# THE BILL JAMES GOLD MINE 



by Bill James




# Comparing Starting Pitchers Across History 

by Bill James

THIS STARTED OUT AS SOMETHING ENTIRELY DIFFERENT, and I'm not going to tell you what it was because it didn't work and it wasn't important. For something else I was trying to do I needed a list of the best starting pitchers each year. I used the Season Score system to generate that list, and then I got interested in that list and what one could do with it. I wound up with a new way to rate starting pitchers across history. There are ten million ways to rate starting pitchers and this is just another one, but...I learned some things I didn't know, I thought it was interesting, and I decided to share it with you.

Suppose that we look at the top ten pitchers in each league each season, and then we compare pitchers based on how they rank among their peers. Our first problem is, how do we rank the pitchers?

I ranked them based on Season Scores. Season Scores is a simple system that I introduced a couple of years ago and revised last August; it scores a pitcher by his wins, losses, innings pitched, ERA, strikeouts and walks, and also Saves, but Saves are not too important for a starting pitcher. I've explained the Season Scores system before and this isn't the place to re-visit that, but the point of the system is to evaluate a pitcher's record without context. In sabermetrics we are

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 usually meticulous about evaluating statistics in context. About 2007 it occurred to me that we were missing something. Suppose that we compare Mike McCormick in 1967 (22-10, 2.85 ERA) to Mark Buehrle in 2004 (16-10, 3.89 ERA.) McCormick was a lot like Buehrle - a cagey lefty who was sneaky fast and would make you beat him. He won the Cy Young Award in ' 67 .

In context, Buehrle's numbers are actually much better than McCormick's. McCormick had a 2.85 ERA, but the league ERA in ' 67 was 3.38. In 2004 the league ERA was 4.64. Buehrle's ERA was 75 points (or $16+\%$ ) better than league - and he was working in a hitter's park. McCormick's ERA was 53 points (or 16-\%) better than league - and he was working in a pitcher's park. In context and adjusting for run support, Buehrle was no doubt better than McCormick, but still, 16-10 is not better than 22-10, and a 3.89 ERA is not better than a 2.85 ERA. This was a way of trying to say "How good are the numbers themselves?", rather than "How good was the pitcher who compiled these numbers?"

This turned out to be useful for a lot of different reasons, in part because it tracks the way that people think in a normal context. The highest-scoring pitcher in the league is usually the Cy Young winner; not always, usually. When there is a difference between the two - when the award goes one way and the Season Score the other - it is probably true that the Season Score is "right" as often as the voters. Since 2000 there have been 20 Cy Young Awards. Seventeen of those have gone to the highest-scoring pitcher in the league. The only awards in the last ten years that did not go to the highest-scoring pitcher in the league were the 2005 American League Award, which went to Bartolo Colon although Johan Santana had a higher Season Score, and both awards in 2009. In 2009 Felix Hernandez had a higher score than Greinke, and Adam Wainwright a higher score than Lincecum.

Maybe our system was right about those judgments; maybe it was wrong. I'm not arguing that the Season Score system is better than the judgment of the Cy Young voters. I am arguing that it is usually about the same as the judgment of the Cy Young voters, and it has certain advantages. The advantages are that it can be easily figured for any pitcher, rather than just the Cy Young candidates, and that it can be looked at for all of baseball history on a constant scale, rather than just the years 1956-2008 and on a scale that has changed

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numerous times.
We use the Season Score method, then, to look at the issue of "Who are the best pitchers in each league each year?" Our next problem is, how do we give credit to those pitchers?

My first thought was to give credit to the top ten pitchers in each league each year, ten points to the \#1 pitcher, 9 to the \#2 pitcher, etc. The problem with this is that it treats unequally the pitchers from different eras. The NL now has 16 teams. From 1900 to 1962 it had only eight teams. For a couple of years in the 19th century, it had only six. With that system, in 1950 there would be 55 points for the pitchers on eight teams, or 6.9 points per team. In 2000 there would be 55 points for 16 teams, or 3.4 points per team.

How do we fix that? Let's try this: let's fix the points at 5.5 points per team. We can do that by this method:

- In a six-team league we give points to the league's six best starting pitchers, on an 8-7-6-5-4-3 scale. Six teams, 33 points, 5.50 points per team.
- In an eight-team league, we give points to the league's eight best starting pitchers, on a scale of 9-8-7-6-5-4-3-2. Eight teams, 44 points, 5.50 points per team.
- In a ten-team league, we give points to the league's ten best starting pitchers, on a scale of 10-9-8-7-6-5-4-3-2-1. Ten teams, 55 points, 5.50 points per team.
- In a twelve-team league, we give points to the league's eleven best starting pitchers, on a scale of 11-10-9-8-7-6-5-4-3-2-1. Twelve teams, 66 points, 5.50 points per team.
- In a fourteen-team league, we give points to the league's eleven best starting pitchers, on a scale of 12-11-10-9-8-7-6-5-4-3-2. Fourteen teams, 77 points, 5.50 points per team.
- In a sixteen-team league, we give points to the league's eleven best starting pitchers, on a scale of 13-12-11-10-9-8-7-6-5-4-3. Sixteen teams, 88 points, 5.50 points per team.

It's basically a ten-best-pitchers list, but we give the pitcher more credit for being the best pitcher in a sixteen-team league than in an eight-team league.

I figured the best pitchers in baseball by that system and totaled up the points, but there was a problem. I had Roy Oswalt ahead of Sandy Koufax. Doesn't sound right.

I am willing to argue for any outcome that is rational, even if it is surprising, but is this a rational outcome? Studying the data, I decided that the biggest problem came from the lack of adequate recognition for truly outstanding seasons. In 1978 Ron Guidry was the best pitcher in the American League, with a won-lost record of 25-3 and an ERA of 1.74. Gaylord Perry was the best pitcher in the National League, but he was 21-6 with an ERA of 2.73.

These seasons are not the same, nor even in the same group. Guidry's season was historic. Dwight Gooden's season in 1985 was historic, as was Pedro's season in 1999, the Big Unit in 2002, and Steve Carlton in 1972. These seasons are something more than the best season in that league that year; they are historic.

I added to the counts three kinds of "historic season bonus points". I gave the pitcher an additional 3 points for

1) Any season in which he led the league in Season Score by 50 points or more,
2) Any season in which he had a Season Score of 400 or higher, post-1900, or
3) Any season which was among the top four seasons of the decade (thus, the top $20 \%$ of the first-in-league seasons).

In the years before the Cy Young Award, a pitcher who led the league in Season Score by 50 points or more would very often be the Most Valuable player. Pitchers don't win the MVP Award anymore, but a pitcher who has the highest season score by 50 points or more is virtually always the Cy Young Award winner. There are only a few cases in which this was not true.

A 400-point season is an even more difficult achievement than leading the league by 50 points. A 20-game winner typically has a Season Score between

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250 and 300. A 400 -point season is big numbers. The last two pitchers to get to 400 points were Guidry in ' 78 and Doc Gooden in '85.

Those seasons are special, so we treat them as special. These three bonuses are not mutually exclusive; one can get the 3 points for leading the league in Season Score by 50 points or more, the 3 points for having one of the top four seasons of the decade, and the 3 points for having a Season Score of 400 . Since 1930 twelve pitchers have gotten all nine points:

- Lefty Grove in 1930 and 1931
- Carl Hubbell in 1933
- Dizzy Dean in 1934
- Robin Roberts in 1952
- Sandy Koufax in 1963, 1965 and 1966
- Denny McLain in 1968
- Steve Carlton in 1972
- Ron Guidry in 1978
- Doc Gooden in 1985

Those were all incredible seasons, and I don't think anyone would question that they all deserve to be distinguished from the "ordinary" Cy Young seasons.

OK, two more little wrinkles I have to explain. First, no points are awarded to any season with a Season Score less than 100. This is a rule which only applies to a handful of seasons in 19th century baseball, and has no impact on the historic standing of any significant pitcher. Second, I created a "damaged goods list", which includes twenty leagues-the Union Association in 1884, all three major leagues in the "strike season" of 1890, the Federal League in 1914 and 1915, both leagues in the warshortened 1918 seasons, both leagues in 1942, 1943, 1944 and 1945, both leagues in 1981, and both leagues in 1994. In 1994 and 1981 a strike wiped out a third of the season, so the best pitchers in the league had records like 13-4 in 190 innings. That's not exactly the same as a Cy Young season in a normal season, is it? It isn't, so I reduced the points awarded in a "damaged season" from 5.50 points per team to 4.50 points per team, and
also, pitchers from "damaged seasons" were not eligible for historic season bonus points, no matter how good their numbers were. Logically, I probably should have done more than that to discount performances in the damaged seasons, but...at least it is something.

## What I Learned

What I learned from doing this is that our modern pitchers stack up extremely well by historical standards. The "recently retired pitchers" list, of course, is a bestiary; Clemens, Maddux, Randy Johnson and others yield to no one in terms of the number of top-rank seasons that they produced -and there are others beyond them, others who perhaps we don't think of as historic pitchers because they don't stack up impressively next to Clemens and Maddux and the Big Unit, but who do stack up surprisingly well when compared to other great pitchers from history.

There were eight pitchers active in the 2009 season who have already done enough, by historic standards, to go into the Hall of Fame, based on the number of high-impact seasons they have already recorded. Two of those - Tim Hudson and Andy Pettitte - are marginal, close calls. They're over the Hall of Fame line, but still close enough that you can argue about it. The other six, based on the big seasons that they have already had, are Randy Johnson, Pedro Martinez, Roy Halladay, John Smoltz, Johan Santana and Roy Oswalt. I know the inclusion of Oswalt on this list may be surprising, but...I'll talk about it later.

Before 1890 there were two semi-established quasimajor leagues, the National League and the American

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Association. In 1890, due to a labor/management dispute, most of the best players in the National League and some of the best players in the American Association started a new league, the Player's League. This a) weakened the competition in all three leagues, and b) opened the door to many new players. Two of the new pitchers were Kid Nichols and By Young.
Although Amos Rusie was the dominant pitcher of the early 1890s in terms of public recognition as a superstar, by the late 1890s Kid Nichols and My Young had become the two greatest pitchers in baseball's short history up to that point-Nichols number one, and Cy Young number two. In 1900-1901 there was another period of labor strife, with new rival leagues starting up. Wy Young signed in a league - the American League - which did become a major league, while Kid Nichols signed in a league which didn't. Young thus moved ahead of Nichols, becoming - in 1901 - the greatest pitcher in baseball history up to that point, as measured by the number of outstanding seasons in his career.

Cy Young got to 500 career wins in part because he pitched in an era when a good pitcher could win 30 games in a season. Thirty wins, for most of My Young's career, meant less than twenty wins does today. We routinely and appropriately discount Young's career record because of this.

But discounted or not, By Young had one hell of a career. Cy Young pitched in the major leagues from 1890 to 1911-22 years. In five of those years (1890, 1906, 1909, 1910 and 1911) he was not one of the top pitchers in the league. The other 17 seasons, he was:

| Year | G | W | L | WPct | IP | SO | BB | ERA | Score | League Rank | SS Points | Bonus | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1891 | 55 | 27 | 22 | . 551 | 423.2 | 147 | 140 | 2.85 | 264 | 7 | 3 | 0 | 3 |
| 1892 | 53 | 36 | 12 | . 750 | 453.0 | 168 | 118 | 1.93 | 549 | 1 | 11 | 6 | 17 |
| 1893 | 53 | 34 | 16 | . 680 | 422.2 | 102 | 103 | 3.36 | 338 | 2 | 10 | 0 | 10 |
| 1894 | 52 | 26 | 21 | . 553 | 408.2 | 108 | 106 | 3.94 | 175 | 4 | 7 | 0 | 7 |
| 1895 | 47 | 35 | 10 | . 778 | 369.2 | 121 | 75 | 3.24 | 392 | 1 | 11 | 0 | 11 |
| 1896 | 51 | 28 | 15 | . 651 | 414.1 | 140 | 62 | 3.24 | 327 | 1 | 11 | 0 | 11 |
| 1897 | 46 | 21 | 19 | . 525 | 335.0 | 88 | 49 | 3.79 | 172 | 9 | 3 | 0 | 3 |
| 1898 | 46 | 25 | 13 | . 658 | 377.2 | 101 | 41 | 2.53 | 349 | 4 | 8 | 0 | 8 |
| 1899 | 44 | 26 | 16 | . 619 | 369.1 | 111 | 44 | 2.58 | 328 | 4 | 8 | 0 | 8 |
| 1900 | 41 | 19 | 19 | . 500 | 321.1 | 115 | 36 | 3.00 | 224 | 2 | 6 | 0 | 6 |
| 1901 | 43 | 33 | 10 | . 767 | 371.1 | 158 | 37 | 1.62 | 522 | 1 | 9 | 6 | 15 |
| 1902 | 45 | 32 | 11 | . 744 | 384.2 | 160 | 53 | 2.15 | 474 | 1 | 9 | 6 | 15 |
| 1903 | 40 | 28 | 9 | . 757 | 341.2 | 176 | 37 | 2.08 | 443 | 1 | 9 | 6 | 15 |
| 1904 | 43 | 26 | 16 | . 619 | 380.0 | 200 | 29 | 1.97 | 450 | 2 | 8 | 3 | 11 |
| 1905 | 38 | 18 | 19 | . 486 | 320.2 | 210 | 30 | 1.82 | 316 | 7 | 3 | 0 | 3 |
| 1907 | 43 | 21 | 15 | . 583 | 343.1 | 147 | 51 | 1.99 | 370 | 4 | 6 | 0 | 6 |
| 1908 | 36 | 21 | 11 | . 656 | 299.0 | 150 | 37 | 1.26 | 404 | 3 | 7 | 3 | 10 |

In 1892, 1895, 1896, 1901, 1902 and 1903 Young scores as the best pitcher in his league. In four others seasons he was the second-best or the third-best. In six seasons beyond that, he was one of the seven best. Four times he was the best pitcher in his league by a margin of 50 points or more. By 1901 Cy Young was the greatest pitcher in the history of baseball, by this method - and he held that position into the 21st century.

## The Hall of Fame Line

I was trying to level the playing field. I was trying to say "the league ERA may be 3.00 one year and 5.00 another year, but let's level the playing field by comparing each pitcher to those pitchers that he actually competed with. Pitchers may pitch 300 innings in one season and lead the league with 200 in another because of the use of bullpens and a five-man starting rotation, but let's compare everyone on a fair basis versus his contemporaries."

Our system has its limitations and its flaws, certainly, but it also has this additional benefit: it gives the
pitcher no credit whatsoever for hanging around as a .500 pitcher. Sandy Koufax had 165 career wins and Dizzy Dean 150, but they easily outpoint Jim Kaat and Tommy John, who hung around a long time and won 280+ games.

The essential reason that this system works as well as it does, and the reason I decided to write about it, is that it draws a relatively bright line between Hall of Fame and non-Hall of Fame pitchers. There are, as I said, millions of ways to rank starting pitchers, and this is just one more. In any of those ways that one can rank starting pitchers, there is a "Hall of Fame line"; there is some point above which most players are in the Hall of Fame, and below which most players are out.

Ordinarily, however, there is a substantial gray area. Usually, when you rank pitchers, you have four things:

- An "in" line,
- An "out" line,
- A gray area between the lines, and
- Outliers.

Outliers on both ends; players who shouldn't be in but are; players who should be in but aren't.

What makes this methodology interesting is that the gray area goes from black to white very, very quickly. The line is: 43 points. At 43 , you're in; below 43 , you're not in. Setting aside active and recently retired pitchers, there are 17 players who score between 43 and 50. Thirteen of those $17-76 \%$ - are in the Hall of Fame. There are 21 players who score between 35 and 42. Only six of those $21-29 \%$ - are in the Hall of Fame. 43 you're in; 42 , you're out. One rarely sees that. This is a summary of the Hall of Famers by ten-point ranges, excluding active and recently-retired pitchers:

| Range | Hall of <br> Papulation |  |  |
| :--- | :---: | :---: | ---: |
| Famers | HOF Pct |  |  |
| 100+ points | 7 | 7 | $100 \%$ |
| 90-99 points | 3 | 3 | $100 \%$ |
| 80-89 points | 2 | 2 | $100 \%$ |
| 70-79 points | 6 | 5 | $83 \%$ |
| 60-69 points | 8 | 7 | $88 \%$ |
| 50-59 points | 10 | 9 | $90 \%$ |
| 40-49 points | 18 | 12 | $67 \%$ |
| 30-39 points | 42 | 8 | $19 \%$ |
| 20-29 points | 76 | 4 | $5 \%$ |
| 10-19 points | 166 | 3 | $2 \%$ |
| 1-9 points | 337 | 2 | $1 \%$ |

So this enables us to say, with a fair degree of confidence, what a Hall of Fame career is in terms of having a necessary number of seasons as one of the best pitchers in the league. I decided to refer to each eleven points, on occasion, as a "strong season". There are 5.5 points per team; 11 points is as many points as there would be on two teams. It's just more convenient sometimes to say that a pitcher had eight strong seasons than that he had a score of 43 points in our strong seasons evaluative system. Comments on individual pitchers are summarized below in alphabetical order.

## Chief Bender

Bender is among the weakest Hall of Fame starting pitchers by this method, checking in with only 23 points. Bender was never the best pitcher in his league in any season, and ranks among the top pitchers in his league in only five seasons.

## Vida Blue

By this method as by so many others, Vida Blue's career appears to be of Hall of Fame stature. With a career won-lost $\log$ of 209-161, Blue certainly has a record comparable to some Hall of Fame pitchers like Don Drysdale (209-166) and Hal Newhouser (207-150)—but also Milt Pappas (209-164) and Lew Burdette (203-144). Pitchers in this group generally go into the Hall of Fame if they have dominant seasons — like Drysdale and Newhouser - and are left out if they do not.

Vida Blue had one of the most dominant seasons of the modern era, winning the American League MVP award in 1971, and won 18 to 22 games four other times. By our system he scores at 50, and almost everybody in that range has been elected to the Hall of Fame. Not counting active and recently retired pitchers, he is the third best-qualified pitcher who has not been elected to the Hall of Fame, behind...well, I'd better save the names.

## Bert Blyleven

With 71 points - six strong seasons - Blyleven ranks as ridiculously over-qualified for the Hall of Fame. He is one of three pitchers in history who has not been elected to the Hall of Fame despite several years on the ballot and more than four strong seasons. Our study in this regard is thus consistent with numerous other methods tending to show Blyleven as a Hall of Fame quality pitcher.

By this method Blyleven ranks as the \#1 starting pitcher in his league in 1984, and among the best starting pitchers in his league in 13 different seasons.


## What makes this methodology interesting is that the gray area goes from black to white very, very quickly.

These are the only pitchers in baseball history who were among the best pitchers in their league in ten or more different seasons:

| Player | Yr <br> Count |  | Player | Yr <br> Count |
| :--- | ---: | ---: | :--- | ---: | ---: |
| Warren Spahn | 17 |  | Steve Carlton | 11 |
| Cy Young | 17 |  | Whitey Ford | 11 |
| Roger Clemens | 15 |  | Tom Glavine | 11 |
| Greg Maddux | 14 |  | Randy Johnson | 11 |
| Tom Seaver | 14 |  | Kid Nichols | 11 |
| Walter Johnson | 13 |  | Eddie Plank | 11 |
| Pete Alexander | 13 |  | Carl Hubbell | 10 |
| Lefty Grove | 13 |  | Pedro Martinez | 10 |
| Bert Blyleven | 13 |  | Jim Palmer | 10 |
| Christy Mathewson | 12 |  | Red Ruffing | 10 |
| Mlke Mussina | 12 |  | Don Sutton | 10 |

## Tommy Bond

Tommy Bond was the number one pitcher in the National League in 1877 and 1878. I figured the alltime top-ten list as it stood after every season beginning in 1876, and Bond, of course, was at the top of the list in the early years, with a total accumulating to 40 points. Bond held the top spot on the chart from 1877 through 1883, being pushed out of the \#1 all-time spot by Old Hoss Radbourn in 1884. He remained on the top-ten list into the early 20th century.

## Tommy Bridges

Bridges, a famous curveball pitcher of the 1930s, had a nice run, being listed among the top pitchers in the American League in seven different seasons from 1934 to 1943 , and ranking first in 1936 . His career total was 28 points.

## Kevin Brown

Kevin Brown does extremely well in our survey, being listed among the best pitchers in his league in 1992,
'96, '97, '98, '99, 2000, and 2003. His career total of 72 points is well above the level that has historically indicated a Hall of Fame career.

Although Tom Glavine won the NL Cy Young Award in 1998, our method lists Brown as the league's best pitcher, Glavine as the third-best. Comparing Glavine to Brown in that season, Brown pitched 28 more innings, had a better ERA, had 100 more strikeouts (257-157) and 25 fewer walks. Glavine was supported by 5.15 runs per nine innings; Brown, by 4.37 .

Again, I'm not saying that our system is right; merely that it is reasonable. Glavine won the Cy Young Award, and he will always have that - but it doesn't mean that he gets all recognition from everybody as the league's best pitcher. Brown has an argument, too.

## Mark Buehrle

After ranking among the best pitchers in the American League in 2001, 2002, 2004 and 2005, Buehrle has not been able to crack the top-pitchers list since 2005. He has 29 points and is holding.

## Jim Bunning

In his first season as a rotation starter (1957), retiring Senator Jim Bunning ranks as the \#1 pitcher in the American League, finishing 20-8 with a 2.70 ERA; in fact, by the season score there is only one other pitcher (Billy Pierce) within 60 points of him.

In the two seasons after that Bunning finished 1412 and 17-13, in both cases just missing the league's best-pitchers list. In 1960 Bunning - despite a wonlost record of 11 and 14 _ ranks as the fourth-best starting pitcher in the American League. There was a shortage of good pitchers in the American League that year. Two young pitchers, Jim Perry and Chuck Estrada, won 18 games each, but both had ERAs about 3.60, and the league ERA was well under 4.00. Whitey Ford and Camilo Pascual, two of the league's best pitchers in that era, had ERAs around 3.00, but missed time with injuries and finished 12-9 and 12-8. Frank Baumann led


Blyleven ranks as ridiculously over-qualified for the Hall of Fame.
the league in ERA (2.67), but made only 20 starts and had a strikeout-to-walk ratio of 71-53. Bunning, leading the league in strikeouts and second in ERA, nearly ranks as the league's best pitcher despite his 11-14 record.

In 1961, of course, Whitey Ford had a historic season, while Bunning's teammate Frank Lary also had a Cy Young-quality campaign, but Bunning, at 17-11 with a better ERA than either Ford or Lary, ranks as the league's number three pitcher. In 1962, at 19-10, he once more ranked among the league's best.

In 1963 Bunning had a poor year, finishing 12-13 with a worse-than-league ERA, failing to place on or near the league's best-pitchers list for the first time in his career. That winter the Tigers traded him to the National League for Don Demeter, an outfielder. It was a poor trade; indeed, it was a stupid trade.

Early in 1964 Bunning pitched a perfect game, baseball's first regular-season perfect game in more than 40 years. In midSeptember, 1964, Jim Bunning seemed poised to win his first Cy Young Award. Entering September he was $14-4$ with a 2.17 ERA. Koufax was at 19-5 but done for the season with an injury. Starting (always on three days' rest) Bunning pitched complete games on September 1, 5 and 13, and took a no-decision on September 9. On September 13 he pitched 10 innings, ultimately winning the game 4-1, making him 17-4 with a 2.23 ERA.

Now let me pause for a moment to defend the reputation of the late Gene Mauch. In popular history, what happened next was that as soon as the Phillies' lead began to slip, Mauch panicked and started Bunning on two days rest to try to arrest the slide. Bunning was shelled, didn't pitch well the rest of the year, and the Phillies had a monumental collapse.

Elements of that are certainly true, but it's not exactly right. Gene Mauch did in fact make an utterly inexplicable decision to start Jim Bunning on two days' rest on September 16, 1964. Bunning did get hit hard, was highly ineffective late in the year, and the Phillies did do an absolutely amazing pennant race pratfall. No one can understand why Bunning made that September 16 start. The Phillies were playing Houston, a team which

had a team batting average for the season of .229 and a team OPS for the season of - I am not making this up - .599. They were one of the worst-hitting teams in the history of baseball. Bunning had pitched a teninning complete game just two days earlier. The Phillies had the pennant virtually wrapped up, six games ahead with a little over two weeks to play. The decision to start Bunning in that game is simply flabbergasting. Bunning was hit hard, and the Phillies lost.

The Gene Mauch blew it story, however, is not exactly right. First, the Phillies lead was not slipping at that time. The Phillies had a $61 / 2$ game lead on September 20 - four days after Bunning's loss to Houston.

Second, Bunning started against Los Angeles on September 20, on his normal rest, and was highly effective, giving up five hits, no walks and no earned runs (two un-earned) in a 9-inning complete-game victory. That made him $18-5$ with a 2.33 ERA.

Third, Bunning's next start after that, on September 24, was on normal rotation, and Bunning did not pitch badly, although he lost.

The Phillies' collapse started on September 21. They lost on the 21st, 22nd and 23 rd , lost on the 24 th with Bunning, and lost again on the 25 th and 26th. Bunning started again on two days' rest on the 27 th and the 30 th - but by then, it was high time to panic. By September 27 the Phillies had lost 6 games of a $61 / 2$ game lead in six days. You know the old joke: If you can keep your head while those around you are panicking, you may not understand the situation. By September 27 the Phillies' house was engulfed in flames; it was time to panic.

There is no defense for the decision to start Bunning on the 16th - but there is also no clear connection between that game and the collapse of the Phillies, which started five days later, after Bunning had pitched an outstanding game on September 20. The Phillies lost six straight games of which Bunning pitched only one, on normal rest, and gave up only three runs. Then he started again on three days' rest, lost, started again on three days' rest, lost again, and pitched a shutout on the last day of the season to finish 19-8, 2.63 ERA.

But also, it wasn't that unusual for a pitcher to start on two days' rest in that era; not common, but not as bizarre as it seems now. Koufax pitched a complete game on September 10, 1963, in the pennant race, came back and started against the Phillies on September 13; nobody says Walt Alston was an idiot for doing that. Warren Spahn in July, 1961, pitched ten-innings, and then came in to pitch relief two days later. He was 40 years old. Nobody said anything about that.

In any event Bunning scores, in 1964, as the number four starting pitcher in the National League, behind fellow Hall of Famers Koufax, Marichal and Drysdale — another really solid season. In 1965 he had almost the same numbers as 1964 (19-9, 2.60 ERA) and scores again as the number four pitcher in the National League, behind the same three pitchers. In 1966 he won 19 games for the third straight season, and this time scores as the \#3 pitcher in the league, behind Koufax and Marichal.

So that is seven times in ten years that Bunning has been listed among the best pitchers in his league. In 1967 Koufax was retired and Marichal was hurt, and Bunning finished only 17-15 - but ranks as the best pitcher in the league. Bunning's 17-15 record in 1966 is the worst wonlost record ever for a league-best pitcher, other than Dazzy Vance in 1930, who also finished 17-15. The Cy Young Award went to Mike McCormick because of his 22-10 wonlost record, but look at the facts: McCormick pitched 262 innings with a 2.85 ERA. Bunning pitched 40 more innings - 302 - with an ERA more than half a run lower, 2.29 . McCormick struck out 150 hitters; Bunning struck out 253. McCormick walked 81 hitters; Bunning walked 73. The park factor in San Francisco, where McCormick pitched, was 98; the park factor in Philadelphia was 108.

Obviously Bunning was better in 1967 than McCormick; he just didn't get the won-lost record he deserved, and thus lost the first Cy Young contest in years in which he would not have had to beat Koufax, Marichal and Drysdale, not to mention Bob Gibson. That was his last good year, but not a lot of pitchers can

By this method, Roger Clemens now ranks as the \#1 starting pitcher of all
time.

match that record. Bunning ranks, by this method, as the \#31 starting pitcher of all time.

## Steve Carlton

Carlton ranks among the best pitchers in the National League eleven years, and ranks first or second five times (1972, 1977, 1980, 1981 and 1982). With 98 points he ranks as the 14th greatest starting pitcher of all time by this method.

## Chris Carpenter

Chris Carpenter piled up 29 points before his injury, based on being among the best pitchers in the league in 2004, 2005 and 2006. Adding 12 points in 2009 - he ranks as the league's \#2 starting pitcher - he now has 41 career points - just short of a Hall of Fame career, in terms of having seasons ranking him among the best pitchers in the league.

## Bob Caruthers

Caruthers, seen by some people as a Hall of Fame candidate, was the best pitcher in the American Association in 1885, but is credited with only three strong seasons (32 points). He does, of course, have some other credentials, in that he was also a good-hitting outfielder when he didn't pitch.

## Jack Chesbro

Chesbro is in the Hall of Fame despite earning only 37 points in our survey - a number that leaves him behind Lew Burdette, Dennis Martinez and Frank Viola. He had a historic season in 1904, of course, and he was also the best pitcher in the National League in 1902. Otherwise his credentials are very modest, and I have long felt that his Hall of Fame selection was a mistake.

## Roger Clemens

By this method, Roger Clemens now ranks as the \#1 starting pitcher of all time. You can agree with that, you can disagree, you can talk about steroids; that's up to you. In terms of having a large number of dominant seasons, Roger Clemens is the greatest starting pitcher
of all time.
By our method, Clemens ranks as the number one starting pitcher in his league in eight different seasons - 1986, 1987, 1990, 1991, 1997, 1998, 2001 and 2004. No one in history can match that:

| Player | Seasons as <br> League's \#1 <br> Starting Pitcher |
| :--- | ---: |
| Roger Clemens | 8 |
| Walter Johnson | 7 |
| Christy Mathewson | 7 |
| Lefty Grove | 6 |
| Jim Palmer | 6 |
| Cy Young | 6 |
| Grover Cleveland Alexander | 5 |
| Randy Johnson | 5 |
| Greg Maddux | 5 |
| Christy Mathewson | 5 |
| Tom Seaver | 5 |
| Warren Spahn | 5 |

Clemens ranks among the best pitchers in the league in 15 seasons, a figure exceeded only by Spahn and Cy Young, with 17 each.

In the eight seasons in which Clemens ranks as his league's \#1 starting pitcher, his career won-lost record was 162-49 - an average of 20-6. But even if you set all eight of those seasons aside, Clemens might still be a Hall of Famer. His record in the rest of his career was 192-135—about the same as the career record of Hall of Fame pitchers Jack Chesbro, Rube Waddell, Ed Walsh and Dazzy Vance.

## David Cone

In our analysis David Cone is a "recently retired" pitcher, meaning that he has earned points in our method since 1990. There are many "recently retired" pitchers
who show by our method as qualified Hall of Famers, and David is easily among them. With the Mets in 1988 (when Cone was 20-3) he ranks as the number two pitcher in the National League, behind Orel Hershiser. In 1990 and 1992 he ranks among the best pitchers in his league, and picks up a few points each year. In 1994, when he won the Cy Young Award for Kansas City, he ranks as the number one pitcher in the league, although we discounted this because it was a strike-shortened season (Cone went $16-5$ in a 115 -game schedule.) In 1995, splitting the year between the Blue Jays and the Yankees, he went 18-8 and ranks as the number three pitcher in the league. In 1997 he picked up a few points at the bottom of the list; in 1998 he won 20 games, and ranks as the fourth-best pitcher in the American League. In 1999, although his won-lost record was just 12-9, he was still the ninth-best pitcher in the league. Adding it all up, he has eight seasons ranking among the best seasons in his league, which is more than most Hall of Fame pitchers, and he has 60 points - about $40 \%$ above the Hall of Fame threshold.

Cone had a career won-lost log of 194-126, which, again, is similar to Hall of Famers Chesbro, Vance, Waddell and Walsh. In the last fifty years pitchers with those kind of won-lost records generally have not been selected for eternal fame, as the emphasis has been on career totals, rather than dominating seasons.

## Mort Cooper

Mort Cooper ranked as the \#1 or \#2 pitcher in the National League three straight years (1941-42-43), but pulled up with just 23 strong-season points.

## Stan Coveleski

Stan Coveleski had seven seasons ranking among the best pitchers in his league and was the top dog in 1925. He had a career total of 43 points, which puts him right on the line between "in" and "out".


There are many "recently retired" pitchers who show by our method as qualified Hall of Famers, and David Cone is easily among them.

## Mike Cuellar

Mike Cuellar had major league opportunities as early as 1959, but struggled for many years to establish himself as a major league pitcher, with a career won-lost record of 6-9 through 1965. He was always regarded as a very talented pitcher.

Finally getting his feet on the ground in 1966, Cuellar ranks among the best pitchers in the National League in two seasons (1966-1967), and among the best in the American League in five (1969-1970-1971-1972-1974). In 1969 he split the Cy Young Award with Denny McLain, a tie vote. Our system sees him as the \#2 pitcher in the American League in that season, behind McLain, and \#3 in 1970. He had a career total of 34 points, and would be in the Hall of Fame if he had gotten traction about three years earlier.

## Paul Derringer

Paul Derringer was 18-8 in 1931, 22-13 in 1935, $21-14$ in 1938, 25-7 in 1939, and 20-12 in 1940. He ranks among the best pitchers in the league in all of those seasons, and was the \#2 pitcher in the league in 1938 and 1939. However, Derringer's career total of 29 points is well short of the Hall of Fame standard.

## Don Drysdale

Drysdale ranks among the best starting pitchers in the National League in 1957 and in every season between 1959 and 1965. In 1962, when he won the Cy Young Award with a 25-9 record, we do have him ranked as the \#1 starting pitcher in either league.

Interestingly, Drysdale does not rank among the best starting pitchers in the National League in 1968, when he had the famous consecutive-scoreless-inning streak - and does not deserve to. His won-lost record was just 14-12. His ERA was good, 2.15 , but that was only sixth in the league in 1968, and he was nowhere near the top ten in the league in innings pitched or strikeouts.

He does, however, clear the Hall of Fame standard by this method, with a career total of 50 points.

## Dennis Eckersley

Dennis Eckersley ranked among the best starting pitchers in the American League in 1978 and 1979, and earned 18 points by this method as a starting pitcher. His biggest credentials, of course, are in his relief career.

## Bob Feller

Bob Feller ranks as the number one starting pitcher in the American League in 1939, 1940, 1946 and 1947, and ranks second in 1941 (behind Thornton Lee). He also made the list in 1938, 1948, 1950 and 1951.

Despite missing four prime seasons due to World War II, Feller still ranks as the \#17 starting pitcher of all time by this method, actually tied for 17 th with Carl Hubbell. His career total was 83 points. If one assumes that he would have been healthy and productive through the War years, he would probably have ranked about 5th or 6th all-time.

## Wes Ferrell

Wes Ferrell, although seen by some people as deserving of Hall of Fame status, was never the best pitcher in his league, and had only two seasons ranking among the top three in his league. His career total is only 35 points. Few pitchers in that range of accomplishment have been named to the Hall of Fame.

## Fat Freddie Fitzsimmons

Fat Freddie Fitzsimmons was not exactly fat, until the end of his career; he was kind of built like a hobbit. He was quite short with extremely short legs but a large, powerful torso and long arms. He had a big neck and a big head. He was odd-looking, like an oversized dwarf. He is listed now at $5-11$; I don't know where that comes from. He was probably $5-8$, but a big man from the waist up.

He threw some knuckleballs and/or knuckle curves, but he made his living off a sinker. He wasn't someone you would look at and say "Wow; there's a Hall of Famer" - yet he won 217 games in his career, and


If one assumes that Feller would have been healthy and productive through the War years, be would probably have ranked about 5th or 6th all-time.
lost only 146 . His won-lost record is better than many Hall of Famers, yet in our system he has only 17 points, nowhere near a Hall of Fame number.

He never got above $6 \%$ in the Hall of Fame voting, and this is sort of what I am getting at. The Hall of Fame voters look for certain things, like dominant seasons and dominant performances. Don Drysdale things. Freddie Fitzsimmons had more wins than Don Drysdale and fewer losses, but he had hardly any of the things that made Drysdale a Hall of Famer. I didn't design this system to track the way that Hall of Fame voters think, but it just accidentally does. This is useful, and instructive.

## Whitey Ford

Ford had a historic season in 1961, leading the American League in Season Score by more than 50 points, and a career total of 72 points (six strong seasons). He ranks as the \#22 starting pitcher of all time by this method.

## Bob Gibson

I know that many people have come to think of Bob Gibson as the paragon of pitching virtues, but in all candor, he doesn't do great by this method. He has 61 points in his career, a Hall of Fame number, but not a front-rank Hall of Fame number. He ranks as the number one pitcher in the National League in 1968 and 1970, his two Cy Young seasons, and also ranks second in 1969, fourth in 1972. 1968 was a historic season, obviously.

Gibson is held back a little, of course, because he was going head-to-head in his best seasons with Koufax and Marichal and Don Drysdale, and they couldn't all be the best pitcher in the league-but then, so was Jim Bunning, and Bunning got 63 points. He was slow getting started. Everybody remembers that Koufax struggled for years before he found himself, but Gibson was the same age as Koufax (a few weeks older, actually), and he was two or three years later than

Koufax in harnessing his ability. He had seven years as one of the best pitchers in the National League. He can accurately be described as a great pitcher, but somehow he has become the archetype of a great pitcher. I'm not sure that's justified by the record.

Within the last year, we have begun to hear the argument that Gibson was held back because he started on a five-man rotation while others in his league were working on a four-man rotation. This is not entirely untrue, but show me the season in which Gibson would rank better with more starts. Gibson ranked 1-4 in the National League in innings pitched in 1964, 1965, 1966, 1968, 1969, 1970 and 1972. He was ninth in 1963, and had in-season injuries in 1967 and 1971. He ranks below Koufax, Marichal, Bunning and Drysdale in the early part of that era not because he didn't pitch as much, but because he didn't pitch as well. He did out-last them all, and this gave him a couple of years as the league's best pitcher.

## Tom Glavine

Tom Glavine, Warren Spahn Lite, had eleven seasons among the best pitchers in the National League, and ranked first in 1991, when he did win the Cy Young Award. His career total was 90 points.

## Lefty Gomez

With 48 points, Gomez is over the Hall of Fame line with a half-season to spare. He was the best pitcher in the American League in 1934 and 1937 - posting a 2.33 ERA both years - and was among the best pitchers in four other seasons. See comments on Ron Guidry.

## Dwight Gooden

Gooden compiled 59 strong season points in his relatively short career. He is listed in my study as a "recently retired" pitcher.

## Lefty Grove

With 13 seasons among the best pitchers in the American League and six seasons as the best pitcher


## Bob Gibson doesn't do great by this method.

in the American League, Grove ranks as the sixth-best starting pitcher in baseball history by this analysis. Had we done this study a decade ago, Grove would have ranked third, behind Cy Young and Walter Johnson.

Ron Guidry
There are four pitchers in this study who are "true outliers" - that is, real and dramatic exceptions to the general patterns of the data. Those four are Bert Blyleven, Ron Guidry, Jesse Haines and Rube Marquard. There are several "marginal exceptions" to the rules, marginal outliers. Billy Pierce is a few points over the Hall of Fame line but never got a nibble from the Hall of Fame voters; Eppa Rixey and Herb Pennock are a few points below the Hall of Fame line but did go in, as did a dozen or so other pitchers. These are marginal calls.

Jesse Haines and Rube Marquard are "negative outliers" - pitchers who made the Hall of Fame despite a serious shortage of meaningful credentials - and then there are Bert Blyleven, at 71 points, and Ron Guidry at 60 .

Blyleven and Guidry are so far above the Hall of Fame line that one would think that their Hall of Fame selection would not be an issue. Blyleven, of course, has become a popular candidate. Guidry has not.

Guidry's career in several respects parallels that of Lefty Gomez. Gomez' career record was 189-102;

Guidry's was 170-91. Gomez' ERA was 3.34; Guidry's was 3.29. Both were Yankees, both left-handers, both hard throwers, both thin. Guidry had three 20 -win seasons; Gomez had four.

In the past, I have analyzed this comparison in this way:

1) Gomez was fortunate to make the Hall of Fame, being very marginally qualified,
2) Guidry was similar but a little bit behind Gomez, thus not in a range where his Hall of Fame selection was likely,
3) Gomez had three outstanding seasons; Guidry only one, 1978, and
4) Gomez made the Hall of Fame, in part, based on his post-career reputation as an entertainer and ambassador for the game.

But the implications of this new method are totally incompatible with that analysis. As this method sees it, putting Gomez in the Hall of Fame was not a reach. Gomez is well qualified based on the number of highquality seasons that he produced. And Guidry, rather than ranking behind Gomez, in fact ranks far ahead of him.

How does that happen? These are Ron Guidry's six point-producing seasons, in the form I used earlier for Cy Young:

| Year | G | W | L W Pct | IP | SO | BB | ERA | Score | Rank | SS Points Bonus | Total |  |
| :--- | ---: | :---: | :---: | :---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1977 | 31 | 16 | 7 | .696 | 210.2 | 176 | 65 | 2.82 | 237 | 6 | 7 | 7 |
| 1978 | 35 | 25 | 3 | .893 | 273.2 | 248 | 72 | 1.74 | 439 | 1 | 12 | 9 |
| 1979 | 33 | 18 | 8 | .692 | 236.1 | 201 | 71 | 2.78 | 268 | 3 | 10 | 10 |
| 1982 | 34 | 14 | 8 | .636 | 222.0 | 162 | 69 | 3.81 | 165 | 11 | 2 | 2 |
| 1983 | 31 | 21 | 9 | .700 | 250.1 | 156 | 60 | 3.42 | 257 | 4 | 9 | 9 |
| 1985 | 34 | 22 | 6 | .786 | 259.0 | 143 | 42 | 3.27 | 289 | 2 | 11 | 11 |



I am not suggesting that my new method here should substitute for all other judgment about Hall of Fame selections, not at all.

A total of 60 points. It takes 43 , historically, to be a Hall of Famer. Although Bret Saberhagen won the Cy Young Award in 1985, Guidry's record is just as good; I have Saberhagen with a Season Score of 290, Guidry 289. That gives Guidry four seasons among the league's four best pitchers, and he was competing in a 14 -team league. Gomez had four such seasons, competing in an eight-team league.

What happened to Guidry, in a sense, was that Guidry's 1978 season was so good that it made the rest of his career look bad by comparison. Also, Guidry competed in the middle of a historic outbreak of 300 -game winners and near-300-game winners. He was competing on the ballot with Steve Carlton, Phil Niekro, Don Sutton, Nolan Ryan, Jim Kaat, Tommy John, Bert Blyleven and others. He was $100+$ wins behind them.

By Guidry's era, career win totals had come to dominate the Hall of Fame discussion. Perhaps this is right; perhaps it is wrong. I am not suggesting that my new method here should substitute for all other judgment about Hall of Fame selections, not at all. There are many other ways to look at the issue. Perhaps those other ways are better.

But while those other pitchers have 100+ wins more than Guidry, Guidry's winning percentage was far better than Carlton's, or Sutton's, or Niekro's, or Kaat's, or Tommy John's, or Ryan's, or Blyleven's or Gaylord Perry's; it was even far better than Tom Seaver's. Guidry was further over .500 - wins minus losses - than most of those pitchers.

Steve Carlton's ERA was 41 points better than the league norm for his career. Don Sutton's ERA was 45 points better-than-league, Tommy John's was 42 points better, Blyleven's 50 points better. Jim Kaat was 15 points better than league. Ron Guidry's ERA was 76 points better than the league average.

I am merely pointing this out: in general, through baseball history, pitchers who have this many seasons as one of the best pitchers in their league have been almost automatic Hall of Fame selections. Historically, the

Through baseball history, pitchers who have this many seasons as one of the best pitchers in their league have been almost automatic Hall of Fame selections.


Hall of Fame has made room for all pitchers with 250+ wins-but also for pitchers who were more dominant in shorter careers.

## Jesse Haines

The only starting pitchers who have been selected with less than 23 points are Dennis Eckersley, Rube Marquard, Jesse Haines, Babe Ruth, Albert Spalding and Hoyt Wilhelm. All of those except Haines and Marquard, of course, have other credentials. Eckersley and Wilhelm were relief pitchers. Babe Ruth, I believe, was an outfielder. Albert Spalding was a millionaire businessman who was one of baseball's most powerful behind-the-scenes executives from 1877 into the 20th century.

And then there is Jesse Haines, whose "other accomplishment" was that he was a friend of Frankie Frisch, the central figure on the Hall of Fame Veteran's Committee at the time Haines was elected. Haines' playing credentials consist of only three seasons among the league's best pitchers, totaling 19 points. He misses by 16 points the bottom of the gray area. He is perhaps the worstqualified pitcher in the Hall of Fame.

## Roy Halladay

Roy Halladay through 2009 has 60 points worth of strong seasons, putting him already over the Hall of Fame line.

Mel Harder
Mel Harder's career won-lost record (223-186) is similar to but better than that of his close contemporary Paul Derringer (223-212). Derringer, whose career was a mixture of good and awful seasons, scores at 29 points in our system, Harder at 28.

## Orel Hershiser

While Hershiser has not become a popular Hall of Fame candidate and may never do so, with only 204 career wins, he scores at 45 points in our system, which would put him just over the Hall of Fame line. In that he pitched until 2000, we considered him a "recently retired" pitcher.

## Carl Hubbell

Tied with Bob Feller for the 17th spot all-time.

## Catfish Hunter

Catfish Hunter, as you probably know, was elected to the Hall of Fame in his third year of eligibility despite a won-lost record - and an overall record - no better than other pitchers who were not selected. Catfish's won-lost record was 224-166. Luis Tiant, whose career ran almost exactly the same years in the same league, was 229-172. Their ERAs were almost the same (3.30 vs. 3.26, edge to Catfish), although Tiant pitched in much more difficult parks. Catfish in his career was only 56 runs better than league average, parkadjusted - an extremely low number, for a Hall of Famer - whereas Tiant was 172 runs better than an average pitcher.

However, while I am not arguing that the selection of Hunter/dismissal ofTiant was right, it is consistent with the voting history of the institution, when looked at from this standpoint. Both Hunter and Tiant had six seasons among the best pitchers in the American League, but Hunter had three seasons ranking \#1 or \#2. Tiant had only one (1968). Hunter had 44 points in our system - over the Hall of Fame line - Tiant had 28, which is well under the line.

In all candor, this argument represents the weakness or failure of this line of analysis, rather than its strength. Catfish was not better than Tiant; he merely looked a little bit better because he pitched in a pitcher's park for a team that won three consecutive World Series. Our system makes no adjustment for that, and thus signs on to the wrongheaded supposition that Hunter was greater than he was. That is the strength and weakness of our system - that it tracks conventional wisdom about pitchers, right or wrong, and this enables us to spot cases where the conventional analysis for some reason misfired.

## Larry Jackson

One of the favorites of my childhood - as was Catfish - Jackson won 194 games in his career, but

## Our system tracks

 conventional wisdom about pitchers, right or wrong, and this enables us to spot cases where the conventional analysis for some reason misfired.earned only 10 points as one of the better pitchers in his league.

## Ferguson Jenkins

An obvious Hall of Famer, ranks among the best pitchers in his league in all seven of his 20 -win seasons, plus 1978 (when he was 18-8 with Texas). He does, however, rank well below Bert Blyleven, a contemporary pitcher with a similar won-lost record.

## Tommy John

John has a similar career won-lost record (288-231) to Ferguson Jenkins (284-226) and Blyleven (287-250). His ERA is also the same as Jenkins' (3.34), which is only three points different from Blyleven (3.31). However, while Blyleven comes in at 71 points in this system and Jenkins at 59, John comes in at 36 . He had a lot of seasons in a very long career in which he pitched well, but just not enough innings to be considered one of the best pitchers in the league. He was 10-5 in 1968, 11-5 in 1972, 13-3 in 1974, 5-3 in 1986 and 13-6 in 1987. He also had a lot of $10-$ 10, 9-8 type of seasons. These seasons add up to essentially the same totals as Blyleven and Jenkins, but they don't have the same impact on Hall of Fame voters. What puts you in the Hall of Fame is if voters look at you and decide "That guy is one of the best pitchers in the league", and then you stay there for several years.

I do believe that Tommy John will eventually be in the Hall of Fame. Historically, the Hall of Fame has eventually selected everybody with $250+$ wins. The very large number of pitchers from the 1970s and 1980s with $250+$ wins made it impossible to select them all in the BBWAA vote, but I do believe that, in time, they will all or almost all get in. And Tommy John, whose name has entered the American Language, is not likely to be forgotten.

## The Johnson Twins

Walter Johnson, as noted earlier, had as many seasons as his league's best starting pitcher - $7-$ as anyone
in history B.C. (Before Clemens). By this method, Cy Young at the end of his career was the number one pitcher of all time by the margin of 159 to 99 . Christy Mathewson got to 121 points, and he then ranked as the \#2 starting pitcher in MLB's brief history. Walter Johnson passed Mathewson in 1924, added a few more points in 1925, and retired with a career total of 135 . Lefty Grove got to 122 points, one up on Matty, in 1939.

And there the leaders sat, for several generations: Cy Young, 159, Walter Johnson, 135, Grove 122, Mathewson, 121. That was the leader board in 1940, in 1950, in 1960, in 1970. Spahn in 1963 tied Christy Mathewson for the \#4/\#5 spot on the list, but through the 1970 s, 1980 s and 1990 s there was no change to the all-time historical starting rotation: Cy Young, Walter Johnson, Lefty Grove, Mathewson or Spahn. By 1990 this was the all-time top ten list:

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Cy Young | 159 |
| 2. | Walter Johnson | 135 |
| 3. | Lefty Grove | 122 |
| t-4. | Christy Mathewson | 121 |
| t-4. | Warren Spahn | 121 |
| 6. | Pete Alexander | 116 |
| 7. | Tom Seaver | 113 |
| $\mathrm{t}-8$. | Kid Nichols | 99 |
| $\mathrm{t}-8$. | Jim Palmer | 99 |
| 9. | Steve Carlton | 98 |
| $\mathrm{t}-10$. | Carl Hubbell | 83 |
| $\mathrm{t}-10$. | Bob Feller | 83 |

But for that word "tie", the top four had not changed in 51 years. Roger Clemens claimed the \#10 spot in 1992. He added a few points in 1994, and then was his league's top pitcher again in 1997 and 1998. By the close of the millennium the top four had not changed for 60 years, but a challenge was on the horizon:

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Cy Young | 159 |
| 2. | Walter Johnson | 135 |
| 3. | Lefty Grove | 122 |
| $\mathrm{t}-4$. | Christy Mathewson | 121 |
| $\mathrm{t}-4$. | Warren Spahn | 121 |
| 6. | Roger Clemens | 119 |
| 7. | Pete Alexander | 116 |
| 8. | Tom Seaver | 113 |
| 9. | Greg Maddux | 107 |
| $\mathrm{t}-10$. | Kid Nichols | 99 |
| $\mathrm{t}-10$. | Jim Palmer | 99 |

Finally, as we skated by the millennium bug, a new order arrived:

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Cy Young | 159 |
| 2. | Walter Johnson | 135 |
| 3. | Roger Clemens | 125 |
| 4. | Lefty Grove | 122 |
| t-5. | Christy Mathewson | 121 |
| t-5. | Warren Spahn | 121 |
| 7. | Greg Maddux | 119 |
| 8. | Pete Alexander | 116 |
| 9. | Tom Seaver | 113 |
| t-10. | Kid Nichols | 99 |
| t-10. | Jim Palmer | 99 |

Randy Johnson at that moment was at 80 points, in 15th place all-time - but Clemens, Maddux and Randy Johnson were not old pitchers ready to retire; they were still among the best in baseball. The list began to move every year. In 2001 Greg Maddux joined Clemens in the all-time starting rotation:

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Cy Young | 159 |
| 2. | Roger Clemens | 137 |
| 3. | Walter Johnson | 135 |
| 4. | Greg Maddux | 128 |
| 5. | Lefty Grove | 122 |
| $\mathrm{t}-6$. | Christy Mathewson | 121 |
| $\mathrm{t}-6$. | Warren Spahn | 121 |
| 8. | Pete Alexander | 116 |
| 9. | Tom Seaver | 113 |
| $\mathrm{t}-10$. | Kid Nichols | 99 |
| $\mathrm{t}-10$. | Jim Palmer | 99 |

Roger Clemens had pushed Walter Johnson from his post as the \#2 starting pitcher of all time - a position he had held for more than a lifetime ( 76 years). Meanwhile Randy Johnson - almost as old as Clemens - was having a string of incredible seasons, and charging up the all-time list, and when Clemens had a so-so season in 2002, Greg Maddux actually moved ahead of him.

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Cy Young | 159 |
| 2. | Greg Maddux | 138 |
| 3. | Roger Clemens | 137 |
| 4. | Walter Johnson | 135 |
| 5. | Lefty Grove | 122 |
| $\mathrm{t}-6$. | Christy Mathewson | 121 |
| $\mathrm{t}-6$. | Warren Spahn | 121 |
| 8. | Pete Alexander | 116 |
| 9. | Randy Johnson | 115 |
| 10. | Tom Seaver | 113 |

The Unit had broken into the top ten. Clemens edged back ahead of Maddux in 2003, and in 2004 came back with yet another Cy Young season, going 18-4 for Houston. Randy Johnson, though stuck with a 16-14 won-lost $\log$ due to poor offensive support, actually pitched just about as well. Maddux wasn't bad, either; he was 16-11 for the Cubs. This was the leaderboard after the 2004 season:

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Cy Young | 159 |
| 2. | Roger Clemens | 153 |
| 3. | Greg Maddux | 138 |
| 4. | Walter Johnson | 135 |
| 5. | Randy Johnson | 125 |
| 6. | Lefty Grove | 122 |
| t-7. | Christy Mathewson | 121 |
| t-7. | Warren Spahn | 121 |
| 9. | Pete Alexander | 116 |
| 10. | Tom Seaver | 113 |

Maddux began to run out of gas in 2005, finishing 13-15 with a 4.24 ERA, but Clemens and Randy Johnson - both of them several years older than Maddux - remained among the best pitchers in the game. Clemens posted a 1.87 ERA for Houston - and became, by this method, the greatest starting pitcher of all time:

| Rank | Player | Career |
| ---: | :--- | ---: |
| 1. | Roger Clemens | 162 |
| 2. | Cy Young | 159 |
| 3. | Greg Maddux | 138 |
| 4. | Walter Johnson | 135 |
| 5. | Randy Johnson | 133 |
| 6. | Lefty Grove | 122 |
| t-7. | Christy Mathewson | 121 |
| t-7. | Warren Spahn | 121 |
| 9. | Pete Alexander | 116 |
| 10. | Tom Seaver | 113 |

What was the world coming to? For more than 60 years the all-time starting rotation was Cy Young, Walter Johnson, Lefty Grove and Christy Mathewson. Only Spahn had climbed into the discussion - and he had to share a berth with Matty. It disturbed the natural order of the universe to see new pitchers doing things the alltime greatest never could. This was disorienting, and it created a sense, among a lot of fans, that "something is not right here." Something is not right here, when all of these modern players begin to do things that have never been done before. It's not natural and it's not right.

I see it a little differently. To me, for new players to challenge constantly for their position among the greatest ever is the natural order of the universe. What was un-natural was for the list not to change for 60 years. I'm entirely willing to accept Clemens and Randy and Greg Maddux all being among the five greatest starting pitchers of all time. I don't have any problem at all with their all being part of the same generation, and I don't see anything about that fact which is in any way suspicious or disturbing. After all, Cy Young, Christy Mathewson and Walter Johnson were all in the major leagues from 1907 through 1911, a five-year span. Does that mean they can't all be considered all-time greats?

I regard Randy Johnson as one of the greatest pitchers of all time. He's fifth on the list, just a hair behind The Big Train. Has he really been as great as Walter Johnson? En. . .I don't know. I'd put him on the same level. I'll worry about ranking them another time.

## Addie Joss

The Hall of Fame rules had always stated that a player had to play in the majors for ten years to qualify for the Hall of Fame. Addie Joss played only 9 years, but the Veteran's Committee elected him anyway. The Hall of Fame amended the rules to make this legal. My belief is that they actually amended the rules after the fact. The Veteran's Committee elected him; the Hall of Fame realized that this was not within the rules, so they
amended the rules and pretended that it had all been done in legal order to avoid there being a stink about it.

Joss was elected essentially on the strength of the argument that he was comparable to Sandy Koufax. Koufax pitched twelve years and was $165-87$; Joss pitched nine years and was 160-97. Koufax had wonlost records of $25-5,26-8$ and 27-9; Joss was 27-11, 24-11 and 21-9.

Of course, Joss in reality was not remotely comparable to Sandy Koufax, but the people who elected him were told that he was, and they believed it. Joss was a very fine pitcher, but he won 27 games in an era in which the best pitchers won 35 and 40 . This is a list of the most wins in the American League in a season between 1901 and 1910:

| Rank | Player | Year | w |
| ---: | :--- | :---: | :---: |
| 1. | Jack Chesbro | 1904 | 41 |
| 2. | Ed Walsh | 1908 | 40 |
| 3. | Cy Young | 1901 | 33 |
| 4. | Cy Young | 1902 | 32 |
| 5. | Jack Coombs | 1910 | 31 |
| 6. | George Mullin | 1909 | 29 |
| 7. | Cy Young | 1903 | 28 |
| t-8. | Addie Joss | 1907 | 27 |
| t-8. | Doc White | 1907 | 27 |
| t-8. | Rube Waddell | 1905 | 27 |
| t-8. | Al Orth | 1906 | 27 |

Joss was a fine pitcher, but winning 27 games when the other best pitchers are winning 40 is not the same as winning 27 games when the other best pitchers are winning 20 . This is what our system measures: how the player compares to his contemporaries. Sandy Koufax, 76, Addie Joss, 35.


> To me, for new players to challenge constantly for their position among the greatest ever is the natural order of the universe.

## Jim Kaat

Similar to Tommy John, he won 280 games in an era in which a lot of pitchers did, thus earning him only 39 points in our evaluation. I still believe that he should and will eventually be in the Hall of Fame, but he ranks far behind Blyleven.

## Bob Lemon

Bob Lemon was one of the best pitchers in the American League for seven years between 1948 and 1956, and earned 45 points in our system, making him a qualified Hall of Famer despite a career total of "just" 207 wins.

## Mickey Lolich

Lolich was among the best pitchers in his league in 1964, 1965, 1969, 1972 and 1973, and earned a career total of 31 points. In terms of big seasons versus his contemporaries he ranks about even with Kevin Appier, Rick Sutcliffe and CC Sabathia.

## Ted Lyons

Made it into the Hall of Fame with 33 points, or three strong seasons. Credentials similar to Herb Pennock, Red Faber, Waite Hoyt; got into the Hall of Fame because he had $250+$ wins and everybody with $250+$ wins got in, even though his "good seasons" count is a little on the short side.

## Greg Maddux

See comments on the Johnson Twins.

## Juan Marichal

Ranked among the best pitchers in the National League eight times, and ranked second five times behind Koufax in '63, ' 64 , ' 65 and ' 66 , Gibson in ' 68.

## Rube Marquard

A Hall of Fame anomaly with only 21 points in our survey and only 201 career wins. Elected in large part because of his appearance in The Glory of Their Times,
which was an enormously popular book and helped to put several players in the Hall of Fame.

## Pedro Martinez

Attempting a comeback at this time, he has 104 points by our method - making him the \#11 pitcher of all time - and is still young enough to add to that total if he can get back to being one of the best pitchers in the game. He is way, way beyond the line of being a Hall of Fame pitcher, whatever his career win total.

## Carl Mays

Probably a Hall of Famer, were it not for the fact that he was the most hated man in baseball in his era. He has 47 points by this system, putting him above the Hall of Fame line, and surrounded by Hall of Fame pitchers.

## Jack Morris

Jack Morris has for some reason become the counterweight to Bert Blyleven in the Hall of Fame debate; whenever somebody argues for Blyleven, somebody else always says they liked Jack Morris better. Morris does well in our analysis - not as well as Blyleven, but still very well. He has 64 points, which is $50 \%$ above the Hall of Fame line. As he did earn points after 1990, I counted him in my analysis as a "recently retired" pitcher.

## Jamie Moyer

Moyer had zero career points and only 72 career wins at the age of 33 ; he now has 41 points and 258 career wins. The Cubs came up with Moyer and Maddux in the same season, 1986. They were building for 2003.

## Mike Mussina

Mike Mussina did stunningly well in our study, ranking as the \#15 starting pitcher of all time. Mussina had no seasons as the league's number one pitcher, but twelve seasons in which he ranked among the best starting pitchers in his league. In the last 50 years only Clemens, Maddux, Seaver and Blyleven have had as many.


## Mike Mussina did stunningly well in our study.

## Kid Nichols

Throughout the 1890s Nichols ran neck and neck with Cy Young. The number one pitcher on the all-time list, at the start of their careers, was Tim Keefe. Nichols and Young both made it on to the leaderboard in 1894, Nichols moving into fifth place, Young into tenth. After 1895 Nichols was in fourth place, Cy Young in fifth, and after the 1896 season they were tied for second. From 1897 to 1900, Nichols was the number one pitcher of all time, with Cy Young second. Both of them were having great years every year. Amos Rusie was the most famous pitcher of that era, but Nichols and Young were better; not as flashy, didn't throw as hard, didn't dominate the news coverage in the same way, but they were better pitchers.

After 1900 Nichols' career kind of stalled out, and Cy Young pulled gradually away from him. The interesting thing is that Nichols' career stalled out not from injury or ineffectiveness, but for a variety of other reasons. His team collapsed underneath him. In 1900 Nichols was 39 runs better than an average pitcher, park-adjusted, which is a huge number, but finished just 13-16 due to poor offensive support. After the turn of the century there was a period of economic turmoil, like that in 1890, in which new leagues formed and players who were unhappy with their National League contracts jumped to other leagues. But whereas Cy Young, Jack Chesbro and others jumped to the American League, Nichols jumped instead to the Kansas City franchise in the Western League. The Western League failed to establish itself as a rival major; Nichols went 26-7 there in 1902 and 21-12 in 1903, but this doesn't count because it's now regarded as a minor league. Cy Young, winning 30 games a year in the American League, pulled far ahead of him.

Nichols returned to the National League in 1904 as player/manager of the St. Louis Cardinals. The Cardinals were a sad sack operation, finishing in last-place at 43-94 in 1903. Nichols improved them to near . 500 in 1904 ( $75-79$ ), in part because he himself won 21 games (21-13) - but was fired early in the 1905 season in a dispute over watching the gate. Major league players in that era were supposed to stand at the gates before the game and take tickets; in fact, even during the game players who were

> Stats, of course, can be looked at through a limitless variety of lenses.
not actually in the contest were delegated to stand at the gate to prevent people from sneaking in without a ticket. Nichols said that he had plenty to do with managing the team and pitching, and refused to take a turn watching the gates, and he was fired as manager and then traded to Philadelphia as a result of this dispute. He went 10-6 for Philadelphia with a 2.27 ERA.

He started slowly in 1906, however, and was released early in the season. He wound up his career with 99 points in our system, making him the number two pitcher in baseball history up to that point. He remained in the top ten list until pushed off of the list by Greg Maddux in 1999.

## Roy Oswalt

One of the most surprising things about this study was the stunning performance of Roy Oswalt. Oswalt has already ranked among the best pitchers in the National League in six seasons-every season from 2001 through 2007 except 2003, when he pitched well but had some injuries. Because he has not had a Cy Young season he is, I think, not generally regarded as a Hall of Fame pitcher. But by our method, six seasons among the best pitchers in your league is a lot, and six seasons ranking among the best pitchers in a 16 -team league is more impressive than six seasons among the best pitchers in an 8 -team league. We credit Roy Oswalt with 54 points through 2008, which is well above the standard of a Hall of Fame career.

Stats, of course, can be looked at through a limitless variety of lenses, and I am in no way suggesting that this one will or should take precedence over the others. Oswalt has 137 career wins as of now; to be a serious Hall of Fame candidate he certainly needs to push that up past 200, and probably up somewhere around 250 . But what he has already done is extremely impressive. Until I did this study, I really had no idea how impressive. He enters the 2010 season 67 games over .500 in his career. That is a Hall of Fame number. Maybe it's not a Hall of Fame number if, like Johnny Allen or Vic Raschi, you only win 140 games in your career; maybe it's not a Hall of Fame number if, like Dave McNally, you only win 184. But many of the pitchers who are in the Hall of Fame aren't 67 games over .500 .

## Jim Palmer

99 points, an obvious Hall of Famer.

## Billy Pierce

Not counting active and recently retired pitchers like Jack Morris, Doc Gooden and David Cone, there are five pitchers in history who are not in the Hall of Fame although they had 44 or more strong season points: Blyleven, Guidry, Vida Blue, Carl Mays and Billy Pierce. Pierce drew 5 votes for the Hall of Fame in 1970 (2\%), 7 in 1971 (still 2\%), and never more than 4 after that. We might safely say that most people did not think of him as a Hall of Fame pitcher.

His record, however, has its points. We rank him among the best pitchers in the American League in 1952, when he pitched 255 innings with an ERA of 2.58 . He was certainly among the best pitchers in the league in 1953, when he was 18-12, was second in the league in ERA at 2.72, and led the league in strikeouts with 186. He was certainly among the best pitchers in the American League in 1955, when he became the only major league ERA qualifier of the 1950 s to have an ERA starting with " 1 " - 1.97. The best ERA of the decade.

He was certainly among the best pitchers in the American League in 1956, when he was $20-9$, and he was certainly among the best pitchers in the American League in 1957, when he was $20-12$. He was certainly among the best pitchers in the American League in 1958, when he was 17-11 and second in the league in ERA. We have him among the best pitchers in the American League in 1960, but granted, that was because the American League in 1960 had a serious shortage of quality pitchers; see comments on Jim Bunning. We gave him nothing for 1962; he was 16-6 for the Giants, helping to lift them to the National League pennant, but we do not rank him among the best pitchers in the league.

Pierce had a career record of 211 wins, 169 losses. There are quite a few pitchers with records like that, and some of them are in the Hall of Fame (Jesse Haines, 210158, Don Drysdale, 209-166, Hal Newhouser, 207-150,

I am not saying that Pierce should be in the Hall of Fame, but it does seem that he was just overlooked somehow.


Rube Marquard, 201-177), and some of them are not (Milt Pappas, 209-164, Vida Blue, 209-161, Bob Welch, 211-146). One of the things that seems to distinguish the Hall of Famers from the non-Hall of Famers is good ERAs. Don Drysdale is in the Hall of Fame in part because he was 229 runs better than an average pitcher; Milt Pappas and Vida Blue had basically the same record, but they were 130 runs and 89 runs better than average, not 229. Bob Welch had basically the same won-lost record as Hal Newhouser, but Welch was 56 runs better than an average pitcher, park-adjusted; Newhouser was 309 runs better than league.

But Billy Pierce was 224 runs better than an average pitcher, park adjusted - about the same number as Drysdale. Among the pitchers with comparable records he ranks better than anyone except Newhouser, Drysdale and Kevin Brown. I am not saying that Pierce should be in the Hall of Fame, but it does seem that he was just overlooked somehow, and that he should have been taken more seriously as a candidate than he was.

## J. R. Richard

Got to 30 points quickly before his health condition stopped him. (His career was ended suddenly in 1980 by a stroke, or something very much like a stroke.) Actually a contemporary American League pitcher, Dennis Leonard, was piling up points just as quickly. Leonard got to 29 points in the same years, 1976-1980.

## Eppa Rixey

Only 39 points in this system; got to the Hall of Fame by hanging around long enough to win 266 games, although he lost 251 . Rixey was the Jim Kaat of the 1920 s - a big left-hander who was very graceful on the mound, fielded his position extremely well and had excellent control.

## Kenny Rogers

Another pitcher with a career won-lost record like Pierce and Drysdale. Had five seasons ranking among the best pitchers in his league, earning him 25 points in this analysis.

## Babe Ruth

Ranks as the second-best pitcher in the American League in 1916, behind Walter Johnson, third in 1917, behind Cicotte and Jim Bagby. 15 points.

## Nolan Ryan

Because of his walks and losses, we do not rank Ryan as the \#1 pitcher in his league in any season; of course, some people do. He has eight seasons among his league's best pitchers and 45 points in our system, which is a Hall of Fame number.

## CC Sabathia

32 points so far. Needs two more seasons among the league's best pitchers to meet the "star" requirements of the Hall of Fame; needs to pile up about 125 more wins to meet the "bulk" requirements.

## Johan Santana

With 54 points through 2009, he has already done the heavy lifting for a Hall of Fame career. What he has to do from now on is basically to stay healthy for six or eight years and not embarrass himself.

## Curt Schilling

Somewhat like Juan Marichal in a Hall of Fame analysis, we credit him with no seasons as his league's best pitcher, but three seasons ranking second or third, and nine seasons ranking among his league's best pitchers. We see him as being beyond a Hall of Fame standard, with 74 points. He's actually close to twice the Hall of Fame cutoff - ignoring entirely his post-season exploits.

## Herb Score

12 points in two seasons before being stopped by injury.

## Curt Simmons

Like Larry Jackson. He won 193 games in an
impressive career, but had only four seasons ranking among the best pitchers in his league, and never ranked higher than seventh. 9 points.

## John Smoltz

Comparable to Schilling. We have him with 58 points, which is well beyond a Hall of Fame standard, but this ignores his fine post-season record and his years as a reliever, which would push him up even higher.

## Warren Spahn

Had five seasons as his league's best pitcher and 17 seasons as one of the best pitchers in his league, which ties with Cy Young for the top spot.

## Luis Tiant

See comments on Catfish Hunter.

## Fernando Valenzuela

Earned 35 points in his first six years in the National League, appearing to be on a Hall of Fame path, but ran out of gas at that point.

## Dazzy Vance

One of the most striking things about this study is the dearth of dominant pitchers after Walter Johnson and Grover Cleveland Alexander. After Alex and Walter there really isn't another great pitcher who comes along until Lefty Grove.

Not quite getting to my point. There are really no great pitchers in the 1920s. There is Vance, who was a phenomenal pitcher but had only half of a career, although that half a career was certainly enough to put him in the Hall of Fame. In the past I have tended to look at this as a function of the norms of the era. The teens were a pitchers' era; pitchers won 30 games, struck out 300 batters, and had ERAs in the ones. The twenties were a hitter's era, so the norms were different.

But this system adjusts those differences out of existence by comparing each pitcher to the other pitchers in the


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same league in the same year, and this enables us to see that the pitchers of that era are not merely weaker because the norms were down. They're also weaker because different pitchers were the best in the league every year. There's just nobody in that era who stands out consistently in the way that Mathewson and Cy Young and Kid Nichols and Walter and Alex stand out from the previous decades. The great pitchers of the 1920s are like Waite Hoyt and Pennock and Shocker and Shawkey and Burleigh Grimes and Remy Kremer. They're good, but they're not all that good. Walter and Alex continued to dominate until they were almost 40 because there just wasn't anybody coming up behind them who was on the same level except Vance.

The 1930s, now; the 1930s have truly great pitchers - Grove, of course, but also Carl Hubbell, Dizzy Dean, Bob Feller, Lefty Gomez and Red Ruffing. OK, Gomez and Ruffing weren't on the same level as Walter and Alex, but they were better than Waite Hoyt and Herb Pennock. Dazzy Vance is really the only great pitcher of the 1920s. 51 points - a Hall of Fame number.

## Rube Waddell

Slides over the Hall of Fame line with 46 points. A colorful character but, with 193 career wins, not overwhelmingly qualified for immortality.

## Ed Walsh

64 points. A lot of people now confuse Waddell and Walsh because they pitched in the same league in the same era and have similar names and similar career records (193-143 for Waddell, 195-126 for Walsh), but it's like confusing Albert Belle and Albert Pujols. As personalities, you can't get much more different than Rube Waddell and Ed Walsh.

## Bucky Walters

Does not do particularly well in this analysis, with only four seasons among the best in his league and a career total of 32 points.

## Lon Warneke

Warneke's records are a lot like Billy Pierce's - 22-6, 18-13, 22-10, 20-13, 16-10, 17-9. He had six seasons among the best pitchers in the National League, and in 1932-33 appeared to be poised to be the best. But he had some little injuries, and Hubbell and Dean zoomed past him like he was standing still. With 43 points in this analysis he stands right on the border of a Hall of Fame career, and could as well be in as out.

## David Wells

I got to see David Wells a lot in 2005, when he was 157 for the Red Sox, and he was amazing. He was 42 years old by then and fat, but he had phenomenal strength in his back and shoulders, and just amazing balance. His bread and butter pitch was a big 12-to-6 curveball, and he could spin that thing in there and nail the bottom of the strike zone with it like it was nothing. That wasn't all he had; his fastball was still pretty good, and he had A+ control of everything. If the hitter leaned in he would put the fastball high and tight; if the hitter leaned back he would pitch away.

He was one of those guys, like Vladimir and Bo Jackson and Ron Cey, that sometimes you felt like you should check his DNA and make sure he was all human. I certainly have never seen anyone else who had the same level of command of his curveball, and in terms of things like repeating his delivery and changing the hitter's eye level, I never saw anybody better.

But his career is chopped up into a million little pieces, in Toronto and Detroit and New York and Boston and San Diego, and mostly that was his own doing; he was always looking for the next opportunity. The Hall of Fame doesn't much like those guys who bounce around like loose tennis balls, and I don't either. When you're building a team, you need people you can count on to be there for a while. We credit him with 36 points for seasons among the best in his league - about $15 \%$ short of a Hall of Fame career.


