# Pitcher Analysis

MAJOR LEAGUE BASEBALL

## Called Strikes Model

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# Project Goals

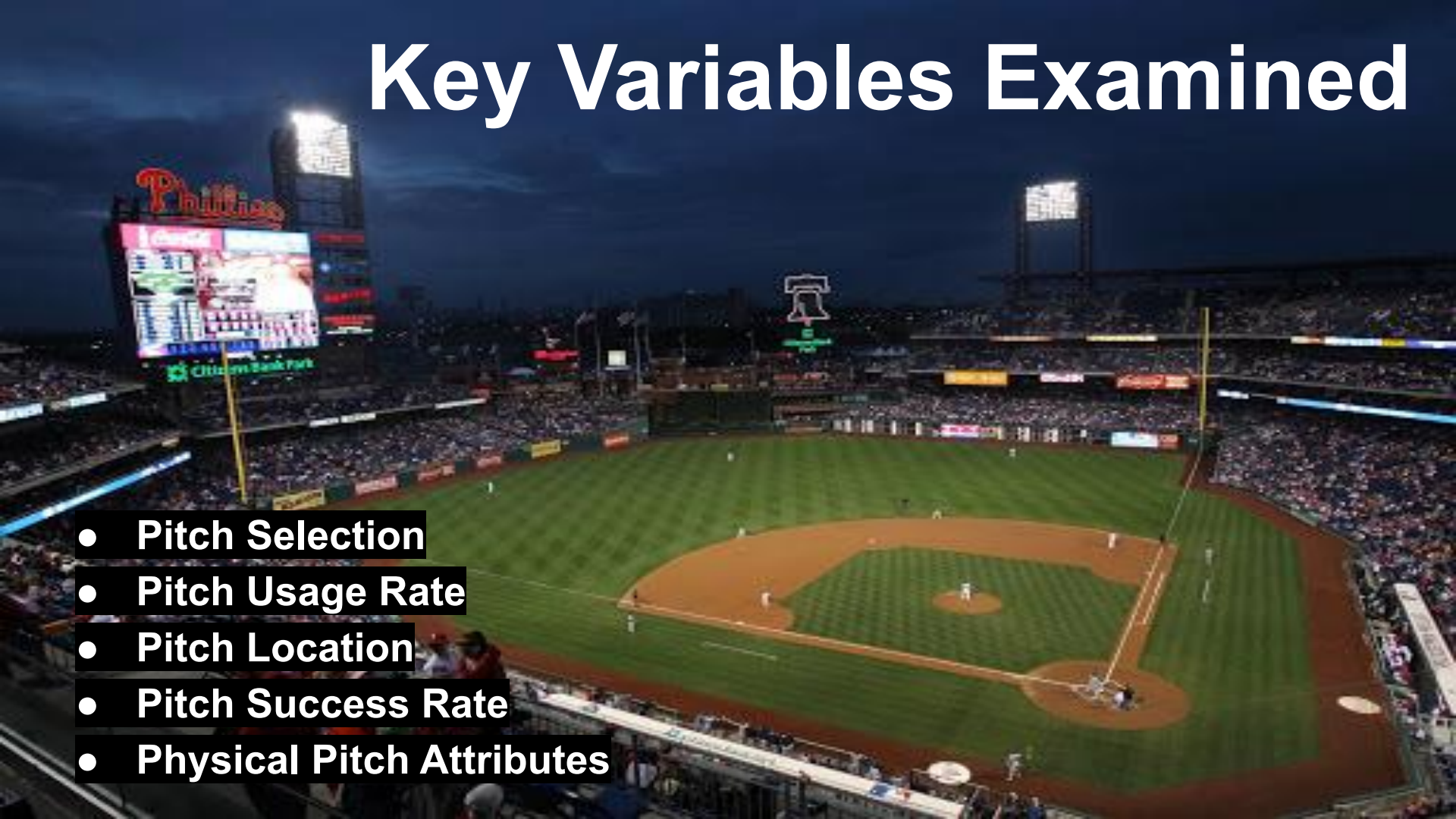
- Solve Pitcher 1’s Post-All-Star Break struggles
- Solve Pitcher 2 and 3’s Post-All-Star Break successes
- Build Called Strikes Model for improved pitching performance

# Summary Of Data

**MLB Pitch Data**

- No post-pitch results
- Two periods of the season
- Split into datasets for each Pitcher

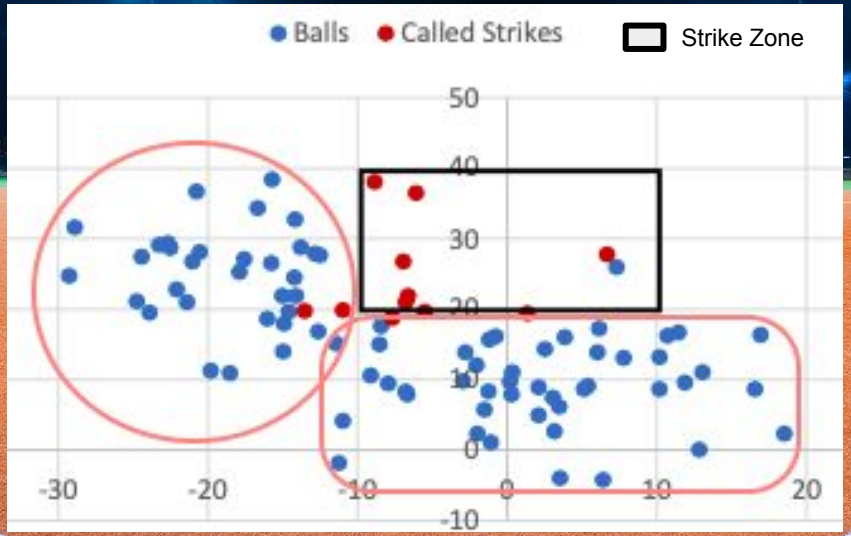
# Key Variables Examined




- Pitch Selection
- Pitch Usage Rate
- Pitch Location
- Pitch Success Rate
- Physical Pitch Attributes

# Pitcher 1 Key Findings

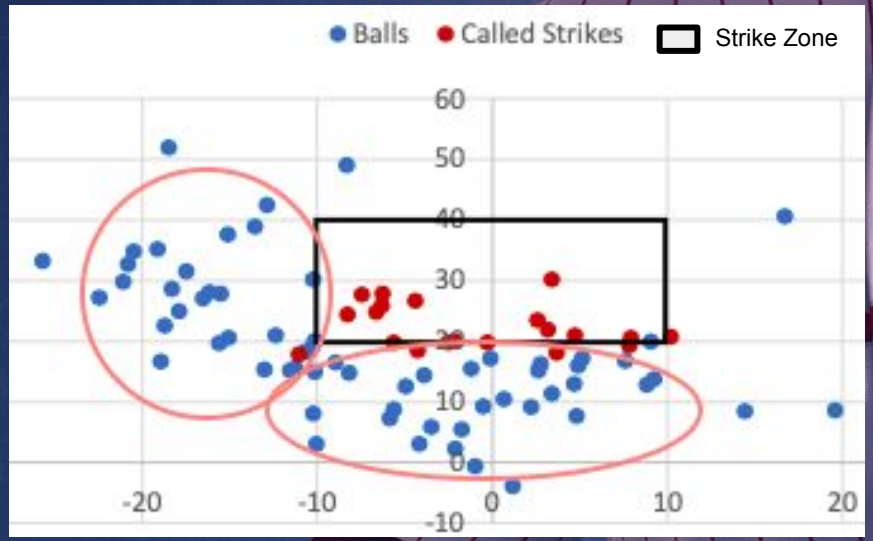
**Changeup**




**Improve Changeup location!**

# Pitcher 2 Key Findings

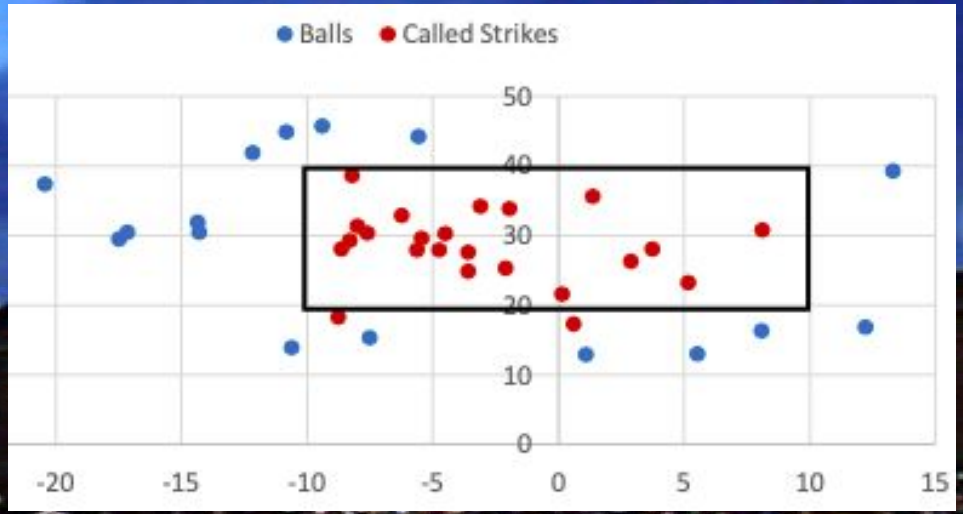
**Changeup**




**Improve Changeup location!**

# Pitcher 3 Key Findings

**Curveball**



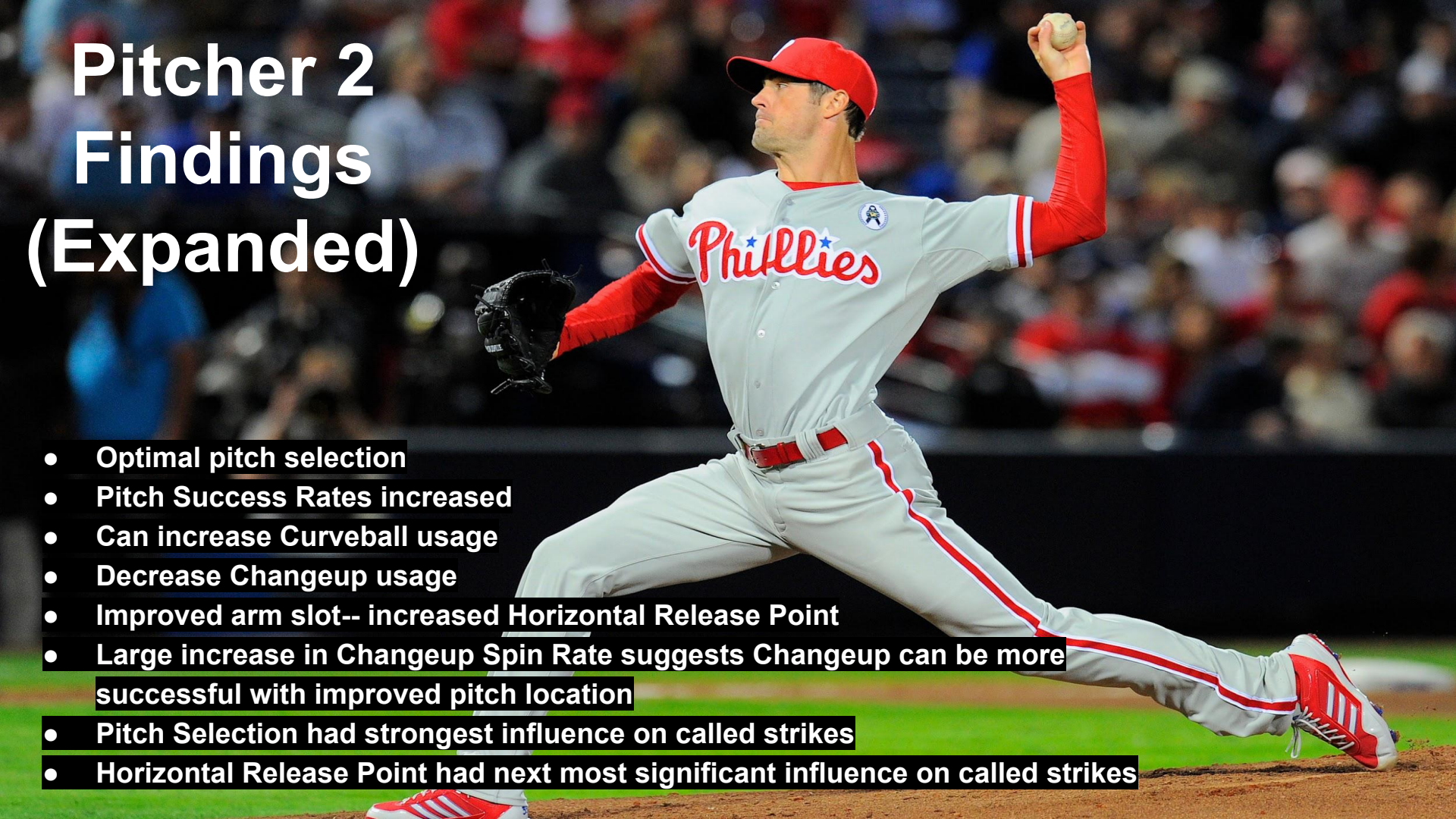

**Use Curveball more!**

# Thank You!

# Pitcher 1 Findings (Expanded)

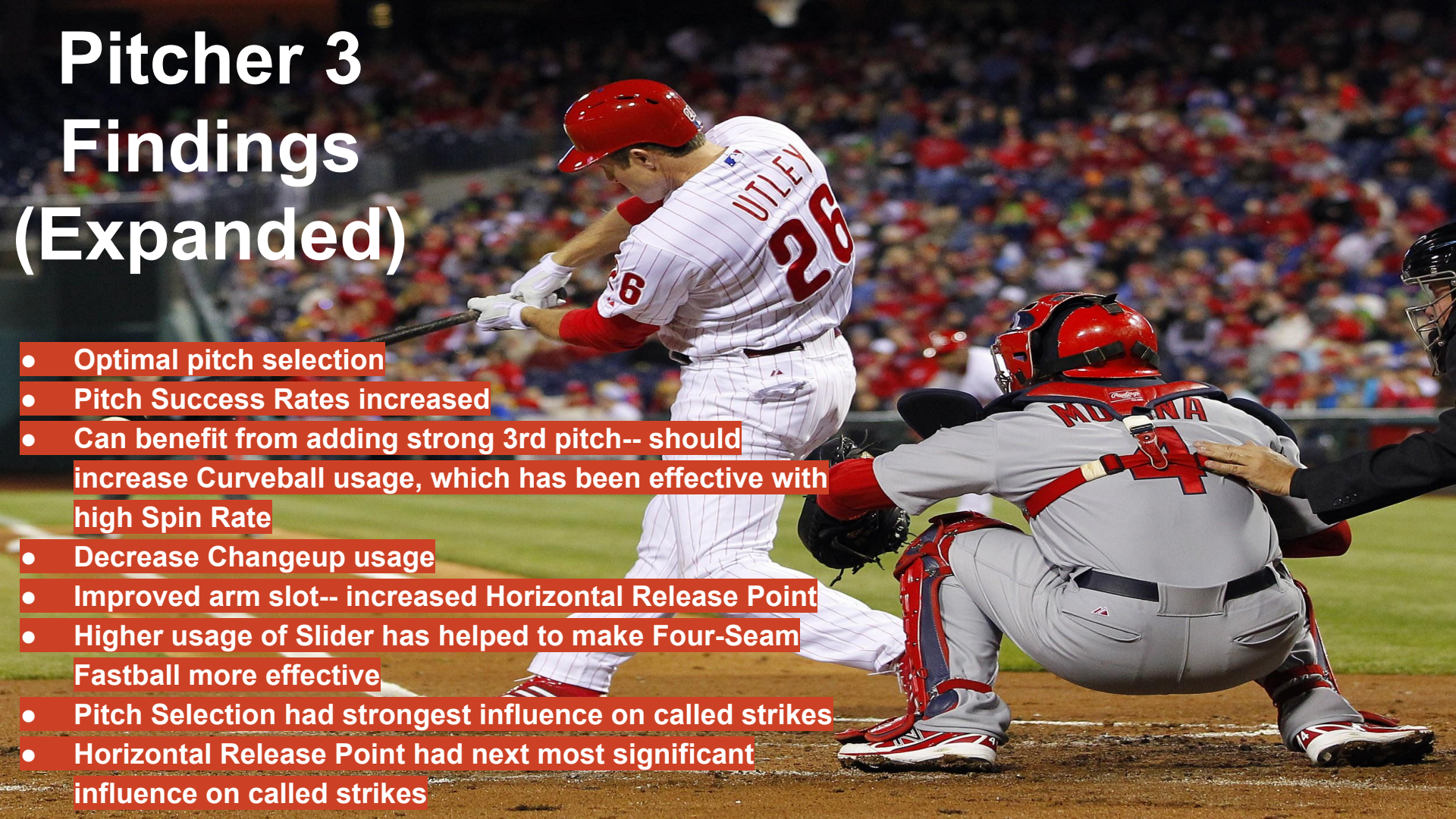
- Throw more Curveballs-- Curveball has highest pitch success rate
- Do not decrease usage of Four-Seam Fastball or Slider
- Consider eliminating Changeup and Cutter from pitch selection
- Changeup may be salvageable pitch with improved pitch location
- Pitch Selection had strongest influence on called strikes
- Horizontal Release Point had next most significant influence on called strikes
- Pitcher 1 had some bad luck-- numbers should've been better post-all-star break than they were

# Pitcher 2 Findings (Expanded)




- Optimal pitch selection
- Pitch Success Rates increased
- Can increase Curveball usage
- Decrease Changeup usage
- Improved arm slot-- increased Horizontal Release Point
- Large increase in Changeup Spin Rate suggests Changeup can be more successful with improved pitch location
- Pitch Selection had strongest influence on called strikes
- Horizontal Release Point had next most significant influence on called strikes

# Pitcher 3 Findings (Expanded)




- Optimal pitch selection
- Pitch Success Rates increased
- Can benefit from adding strong 3rd pitch-- should increase Curveball usage, which has been effective with high Spin Rate
- Decrease Changeup usage
- Improved arm slot-- increased Horizontal Release Point
- Higher usage of Slider has helped to make Four-Seam Fastball more effective
- Pitch Selection had strongest influence on called strikes
- Horizontal Release Point had next most significant influence on called strikes