

Pitch Command

By Jack Cecil

wOBA Correlations to Plate Discipline

| | PA | wOBA | O-Swing% | Z-Swing% | Swing% | O-Contact% | Z-Contact% | Contact% | Zone% | F-Strike% | SwStr% |
|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------|
| PA | 1 | | | | | | | | | | |
| wOBA | 0.544917174 | 1 | | | | | | | | | |
| O-Swing% | -0.03350829 | -0.185109728 | 1 | | | | | | | | |
| Z-Swing% | 0.107734205 | 0.02725243 | 0.526193539 | 1 | | | | | | | |
| Swing% | -0.011347256 | -0.164810737 | 0.905026153 | 0.812310857 | 1 | | | | | | |
| O-Contact% | 0.202888455 | 0.113823618 | 0.123631569 | -0.157599494 | 0.020543773 | 1 | | | | | |
| Z-Contact% | 0.226448292 | 0.101267515 | -0.042540765 | -0.259002283 | -0.133235085 | 0.647367932 | 1 | | | | |
| Contact% | 0.224525054 | 0.129056188 | -0.110736023 | -0.265062857 | -0.168347725 | 0.887752388 | 0.891653633 | 1 | | | |
| Zone% | -0.216851707 | -0.263185292 | -0.363432618 | -0.271786621 | -0.223102761 | 0.065370846 | 0.147046568 | 0.242693369 | 1 | | |
| F-Strike% | -0.206414055 | -0.298353892 | 0.473700641 | 0.302818736 | 0.512415213 | -0.065504292 | -0.085380583 | -0.125269153 | 0.178008099 | 1 | |
| SwStr% | -0.195641847 | -0.173698418 | 0.431956865 | 0.527429183 | 0.515187872 | -0.753894488 | -0.818564593 | -0.924689124 | -0.291903533 | 0.301522356 | 1 |

1. First Pitch Strikes

0-0 Counts in the MLB in 2019

| pitchcall | Count | Percentage |
|-----------------|-------|------------|
| BallCalled | 72541 | 38.63% |
| HitByPitch | 396 | 0.21% |
| FoulBall | 21138 | 11.26% |
| StrikeCalled | 58153 | 30.97% |
| BallIntentional | 604 | 0.32% |
| InPlay | 19936 | 10.62% |
| StrikeSwinging | 15011 | 7.99% |

0-0 Counts in 2019 by Angels Pitchers

| Pitchcall | Count | Percentage | MLB Diff |
|-----------------|-------|------------|----------|
| BallCalled | 2525 | 40.65% | -2.02% |
| HitByPitch | 10 | 0.16% | 0.05% |
| FoulBall | 647 | 10.42% | -0.84% |
| StrikeCalled | 1923 | 30.96% | -0.01% |
| BallIntentional | 8 | 0.13% | 0.19% |
| InPlay | 589 | 9.48% | 1.14% |
| StrikeSwinging | 510 | 8.21% | 0.22% |

| Team | pitchcall | Rate | Rank |
|------|------------|--------|------|
| LAD | BallCalled | 36.62% | 1 |
| SD | BallCalled | 36.68% | 2 |
| CLE | BallCalled | 36.97% | 3 |
| SF | BallCalled | 37.05% | 4 |
| MIN | BallCalled | 37.10% | 5 |
| SEA | BallCalled | 37.18% | 6 |
| WAS | BallCalled | 37.38% | 7 |
| TB | BallCalled | 37.39% | 8 |
| PHI | BallCalled | 37.96% | 9 |
| BOS | BallCalled | 38.00% | 10 |
| HOU | BallCalled | 38.29% | 11 |
| NYY | BallCalled | 38.29% | 12 |
| OAK | BallCalled | 38.39% | 13 |
| ATL | BallCalled | 38.51% | 14 |
| DET | BallCalled | 38.58% | 15 |
| PIT | BallCalled | 38.63% | 16 |
| COL | BallCalled | 38.76% | 17 |
| ARI | BallCalled | 38.90% | 18 |
| CIN | BallCalled | 38.97% | 19 |
| NYM | BallCalled | 39.06% | 20 |
| CHC | BallCalled | 39.10% | 21 |
| STL | BallCalled | 39.19% | 22 |
| KC | BallCalled | 39.35% | 23 |
| TEX | BallCalled | 39.48% | 24 |
| MIA | BallCalled | 40.06% | 25 |
| CWS | BallCalled | 40.08% | 26 |
| TOR | BallCalled | 40.21% | 27 |
| MIL | BallCalled | 40.44% | 28 |
| ANA | BallCalled | 40.65% | 29 |
| BAL | BallCalled | 41.67% | 30 |

| Team | pitchcall | Rate | Rank |
|------|--------------|--------|------|
| SEA | StrikeCalled | 33.18% | 1 |
| NYY | StrikeCalled | 32.48% | 2 |
| TB | StrikeCalled | 32.29% | 3 |
| LAD | StrikeCalled | 32.27% | 4 |
| MIN | StrikeCalled | 32.14% | 5 |
| DET | StrikeCalled | 32.03% | 6 |
| BOS | StrikeCalled | 32.00% | 7 |
| CLE | StrikeCalled | 31.95% | 8 |
| HOU | StrikeCalled | 31.83% | 9 |
| SD | StrikeCalled | 31.77% | 10 |
| TOR | StrikeCalled | 31.73% | 11 |
| KC | StrikeCalled | 31.37% | 12 |
| TEX | StrikeCalled | 31.31% | 13 |
| SF | StrikeCalled | 31.26% | 14 |
| CHC | StrikeCalled | 31.20% | 15 |
| ATL | StrikeCalled | 31.11% | 16 |
| ANA | StrikeCalled | 30.96% | 17 |
| OAK | StrikeCalled | 30.81% | 18 |
| ARI | StrikeCalled | 30.66% | 19 |
| CIN | StrikeCalled | 30.55% | 20 |
| WAS | StrikeCalled | 30.37% | 21 |
| STL | StrikeCalled | 30.32% | 22 |
| PHI | StrikeCalled | 30.15% | 23 |
| CWS | StrikeCalled | 30.11% | 24 |
| PIT | StrikeCalled | 29.83% | 25 |
| NYM | StrikeCalled | 29.32% | 26 |
| BAL | StrikeCalled | 29.27% | 27 |
| COL | StrikeCalled | 29.17% | 28 |
| MIL | StrikeCalled | 28.87% | 29 |
| MIA | StrikeCalled | 28.79% | 30 |

| Team | pitchcall | Rate | Rank |
|------|----------------|-------|------|
| CIN | StrikeSwinging | 9.33% | 1 |
| TB | StrikeSwinging | 8.88% | 2 |
| MIA | StrikeSwinging | 8.80% | 3 |
| BOS | StrikeSwinging | 8.79% | 4 |
| LAD | StrikeSwinging | 8.78% | 5 |
| HOU | StrikeSwinging | 8.62% | 6 |
| WAS | StrikeSwinging | 8.58% | 7 |
| CLE | StrikeSwinging | 8.47% | 8 |
| NYY | StrikeSwinging | 8.31% | 9 |
| MIN | StrikeSwinging | 8.27% | 10 |
| ANA | StrikeSwinging | 8.21% | 11 |
| NYM | StrikeSwinging | 8.13% | 12 |
| STL | StrikeSwinging | 8.05% | 13 |
| TEX | StrikeSwinging | 7.98% | 14 |
| COL | StrikeSwinging | 7.94% | 15 |
| PIT | StrikeSwinging | 7.90% | 16 |
| SD | StrikeSwinging | 7.89% | 17 |
| CWS | StrikeSwinging | 7.86% | 18 |
| MIL | StrikeSwinging | 7.71% | 19 |
| BAL | StrikeSwinging | 7.67% | 20 |
| CHC | StrikeSwinging | 7.66% | 21 |
| ARI | StrikeSwinging | 7.61% | 22 |
| PHI | StrikeSwinging | 7.53% | 23 |
| SEA | StrikeSwinging | 7.52% | 24 |
| SF | StrikeSwinging | 7.38% | 25 |
| TOR | StrikeSwinging | 7.31% | 26 |
| ATL | StrikeSwinging | 7.31% | 27 |
| OAK | StrikeSwinging | 7.26% | 28 |
| DET | StrikeSwinging | 7.20% | 29 |
| KC | StrikeSwinging | 6.89% | 30 |

Which variation of First Strike % is best?

| | <i>Called</i> | <i>Swinging</i> | <i>Foul</i> | <i>InPlay</i> | <i>FPS%</i> | <i>NoBIP</i> | <i>NoFoul</i> | <i>wOBA</i> |
|-----------------|---------------|-----------------|-------------|---------------|-------------|--------------|---------------|-------------|
| <i>Called</i> | 1 | | | | | | | |
| <i>Swinging</i> | 0.033538 | 1 | | | | | | |
| <i>Foul</i> | -0.43523 | -0.07553 | 1 | | | | | |
| <i>InPlay</i> | -0.05647 | -0.48007 | 0.248981 | 1 | | | | |
| <i>FPS%</i> | 0.668282 | 0.201322 | 0.207112 | 0.379777 | 1 | | | |
| <i>NoBIP</i> | 0.745177 | 0.485156 | 0.080932 | -0.15752 | 0.853707 | 1 | | |
| <i>NoFoul</i> | 0.89307 | 0.479616 | -0.41612 | -0.26569 | 0.677362 | 0.872648 | 1 | |
| <i>wOBA</i> | -0.29336 | -0.5258 | -0.04021 | 0.048214 | -0.50233 | -0.56337 | -0.49426 | 1 |

O-O Count

| RHP vs RHH | | | | |
|-------------------|--------------|-----------|-------------|--------|
| TaggedPitchType ▼ | PitchCount ▼ | SwngStk ▼ | CalledStk ▼ | CSW ▼ |
| ChangeUp | 1863 | 12.94% | 23.19% | 36.12% |
| Curveball | 6686 | 7.69% | 36.45% | 44.14% |
| Cutter | 4522 | 10.04% | 27.95% | 37.99% |
| Fastball | 35234 | 6.52% | 33.13% | 39.65% |
| Sinker | 6222 | 4.85% | 33.08% | 37.93% |
| Slider | 17061 | 13.56% | 29.84% | 43.40% |
| Splitter | 564 | 16.67% | 21.99% | 38.65% |

O-O Count

| RHP vs LHH | | | | |
|-----------------|------------|---------|-----------|--------|
| TaggedPitchType | PitchCount | SwngStk | CalledStk | CSW |
| ChangeUp | 6687 | 11.81% | 22.49% | 34.31% |
| Curveball | 7486 | 6.68% | 35.97% | 42.65% |
| Cutter | 2696 | 8.42% | 27.97% | 36.39% |
| Fastball | 30339 | 6.13% | 29.91% | 36.05% |
| Sinker | 4604 | 5.13% | 27.87% | 32.99% |
| Slider | 6853 | 10.59% | 31.84% | 42.43% |
| Splitter | 1094 | 12.61% | 22.85% | 35.47% |

O-O RHP vs RHH CSW on Fastballs and Sinkers

| Average of CSW | Column Labels | | | | | | | | | | | |
|----------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | 0% | 0% | 8% | 0% | 4% | 0% | 8% | 0% | 0% | 0% | 1.8% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 8% | 2% | 2% | 0% | 1% | 1.6% |
| 4-4.25 | | 0% | 0% | 0% | 5% | 2% | 7% | 8% | 4% | 2% | 2% | 3.7% |
| 3.75-4 | | 0% | 2% | 2% | 7% | 9% | 9% | 16% | 9% | 7% | 3% | 7.5% |
| 3.5-3.75 | | 2% | 6% | 10% | 23% | 24% | 25% | 30% | 20% | 11% | 2% | 17.0% |
| 3.25-3.5 | | 0% | 33% | 49% | 55% | 52% | 49% | 56% | 40% | 16% | 5% | 38.3% |
| 3-3.25 | | 7% | 51% | 74% | 68% | 66% | 51% | 45% | 56% | 26% | 4% | 46.8% |
| 2.75-3 | | 8% | 62% | 71% | 61% | 55% | 51% | 47% | 50% | 29% | 5% | 45.8% |
| 2.5-2.75 | | 10% | 68% | 72% | 61% | 53% | 45% | 44% | 42% | 37% | 7% | 44.7% |
| 2.25-2.5 | | 11% | 73% | 73% | 67% | 57% | 48% | 45% | 41% | 40% | 10% | 48.0% |
| 2-2.25 | | 10% | 70% | 77% | 72% | 60% | 54% | 49% | 49% | 38% | 14% | 51.1% |
| 1.75-2 | | 9% | 61% | 81% | 76% | 69% | 64% | 60% | 56% | 50% | 17% | 54.4% |
| 1.5-1.75 | | 3% | 42% | 65% | 63% | 66% | 57% | 49% | 55% | 48% | 10% | 44.9% |
| 1.25-1.5 | | 1% | 5% | 22% | 19% | 21% | 27% | 23% | 31% | 20% | 9% | 15.7% |
| 1-1.25 | | 1% | 1% | 3% | 4% | 4% | 6% | 1% | 7% | 4% | 4% | 2.8% |
| 0.75-1 | | 0% | 0% | 0% | 1% | 7% | 3% | 3% | 15% | 10% | 0% | 2.4% |
| 0.5-0.75 | | 0% | 0% | 0% | 2% | 0% | 6% | 0% | 6% | 0% | 0% | 1.1% |
| <0.5 | | 2% | 0% | 0% | 0% | 0% | 21% | 0% | 0% | 0% | 0% | 3.4% |
| Grand Total | | 6.1% | 48.6% | 61.0% | 56.5% | 50.7% | 44.9% | 42.1% | 40.8% | 29.4% | 7.0% | 39.4% |

O-O RHP vs LHH CSW on Fastballs and Sinkers

| Average of CSW | Column Labels | | | | | | | | | | | |
|----------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | 0% | 0% | 0% | 4% | 0% | 0% | 3% | 0% | 0% | 0.6% | |
| 4.25-4.5 | | 0% | 0% | 6% | 0% | 3% | 0% | 3% | 0% | 0% | 0.9% | |
| 4-4.25 | | 0% | 0% | 0% | 8% | 5% | 5% | 1% | 1% | 2% | 2.2% | |
| 3.75-4 | | 0% | 0% | 11% | 10% | 14% | 11% | 12% | 5% | 0% | 6.2% | |
| 3.5-3.75 | 3% | 10% | 22% | 30% | 39% | 34% | 25% | 19% | 4% | 0% | 17.8% | |
| 3.25-3.5 | 1% | 21% | 46% | 51% | 49% | 51% | 54% | 50% | 16% | 2% | 33.2% | |
| 3-3.25 | 2% | 25% | 52% | 53% | 51% | 55% | 60% | 64% | 42% | 4% | 40.4% | |
| 2.75-3 | 3% | 33% | 47% | 50% | 50% | 53% | 55% | 65% | 55% | 6% | 40.9% | |
| 2.5-2.75 | 3% | 31% | 48% | 47% | 44% | 46% | 55% | 65% | 61% | 7% | 40.8% | |
| 2.25-2.5 | 3% | 33% | 53% | 47% | 42% | 49% | 55% | 64% | 62% | 9% | 42.3% | |
| 2-2.25 | 3% | 35% | 59% | 54% | 50% | 56% | 53% | 68% | 65% | 12% | 46.5% | |
| 1.75-2 | 2% | 24% | 56% | 61% | 62% | 63% | 65% | 70% | 64% | 11% | 50.9% | |
| 1.5-1.75 | 2% | 14% | 32% | 60% | 52% | 58% | 63% | 66% | 58% | 9% | 45.5% | |
| 1.25-1.5 | 1% | 4% | 10% | 12% | 20% | 31% | 29% | 31% | 21% | 4% | 18.6% | |
| 1-1.25 | 0% | 2% | 3% | 6% | 6% | 3% | 4% | 0% | 4% | 0% | 3.1% | |
| 0.75-1 | 1% | 3% | 2% | 4% | 4% | 3% | 3% | 4% | 3% | 0% | 2.7% | |
| 0.5-0.75 | 0% | 0% | 0% | 0% | 0% | 0% | 11% | 3% | 0% | 0% | 1.4% | |
| <0.5 | 0% | 0% | 0% | 0% | 0% | 10% | 0% | 0% | 0% | 0% | 1.7% | |
| Grand Total | | 2.2% | 21.7% | 39.5% | 42.5% | 41.7% | 45.4% | 48.7% | 54.5% | 46.2% | 5.9% | 35.6% |

O-O RHP vs RHH CSW on Breaking Pitches

| Average of CSW | Column Labels | | | | | | | | | | | |
|----------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4.25-4.5 | | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4-4.25 | | 0% | 0% | 17% | 0% | 0% | 0% | 4% | 6% | 0% | 1.8% | |
| 3.75-4 | | 0% | 0% | 0% | 5% | 3% | 4% | 6% | 2% | 0% | 2.2% | |
| 3.5-3.75 | | 0% | 0% | 7% | 25% | 28% | 23% | 23% | 12% | 5% | 0% | 14.9% |
| 3.25-3.5 | | 0% | 30% | 53% | 64% | 68% | 63% | 70% | 51% | 15% | 0% | 48.6% |
| 3-3.25 | | 8% | 67% | 83% | 70% | 76% | 74% | 82% | 72% | 24% | 4% | 62.2% |
| 2.75-3 | | 13% | 72% | 73% | 75% | 70% | 69% | 71% | 74% | 41% | 2% | 61.9% |
| 2.5-2.75 | | 20% | 74% | 71% | 69% | 68% | 61% | 68% | 75% | 45% | 4% | 59.8% |
| 2.25-2.5 | | 21% | 67% | 61% | 59% | 57% | 56% | 64% | 74% | 38% | 4% | 53.2% |
| 2-2.25 | | 19% | 63% | 68% | 63% | 57% | 60% | 69% | 72% | 44% | 4% | 54.7% |
| 1.75-2 | | 21% | 65% | 69% | 69% | 57% | 67% | 72% | 69% | 47% | 10% | 55.8% |
| 1.5-1.75 | | 17% | 52% | 64% | 66% | 65% | 57% | 68% | 60% | 21% | 0% | 48.4% |
| 1.25-1.5 | | 14% | 38% | 43% | 46% | 41% | 41% | 34% | 11% | 14% | 0% | 31.9% |
| 1-1.25 | | 14% | 26% | 27% | 25% | 29% | 26% | 14% | 8% | 0% | 0% | 21.6% |
| 0.75-1 | | 11% | 24% | 20% | 25% | 27% | 6% | 5% | 9% | 0% | 0% | 16.6% |
| 0.5-0.75 | | 7% | 21% | 16% | 26% | 31% | 23% | 13% | 0% | 0% | 0% | 14.0% |
| <0.5 | | 5% | 15% | 14% | 11% | 16% | 13% | 0% | 0% | 0% | 0% | 8.1% |
| Grand Total | | 14.0% | 49.4% | 55.1% | 56.7% | 54.8% | 54.2% | 61.7% | 56.2% | 28.8% | 2.2% | 43.6% |

O-O RHP vs LHH CSW on Breaking Pitches

| Average of CSW | Column Labels | | | | | | | | | | |
|--------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | 0% | 0% | 0% | 15% | 0% | 9% | 0% | 0% | 0% | 0% | 1.2% |
| 3.5-3.75 | 0% | 0% | 0% | 50% | 33% | 37% | 22% | 18% | 2% | 0% | 13.4% |
| 3.25-3.5 | 0% | 18% | 61% | 45% | 68% | 63% | 80% | 49% | 17% | 1% | 34.5% |
| 3-3.25 | 5% | 43% | 48% | 79% | 85% | 82% | 84% | 82% | 50% | 3% | 51.6% |
| 2.75-3 | 0% | 39% | 60% | 70% | 79% | 78% | 86% | 84% | 70% | 5% | 58.6% |
| 2.5-2.75 | 11% | 34% | 62% | 58% | 70% | 65% | 82% | 85% | 78% | 10% | 58.8% |
| 2.25-2.5 | 11% | 29% | 59% | 58% | 61% | 67% | 77% | 88% | 73% | 9% | 56.6% |
| 2-2.25 | 7% | 45% | 55% | 63% | 55% | 65% | 74% | 80% | 81% | 14% | 57.0% |
| 1.75-2 | 12% | 23% | 49% | 57% | 63% | 65% | 73% | 84% | 72% | 9% | 54.8% |
| 1.5-1.75 | 16% | 38% | 36% | 67% | 61% | 60% | 71% | 73% | 58% | 7% | 52.3% |
| 1.25-1.5 | 20% | 38% | 30% | 36% | 39% | 34% | 32% | 33% | 18% | 8% | 30.8% |
| 1-1.25 | 14% | 23% | 25% | 29% | 24% | 27% | 11% | 5% | 6% | 10% | 19.8% |
| 0.75-1 | 15% | 22% | 21% | 16% | 19% | 27% | 10% | 0% | 0% | 0% | 17.1% |
| 0.5-0.75 | 9% | 25% | 26% | 22% | 27% | 27% | 4% | 0% | 0% | 0% | 18.6% |
| <0.5 | 6% | 13% | 14% | 6% | 11% | 0% | 4% | 5% | 0% | 0% | 7.8% |
| Grand Total | | 11.5% | 28.7% | 39.6% | 48.5% | 52.4% | 55.6% | 62.7% | 65.3% | 53.9% | 5.7% |
| | | | | | | | | | | | 42.5% |

Mike Trout vs Inside Setup



Mike Trout vs Outside Setup



Shohei Ohtani vs Inside Setup



Shohei Ohtani vs Away Setup



RHP vs RHH Gloveside Correlations

| RvR FBF | | | | RvR SI | | | | RvR SL | | | |
|------------------|--------|------------|-----------|------------------|--------|-----------|-----------|------------------|--------|-----------|-----------|
| Metric | CSW | CalledSTK | SwingSTK | Metric | CSW | CalledSTK | SwingSTK | Metric | CSW | CalledSTK | SwingSTK |
| CalledSTK | 0.8198 | 1 | | CalledSTK | 0.9228 | 1 | | CalledSTK | 0.5372 | 1 | |
| CSW | 1 | | | CSW | 1 | | | CSW | 1 | | |
| Extension | 0.0029 | -0.005531 | 0.0138817 | Extension | 0.0108 | 0.0130065 | -0.005402 | Extension | -0.022 | -0.037157 | 0.0071077 |
| HorzApprAngle | 0.0297 | 0.0650842 | -0.055072 | HorzApprAngle | 0.0249 | 0.0418494 | -0.042224 | HorzApprAngle | -0.003 | 0.0206742 | -0.020966 |
| HorzBreak | 0.0595 | 0.1402438 | -0.126392 | HorzBreak | -0.001 | 0.0430464 | -0.111732 | HorzBreak | -0.015 | -0.00957 | -0.008466 |
| HorzRelAngle | -0.028 | -0.071133 | 0.0669614 | HorzRelAngle | 0.0249 | 0.0129523 | 0.0308893 | HorzRelAngle | 0.0124 | 0.030352 | -0.01214 |
| InducedVertBreal | 0.0161 | -0.032571 | 0.0801382 | InducedVertBreal | 0.0321 | 0.0148341 | 0.0442971 | InducedVertBreal | 0.0026 | 0.017068 | -0.011917 |
| PlateLocHeight | -0.022 | -0.097437 | 0.1206262 | PlateLocHeight | 0.2403 | 0.2063729 | 0.090247 | PlateLocHeight | 0.1179 | 0.2355287 | -0.121898 |
| PlateLocSide | 0.0755 | 0.0449586 | 0.0553414 | PlateLocSide | 0.1047 | 0.0926293 | 0.0330535 | PlateLocSide | 0.0282 | 0.0744066 | -0.032409 |
| RelHeight | -0.024 | -0.008932 | -0.025824 | RelHeight | -0.008 | -0.001299 | -0.018377 | RelHeight | -0.008 | -0.002658 | -0.007143 |
| RelSide | 0.0185 | 0.0225304 | -0.005155 | RelSide | -0.009 | -0.012797 | 0.0105255 | RelSide | 0.0004 | -0.014076 | 0.0127308 |
| RelSpeed | -0.016 | -0.052578 | 0.0575877 | RelSpeed | -0.078 | -0.075724 | -0.006885 | RelSpeed | -0.008 | -0.044644 | 0.0295843 |
| SpinAxis | 0.0497 | 0.1303394 | -0.126387 | SpinAxis | -0.032 | -0.004955 | -0.06862 | SpinAxis | 0.0002 | 0.0039778 | -0.003199 |
| SpinRate | -0.008 | -0.044916 | 0.0590639 | SpinRate | -0.02 | -0.018633 | -0.002862 | SpinRate | 0.0102 | -0.004553 | 0.0156063 |
| SwingSTK | 0.3699 | -0.228833 | 1 | SwingSTK | 0.2198 | -0.172887 | 1 | SwingSTK | 0.6793 | -0.254033 | 1 |
| Tilt | -0.036 | -0.107031 | 0.1128997 | Tilt | -0.014 | -0.03304 | 0.048365 | Tilt | 0.0072 | 0.0192332 | -0.008496 |
| VertApprAngle | -0.005 | -0.096663 | 0.1481754 | VertApprAngle | 0.1854 | 0.1474119 | 0.100743 | VertApprAngle | 0.0857 | 0.203871 | -0.079155 |
| VertBreak | 0.0081 | -0.049113 | 0.0934278 | VertBreak | -0.001 | -0.013718 | 0.0314123 | VertBreak | -0.003 | -0.011503 | 0.0070378 |
| VertRelAngle | -0.011 | -0.059451 | 0.0784778 | VertRelAngle | 0.1357 | 0.1181825 | 0.0477318 | VertRelAngle | 0.0939 | 0.2287041 | -0.091274 |
| ZoneSpeed | -0.02 | -0.052233 | 0.0503703 | ZoneSpeed | -0.086 | -0.081816 | -0.013196 | ZoneSpeed | -0.013 | -0.05426 | 0.0318945 |
| ZoneTime | 0.0129 | 0.0493416 | -0.058067 | ZoneTime | 0.0656 | 0.0627654 | 0.0086948 | ZoneTime | 0.0091 | 0.0445204 | -0.028251 |
| RvR CH | | | | RvR SPL | | | | RvR CB | | | |
| Metric | CSW | CalledSTK | SwingSTK | Metric | CSW | CalledSTK | SwingSTK | Metric | CSW | CalledSTK | SwingSTK |
| CalledSTK | 0.6006 | 1 | | CalledSTK | 0.5285 | 1 | | CalledSTK | 0.6213 | 1 | |
| CSW | 1 | | | CSW | 1 | | | CSW | 1 | | |
| Extension | -0.072 | -0.028144 | -0.062733 | Extension | 0.0496 | 0.0415216 | 0.0256183 | Extension | -0.04 | -0.056429 | 0.0066913 |
| HorzApprAngle | -0.003 | 0.0305452 | -0.031051 | HorzApprAngle | 0.0187 | 0.0166096 | 0.0089328 | HorzApprAngle | -0.021 | 0.0254038 | -0.051686 |
| HorzBreak | -0.035 | -0.025336 | -0.020328 | HorzBreak | -0.117 | -0.079449 | -0.074841 | HorzBreak | -0.025 | 0.0113348 | -0.041829 |
| HorzRelAngle | 0.0369 | 0.0562955 | -0.005772 | HorzRelAngle | 0.102 | 0.0727528 | 0.0624655 | HorzRelAngle | 0.0023 | 0.0155761 | -0.012878 |
| InducedVertBreal | -0.023 | 0.0342937 | -0.059904 | InducedVertBreal | -0.058 | -0.029808 | -0.044785 | InducedVertBreal | 0.0801 | 0.0501512 | 0.0487536 |
| PlateLocHeight | 0.3066 | 0.3399935 | 0.0682918 | PlateLocHeight | 0.3427 | 0.363561 | 0.1177722 | PlateLocHeight | 0.2225 | 0.390142 | -0.117817 |
| PlateLocSide | 0.0891 | 0.0857584 | 0.0316883 | PlateLocSide | 0.091 | 0.1023932 | 0.0266812 | PlateLocSide | 0.0558 | 0.0879373 | -0.019432 |
| RelHeight | -0.004 | 0.0025604 | -0.007384 | RelHeight | -0.006 | -0.074208 | 0.0497888 | RelHeight | -0.049 | 0.0011708 | -0.062099 |
| RelSide | -0.002 | -0.035448 | 0.0298272 | RelSide | -0.06 | -0.039381 | -0.039419 | RelSide | 0.0242 | -0.005414 | 0.035505 |
| RelSpeed | -0.025 | -0.00894 | -0.022322 | RelSpeed | -0.034 | -0.08393 | 0.0250833 | RelSpeed | -0.017 | -0.070911 | 0.0497809 |
| SpinAxis | -0.042 | -0.042271 | -0.012747 | SpinAxis | -0.075 | -0.102559 | -0.008525 | SpinAxis | 0.0537 | 0.0449594 | 0.0212275 |
| SpinRate | 0.0343 | 0.0515969 | -0.004857 | SpinRate | -0.007 | 0.046303 | -0.043425 | SpinRate | -0.017 | -0.004566 | -0.016805 |
| SwingSTK | 0.6857 | -0.170246 | 1 | SwingSTK | 0.7548 | -0.157894 | 1 | SwingSTK | 0.6138 | -0.237167 | 1 |
| Tilt | 0.0252 | 0.0232448 | 0.0099282 | Tilt | 0.0952 | 0.1000927 | 0.033348 | Tilt | 0.0558 | 0.0143215 | 0.0546965 |
| VertApprAngle | 0.2419 | 0.2984721 | 0.0263717 | VertApprAngle | 0.2492 | 0.2956409 | 0.0614042 | VertApprAngle | 0.1815 | 0.2389105 | -0.015665 |
| VertBreak | -0.043 | 0.0239971 | -0.075164 | VertBreak | -0.054 | -0.049316 | -0.024602 | VertBreak | 0.05 | 0.0006588 | 0.0613404 |
| VertRelAngle | 0.2565 | 0.2493411 | 0.0890446 | VertRelAngle | 0.2999 | 0.3400346 | 0.0861692 | VertRelAngle | 0.1653 | 0.2366839 | -0.095269 |
| ZoneSpeed | -0.043 | -0.0267775 | -0.028565 | ZoneSpeed | -0.053 | -0.087446 | -0.001539 | ZoneSpeed | -0.025 | -0.081802 | 0.0510947 |
| ZoneTime | 0.0352 | 0.0111394 | 0.0332167 | ZoneTime | 0.0148 | 0.0575857 | -0.02754 | ZoneTime | 0.0186 | 0.0674524 | -0.04431 |

RHP vs LHH Gloveside Correlations

| RvLFB | | | | RvL SI | | | | RvL SL | | | |
|------------------|--------|--------|-------------|------------------|--------|--------|--------------|------------------|--------|--------|--------------|
| Metric | -1 | CSW | Called | -1 | CSW | Called | SwingSTK | -1 | CSW | Called | SwingSTK |
| CalledSTK | 0.8378 | 1 | | CalledSTK | 0.9467 | 1 | | CalledSTK | 0.4095 | 1 | |
| CSW | | 1 | | CSW | | 1 | | CSW | | 1 | |
| Extension | -0.011 | -0.027 | 0.025280034 | Extension | -0.011 | -0.009 | -0.00733805 | Extension | -0.042 | -0.04 | -0.02172954 |
| HorzApprAngle | 0.1086 | 0.123 | -0.00445117 | HorzApprAngle | 0.1329 | 0.158 | -0.06711785 | HorzApprAngle | 0.0136 | 0.0534 | -0.01750434 |
| HorzBreak | 0.1236 | 0.1702 | -0.04380674 | HorzBreak | 0.0573 | 0.0747 | -0.04870202 | HorzBreak | 0.0063 | 0.0215 | -0.00615316 |
| HorzRelAngle | -0.025 | -0.05 | 0.035910302 | HorzRelAngle | 0.0975 | 0.117 | -0.0364245 | HorzRelAngle | 0.0069 | 0.0303 | -0.01079745 |
| InducedVertBreak | -0.024 | -0.058 | 0.051915621 | InducedVertBreak | 0.0263 | 0.0307 | -0.0114447 | InducedVertBreak | -0.078 | 0.0279 | -0.10080253 |
| PlateLocHeight | -0.026 | -0.079 | 0.082141701 | PlateLocHeight | 0.1453 | 0.1541 | -0.0172423 | PlateLocHeight | -0.021 | 0.24 | -0.16771517 |
| PlateLocSide | 0.1322 | 0.1144 | 0.052562219 | PlateLocSide | 0.1899 | 0.1838 | 0.030626109 | PlateLocSide | 0.0322 | 0.1182 | -0.03654596 |
| RelHeight | -0.008 | -0.013 | 0.008074356 | RelHeight | 0.0618 | 0.0729 | -0.02968473 | RelHeight | 0.0068 | 0.0165 | -0.002569365 |
| RelSide | -0.012 | -0.006 | -0.01105274 | RelSide | -0.088 | -0.11 | 0.060798479 | RelSide | -0.004 | -0.023 | 0.009810911 |
| RelSpeed | 0.0029 | -0.024 | 0.044709127 | RelSpeed | -0.031 | -0.042 | 0.030845125 | RelSpeed | 0.0019 | -0.031 | 0.020701863 |
| SpinAxis | 0.1098 | 0.1561 | -0.05663709 | SpinAxis | 0.0152 | 0.0099 | 0.017145283 | SpinAxis | -0.043 | 0.0086 | -0.05168078 |
| SpinRate | -0.011 | -0.035 | 0.038169001 | SpinRate | -0.008 | -0.005 | -0.01013235 | SpinRate | 0.0309 | 0.019 | 0.026283754 |
| SwingSTK | 0.4428 | -0.118 | 1 | SwingSTK | 0.2263 | -0.1 | 1 | SwingSTK | 0.8346 | -0.161 | 1 |
| Tilt | -0.094 | -0.122 | 0.029546298 | Tilt | -0.036 | -0.056 | 0.05716449 | Tilt | -0.068 | -0.002 | -0.07176507 |
| VertApprAngle | -0.027 | -0.085 | 0.091066179 | VertApprAngle | 0.0776 | 0.0775 | 0.005204899 | VertApprAngle | -0.047 | 0.1562 | -0.14476612 |
| VertBreak | -0.021 | -0.064 | 0.066767488 | VertBreak | 0.0088 | 0.0095 | -0.00144365 | VertBreak | -0.061 | -0.006 | -0.06202892 |
| VertRelAngle | -0.011 | -0.038 | 0.042737713 | VertRelAngle | 0.0564 | 0.0553 | 0.005232092 | VertRelAngle | 0.0136 | 0.1902 | -0.10009557 |
| ZoneSpeed | -0.006 | -0.031 | 0.039304211 | ZoneSpeed | -0.049 | -0.057 | 0.02199348 | ZoneSpeed | 0.0002 | -0.04 | 0.024415157 |
| ZoneTime | 0.0032 | 0.0336 | -0.04936609 | ZoneTime | 0.0319 | 0.0393 | -0.02012605 | ZoneTime | 0.01 | 0.0419 | -0.01446157 |
| RvLCH | | | | RvLSPL | | | | RvLCB | | | |
| Metric | -1 | CSW | Called | -1 | CSW | Called | SwingSTK | -1 | CSW | Called | SwingSTK |
| CalledSTK | 0.7394 | 1 | | CalledSTK | 0.5454 | 1 | | CalledSTK | 0.4982 | 1 | |
| CSW | | 1 | | CSW | | 1 | | CSW | | 1 | |
| Extension | -0.009 | 0.027 | -0.04523363 | Extension | 0.0118 | 0.0184 | -0.00034774 | Extension | 0.0146 | -0.03 | 0.038803191 |
| HorzApprAngle | 0.08 | 0.1116 | -0.01670512 | HorzApprAngle | 0.0653 | 0.1808 | -0.03935801 | HorzApprAngle | 0.0205 | 0.0521 | -0.01516502 |
| HorzBreak | -0.038 | 0.012 | -0.07066551 | HorzBreak | -0.161 | -0.032 | -0.165363914 | HorzBreak | 0.0015 | 0.0348 | -0.02401208 |
| HorzRelAngle | 0.1078 | 0.0908 | 0.049338111 | HorzRelAngle | 0.1753 | 0.1665 | 0.078227107 | HorzRelAngle | 0.023 | 0.0194 | 0.011860102 |
| InducedVertBreak | -0.046 | 0.0494 | -0.12780001 | InducedVertBreak | -0.069 | -0.03 | -0.050801192 | InducedVertBreak | -0.005 | 0.0486 | -0.04170898 |
| PlateLocHeight | 0.3413 | 0.3966 | 0.024444343 | PlateLocHeight | 0.2966 | 0.3461 | 0.082435576 | PlateLocHeight | 0.1427 | 0.3421 | -0.09071884 |
| PlateLocSide | 0.2095 | 0.1849 | 0.085684799 | PlateLocSide | 0.0931 | 0.0313 | 0.085737689 | PlateLocSide | 0.0833 | 0.1489 | -0.01537844 |
| RelHeight | 0.005 | 0.0392 | -0.03996448 | RelHeight | 0.0814 | 0.0127 | 0.086425128 | RelHeight | 0.0085 | 0.0367 | -0.01746043 |
| RelSide | -0.068 | -0.08 | -0.00379341 | RelSide | -0.135 | -0.181 | -0.01971357 | RelSide | -0.01 | -0.013 | -0.00205377 |
| RelSpeed | -0.041 | -0.043 | -0.00184217 | RelSpeed | -0.086 | -0.08 | -0.03911416 | RelSpeed | 0.0407 | -0.084 | 0.108330828 |
| SpinAxis | 0.001 | -0.046 | 0.057097438 | SpinAxis | 0.0016 | -0.021 | 0.018508337 | SpinAxis | -7E-04 | 0.0059 | -0.00512247 |
| SpinRate | -0.024 | 0.0155 | -0.05391643 | SpinRate | -0.112 | -0.037 | -0.10385319 | SpinRate | 0.0461 | -0.006 | 0.056872382 |
| SwingSTK | 0.5822 | -0.117 | 1 | SwingSTK | 0.7598 | -0.131 | 1 | SwingSTK | 0.7678 | -0.173 | 1 |
| Tilt | -0.012 | -0.041 | 0.031679627 | Tilt | 0.1213 | 0.0418 | 0.111056639 | Tilt | -0.007 | -0.014 | 0.001882582 |
| VertApprAngle | 0.2406 | 0.3031 | -0.1834112 | VertApprAngle | 0.1684 | 0.2487 | 0.006320504 | VertApprAngle | 0.1009 | 0.2162 | -0.04516892 |
| VertBreak | -0.056 | 0.0287 | -0.11678817 | VertBreak | -0.087 | -0.056 | -0.05895419 | VertBreak | 0.0173 | -0.013 | 0.029361766 |
| VertRelAngle | 0.2875 | 0.2761 | 0.090552823 | VertRelAngle | 0.2549 | 0.309 | 0.061832993 | VertRelAngle | 0.1028 | 0.2705 | -0.08319356 |
| ZoneSpeed | -0.055 | -0.07 | 0.003889743 | ZoneSpeed | -0.101 | -0.116 | -0.03023781 | ZoneSpeed | 0.0255 | -0.097 | 0.100357679 |
| ZoneTime | 0.0303 | 0.0305 | 0.007763247 | ZoneTime | 0.0762 | 0.0771 | 0.030255457 | ZoneTime | -0.037 | 0.0801 | -0.10073303 |

O-O Fastball, Cutter, and Sinker Usage

| PitcherTeam | Grouped Rate | CSWF |
|-------------|--------------|--------|
| OAK | 74.04% | 50.92% |
| CHC | 70.44% | 51.26% |
| SF | 70.15% | 51.26% |
| LA | 67.92% | 54.49% |
| PIT | 67.86% | 50.29% |
| WAS | 67.16% | 50.38% |
| CWS | 66.49% | 50.26% |
| BAL | 65.85% | 48.16% |
| MIL | 65.74% | 49.59% |
| ARI | 65.55% | 50.88% |
| SD | 65.41% | 52.96% |
| COL | 65.28% | 50.64% |
| ATL | 64.45% | 49.67% |
| TB | 64.05% | 51.49% |
| TEX | 63.72% | 49.82% |
| DET | 63.50% | 50.62% |
| KC | 62.89% | 50.75% |
| HOU | 62.22% | 50.87% |
| STL | 62.22% | 49.35% |
| NYM | 61.91% | 49.62% |
| TOR | 61.57% | 49.71% |
| NYY | 61.43% | 51.92% |
| MIN | 61.25% | 51.05% |
| CLE | 61.10% | 53.68% |
| BOS | 58.98% | 53.57% |
| PHI | 58.68% | 50.09% |
| SEA | 58.02% | 51.57% |
| CIN | 56.95% | 49.61% |
| MIA_MAR | 56.88% | 50.59% |
| ANA | 52.97% | 50.98% |

O-O Slider and Curveball Usage

| PitcherTeam | Grouped Rate | CSWF |
|-------------|--------------|--------|
| MIA_MAR | 37.63% | 48.76% |
| CIN | 36.42% | 52.10% |
| ANA | 35.60% | 50.72% |
| STL | 33.60% | 51.19% |
| KC | 32.68% | 48.04% |
| TOR | 32.26% | 49.21% |
| DET | 30.88% | 50.54% |
| NYY | 30.86% | 54.23% |
| HOU | 30.14% | 52.56% |
| COL | 29.52% | 48.83% |
| ATL | 29.48% | 50.94% |
| MIN | 29.45% | 53.77% |
| SEA | 29.14% | 50.51% |
| CLE | 28.86% | 50.42% |
| PHI | 28.82% | 51.15% |
| BOS | 28.31% | 51.00% |
| NYM | 27.37% | 49.64% |
| WAS | 26.77% | 55.44% |
| TB | 26.48% | 53.85% |
| TEX | 26.34% | 51.84% |
| LA | 26.25% | 51.12% |
| BAL | 26.05% | 47.69% |
| MIL | 25.28% | 47.92% |
| SD | 24.60% | 50.91% |
| CWS | 23.75% | 48.35% |
| CHC | 23.68% | 48.85% |
| PIT | 23.33% | 53.81% |
| ARI | 23.28% | 49.82% |
| SF | 20.83% | 50.81% |
| OAK | 17.35% | 47.28% |

O-O Changeup and Splitter Usage

| PitcherTeam | Grouped Rate | CSWF |
|-------------|--------------|--------|
| SEA | 12.83% | 47.67% |
| BOS | 12.71% | 49.30% |
| PHI | 12.51% | 43.24% |
| ANA | 11.43% | 42.11% |
| ARI | 11.17% | 44.09% |
| NYM | 10.73% | 47.63% |
| CLE | 10.04% | 45.83% |
| SD | 9.99% | 48.18% |
| TEX | 9.95% | 48.76% |
| CWS | 9.76% | 45.90% |
| TB | 9.47% | 49.83% |
| MIN | 9.29% | 46.02% |
| SF | 9.02% | 43.76% |
| MIL | 8.97% | 44.32% |
| PIT | 8.81% | 39.82% |
| OAK | 8.61% | 46.86% |
| BAL | 8.11% | 46.38% |
| NYY | 7.71% | 44.76% |
| HOU | 7.64% | 46.46% |
| CIN | 6.64% | 47.06% |
| TOR | 6.17% | 45.21% |
| ATL | 6.07% | 44.01% |
| WAS | 6.06% | 45.07% |
| CHC | 5.88% | 44.79% |
| LA | 5.83% | 47.04% |
| DET | 5.62% | 41.48% |
| MIA_MAR | 5.49% | 42.26% |
| COL | 5.20% | 38.46% |
| KC | 4.42% | 40.98% |
| STL | 4.18% | 46.30% |

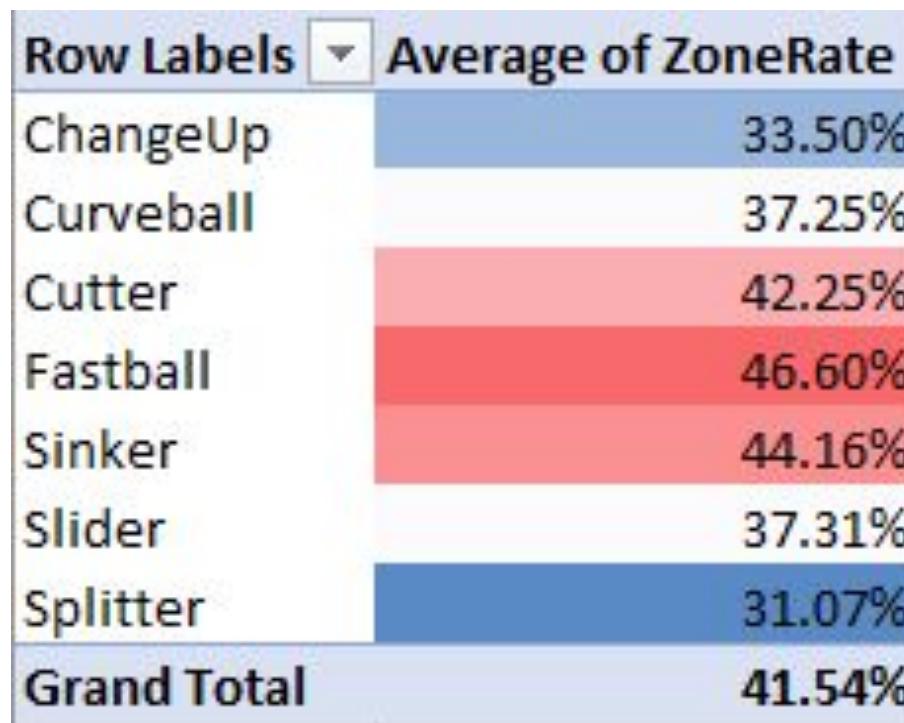
2. Zone Rate Data

(pitches by RHP unless
otherwise specified)

MLB RHP Pitches in Strike Zone by Pitch Type

| Row Labels | Average of Zone |
|--------------------|-----------------|
| ChangeUp | 32.48% |
| Curveball | 37.45% |
| Cutter | 39.86% |
| Fastball | 46.21% |
| Sinker | 45.33% |
| Slider | 37.12% |
| Splitter | 32.84% |
| Grand Total | 41.11% |

MLB LHP Pitches in Strike Zone by Pitch Type



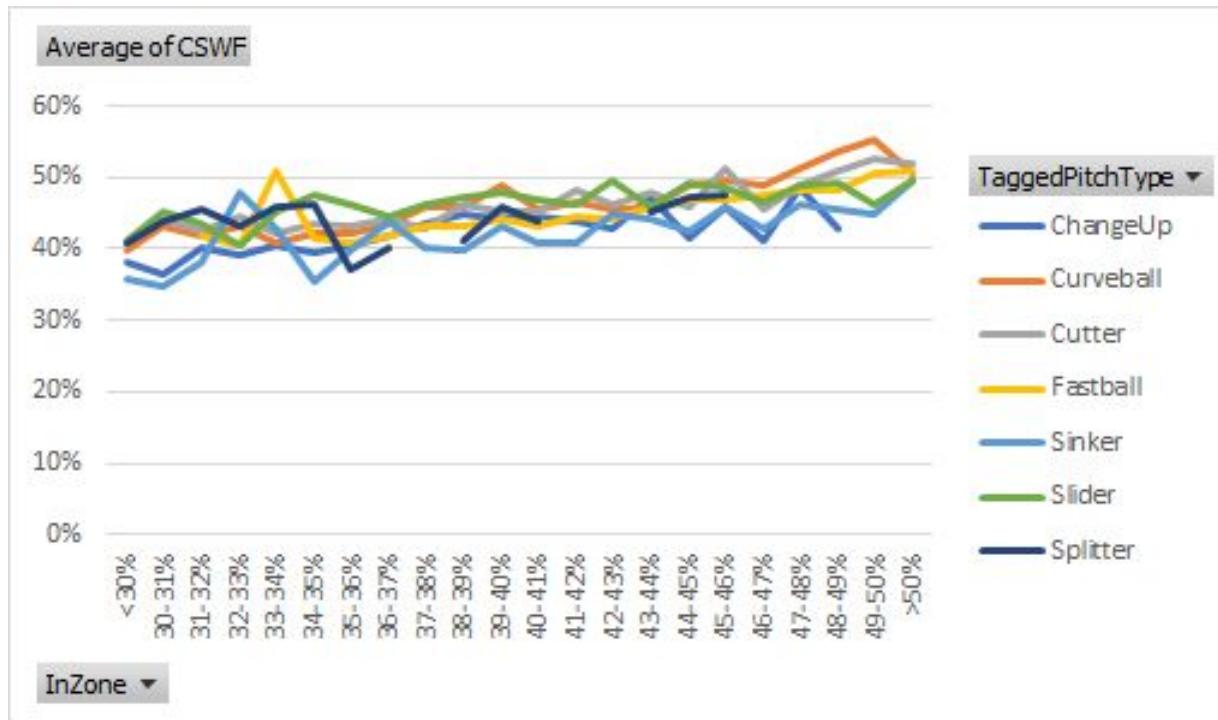
RHP Called Strikes, Whiffs, and Fouls by Location

| Average of CSWF | Column Labels | ChangeUp | Curveball | Cutter | Fastball | Sinker | Slider | Splitter | Grand Total |
|--------------------|---------------|----------|-----------|--------|----------|--------|--------|----------|-------------|
| Row Labels | | 30.99% | 29.71% | 32.51% | 29.31% | 28.83% | 34.37% | 33.44% | 30.77% |
| Out of Strike Zone | | 30.99% | 29.71% | 32.51% | 29.31% | 28.83% | 34.37% | 33.44% | 30.77% |
| In Strike Zone | | 63.81% | 70.60% | 65.38% | 70.45% | 62.80% | 67.80% | 64.85% | 68.58% |
| Grand Total | | 41.99% | 44.94% | 46.40% | 48.48% | 43.82% | 46.84% | 43.20% | 46.48% |

LHP Called Strikes, Whiffs, and Fouls by Location

| Average of CSWF | Column Labels | | | | | | | | |
|--------------------|---------------|-----------|--------|----------|--------|--------|----------|-------------|--------|
| Row Labels | ChangeUp | Curveball | Cutter | Fastball | Sinker | Slider | Splitter | Grand Total | |
| Out of Strike Zone | 31.32% | 30.31% | 33.48% | 29.18% | 28.12% | 35.32% | 30.37% | | 30.84% |
| In Strike Zone | 62.83% | 70.22% | 64.16% | 70.53% | 66.55% | 66.80% | 56.06% | | 68.19% |
| Grand Total | 41.55% | 45.26% | 45.71% | 48.28% | 45.54% | 47.01% | 38.81% | | 46.19% |

Average CSWF by Average Zone Rate



3. Improve Chase Rate

RvR Chase Rate Correlations

| | RvR FB | RvR SI | RvR Cut | RvR SL | RvR CB | RvR CH | RvR SPL |
|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | <i>Swing</i> |
| RelSpeed | 0.006379 | 0.01332 | -0.02627 | 0.021707 | 0.042709 | -0.01413 | -0.01235 |
| VertRelAngle | 0.125674 | 0.078943 | 0.074503 | 0.049259 | -0.04791 | 0.137833 | 0.160191 |
| HorzRelAngle | 0.131801 | 0.177913 | 0.069816 | 0.098345 | 0.055281 | 0.082506 | 0.050407 |
| SpinRate | -0.0217 | -0.01983 | -0.01509 | 0.000383 | -0.00331 | -0.01209 | -0.01794 |
| SpinAxis | 0.027969 | 0.061901 | -0.02488 | -0.01159 | 0.011352 | 0.049752 | 0.083618 |
| Tilt | -0.0149 | 0.046049 | -0.0238 | -0.01049 | 0.026887 | 0.003984 | -0.04035 |
| RelHeight | -0.00539 | -0.01772 | -0.00976 | 0.009195 | -0.01712 | -0.03102 | -0.02447 |
| RelSide | 0.014834 | 0.069111 | -0.02298 | -0.02912 | -0.01615 | 0.067757 | 0.028432 |
| Extension | 0.002707 | 0.011514 | -0.01837 | -0.0001 | 0.033257 | 0.01493 | -0.04129 |
| VertBreak | -0.01359 | -0.04113 | -0.02316 | 0.01174 | 0.050104 | -0.08108 | -0.07025 |
| InducedVertBreak | -0.03753 | -0.06217 | -0.03211 | -0.01037 | 0.031956 | -0.09683 | -0.07873 |
| HorzBreak | 0.033883 | 0.052803 | -0.02379 | -0.00642 | -0.01593 | 0.021346 | 0.053431 |
| PlateLocHeight | 0.128394 | 0.086895 | 0.066266 | 0.075069 | -0.03582 | 0.116437 | 0.14839 |
| PlateLocSide | 0.181776 | 0.272069 | 0.065229 | 0.10694 | 0.050856 | 0.162946 | 0.144729 |
| ZoneSpeed | 0.001465 | 0.009313 | -0.02471 | 0.018918 | 0.043997 | -0.01963 | -0.02008 |
| VertApprAngle | 0.108313 | 0.063717 | 0.045364 | 0.056385 | 0.000514 | 0.075578 | 0.105989 |
| HorzApprAngle | 0.146189 | 0.198025 | 0.055423 | 0.089006 | 0.036675 | 0.093488 | 0.082157 |
| ZoneTime | -0.0359 | -0.02278 | -0.00751 | -0.03076 | -0.04624 | -0.00926 | 0.010026 |

RvL Chase Rate Correlations

| | RvL FB | RvL SI | RvL Cut | RvL SLP | RvL CB | RvL CH | RvL SPL |
|------------------|----------|----------|----------|----------|----------|----------|----------|
| | Swing |
| RelSpeed | 0.043109 | 0.010364 | 0.014398 | 0.058237 | 0.07527 | -0.01034 | 0.002571 |
| VertRelAngle | 0.026691 | -0.03045 | -0.01419 | -0.05156 | -0.10594 | 0.035179 | 0.056201 |
| HorzRelAngle | -0.0462 | -0.02682 | -0.09728 | -0.09686 | -0.09384 | -0.00823 | -0.02702 |
| SpinRate | 0.023299 | 0.001845 | -0.00111 | -0.01179 | 0.017956 | 0.003478 | -0.02878 |
| SpinAxis | -0.00504 | 0.047057 | -0.04661 | -0.02277 | 0.008226 | 0.051655 | 0.065509 |
| Tilt | 0.003183 | 0.028247 | -0.00899 | -0.03789 | -0.01389 | -0.00954 | -0.03287 |
| RelHeight | -0.00456 | -0.02148 | -0.02491 | 0.009517 | -0.03079 | 0.000366 | -0.02469 |
| RelSide | -0.0057 | 0.06651 | -0.03002 | -0.03785 | -0.00962 | 0.016735 | 0.019153 |
| Extension | 0.02608 | 0.002879 | 0.016117 | 0.023044 | 0.040561 | -0.00621 | -0.01258 |
| VertBreak | 0.018557 | -0.02374 | -0.03661 | 0.008442 | 0.043313 | -0.06998 | -0.06702 |
| InducedVertBreak | -0.00599 | -0.03889 | -0.0546 | -0.04146 | -0.01071 | -0.07878 | -0.08365 |
| HorzBreak | -0.00547 | 0.065596 | -0.0512 | 0.020044 | 0.008258 | 0.019238 | 0.018228 |
| PlateLocHeight | 0.033764 | -0.06824 | -0.04345 | -0.05317 | -0.11335 | 0.010893 | 0.026458 |
| PlateLocSide | -0.06107 | 0.038982 | -0.15618 | -0.13141 | -0.11796 | 0.010539 | -0.01224 |
| ZoneSpeed | 0.038394 | 0.003697 | 0.016599 | 0.059993 | 0.078656 | -0.0074 | 0.008297 |
| VertApprAngle | 0.036489 | -0.05652 | -0.0431 | -0.04118 | -0.06227 | -0.02154 | 0.004631 |
| HorzApprAngle | -0.04778 | 0.005272 | -0.12013 | -0.07894 | -0.08183 | 0.003583 | -0.01739 |
| ZoneTime | -0.04886 | -0.01962 | -0.00575 | -0.06623 | -0.08003 | 0.000764 | -0.01006 |

RHP Chase Rates by Pitch Type by Platoon

| Average of Swing | Column Labels | | | |
|--------------------|---------------|--------------|--------------|--------------|
| Row Labels | Left | Right | Grand Total | |
| ChangeUp | | 38% | 39% | 38.2% |
| Curveball | | 30% | 31% | 30.2% |
| Cutter | | 34% | 33% | 33.4% |
| Fastball | | 26% | 29% | 27.7% |
| Sinker | | 27% | 32% | 29.8% |
| Slider | | 36% | 37% | 36.4% |
| Splitter | | 40% | 41% | 40.4% |
| Grand Total | | 30.7% | 32.5% | 31.7% |

RvR Fastball

| Average of Swing | Column Labels | | | | | | | | | | | |
|------------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|----|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | 0% | 0% | 3% | 2% | 3% | 2% | 4% | 3% | 2% | 1% | 2.4% | |
| 4.25-4.5 | 2% | 3% | 5% | 9% | 14% | 18% | 13% | 9% | 7% | 5% | 9.8% | |
| 4-4.25 | 2% | 11% | 12% | 23% | 25% | 27% | 27% | 20% | 18% | 7% | 18.7% | |
| 3.75-4 | 7% | 17% | 27% | 40% | 46% | 45% | 40% | 40% | 33% | 15% | 33.5% | |
| 3.5-3.75 | 12% | 30% | 42% | 57% | 65% | 65% | 67% | 57% | 43% | 22% | 49.7% | |
| 3.25-3.5 | 17% | 41% | 56% | 68% | 78% | 71% | 66% | 67% | 58% | 29% | 48.2% | |
| 3-3.25 | 17% | 44% | | | | | | | 63% | 31% | 37.1% | |
| 2.75-3 | 21% | 45% | | | | | | | 71% | 38% | 41.3% | |
| 2.5-2.75 | 18% | 45% | | | | | | | 69% | 37% | 38.8% | |
| 2.25-2.5 | 18% | 38% | | | | | | | 69% | 38% | 36.0% | |
| 2-2.25 | 12% | 34% | | | | | | | 65% | 39% | 30.6% | |
| 1.75-2 | 7% | 22% | | | | | | | 53% | 30% | 20.9% | |
| 1.5-1.75 | 5% | 12% | 22% | 25% | 35% | 41% | 41% | 39% | 44% | 20% | 18.8% | |
| 1.25-1.5 | 3% | 6% | 14% | 22% | 26% | 35% | 37% | 36% | 29% | 17% | 19.2% | |
| 1-1.25 | 2% | 5% | 9% | 11% | 16% | 22% | 18% | 23% | 17% | 10% | 10.5% | |
| 0.75-1 | 1% | 2% | 1% | 6% | 10% | 10% | 12% | 10% | 9% | 1% | 4.8% | |
| 0.5-0.75 | 0% | 0% | 5% | 4% | 5% | 9% | 3% | 8% | 6% | 2% | 3.2% | |
| <0.5 | 1% | 0% | 1% | 1% | 0% | 31% | 5% | 0% | 6% | 0% | 5.3% | |
| Grand Total | 10.8% | 29.4% | 20.5% | 30.6% | 37.0% | 39.8% | 38.0% | 35.1% | 53.7% | 28.6% | 29.1% | 35 |

RvL Fastball

| Average of Swing | Column Labels | | | | | | | | | | | |
|------------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | 0% | 2% | 0% | 3% | 2% | 1% | 4% | 2% | 1% | 0% | 1.5% |
| 4.25-4.5 | | 0% | 2% | 6% | 7% | 13% | 9% | 7% | 7% | 6% | 1% | 6.2% |
| 4-4.25 | | 2% | 6% | 9% | 20% | 27% | 23% | 23% | 13% | 7% | 2% | 13.8% |
| 3.75-4 | | 6% | 15% | 26% | 37% | 46% | 46% | 39% | 28% | 15% | 3% | 27.8% |
| 3.5-3.75 | | 7% | 27% | 44% | 60% | 68% | 66% | 59% | 40% | 26% | 6% | 41.8% |
| 3.25-3.5 | | 14% | 42% | 55% | 71% | 77% | 73% | 69% | 53% | 36% | 10% | 37.2% |
| 3-3.25 | | 17% | 52% | | | | | | | 45% | 13% | 27.5% |
| 2.75-3 | | 21% | 57% | | | | | | | 51% | 18% | 32.2% |
| 2.5-2.75 | | 20% | 54% | | | | | | | 51% | 19% | 32.2% |
| 2.25-2.5 | | 18% | 51% | | | | | | | 47% | 19% | 31.0% |
| 2-2.25 | | 16% | 47% | | | | | | | 41% | 18% | 27.8% |
| 1.75-2 | | 11% | 34% | | | | | | | 34% | 15% | 21.9% |
| 1.5-1.75 | | 8% | 20% | 34% | 36% | 36% | 45% | 32% | 27% | 30% | 11% | 23.6% |
| 1.25-1.5 | | 4% | 15% | 20% | 31% | 28% | 34% | 30% | 24% | 16% | 7% | 22.6% |
| 1-1.25 | | 3% | 13% | 13% | 18% | 17% | 20% | 17% | 19% | 13% | 5% | 14.2% |
| 0.75-1 | | 2% | 2% | 6% | 6% | 10% | 9% | 10% | 6% | 6% | 5% | 6.5% |
| 0.5-0.75 | | 0% | 2% | 3% | 1% | 7% | 1% | 13% | 3% | 3% | 0% | 3.1% |
| <0.5 | | 0% | 0% | 0% | 4% | 0% | 6% | 2% | 3% | 0% | 0% | 1.7% |
| Grand Total | | 13.4% | 39.0% | 24.7% | 33.6% | 38.2% | 37.9% | 33.8% | 25.0% | 36.6% | 12.6% | 26.2% |

RvR Sinker

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|-------------|------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| >4.5 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 3% | 1.4% |
| 4.25-4.5 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 13% | 6% | 3.6% |
| 4-4.25 | 0% | 0% | 10% | 0% | 7% | 18% | 7% | 6% | 19% | 0% | 7.9% |
| 3.75-4 | 0% | 0% | 7% | 0% | 15% | 48% | 28% | 19% | 18% | 8% | 16.2% |
| 3.5-3.75 | 13% | 9% | 31% | 31% | 39% | 51% | 46% | 45% | 51% | 19% | 34.6% |
| 3.25-3.5 | 0% | 28% | 8% | 38% | 42% | 48% | 65% | 48% | 52% | 28% | 34.7% |
| 3-3.25 | 0% | 14% | | | | | | | 67% | 32% | 36.4% |
| 2.75-3 | 5% | 27% | | | | | | | 80% | 43% | 45.1% |
| 2.5-2.75 | 7% | 29% | | | | | | | 77% | 47% | 44.3% |
| 2.25-2.5 | 6% | 22% | | | | | | | 78% | 46% | 41.4% |
| 2-2.25 | 7% | 23% | | | | | | | 78% | 43% | 40.6% |
| 1.75-2 | 5% | 11% | | | | | | | 71% | 45% | 34.1% |
| 1.5-1.75 | 2% | 8% | 10% | 40% | 43% | 63% | 56% | 74% | 66% | 37% | 34.5% |
| 1.25-1.5 | 0% | 4% | 11% | 28% | 37% | 45% | 53% | 45% | 46% | 25% | 29.0% |
| 1-1.25 | 1% | 5% | 10% | 14% | 23% | 36% | 40% | 32% | 35% | 14% | 20.4% |
| 0.75-1 | 2% | 0% | 0% | 6% | 14% | 18% | 26% | 24% | 19% | 10% | 10.7% |
| 0.5-0.75 | 0% | 8% | 0% | 6% | 0% | 3% | 8% | 29% | 0% | 0% | 4.3% |
| <0.5 | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 1.0% |
| Grand Total | 3.9% | 15.9% | 8.5% | 21.0% | 27.9% | 38.1% | 40.6% | 39.5% | 66.4% | 36.4% | 32.0% |

RvL Sinker

Average of Swing Column Labels ▾

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|-------------|------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| >4.5 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | 0% | | 0% | 0% | 0% | 0% | 0% | 25% | 0% | 0% | 1.8% |
| 4-4.25 | 0% | 0% | 14% | 7% | 6% | 8% | 7% | 20% | 0% | 0% | 4.8% |
| 3.75-4 | 0% | 0% | 0% | 30% | 17% | 23% | 27% | 14% | 0% | 0% | 10.7% |
| 3.5-3.75 | 0% | 9% | 7% | 27% | 36% | 38% | 37% | 25% | 12% | 2% | 17.6% |
| 3.25-3.5 | 4% | 8% | 0% | 25% | 52% | 50% | 45% | 32% | 26% | 8% | 17.7% |
| 3-3.25 | 11% | 14% | | | | | | | 39% | 12% | 17.9% |
| 2.75-3 | 4% | 18% | | | | | | | 60% | 21% | 27.8% |
| 2.5-2.75 | 4% | 26% | | | | | | | 61% | 23% | 32.3% |
| 2.25-2.5 | 3% | 35% | | | | | | | 62% | 26% | 33.3% |
| 2-2.25 | 3% | 25% | | | | | | | 68% | 28% | 36.1% |
| 1.75-2 | 1% | 22% | | | | | | | 62% | 26% | 32.9% |
| 1.5-1.75 | 3% | 13% | 28% | 40% | 61% | 64% | 64% | 48% | 51% | 22% | 35.1% |
| 1.25-1.5 | 2% | 12% | 27% | 29% | 46% | 48% | 53% | 52% | 30% | 19% | 36.0% |
| 1-1.25 | 6% | 3% | 16% | 22% | 43% | 35% | 27% | 40% | 9% | 8% | 23.2% |
| 0.75-1 | 3% | 22% | 18% | 18% | 15% | 22% | 27% | 13% | 17% | 3% | 15.8% |
| 0.5-0.75 | 0% | 0% | 0% | 5% | 0% | 15% | 14% | 14% | 0% | 0% | 5.5% |
| <0.5 | 0% | 0% | 0% | 6% | 0% | 5% | 4% | 0% | 0% | 0% | 2.2% |
| Grand Total | 3.0% | 17.8% | 15.3% | 24.1% | 33.6% | 36.8% | 37.4% | 35.2% | 48.7% | 18.9% | 26.6% |

RvR Cutter

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|-------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 8% | 0% | 0% | 14% | 0% | 0% | 2.0% |
| 4-4.25 | | 0% | 0% | 0% | 13% | 14% | 9% | 10% | 10% | 17% | 0% |
| 3.75-4 | | 11% | 24% | 28% | 35% | 23% | 29% | 29% | 24% | 36% | 5% |
| 3.5-3.75 | | 12% | 35% | 25% | 30% | 41% | 42% | 33% | 29% | 17% | 17% |
| 3.25-3.5 | | 23% | 42% | 38% | 46% | 65% | 50% | 56% | 57% | 31% | 7% |
| 3-3.25 | | 25% | 50% | | | | | | | 28% | 9% |
| 2.75-3 | | 35% | 58% | | | | | | | 39% | 15% |
| 2.5-2.75 | | 40% | 68% | | | | | | | 44% | 16% |
| 2.25-2.5 | | 39% | 66% | | | | | | | 33% | 17% |
| 2-2.25 | | 35% | 60% | | | | | | | 27% | 18% |
| 1.75-2 | | 32% | 61% | | | | | | | 27% | 10% |
| 1.5-1.75 | | 30% | 51% | 53% | 70% | 55% | 59% | 43% | 43% | 20% | 8% |
| 1.25-1.5 | | 19% | 38% | 52% | 52% | 54% | 47% | 35% | 9% | 18% | 0% |
| 1-1.25 | | 14% | 28% | 43% | 52% | 43% | 38% | 24% | 0% | 20% | 0% |
| 0.75-1 | | 12% | 20% | 25% | 38% | 26% | 28% | 60% | 0% | 0% | 18.6% |
| 0.5-0.75 | | 9% | 10% | 22% | 24% | 26% | 27% | 50% | 0% | 0% | 13.6% |
| <0.5 | | 3% | 11% | 8% | 9% | 10% | 36% | 0% | 0% | 0% | 5.6% |
| Grand Total | | 25.2% | 50.4% | 36.9% | 41.7% | 39.2% | 37.5% | 30.3% | 19.3% | 29.7% | 11.0% |
| | | | | | | | | | | | 33.0% |

RvL Cutter

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|-------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| >4.5 | | 0% | 0% | 0% | 0% | 7% | 0% | 8% | 0% | 0% | 1.8% |
| 4.25-4.5 | | 0% | 0% | 0% | 10% | 17% | 0% | 0% | 0% | 0% | 2.7% |
| 4-4.25 | | 0% | 13% | 10% | 18% | 22% | 7% | 6% | 4% | 0% | 7.7% |
| 3.75-4 | | 13% | 35% | 28% | 38% | 29% | 33% | 26% | 22% | 4% | 0% |
| 3.5-3.75 | | 20% | 41% | 41% | 55% | 57% | 50% | 41% | 15% | 18% | 5% |
| 3.25-3.5 | | 16% | 57% | 45% | 64% | 50% | 57% | 46% | 24% | 18% | 4% |
| 3-3.25 | | 31% | 63% | | | | | | | 24% | 6% |
| 2.75-3 | | 35% | 68% | | | | | | | 46% | 13% |
| 2.5-2.75 | | 37% | 76% | | | | | | | 29% | 8% |
| 2.25-2.5 | | 42% | 68% | | | | | | | 29% | 8% |
| 2-2.25 | | 38% | 80% | | | | | | | 41% | 15% |
| 1.75-2 | | 39% | 69% | | | | | | | 26% | 9% |
| 1.5-1.75 | | 34% | 52% | 69% | 60% | 56% | 52% | 65% | 21% | 10% | 2% |
| 1.25-1.5 | | 24% | 49% | 68% | 54% | 59% | 59% | 30% | 28% | 16% | 0% |
| 1-1.25 | | 19% | 44% | 49% | 58% | 40% | 49% | 26% | 25% | 20% | 0% |
| 0.75-1 | | 21% | 32% | 23% | 31% | 42% | 38% | 12% | 8% | 18% | 0% |
| 0.5-0.75 | | 6% | 35% | 25% | 22% | 40% | 15% | 29% | 0% | 0% | 0% |
| <0.5 | | 1% | 10% | 23% | 7% | 5% | 6% | 0% | 13% | 0% | 0% |
| Grand Total | | 30.0% | 61.7% | 43.1% | 44.0% | 42.2% | 39.8% | 28.8% | 16.5% | 25.5% | 6.8% |
| | | | | | | | | | | | 33.9% |

RvR Slider

| Average of Swing | Column Labels | | | | | | | | | | | |
|------------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 0% | 0% | 0.7% | |
| 4.25-4.5 | | 0% | 0% | 0% | 10% | 0% | 8% | 5% | 0% | 7% | 0% | 3.0% |
| 4-4.25 | | 0% | 0% | 7% | 9% | 10% | 3% | 3% | 4% | 8% | 2% | 5.2% |
| 3.75-4 | | 4% | 12% | 7% | 11% | 19% | 17% | 14% | 10% | 5% | 6% | 11.3% |
| 3.5-3.75 | | 7% | 20% | 21% | 29% | 29% | 23% | 26% | 28% | 10% | 5% | 21.2% |
| 3.25-3.5 | | 8% | 27% | 30% | 48% | 38% | 36% | 41% | 43% | 20% | 9% | 25.4% |
| 3-3.25 | | 22% | 42% | | | | | | | 36% | 11% | 28.0% |
| 2.75-3 | | 31% | 50% | | | | | | | 38% | 16% | 35.3% |
| 2.5-2.75 | | 37% | 60% | | | | | | | 40% | 18% | 42.9% |
| 2.25-2.5 | | 43% | 66% | | | | | | | 40% | 14% | 48.5% |
| 2-2.25 | | 42% | 66% | | | | | | | 33% | 19% | 48.7% |
| 1.75-2 | | 39% | 65% | | | | | | | 31% | 13% | 46.3% |
| 1.5-1.75 | | 35% | 58% | 66% | 70% | 70% | 69% | 52% | 39% | 29% | 16% | 48.2% |
| 1.25-1.5 | | 28% | 54% | 61% | 70% | 64% | 59% | 44% | 40% | 23% | 9% | 47.3% |
| 1-1.25 | | 25% | 46% | 50% | 58% | 58% | 50% | 40% | 19% | 30% | 8% | 39.2% |
| 0.75-1 | | 20% | 40% | 47% | 47% | 46% | 34% | 20% | 26% | 0% | 0% | 31.3% |
| 0.5-0.75 | | 15% | 26% | 30% | 38% | 40% | 39% | 19% | 24% | 0% | 0% | 22.0% |
| <0.5 | | 7% | 18% | 19% | 17% | 23% | 21% | 11% | 0% | 0% | 0% | 11.0% |
| Grand Total | | 26.7% | 52.1% | 47.1% | 53.1% | 50.5% | 43.4% | 31.6% | 23.6% | 30.1% | 11.8% | 36.6% |

RvL Slider

| Average of Swing Column Labels ▾ | | | | | | | | | | | | |
|----------------------------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 8% | 0% | 0% | 1.1% | |
| 4-4.25 | 25% | 0% | 0% | 7% | 19% | 14% | 8% | 0% | 0% | 0% | 5.1% | |
| 3.75-4 | 0% | 0% | 33% | 27% | 26% | 40% | 8% | 5% | 7% | 1% | 11.2% | |
| 3.5-3.75 | 12% | 30% | 32% | 31% | 39% | 34% | 24% | 24% | 13% | 3% | 20.1% | |
| 3.25-3.5 | 6% | 29% | 50% | 63% | 48% | 37% | 33% | 11% | 12% | 5% | 16.1% | |
| 3-3.25 | 22% | 42% | | | | | | | 19% | 5% | 14.2% | |
| 2.75-3 | 29% | 62% | | | | | | | 31% | 5% | 23.6% | |
| 2.5-2.75 | 40% | 65% | | | | | | | 35% | 10% | 30.2% | |
| 2.25-2.5 | 36% | 72% | | | | | | | 30% | 11% | 32.7% | |
| 2-2.25 | 40% | 73% | | | | | | | 34% | 13% | 37.4% | |
| 1.75-2 | 42% | 68% | | | | | | | 40% | 11% | 42.1% | |
| 1.5-1.75 | 37% | 67% | 73% | 78% | 75% | 65% | 56% | 45% | 34% | 13% | 51.2% | |
| 1.25-1.5 | 37% | 66% | 70% | 69% | 69% | 64% | 53% | 39% | 28% | 6% | 55.1% | |
| 1-1.25 | 30% | 58% | 58% | 58% | 65% | 53% | 49% | 30% | 11% | 10% | 47.2% | |
| 0.75-1 | 22% | 46% | 48% | 54% | 45% | 45% | 31% | 19% | 14% | 9% | 37.0% | |
| 0.5-0.75 | 19% | 37% | 34% | 35% | 33% | 36% | 39% | 24% | 13% | 0% | 28.6% | |
| <0.5 | 8% | 15% | 20% | 18% | 18% | 16% | 11% | 17% | 4% | 0% | 12.9% | |
| Grand Total | | 27.6% | 56.0% | 50.4% | 52.0% | 52.4% | 48.3% | 39.5% | 26.6% | 27.9% | 7.9% | 36.0% |

RvR Curveball

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|-------------|-------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0.7% |
| 4.25-4.5 | | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 3% | 0.9% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 0% | 0% | 1.7% |
| 3.75-4 | | 0% | 40% | 8% | 17% | 7% | 6% | 14% | 0% | 1% | 5.5% |
| 3.5-3.75 | | 0% | 23% | 10% | 3% | 17% | 10% | 13% | 14% | 8% | 0% |
| 3.25-3.5 | 12% | 23% | 0% | 17% | 25% | 32% | 24% | 17% | 21% | 3% | 16.4% |
| 3-3.25 | 18% | 31% | | | | | | | 23% | 4% | 16.3% |
| 2.75-3 | 16% | 36% | | | | | | | 28% | 12% | 21.8% |
| 2.5-2.75 | 24% | 46% | | | | | | | 33% | 12% | 28.2% |
| 2.25-2.5 | 33% | 54% | | | | | | | 41% | 11% | 38.2% |
| 2-2.25 | 34% | 52% | | | | | | | 27% | 18% | 38.4% |
| 1.75-2 | 27% | 56% | | | | | | | 37% | 27% | 37.8% |
| 1.5-1.75 | 26% | 50% | 62% | 62% | 71% | 78% | 55% | 55% | 21% | 15% | 43.3% |
| 1.25-1.5 | 26% | 51% | 59% | 67% | 69% | 68% | 61% | 50% | 40% | 16% | 50.0% |
| 1-1.25 | 20% | 42% | 50% | 58% | 54% | 59% | 59% | 57% | 33% | 45% | 39.8% |
| 0.75-1 | 19% | 32% | 38% | 42% | 46% | 48% | 37% | 48% | 29% | 0% | 30.4% |
| 0.5-0.75 | 15% | 30% | 22% | 43% | 51% | 44% | 21% | 9% | 17% | 0% | 24.6% |
| <0.5 | 9% | 19% | 19% | 25% | 31% | 25% | 29% | 24% | 0% | 0% | 14.6% |
| Grand Total | 20.1% | 42.9% | 40.6% | 47.2% | 49.7% | 45.6% | 35.5% | 24.4% | 24.2% | 8.0% | 30.8% |

RvL Curveball

Average of Swing Column Labels ▾

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|-------------|-------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| >4.5 | | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | | | 0% | 0% | 0% | 0% | 6% | 0% | 0.8% |
| 4-4.25 | | 0% | | 0% | 0% | 7% | 16% | 0% | 0% | 0% | 2.0% |
| 3.75-4 | | 0% | 0% | 0% | 13% | 25% | 9% | 5% | 5% | 1% | 4.6% |
| 3.5-3.75 | | 0% | 22% | 25% | 22% | 21% | 23% | 9% | 3% | 7% | 1% |
| 3.25-3.5 | | 0% | 63% | 50% | 67% | 15% | 25% | 7% | 16% | 10% | 1% |
| 3-3.25 | 18% | 33% | | | | | | | | 18% | 5% |
| 2.75-3 | 7% | 28% | | | | | | | | 21% | 8% |
| 2.5-2.75 | 32% | 48% | | | | | | | | 27% | 10% |
| 2.25-2.5 | 26% | 54% | | | | | | | | 34% | 13% |
| 2-2.25 | 31% | 58% | | | | | | | | 45% | 12% |
| 1.75-2 | 34% | 61% | | | | | | | | 43% | 19% |
| 1.5-1.75 | 40% | 57% | 60% | 67% | 66% | 64% | 52% | 44% | 40% | 17% | 49.1% |
| 1.25-1.5 | 28% | 48% | 59% | 61% | 68% | 60% | 56% | 35% | 40% | 19% | 51.6% |
| 1-1.25 | 21% | 35% | 51% | 56% | 53% | 54% | 51% | 35% | 37% | 16% | 43.7% |
| 0.75-1 | 21% | 32% | 37% | 46% | 47% | 48% | 37% | 29% | 26% | 13% | 36.4% |
| 0.5-0.75 | 11% | 33% | 33% | 28% | 40% | 31% | 27% | 21% | 8% | 0% | 26.2% |
| <0.5 | 9% | 17% | 19% | 21% | 19% | 15% | 8% | 14% | 20% | 0% | 14.1% |
| Grand Total | 19.3% | 40.8% | 39.7% | 45.9% | 47.4% | 44.7% | 37.3% | 24.1% | 28.4% | 8.0% | 29.7% |

RvR Change Up

| Average of Swing | Column Labels | | | | | | | | | | |
|------------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
| >4.5 | | 0% | | | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 25% | 0% | 33% | 0% | 0% | 0% | 12% | 8.4% |
| 3.75-4 | | 0% | 0% | 50% | 0% | 11% | 13% | 44% | 24% | 18% | 12% |
| 3.5-3.75 | | 0% | 0% | 17% | 21% | 50% | 38% | 30% | 37% | 24% | 14% |
| 3.25-3.5 | | 0% | 22% | 0% | 25% | 50% | 45% | 50% | 62% | 30% | 18% |
| 3-3.25 | 29% | 30% | | | | | | | | 67% | 35% |
| 2.75-3 | 18% | 54% | | | | | | | | 60% | 38% |
| 2.5-2.75 | 11% | 42% | | | | | | | | 72% | 46% |
| 2.25-2.5 | 18% | 60% | | | | | | | | 74% | 38% |
| 2-2.25 | 33% | 57% | | | | | | | | 73% | 44% |
| 1.75-2 | 24% | 51% | | | | | | | | 73% | 38% |
| 1.5-1.75 | 17% | 51% | 57% | 71% | 78% | 81% | 84% | 86% | 67% | 46% | 59.1% |
| 1.25-1.5 | 16% | 36% | 51% | 62% | 72% | 77% | 75% | 72% | 59% | 38% | 58.4% |
| 1-1.25 | 10% | 23% | 34% | 52% | 60% | 63% | 62% | 53% | 47% | 31% | 44.6% |
| 0.75-1 | 8% | 20% | 19% | 35% | 40% | 49% | 45% | 44% | 28% | 26% | 30.9% |
| 0.5-0.75 | 4% | 11% | 7% | 18% | 28% | 35% | 31% | 28% | 3% | 13% | 17.9% |
| <0.5 | 1% | 3% | 4% | 6% | 11% | 14% | 11% | 14% | 3% | 4% | 6.0% |
| Grand Total | 11.0% | 31.8% | 26.4% | 39.5% | 49.2% | 53.0% | 53.6% | 51.7% | 58.7% | 34.5% | 38.8% |

RvL Change Up

| Average of Swing | Column Labels | | | | | | | | | | |
|------------------|---------------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
| >4.5 | | | 0% | | | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | | | | 0% | 0% | 100% | 0% | 0% | 0% | 1.8% |
| 4-4.25 | | 0% | 0% | | 0% | 0% | 0% | 16% | 0% | 1% | 2.5% |
| 3.75-4 | | | 0% | 25% | 27% | 12% | 3% | 3% | 0% | 2% | 3.6% |
| 3.5-3.75 | | 0% | 0% | 0% | 38% | 33% | 23% | 26% | 19% | 17% | 11.7% |
| 3.25-3.5 | | 0% | 0% | 0% | 17% | 11% | 41% | 36% | 39% | 28% | 15.3% |
| 3-3.25 | | 0% | 10% | | | | | | | 46% | 13% |
| 2.75-3 | | 0% | 30% | | | | | | | 56% | 21% |
| 2.5-2.75 | | 0% | 13% | | | | | | | 69% | 34% |
| 2.25-2.5 | | 21% | 24% | | | | | | | 75% | 38% |
| 2-2.25 | | 12% | 26% | | | | | | | 78% | 38% |
| 1.75-2 | | 5% | 24% | | | | | | | 75% | 36% |
| 1.5-1.75 | | 6% | 25% | 44% | 60% | 69% | 78% | 80% | 81% | 71% | 35% |
| 1.25-1.5 | | 6% | 22% | 33% | 53% | 61% | 72% | 71% | 72% | 52% | 33% |
| 1-1.25 | | 3% | 13% | 29% | 36% | 48% | 55% | 60% | 55% | 44% | 28% |
| 0.75-1 | | 5% | 13% | 18% | 25% | 35% | 46% | 42% | 33% | 27% | 25% |
| 0.5-0.75 | | 2% | 1% | 11% | 13% | 24% | 23% | 23% | 26% | 22% | 10% |
| <0.5 | | 0% | 1% | 3% | 3% | 10% | 11% | 6% | 10% | 7% | 7% |
| Grand Total | | 4.1% | 14.0% | 20.0% | 29.9% | 41.3% | 49.5% | 51.5% | 50.0% | 59.2% | 27.5% |
| | | | | | | | | | | | 37.9% |

RvR Splitter

| Average of Swing | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|------------------|---------------|-------|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| Row Labels | | 0% | | | | 0% | 0% | 0% | 0% | 0% | 25% | |
| >4.5 | | 0% | | | | 0% | 0% | 0% | 0% | 0% | 25% | 7.7% |
| 4.25-4.5 | | | | | 0% | | | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | | 0% | | 0% | | | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | | | 0% | 0% | 0% | 67% | 33% | 0% | 25% | 11% | 17.2% |
| 3.5-3.75 | | 0% | | 50% | 75% | 0% | 60% | 0% | 25% | 25% | 17% | 26.5% |
| 3.25-3.5 | | 0% | 100% | 0% | | 0% | 0% | 0% | 40% | 36% | 17% | 24.4% |
| 3-3.25 | | 20% | | | | | | | | 65% | 29% | 41.3% |
| 2.75-3 | | 0% | 33% | | | | | | | 83% | 33% | 41.9% |
| 2.5-2.75 | | 17% | 67% | | | | | | | 59% | 32% | 40.9% |
| 2.25-2.5 | | 31% | 30% | | | | | | | 88% | 38% | 51.9% |
| 2-2.25 | | 20% | 67% | | | | | | | 67% | 45% | 52.2% |
| 1.75-2 | | 33% | 63% | | | | | | | 66% | 42% | 50.0% |
| 1.5-1.75 | | 46% | 50% | 64% | 76% | 80% | 91% | 80% | 67% | 67% | 39% | 64.5% |
| 1.25-1.5 | | 10% | 47% | 63% | 69% | 74% | 83% | 91% | 83% | 55% | 22% | 64.3% |
| 1-1.25 | | 6% | 31% | 34% | 50% | 70% | 72% | 67% | 57% | 58% | 27% | 50.8% |
| 0.75-1 | | 11% | 27% | 44% | 56% | 53% | 53% | 58% | 37% | 37% | 17% | 43.0% |
| 0.5-0.75 | | 5% | 13% | 27% | 32% | 36% | 49% | 26% | 33% | 14% | 27% | 27.4% |
| <0.5 | | 2% | 3% | 5% | 15% | 10% | 19% | 29% | 14% | 10% | 7% | 9.6% |
| Grand Total | | 11.7% | 30.3% | 33.5% | 46.8% | 50.3% | 59.7% | 53.9% | 48.1% | 59.3% | 30.9% | 40.8% |

RvL Splitter

Average of Swing Column Labels ▾

| Row Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
|--------------------|-----|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| >4.5 | | | | | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4.25-4.5 | 0% | | | | 0% | 33% | | 0% | 0% | 0% | 5.0% | |
| 4-4.25 | | 0% | | | 0% | 0% | 0% | 33% | 0% | 7% | 6.9% | |
| 3.75-4 | | | 0% | 0% | 25% | 0% | 25% | 13% | 0% | 4% | 6.6% | |
| 3.5-3.75 | | 0% | 0% | 0% | 17% | 10% | 38% | 11% | 0% | 7% | 10.2% | |
| 3.25-3.5 | | 100% | 100% | | 17% | 67% | 0% | 50% | 26% | 12% | 23.3% | |
| 3-3.25 | | 0% | | | | | | | 28% | 13% | 16.8% | |
| 2.75-3 | 0% | 0% | | | | | | | 55% | 22% | 32.6% | |
| 2.5-2.75 | 20% | 71% | | | | | | | 56% | 29% | 39.3% | |
| 2.25-2.5 | 0% | 57% | | | | | | | 70% | 28% | 40.1% | |
| 2-2.25 | 25% | 63% | | | | | | | 63% | 31% | 45.9% | |
| 1.75-2 | 9% | 47% | | | | | | | 78% | 41% | 51.7% | |
| 1.5-1.75 | 12% | 39% | 40% | 72% | 77% | 83% | 89% | 76% | 74% | 42% | 62.5% | |
| 1.25-1.5 | 12% | 32% | 64% | 72% | 77% | 78% | 74% | 75% | 64% | 35% | 65.2% | |
| 1-1.25 | 14% | 36% | 41% | 60% | 65% | 79% | 63% | 71% | 54% | 18% | 56.8% | |
| 0.75-1 | 9% | 13% | 35% | 39% | 52% | 55% | 46% | 39% | 32% | 21% | 39.8% | |
| 0.5-0.75 | 0% | 18% | 16% | 28% | 29% | 35% | 28% | 35% | 18% | 9% | 25.4% | |
| <0.5 | 5% | 0% | 9% | 9% | 24% | 15% | 11% | 9% | 7% | 6% | 10.3% | |
| Grand Total | | 7.8% | 27.9% | 28.5% | 41.8% | 51.4% | 54.5% | 50.2% | 50.1% | 54.6% | 25.1% | 40.1% |

4. Increase Swing Rate

RHP Swing Correlations

| | <i>Swing</i> |
|-----------|--------------|
| Swing | 1 |
| ZoneRate | 0.368511 |
| CSWF | 0.328453 |
| CSW | -0.05739 |
| CalledSTK | -0.41815 |
| SwingSTK | 0.393928 |
| Foul Rate | 0.494598 |

RHP vs RHH Swing Correlations

| | Swing | InZone | RelSpeed | VertRelAngle | HorzRelAngle | SpinRate | SpinAxis | Tilt | RelHeight | RelSide | Extension | VertBreak | Iced | VertBi | HorzBreak | lateLocHeig | lateLocSide | ZoneSpeed | ApprAngle | ApprAngle | ApprAngle | ZoneTime |
|------------------|----------|----------|----------|--------------|--------------|----------|----------|----------|-----------|----------|-----------|-----------|----------|----------|-----------|-------------|-------------|-----------|-----------|-----------|-----------|----------|
| Swing | 1 | | | | | | | | | | | | | | | | | | | | | |
| InZone | 0.352938 | 1 | | | | | | | | | | | | | | | | | | | | |
| RelSpeed | 0.040671 | 0.095509 | 1 | | | | | | | | | | | | | | | | | | | |
| VertRelAngle | 0.057142 | 0.06872 | -0.43695 | 1 | | | | | | | | | | | | | | | | | | |
| HorzRelAngle | 0.088142 | 0.070273 | -0.31026 | 0.277089 | 1 | | | | | | | | | | | | | | | | | |
| SpinRate | -0.00998 | 0.027752 | 0.270304 | 0.031485 | 0.007707 | 1 | | | | | | | | | | | | | | | | |
| SpinAxis | 0.039436 | 0.071745 | 0.561803 | -0.43424 | -0.4374 | -0.1412 | 1 | | | | | | | | | | | | | | | |
| Tilt | -0.00105 | -0.01228 | -0.02161 | 0.022537 | 0.274939 | 0.182952 | -0.38275 | 1 | | | | | | | | | | | | | | |
| RelHeight | 0.016065 | 0.044819 | 0.525142 | -0.38457 | 0.095782 | 0.210505 | 0.065989 | 0.145041 | 1 | | | | | | | | | | | | | |
| RelSide | 0.009099 | 0.024153 | 0.115554 | 0.164441 | -0.61419 | 0.097522 | 0.077421 | -0.09811 | -0.16543 | 1 | | | | | | | | | | | | |
| Extension | 0.029769 | 0.05629 | 0.669085 | -0.22643 | -0.22007 | 0.181166 | 0.338374 | 0.028099 | 0.369951 | 0.127358 | 1 | | | | | | | | | | | |
| VertBreak | 0.024669 | 0.077586 | 0.468262 | -0.6091 | -0.26341 | -0.09187 | 0.67075 | -0.08515 | -0.02331 | -0.09261 | 0.185305 | 1 | | | | | | | | | | |
| InducedVertBreak | 0.025231 | 0.095099 | 0.546872 | -0.59656 | -0.26065 | -0.03711 | 0.689354 | -0.01069 | 0.123053 | -0.06617 | 0.277813 | 0.940341 | 1 | | | | | | | | | |
| HorzBreak | 0.027032 | 0.062363 | 0.446324 | -0.41402 | -0.47 | -0.20325 | 0.858347 | -0.57963 | 0.009548 | 0.053717 | 0.226707 | 0.632309 | 0.586044 | 1 | | | | | | | | |
| PlateLocHeight | 0.118368 | 0.216142 | 0.312398 | 0.39592 | 0.144063 | 0.085236 | 0.226105 | 0.035302 | 0.149593 | 0.00118 | 0.172763 | 0.30453 | 0.355662 | 0.169409 | 1 | | | | | | | |
| PlateLocSide | 0.160968 | 0.182832 | 0.08397 | 0.148274 | 0.445952 | -0.09556 | 0.258043 | -0.24199 | -0.00191 | 0.05511 | 0.0308 | 0.145909 | 0.127827 | 0.323959 | 0.371459 | 1 | | | | | | |
| ZoneSpeed | 0.040083 | 0.090497 | 0.996092 | -0.44215 | -0.30713 | 0.268419 | 0.544246 | -0.00832 | 0.538012 | 0.116258 | 0.670289 | 0.446323 | 0.522757 | 0.425026 | 0.288937 | 0.068729 | 1 | | | | | |
| VertApprAngle | 0.071592 | 0.146204 | 0.271373 | -0.0455 | -0.13053 | -0.09264 | 0.527356 | -0.0874 | -0.30634 | 0.001511 | 0.051499 | 0.819645 | 0.754245 | 0.493594 | 0.669119 | 0.287773 | 0.240841 | 1 | | | | |
| HorzApprAngle | 0.09922 | 0.123372 | 0.240599 | -0.2314 | 0.279363 | -0.21483 | 0.587728 | -0.41325 | 0.085631 | -0.4269 | 0.075248 | 0.480072 | 0.43187 | 0.716163 | 0.298376 | 0.705338 | 0.219816 | 0.434282 | 1 | | | |
| ZoneTime | -0.00354 | -0.00472 | 0.084005 | 0.351978 | 0.107192 | 0.24153 | -0.31783 | 0.181721 | 0.4207 | 0.156487 | 0.237656 | -0.73245 | -0.48012 | -0.42912 | -0.06806 | -0.1203 | 0.098929 | -0.66882 | -0.38234 | 1 | | |

RHP vs LHH Swing Correlations

| | Swing | InZone | RelSpeed | VertRelAngle | HorzRelAngle | SpinRate | SpinAxis | Tilt | RelHeight | RelSide | Extension | VertBreak | InducedVertBreak | HorzBreak | PlateLocHeight | PlateLocSide | ZoneSpeed | VertApprAngle | HorzApprAngle | ZoneTime |
|----------------|----------|----------|----------|--------------|--------------|----------|----------|----------|-----------|----------|-----------|-----------|------------------|-----------|----------------|--------------|-----------|---------------|---------------|----------|
| Swing | 1 | | | | | | | | | | | | | | | | | | | |
| InZone | 0.386536 | 1 | | | | | | | | | | | | | | | | | | |
| RelSpeed | 0.066662 | 0.10603 | 1 | | | | | | | | | | | | | | | | | |
| VertRelAngle | -0.01942 | 0.004841 | -0.40299 | 1 | | | | | | | | | | | | | | | | |
| HorzRelAngle | -0.07607 | -0.05975 | -0.33456 | 0.315449 | 1 | | | | | | | | | | | | | | | |
| SpinRate | 0.002011 | 0.067466 | 0.371407 | 0.043543 | 0.022892 | 1 | | | | | | | | | | | | | | |
| SpinAxis | 0.04507 | 0.029784 | 0.510893 | -0.43927 | -0.4929 | -0.21254 | 1 | | | | | | | | | | | | | |
| Tilt | 0.000904 | 0.033059 | 0.047992 | 0.035656 | 0.290001 | 0.265047 | -0.38164 | 1 | | | | | | | | | | | | |
| RelHeight | 0.034708 | 0.06395 | 0.603713 | -0.31769 | 0.034645 | 0.29656 | 0.100641 | 0.158968 | 1 | | | | | | | | | | | |
| RelSide | 0.00677 | 0.002226 | 0.184131 | 0.121938 | -0.58656 | 0.134914 | 0.114145 | -0.08296 | -0.06806 | 1 | | | | | | | | | | |
| Extension | 0.058398 | 0.072262 | 0.720892 | -0.23181 | -0.25337 | 0.247603 | 0.351153 | 0.054906 | 0.49432 | 0.187626 | 1 | | | | | | | | | |
| VertBreak | 0.02388 | 0.066709 | 0.378729 | -0.59819 | -0.31001 | -0.10018 | 0.597806 | -0.05923 | -0.09757 | -0.06634 | 0.125543 | 1 | | | | | | | | |
| InducedVertBre | 0.028251 | 0.085255 | 0.508628 | -0.59959 | -0.31423 | -0.02893 | 0.653799 | -0.00321 | 0.107168 | -0.02522 | 0.271735 | 0.930468 | 1 | | | | | | | |
| HorzBreak | 0.02595 | 0.004993 | 0.36161 | -0.42264 | -0.52841 | -0.2783 | 0.862331 | -0.57873 | -0.00436 | 0.072748 | 0.208412 | 0.578921 | 0.570926 | 1 | | | | | | |
| PlateLocHeight | 0.027051 | 0.129972 | 0.340244 | 0.398 | 0.083427 | 0.154879 | 0.183303 | 0.093696 | 0.187028 | 0.034686 | 0.201754 | 0.296252 | 0.361201 | 0.107602 | 1 | | | | | |
| PlateLocSide | -0.08309 | -0.08216 | 0.010424 | 0.180585 | 0.46747 | -0.10736 | 0.183454 | -0.18817 | -0.01517 | 0.095155 | 0.003601 | 0.029018 | 0.051133 | 0.222478 | 0.26089 | 1 | | | | |
| ZoneSpeed | 0.067808 | 0.103425 | 0.99706 | -0.40686 | -0.3306 | 0.367336 | 0.499679 | 0.056936 | 0.613984 | 0.186241 | 0.722795 | 0.359738 | 0.488185 | 0.345118 | 0.320599 | 0.00254 | 1 | | | |
| VertApprAngle | 0.015579 | 0.085403 | 0.191998 | -0.05847 | -0.16738 | -0.0941 | 0.438677 | -0.04609 | -0.3398 | 4.99E-05 | -0.01964 | 0.834635 | 0.747341 | 0.426868 | 0.641786 | 0.158144 | 0.166385 | 1 | | |
| HorzApprAngle | -0.03601 | -0.04578 | 0.122919 | -0.20863 | 0.262001 | -0.29625 | 0.554714 | -0.40759 | 0.024606 | -0.42309 | 0.021979 | 0.391399 | 0.378595 | 0.680817 | 0.194603 | 0.656499 | 0.10745 | 0.341503 | 1 | |
| ZoneTime | 0.012935 | 0.010444 | 0.244291 | 0.293332 | 0.102441 | 0.287535 | -0.18033 | 0.137583 | 0.563488 | 0.173482 | 0.375253 | -0.70353 | -0.41805 | -0.30951 | -0.02092 | 0.0131 | 0.256795 | -0.67601 | -0.26387 | 1 |

RHP vs RHH

| RHH | FB | Si | CT | SL | CB | CH | SP |
|------------------|----------|----------|----------|----------|----------|----------|----------|
| | Swing |
| InZone | 0.396825 | 0.328264 | 0.375619 | 0.300357 | 0.266144 | 0.413182 | 0.373324 |
| RelSpeed | 0.031894 | 0.018535 | 0.01065 | 0.028767 | 0.025105 | -0.02591 | 0.005969 |
| VertRelAngle | 0.090312 | 0.069602 | 0.110985 | 0.100281 | 0.023253 | 0.193678 | 0.235148 |
| HorzRelAngle | 0.117627 | 0.133161 | 0.125114 | 0.124635 | 0.089207 | 0.091914 | 0.037835 |
| SpinRate | -0.00112 | -0.00908 | -0.0042 | -0.00681 | -0.00678 | -0.00603 | -0.00899 |
| SpinAxis | -0.0006 | 0.018989 | 0.014447 | 0.016479 | 0.016062 | 0.009644 | 0.034486 |
| RelHeight | -0.00692 | -0.00269 | -0.00836 | 0.008833 | -0.0165 | 0.006366 | -0.03613 |
| RelSide | 0.007553 | 0.019444 | 0.000817 | -0.00828 | -0.01245 | 0.020492 | 0.037218 |
| Extension | 0.009748 | -0.00295 | -0.01385 | 0.005938 | 0.013634 | 0.014799 | -0.03866 |
| VertBreak | 0.014471 | -0.01134 | 0.012322 | 0.033241 | 0.039769 | -0.03347 | -0.01228 |
| InducedVertBreak | -0.00837 | -0.0259 | 0.001013 | 0.017879 | 0.034782 | -0.0299 | -0.02 |
| HorzBreak | -0.0022 | 0.008635 | 0.011591 | 0.02563 | -0.00549 | -0.00905 | 0.026244 |
| PlateLocHeight | 0.108701 | 0.116921 | 0.136475 | 0.156079 | 0.045395 | 0.228996 | 0.257767 |
| PlateLocSide | 0.168181 | 0.195733 | 0.186816 | 0.183393 | 0.106904 | 0.139589 | 0.14035 |
| ZoneSpeed | 0.029639 | 0.016655 | 0.009324 | 0.02325 | 0.02294 | -0.03089 | -0.00997 |
| VertApprAngle | 0.097631 | 0.086854 | 0.112743 | 0.126821 | 0.056343 | 0.174227 | 0.221474 |
| HorzApprAngle | 0.113467 | 0.13534 | 0.129072 | 0.140491 | 0.073747 | 0.082076 | 0.056035 |
| ZoneTime | -0.04082 | -0.02391 | -0.02911 | -0.03344 | -0.02548 | 0.009548 | -0.0096 |

RHP vs RHH

| RHH | FB | Si | CT | SL | CB | CH | SP |
|------------------|----------|----------|----------|----------|----------|----------|----------|
| | Swing |
| InZone | 0.396825 | 0.328264 | 0.375619 | 0.300357 | 0.266144 | 0.413182 | 0.373324 |
| RelSpeed | 0.031894 | 0.018535 | 0.01065 | 0.028767 | 0.025105 | -0.02591 | 0.005969 |
| VertRelAngle | 0.090312 | 0.069602 | 0.110985 | 0.100281 | 0.023253 | 0.193678 | 0.235148 |
| HorzRelAngle | 0.117627 | 0.133161 | 0.125114 | 0.124635 | 0.089207 | 0.091914 | 0.037835 |
| SpinRate | -0.00112 | -0.00908 | -0.0042 | -0.00681 | -0.00678 | -0.00603 | -0.00899 |
| SpinAxis | -0.0006 | 0.018989 | 0.014447 | 0.016479 | 0.016062 | 0.009644 | 0.034486 |
| RelHeight | -0.00692 | -0.00269 | -0.00836 | 0.008833 | -0.0165 | 0.006366 | -0.03613 |
| RelSide | 0.007553 | 0.019444 | 0.000817 | -0.00828 | -0.01245 | 0.020492 | 0.037218 |
| Extension | 0.009748 | -0.00295 | -0.01385 | 0.005938 | 0.013634 | 0.014799 | -0.03866 |
| VertBreak | 0.014471 | -0.01134 | 0.012322 | 0.033241 | 0.039769 | -0.03347 | -0.01228 |
| InducedVertBreak | -0.00837 | -0.0259 | 0.001013 | 0.017879 | 0.034782 | -0.0299 | -0.02 |
| HorzBreak | -0.0022 | 0.008635 | 0.011591 | 0.02563 | -0.00549 | -0.00905 | 0.026244 |
| PlateLocHeight | 0.108701 | 0.116921 | 0.136475 | 0.156079 | 0.045395 | 0.228996 | 0.257767 |
| PlateLocSide | 0.168181 | 0.195733 | 0.186816 | 0.183393 | 0.106904 | 0.139589 | 0.14035 |
| ZoneSpeed | 0.029639 | 0.016655 | 0.009324 | 0.02325 | 0.02294 | -0.03089 | -0.00997 |
| VertApprAngle | 0.097631 | 0.086854 | 0.112743 | 0.126821 | 0.056343 | 0.174227 | 0.221474 |
| HorzApprAngle | 0.113467 | 0.13534 | 0.129072 | 0.140491 | 0.073747 | 0.082076 | 0.056035 |
| ZoneTime | -0.04082 | -0.02391 | -0.02911 | -0.03344 | -0.02548 | 0.009548 | -0.0096 |

RHP vs LHH

| LHH | FB | SI | CT | SL | CB | CH | SP |
|------------------|----------|----------|----------|----------|----------|----------|----------|
| | Swing |
| InZone | 0.448945 | 0.406955 | 0.3911 | 0.326973 | 0.257647 | 0.35796 | 0.361619 |
| RelSpeed | 0.068538 | 0.041725 | 0.018141 | 0.067715 | 0.064839 | -0.00926 | 0.017441 |
| VertRelAngle | -0.00809 | -0.01079 | 0.013145 | 0.013609 | -0.04108 | 0.07696 | 0.126698 |
| HorzRelAngle | -0.07489 | -0.03975 | -0.0481 | -0.06875 | -0.07392 | -0.02468 | -0.02695 |
| SpinRate | 0.030635 | 0.021285 | -0.01539 | -0.02067 | 0.007007 | 0.00518 | -0.02459 |
| SpinAxis | -0.00917 | 0.002072 | -0.01197 | 0.009488 | 0.019642 | 0.005425 | 0.010787 |
| RelHeight | -0.01249 | -0.00625 | -0.01616 | 0.022668 | -0.0284 | 0.019925 | -0.03077 |
| RelSide | 0.000335 | 0.008681 | -0.01651 | -0.02746 | -0.00826 | -0.00874 | 0.008562 |
| Extension | 0.02868 | 0.004099 | 0.011665 | 0.031104 | 0.031384 | 0.003657 | -0.01406 |
| VertBreak | 0.033425 | 0.019721 | -0.00977 | 0.04913 | 0.050983 | -0.02499 | -0.01976 |
| InducedVertBreak | 0.000491 | 0.000873 | -0.02022 | 0.011021 | 0.015482 | -0.02627 | -0.03586 |
| HorzBreak | -0.01119 | 0.000155 | -0.01472 | 0.042271 | 0.009604 | -0.02283 | -0.01209 |
| PlateLocHeight | -0.00171 | -0.01049 | 0.002402 | 0.061408 | -0.03166 | 0.093665 | 0.124251 |
| PlateLocSide | -0.10702 | -0.04303 | -0.0861 | -0.08887 | -0.10095 | -0.053 | -0.04385 |
| ZoneSpeed | 0.067039 | 0.038454 | 0.018156 | 0.06571 | 0.064467 | -0.00743 | 0.014535 |
| VertApprAngle | 0.01547 | 0.005193 | 0.00208 | 0.058304 | 0.009967 | 0.05749 | 0.105598 |
| HorzApprAngle | -0.08292 | -0.03782 | -0.05546 | -0.03214 | -0.06078 | -0.03984 | -0.03652 |
| ZoneTime | -0.0694 | -0.04647 | -0.0085 | -0.07236 | -0.06459 | 0.002492 | -0.02454 |

RHP vs LHH

| LHH | FB | SI | CT | SL | CB | CH | SP |
|------------------|----------|----------|----------|----------|----------|----------|----------|
| | Swing |
| InZone | 0.448945 | 0.406955 | 0.3911 | 0.326973 | 0.257647 | 0.35796 | 0.361619 |
| RelSpeed | 0.068538 | 0.041725 | 0.018141 | 0.067715 | 0.064839 | -0.00926 | 0.017441 |
| VertRelAngle | -0.00809 | -0.01079 | 0.013145 | 0.013609 | -0.04108 | 0.07696 | 0.126698 |
| HorzRelAngle | -0.07489 | -0.03975 | -0.0481 | -0.06875 | -0.07392 | -0.02468 | -0.02695 |
| SpinRate | 0.030635 | 0.021285 | -0.01539 | -0.02067 | 0.007007 | 0.00518 | -0.02459 |
| SpinAxis | -0.00917 | 0.002072 | -0.01197 | 0.009488 | 0.019642 | 0.005425 | 0.010787 |
| RelHeight | -0.01249 | -0.00625 | -0.01616 | 0.022668 | -0.0284 | 0.019925 | -0.03077 |
| RelSide | 0.000335 | 0.008681 | -0.01651 | -0.02746 | -0.00826 | -0.00874 | 0.008562 |
| Extension | 0.02868 | 0.004099 | 0.011665 | 0.031104 | 0.031384 | 0.003657 | -0.01406 |
| VertBreak | 0.033425 | 0.019721 | -0.00977 | 0.04913 | 0.050983 | -0.02499 | -0.01976 |
| InducedVertBreak | 0.000491 | 0.000873 | -0.02022 | 0.011021 | 0.015482 | -0.02627 | -0.03586 |
| HorzBreak | -0.01119 | 0.000155 | -0.01472 | 0.042271 | 0.009604 | -0.02283 | -0.01209 |
| PlateLocHeight | -0.00171 | -0.01049 | 0.002402 | 0.061408 | -0.03166 | 0.093665 | 0.124251 |
| PlateLocSide | -0.10702 | -0.04303 | -0.0861 | -0.08887 | -0.10095 | -0.053 | -0.04385 |
| ZoneSpeed | 0.067039 | 0.038454 | 0.018156 | 0.06571 | 0.064467 | -0.00743 | 0.014535 |
| VertApprAngle | 0.01547 | 0.005193 | 0.00208 | 0.058304 | 0.009967 | 0.05749 | 0.105598 |
| HorzApprAngle | -0.08292 | -0.03782 | -0.05546 | -0.03214 | -0.06078 | -0.03984 | -0.03652 |
| ZoneTime | -0.0694 | -0.04647 | -0.0085 | -0.07236 | -0.06459 | 0.002492 | -0.02454 |

Called Strikes/Location Behavior

Called Strikes in Every Count

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0.5% |
| 3.5-3.75 | | 0% | 2% | 8% | 11% | 18% | 17% | 14% | 7% | 2% | 0% | 6.7% |
| 3.25-3.5 | | 1% | 17% | 44% | 60% | 65% | 64% | 63% | 46% | 14% | 0% | 29.4% |
| 3-3.25 | | 3% | 45% | 84% | 93% | 97% | 96% | 95% | 83% | 40% | 2% | 47.7% |
| 2.75-3 | | 5% | 62% | 93% | 99% | 100% | 100% | 100% | 95% | 57% | 3% | 53.3% |
| 2.5-2.75 | | 5% | 69% | 96% | 100% | 100% | 100% | 100% | 97% | 66% | 4% | 55.4% |
| 2.25-2.5 | | 6% | 71% | 97% | 100% | 100% | 100% | 100% | 98% | 68% | 5% | 57.0% |
| 2-2.25 | | 6% | 68% | 95% | 99% | 100% | 100% | 99% | 97% | 70% | 6% | 58.9% |
| 1.75-2 | | 4% | 57% | 90% | 97% | 98% | 98% | 97% | 93% | 64% | 5% | 56.3% |
| 1.5-1.75 | | 1% | 35% | 62% | 75% | 79% | 79% | 77% | 71% | 46% | 3% | 43.1% |
| 1.25-1.5 | | 0% | 6% | 16% | 20% | 23% | 25% | 23% | 21% | 12% | 1% | 12.1% |
| 1-1.25 | | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0.5% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 20% | 0% | 0% | 0% | 0% | 1.6% |
| Grand Total | | 2.3% | 33.4% | 49.8% | 52.5% | 52.7% | 53.3% | 54.1% | 53.1% | 35.9% | 2.5% | 31.4% |

Called Strikes in 3-0 Counts

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|
| Row Labels | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0.7% |
| 3.5-3.75 | | 0% | 0% | 5% | 15% | 27% | 39% | 41% | 10% | 0% | 0% | 14.8% |
| 3.25-3.5 | | 0% | 31% | 59% | 72% | 86% | 89% | 77% | 70% | 18% | 0% | 49.9% |
| 3-3.25 | | 5% | 50% | 91% | 99% | 98% | 100% | 100% | 96% | 46% | 1% | 71.3% |
| 2.75-3 | | 10% | 74% | 97% | 100% | 100% | 100% | 100% | 99% | 67% | 3% | 79.1% |
| 2.5-2.75 | | 16% | 76% | 98% | 100% | 100% | 100% | 100% | 98% | 85% | 6% | 83.2% |
| 2.25-2.5 | | 3% | 78% | 100% | 100% | 100% | 100% | 100% | 96% | 82% | 8% | 80.2% |
| 2-2.25 | | 9% | 80% | 97% | 100% | 100% | 100% | 100% | 100% | 78% | 19% | 82.1% |
| 1.75-2 | | 4% | 60% | 98% | 96% | 100% | 100% | 100% | 95% | 78% | 11% | 77.7% |
| 1.5-1.75 | | 0% | 49% | 76% | 86% | 92% | 92% | 89% | 88% | 53% | 6% | 67.6% |
| 1.25-1.5 | | 0% | 11% | 27% | 45% | 38% | 40% | 33% | 38% | 21% | 0% | 26.1% |
| 1-1.25 | | 0% | 0% | 0% | 4% | 0% | 4% | 6% | 10% | 0% | 0% | 2.0% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 71% | 0% | 0% | 0% | 0% | 27.8% |
| Grand Total | | 4.3% | 54.8% | 73.5% | 80.9% | 83.3% | 84.2% | 82.2% | 80.1% | 57.4% | 5.4% | 63.2% |

Called Strikes in 0-2 Counts

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 0.2% |
| 3.5-3.75 | | 0% | 1% | 4% | 3% | 4% | 6% | 4% | 5% | 2% | 0% | 2.1% |
| 3.25-3.5 | | 0% | 9% | 19% | 45% | 53% | 34% | 51% | 23% | 10% | 0% | 12.8% |
| 3-3.25 | | 1% | 23% | 74% | 75% | 87% | 77% | 81% | 78% | 23% | 0% | 20.1% |
| 2.75-3 | | 2% | 48% | 80% | 100% | 100% | 100% | 100% | 88% | 48% | 1% | 25.3% |
| 2.5-2.75 | | 2% | 57% | 89% | 100% | 100% | 100% | 100% | 83% | 43% | 2% | 22.4% |
| 2.25-2.5 | | 2% | 46% | 87% | 100% | 100% | 100% | 100% | 91% | 60% | 1% | 25.6% |
| 2-2.25 | | 1% | 56% | 91% | 97% | 97% | 100% | 94% | 96% | 49% | 2% | 29.7% |
| 1.75-2 | | 1% | 42% | 83% | 81% | 87% | 90% | 94% | 80% | 43% | 2% | 25.0% |
| 1.5-1.75 | | 0% | 20% | 47% | 54% | 37% | 47% | 40% | 47% | 29% | 1% | 15.7% |
| 1.25-1.5 | | 0% | 4% | 6% | 3% | 5% | 7% | 2% | 9% | 3% | 0% | 2.1% |
| 1-1.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 2% | 0% | 0% | 0.1% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0.1% |
| Grand Total | | 0.5% | 12.8% | 17.5% | 14.0% | 12.0% | 11.7% | 13.7% | 17.7% | 13.0% | 0.6% | 7.5% |

O-2

VS

3-0

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0.2% |
| 3.5-3.75 | | 0% | 1% | 4% | 3% | 4% | 6% | 4% | 5% | 2% | 0% | 2.1% |
| 3.25-3.5 | | 0% | 9% | 19% | 45% | 53% | 34% | 51% | 23% | 10% | 0% | 12.8% |
| 3-3.25 | | 1% | 23% | 74% | 75% | 87% | 77% | 81% | 78% | 23% | 0% | 20.1% |
| 2.75-3 | | 2% | 48% | 80% | 100% | 100% | 100% | 100% | 88% | 48% | 1% | 25.3% |
| 2.5-2.75 | | 2% | 57% | 89% | 100% | 100% | 100% | 100% | 83% | 43% | 2% | 22.4% |
| 2.25-2.5 | | 2% | 46% | 87% | 100% | 100% | 100% | 100% | 91% | 60% | 1% | 25.6% |
| 2-2.25 | | 1% | 56% | 91% | 97% | 97% | 100% | 94% | 96% | 49% | 2% | 29.7% |
| 1.75-2 | | 1% | 42% | 83% | 81% | 87% | 90% | 94% | 80% | 43% | 2% | 25.0% |
| 1.5-1.75 | | 0% | 20% | 47% | 54% | 37% | 47% | 40% | 47% | 29% | 1% | 15.7% |
| 1.25-1.5 | | 0% | 4% | 6% | 3% | 5% | 7% | 2% | 9% | 3% | 0% | 2.1% |
| 1-1.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 2% | 0% | 0% | 0.1% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% | 0.1% |
| Grand Total | | 0.5% | 12.8% | 17.5% | 14.0% | 12.0% | 11.7% | 13.7% | 17.7% | 13.0% | 0.6% | 7.5% |

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | | | | | | | | | | | |
| >4.5 | | 0% | | | | | | | | | | 0.0% |
| 4.25-4.5 | | 0% | 0% | | | | | | | | | 0.0% |
| 4-4.25 | | 0% | 0% | | | | | | | | | 0.0% |
| 3.75-4 | | 0% | 0% | | | | | | | | | 0.7% |
| 3.5-3.75 | | 0% | 0% | | | | | | | | | 14.8% |
| 3.25-3.5 | | 0% | 31% | 59% | 72% | 86% | 89% | 77% | 70% | 18% | 0% | 49.9% |
| 3-3.25 | | 5% | 50% | 91% | 99% | 98% | 100% | 100% | 96% | 46% | 1% | 71.3% |
| 2.75-3 | | 10% | 74% | 97% | 100% | 100% | 100% | 100% | 99% | 67% | 3% | 79.1% |
| 2.5-2.75 | | 16% | 76% | 98% | 100% | 100% | 100% | 100% | 98% | 85% | 6% | 83.2% |
| 2.25-2.5 | | 3% | 78% | 100% | 100% | 100% | 100% | 100% | 96% | 82% | 8% | 80.2% |
| 2-2.25 | | 9% | 80% | 97% | 100% | 100% | 100% | 100% | 100% | 78% | 19% | 82.1% |
| 1.75-2 | | 4% | 60% | 98% | 98% | 100% | 100% | 100% | 95% | 78% | 11% | 77.7% |
| 1.5-1.75 | | 0% | 49% | 76% | 86% | 92% | 92% | 89% | 88% | 53% | 6% | 67.6% |
| 1.25-1.5 | | 0% | 11% | 27% | 45% | 38% | 40% | 33% | 38% | 21% | 0% | 26.1% |
| 1-1.25 | | 0% | 0% | 0% | 4% | 0% | 4% | 6% | 10% | 0% | 0% | 2.0% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 27.8% |
| Grand Total | | 4.3% | 54.8% | 73.5% | 80.9% | 83.3% | 84.2% | 82.2% | 80.1% | 57.4% | 5.4% | 63.2% |

Called Strikes by Pitch Type and Count

| Average of Strike? Column Labels ▾ | | Fastball | Sinker | Cutter | Slider | Curveball | ChangeUp | Splitter | Grand Total |
|------------------------------------|---|----------|--------|--------|--------|-----------|----------|----------|-------------|
| Row Labels | 0 | 37% | 38% | 32% | 32% | 37% | 23% | 20% | 34.5% |
| 0 | 0 | 46% | 45% | 42% | 44% | 46% | 35% | 35% | 44.6% |
| 1 | 1 | 22% | 23% | 18% | 20% | 24% | 12% | 11% | 20.5% |
| 2 | 2 | 9% | 12% | 9% | 6% | 7% | 3% | 4% | 7.5% |
| 1 | 0 | 29% | 30% | 26% | 24% | 27% | 19% | 14% | 26.4% |
| 0 | 0 | 42% | 40% | 39% | 41% | 47% | 31% | 28% | 40.4% |
| 1 | 1 | 26% | 23% | 23% | 24% | 29% | 14% | 14% | 24.0% |
| 2 | 2 | 12% | 16% | 10% | 7% | 8% | 5% | 4% | 9.7% |
| 2 | 0 | 30% | 32% | 27% | 24% | 24% | 19% | 14% | 27.0% |
| 0 | 0 | 45% | 46% | 47% | 46% | 52% | 37% | 35% | 44.6% |
| 1 | 1 | 30% | 30% | 28% | 33% | 38% | 22% | 21% | 29.9% |
| 2 | 2 | 18% | 19% | 13% | 11% | 12% | 6% | 6% | 13.7% |
| 3 | 0 | 41% | 41% | 34% | 28% | 29% | 21% | 20% | 37.3% |
| 0 | 0 | 64% | 63% | 58% | 61% | 60% | 54% | 50% | 63.2% |
| 1 | 1 | 37% | 40% | 39% | 44% | 51% | 34% | 37% | 38.5% |
| 2 | 2 | 22% | 19% | 22% | 18% | 20% | 11% | 12% | 19.6% |
| Grand Total | | 34.4% | 35.5% | 29.8% | 28.4% | 32.7% | 20.4% | 17.2% | 31.4% |

Zone Rate by Pitch Type and Count

| Average of Zone | Column Labels | Fastball | Sinker | Cutter | Slider | Curveball | ChangeUp | Splitter | Grand Total |
|-----------------|---------------|----------|--------|--------|--------|-----------|----------|----------|-------------|
| Row Labels | | 44% | 43% | 39% | 36% | 37% | 31% | 30% | 40.0% |
| 0 | 0 | 49% | 45% | 44% | 43% | 43% | 38% | 36% | 45.3% |
| | 1 | 41% | 40% | 36% | 33% | 35% | 27% | 30% | 36.4% |
| | 2 | 32% | 33% | 27% | 22% | 23% | 18% | 19% | 26.4% |
| | 1 | 45% | 43% | 40% | 35% | 36% | 32% | 30% | 39.4% |
| 1 | 0 | 50% | 46% | 45% | 43% | 44% | 39% | 39% | 45.7% |
| | 1 | 46% | 42% | 42% | 39% | 40% | 33% | 33% | 41.4% |
| | 2 | 37% | 37% | 30% | 27% | 28% | 23% | 22% | 31.0% |
| | 2 | 49% | 47% | 44% | 40% | 37% | 36% | 34% | 43.7% |
| 2 | 0 | 53% | 51% | 50% | 47% | 45% | 45% | 46% | 49.2% |
| | 1 | 51% | 49% | 47% | 46% | 45% | 40% | 40% | 47.7% |
| | 2 | 45% | 43% | 39% | 35% | 34% | 31% | 30% | 38.9% |
| | 3 | 55% | 52% | 52% | 46% | 46% | 43% | 40% | 51.2% |
| 3 | 0 | 55% | 54% | 51% | 50% | 42% | 48% | 50% | 49.7% |
| | 1 | 56% | 53% | 53% | 51% | 50% | 46% | 41% | 53.9% |
| | 2 | 55% | 52% | 51% | 45% | 45% | 42% | 39% | 50.4% |
| Grand Total | | 46.5% | 44.6% | 41.4% | 37.3% | 37.3% | 33.1% | 31.1% | 41.4% |

RHH Called Strikes

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.1% |
| 3.75-4 | | 0% | 0% | 0% | 1% | 1% | 1% | 0% | 1% | 0% | 0% | 0.5% |
| 3.5-3.75 | | 0% | 2% | 7% | 9% | 17% | 16% | 17% | 8% | 2% | 0% | 7.1% |
| 3.25-3.5 | | 1% | 20% | 45% | 59% | 65% | 64% | 64% | 44% | 13% | 0% | 31.4% |
| 3-3.25 | | 4% | 52% | 88% | 94% | 97% | 97% | 96% | 81% | 34% | 1% | 51.1% |
| 2.75-3 | | 6% | 71% | 95% | 99% | 100% | 100% | 100% | 93% | 50% | 2% | 57.0% |
| 2.5-2.75 | | 7% | 78% | 98% | 100% | 100% | 100% | 100% | 97% | 57% | 2% | 57.6% |
| 2.25-2.5 | | 7% | 79% | 98% | 100% | 100% | 100% | 100% | 97% | 59% | 3% | 58.5% |
| 2-2.25 | | 7% | 75% | 97% | 99% | 100% | 100% | 99% | 95% | 59% | 4% | 59.7% |
| 1.75-2 | | 5% | 65% | 93% | 97% | 98% | 98% | 96% | 89% | 54% | 4% | 55.8% |
| 1.5-1.75 | | 2% | 42% | 69% | 77% | 80% | 78% | 70% | 63% | 38% | 2% | 41.8% |
| 1.25-1.5 | | 0% | 7% | 19% | 22% | 23% | 22% | 19% | 15% | 8% | 0% | 11.0% |
| 1-1.25 | | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 0% | 0% | 0% | 0.4% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 22% | 0% | 0% | 0% | 0% | 1.6% |
| Grand Total | | 2.9% | 39.6% | 54.7% | 56.0% | 55.4% | 54.3% | 52.1% | 48.3% | 28.8% | 1.6% | 32.1% |

RHP Called Strikes

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | | | | | | | | | | | |
| >4.5 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | | 0% | 0% | 0% | 1% | 1% | 2% | 1% | 1% | 0% | 0.5% |
| 3.5-3.75 | | 0% | 1% | 7% | 12% | 18% | 17% | 12% | 6% | 2% | 0% | 6.5% |
| 3.25-3.5 | | 1% | 16% | 45% | 61% | 65% | 64% | 61% | 46% | 13% | 0% | 29.4% |
| 3-3.25 | | 3% | 40% | 85% | 94% | 96% | 96% | 95% | 84% | 40% | 2% | 47.7% |
| 2.75-3 | | 5% | 57% | 93% | 99% | 100% | 100% | 100% | 95% | 59% | 3% | 53.5% |
| 2.5-2.75 | | 5% | 67% | 96% | 100% | 100% | 100% | 100% | 98% | 70% | 4% | 55.9% |
| 2.25-2.5 | | 5% | 69% | 96% | 100% | 100% | 100% | 100% | 99% | 71% | 6% | 57.5% |
| 2-2.25 | | 5% | 65% | 94% | 99% | 100% | 100% | 99% | 98% | 75% | 7% | 59.3% |
| 1.75-2 | | 3% | 53% | 88% | 96% | 98% | 98% | 97% | 95% | 70% | 6% | 56.3% |
| 1.5-1.75 | | 1% | 32% | 59% | 74% | 78% | 80% | 79% | 75% | 52% | 5% | 43.1% |
| 1.25-1.5 | | 0% | 5% | 16% | 19% | 23% | 26% | 26% | 25% | 15% | 1% | 12.2% |
| 1-1.25 | | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0.4% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 20% | 0% | 0% | 0% | 0% | 1.6% |
| Grand Total | | 1.9% | 30.6% | 48.5% | 52.1% | 53.0% | 54.1% | 55.4% | 55.1% | 38.8% | 2.8% | 31.4% |

RvR Fastballs, Sinkers, and Cutters

| Average of Strike? Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
|----------------------------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 3.75-4 | | 0% | 0% | 0% | 1% | 1% | 0% | 1% | 1% | 0% | 0.3% | |
| 3.5-3.75 | | 0% | 1% | 3% | 9% | 15% | 15% | 12% | 6% | 2% | 6.0% | |
| 3.25-3.5 | 1% | 17% | 42% | 59% | 62% | 57% | 58% | 40% | 12% | 0% | 29.5% | |
| 3-3.25 | 3% | 45% | 88% | 95% | 95% | 96% | 95% | 81% | 33% | 1% | 49.1% | |
| 2.75-3 | 5% | 65% | 95% | 98% | 100% | 100% | 100% | 93% | 52% | 2% | 55.4% | |
| 2.5-2.75 | 6% | 75% | 97% | 99% | 100% | 100% | 100% | 96% | 63% | 2% | 56.0% | |
| 2.25-2.5 | 7% | 78% | 97% | 99% | 100% | 100% | 100% | 97% | 66% | 3% | 59.1% | |
| 2-2.25 | 7% | 73% | 96% | 99% | 99% | 99% | 99% | 95% | 65% | 5% | 60.0% | |
| 1.75-2 | 5% | 62% | 93% | 96% | 98% | 97% | 96% | 91% | 64% | 5% | 57.2% | |
| 1.5-1.75 | 1% | 42% | 69% | 76% | 78% | 79% | 71% | 69% | 49% | 3% | 43.9% | |
| 1.25-1.5 | 0% | 7% | 21% | 21% | 22% | 26% | 22% | 21% | 13% | 1% | 12.7% | |
| 1-1.25 | 0% | 0% | 1% | 1% | 1% | 0% | 1% | 0% | 0% | 0% | 0.5% | |
| 0.75-1 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 0.5-0.75 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| <0.5 | 0% | 0% | 0% | 0% | 0% | 13% | 0% | 0% | 0% | 0% | 0.7% | |
| Grand Total | | 3.3% | 44.4% | 62.2% | 62.3% | 59.7% | 56.0% | 51.4% | 47.5% | 31.5% | 1.9% | 35.9% |

RvL Fastballs, Sinkers, and Cutters

| Average of Strike? Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|----------------------------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| Row Labels | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 1% | 1% | 0% | 1% | 0% | 0% | 0% | 0.3% |
| 3.5-3.75 | | 0% | 3% | 9% | 14% | 18% | 16% | 10% | 5% | 1% | 0% 5.7% |
| 3.25-3.5 | | 1% | 13% | 43% | 62% | 64% | 64% | 57% | 44% | 12% | 0% 24.2% |
| 3-3.25 | | 0% | 27% | 74% | 93% | 98% | 93% | 94% | 84% | 44% | 2% 39.4% |
| 2.75-3 | | 2% | 34% | 85% | 99% | 100% | 100% | 100% | 96% | 62% | 3% 44.5% |
| 2.5-2.75 | | 1% | 44% | 93% | 100% | 100% | 100% | 100% | 98% | 76% | 5% 48.3% |
| 2.25-2.5 | | 1% | 49% | 93% | 100% | 100% | 100% | 100% | 99% | 76% | 7% 52.6% |
| 2-2.25 | | 1% | 44% | 89% | 100% | 100% | 100% | 100% | 98% | 83% | 9% 58.0% |
| 1.75-2 | | 1% | 32% | 80% | 96% | 97% | 99% | 98% | 98% | 76% | 9% 59.6% |
| 1.5-1.75 | | 0% | 14% | 44% | 71% | 78% | 83% | 86% | 83% | 61% | 6% 49.9% |
| 1.25-1.5 | | 0% | 2% | 9% | 18% | 23% | 30% | 32% | 29% | 20% | 1% 16.4% |
| 1-1.25 | | 0% | 0% | 1% | 0% | 1% | 1% | 0% | 0% | 1% | 0% 0.6% |
| 0.75-1 | | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.1% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 5% | 0% | 0% | 0% | 0.7% |
| Grand Total | | 0.7% | 22.3% | 46.5% | 51.1% | 51.0% | 53.0% | 55.7% | 57.2% | 43.4% | 3.6% 32.1% |

RHP Splitters and Change ups

| Average of Strike? Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|----------------------------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| Row Labels | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 0% | 7% | 0% | 3% | 7% | 0% | 0% | 1.1% |
| 3.5-3.75 | | 0% | 0% | 0% | 23% | 23% | 15% | 15% | 10% | 2% | 5.2% |
| 3.25-3.5 | | 0% | 18% | 52% | 66% | 64% | 68% | 61% | 59% | 18% | 25.2% |
| 3-3.25 | | 6% | 41% | 92% | 98% | 97% | 99% | 98% | 90% | 46% | 2% |
| 2.75-3 | | 5% | 68% | 90% | 100% | 100% | 100% | 100% | 97% | 60% | 2% |
| 2.5-2.75 | | 6% | 56% | 100% | 100% | 100% | 100% | 100% | 98% | 67% | 3% |
| 2.25-2.5 | | 3% | 44% | 91% | 100% | 100% | 100% | 100% | 99% | 70% | 4% |
| 2-2.25 | | 2% | 47% | 88% | 100% | 100% | 100% | 99% | 97% | 69% | 5% |
| 1.75-2 | | 1% | 38% | 82% | 95% | 97% | 99% | 98% | 98% | 67% | 4% |
| 1.5-1.75 | | 1% | 19% | 49% | 66% | 74% | 73% | 77% | 73% | 48% | 3% |
| 1.25-1.5 | | 0% | 1% | 13% | 13% | 19% | 23% | 18% | 20% | 14% | 0% |
| 1-1.25 | | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 0% | 1% | 0% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.1% |
| Grand Total | | 0.6% | 10.2% | 23.8% | 27.4% | 30.9% | 30.1% | 35.4% | 42.3% | 33.2% | 2.1% |
| | | | | | | | | | | | 19.7% |

RvR Splitters and Change ups

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|--------------------|---------------|------|----------|------------|------------|---------|--------|----------|----------|--------|------|-------------|
| Row Labels | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| >4.5 | | 0% | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 0% | 11% | 0% | 0% | 9% | 0% | 0% | 0% | 1.8% |
| 3.5-3.75 | | 0% | 0% | 0% | 25% | 33% | 13% | 26% | 11% | 0% | 0% | 9.2% |
| 3.25-3.5 | | 0% | 29% | 75% | 58% | 80% | 75% | 52% | 67% | 9% | 0% | 32.9% |
| 3-3.25 | | 8% | 43% | 92% | 100% | 96% | 100% | 96% | 81% | 36% | 1% | 52.2% |
| 2.75-3 | | 9% | 88% | 100% | 100% | 100% | 100% | 100% | 92% | 46% | 2% | 49.9% |
| 2.5-2.75 | | 8% | 63% | 100% | 100% | 100% | 100% | 100% | 90% | 63% | 2% | 49.6% |
| 2.25-2.5 | | 4% | 70% | 93% | 100% | 100% | 100% | 100% | 100% | 50% | 1% | 45.3% |
| 2-2.25 | | 3% | 68% | 95% | 100% | 100% | 100% | 100% | 100% | 46% | 3% | 51.6% |
| 1.75-2 | | 2% | 48% | 88% | 98% | 96% | 97% | 97% | 98% | 42% | 1% | 47.6% |
| 1.5-1.75 | | 2% | 29% | 57% | 65% | 71% | 70% | 59% | 64% | 38% | 0% | 37.2% |
| 1.25-1.5 | | 0% | 1% | 10% | 10% | 14% | 24% | 15% | 9% | 4% | 0% | 7.1% |
| 1-1.25 | | 0% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 2% | 0% | 0.3% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| Grand Total | | 0.9% | 13.4% | 25.9% | 26.5% | 28.8% | 28.3% | 31.0% | 39.3% | 23.0% | 0.9% | 18.1% |

RvL Changeup and Splitter

| Average of Strike? Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 >1 | Grand Total |
|----------------------------------|------|----------|------------|------------|---------|--------|----------|----------|-----------|-------------|
| Row Labels | | | | | | | | | | |
| >4.5 | | | 0% | | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | 0% | | | | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | | 0% | 0% | 0% | 5% | 6% | 0% | 0% | 0.9% |
| 3.5-3.75 | 0% | 0% | 0% | 20% | 18% | 16% | 8% | 10% | 3% | 3.8% |
| 3.25-3.5 | 0% | 0% | 31% | 74% | 56% | 64% | 64% | 57% | 22% | 0% |
| 3-3.25 | 0% | 40% | 92% | 96% | 98% | 98% | 99% | 93% | 48% | 2% |
| 2.75-3 | 0% | 55% | 85% | 100% | 100% | 100% | 100% | 99% | 64% | 2% |
| 2.5-2.75 | 0% | 47% | 100% | 100% | 100% | 100% | 100% | 100% | 68% | 4% |
| 2.25-2.5 | 3% | 24% | 89% | 100% | 100% | 100% | 100% | 99% | 75% | 4% |
| 2-2.25 | 0% | 32% | 82% | 100% | 100% | 100% | 99% | 97% | 76% | 5% |
| 1.75-2 | 0% | 31% | 79% | 93% | 98% | 100% | 99% | 98% | 75% | 4% |
| 1.5-1.75 | 0% | 11% | 43% | 66% | 75% | 73% | 81% | 76% | 51% | 4% |
| 1.25-1.5 | 0% | 1% | 14% | 14% | 21% | 23% | 19% | 23% | 17% | 0% |
| 1-1.25 | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 0.5% |
| 0.75-1 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% |
| 0.5-0.75 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0.1% |
| Grand Total | 0.1% | 7.4% | 22.3% | 28.0% | 31.9% | 30.9% | 36.9% | 43.3% | 36.3% | 2.4% |
| | | | | | | | | | | 20.4% |

RHP Curveballs and Sliders

| Average of Strike? | Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
|--------------------|---------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
| >4.5 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4.25-4.5 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4-4.25 | | | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 0.1% | |
| 3.75-4 | | | 0% | 0% | 0% | 2% | 2% | 5% | 0% | 1% | 0% | 0.9% | |
| 3.5-3.75 | | | 0% | 0% | 12% | 17% | 22% | 22% | 17% | 9% | 1% | 0% | |
| 3.25-3.5 | | | 1% | 22% | 54% | 61% | 69% | 70% | 70% | 51% | 15% | 0% | |
| 3-3.25 | | | 6% | 50% | 92% | 93% | 98% | 98% | 96% | 84% | 36% | 2% | |
| 2.75-3 | | | 8% | 67% | 96% | 100% | 100% | 100% | 100% | 95% | 60% | 4% | |
| 2.5-2.75 | | | 7% | 78% | 97% | 100% | 100% | 100% | 100% | 99% | 67% | 5% | |
| 2.25-2.5 | | | 5% | 71% | 99% | 100% | 100% | 100% | 100% | 99% | 67% | 7% | |
| 2-2.25 | | | 5% | 67% | 96% | 100% | 100% | 100% | 99% | 98% | 71% | 8% | |
| 1.75-2 | | | 3% | 51% | 88% | 98% | 98% | 98% | 98% | 95% | 63% | 5% | |
| 1.5-1.75 | | | 1% | 32% | 55% | 76% | 79% | 80% | 76% | 67% | 44% | 5% | |
| 1.25-1.5 | | | 0% | 5% | 14% | 19% | 25% | 24% | 24% | 26% | 11% | 0% | |
| 1-1.25 | | | 0% | 0% | 0% | 1% | 2% | 1% | 2% | 1% | 0% | 0% | |
| 0.75-1 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 0.5-0.75 | | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| <0.5 | | | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 0.1% | |
| Grand Total | | | 1.3% | 24.2% | 40.9% | 49.7% | 56.2% | 61.4% | 66.7% | 64.8% | 41.5% | 3.2% | 30.1% |

RvR Curveballs and Sliders

| Average of Strike? Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total | |
|----------------------------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|-------|
| Row Labels | | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0.2% | |
| 3.75-4 | | 0% | 0% | 0% | 2% | 1% | 4% | 0% | 2% | 0% | 1.1% | |
| 3.5-3.75 | 0% | 0% | 12% | 14% | 19% | 17% | 17% | 10% | 2% | 0% | 10.2% | |
| 3.25-3.5 | 1% | 25% | 52% | 59% | 67% | 71% | 71% | 48% | 12% | 0% | 44.4% | |
| 3-3.25 | 7% | 57% | 96% | 91% | 99% | 97% | 97% | 80% | 28% | 1% | 66.9% | |
| 2.75-3 | 9% | 75% | 98% | 100% | 100% | 100% | 100% | 93% | 49% | 2% | 71.9% | |
| 2.5-2.75 | 9% | 87% | 99% | 100% | 100% | 100% | 100% | 99% | 55% | 2% | 71.6% | |
| 2.25-2.5 | 6% | 78% | 99% | 100% | 100% | 100% | 100% | 99% | 45% | 2% | 65.6% | |
| 2-2.25 | 6% | 74% | 98% | 100% | 99% | 100% | 99% | 97% | 56% | 3% | 62.0% | |
| 1.75-2 | 4% | 61% | 92% | 99% | 98% | 99% | 97% | 91% | 42% | 3% | 51.0% | |
| 1.5-1.75 | 2% | 39% | 63% | 79% | 83% | 82% | 76% | 60% | 25% | 1% | 35.2% | |
| 1.25-1.5 | 0% | 7% | 17% | 21% | 28% | 22% | 23% | 9% | 7% | 0% | 8.1% | |
| 1-1.25 | 0% | 0% | 0% | 2% | 2% | 0% | 2% | 0% | 0% | 0% | 0.3% | |
| 0.75-1 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| 0.5-0.75 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% | |
| <0.5 | 0% | 0% | 0% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0.1% | |
| Grand Total | | 1.6% | 29.8% | 46.7% | 55.6% | 61.7% | 65.9% | 69.4% | 62.2% | 29.8% | 1.1% | 29.6% |

RvL Curveballs and Sliders

| Average of Strike? Column Labels | <-1 | -1--0.75 | -0.75--0.5 | -0.5--0.25 | -0.25-0 | 0-0.25 | 0.25-0.5 | 0.5-0.75 | 0.75-1 | >1 | Grand Total |
|----------------------------------|-----|----------|------------|------------|---------|--------|----------|----------|--------|-------|-------------|
| Row Labels | | | | | | | | | | | |
| >4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4.25-4.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 4-4.25 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| 3.75-4 | | 0% | 0% | 0% | 3% | 3% | 7% | 0% | 0% | 0% | 0.7% |
| 3.5-3.75 | | 0% | 0% | 14% | 30% | 30% | 30% | 17% | 8% | 0% | 8.8% |
| 3.25-3.5 | | 0% | 13% | 59% | 68% | 74% | 67% | 69% | 55% | 17% | 0% |
| 3-3.25 | | 2% | 27% | 77% | 95% | 94% | 98% | 95% | 87% | 44% | 2% |
| 2.75-3 | | 2% | 35% | 88% | 100% | 100% | 100% | 97% | 67% | 5% | 57.8% |
| 2.5-2.75 | | 2% | 45% | 89% | 100% | 100% | 100% | 98% | 75% | 6% | 62.5% |
| 2.25-2.5 | | 2% | 42% | 97% | 100% | 100% | 100% | 99% | 78% | 9% | 63.3% |
| 2-2.25 | | 1% | 42% | 90% | 100% | 100% | 99% | 100% | 98% | 79% | 9% |
| 1.75-2 | | 0% | 18% | 74% | 95% | 98% | 98% | 98% | 97% | 74% | 5% |
| 1.5-1.75 | | 0% | 11% | 31% | 69% | 73% | 78% | 77% | 72% | 52% | 6% |
| 1.25-1.5 | | 0% | 1% | 8% | 15% | 21% | 26% | 24% | 33% | 13% | 1% |
| 1-1.25 | | 0% | 0% | 0% | 0% | 3% | 1% | 2% | 1% | 0% | 0% |
| 0.75-1 | | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0.1% |
| 0.5-0.75 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| <0.5 | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0.0% |
| Grand Total | | 0.3% | 9.5% | 27.4% | 39.0% | 47.8% | 55.8% | 64.0% | 66.8% | 48.9% | 4.0% |
| | | | | | | | | | | | 30.9% |

Example of the zone used

| Average of Strike? | -1--0.75 | -0.75--0.5 |
|--------------------|--------------|--------------|
| Row Labels | | |
| >4.5 | 0% | 0% |
| 4.25-4.5 | 0% | 0% |
| 4-4.25 | 0% | 0% |
| 3.75-4 | 0% | 1% |
| 3.5-3.75 | 2% | 8% |
| 3.25-3.5 | 17% | 44% |
| 3-3.25 | 45% | 84% |
| 2.75-3 | 62% | 93% |
| 2.5-2.75 | 69% | 96% |
| 2.25-2.5 | 71% | 97% |
| 2-2.25 | 68% | 95% |
| 1.75-2 | 57% | 90% |
| 1.5-1.75 | 35% | 62% |
| 1.25-1.5 | 6% | 16% |
| 1-1.25 | 0% | 0% |
| 0.75-1 | 0% | 0% |
| 0.5-0.75 | 0% | 0% |
| <0.5 | 0% | 0% |
| Grand Total | 33.4% | 49.8% |

RHP pitches located between 6in and 1ft armside from center of the plate

| | CSW | CalledStk | SwngStk | RelSpeed | VertBreak | InducedVertBreak | HorzBreak | PlateLocHeight | PlateLocSide | ZoneSpeed | VertApprAngle | HorzApprAngle | ZoneTime |
|------------------|----------|-----------|----------|----------|-----------|------------------|-----------|----------------|--------------|-----------|---------------|---------------|----------|
| CSW | 1 | | | | | | | | | | | | |
| CalledStk | 0.763075 | 1 | | | | | | | | | | | |
| SwngStk | 0.486957 | -0.19292 | 1 | | | | | | | | | | |
| RelSpeed | -0.05467 | -0.08701 | 0.034591 | 1 | | | | | | | | | |
| VertBreak | -0.04385 | -0.08082 | 0.042637 | 0.8811 | 1 | | | | | | | | |
| InducedVertBreak | -0.03062 | -0.06483 | 0.041122 | 0.718188 | 0.95607 | 1 | | | | | | | |
| HorzBreak | -0.1046 | -0.18398 | 0.089826 | 0.528315 | 0.555685 | 0.499643 | 1 | | | | | | |
| PlateLocHeight | -0.07435 | -0.06767 | -0.02143 | 0.184916 | 0.211953 | 0.220319 | -0.11739 | 1 | | | | | |
| PlateLocSide | -0.06779 | -0.04984 | -0.03556 | 0.00866 | 0.008815 | 0.007819 | 0.046636 | 0.038877 | 1 | | | | |
| ZoneSpeed | -0.05304 | -0.08337 | 0.032136 | 0.991986 | 0.867313 | 0.696702 | 0.513491 | 0.159291 | 0.006591 | 1 | | | |
| VertApprAngle | -0.06472 | -0.08838 | 0.021169 | 0.711575 | 0.795763 | 0.760915 | 0.343274 | 0.674735 | 0.032271 | 0.685395 | 1 | | |
| HorzApprAngle | -0.11127 | -0.16531 | 0.054474 | 0.406515 | 0.458605 | 0.436464 | 0.728689 | -0.05141 | 0.152462 | 0.39412 | 0.229211 | 1 | |
| ZoneTime | 0.057124 | 0.091683 | -0.03718 | -0.98488 | -0.89045 | -0.7191 | -0.53964 | -0.16888 | -0.00888 | -0.985 | -0.71216 | -0.40936 | 1 |

RvR pitches located between 6in and 1ft armside from center of the plate

| | CSW | CalledStk | SwngStk | RelSpeed | VertBreak | InducedVertBreak | HorzBreak | PlateLocHeight | lateLocSide | ZoneSpeed | rtApprAngle | grzApprAngle | ZoneTime |
|------------------|----------|-----------|----------|----------|-----------|------------------|-----------|----------------|-------------|-----------|-------------|--------------|----------|
| CSW | 1 | | | | | | | | | | | | |
| CalledStk | 0.750165 | 1 | | | | | | | | | | | |
| SwngStk | 0.53283 | -0.15985 | 1 | | | | | | | | | | |
| RelSpeed | -0.07722 | -0.12763 | 0.048055 | 1 | | | | | | | | | |
| VertBreak | -0.06786 | -0.11952 | 0.051657 | 0.878332 | 1 | | | | | | | | |
| InducedVertBreak | -0.05296 | -0.09878 | 0.047345 | 0.713082 | 0.955711 | 1 | | | | | | | |
| HorzBreak | -0.10542 | -0.18393 | 0.078004 | 0.582124 | 0.557165 | 0.473676 | 1 | | | | | | |
| PlateLocHeight | -0.08328 | -0.08675 | -0.01331 | 0.112804 | 0.170277 | 0.198368 | -0.16212 | 1 | | | | | |
| PlateLocSide | -0.09623 | -0.09235 | -0.02548 | 0.02659 | 0.018259 | 0.011301 | 0.069656 | 0.027182 | 1 | | | | |
| ZoneSpeed | -0.07547 | -0.12362 | 0.045532 | 0.991604 | 0.862863 | 0.689379 | 0.5665 | 0.089296 | 0.023603 | 1 | | | |
| VertApprAngle | -0.08647 | -0.1256 | 0.031651 | 0.66304 | 0.764325 | 0.740176 | 0.316479 | 0.663229 | 0.03486 | 0.635266 | 1 | | |
| HorzApprAngle | -0.11417 | -0.16868 | 0.045426 | 0.466065 | 0.483289 | 0.438988 | 0.726706 | -0.08051 | 0.168357 | 0.454124 | 0.216177 | 1 | |
| ZoneTime | 0.079613 | 0.131561 | -0.04951 | -0.98435 | -0.88559 | -0.71082 | -0.58497 | -0.10007 | -0.02629 | -0.98437 | -0.66442 | -0.46426 | 1 |

RvL pitches located between 6in and 1ft armside from center of the plate

| | CSW | CalledStk | SwngStk | RelSpeed | VertBreak | InducedVertBreak | HorzBreak | PlateLocHeight | lateLocSide | ZoneSpeed | rtApprAngle | grzApprAngle | ZoneTime |
|------------------|----------|-----------|----------|----------|-----------|------------------|-----------|----------------|-------------|-----------|-------------|--------------|----------|
| CSW | 1 | | | | | | | | | | | | |
| CalledStk | 0.767419 | 1 | | | | | | | | | | | |
| SwngStk | 0.458965 | -0.21741 | 1 | | | | | | | | | | |
| RelSpeed | -0.02607 | -0.04982 | 0.029347 | 1 | | | | | | | | | |
| VertBreak | -0.0207 | -0.0507 | 0.038737 | 0.883137 | 1 | | | | | | | | |
| InducedVertBreak | -0.01277 | -0.0414 | 0.037924 | 0.72335 | 0.956887 | 1 | | | | | | | |
| HorzBreak | -0.10341 | -0.18459 | 0.09836 | 0.494104 | 0.555565 | 0.517761 | 1 | | | | | | |
| PlateLocHeight | -0.05624 | -0.04433 | -0.0242 | 0.22306 | 0.234426 | 0.233283 | -0.08767 | 1 | | | | | |
| PlateLocSide | -0.05517 | -0.02918 | -0.04356 | 0.001735 | 0.005359 | 0.006768 | 0.030698 | 0.051855 | 1 | | | | |
| ZoneSpeed | -0.02519 | -0.04695 | 0.026712 | 0.992146 | 0.870111 | 0.702846 | 0.47928 | 0.196333 | -2.7E-05 | 1 | | | |
| VertApprAngle | -0.03944 | -0.05584 | 0.017335 | 0.739001 | 0.814693 | 0.775443 | 0.362188 | 0.679306 | 0.035089 | 0.713743 | 1 | | |
| HorzApprAngle | -0.10845 | -0.16332 | 0.061218 | 0.366791 | 0.442126 | 0.434802 | 0.73011 | -0.03247 | 0.141767 | 0.353635 | 0.238086 | 1 | |
| ZoneTime | 0.029238 | 0.055661 | -0.03262 | -0.98504 | -0.89375 | -0.72611 | -0.51154 | -0.20457 | -0.00222 | -0.98524 | -0.73884 | -0.37321 | 1 |

RHP pitches located between 6in and 1ft gloveside from center of the plate

| | CSW | CalledSTK | SwingSTK | RelSpeed | VertRelAnglrz | RelAngl | SpinRate | SpinAxis | Tilt | RelHeight | RelSide | Extension | VertBreak | icedVertBt | HorzBreak | lateLocHeig | lateLocSide | ZoneSpeed | rtApprAnglrz | ApprAngl | ApprAn | ZoneTime |
|------------------|----------|-----------|----------|----------|---------------|----------|----------|----------|----------|-----------|----------|-----------|-----------|------------|-----------|-------------|-------------|-----------|--------------|----------|--------|----------|
| CSW | | 1 | | | | | | | | | | | | | | | | | | | | |
| CalledSTK | 0.697958 | | 1 | | | | | | | | | | | | | | | | | | | |
| SwingSTK | 0.550237 | -0.21394 | | 1 | | | | | | | | | | | | | | | | | | |
| RelSpeed | -0.00407 | 0.108256 | -0.13177 | | 1 | | | | | | | | | | | | | | | | | |
| VertRelAngle | 0.053535 | 0.00631 | 0.065667 | -0.57811 | | 1 | | | | | | | | | | | | | | | | |
| HorzRelAngle | 0.012122 | -0.09174 | 0.123503 | -0.44283 | 0.234175 | | 1 | | | | | | | | | | | | | | | |
| SpinRate | 0.01498 | -0.00376 | 0.024814 | 0.01556 | 0.085254 | 0.127712 | | 1 | | | | | | | | | | | | | | |
| SpinAxis | -0.01298 | 0.126015 | -0.16464 | 0.668169 | -0.47477 | -0.62088 | -0.20799 | | 1 | | | | | | | | | | | | | |
| Tilt | -0.01564 | -0.10157 | 0.09709 | -0.10413 | 0.033635 | 0.443063 | 0.135975 | -0.33044 | | 1 | | | | | | | | | | | | |
| RelHeight | -0.01533 | -0.00883 | -0.01062 | 0.053134 | -0.42379 | 0.263135 | -0.00175 | -0.07314 | 0.110649 | | 1 | | | | | | | | | | | |
| RelSide | -0.00118 | -0.01102 | 0.011235 | -0.03487 | 0.154466 | -0.69829 | 0.034316 | 0.029497 | -0.11242 | -0.35703 | | 1 | | | | | | | | | | |
| Extension | -0.01469 | 0.043093 | -0.07029 | 0.372618 | -0.2553 | -0.23052 | -0.06455 | 0.308204 | -0.0367 | -0.09447 | -0.00034 | | 1 | | | | | | | | | |
| VertBreak | -0.00467 | 0.119152 | -0.1453 | 0.905794 | -0.62324 | -0.44512 | -0.05838 | 0.755459 | -0.02478 | 0.053204 | -0.04972 | 0.411242 | | 1 | | | | | | | | |
| InducedVertBreak | -0.00414 | 0.120112 | -0.14569 | 0.784504 | -0.59024 | -0.41199 | -0.08033 | 0.744419 | 0.010379 | 0.056599 | -0.05527 | 0.342372 | 0.968724 | | 1 | | | | | | | |
| HorzBreak | -0.00335 | 0.154186 | -0.18435 | 0.65498 | -0.46819 | -0.72602 | -0.21612 | 0.852387 | -0.52635 | -0.02539 | 0.033804 | 0.296074 | 0.672368 | 0.63319 | | 1 | | | | | | |
| PlateLocHeight | 0.057685 | 0.150966 | -0.09734 | 0.371853 | 0.344142 | -0.09591 | 0.040805 | 0.257575 | 0.073735 | 0.025364 | -0.04432 | 0.128006 | 0.427962 | 0.434927 | 0.18896 | | 1 | | | | | |
| PlateLocSide | 0.064767 | 0.079194 | -0.00399 | 0.02536 | 0.023124 | 0.088008 | -0.01845 | 0.046454 | -0.03849 | 0.014033 | 0.006029 | 0.011324 | 0.03048 | 0.031821 | 0.058699 | 0.076096 | | 1 | | | | |
| ZoneSpeed | -0.00823 | 0.097218 | -0.12458 | 0.990893 | -0.59301 | -0.42852 | 0.006824 | 0.64978 | -0.08871 | 0.068829 | -0.03495 | 0.366181 | 0.889604 | 0.759566 | 0.634212 | 0.340204 | 0.020967 | | 1 | | | |
| VertApprAngle | 0.029501 | 0.1544 | -0.13979 | 0.764223 | -0.12548 | -0.40739 | -0.01621 | 0.640461 | -0.00596 | -0.2111 | 0.040508 | 0.330993 | 0.853722 | 0.837297 | 0.539157 | 0.772957 | 0.053606 | 0.735147 | | 1 | | |
| HorzApprAngle | 0.00728 | 0.133842 | -0.14613 | 0.515551 | -0.44932 | -0.07008 | -0.18779 | 0.625845 | -0.32774 | 0.22121 | -0.63754 | 0.205622 | 0.538816 | 0.514495 | 0.7368 | 0.180383 | 0.171824 | 0.499367 | 0.382743 | | 1 | |
| ZoneTime | 0.00518 | -0.10234 | 0.12639 | -0.98606 | 0.584459 | 0.437968 | 0.007368 | -0.66559 | 0.085776 | -0.03971 | 0.035221 | -0.47535 | -0.9079 | -0.77647 | -0.64492 | -0.36007 | -0.02465 | -0.98624 | -0.76054 | -0.50601 | 1 | |

RvR pitches located between 6in and 1ft gloveside from center of the plate

| | CSW | CalledSTK | SwingSTK | RelSpeed | VertRelAnglorz | RelAngi | SpinRate | SpinAxis | Tilt | RelHeight | RelSide | Extension | VertBreak | icedVertBiHorzBreak | lateLocHeig | lateLocSide | ZoneSpeed | rtApprAngrz | ApprAngrz | ApprAng | ZoneTime |
|------------------|----------|-----------|----------|----------|----------------|----------|----------|----------|----------|-----------|----------|-----------|-----------|---------------------|-------------|-------------|-----------|-------------|-----------|----------|----------|
| CSW | | 1 | | | | | | | | | | | | | | | | | | | |
| CalledSTK | 0.700356 | | 1 | | | | | | | | | | | | | | | | | | |
| SwingSTK | 0.517177 | -0.24871 | | 1 | | | | | | | | | | | | | | | | | |
| RelSpeed | 0.02575 | 0.126942 | -0.11727 | | 1 | | | | | | | | | | | | | | | | |
| VertRelAngle | 0.044071 | -0.00028 | 0.060134 | -0.60498 | | 1 | | | | | | | | | | | | | | | |
| HorzRelAngle | -0.01703 | -0.10908 | 0.107681 | -0.44503 | 0.235198 | | 1 | | | | | | | | | | | | | | |
| SpinRate | 0.008378 | -0.00331 | 0.015338 | 0.018422 | 0.069522 | 0.104194 | | 1 | | | | | | | | | | | | | |
| SpinAxis | 0.022047 | 0.142391 | -0.14082 | 0.677621 | -0.48903 | -0.61219 | -0.17183 | | 1 | | | | | | | | | | | | |
| Tilt | -0.01692 | -0.10658 | 0.104829 | -0.11361 | 0.026849 | 0.43993 | 0.117802 | -0.32527 | | 1 | | | | | | | | | | | |
| RelHeight | -0.02121 | -0.01147 | -0.01503 | 0.067396 | -0.43955 | 0.262169 | -0.00466 | -0.0642 | 0.10917 | | 1 | | | | | | | | | | |
| RelSide | 0.009643 | -0.0031 | 0.016805 | -0.04439 | 0.164555 | -0.70012 | 0.03677 | 0.02183 | -0.11354 | -0.36479 | | 1 | | | | | | | | | |
| Extension | -1.4E-05 | 0.053249 | -0.06387 | 0.378267 | -0.26337 | -0.23074 | -0.05108 | 0.310929 | -0.03956 | -0.08931 | -0.00591 | | 1 | | | | | | | | |
| VertBreak | 0.034255 | 0.138802 | -0.11995 | 0.904816 | -0.64899 | -0.43913 | -0.04638 | 0.76244 | -0.02613 | 0.064026 | -0.0625 | 0.412603 | | 1 | | | | | | | |
| InducedVertBreak | 0.037035 | 0.138447 | -0.11575 | 0.77899 | -0.61172 | -0.40173 | -0.06664 | 0.749106 | 0.013354 | 0.062729 | -0.06806 | 0.340624 | 0.967212 | | 1 | | | | | | |
| HorzBreak | 0.025424 | 0.168963 | -0.1681 | 0.670954 | -0.48138 | -0.71972 | -0.18587 | 0.850362 | -0.52036 | -0.01365 | 0.027222 | 0.303573 | 0.679886 | 0.63431 | | 1 | | | | | |
| PlateLocHeight | 0.094455 | 0.170643 | -0.07644 | 0.331428 | 0.346878 | -0.07643 | 0.036958 | 0.239852 | 0.067513 | 0.019417 | -0.0527 | 0.113791 | 0.388535 | 0.39856 | 0.17385 | | 1 | | | | |
| PlateLocSide | 0.055776 | 0.066676 | -0.00426 | 0.033657 | 0.026022 | 0.088563 | -0.01608 | 0.050604 | -0.03391 | 0.01339 | 0.00498 | 0.013401 | 0.037002 | 0.036464 | 0.059664 | 0.092045 | | 1 | | | |
| ZoneSpeed | 0.020506 | 0.115408 | -0.11055 | 0.990771 | -0.61935 | -0.43033 | 0.010664 | 0.658074 | -0.09827 | 0.084411 | -0.04485 | 0.370956 | 0.888283 | 0.75338 | 0.649966 | 0.299402 | 0.029415 | | 1 | | |
| VertApprAngle | 0.075445 | 0.179447 | -0.11279 | 0.752003 | -0.1423 | -0.40459 | -0.01065 | 0.646476 | -0.01188 | -0.22197 | 0.035076 | 0.330059 | 0.845062 | 0.829935 | 0.544072 | 0.750212 | 0.065969 | 0.721878 | | 1 | |
| HorzApprAngle | 0.020169 | 0.136755 | -0.13661 | 0.530608 | -0.4626 | -0.05754 | -0.16536 | 0.624218 | -0.31811 | 0.235987 | -0.64526 | 0.213257 | 0.549443 | 0.520407 | 0.734461 | 0.175903 | 0.172442 | 0.514702 | 0.38807 | | 1 |
| ZoneTime | -0.02437 | -0.12092 | 0.111927 | -0.98631 | 0.610544 | 0.438174 | 0.001024 | -0.67258 | 0.094097 | -0.05595 | 0.045744 | -0.47917 | -0.90571 | -0.7693 | -0.65918 | -0.31942 | -0.03321 | -0.98656 | -0.74711 | -0.52058 | 1 |

RvL pitches located between 6in and 1ft gloveside from center of the plate

| | CSW | CalledSTK | SwingSTK | RelSpeed | ertRelAnglorz | RelAngi | SpinRate | SpinAxis | Tilt | RelHeight | RelSide | Extension | VertBreak | icedVert | BiHorzBreak | lateLocHeig | lateLocSid | ZoneSpeed | rtApprAng | rzApprAng | qZoneTime |
|------------------|----------|-----------|----------|----------|---------------|----------|----------|----------|----------|-----------|----------|-----------|-----------|----------|-------------|-------------|------------|-----------|-----------|-----------|-----------|
| CSW | 1 | | | | | | | | | | | | | | | | | | | | |
| CalledSTK | 0.676297 | 1 | | | | | | | | | | | | | | | | | | | |
| SwingSTK | 0.623323 | -0.15447 | 1 | | | | | | | | | | | | | | | | | | |
| RelSpeed | -0.04846 | 0.08659 | -0.15692 | 1 | | | | | | | | | | | | | | | | | |
| VertRelAngle | 0.069206 | 0.016216 | 0.075608 | -0.52878 | 1 | | | | | | | | | | | | | | | | |
| HorzRelAngle | 0.049786 | -0.07821 | 0.149799 | -0.43621 | 0.231342 | 1 | | | | | | | | | | | | | | | |
| SpinRate | 0.025294 | -0.0092 | 0.043687 | 0.01118 | 0.116172 | 0.172293 | 1 | | | | | | | | | | | | | | |
| SpinAxis | -0.06039 | 0.11763 | -0.20586 | 0.6509 | -0.45026 | -0.63376 | -0.27465 | 1 | | | | | | | | | | | | | |
| Tilt | -0.04146 | -0.12377 | 0.075782 | -0.08227 | 0.04353 | 0.443764 | 0.168964 | -0.33319 | 1 | | | | | | | | | | | | |
| RelHeight | 0.004969 | 0.005339 | 0.000997 | 0.024607 | -0.39268 | 0.269114 | 0.004705 | -0.09247 | 0.118058 | 1 | | | | | | | | | | | |
| RelSide | -0.02102 | -0.0272 | 0.000677 | -0.01809 | 0.135471 | -0.69678 | 0.029661 | 0.042403 | -0.11024 | -0.34256 | 1 | | | | | | | | | | |
| Extension | -0.03742 | 0.02932 | -0.08131 | 0.36171 | -0.23999 | -0.22867 | -0.09001 | 0.302576 | -0.02895 | -0.10532 | 0.009636 | 1 | | | | | | | | | |
| VertBreak | -0.07033 | 0.09204 | -0.19203 | 0.907919 | -0.57863 | -0.45462 | -0.08008 | 0.744058 | -0.01884 | 0.032729 | -0.02767 | 0.408587 | 1 | | | | | | | | |
| InducedVertBreak | -0.07628 | 0.093492 | -0.20156 | 0.794464 | -0.5536 | -0.42945 | -0.10524 | 0.737439 | 0.00829 | 0.045043 | -0.03326 | 0.345164 | 0.971227 | 1 | | | | | | | |
| HorzBreak | -0.0303 | 0.159506 | -0.20996 | 0.625273 | -0.44481 | -0.73503 | -0.27415 | 0.855587 | -0.53063 | -0.05188 | 0.045018 | 0.281519 | 0.660899 | 0.633611 | 1 | | | | | | |
| PlateLocHeight | 0.003463 | 0.1299 | -0.13325 | 0.435712 | 0.34356 | -0.12503 | 0.048324 | 0.283347 | 0.087052 | 0.034476 | -0.03146 | 0.150232 | 0.487517 | 0.489577 | 0.211446 | 1 | | | | | |
| PlateLocSide | 0.101346 | 0.126862 | 0.00126 | 0.006683 | 0.019168 | 0.092935 | -0.02202 | 0.034393 | -0.03983 | 0.01317 | 0.007373 | 0.005785 | 0.017002 | 0.022361 | 0.049694 | 0.049451 | 1 | | | | |
| ZoneSpeed | -0.05135 | 0.075392 | -0.1489 | 0.991083 | -0.54468 | -0.42271 | 0.0005 | 0.634518 | -0.06691 | 0.037987 | -0.01746 | 0.356838 | 0.892213 | 0.770525 | 0.604976 | 0.40443 | 0.0022 | 1 | | | |
| VertApprAngle | -0.04414 | 0.121122 | -0.18778 | 0.786073 | -0.09774 | -0.41263 | -0.02543 | 0.631962 | 0.006353 | -0.19564 | 0.049459 | 0.333127 | 0.867941 | 0.849252 | 0.533677 | 0.804892 | 0.031968 | 0.758452 | 1 | | |
| HorzApprAngle | 0.00502 | 0.15679 | -0.15971 | 0.485833 | -0.42418 | -0.08571 | -0.23122 | 0.626743 | -0.3382 | 0.190733 | -0.62682 | 0.190007 | 0.520284 | 0.505149 | 0.738466 | 0.186872 | 0.165753 | 0.46925 | 0.37502 | 1 | |
| ZoneTime | 0.050341 | -0.07931 | 0.151713 | -0.9856 | 0.536963 | 0.435335 | 0.018498 | -0.65278 | 0.066526 | -0.00785 | 0.016668 | -0.46799 | -0.91184 | -0.78885 | -0.61895 | -0.42365 | -0.00603 | -0.98567 | -0.78375 | -0.47781 | 1 |

Called Strikes+Whiffs by Count RHP vs RHH

| Average of CSW Column Labels ▾ | | Fastball | Sinker | Cutter | Slider | Curveball | ChangeUp | Splitter | Grand Total |
|--------------------------------|---|----------|--------|--------|--------|-----------|----------|----------|-------------|
| Row Labels | 0 | 32.4% | 31.2% | 31.7% | 35.6% | 35.1% | 26.4% | 28.5% | 33.0% |
| 0 | 0 | 40% | 38% | 38% | 43% | 44% | 36% | 39% | 40.5% |
| | 1 | 24% | 20% | 24% | 30% | 28% | 23% | 27% | 25.5% |
| | 2 | 18% | 17% | 20% | 23% | 19% | 17% | 19% | 19.7% |
| 1 | 0 | 25.8% | 23.6% | 27.9% | 30.7% | 28.8% | 25.1% | 26.0% | 27.2% |
| | 1 | 33% | 30% | 35% | 40% | 40% | 35% | 31% | 35.2% |
| | 2 | 25% | 19% | 26% | 31% | 30% | 23% | 28% | 26.3% |
| 2 | 0 | 19% | 20% | 20% | 23% | 21% | 21% | 23% | 20.6% |
| | 1 | 24.6% | 22.9% | 24.9% | 29.7% | 28.8% | 25.7% | 24.9% | 25.9% |
| | 2 | 33% | 34% | 36% | 46% | 48% | 41% | 34% | 35.8% |
| 3 | 0 | 25% | 22% | 25% | 35% | 37% | 29% | 31% | 28.0% |
| | 1 | 20% | 17% | 19% | 23% | 24% | 21% | 21% | 20.9% |
| | 2 | 26.8% | 25.3% | 28.3% | 28.3% | 26.9% | 25.6% | 31.1% | 26.8% |
| Grand Total | 0 | 59% | 61% | 51% | 59% | 50% | 52% | 100% | 55.1% |
| | 1 | 26% | 26% | 29% | 39% | 39% | 33% | 40% | 28.3% |
| | 2 | 18% | 14% | 25% | 25% | 25% | 23% | 29% | 20.5% |

Called Strikes+Whiffs by Count RHP vs LHH

| Average of CSW Column Labels | | | | | | | | |
|------------------------------|----------|--------|--------|--------|-----------|----------|----------|-------------|
| Row Labels | Fastball | Sinker | Cutter | Slider | Curveball | ChangeUp | Splitter | Grand Total |
| 0 | 29.5% | 28.1% | 29.2% | 33.8% | 35.7% | 26.9% | 26.9% | 30.3% |
| | 36% | 33% | 36% | 42% | 43% | 34% | 35% | 37.2% |
| | 21% | 17% | 23% | 27% | 28% | 21% | 22% | 22.7% |
| 1 | 16% | 12% | 16% | 21% | 19% | 16% | 19% | 17.5% |
| | 24.0% | 21.3% | 23.7% | 29.0% | 29.4% | 24.4% | 25.8% | 25.3% |
| | 31% | 26% | 31% | 41% | 44% | 32% | 34% | 32.7% |
| 2 | 23% | 17% | 22% | 29% | 28% | 22% | 26% | 23.9% |
| | 17% | 18% | 15% | 21% | 21% | 18% | 20% | 18.9% |
| | 23.0% | 20.1% | 25.1% | 26.9% | 26.6% | 23.8% | 22.8% | 23.8% |
| 3 | 32% | 28% | 37% | 41% | 45% | 34% | 34% | 32.1% |
| | 22% | 19% | 24% | 32% | 35% | 26% | 25% | 25.0% |
| | 18% | 14% | 20% | 22% | 21% | 19% | 20% | 19.4% |
| 4 | 26.1% | 22.1% | 26.4% | 28.2% | 27.7% | 24.1% | 27.1% | 25.5% |
| | 58% | 55% | 60% | 57% | 75% | 50% | 43% | 51.0% |
| | 24% | 20% | 31% | 38% | 44% | 32% | 38% | 26.3% |
| Grand Total | 16% | 11% | 21% | 25% | 24% | 21% | 24% | 19.1% |
| | 26.4% | 24.2% | 26.4% | 30.5% | 32.2% | 25.2% | 25.8% | 27.2% |
| | | | | | | | | |

Outside RvR Fastball Facts

CSW

1. Called strikes are considerably more important than swinging strikes
2. Having armside run is most helpful

Called Strikes

1. Armside run becomes even more valuable

Swinging Strikes

1. Velocity and zone time become much more valuable
2. Vertical Approach Angle is most important factor
3. Higher pitch locations increase

Outside RvR Sinker Facts

CSW

1. Called strikes considerably outweigh swinging strikes

Called Strikes

1. Higher location improves called strikes%
2. Lower arm slots get more called strikes

Swinging Strikes

1. Arm side run is the most important factor
2. Vertical approach angle being higher, like a four seam fastball, is a close second

Outside RvR Slider Facts

CSW

1. Swinging strikes carry more weight than called strikes
2. Higher vertical release angles and vertical approach angles are most important overall

Called Strikes

1. Same as in CSW, higher vertical release angles and vertical approach angles are most important overall

Swinging Strikes

1. Keep it low is the highest priority
2. The steeper the incoming pitch the better
3. Zone speed is more important than release speed

Outside RvR Curveball Facts

CSW

1. Called and Swinging Strikes are equally valuable

Called Strikes

1. Higher vertical release and approach angles are the carrying factors

Swinging Strikes

1. Keep it low
2. Hard curves work well

Outside RvR Changeup Facts

CSW

1. Swinging Strikes carry more weight than called strikes
2. A hard level changeup yields the most positive outcomes

Called Strikes

1. Same attributes as listed for CSW

Swinging Strikes

1. Downward vertical break is the most important factor

Outside RvR Splitter Facts

CSW

1. Swinging Strikes considerably higher relationship to CSW

Called Strikes

1. High vertical release angle and vertical approach angle are best for called strikes

Inside RvL Fastball Facts

CSW

1. Called Strikes considerably more statistically significant

Called Strikes

1. Armside run is the biggest key to getting more called strikes

Swinging Strikes

1. High vertical approach angle
2. High plate location
3. Zone time over release speed

Inside RvL Sinker Facts

CSW

1. Keep it high
2. Called strikes tie to sinkers extremely well

Called Strikes

1. Keep it high
2. Arm side run is best for called strikes

Swinging Strikes

1. The inverse of called strikes. The more of the ball is coming across the plate like a cutter the better.

Inside RvL Slider Facts

CSW

1. Swinging strikes are considerably more valuable
2. Strongest characteristic is steep induced vertical break

Called Strike

1. Higher vertical release angles get more called strikes

Swinging Strikes

1. Low in the zone
2. Steep vertical approach angle, induced vertical break, and a downward release angle

Inside RvL Curveball Facts

CSW

1. Swinging strikes over called strikes

Called Strikes

1. Flatter and slower

Swinging Strikes

1. Harder with extension
2. Low Location
3. Steep release and approach angle

Inside RvL Changeup Facts

CSW

1. Called strikes are a larger factor

Called Strikes

1. Higher vertical approach and release angle
2. Horizontal approach further from the left
(higher number)

Swinging Strikes

1. As much downward induced vertical and vertical break as possible
2. An upward release

Inside RvL Splitter Facts

CSW

1. Swinging Strikes contribute more than Called

Called Strikes

1. Higher vertical release and approach angle
2. Approach angle coming from further right is better

Swinging Strikes

1. As much armside horizontal break as possible
2. Higher release points are better