batter	
IBB	Number of intentional walks	
SO	Number of strikeouts	
GB%	Percentage of BIP that are GB	
LD%	Percentage of BIP that are LD	H/AB
FB%	Percentage of BIP that are FB	(Total Bases)/AB
K%	Strikeout Proportion	
BB%	Walk Proportion	
FIP	Fielding Independent Pitching	see Fangraphs

Batter Stats Glossary

These data are performance data for batters over 2013-2015 split by player, team, and year. Therefore, if a player is traded during the season, he will have two rows in that year.

Abbrev	Description	Example/Note
batter_id	Unique batter identifier	joins to pitchf/x data
Name	Player name <Last, First>	Machado, Manny
birth_date	Player date of birth	yyyy-mm-dd
org	Team code - unique identifier	BAL
League	Player's league	AL/NL
G	Number of games played	122
AB	Numberof at bats	
PA	Number of plate appearances	
Year	Near of performance	2013-2015
1B	Number of singles	
2B	Number of doubles	
3B	Number of triples	
HR	Number of home runs	
BB	Number of unintentional walks	
HBP	Number of pitches that hit batter	
IBB	Number of intentional walks	
SO	Number of strikeouts	
SB	Number of stolen bases	
CS	Number of times caught stealing	
AVG	Batting Average	H/AB
SLG	Slugging Average	(Total Bases)/AB
OBP	On Base Percentage	(H + BB + HBP)/PA
wOBA	Weighted On Base Average	see Fangraphs
rWAR	Wins Above Replacement	see Baseball Ref.

Pitcher Stats Glossary

These data are performance data for pitchers over 2013-2015 split by player, team, and year. Therefore, if a player is traded during the season, he will have two rows in that year.

Abbrev	Description	Example/Note
pitcher_id	Unique pitcher identifier	joins to pitchf/x data
Name	Player name <Last, First>	Machado, Manny
birth_date	Player date of birth	yyyy-mm-dd
org	Organization code	BAL
League	Player's league	AL/NL
G	Number of games played	122
GS	Number of games started	
TBF	Number of batters faced	
Year	Year of performance	2013-2015
1B	Number of singles	
2B	Number of doubles	
3B	Number of triples	
HR	Number of home runs	
BB	Number of unintentional walks	
IBB	Number of intentional walks	
HBP	Number of pitches that hit batter	
SO	Number of strikeouts	
GB%	Percentage of BIP that are GB	
LD%	Percentage of BIP that are LD	H/AB
FB%	Percentage of BIP that are FB	(Total Bases)/AB
K%	Strikeout Percentage	
BB%	Walk Percentage	
ERA	Earned Run Average	(Earned Runs)/IP*9
FIP	Fielding Independent Pitching	see Fangraphs
rWAR	Wins Above Replacement	see Baseball Ref.