Using pitchf/x to measure pitch success by location

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Introduction

Pitchf/x system captures entire trajectory, so we know pitch location (crosses or would have crossed front edge of plate)

Can use this information to assess pitch success by location

Here I briefly examine some results on this topic.
Methods

Assign a linear weights run value to each pitch

Scale pitch height within the strike zone to account for different strike-size sizes

Fit a loess regression surface to these values

For more information on this method and replicating the analysis see THT Annual 2009, my pitchf/x Summit 2009 talk and my posts at Baseball Analysts
Caveats

Pitch location is, obviously, not the only factor in determining pitch success.
- speed
- movement
- sequencing

Since pitchers cannot hit their spot perfectly the information is of limited ‘actionable’ importance to them.
Caveats

For individual batters, as in the Pedroia case, because we are dealing with a much smaller number of pitches the estimates of loess fit come with rather large errors.
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Conclusion

This is just a brief introduction to the type of analysis that could be done on pitch location, which is just one of the multitude of possible topics that could be looked at with the pitchf/x data.

The data are freely available through MLBAM’s website in xml format, or through a number of third-party online providers (brooksbaseball.net, texasleaguers.com, joelefkowitz.com, …),

and are an amazing resource for: fans; analysts; print, online and broadcasting media; and even some players (Scherzer, Bannister).