

# Rockies 2017 - Week #17

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Figure 1: Charlie Blackmon: “I’m the tireddest guy in baseball.”

“Statistics is the grammar of science.” – Karl Pearson

Table 1: NL West Standings

Tm	W	L	W-L%	GB
Los Angeles Dodgers	74	31	.705	–
Arizona Diamondbacks	60	45	.571	14.0
Colorado Rockies	60	46	.566	14.5
San Diego Padres	47	58	.448	27.0
San Francisco Giants	40	66	.377	34.5

Table 2: Current Rockies Results as of 2017-07-31

Wins	Losses	Win.Pct	Runs	Runs.Ag	Predicted Season Wins
60	46	.56.604	564	514	88



## Week #17

It has been a travel week for the Rox. Losing three games to the Seattle Mariners, they proceeded across the country to Washington, DC, where the Rockies bettered the Nationals two out of three. The Rockies are still neck-and-neck with the Diamondbacks for second and 14.5 games behind the “Lots A Dinero” team based in the City of Angels.

It has been a busy week for yours truly, as well. Actually, I took the week off from work and spent time addressing some deferred maintenance issues at home. Therefore, this will be a week when I don’t have a Featured Article. I will work on some ideas this week and hopefully have something worthwhile next week.

- **Featured Article**
  - None this week.
- Colorado Rockies Dashboard
  - Rockies Win/Loss Graphs for 2017 and 2007
  - National and American League Standings
  - Game-by-Game Results
  - **Pythagorean Theorem** prediction of the number of wins.
  - Batting Statistics (for non-pitchers)
  - Pitching Statistics
  - National League Team Standard Batting **New**
  - Current Injuries **Updated**
- Topics for Future Articles
- Glossary
  - Batting Statistics
  - Pitching Statistics
  - Fielding Statistics

Most of the source data for this article can be found at URL <http://baseball-reference.com>.

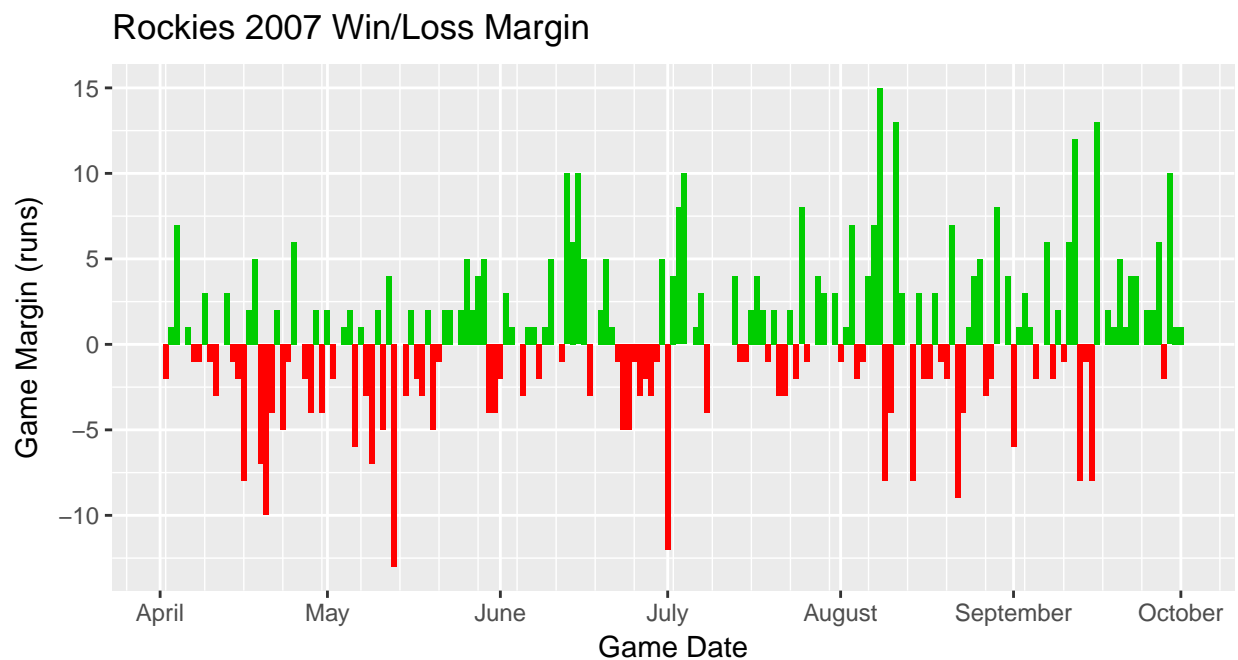
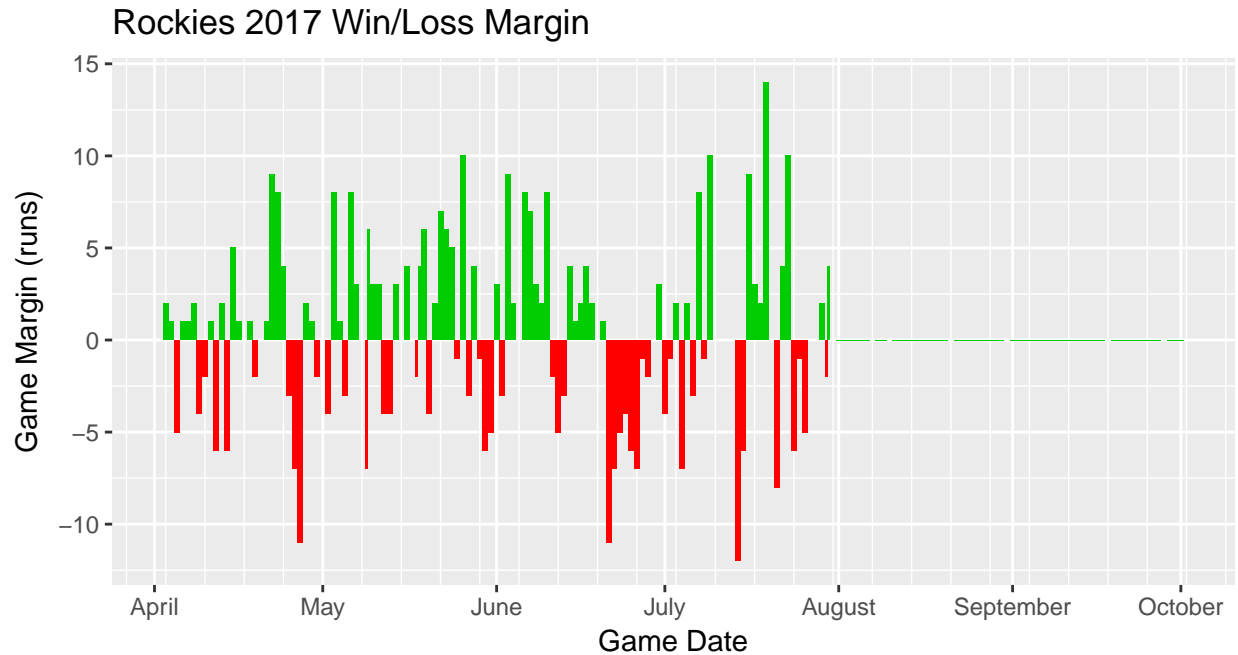
Let me know what other special interest statistics you might like to see. Remember to refer to the Glossaries at the end of the document if unfamiliar with one or more of the statistic abbreviations in the tables.

## 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.



## National League Standings

Table 3: NL East Standings

Tm	W	L	W-L%	GB
Washington Nationals	62	41	.602	–
Miami Marlins	49	54	.476	13.0
Atlanta Braves	48	55	.466	14.0
New York Mets	48	55	.466	14.0
Philadelphia Phillies	38	64	.373	23.5

Table 4: NL Central Standings

Tm	W	L	W-L%	GB
Chicago Cubs	56	48	.538	–
Milwaukee Brewers	55	52	.514	2.5
St. Louis Cardinals	52	53	.495	4.5
Pittsburgh Pirates	51	54	.486	5.5
Cincinnati Reds	42	63	.400	14.5

Table 5: NL West Standings

Tm	W	L	W-L%	GB
Los Angeles Dodgers	74	31	.705	–
Arizona Diamondbacks	60	45	.571	14.0
Colorado Rockies	60	46	.566	14.5
San Diego Padres	47	58	.448	27.0
San Francisco Giants	40	66	.377	34.5

**American League Standings**

Table 6: AL East Standings

Tm	W	L	W-L%	GB
New York Yankees	56	47	.544	–
Boston Red Sox	57	49	.538	0.5
Tampa Bay Rays	54	52	.509	3.5
Baltimore Orioles	50	54	.481	6.5
Toronto Blue Jays	49	56	.467	8.0

Table 7: AL Central Standings

Tm	W	L	W-L%	GB
Cleveland Indians	57	46	.553	–
Kansas City Royals	55	48	.534	2.0
Minnesota Twins	50	53	.485	7.0
Detroit Tigers	47	56	.456	10.0
Chicago White Sox	40	62	.392	16.5

Table 8: AL West Standings

Tm	W	L	W-L%	GB
Houston Astros	68	36	.654	–
Seattle Mariners	53	53	.500	16.0
Los Angeles Angels	51	55	.481	18.0
Texas Rangers	50	54	.481	18.0
Oakland Athletics	46	59	.438	22.5

## 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	-

The Rockies current record is 60 Wins and 46 Losses. So far, the Rockies have scored 564 runs and have had 514 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 10: Predicted Wins for Entire 2017 Season

Wins (k=1.81)	Wins (k=1.83)	Wins (k=2.00)
88	88	88

## Batting Statistics (non-pitchers)

Table 11: 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	99	358	60	100	15	1	22	71	2	1	50
3	2B	LeMahieu	28	100	390	64	123	19	1	4	47	5	4	37
4	SS	Story	24	90	308	44	71	14	1	15	49	4	0	33
5	3B	Arenado	26	103	410	69	129	33	6	23	91	2	1	31
6	LF	Desmond	31	65	242	33	69	8	1	5	32	10	4	14
7	CF	Blackmon*	30	104	430	93	141	20	13	24	70	9	6	32
8	RF	Gonzalez*	31	86	307	42	70	16	0	6	26	2	0	33
9	LF	Parra*	30	65	209	36	74	13	0	8	45	0	4	9
10	IF	Valaika	24	71	124	22	32	10	0	9	28	0	0	5
11	UT	Amarista*	28	65	127	16	32	9	0	2	18	1	0	4
12	OF	Tapia*	23	42	111	21	34	8	2	2	10	3	2	7
13	C	Hanigan	36	24	81	8	21	2	0	2	13	0	0	6
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	Murphy	26	8	20	1	1	1	0	0	1	0	0	2
17	IF	Adames#	25	12	13	1	0	0	0	0	0	0	0	1
18	OF	Tauchman*	26	7	9	0	2	0	0	0	1	0	0	3

Table 12: 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	119	.279	.368	.511	.879	113	183	10	1	0	1	0
3	2B	LeMahieu	28	53	.315	.377	.400	.777	92	156	12	4	2	4	0
4	SS	Story	24	123	.231	.307	.429	.736	78	132	6	1	0	0	1
5	3B	Arenado	26	76	.315	.363	.593	.956	128	243	14	3	1	5	5
6	LF	Desmond	31	65	.285	.328	.388	.717	75	94	8	3	2	3	1
7	CF	Blackmon*	30	93	.328	.379	.602	.981	135	259	2	5	3	3	2
8	RF	Gonzalez*	31	74	.228	.301	.339	.640	57	104	4	1	0	4	3
9	LF	Parra*	30	34	.354	.376	.531	.907	119	111	7	2	0	6	0
10	IF	Valaika	24	33	.258	.285	.556	.841	99	69	0	0	3	1	0
11	UT	Amarista*	28	27	.252	.275	.370	.645	56	47	3	0	1	0	0
12	OF	Tapia*	23	23	.306	.358	.468	.827	101	52	0	2	1	0	1
13	C	Hanigan	36	22	.259	.315	.358	.673	65	29	3	1	1	1	1
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	1	4	0	1	0	0	0
16	C	Murphy	26	7	.050	.136	.100	.236	-40	2	0	0	0	0	1
17	IF	Adames#	25	6	.000	.071	.000	.071	-80	0	0	0	0	0	0
18	OF	Tauchman*	26	1	.222	.417	.222	.639	65	2	0	0	0	0	0

- \* - bats left-handed, # - bats both, else - bats right, ? - unknown; OPS<sub>lg</sub> for OPS+ does not include pitchers.

## Pitching Statistics

Table 13: 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	3.71	21	20	0	0	0	0	121.1	124	54
2	SP	Chatwood	27	6	11	.353	4.78	20	19	0	1	1	0	107.1	95	59
3	SP	Senzatela	22	10	4	.714	4.84	20	17	1	0	0	0	102.1	96	57
4	SP	Marquez	22	9	4	.692	4.08	17	17	0	0	0	0	97.0	95	45
5	SP	Hoffman	24	6	3	.667	5.58	13	12	1	0	0	0	69.1	72	44
6	SP	Anderson*	27	3	5	.375	6.11	13	12	1	0	0	0	63.1	75	45
7	CL	Holland	31	1	1	.500	1.64	40	0	39	0	0	33	38.1	22	7
8	RP	McGee*	30	0	1	.000	3.27	43	0	9	0	0	1	41.1	33	15
9	RP	Oberg	27	0	1	.000	5.58	46	0	7	0	0	0	40.1	50	27
10	RP	Ottavino	31	1	3	.250	5.35	42	0	4	0	0	0	37.0	35	22
11	RP	Dunn*	32	2	1	.667	4.63	44	0	6	0	0	0	35.0	34	18
12		Rusin*	30	3	0	1.000	2.80	37	0	5	0	0	1	54.2	44	21
13		Lyles	26	0	2	.000	6.94	33	0	12	0	0	0	46.2	61	37
14		Gray	25	3	2	.600	5.52	9	9	0	0	0	0	44.0	54	28
15		Estevez	24	4	0	1.000	8.10	18	0	6	0	0	0	16.2	25	16
16		Qualls	38	1	1	.500	5.40	19	0	9	0	0	0	16.2	17	11
17		Diaz	26	0	0		9.00	4	0	3	0	0	0	5.0	12	6
18		Rosscup*	29	0	0		3.00	2	0	1	0	0	0	3.0	4	1
19		Neshek	36	0	0		5.40	2	0	0	0	0	0	1.2	1	1
20		Carle	25	0	0		0.00	1	0	1	0	0	0	1.0	0	0

Table 14: 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	76	8	1	0	525	136	4.79	1.385
2	SP	Chatwood	57	15	62	2	88	2	2	7	458	105	5.11	1.463
3	SP	Senzatela	55	17	35	1	75	4	2	1	427	104	4.99	1.280
4	SP	Marquez	44	10	30	2	95	6	0	3	413	123	3.64	1.289
5	SP	Hoffman	43	8	24	1	58	4	0	0	302	90	4.19	1.385
6	SP	Anderson*	43	15	23	0	63	2	2	3	281	83	5.42	1.547
7	CL	Holland	7	2	18	1	50	0	0	5	149	308	2.63	1.043
8	RP	McGee*	15	4	12	0	47	0	0	5	165	155	3.00	1.089
9	RP	Oberg	25	3	18	2	38	2	0	3	187	91	3.72	1.686
10	RP	Ottavino	22	7	26	1	42	3	0	7	170	95	5.69	1.649
11	RP	Dunn*	18	7	19	0	45	0	0	2	155	109	4.81	1.514
12		Rusin*	17	6	15	1	42	1	0	2	218	180	3.92	1.079
13		Lyles	36	11	12	1	33	4	0	2	211	73	5.83	1.564
14		Gray	27	6	15	0	46	0	0	2	197	91	3.85	1.568
15		Estevez	15	1	6	1	18	1	1	1	82	63	3.03	1.860
16		Qualls	10	3	5	0	11	0	0	0	72	95	5.07	1.320
17		Diaz	5	0	5	0	2	1	0	0	30	59	5.95	3.400
18		Rosscup*	1	1	0	0	4	0	0	0	13	184	4.82	1.333
19		Neshek	1	1	0	0	2	0	0	0	6	110	8.55	0.600
20		Carle	0	0	0	0	1	0	0	1	4		1.15	0.000

\* - throws left-handed

## National League Team Standard Batting

Table 15: 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	45	29.2	5.57	103	4039	3614	574	1000	214	18	158	560	69	20	359	823
COL	38	28.2	5.32	106	4044	3643	564	1000	188	26	125	541	38	23	305	936
LAD	40	27.8	5.10	105	4030	3521	535	914	208	14	150	503	49	19	428	908
ARI	37	28.2	5.03	105	4054	3608	528	929	214	28	134	505	72	22	370	956
MIA	40	28.4	4.77	103	3951	3558	491	953	179	14	125	469	56	18	294	809
NYM	43	29.7	4.76	103	3954	3537	490	890	189	19	152	473	25	8	336	792
MIL	43	27.1	4.74	107	4078	3650	507	916	187	15	156	485	89	27	349	1040
CHC	39	26.9	4.65	104	4006	3514	484	859	179	19	145	461	37	18	393	877
LgAvg	41	28.1	4.64	104	4000	3571	485	912	187	20	129	464	54	20	340	871
ATL	41	29.3	4.60	103	3968	3576	474	934	193	11	108	454	46	16	291	784
CIN	40	27.2	4.55	105	4035	3594	478	910	169	28	142	460	83	22	340	854
STL	41	28.3	4.47	105	4009	3548	469	907	188	12	123	446	53	22	364	864
PIT	41	28.2	4.25	105	4033	3569	446	882	169	25	102	419	48	26	357	763
PHI	39	27.1	4.06	102	3864	3484	414	863	186	23	107	394	41	19	311	891
SFG	46	29.6	3.91	106	4063	3671	414	896	188	19	82	398	53	21	307	780
SDP	46	26.2	3.81	105	3871	3482	400	821	147	25	127	389	53	25	301	985

Table 16: 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	45	29.2	5.57	0	0.342	0.477	0.819	109	1724	70	14	24	28	37	725
COL	38	28.2	5.32	0	0.333	0.443	0.776	88	1615	82	27	41	28	24	670
LAD	40	27.8	5.10	0	0.344	0.454	0.798	108	1600	82	35	21	24	26	745
ARI	37	28.2	5.03	0	0.331	0.444	0.774	93	1601	59	33	25	18	30	735
MIA	40	28.4	4.77	0	0.329	0.431	0.761	102	1535	83	43	30	25	30	704
NYM	43	29.7	4.76	0	0.321	0.445	0.765	99	1573	76	35	21	25	23	694
MIL	43	27.1	4.74	0	0.322	0.439	0.760	96	1601	68	39	26	14	22	711
CHC	39	26.9	4.65	0	0.328	0.430	0.758	97	1511	91	55	26	17	35	732
LgAvg	41	28.1	4.64	0	0.325	0.427	0.751	94	1525	79	37	27	24	26	713
ATL	41	29.3	4.60	0	0.323	0.412	0.735	91	1473	96	47	33	21	44	699
CIN	40	27.2	4.55	0	0.324	0.434	0.758	95	1561	74	48	29	24	20	737
STL	41	28.3	4.47	0	0.328	0.419	0.748	95	1488	88	35	29	33	24	715
PIT	41	28.2	4.25	0	0.324	0.394	0.718	88	1407	82	59	28	19	28	759
PHI	39	27.1	4.06	0	0.313	0.406	0.719	89	1416	83	29	16	24	18	681
SFG	46	29.6	3.91	0	0.304	0.373	0.677	79	1368	83	27	21	37	21	724
SDP	46	26.2	3.81	0	0.301	0.402	0.703	85	1399	66	34	34	20	13	671

**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	Chad Bettis	July 21 2017	Illness	Bettis is on the 60-day disabled list while recovering from testicular cancer but is expected to make his season debut sometime during the early part of August.
3	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.
4	Jake McGee	July 30 2017	Back	McGee has been placed on the 10-day disabled list with a back injury and it is unclear how much time he is expected to miss.

Table 17: 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](mailto: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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