

Rockies 2017 - Week #19

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Figure 1: Colorado Rockies starting pitcher Chad Bettis made his first rehab assignment start for the Hartford Yard Goats at Dunkin Donuts Park. Credit: Brad Horrigan, The Hartford Courant.

Playing for Yogi is like playing for your father; playing for Billy is like playing for your father-in-law.
– Don Baylor (1949-2017)

Table 1: NL West Standings

Tm	W	L	W-L%	GB
Los Angeles Dodgers	83	34	.709	–
Arizona Diamondbacks	65	52	.556	18.0
Colorado Rockies	65	52	.556	18.0
San Diego Padres	51	66	.436	32.0
San Francisco Giants	47	72	.395	37.0

Table 2: Current Rockies Results as of 2017-08-14

Wins	Losses	Win.Pct	Runs	Runs.Ag	Predicted Season Wins
65	52	.55556	606	564	87



Week #19

The Rockies are still in second place in their division but losing ground to the LA lads. The Colorado gang won just one game of six this week. Hang in their Rox fans, it could be a rocky October.

Chad Bettis returned to active duty last Monday, taking part in some rehab starts at Coors Field against his team mates. The Rockies are being careful to bring back their prized right hander in a slow and deliberate manner. He was sent to Connecticut by the Rox front office on Thursday to pitch a couple innings for the Double A Hartford Yard Goats against the Yankees' Double A affiliate, the Trenton Thunder. Chad is expected to return to the Rockies rotation on Monday, August 14th.

This weeks' featured article is bound to disappoint some of you. Again, I return to the WAR ratings of position players and pitchers. This time though, the top twenty for each will be displayed. Before you skip ahead to see whether or not your favorite player is ranked, take a deep breath. WAR or Wins Above Replacement is an ongoing quest to find the perfect metric by which to measure the worth of a baseball player compared to his fellow players, present and past. Baseball-Reference and others have refined WAR over several years.

If you would like to see an in-depth explanation and the history of WAR, see the following URL: https://www.baseball-reference.com/about/war_explained.shtml.

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 - Top Twenty MLB Position Players of All Time
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 - Top Twelve Rockies Players as Measured by WAR **New to the Dashboard**
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Most of the source data for this article can be found at URL <http://baseball-reference.com>.

Let me know what other special interest statistics you might like to see. Remember to refer to the Glossaries at the end of the document if unfamiliar with one or more of the statistic abbreviations in the tables.

Featured Article

Top Twenty MLB Pitchers of All Time

The tables below show the top pitchers of all time. As before, these WAR values are from Baseball-Reference.com.

Table 3: All-Time Best Pitchers (WAR)

Rank	Player	Career Start	Career End	Years	Games	IPouts	WAR
1	Cy Young	1890	1911	22	918	22068	170.28
2	Walter Johnson	1907	1927	21	936	17746	152.33
3	Roger Clemens	1984	2007	24	709	14750	139.36
4	Pete Alexander	1911	1930	20	703	15559	116.98
5	Kid Nichols	1890	1906	17	650	15202	116.56
6	Lefty Grove	1925	1941	17	619	11818	109.93
7	Tom Seaver	1967	1986	20	677	14349	106.26
8	Greg Maddux	1986	2008	23	759	15025	104.60
9	Randy Johnson	1988	2009	22	619	12406	104.28
10	Phil Niekro	1964	1987	24	866	16212	97.39
11	Bert Blyleven	1970	1992	23	699	14910	96.49
12	Christy Mathewson	1900	1916	17	647	14363	95.30
13	Gaylord Perry	1962	1983	22	787	16050	93.70
14	Warren Spahn	1942	1965	24	783	15731	92.58
15	Tim Lincecum	1880	1893	14	618	15149	88.89
16	Eddie Plank	1901	1917	17	630	13480	86.48
17	Pedro Martinez	1992	2009	18	477	8482	86.01
18	John Clarkson	1882	1894	13	546	13609	85.69
19	Steve Carlton	1965	1988	24	745	15653	84.13
20	Nolan Ryan	1966	1993	28	807	16158	83.85

Top Twenty MLB Position Players of All Time

The following table lists the top twenty position players of all time. There aren't any past or present Rockies on the list yet, but maybe someday!

Table 4: All-Time Best Position Players (WAR)

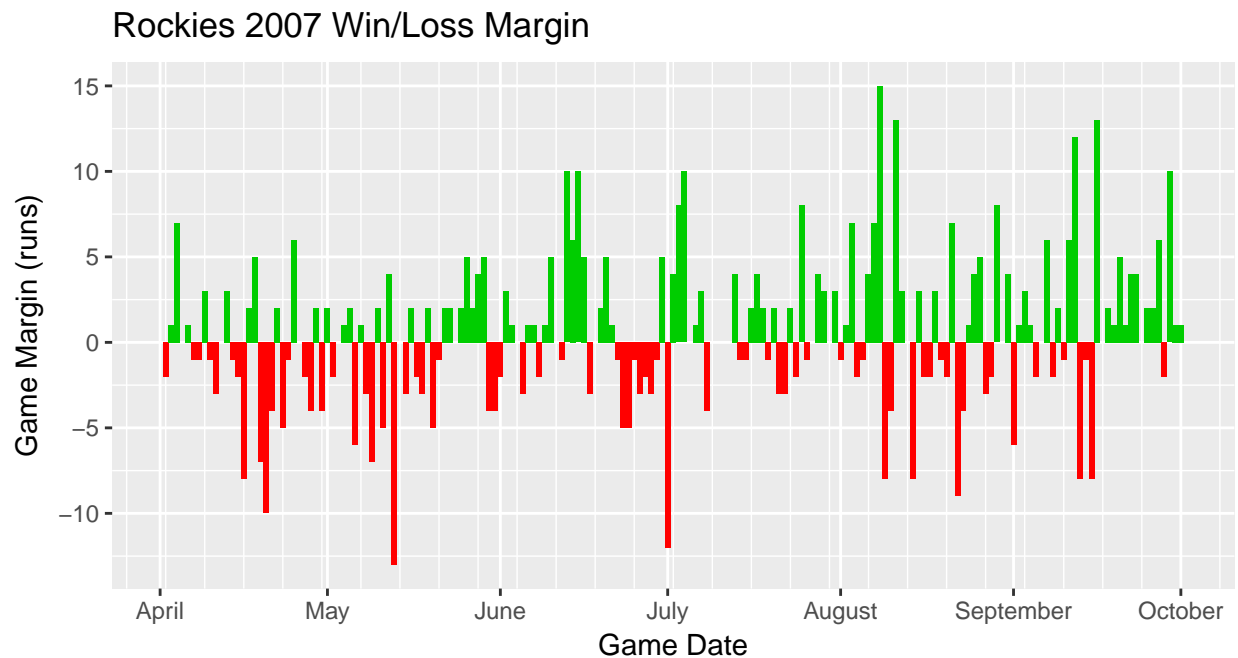
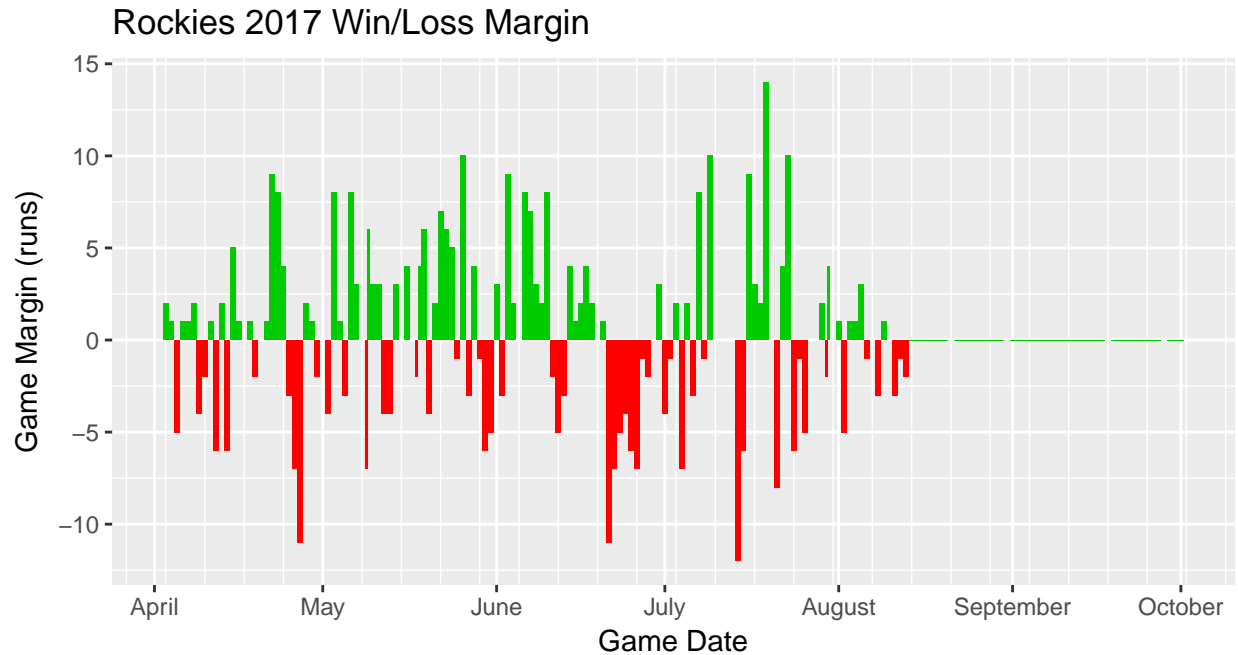
Rank	Player	Career Start	Career End	Years	Games	PA	WAR
1	Babe Ruth	1914	1935	22	2504	10622	163.06
2	Barry Bonds	1986	2007	22	2986	12606	162.43
3	Willie Mays	1951	1973	23	2992	12496	156.22
4	Ty Cobb	1905	1928	24	3034	13084	151.00
5	Hank Aaron	1954	1976	23	3298	13941	142.57
6	Tris Speaker	1907	1928	22	2792	11992	133.72
7	Honus Wagner	1897	1917	21	2795	11748	131.00
8	Stan Musial	1941	1963	23	3026	12717	128.13
9	Rogers Hornsby	1915	1937	23	2259	9480	126.99
10	Eddie Collins	1906	1930	25	2825	12044	123.89
11	Ted Williams	1939	1960	22	2292	9788	123.13
12	Alex Rodriguez	1994	2016	23	2784	12207	117.71
13	Lou Gehrig	1923	1939	17	2164	9663	112.36
14	Rickey Henderson	1979	2003	25	3081	13346	110.81
15	Mickey Mantle	1951	1968	18	2401	9907	109.72
16	Mel Ott	1926	1947	22	2730	11348	107.77
17	Nap Lajoie	1896	1916	21	2480	10461	107.39
18	Frank Robinson	1956	1976	21	2808	11742	107.21
19	Mike Schmidt	1972	1989	18	2404	10062	106.49
20	Joe Morgan	1963	1984	22	2649	11329	100.26

Colorado Rockies Dashboard

Win Loss Margin

One of the many ways to visualize a teams performance is to show wins and losses as the margin of the win (positive) or loss (negative). In the graphs below, we show the current season performance. For emphasis, wins are displayed in green (above the zero) and losses in red (below the zero).

Following the current season's graph, I have included the Win/Loss margin chart for our benchmark season of 2007 when the Rockies won the National League pennant.



Top Twelve Rockies Players as Measured by WAR

Following is a table of the top twelve Colorado Rockies players as measured by the most recent WAR assessment for pitchers and position players. Week after week Nolan Arenado is at the top of this list. You may be surprised by some of the others on the list.

Table 5: Rockies Top 12 Players (WAR)

Rank	Name	Age	WAR	Salary.M
1	Nolan Arenado	26	5.2	11.750
2	Charlie Blackmon	30	4.1	7.300
3	Kyle Freeland	24	3.8	0.535
4	German Marquez	22	3.0	0.535
5	Chris Rusin	30	2.1	0.535
6	Antonio Senzatela	22	2.0	0.535
7	Greg Holland	31	1.9	6.000
8	DJ LeMahieu	28	1.5	4.800
9	Trevor Story	24	1.3	0.535
10	Tyler Chatwood	27	1.2	4.400
11	Gerardo Parra	30	1.1	8.000
12	Jake McGee	30	1.0	5.900

National League Standings

Table 6: NL East Standings

Tm	W	L	W-L%	GB
Washington Nationals	70	46	.603	–
Miami Marlins	56	60	.483	14.0
New York Mets	53	62	.461	16.5
Atlanta Braves	52	63	.452	17.5
Philadelphia Phillies	43	72	.374	26.5

Table 7: NL Central Standings

Tm	W	L	W-L%	GB
Chicago Cubs	61	55	.526	–
St. Louis Cardinals	61	57	.517	1.0
Milwaukee Brewers	61	59	.508	2.0
Pittsburgh Pirates	58	60	.492	4.0
Cincinnati Reds	49	69	.415	13.0

Table 8: NL West Standings

Tm	W	L	W-L%	GB
Los Angeles Dodgers	83	34	.709	–
Arizona Diamondbacks	65	52	.556	18.0
Colorado Rockies	65	52	.556	18.0
San Diego Padres	51	66	.436	32.0
San Francisco Giants	47	72	.395	37.0

American League Standings

Table 9: AL East Standings

Tm	W	L	W-L%	GB
Boston Red Sox	67	50	.573	—
New York Yankees	61	55	.526	5.5
Tampa Bay Rays	59	60	.496	9.0
Baltimore Orioles	58	60	.492	9.5
Toronto Blue Jays	56	61	.479	11.0

Table 10: AL Central Standings

Tm	W	L	W-L%	GB
Cleveland Indians	63	52	.548	—
Minnesota Twins	59	57	.509	4.5
Kansas City Royals	59	58	.504	5.0
Detroit Tigers	53	64	.453	11.0
Chicago White Sox	45	70	.391	18.0

Table 11: AL West Standings

Tm	W	L	W-L%	GB
Houston Astros	72	45	.615	—
Los Angeles Angels	61	58	.513	12.0
Seattle Mariners	59	60	.496	14.0
Texas Rangers	56	60	.483	15.5
Oakland Athletics	52	66	.441	20.5

Rockies Game-by-Game Schedule/Results

Gm#	Day	Date	H/A	Opp	W/L	R	RA	Win	Loss	Save	D/N	Streak
1	Mon	Apr 3	A	MIL	W	7	5	Estevez	Marinez	Holland	D	+
2	Tue	Apr 4	A	MIL	W	6	5	Anderson	Davies	Holland	N	++
3	Wed	Apr 5	A	MIL	L	1	6	Peralta	Chatwood	Feliz	N	-
4	Thu	Apr 6	A	MIL	W	2	1	Dunn	Feliz	Holland	D	+
5	Fri	Apr 7	H	LAD	W	2	1	Freeland	Ryu	McGee	D	++
6	Sat	Apr 8	H	LAD	W	4	2	Dunn	Kershaw	Holland	N	+++
7	Sun	Apr 9	H	LAD	L	6	10	Maeda	Anderson		D	-
8	Mon	Apr 10	H	SDP	L	3	5	Diaz	Chatwood		N	-
9	Tue	Apr 11	H	SDP	W	3	2	Senzatela	Diaz	Holland	N	+
10	Wed	Apr 12	H	SDP	L	0	6	Lee	Freeland		D	-
11	Thu	Apr 13	A	SFG	W	3	1	Rusin	Bumgarner	Holland	N	+
12	Fri	Apr 14	A	SFG	L	2	8	Cueto	Anderson		N	-
13	Sat	Apr 15	A	SFG	W	5	0	Chatwood	Moore		D	+
14	Sun	Apr 16	A	SFG	W	4	3	Senzatela	Samardzija	Holland	D	++
15	Tue	Apr 18	A	LAD	W	4	3	Rusin	Ryu	Holland	N	+++
16	Wed	Apr 19	A	LAD	L	2	4	Kershaw	Anderson	Jansen	N	-
17	Fri	Apr 21	H	SFG	W	6	5	Chatwood	Cueto	Holland	N	+
18	Sat	Apr 22	H	SFG	W	12	3	Senzatela	Moore		N	++
19	Sun	Apr 23	H	SFG	W	8	0	Freeland	Samardzija		D	+++
20	Mon	Apr 24	H	WSN	W	8	4	Estevez	Romero		N	++++
21	Tue	Apr 25	H	WSN	L	12	15	Romero	Marquez		N	-
22	Wed	Apr 26	H	WSN	L	4	11	Roark	Chatwood		N	-
23	Thu	Apr 27	H	WSN	L	5	16	Gonzalez	Senzatela		D	—
24	Fri	Apr 28	A	ARI	W	3	1	Freeland	Ray	Holland	N	+
25	Sat	Apr 29	A	ARI	W	7	6	Estevez	Rodney	Holland	N	++
26	Sun	Apr 30	A	ARI	L-wo	0	2	Delgado	Lyles		D	-
27	Tue	May 2	A	SDP	L	2	6	Cahill	Chatwood		N	-
28	Wed	May 3	A	SDP	W	11	3	Senzatela	Weaver		N	+
29	Thu	May 4	A	SDP	W	3	2	Qualls	Hand	Holland	D	++
30	Fri	May 5	H	ARI	L	3	6	Greinke	Marquez	Rodney	N	-
31	Sat	May 6	H	ARI	W	9	1	Anderson	Corbin	Rusin	N	+
32	Sun	May 7	H	ARI	W	5	2	Chatwood	Walker	Holland	D	++
33	Tue	May 9 (1)	H	CHC	W	10	4	Senzatela	Arrieta		D	+++
34	Tue	May 9 (2)	H	CHC	L	1	8	Lackey	Freeland		N	-
35	Wed	May 10	H	CHC	W	3	0	Marquez	Hendricks	Holland	D	+
36	Thu	May 11	H	LAD	W	10	7	Hoffman	Ryu	Holland	N	++
37	Fri	May 12	H	LAD	L	2	6	Kershaw	Chatwood		N	-
38	Sat	May 13	H	LAD	L	0	4	Wood	Anderson		N	-
39	Sun	May 14	H	LAD	W	9	6	Senzatela	Urias	Holland	D	+
40	Tue	May 16	A	MIN	W	7	3	Freeland	Hughes	Holland	N	++
41	Thu	May 18 (1)	A	MIN	W	5	1	Marquez	Santana	Holland	D	+++
42	Thu	May 18 (2)	A	MIN	L	0	2	Berrios	Chatwood	Kintzler	N	-
43	Fri	May 19	A	CIN	W	12	6	Anderson	Bonilla		N	+
44	Sat	May 20	A	CIN	L	8	12	Wojciechowski	Dunn		D	-
45	Sun	May 21	A	CIN	W	6	4	Freeland	Arroyo	Holland	D	+
46	Mon	May 22	A	PHI	W	8	1	Hoffman	Eickhoff		N	++
47	Tue	May 23	A	PHI	W	8	2	Marquez	Eflin		N	+++
48	Wed	May 24	A	PHI	W	7	2	Chatwood	Hellickson		N	++++
49	Thu	May 25	A	PHI	L-wo	1	2	Gomez	Oberg		D	-
50	Fri	May 26	H	STL	W	10	0	Senzatela	Martinez		N	+

Gm#	Day	Date	H/A	Opp	W/L	R	RA	Win	Loss	Save	D/N	Streak
51	Sat	May 27	H	STL	L	0	3	Wainwright	Freeland	Oh	N	-
52	Sun	May 28	H	STL	W	8	4	Marquez	Lynn		D	+
53	Mon	May 29	H	SEA	L	5	6	Gaviglio	Chatwood	Diaz	D	-
54	Tue	May 30	H	SEA	L	4	10	Miranda	Anderson		N	-
55	Wed	May 31	A	SEA	L	0	5	Paxton	Senzatela		N	—
56	Thu	Jun 1	A	SEA	W	6	3	Freeland	Gallardo	Holland	D	+
57	Fri	Jun 2	A	SDP	L	5	8	Richard	Marquez	Maurer	N	-
58	Sat	Jun 3	A	SDP	W	10	1	Chatwood	Chacin		D	+
59	Sun	Jun 4	A	SDP	W	3	1	Hoffman	Cosart	Holland	D	++
60	Tue	Jun 6	H	CLE	W	11	3	Senzatela	Clevinger		N	+++
61	Wed	Jun 7	H	CLE	W	8	1	Freeland	Bauer		D	++++
62	Thu	Jun 8	A	CHC	W	4	1	Chatwood	Lester	Holland	N	++++
63	Fri	Jun 9	A	CHC	W	5	3	Rusin	Frankoff	Holland	D	++++
64	Sat	Jun 10	A	CHC	W	9	1	Hoffman	Butler		D	++++
65	Sun	Jun 11	A	CHC	L	5	7	Edwards	Lyles	Davis	D	-
66	Mon	Jun 12	A	PIT	L	2	7	Taillon	Freeland		N	-
67	Tue	Jun 13	A	PIT	L	2	5	Cole	Ottavino		N	—
68	Wed	Jun 14	A	PIT	W	5	1	Marquez	Kuhl		N	+
69	Thu	Jun 15	H	SFG	W-wo	10	9	Holland	Strickland		N	++
70	Fri	Jun 16	H	SFG	W	10	8	Senzatela	Samardzija	Holland	N	+++
71	Sat	Jun 17	H	SFG	W	5	1	Freeland	Cain		D	++++
72	Sun	Jun 18	H	SFG	W-wo	7	5	Estevez	Melancon		D	++++
73	Tue	Jun 20	H	ARI	W	4	3	Ottavino	Greinke	Holland	N	++++
74	Wed	Jun 21	H	ARI	L	5	16	Walker	Hoffman		N	-
75	Thu	Jun 22	H	ARI	L	3	10	Godley	Senzatela		D	-
76	Fri	Jun 23	A	LAD	L	1	6	Wood	Freeland		N	—
77	Sat	Jun 24	A	LAD	L	0	4	Kershaw	Chatwood		N	—
78	Sun	Jun 25	A	LAD	L	6	12	Baez	Ottavino	Jansen	D	—
79	Mon	Jun 26	A	SFG	L	2	9	Samardzija	Marquez		N	—
80	Tue	Jun 27	A	SFG	L-wo	3	4	Gearrin	Qualls		N	—
81	Wed	Jun 28	A	SFG	L	3	5	Blach	Freeland	Strickland	D	—
82	Fri	Jun 30	A	ARI	W	6	3	Gray	Ray	Holland	N	+
83	Sat	Jul 1	A	ARI	L	2	6	Greinke	Chatwood	Rodney	N	-
84	Sun	Jul 2	A	ARI	L-wo	3	4	Rodney	Ottavino		D	-
85	Mon	Jul 3	H	CIN	W	5	3	Hoffman	Castillo	Holland	N	+
86	Tue	Jul 4	H	CIN	L	1	8	Bailey	Freeland		N	-
87	Wed	Jul 5	H	CIN	W	5	3	Gray	Feldman	Holland	N	+
88	Thu	Jul 6	H	CIN	L	3	6	Romano	Chatwood		D	-
89	Fri	Jul 7	H	CHW	W	12	4	Marquez	Holland		N	+
90	Sat	Jul 8	H	CHW	L	4	5	Kahnle	Holland	Robertson	N	-
91	Sun	Jul 9	H	CHW	W	10	0	Freeland	Rodon		D	+
92	Fri	Jul 14	A	NYM	L	2	14	deGrom	Gray		N	-
93	Sat	Jul 15	A	NYM	L	3	9	Lugo	Chatwood		N	-
94	Sun	Jul 16	A	NYM	W	13	4	Hoffman	Matz		D	+
95	Mon	Jul 17	H	SDP	W	9	6	Marquez	Perdomo	Holland	N	++
96	Tue	Jul 18	H	SDP	W	9	7	Senzatela	Lamet	Holland	N	+++
97	Wed	Jul 19	H	SDP	W	18	4	Gray	Richard		D	++++
98	Fri	Jul 21	H	PIT	L	5	13	Williams	Hoffman		N	-
99	Sat	Jul 22	H	PIT	W	7	3	Marquez	Kuhl	Holland	N	+
100	Sun	Jul 23	H	PIT	W	13	3	Freeland	Nova		D	++
101	Mon	Jul 24	A	STL	L	2	8	Leake	Senzatela		N	-
102	Tue	Jul 25	A	STL	L-wo	2	3	Rosenthal	McGee		N	-

Gm#	Day	Date	H/A	Opp	W/L	R	RA	Win	Loss	Save	D/N	Streak
103	Wed	Jul 26	A	STL	L	5	10	Martinez	Hoffman		N	—
104	Sat	Jul 29	A	WSN	W	4	2	Marquez	Roark	Holland	N	+
105	Sun	Jul 30 (1)	A	WSN	W	10	6	Freeland	Fedde	Holland	D	++
106	Sun	Jul 30 (2)	A	WSN	L	1	3	Jackson	Gray	Doolittle	N	-
107	Tue	Aug 1	H	NYM	W-wo	5	4	Dunn	Robles		N	+
108	Wed	Aug 2	H	NYM	L	5	10	Bradford	Chatwood		N	-
109	Thu	Aug 3	H	NYM	W-wo	5	4	Holland	Robles		D	+
110	Fri	Aug 4	H	PHI	W	4	3	Dunn	Garcia	Holland	N	++
111	Sat	Aug 5	H	PHI	W	8	5	Gray	Pivetta		N	+++
112	Sun	Aug 6	H	PHI	L	2	3	Ramos	Holland	Neris	D	-
113	Tue	Aug 8	A	CLE	L-wo	1	4	Kluber	Holland		N	-
114	Wed	Aug 9	A	CLE	W	3	2	Estevez	McAllister	Chatwood	D	+
115	Fri	Aug 11	A	MIA	L	3	6	Tazawa	McGee	Ziegler	N	-
116	Sat	Aug 12	A	MIA	L	3	4	Nicolino	Hoffman	Ziegler	N	-
117	Sun	Aug 13	A	MIA	L	3	5	Guerra	Marquez	Despaigne	D	—

The Rockies current record is 65 Wins and 52 Losses. So far, the Rockies have scored 606 runs and have had 564 runs scored against them.

Pythagorean Win-Loss Theorem

$$predictedW\% = \frac{R^k}{R^k + RA^k}$$

Using the commonly used values of k, the Rockies predicted wins for the 2017 are shown in the table below. Remember this statistic will vary widely over the course of the season.

Table 13: Predicted Wins for Entire 2017 Season

Wins (k=1.81)	Wins (k=1.83)	Wins (k=2.00)
86	86	87

Batting Statistics (non-pitchers)

Table 14: Rockies Batting Statistics (1 of 2).

Rk	Pos	Name	Age	G	AB	R	H	2B	3B	HR	RBI	SB	CS	BB
1	C	Wolters*	25	67	202	30	50	8	1	0	14	0	1	28
2	1B	Reynolds	33	110	393	66	109	17	1	23	75	2	1	54
3	2B	LeMahieu	28	110	434	69	135	22	1	4	50	5	5	40
4	SS	Story	24	100	341	45	75	14	1	15	49	5	0	36
5	3B	Arenado	26	114	453	74	141	34	6	26	100	3	2	34
6	LF	Parra*	30	76	252	40	87	18	0	9	52	0	4	11
7	CF	Blackmon*	30	115	474	106	159	25	13	27	74	11	7	42
8	RF	Gonzalez*	31	97	349	45	81	18	0	7	35	2	0	34
9	LF	Desmond	31	65	242	33	69	8	1	5	32	10	4	14
10	IF	Valaika	24	78	135	24	38	10	0	10	31	0	0	6
11	UT	Amarista*	28	74	140	17	34	9	0	3	19	1	0	5
12	OF	Tapia*	23	48	122	22	35	8	2	2	10	5	2	8
13	C	Hanigan	36	28	94	8	24	2	0	2	12	0	0	8
14	C	Garneau	29	22	68	5	14	7	0	1	6	0	0	4
15	OF	Cardullo	29	15	28	2	4	0	0	0	3	0	0	3
16	C	Lucroy	31	8	19	1	6	2	0	0	2	0	0	5
17	C	Murphy	26	8	20	1	1	1	0	0	1	0	0	2
18	IF	Adames#	25	12	13	1	0	0	0	0	0	0	0	1
19	OF	Tauchman*	26	7	9	0	2	0	0	0	1	0	0	3
20	1B	McMahon*	22	2	4	0	1	0	0	0	0	0	0	1

Table 15: Rockies Batting Statistics (2 of 2).

Rk	Pos	Name	Age	SO	BA	OBP	SLG	OPS	OPS+	TB	GDP	HBP	SH	SF	IBB
1	C	Wolters*	25	49	.248	.345	.297	.642	61	60	9	2	2	0	9
2	1B	Reynolds	33	129	.277	.365	.501	.867	111	197	10	1	0	1	0
3	2B	LeMahieu	28	60	.311	.372	.394	.766	90	171	17	5	2	5	0
4	SS	Story	24	137	.220	.298	.399	.697	70	136	6	2	0	0	3
5	3B	Arenado	26	84	.311	.361	.585	.946	127	265	17	4	1	5	5
6	LF	Parra*	30	42	.345	.369	.524	.893	117	132	7	2	0	6	0
7	CF	Blackmon*	30	99	.335	.394	.614	1.008	143	291	3	6	3	3	4
8	RF	Gonzalez*	31	85	.232	.298	.344	.642	58	120	5	1	0	5	3
9	LF	Desmond	31	65	.285	.328	.388	.717	76	94	8	3	2	3	1
10	IF	Valaika	24	36	.281	.310	.578	.888	111	78	0	0	4	1	0
11	UT	Amarista*	28	30	.243	.269	.371	.640	56	52	3	0	1	0	0
12	OF	Tapia*	23	28	.287	.341	.434	.775	90	53	0	2	1	0	1
13	C	Hanigan	36	25	.255	.317	.340	.658	63	32	4	1	1	1	2
14	C	Garneau	29	24	.206	.260	.353	.613	49	24	1	1	1	0	0
15	OF	Cardullo	29	7	.143	.250	.143	.393	2	4	0	1	0	0	0
16	C	Lucroy	31	3	.316	.517	.421	.938	137	8	0	4	0	1	0
17	C	Murphy	26	7	.050	.136	.100	.236	-40	2	0	0	0	0	1
18	IF	Adames#	25	6	.000	.071	.000	.071	-80	0	0	0	0	0	0
19	OF	Tauchman*	26	1	.222	.417	.222	.639	66	2	0	0	0	0	0
20	1B	McMahon*	22	0	.250	.400	.250	.650	67	1	1	0	0	0	0

- * - bats left-handed, # - bats both, else - bats right, ? - unknown; OPS_lg for OPS+ does not include pitchers.

Pitching Statistics

Table 16: Rockies pitching statistics (1 of 2).

Rk	Pos	Name	Age	W	L	W-L%	ERA	G	GS	GF	CG	SHO	SV	IP	H	R
1	SP	Freeland*	24	11	7	.611	3.70	22	21	0	0	0	0	121.2	125	54
2	SP	Senzatela	22	10	4	.714	4.64	24	18	2	0	0	0	114.1	105	61
3	SP	Chatwood	27	6	12	.333	5.15	22	20	1	1	1	1	113.2	103	67
4	SP	Marquez	22	9	5	.643	4.13	20	20	0	0	0	0	113.1	110	53
5	SP	Hoffman	24	6	4	.600	5.15	16	15	1	0	0	0	87.1	88	51
6	SP	Anderson*	27	3	5	.375	6.11	13	12	1	0	0	0	63.1	75	45
7	CL	Holland	31	2	3	.400	2.79	44	0	43	0	0	34	42.0	28	13
8	RP	McGee*	30	0	2	.000	3.77	45	0	9	0	0	1	43.0	36	18
9	RP	Oberg	27	0	1	.000	5.91	49	0	7	0	0	0	42.2	57	30
10	RP	Dunn*	32	4	1	.800	4.05	50	0	7	0	0	0	40.0	35	18
11	RP	Ottavino	31	1	3	.250	4.95	47	0	5	0	0	0	40.0	37	22
12		Rusin*	30	3	0	1.000	2.54	42	0	5	0	0	1	63.2	52	22
13		Gray	25	4	2	.667	4.92	11	11	0	0	0	0	56.2	68	32
14		Lyles	26	0	2	.000	6.94	33	0	12	0	0	0	46.2	61	37
15		Estevez	24	5	0	1.000	6.53	21	0	8	0	0	0	20.2	27	16
16		Qualls	38	1	1	.500	5.40	19	0	9	0	0	0	16.2	17	11
17		Neshek	36	0	0		4.76	8	0	1	0	0	0	5.2	9	4
18		Diaz	26	0	0		9.00	4	0	3	0	0	0	5.0	12	6
19		Rosscup*	29	0	0		10.80	3	0	1	0	0	0	3.1	7	4
20		Carle	25	0	0		0.00	1	0	1	0	0	0	1.0	0	0

Table 17: Rockies pitching statistics (2 of 2).

Rk	Pos	Name	ER	HR	BB	IBB	SO	HBP	BK	WP	BF	ERA+	FIP	WHIP
1	SP	Freeland*	50	15	44	2	77	8	1	0	527	135	4.76	1.389
2	SP	Senzatela	59	18	39	1	87	4	2	1	475	107	4.79	1.259
3	SP	Chatwood	65	17	63	2	91	2	2	8	485	97	5.20	1.460
4	SP	Marquez	52	12	37	2	107	7	0	3	485	121	3.79	1.297
5	SP	Hoffman	50	10	31	1	72	4	0	2	377	97	4.18	1.363
6	SP	Anderson*	43	15	23	0	63	2	2	3	281	82	5.41	1.547
7	CL	Holland	13	3	20	1	54	0	0	6	168	180	2.92	1.143
8	RP	McGee*	18	4	13	0	49	1	0	5	175	133	3.04	1.140
9	RP	Oberg	28	3	18	2	40	2	0	3	201	85	3.58	1.758
10	RP	Dunn*	18	7	22	0	48	0	0	2	174	124	4.66	1.425
11	RP	Ottavino	22	7	28	1	45	4	0	7	183	101	5.56	1.625
12		Rusin*	18	7	15	1	50	1	0	2	251	196	3.75	1.052
13		Gray	31	7	18	0	54	0	1	3	248	101	3.79	1.518
14		Lyles	36	11	12	1	33	4	0	2	211	72	5.82	1.564
15		Estevez	15	1	8	1	19	1	1	1	97	77	3.23	1.694
16		Qualls	10	3	5	0	11	0	0	0	72	94	5.06	1.320
17		Neshek	3	1	0	0	7	0	0	0	26	110	2.96	1.588
18		Diaz	5	0	5	0	2	1	0	0	30	59	5.94	3.400
19		Rosscup*	4	2	0	0	5	0	0	0	17	50	7.94	2.100
20		Carle	0	0	0	0	1	0	0	1	4		1.14	0.000

* - throws left-handed

National League Team Standard Batting

Table 18: NL Team Batting statistics (1 of 2).

Tm	#Bat	BatAge	R/G	G	PA	AB	R	H	2B	3B	HR	RBI	SB	CS	BB	SO
WSN	46	29.1	5.41	116	4512	4039	628	1110	233	19	173	613	75	22	392	920
COL	40	28.3	5.18	117	4468	4016	606	1100	208	26	136	582	44	26	342	1026
LAD	43	27.7	5.11	117	4483	3914	598	1006	229	15	172	561	57	21	475	1006
ARI	40	28.2	4.95	117	4513	4011	579	1022	234	30	149	554	77	23	412	1075
CHC	41	27.0	4.72	116	4470	3928	547	970	192	21	165	520	43	20	432	986
NYM	45	29.6	4.71	115	4391	3941	542	982	205	21	174	524	29	14	363	910
CIN	40	27.2	4.68	118	4544	4028	552	1024	182	31	167	531	89	26	401	952
MIA	41	28.4	4.66	116	4419	3975	541	1051	194	18	140	518	59	21	331	898
STL	41	28.3	4.66	118	4529	3986	550	1034	215	17	139	524	59	25	426	973
MIL	47	27.2	4.62	120	4567	4088	555	1025	207	18	171	527	100	31	391	1178
LgAvg	42	28.1	4.61	117	4469	3989	539	1015	206	22	145	516	60	23	381	973
ATL	44	29.2	4.56	115	4405	3972	524	1033	208	13	120	501	52	18	324	857
PIT	44	28.3	4.19	118	4514	4000	495	981	187	27	111	466	52	27	395	849
PHI	43	27.0	3.97	115	4350	3926	456	972	209	28	114	433	47	20	350	992
SFG	47	29.6	3.97	119	4552	4117	472	1010	216	20	94	455	62	24	344	874
SDP	47	26.1	3.82	117	4323	3890	447	912	164	25	147	433	57	25	333	1095

Table 19: NL Team Batting statistics (2 of 2).

Tm	#Bat	BatAge	R/G	BA	OBP	SLG	OPS	OPS+	TB	GDP	HBP	SH	SF	IBB	LOB
WSN	46	29.1	5.41	0	0.339	0.470	0.809	107	1900	82	17	30	34	43	802
COL	40	28.3	5.18	0	0.334	0.440	0.774	89	1768	94	35	44	31	29	757
LAD	43	27.7	5.11	0	0.342	0.455	0.797	108	1781	90	42	24	27	29	817
ARI	40	28.2	4.95	0	0.329	0.440	0.768	92	1763	66	41	29	20	34	822
CHC	41	27.0	4.72	0	0.329	0.433	0.762	97	1699	102	60	30	19	38	815
NYM	45	29.6	4.71	0	0.317	0.444	0.761	98	1751	80	38	23	26	23	758
CIN	40	27.2	4.68	0	0.328	0.439	0.767	97	1769	86	53	36	26	24	830
MIA	41	28.4	4.66	0	0.327	0.428	0.755	100	1701	86	50	35	27	33	786
STL	41	28.3	4.66	0	0.335	0.426	0.762	98	1700	103	47	35	35	27	815
MIL	47	27.2	4.62	0	0.322	0.436	0.757	95	1781	78	44	30	14	24	808
LgAvg	42	28.1	4.61	0	0.324	0.426	0.750	94	1699	88	43	31	26	29	797
ATL	44	29.2	4.56	0	0.322	0.410	0.732	91	1627	107	50	37	22	45	771
PIT	44	28.3	4.19	0	0.321	0.389	0.710	86	1555	91	65	29	24	30	846
PHI	43	27.0	3.97	0	0.312	0.402	0.715	88	1579	92	32	17	25	21	780
SFG	47	29.6	3.97	0	0.305	0.376	0.681	80	1548	93	29	23	39	29	808
SDP	47	26.1	3.82	0	0.299	0.403	0.702	84	1567	70	37	39	24	13	746

Current Injuries

	Name	Updated	Type	Details
1	Tyler Anderson	July 27 2017	Knee	Anderson has been transferred to the 60-day disabled list due to arthroscopic left knee surgery and is expected to be sidelined until the end of August.
2	Ian Desmond	July 28 2017	Calf	Desmond has been placed on the 10-day disabled due to a right calf strain. A timetable for his recovery has yet to be established.
3	Kyle Freeland	August 09 2017	Groin	Freeland is on the 10-day disabled list with a left groin strain and is expected to remain sidelined until the end of August.

Table 20: Current Injuries

Topics for Future Articles

Here are a few suggestions, but I would prefer to hear from you, dear reader, on what interests you.

- Player Value - There is much more to cover here. Perhaps we can rank some of the past greats based on their modern day WAR rating?
- What is the OPS+ statistic and how is it calculated.
- Survey MLB ticket prices.
- Are WAR ratings a good indicator of past season's playoff and World Series teams?
- A suggestion from a work colleague that we investigate what budding talent we have in the Rockies farm system. I will look into this and see what I can find.

Let me know what you would like to see in future articles. Send me an email at jdreed@q.com.

Yours truly,

Jim Reed

Appendix

Glossary

Batting Statistics

Statistic Abbreviation	Definition
<i>G</i>	number of games (participated)
<i>PA</i>	plate appearances
<i>AB</i>	at bats
<i>R</i>	runs scored by player or team
<i>RA</i>	runs allowed
<i>H</i>	hits
<i>2B</i>	doubles
<i>3B</i>	triples
<i>HR</i>	home runs
<i>RBI</i>	runs batted in
<i>BA</i>	batting average
<i>OBP</i>	on-base percentage
<i>SLG</i>	slugging percentage
<i>OPS</i>	on-base percentage plus slugging percentage
<i>OPS+</i>	This statistic normalizes a player's OPS. It adjusts for small variables that might affect OPS scores (e.g., park effects).

Pitching Statistics

Pitching Statistic	Definition
<i>Rk</i>	Rank This is a count of the rows from top to bottom. It is recalculated following the sorting of a column.
<i>Pos</i>	Position
<i>Name</i>	Player Name
<i>Age</i>	Player's age at midnight of June 30th of that year
<i>W</i>	Wins
<i>L</i>	Losses
<i>W-L%</i>	Win-Loss Percentage $W / (W + L)$ For players, leaders need one decision for every ten team games. For managers, minimum to qualify for leading is 320 games.
<i>ERA</i>	$9 * ER / IP$
<i>G</i>	Games Played or Pitched
<i>GS</i>	Games Started
<i>GF</i>	Games Finished
<i>CG</i>	Complete Game
<i>SHO</i>	Shutouts No runs allowed and a complete game.
<i>SV</i>	Saves
<i>IP</i>	Innings Pitched
<i>H</i>	Hits/Hits Allowed
<i>R</i>	Runs Scored/Allowed
<i>ER</i>	Earned Runs Allowed
<i>HR</i>	Home Runs Hit/Allowed
<i>BB</i>	Bases on Balls/Walks
<i>IBB</i>	Intentional Bases on Balls First tracked in 1955.
<i>SO</i>	Strikeouts
<i>HBP</i>	Times Hit by a Pitch.
<i>BK</i>	Balks
<i>WP</i>	Wild Pitches
<i>BF</i>	Batters Faced
<i>ERA+</i>	$ERA+ 100*[lgERA/ERA]$ Adjusted to the player's ballpark(s).
<i>FIP</i>	Fielding Independent Pitching
<i>WHIP</i>	$(BB + H)/IP$ For recent years, leaders need 1 IP per team game played
<i>H9</i>	$9 \times H / IP$ For recent years, leaders need 1 IP per team game played
<i>HR9</i>	$9 \times HR / IP$ For recent years, leaders need 1 IP per team game played
<i>BB9</i>	$9 \times BB / IP$ For recent years, leaders need 1 IP per team game played
<i>SO9</i>	$9 \times SO / IP$ For recent years, leaders need 1 IP per team game played
<i>SO/W</i>	SO/W or SO/BB For recent years, pitching leaders need 1 IP per team game played.

Fielding Statistics

Fielding Statistic	Definition
<i>Name</i>	Player Name Bold can mean player is active for this team or player has appeared in MLB * means LHP or LHB, \# means switch hitter, + can mean HOFer.
<i>Age</i>	Player's age at midnight of June 30th of that year
<i>G</i>	Games Played or Pitched
<i>GS</i>	– Games Started
<i>CG</i>	– Complete Game
<i>Inn</i>	– Innings Played in Field
<i>Ch</i>	– Defensive Chances Putouts + Assists + Errors
<i>PO</i>	– Putouts
<i>A</i>	– Assists
<i>E</i>	– Errors Committed
<i>DP</i>	– Double Plays Turned
<i>Fld%</i>	– Fielding Percentage (Putouts + Assists) / (Putouts + Assists + Errors)
<i>Rtot</i>	– Total Zone Total Fielding Runs Above Avg The number of runs above or below average the player was worth based on the number of plays made. This number combines the Rtz, Rdp, Rof, Rcatch numbers into a total defensive contribution. See the glossary section for a more complete explanation. Provided by BaseballProjection.com
<i>Rtot/yr</i>	– Total Zone Total Fielding Runs Above Avg per 1,200 Inn The number of runs above or below average the fielder was worth per 1,200 Innings (approx 135 games). This number combines the Rtz, Rdp, Rof, Rcatch numbers into a total defensive contribution. See the glossary section for a more complete explanation. Provided by BaseballProjection.com
<i>Rdrs</i>	– BIS Defensive Runs Saved Above Avg The number of runs above or below average the player was worth based on the number of plays made. This number combines the Rpm, Rbdp, Rbof, Rbcatch numbers into a total defensive contribution. Provided by Baseball Info Solutions
<i>Rdrs/yr</i>	– BIS Defensive Runs Saved Above Avg per 1,200 Inn The number of runs above or below average the fielder was worth per 1,200 Innings (approx 135 games). This number combines the Rpm, Rbdp, Rbof, Rbcatch numbers into a total defensive contribution. For pitchers, this is set to 200 Innings. Provided by Baseball Info Solutions
<i>RF/9</i>	– Range Factor per 9 Inn $9 * (\text{Putouts} + \text{Assists}) / \text{Innings Played}$
<i>RF/G</i>	– Range Factor per Game $(\text{Putouts} + \text{Assists}) / \text{Games Played}$
<i>PB</i>	– Passed Balls
<i>WP</i>	– Wild Pitches
<i>SB</i>	– Stolen Bases
<i>CS</i>	– Caught Stealing

Fielding Statistic	Definition
<i>CS%</i>	– Caught Stealing Percentage $CS / (SB + CS)$
<i>lgCS%</i>	– League Caught Stealing Percentage League Expected $CS / \text{Players } SB + \text{Players } CS$
<i>PO</i>	– Pickoffs Runner picked off a base. May include cases they were safe on an error. Also includes Pickoff Caught Stealing plays.
<i>Pos</i>	Summary – Positions Played The positions either followed by the games played at that position or in order of games or innings played. For a single season, * indicates they played at least 2/3rds of the team games there Positions after / indicate less than ten games played at those positions. For career, a + sign means more than 300 games at that position and a - sign means less than 30 games.

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