2020 Presidential Election Startling Vote Spikes

1-2-21 (rev 7-25-23)

Statistical Analysis of State Vote Dumps in the 2020 Presidential Election

Eric Quinnell (Engineer); Stan Young (Statistician); Tony Cox (Statistician); Tom Davis (IT Expert);
Ray Blehar (Government Analyst, retired); John Droz (Physicist); and Anonymous Expert

Contents

Executive Overview

A team of unpaid citizen volunteer mathematicians, scientists, IT veterans, and engineers collaborated in a statistical vote analysis of selected states in the 2020 Elections. The purpose of such an analysis is not to tell **what** happened (ballot stuffing, machine algorithm, etc.), but rather **where** there were unusual results.

In this special report, we are looking at what has been called vote "Dumps." We are defining a Dump as ***unusually large differences*** **between Presidential candidates received/recorded at one time**. We looked for such spikes for both candidates. The conclusion is that all we were able to find were net Biden Dumps (see next page, Table 1, where the states are listed alphabetically, and the dumps chronologically). These are representative. (For additional data on spikes in other states, see our other report here.) Unless otherwise noted, all data in Table 1 are from Edison time-series analysis of rates of votes added.

Again, we cannot determine exactly **what** happened to cause these Dumps (e.g., ballot stuffing, something legitimate, etc.), but rather **where** (a State) and time(s) that these unusual results took place.

To verify vote integrity, Phase 2 is to have a **forensic audit** done of the locations and time(s) where these suspicious Dumps were identified — which can likely resolve the **what.** For any questions, please contact one of the above-listed authors.

STATE	BIDEN VOTES ADDED	TRUMP VOTES ADDED	BIDEN NET VOTE DUMPS*	TIME (Local)	TIME (UTC)
Arizona	363,014	254,499	**108,515**	(Nov 3) 8:05 PM	3:05:47
	798,568	655,467	**143,101**	(Nov 3) 8:06 PM	3:06:25
Florida	369,751	247,008	**122,743**	(Nov 4) 7:28 AM	12:28:01
	435,219	243,092	**192,127**	(Nov 4) 7:32 AM	12:32:23
	367,539	227,312	**140,227**	(Nov 4) 7:38 AM	12:38:40
Georgia	162,133	42,322	**119,811**	(Nov 4) 1:32 AM	6:32:50
Illinois	219,339	45,303	**174,036**	(Nov 3) 8:57 PM	2:57:45
	352,237	112,550	**239,687**	(Nov 3) 9:12 PM	3:12:42
	475,306	285,947	**189,359**	(Nov 3) 9:36 PM	3:36:11
Kentucky	206,959	136,032	**70,927**	(Nov 3) 8:13 PM	1:13:00
Maine	33,264	6,028	**27,236**	(Nov 4) 2:05 AM	7:05:33
Michigan	141,258	5,968	**135,290**	(Nov 4) 6:31 AM	11:31:53
Minnesota	198,564	84,809	**113,755**	(Nov 3) 11:30 PM	5:30:22
Missouri	157,389	61,899	**95,490**	(Nov 3) 8:53 PM	1:53:59
	67,467	15,783	**51,684**	(Nov 3) 11:39 PM	4:39:09
New Jersey	130,023	39,445	**90,578**	(Nov 3) 8:59 PM	1:59:17
Ohio	366,894	206,713	**160,181**	(Nov 4) 7:44 AM	12:44:11
Pennsylvania	70,565	4,218	**66,347**	(Nov 3) 8:15 PM	1:15:31
	73,945	8,543	**65,402**	(Nov 3) 8:26 PM	1:26:57
	88,865	23,713	**65,152**	(Nov 3) 8:38 PM	1:38:49
	62,445	1,159	**61,286**	(Nov 4) 9:16 AM	14:16:51
Virginia	245,108	125,813	**119,295**	(Nov 3) 9:56 PM	2:56:40
	308,052	77,493	**230,559**	(Nov 4) 2:17 AM	7:17:06
	191,347	67,210	**124,137**	(Nov 4) 4:00 AM	9:00:01
Wisconsin	38,989	14,004	**24,985**	(Nov 3) 9:27 PM	3:27:32
	143,379	25,163	**118,216**	(Nov 4) 3:42 AM	9:42:20
TOTAL			**3,050,126**		

Table 1: Summary of State's Larger 2020 Presidential Differential Vote Dumps

*A "Net Vote Dump" for most of the above states is defined as a 25,000+ vote differential between 2020 Presidential candidates, at one time. All were for Biden as we were not able to find any cases for Trump that met this criteria. (If any can be documented, we'd be glad to do an update and include them.)

AZ, PA & VA are exceptions for our arbitrary 25k rule. PA and VA (unlike most other states) have too many over 25k. AZ has just two standouts. As a result, the PA threshold is 60k, and AZ & VA are 100k.

Note: there are major differences between various versions of the Edison data — and it's not always clear as to which are the most reliable. Table 1 was made up from versions 11-24 and 11-25 Edison data, and we did our best to sort through confusing data… Also, note that all of the timestamps in this report are 2020.

Arizona

Figure 1 on the next page contains four graphs:

- **[top left]** cumulative vote count (Trump *vs* Biden) as a function of time (batch),
- **[top right]** votes added ("jumps") at each batch *divided by the time interval between consecutive batches* (i.e., we plot the "rate" of vote counts added, denoted Δ Trump and Δ Biden),
- **[bottom left]** correlation analysis of Biden jumps *vs* Trump jumps, and
- **[bottom right]** plot of the residuals.

"Residuals" is defined as the difference between Biden and Trump votes added (Δ Biden-Δ Trump) for each batch. On average, we expect Trump/Biden jumps to be of the same order of magnitude for each candidate, especially for close races. Wild differences ("jumps") in magnitudes, and especially ones that favor a particular candidate, are signs of potential anomalies.

When the race is tight, we expect the points to lie along the diagonal red line (bottom left), indicating that the jumps in vote counts are similar between both candidates. Deviations from the diagonal (for tight races) indicate unexpected activity. As can be seen in all the correlation plots shown in this document, and to a larger extent in the residuals plot, statistically anomalous jumps are all in Biden's favor.

A jump of the magnitude shown by the green line (top right) is statistically impossible. As an example, jumps of magnitude greater than 10x the standard deviation (sigma) are considered statistically impossible.

Note: This same format is used in several subsequent states, and for the sake of brevity and simplicity this four-part graph will not be explained in each of those.

For the time series data in Arizona (Figure 1), there are two statistically impossible jumps (in Biden's favor) to the level shown by the horizontal green line on the Residual plot (bottom right graph). The first jump occurred on 11-04 03:05:47 UTC (363,104 votes for Biden, 254,499 votes for Trump), which is 8:05:47 PM AZ time. **This corresponds to a net gain of 108,515 votes to Biden's advantage**.

The second jump occurred on 11-04 03:06:25 UTC (798,568 votes for Biden, 644,467 votes for Trump), just 38 seconds after the first dump. **This corresponds to a net gain of 143,100 votes to Biden's advantage**. A third jump occurs at 11-04 03:10:54 UTC (19,880 votes for Biden, 49,003 votes for Trump), which is about 4 minutes after the first two dumps. This corresponds to a net gain of 29,123 votes to Trump's advantage – a rarity, but the point exists.

A small selection of states have these spikes right after poll closings, but the majority do not, and certainly not within seconds of each other. Suggestions of "in-person" votes simply being reported *en masse* have been hypothesized, but not confirmed or even solicited to official channels. These two points are flagged as statistically naturally impossible (meaning they represent some other external process) due to the extremely short time window where such large counts occurred as compared to the remainder of the data.

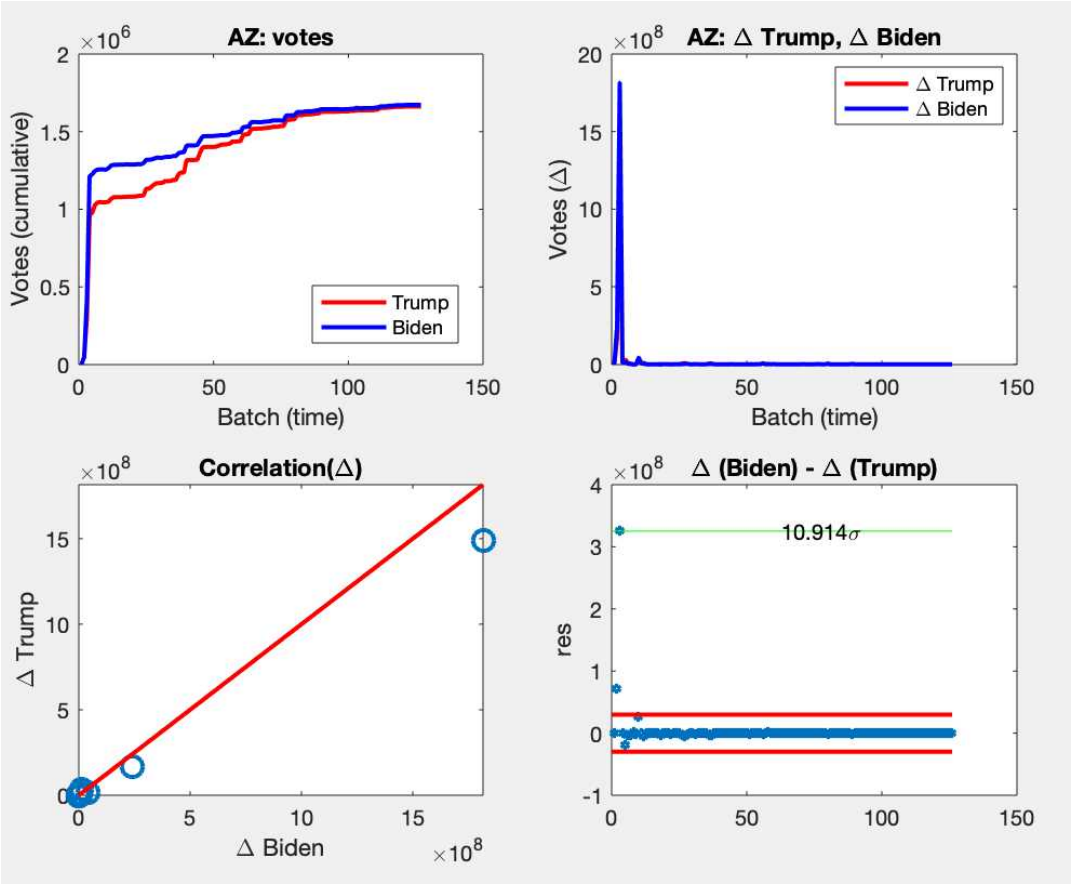

Figure 1. Arizona time series analysis.
Time axis shown extends from '11-04 03:03:36' (batch 1) to '11-20 14:19:13' (batch 126).

The table below shows the actual votes, where the three spikes are in red.

Local Time	Elapsed Time	T Increase	B Increase	Bi - Tr
Nov3 8:03:36 PM	NA	52,957	50,336	-2,622
Nov3 8:05:47 PM	2m, 11s	254,499	363,014	108,515
Nov3 8:06:25 PM	38s	655,467	798,568	143,100
Nov3 8:08:46 PM	2m, 21s	15,811	14,853	-958
Nov3 8:10:54 PM	2m, 8s	49,003	19,880	-29,123
Nov3 8:13:47 PM	2m, 51s	15,904	8,981	-6,923

Table 2. Arizona small granule time-series data showing three vote injections.

Florida

Florida has three statistically unlikely jumps (Figure 2) found at two time periods. At the first jump (going from batch #50 to #51, time stamp '11-04 00:28:01') Biden gains 369,751 votes and Trump gains 247,008 votes. **This represents a net difference of 122,743 votes for Biden**.

At 11-04 00:32:23 going from batch #60 to #61, Biden gains 435,219 votes and Trump gains 243,092 votes. **The net difference, 192,127 votes, represents an advantage in favor of Biden.** The probability is 1 in 10^{23}. At time stamp '11-04 00:38:40' Biden gains 367,539 votes and Trump gains 227,312 votes when going from batch #73 to #74. The probability is 1 in 10^{25}. **The difference is a net 140,227 votes in Biden's favor**.

These three gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on its unusually high rate.

In the graph on the next page (Figure 3) we zoom in on the region covering batches #45-77. The graph shows the three obvious jumps.

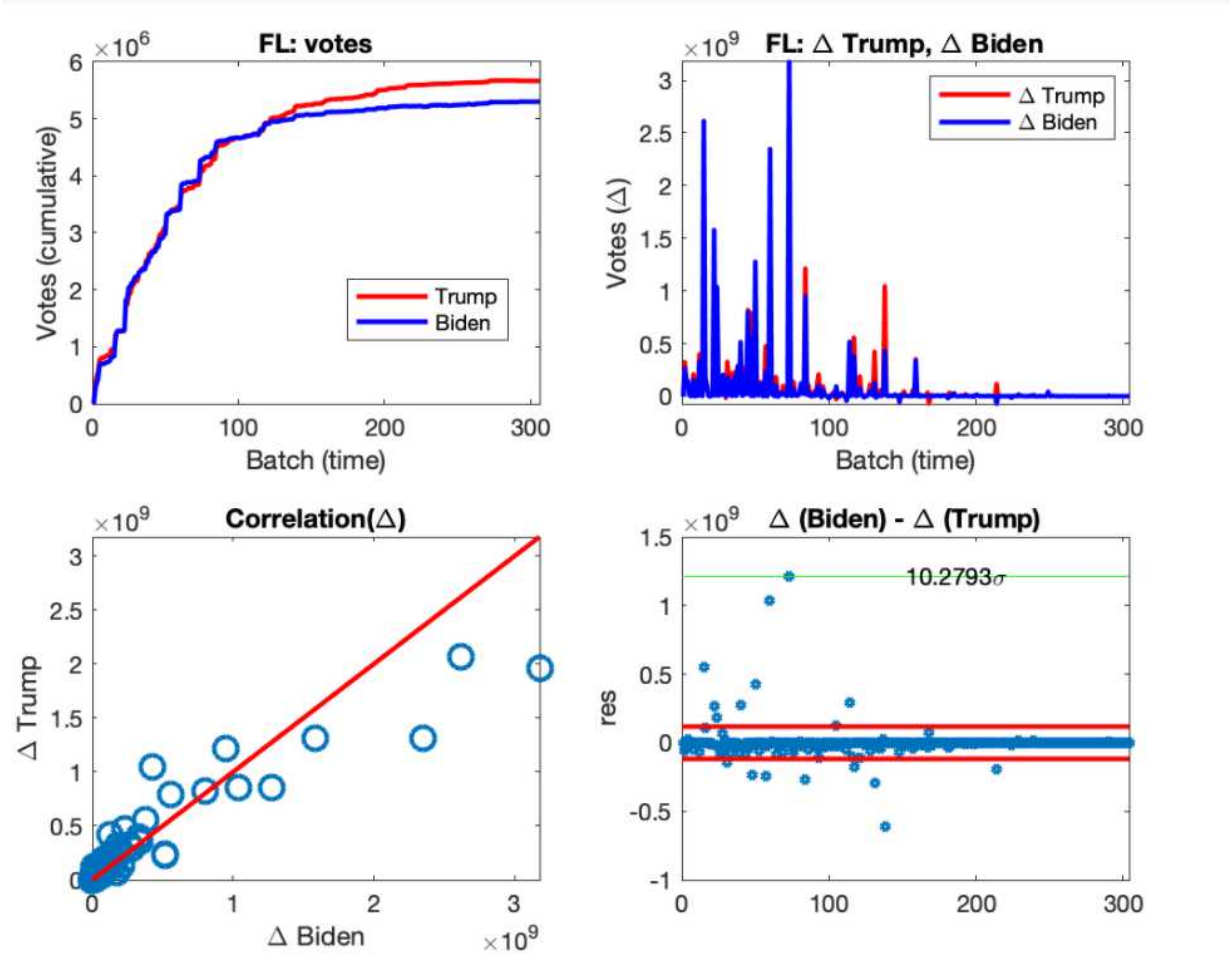

Figure 2. Florida time series analysis.

Time axis extends from '11-04 00:02:01' (batch #1) to '11-20 14:16:04' (batch #306).

The second jump (going from batch #60 to #61, time stamp '11-04 00:32:23') awards Biden with 435,219 votes and Trump with 243,092 votes. The net difference, 192,127 votes, represents a net advantage for Biden (this jump was already identified in the previous paragraph). The third “Biden injection” (going from batch #73 to #74, time stamp '11-04 00:38:40') awards Biden with 367,539 votes and Trump with 227,312 votes. The net difference, 140,227 votes, represents a net advantage for Biden.

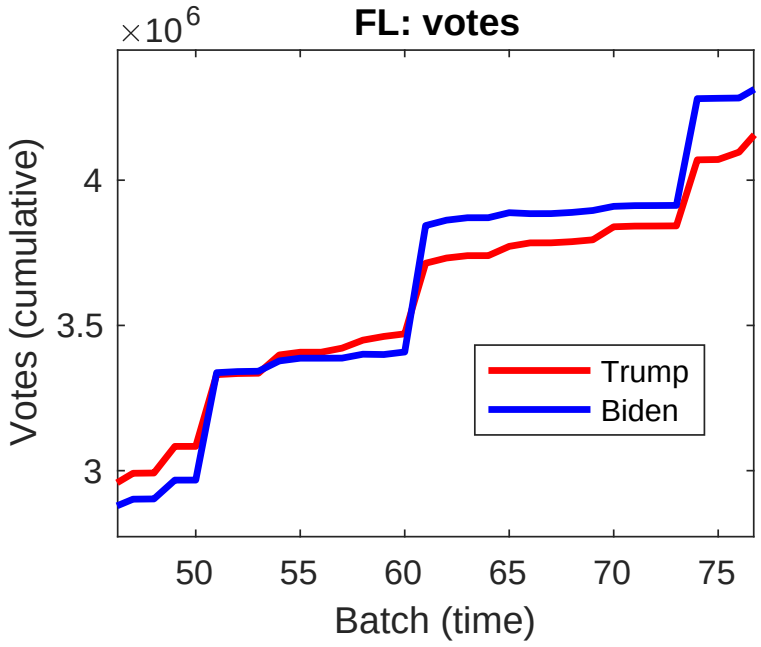

Figure 3. Zoom in on the Florida time series to show the region ranging from batch #45 to #77.

Georgia

In Georgia (Figure 4) we find two 10-sigma jumps. The time stamps for these jumps are 11-04 01:42:47 and 11-04 03:23:48 UTC. Ten-sigma jumps have a probability of 1 in 10^{23}.

The first jump (occurring at batch #83, time stamp '11-04 01:42:47') gives Trump 19,514 votes and Biden, 35,135 votes. **The difference is 15,621 votes in Biden's favor.** The second 10-sigma jump (occurring at batch #184, time stamp '11-04 03:23:48') awards Biden 31,092 votes and Trump, 20,633 votes. **The difference is 10,459 votes in Biden's favor.** These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on its unusually high rate.

The plot (Figure 4 top left) also shows a "Biden injection" starting at batch #274 (timestamp: '11-04 06:32:50'). Subtracting the vote counts of batch #276 from batch #274, we obtain a Biden jump of size 162,133 votes and for Trump, 42,322 votes. **This is a net advantage of 119,811 votes for Biden.**

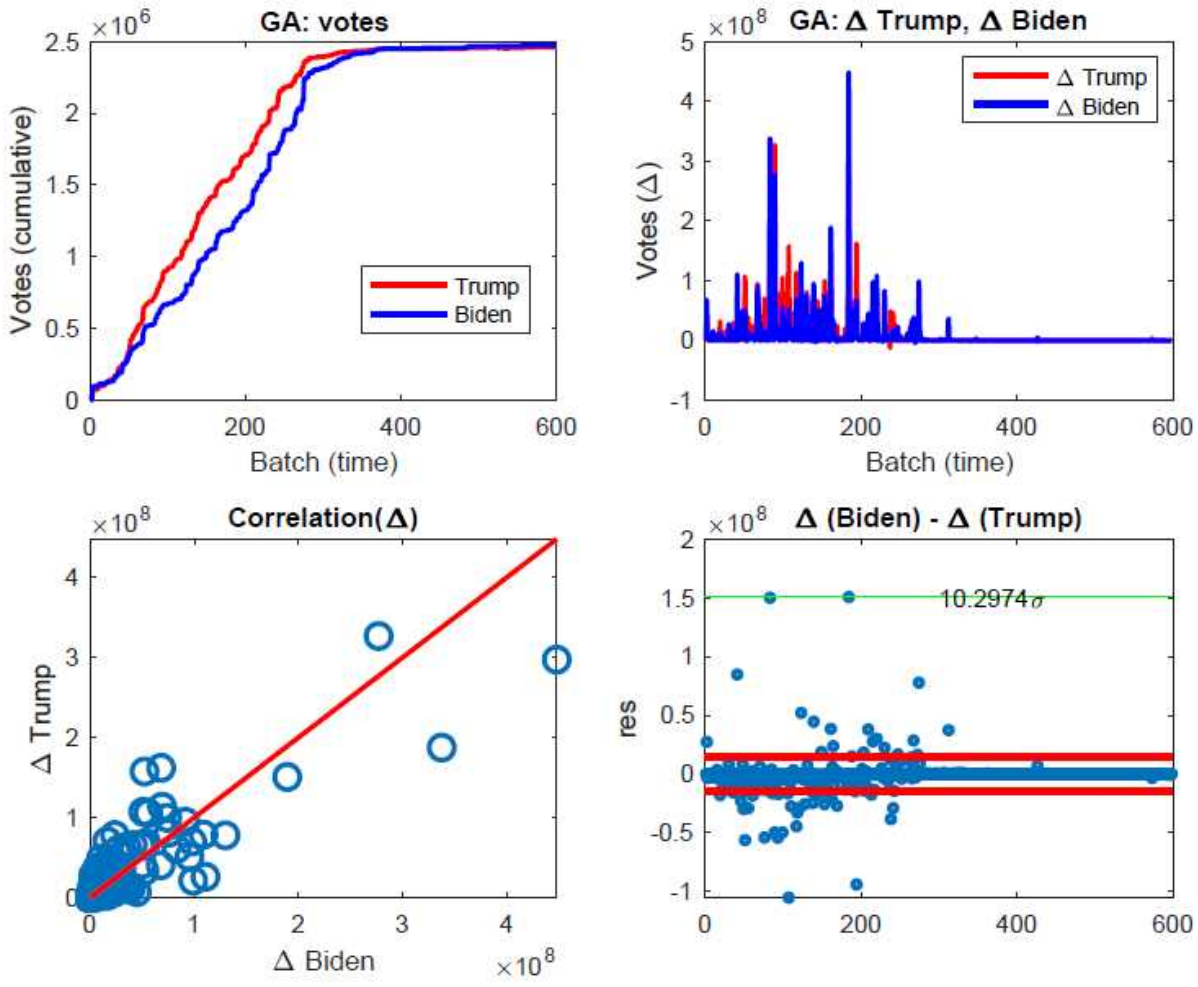

Figure 4. Georgia time series analysis.

Time axis extends from '11-04 00:14:11' (batch #1) to '11-20 22:04:53' (batch #599).

Illinois

For Illinois (Figure 5) the time axis begins at '11-04 01:08:08' and ends at '11-24 15:41:28'. Around batch #118 (timestamp '11-04 03:36:11'), a jump of size 12.6-sigma (probability 1 in 10^{37}) occurs where Biden gained 475,306 votes and Trump, 285,947 votes. **The difference gives Biden an advantage of 189,359 votes**. These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on this.

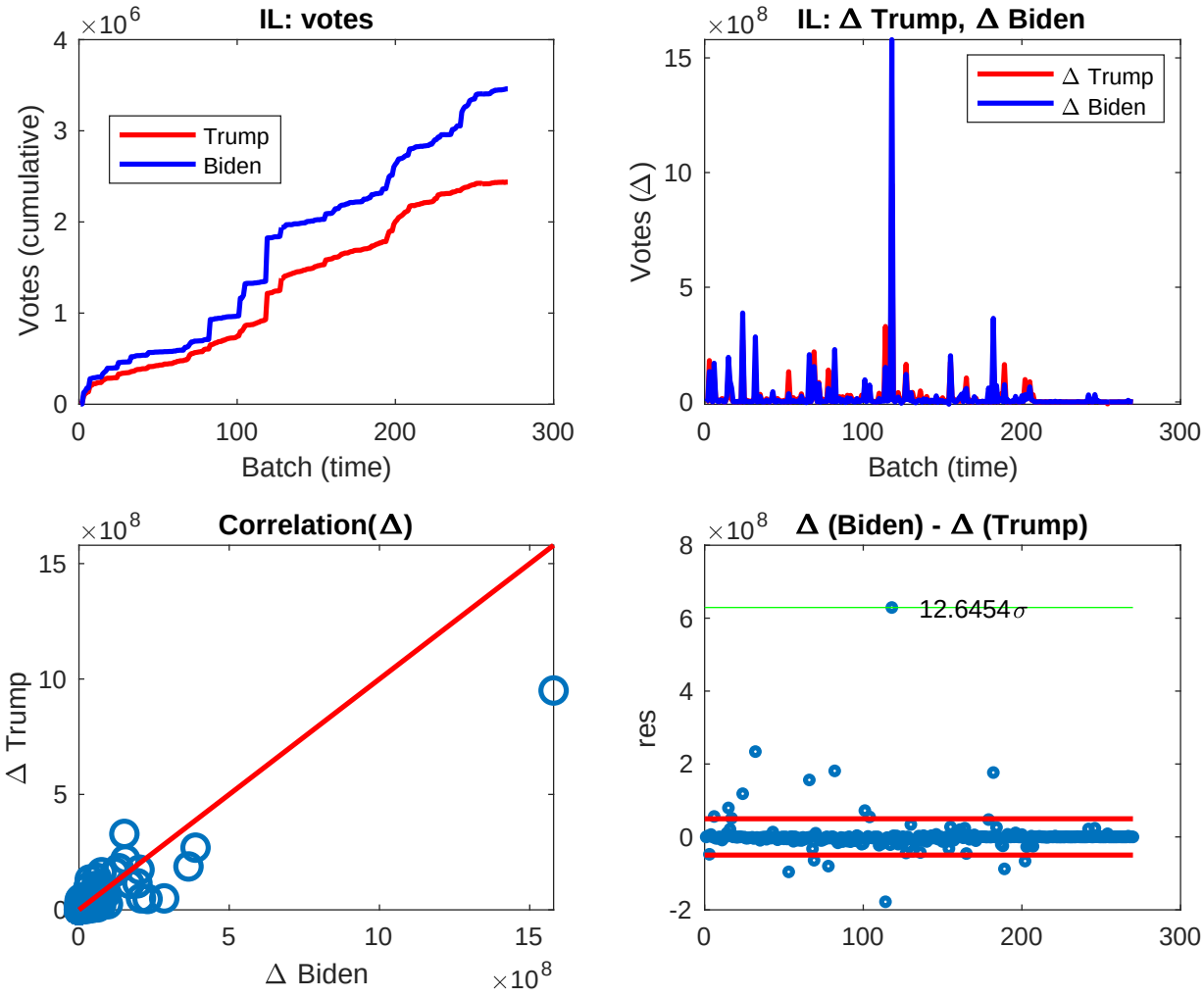

Figure 5. Illinois time series analysis.

Time axis extends from '11-04 01:08:08' (batch #2) to '11-24 15:41:28' (batch #271).
The 12.6-sigma jump occurs around batch #118 (timestamp '11-04 03:36:11').

The graph below (Figure 6) shows a close-up view of the time series covering the range from batch #75 to #138 (timestamp from 11-04 02:54:04' to '11-04 03:50:35'). We see three "Biden injections" on this graph. The first one is located around batch #82-83. It awards Biden with 219,339 votes, and Trump with 45,303 votes. **The net difference is a 174,035 votes advantage in Biden's favor**. The second one is located around batch #101-105. It awards Biden with 352,237 votes, and Trump with 112,550 votes. **The net difference is a 239,687 votes advantage in Biden's favor**. The third one is at batch #118. It awards Biden with 475,306 votes, and Trump with 285,947 votes. **The net difference is a 189,359 votes advantage in Biden's favor**.

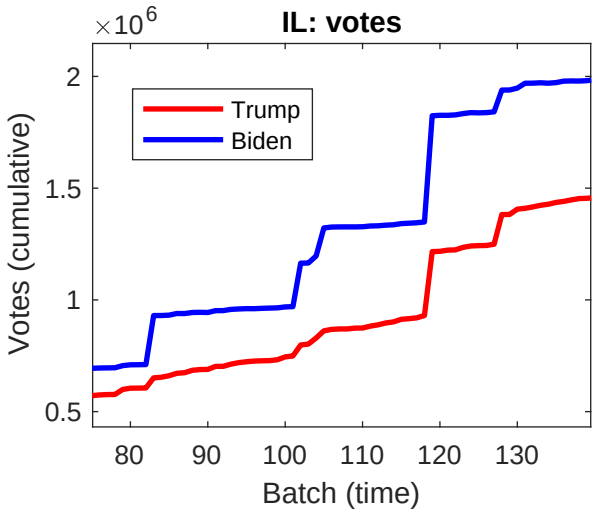

Figure 6. Zoom in on the Illinois time series to show the region ranging from batch #75 to #138.

Here the three large "Biden injections" are obvious. The first one is located around batch #82-83. The second one is located around batch #101-105. The third one is at batch #118.

Kentucky

For Kentucky (Figure 7) the time axis begins at '11-03 23:18:18' and ends at '11-20 19:52:51'. Around batch #102 (timestamp '11-04 01:13:00') a jump of size 17-sigma (probability 1 in 10^{65}) is observed, giving Trump 136,032 votes and Biden 206,959 votes. **The difference gives Biden an advantage of 70,927 votes.** This gain is a "red flag" based on the rate at which votes were added, which is very high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on this high rate.

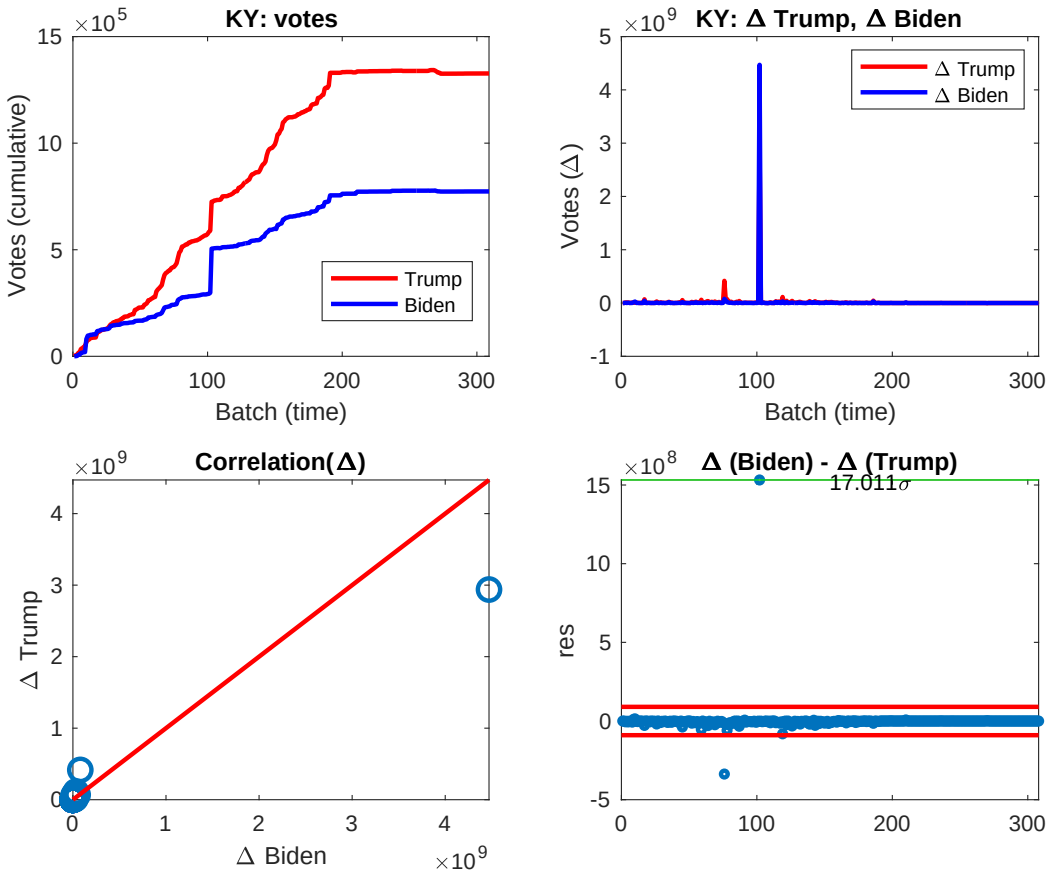

Figure 7. Kentucky time series analysis.

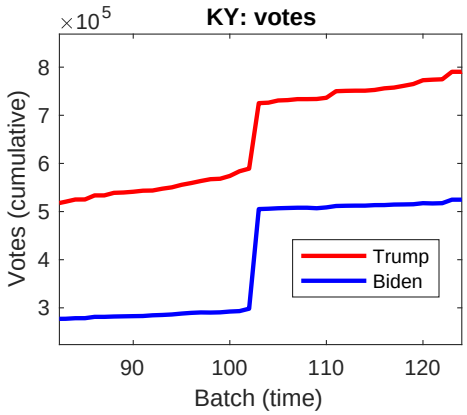

Figure 8. Zoom in on the Kentucky time series to show the region ranging from batch #82 to #124.

A "Biden injection" around batch #102-103 (timestamp '11-04 01:13:00') is apparent.

Maine

For Maine (Figure 9) the time axis begins at '11-04 01:34:20' and ends at '11-25 05:23:54'. Around Batch #216 (timestamp '11-04 07:05:33') a jump of size 19-sigma occurred (probability 1 in 10^{86}) featuring a Biden gain of 33,264 votes and a Trump gain of 6,028 votes. **The difference is a net advantage of 27,236 votes in Biden's favor.** These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on its unusually high rate.

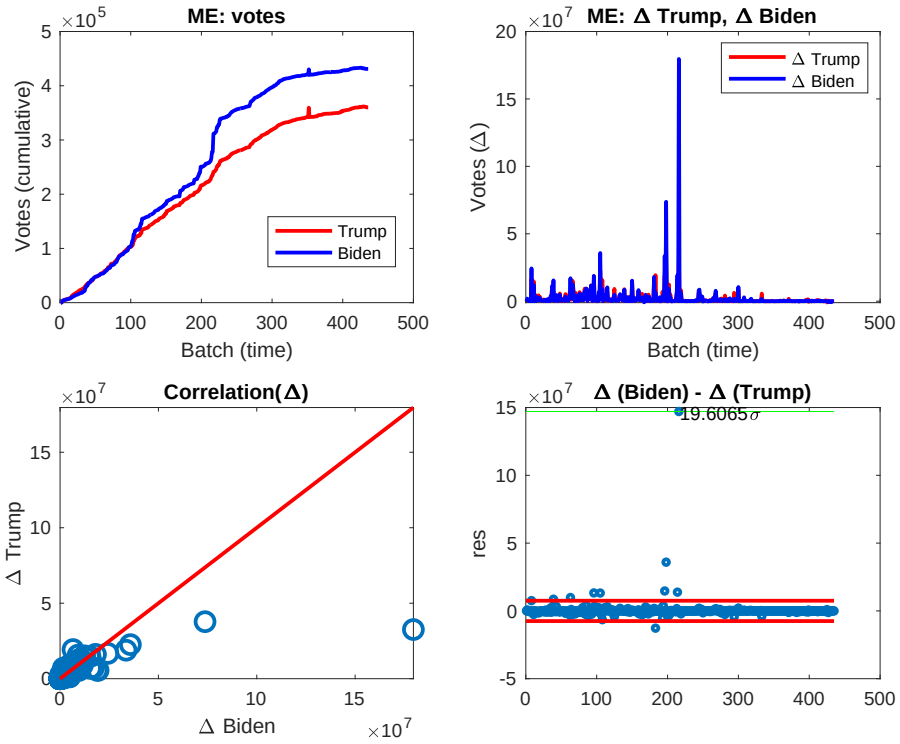

Figure 9. Maine time series analysis.

Time axis extends from '11-04 01:34:20' (batch #1) to '11-25 05:23:54' (batch #436).
The 19.6-sigma jump occurs around batch #216 (timestamp '11-04 07:05:33').

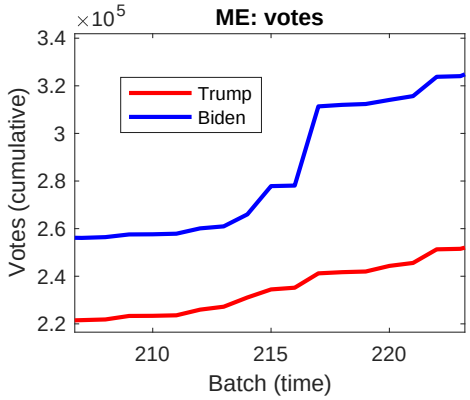

Figure 10. Zoom in on the Maine time series to show the region ranging from batch #206 to #224.

By zooming in on the time series in the vicinity of batch #216-217, this jump can be clearly seen.

Michigan

This ballot dump is a notorious jump. On November 4th, 11:31:53 UTC (6:31:53 AM Michigan time) Biden gained 141,258 votes in a count update. Trump only gained 5,968. **The net gain for Biden was 135,290.**

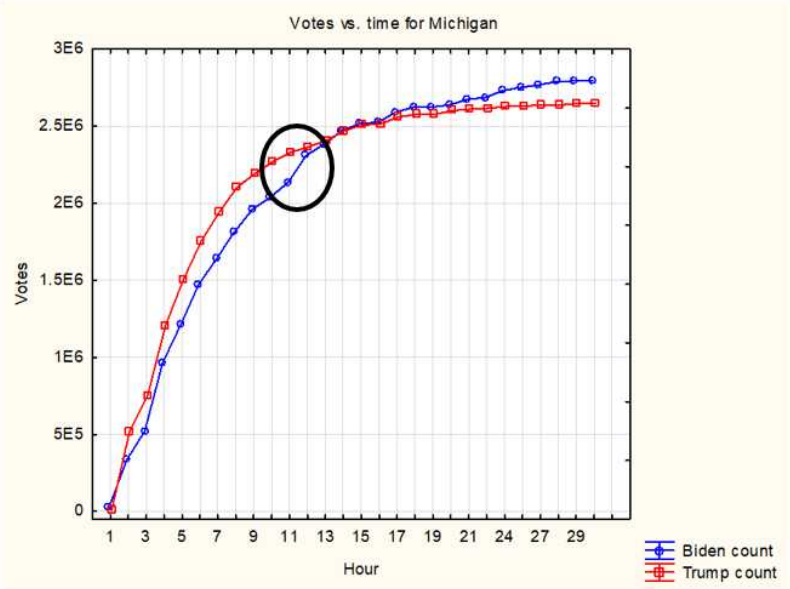

Figure 11. Michigan per hour accumulated votes

	Time Stamp	Time	Trump Count	T Increase	Biden Count	B Increase
1	11:13:53	NA	2,335,619	NA	2,139,846	NA
2	11:14:33	40s	2,337,117	1,498	2,141,218	1,372
3	11:14:48	15s	2,341,550	4,433	2,145,279	4,061
4	11:26:47	11m 59s	2,341,935	385	2,145,632	353
5	11:31:48	5m 1s	2,346,747	4,812	2,150,041	4,409
6	11:31:53	**5s**	2,352,715	5,968	2,291,299	**141,258**
7	11:52:08	20m 15s	2,357,842	5,127	2,296,292	4,993
8	12:03:10	11m 2s	2,366,977	9,135	2,309,941	13,649
9	12:08:46	5m 36s	2,388,624	21,647	2,345,282	35,341

Table 3. Michigan small granule time-series data showing vote injection at 11:31:53

Another depiction of this same occurrence is in the graphs below (Figure 12), with arrows to the same event in different forms. The probability we assign this is 1 in 10^{117} — or 14 Powerball wins in a row.

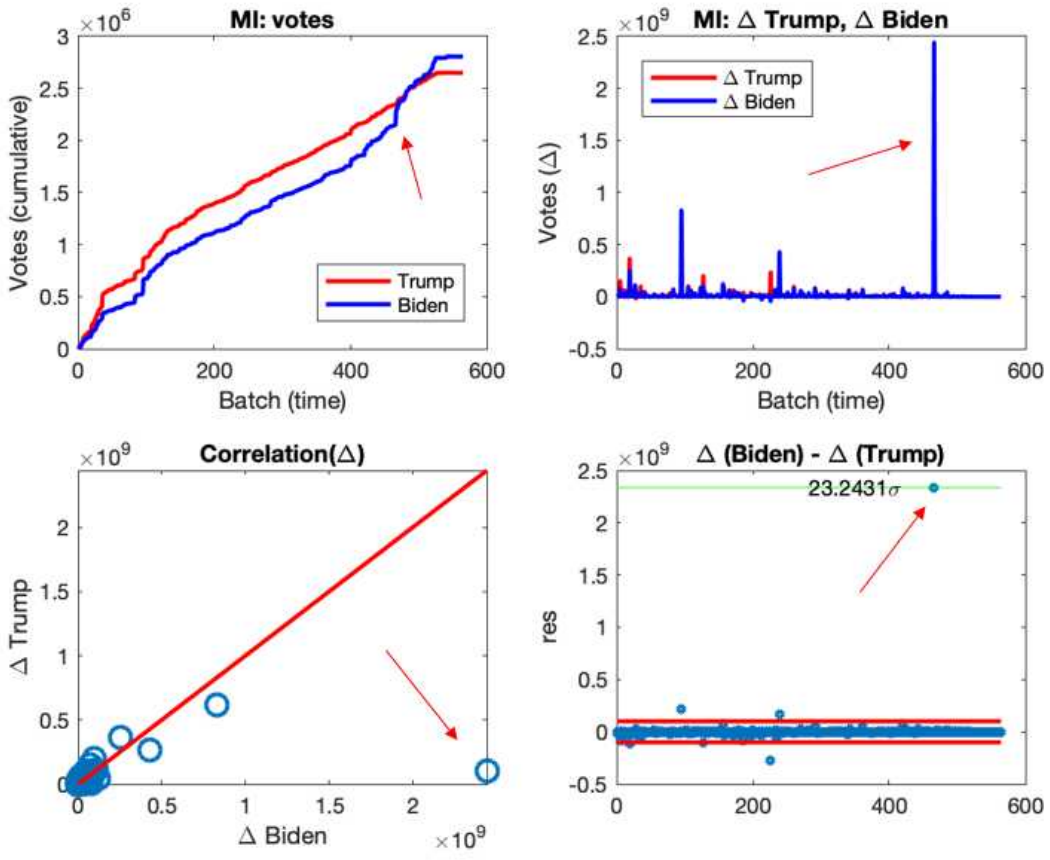

Figure 12. Michigan time series analysis.
Time axis extends from '11-04 01:09:14' (batch #1) to '11-24 02:28:05' (batch #565).

The vote gain ("Biden injection") is found in the vicinity of batch #466 (timestamp '11-04 11:31:48'). A close-up of that region is shown below (Figure 13). When going from batch #466 to batch #467 Biden gains 141,257 votes whereas Trump gains 5,968 votes. **The net difference, 135,289 votes, is in Biden's favor.**

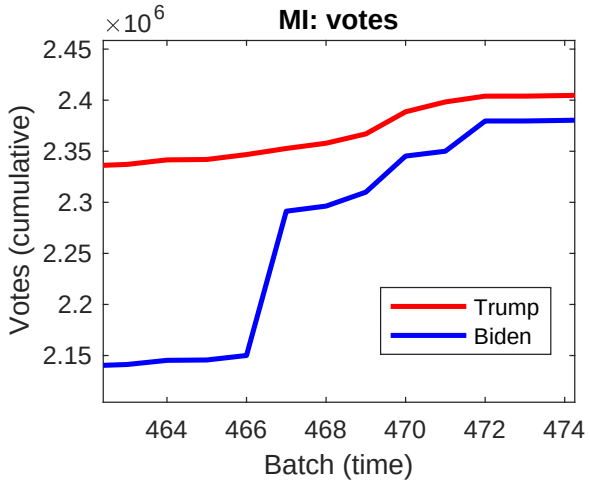

Figure 13. Zoom in on the Michigan time series to show the region ranging from batch #462 to #474.

We immediately see a "Biden injection" around batch #46 (timestamp '11-04 11:31:48').

Minnesota

For Minnesota (Figure 14) the time axis starts at '11-04 02:31:47' and ends at '11-25 15:34:34'. Around batch #84 (timestamp '2020-11-04 05:30:22') there is an anomalous jump of magnitude 19 standard deviations (probability 1 in 10^{81}) featuring a Trump gain of 84,809 votes and a Biden gain of 198,564 votes. **The difference is a net advantage of 113,755 votes in Biden's favor.** These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on its unusually high rate.

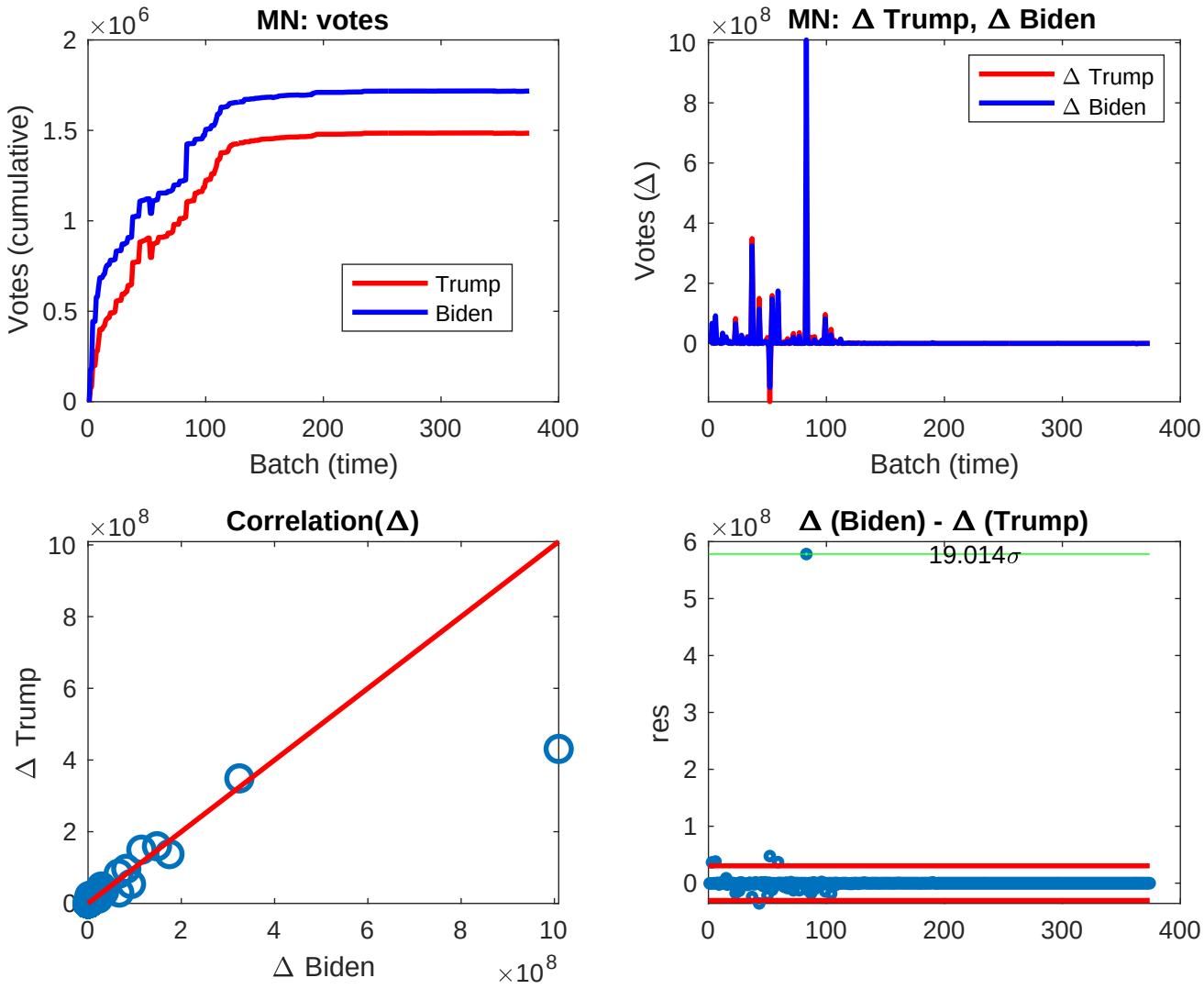

Figure 14. Minnesota time series analysis.

Time axis extends from '11-04 02:31:47' (batch #1) to '11-25 15:34:34' (batch #375).
The 19-sigma jump occurs around batch #83 (timestamp '2020-11-04 05:30:22').

This large jump can be most clearly seen by zooming in on the time series in the vicinity of batch #83-84, as shown in the graph below.

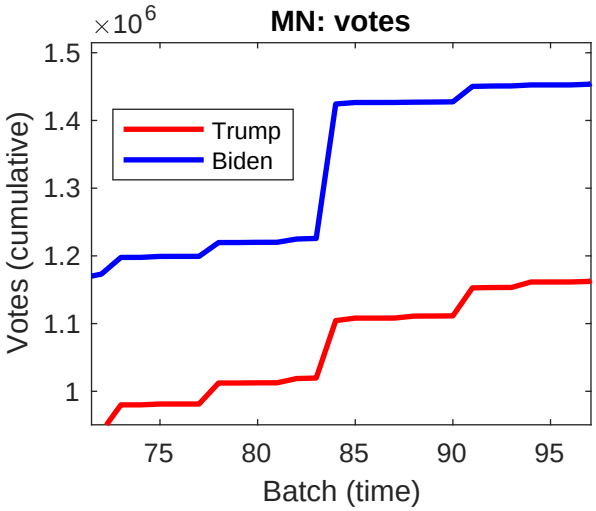

Figure 15. Zoom in on the Minnesota time series to show the region ranging from batch #72 to #97.

Missouri

For Missouri (Figure 16) the time axis begins at '11-04 01:13:29' and ends at '11-24 20:40:40'. Around batch #156 (timestamp '11-04 04:39:09') there is a jump of size 12.12 standard deviations (probability 1 in 10^{34}) featuring a Biden gain of 67,467 votes and a Trump gain of 15,783 votes. **The difference is a net gain of 51,684 votes in Biden's favor.** These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on its unusually high rate.

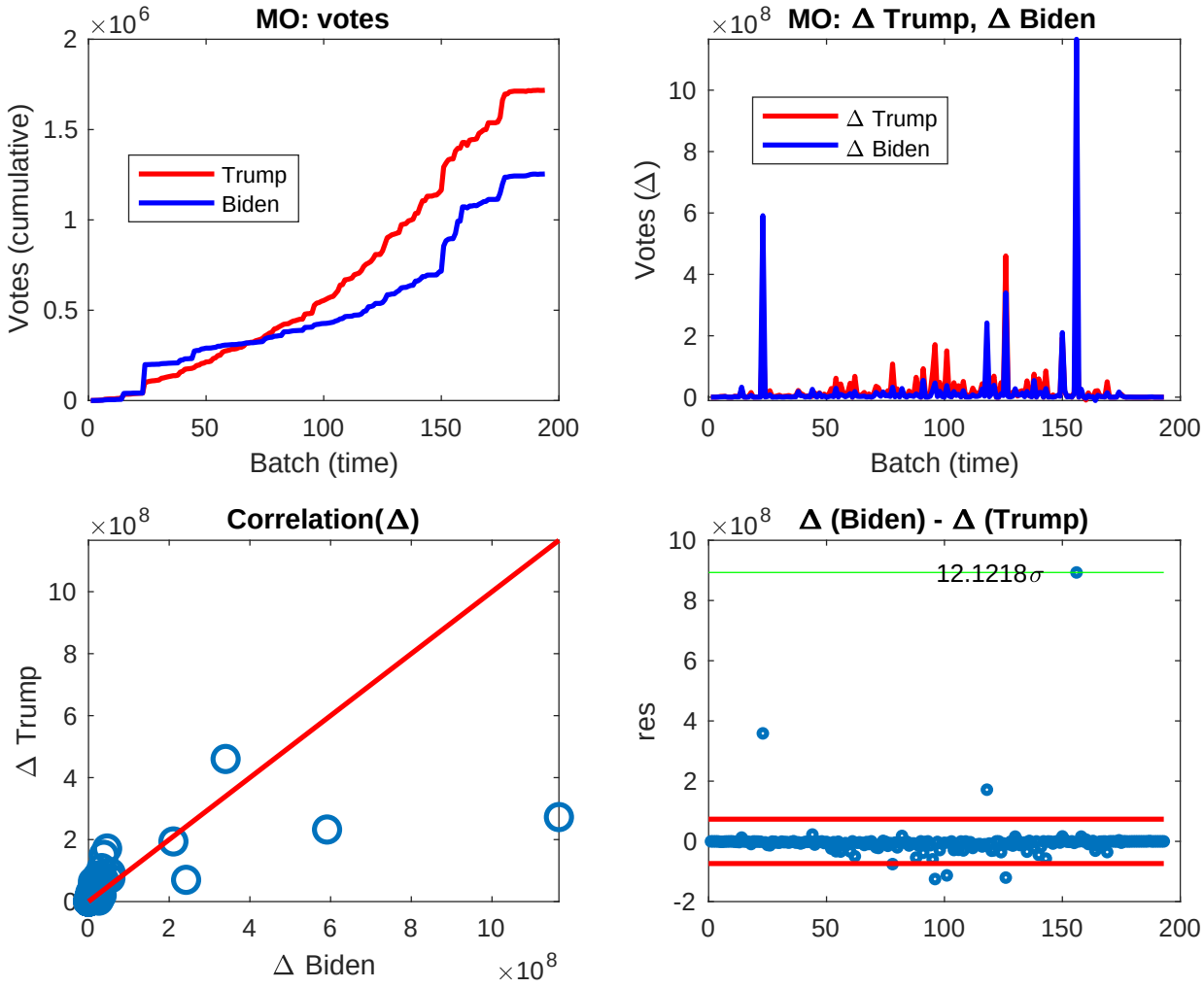

Figure 16. Missouri time series analysis.

Time axis extends from '11-04 01:13:29' (batch #1) to '11-24 20:40:40' (batch #194).
The 12.1-sigma jump occurs around batch #156 (timestamp '11-04 04:39:09').

We also find evidence of a possible "Biden injection" in a jump of size 157,389 for Biden and 61,899 for Trump when going from batch #23 to #24 (around time stamp '11-04 01:53:59'). **The difference in votes is 95,379 in favor of Biden.** This increase is shown in the graph on the next page (Figure 17).

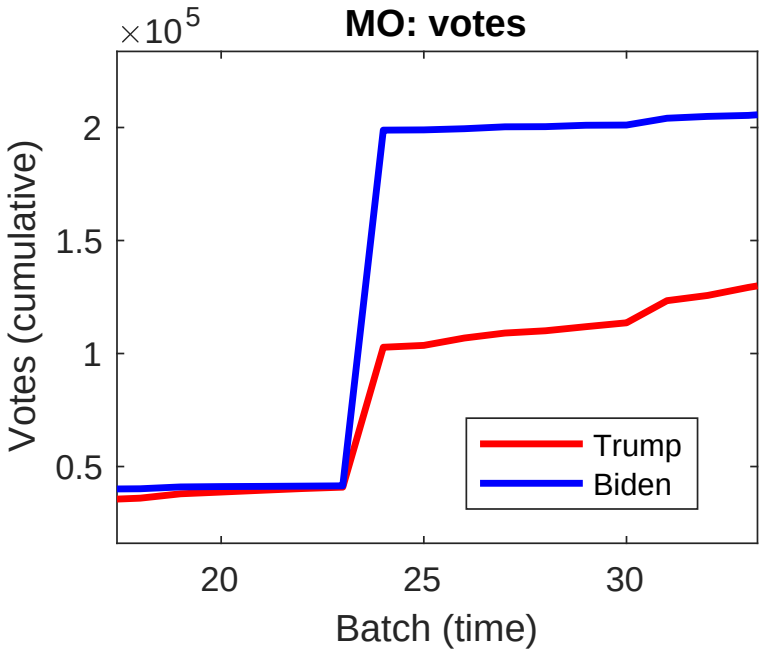

Figure 17. Zoom in on the Missouri time series to show the region ranging from batch #18 to #34.

The “Biden injection” around batch #23-24 (timestamp '11-04 01:53:59') is readily apparent.

New Jersey

For New Jersey (Figure 18) the time axis extends from '11-04 01:22:53' to '11-23 13:16:44'. The anomalous jump occurs in the 9th batch (timestamp '11-04 01:59:17') and has a probability of occurrence of 1 in 10^{37} (12.81 times the standard deviation). The size of the Biden vote increase is 130,023 votes. For Trump, the increase is 39,445 votes. **This corresponds to a difference of 90,578 votes in favor of Biden.** These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We identify this batch for further inspection based on its unusually high rate.

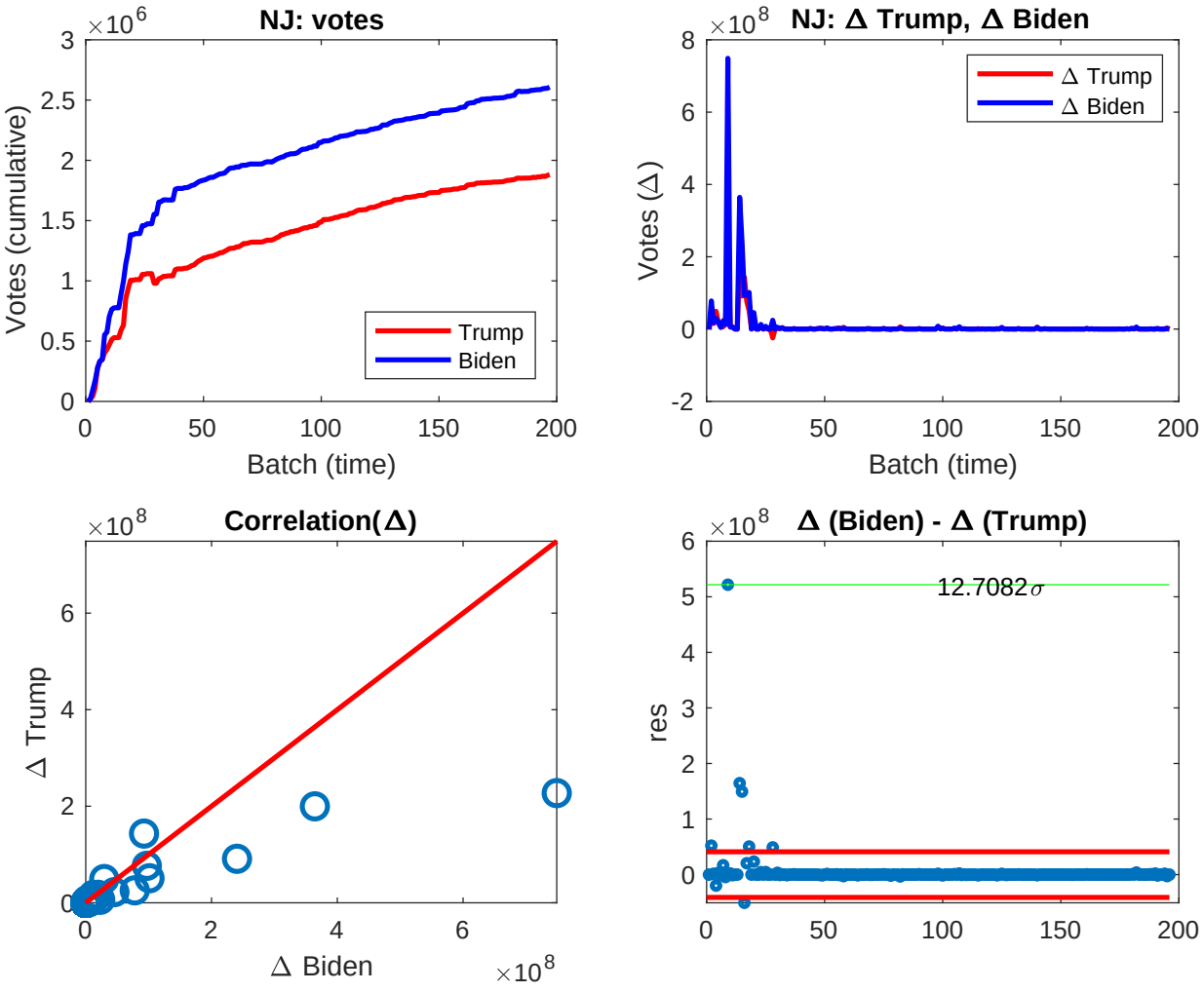

Figure 18. New Jersey time series analysis.

Time axis extends from '11-04 01:22:53' (batch #1) to '11-23 13:16:44' (batch #197).
The 10.7-sigma jump occurs around batch #9 (timestamp '11-04 01:59:17').

Ohio

For Ohio (Figure 19) the time axis of the time-series data begins at '11-04 00:39:55' and ends at '11-24 20:25:25'. The anomaly occurs on the fifth batch (timestamp '11-04 00:44:11'). It is 10.34 times larger than the standard deviation, corresponding to a probability of occurrence of 1 in 10^{25}. The size of the Trump vote increase is 206,713. That of Biden is 366,894. **The difference is 160,181 votes in favor of Biden**. These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We identify this batch for further inspection based on its unusually high rate.

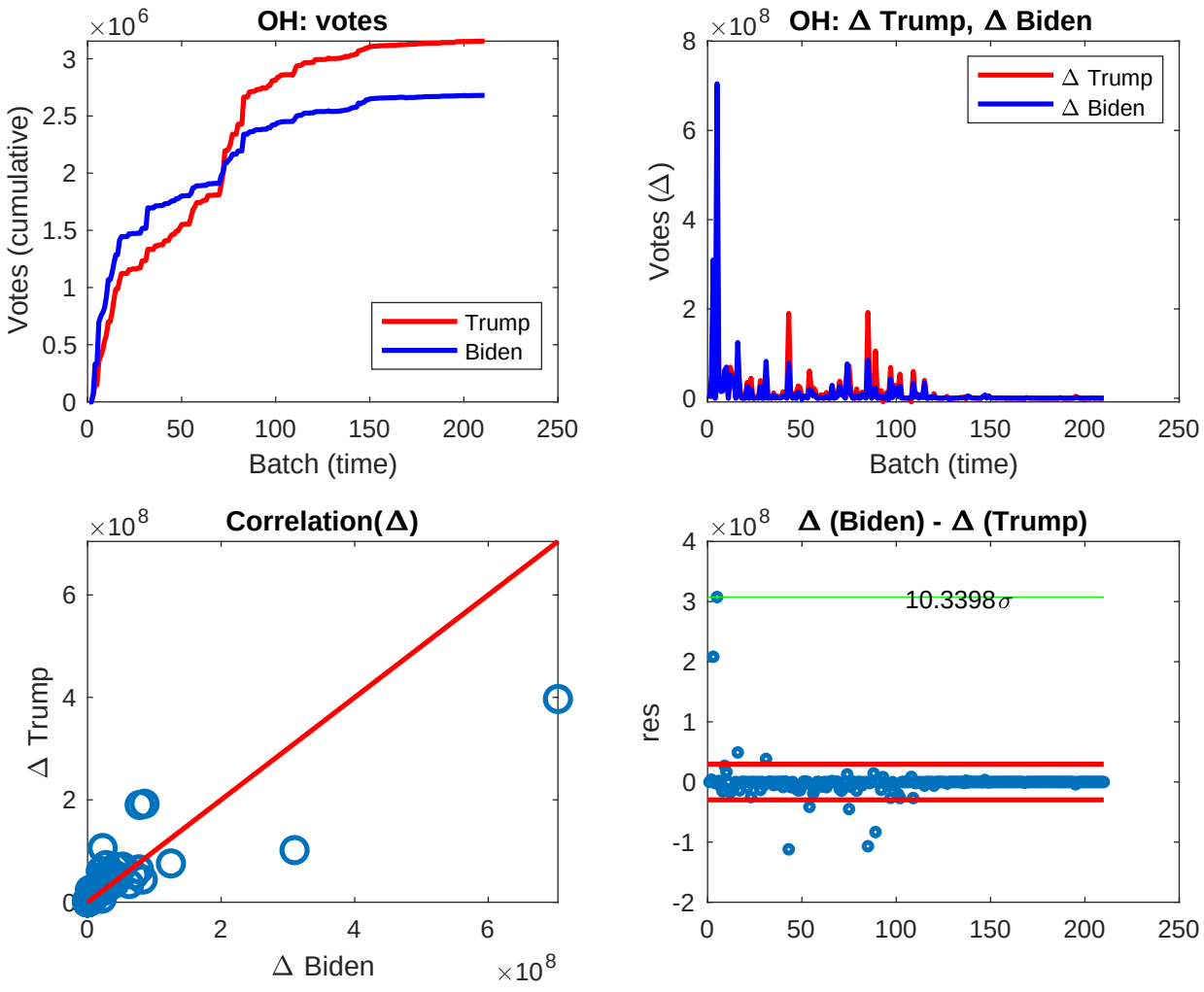

Figure 19. Ohio time series analysis.

Time axis extends from '11-04 00:39:55' (batch #1) to '11-24 20:25:25' (batch #211).
The 10.3-sigma jump occurs around batch #5 (timestamp '11-04 00:44:11').

Pennsylvania

Evidently, Pennsylvania and Virginia were engaged in a contest to see which state could produce the most convoluted election data. After struggling to make heads or tails of both, we think it's a draw.

In the case of Pennsylvania, it's impossible to provide meaningful graphs in our Report — as multiple speculative assumptions would have to be made. To give the reader a grasp of what we faced, below (Table 4) is a list of all of the large differentials (i.e., Biden minus Trump results at individual time stamps). A major problem is that there are multiple examples where someone "corrected" the data — by making huge subtractions. Whether these are justified or accurate is anyone's guess.

Rather than take on the impossible task of sorting this all out, we selected four time periods that we believe are representative of suspicious Biden minus Trump differentials (See Table 1). We leave the rest of the challenge to a masochistic reader to tackle. Feel free to share if you can make any sense of it!

Time Stamp (UTC)	Biden Gain/Loss	Trump Gain/Loss	BI-TR Differential
(11-04) 2:18:59	337,019	146,137	190,882
(11-04) 01:51:36	195,741	43,099	152,642
(11-04) 01:15:31	**70,565**	**4,218**	**66,347**
(11-04) 01:26:57	**73,945**	**8,543**	**65,402**
(11-04) 01:38:49	**88,865**	**23,713**	**65,152**
(11-04) 14:16:51	**62,445**	**1,159**	**61,286**
(11-04) 04:14:30	66,144	22,706	43,438
(11-04) 03:16:36	73,369	32,702	40,667
(11-04) 01:03:44	51,556	12,129	39,428
(11-04) 15:22:18	41,525	2,456	39,069
(11-04) 01:36:16	46,762	7,742	39,020
(11-04) 04:08:51	17,930	-17,877	35,806
(11-25) 00:12:32	30,699	2,470	28,229
(11-04) 04:38:24	41,814	14,923	26,891
(11-06) 13:49:46	28,796	2,208	26,587
(11-25) 00:21:33	-30,911	-2,681	-28,231
(11-04) 03:47:08	40,955	102,211	-61,257
(11-04) 02:14:32	-196,432	-42,326	-154,106
(11-04) 02:22:45	-416,589	-145,179	-271,410

Table 4. Pennsylvania Large Differentials.

Virginia

For the time series data in Virginia (Figure 20), there is one statistically impossible jump (in Biden's favor) to the level shown by the horizontal green line on the Residual plot (bottom right graph). The odds of this happening are 1 in 10^{58} by chance – which is equivalent to being dealt 10 royal flushes in a row. This jump occurred on 11-04 07:17:06 UTC (308,342 votes for Biden, 77,493 votes for Trump), which is 2:17:06 AM VA time. This corresponds to a net gain of 230,559 votes to Biden's advantage. These gains are "red flags" based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. That being said, this statistically anomalous jump invites closer scrutiny of the region where it occurred.

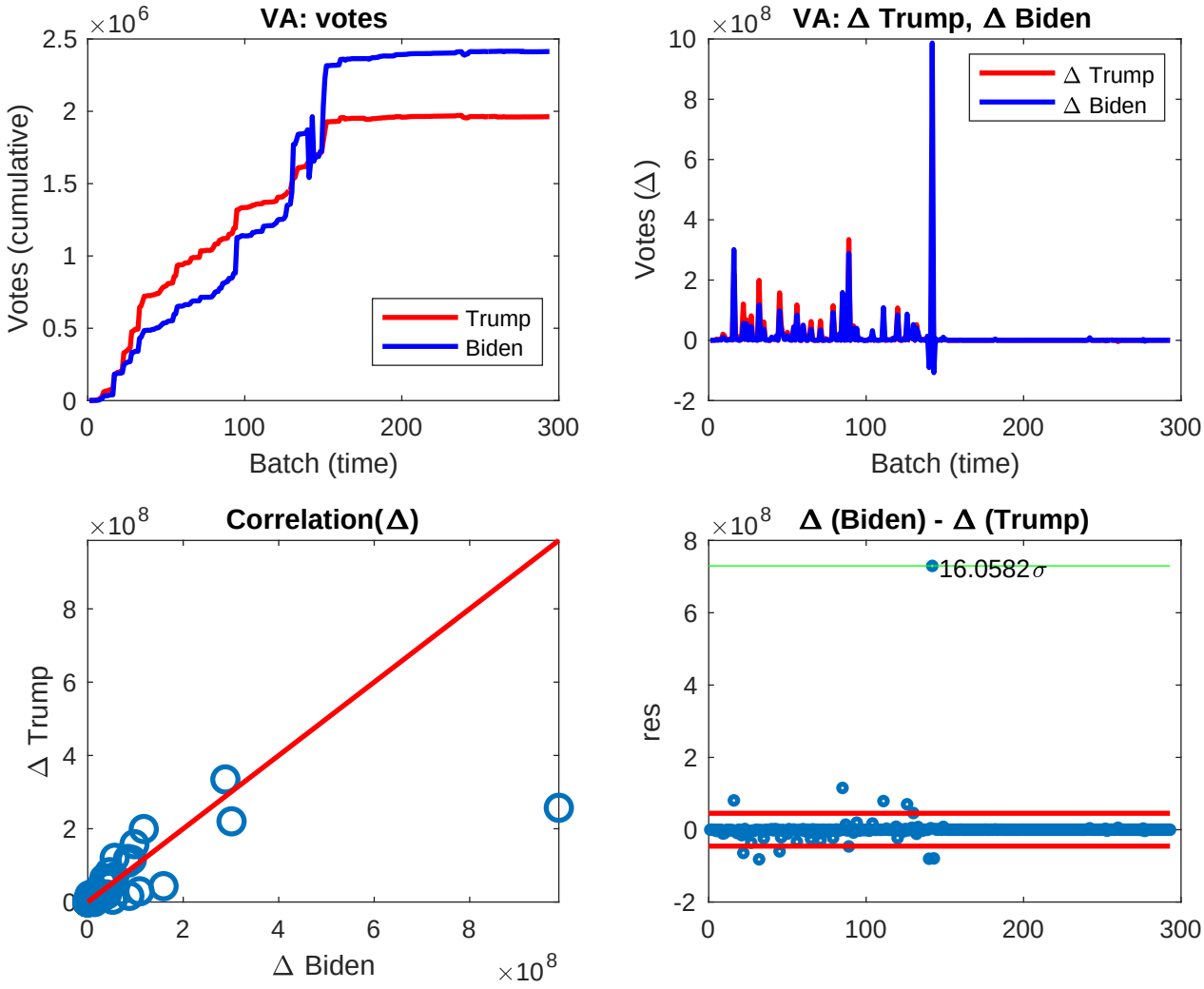

Figure 20. Virginia time series analysis.
The time axis shown extends from '2020-11-04 00:07:32' (batch 1) to '2020-11-22 14:51:09' (batch 300).

In the graph on the next page (Figure 21), we zoom in on the time axis to show the time window from '11-04 03:54:17' (batch #120) to '11-06 03:12:02' (batch #170). During that long two-day time interval, the Trump votes increase by 572,370 whereas those for Biden increased by 1,135,858 (almost twice as much). **This is a net gain of 563,488 votes in favor of Biden.** As Figure 21 shows, this differential is almost entirely accounted for by the three spikes we are identifying in Table 5 (next page).

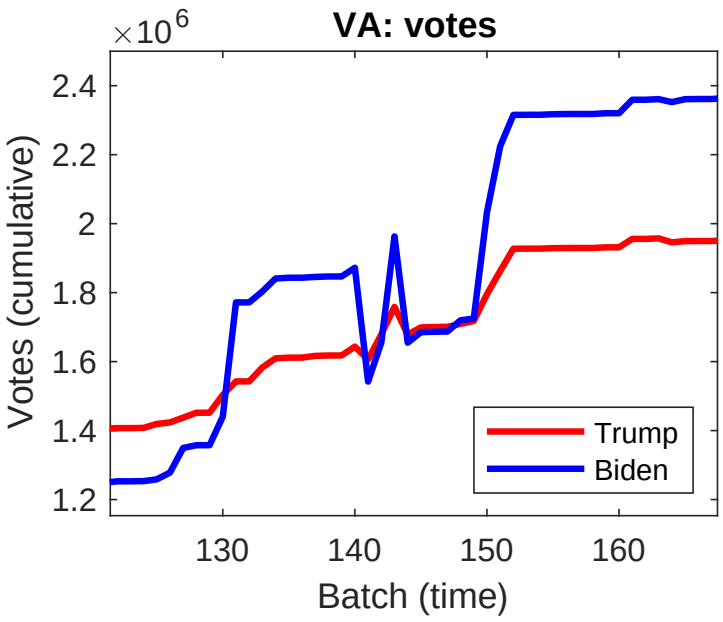

Figure 21. Zoom in on the Virginia time series to show the region ranging from batch #120 to #170.

Local Time	Elapsed Time	T Count	T Increase	B Count	B Increase	Bi - Tr
9:44:24 PM	NA	1,150,854	222	843,824	-1,870	-2,092
9:46:13 PM	1m & 49s	1,187,069	36,215	874,101	30,277	-5,939
9:47:52 PM	1m & 39s	1,188,050	981	876,386	2,285	1,304
9:56:40 PM	8m & 48s	1,313,864	125,813	1,121,494	245,108	119,295
10:01:32 PM	4m & 52s	1,314,653	790	1,122,169	675	-115
10:03:47 PM	2m & 15s	1,323,926	9,273	1,127,588	5,419	-3,854
10:06:33 PM	2m & 46s	1,329,410	5,483	1,134,781	7,193	1,710
12:38:42 AM	NA	1,699,167	20,714	1,685,408	30,692	9,977
12:58:44 AM	20m & 2s	1,707,694	8,527	1,718,172	32,764	24,238
1:34:54 AM	36m & 10s	1,716,134	8,440	1,723,144	4,972	-3,468
2:17:06 AM	42m & 12s	1,793,627	77,493	2,031,196	308,052	230,559
4:00:01 AM	42m & 55s	1,860,837	67,210	2,222,543	191,347	124,137
4:59:54 AM	59m & 53s	1,925,660	64,823	2,313,727	91,184	26,361
12:59:59 PM	5s	1,926,946	1,286	2,315,272	1,544	259
2:03:12 PM	3m & 13s	1,927,466	520	2,315,897	625	105

Table 5. Virginia small granule time-series data showing three vote injections.

This table should be an easy way to appreciate the nature of the three main spikes that make up Virginia's convoluted results graphically portrayed in Figure 21 (above). What's very helpful in Table 5 is that it makes it extremely clear how deviant the three main Virginia pro-Biden spikes are (in red).

It is very important to note the significantly different differentials *before* and *after* the three strange red spikes. In neither of these cases are the spikes an indication of a pro-Biden trend — either before or after.

Wisconsin

These gains are “red flags” based on the rate at which votes were added, which is exceedingly high compared to the rate observed at all other time intervals. We flag this batch for further inspection based on its unusually high rate.

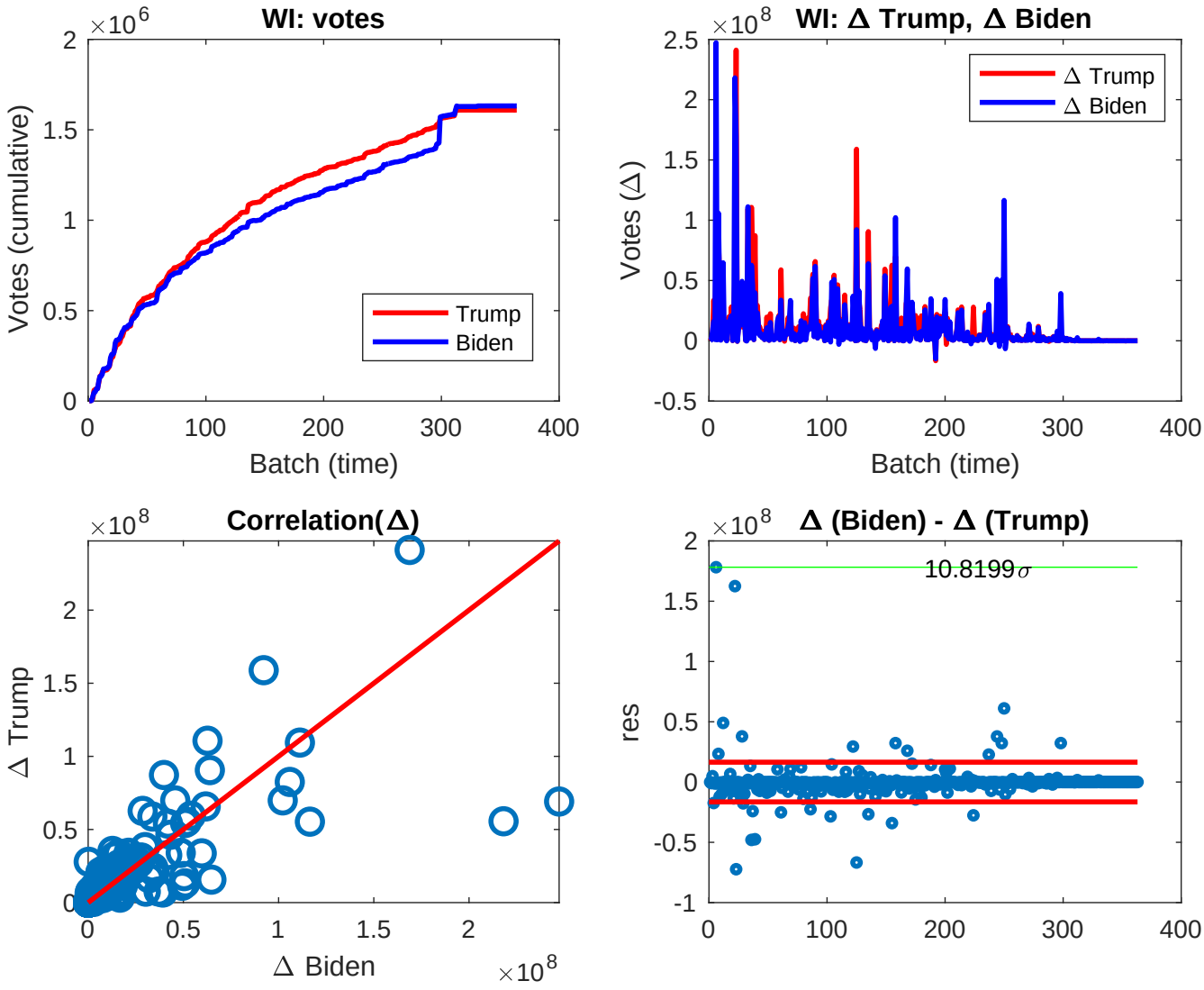

Figure 22. Wisconsin time series analysis.

Time axis extends from '11-04 02:14:29’ (batch #1) to '11-20 14:18:12' (batch #364).

As seen in the top left graph (Figure 22), there appears to be a “Biden injection” just past batch #300. We therefore zoom in on this region to inspect more closely, as shown in the graph on the next page (Figure 23). There are two “Biden injections”. The larger “Biden injection” occurs around batch #299 (timestamp '11-04 09:42:20’). We find that Trump gained 25,163 votes whereas Biden gained 143,379 votes. The difference represents an **118,216 vote advantage in favor of Biden**. The smaller spike (with a net Biden gain of **~25,000 votes**) occurs before this, at time stamp '11-03 03:27:32’.

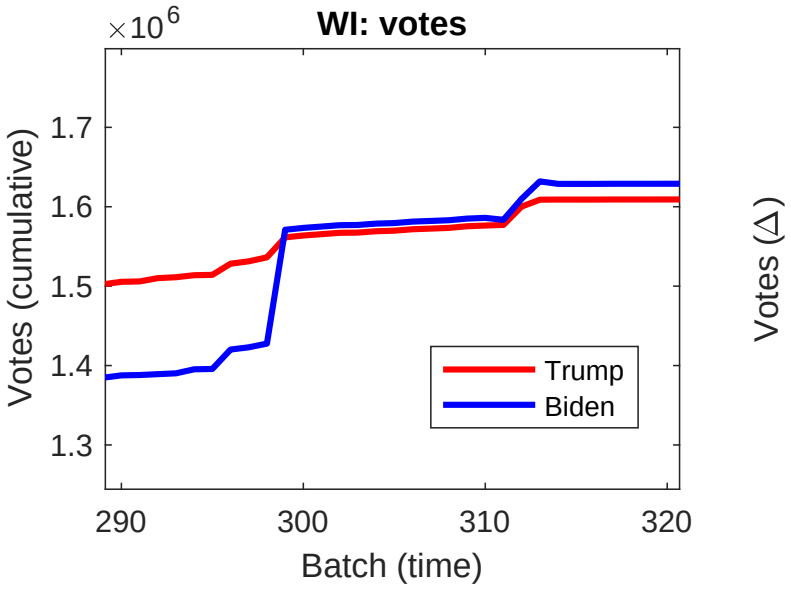

Figure 23. Zoom in on the Wisconsin time series to show the region ranging from batch #290 to #320.

	Time Stamp	Time	Trump Count	T Increase	Biden Count	B Increase
1	08:32:00	NA	1,528,256	NA	1,420,167	NA
2	09:08:47	36m 47s	1,531,258	3,002	1,422,957	2,790
3	09:37:04	28m 17s	1,536,270	5,012	1,427,614	4,657
4	09:42:20	**5m 16s**	1,561,433	**25,163**	1,570,993	**143,379**
5	09:46:31	4m 11s	1,563,774	2,341	1,573,348	2,356
6	09:47:24	53s	1,565,455	1,681	1,575,040	1,692
7	09:54:17	6m 53s	1,567,164	1,709	1,576,759	1,719
8	10:00:53	5m 36s	1,567,452	288	1,577,048	289
9	10:02:07	1m 14s	1,569,150	1,698	1,578,757	1,709

Table 6. Wisconsin small granule time-series data showing vote injection at 09:42:20

As with the Virginia and Michigan tables, this table should be an easy way to appreciate the nature of the main spike that makes up Wisconsin's results (graphically portrayed in Figure 23, above). What's very helpful in Table 6 is that it makes it very clear how deviant this red pro-Biden spike is.

It is very important to note the significantly different differentials *before* and *after* the unexpected red spike. It's clear that this spike is **not** an indication of a pro-Biden trend — either before or after. In fact, on ALL of the proximate before and after time stamps, Trump was basically equal to Biden, or ahead.

Lastly, here is the bottom line, where we compare the data in Table 1 to the reported Biden lead for some key swing states. We've also listed the Electoral College votes for each state (270 are needed to win).

SWING STATE	BIDEN REPORTED LEAD	BIDEN NET VOTE DUMPS	ELECTORAL VOTES
Arizona	10,457	**251,616**	**11**
Georgia	10,779	**119,811**	**16**
Pennsylvania	80,555	**258,187**	**20**
Wisconsin	20,682	**143,201**	**10**
TOTAL			**57**

Note 1: The Electoral College votes were: Biden = 306 and Trump = 232.
Note 2: If any **three** of the above state's Electoral College votes are changed to accurately reflect the public's actual votes, **the new totals would put Trump in a tie, or over 270.**

APPENDIX

Our team of authors of 2020 election-related analyses are unpaid volunteers, whose expertise covers a wide range of fields (Cyber Security, IT, Statistics, Physics, Economics, etc.). Our main interest is in assuring election integrity, which is when American citizens legally express their preferences for their representatives. Our reports are now listed at:

Election-Integrity.info.