National Election Data Archive
Date: February 18, 2008
Kathy Dopp, MS Mathematics
Phone: 435-658-4657
Email: kathy@electionarchive.org

Were the Super Tuesday Presidential Primary Vote Counts Accurate?

Executive Summary

Part City, Utah, February 15- Discrepancies between exit polls and vote counts in the February 5th, 2008 "Super Tuesday" U.S. presidential primary suggest that vote miscount may have occurred, favoring Hillary Clinton at the expense of Barack Obama, and on the Republican side favoring John McCain at the expense of Mitt Romney. States with the least likely (most suspicious) election results given their exit polls are Massachusetts and New Jersey in both the Democratic primary election in the Republican primary elections. Massachusetts, New Jersey and New York are just a few states that did not conduct any post-election manual audits to check the accuracy of machine vote counts, leaving their primary elections susceptible to undetected manipulation consistent with their exit poll discrepancies. Not one U.S. State currently uses all the fundamental measures that are required to ensure accurate elections – paper ballots, scientific post-election manual audits, verifiable ballot security, ballot and voter reconciliation, and public access to election records. The Super Tuesday discrepancies between exit polls and the actual vote counts are startling.

Super Tuesday *Democratic* Primary: Vote Count- Exit Poll Discrepancies

Super Tuesday Democratic Primary Exit Poll Discrepancies	Discrepancy favoring		Poll Margin of Error (MoE)	Clinton Results	Obama Results	Paper Ballot Records?	Manual Audits?	Verifiably Secure and Reconcile Ballots?
	CLINTON	OBAMA		Odds of occurring by chance are less than 1 in				
AL (9:53 PM)		2.68%	4.09%	2	8	YES	NO	NO
AR (9:35 PM)	11.83%		3.93%	10,610	86	Some NO	NO	NO
CA (1:21 AM)	3.67%		2.99%	10	8	YES	Yes - 1%	NO
CT (10:59 PM)		0.87%	3.81%	3	4	YES	Yes - 10%	NO
DE (9:35 PM)	0.19%		4.84%	2	2	NO	NO	NO
GA (7:31 PM)		0.35%	4.64%	2	2	NO	NO	NO
GA (10:50 PM)		3.10%	3.72%	6	4	NO	NO	NO
IL (8:17 PM)	6.51%		3.55%	16	42	YES	NO	NO
MA (9:35 PM)	15.83%		4.39%	55,250	603	YES	NO	NO
MA (10:49 PM)	9.92%		3.45%	497	354	YES	NO	NO
MO (11:28 PM)		2.96%	4.01%	3	23	YES	Partial - 1%	NO
NJ (9:53 PM)	8.99%		3.61%	147	126	NO	NO	NO
NY (9:35 PM)	1.59%		3.42%	4	2	NO	NO	NO
OK (8:33 PM)		4.24%	6.09%	4	4	YES	NO	NO
TN (9:36 PM)	1.20%		3.98%	13	5	Most NO	NO	NO

Exit poll discrepancies are calculated using simple subtraction:
Discrepancy = Vote share margin – Poll share margin
= (Clinton vote share – Obama vote share) – (Clinton poll share – Obama poll share)

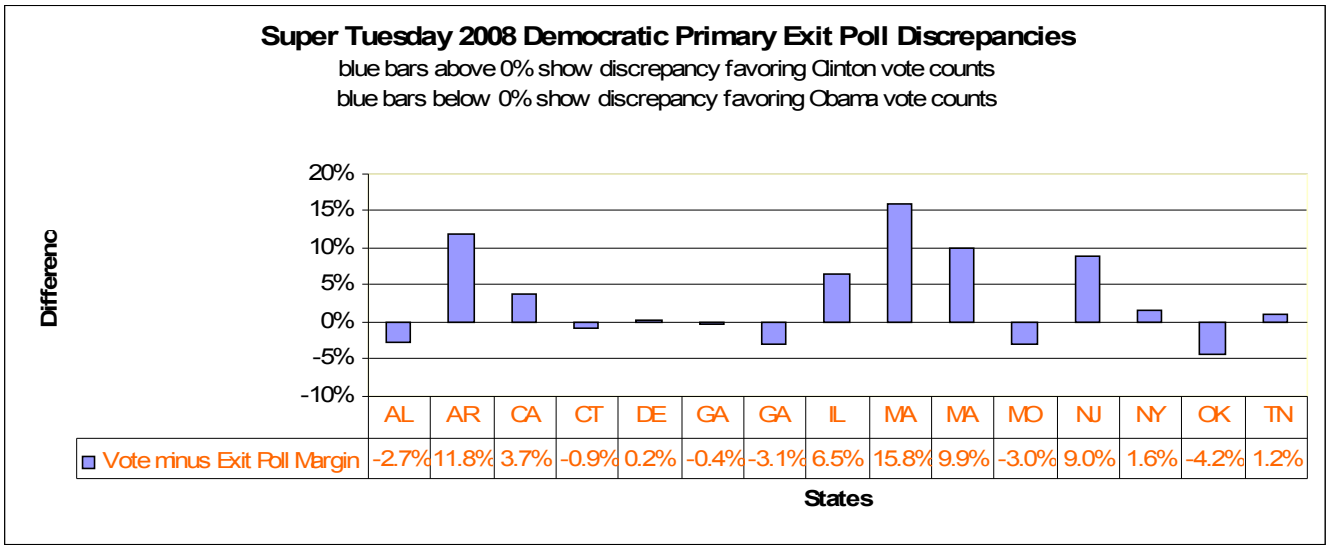
 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Are Super Tuesday *Democratic* Presidential Primary Results Consistent with Vote Miscount?

Yes! In two states the February 5th, 2008 exit poll discrepancies reported on FoxNews.com are consistent with *possible outcome-altering* vote miscount favoring Hillary Clinton over Barack Obama!

Massachusetts' exit polls of 9:35 pm[1] indicated a very close race with Obama up 0.24% - within the margin of poll error (MOE). The exit poll discrepancy (difference in margins between Clinton and Obama's vote counts and exit polls) of 15.83% is much larger than the poll's margin of error. Clinton's vote counts outperformed her exit polls. The probability of obtaining Clinton vote count values this much greater than her exit poll results by random chance is less than one chance in 55,250! The chance of Obama's vote counts being this much less than his exit poll results is less than one chance in 603! Massachusetts also had the highest exit poll discrepancy in the Republican primary, consistent with vote miscount benefiting John McCain over Mitt Romney.[2] Massachusetts conducts no manual checks of the accuracy of its machine vote counts and its voting machines are programmed by the same company, LHS, which programs New Hampshire's optical scan machines.[3]

New Jersey's exit polls indicated a close race with Clinton ahead by less than 1% - within the margin of poll error. The exit poll discrepancy of 9% is much larger than the poll's margin of error. The probability of Clinton's N.J. vote counts outperforming her exit polls this much by random chance is less than one in 147. The chance that Obama's vote count margin under-performed his exit poll margin by this much due to random chance is less than one chance in 126. New Jersey, like Massachusetts, currently conducts no manual checks of its election results.



	AL	AR	CA	CT	DE	GA	GA	IL	MA	MA	MO	NJ	NY	OK	TN
Vote minus Exit Poll Margin	-2.7%	11.8%	3.7%	-0.9%	0.2%	-0.4%	-3.1%	6.5%	15.8%	9.9%	-3.0%	9.0%	1.6%	-4.2%	1.2%

[1] We assume that the earlier polls are less adjusted to match the vote counts than the 10:49 polls.
[2] The Republican Super Tuesday exit poll data and vote counts are provided in Appendix C for those wanting to analyze the Republican Super Tuesday primary election data.
[3] New Hampshire's machine-counted primary election results also showed a suspicious vote shift to Clinton. See http://electionarchive.org/ucvData/NH/DemPrimary2008-PairedPrecinctStudy.pdf New Hampshire also lacks verifiable ballot security and reconciliation procedures.

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Other states showed exit poll discrepancies consistent with significant vote miscount favoring Clinton.

Arkansas' exit poll margins between Clinton and Obama (9:35 p.m. exit poll) show an 11.54% discrepancy with vote count margins. The odds are less than one in 10,610 of obtaining Clinton exit poll results this discrepant from her vote counts by chance and less than one in 86 of obtaining Obama exit poll results this discrepant. Arkansas conducts no manual checks of its machine-counted election results. However, some earlier and later Arkansas CNN exit polls showed less discrepancy. (See appendix C)

Illinois' exit poll margins between Clinton and Obama show a 6.51% discrepancy with the unofficial vote count margins. Illinois has an "audit" procedure in its statutes that appears to be a post-election machine test that does not check the accuracy of its unofficial machine vote counts after the election.

California is the only state conducting manual audits included in the analysis above which had an exit poll discrepancy of more than the poll margin of error in this sample. This can be somewhat explained by problems with California's election administration including:

- Bad ballot design in LA County (the "double bubble" trouble) that required independent voters to fill out a small bubble to specify which party they wanted to vote in, in addition to filling out the ballot. This caused the ballots of independent voters who participated in exit polls to not be counted. Los Angeles County voters cast 29.8% of the ballots statewide. The double-bubble trouble resulted in approximately 94,000 voters' ballots, 7.4% of LA County or 2.2% of Democratic ballots state-wide, not being counted due to this ballot flaw.
- A high rate of provisional ballot use due in part to voters' mistaken party affiliations in the electronic voter registration rolls which caused the ballots of some voters to not be included in the tallies and also due to Decline-to-State voters receiving Non-Partisan Vote-by-Mail ballots and wishing to vote in the primary. These Decline-to-State voters often did not have their ballots to surrender, either because they left them home, or because they had mailed them in.[4]

Arizona exit polls and **Georgia** early polls (7 p.m. polls - not shown in the table above, but included in Appendix C) show large discrepancies that favored Clinton in the unofficial vote counts in an amount far exceeding their exit polls' margin of errors. The early Arizona exit poll data is consistent with possible election outcome reversal. However in Arizona voters must be registered in the Democratic or Republican political party to vote in their respective party's primary. Voters who voted on provisional ballots and were not eligible to vote due to their own fault or because their party affiliation was incorrectly recorded in electronic voter rolls may have participated in exit polls and skewed those polls if such unaffiliated voters tended to vote more for Obama.

[4] See http://gnosis.python-hosting.com/voting-project/February.2008/0064.html by Arthur Keller.

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

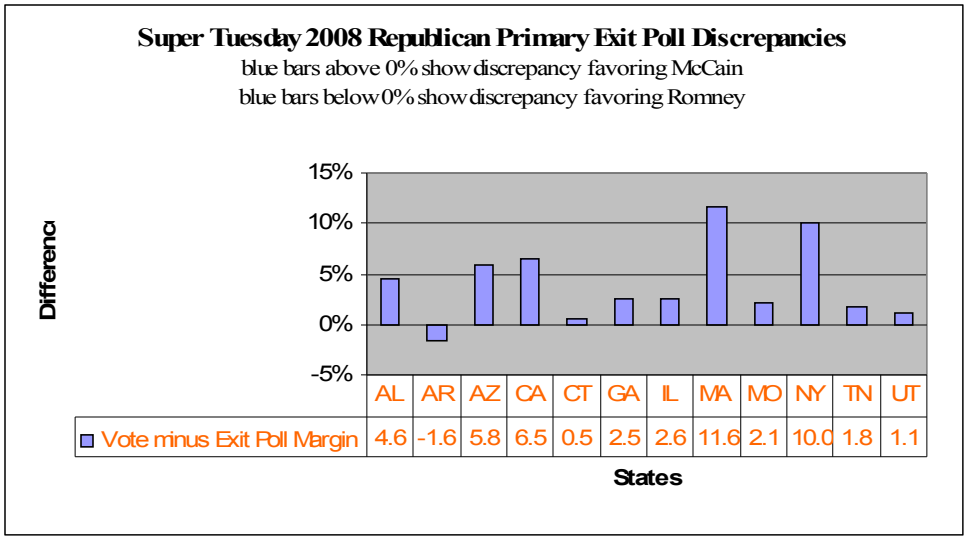
Super Tuesday *Republican* Primary: Vote Count- Exit Poll Discrepancies

Super Tuesday Republican Primary Exit Poll Discrepancies	Discrepancy Favoring		Poll Margin of Error (MoE)	Discrepancy more than MOE?	Romney Results	McCain Results
	McCain	Romney			Odds of occurring due to random chance are less than 1 chance in	
AL	4.6%		4.3%	Yes	45	2
AR		1.6%	4.6%		18	7
AZ	5.8%		4.3%	Yes	10	11
CA	6.5%		4.6%	Yes	17	9
CT	0.5%		5.7%		4	3
GA	2.5%		4.7%		4	3
IL	2.6%		5.4%		4	3
MA	11.6%		6.7%	Yes	118	6
MO	2.1%		5.5%		2	3
NY	10.0%		5.0%	Yes	17	160
TN	1.8%		3.9%		10	3
UT	1.1%		3.5%		3	3

Are Super Tuesday *Republican* Presidential Primary Results Consistent with Vote Miscount?

Yes! The CNN exit polls, downloaded just after polling locations closed in each state, show that McCain outperformed Romney more than the polls predicted in at least five states, Alabama, Arizona, California, Massachusetts, and New York – beyond the poll margin of error. In Georgia, Missouri, and California the original exit poll margin predicted a close race that either McCain or Romney might win. The results were particularly surprising in Massachusetts where the chance was less than one in 118 that McCain would outperform the exit poll results so much due to random chance; and in New York where the chance was less than one in 160 that Romney would under-perform the exit poll results so much due to random chance.

It is interesting to note that of all the states where we have the number of exit poll respondents (and are thus able to calculate a margin of error and the probabilities), Connecticut which conducts the largest amount of post-election manual audits of any U.S. state, also has the lowest discrepancy, 0.5%, between its exit poll and election results.



Notice how lopsided the above chart is, with almost all the blue bars above the 0% line, showing that the discrepancies between exit polls and vote counts consistently favored McCain over Romney

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Were the 2008 Super-Primary Election Results Accurate?

We don't know! Five fundamentals are required to ensure accurate election results:

1. *Voter-marked paper ballots* for able-bodied voters and voter-verifiable paper ballots for voters with disabilities.
2. *Post-election independent manual audits* of the paper ballots associated with a sufficient number of publicly announced unofficial vote counts to verify the accuracy of the election outcomes.
3. *Publicly verifiable ballot chain-of-custody* and ballot security during and after the election until the end of the federal retention period of 24 months.
4. *Publicly verifiable reconciliation of printed paper ballots* with the amount of voters to ensure that the total number of printed ballots is accounted for and that the unused ballots are not missing or tampered with. (Ballot reconciliation must occur to ensure that no ballot substitution, ballot box stuffing, or ballot tampering has occurred.)
5. *Public access to copies of election records* in order to evaluate the integrity and accuracy of voter rolls, the voting process, and the post-election audits.

NOT ONE Super Tuesday State Provides the Five Fundamentals Required for Accurate Elections!

Arkansas, Delaware, Georgia, New Jersey, New York, and Tennessee provide no fundamental protections for their elections – no paper ballots, no audits, no verifiable ballot security and no reconciliation. The vote counting systems of all these states except for New York could be fraudulently tampered with statewide electronically by one or several programmers without the knowledge of any of election officials. New York's lever machines must be tampered with one machine at a time in person.[5]

A mere four of the fifteen Super-Tuesday states conduct mandatory random manual post-election audits: Arizona, New Mexico (not listed above), California, Connecticut, and Missouri. Of those, only New Mexico's audits are conducted independently of the insiders who administer the elections. Arizona's audits can be a sham because some of Arizona's county election officials subvert the audits by[6]:

- Auditing only the Republican primary but not auditing the Democratic primary;
- Randomly selecting the batches of ballots to be audited prior to doing the initial machine counts so that the unaudited vote counts can be undetectably manipulated during the initial count;
- Waiting more than 24 hours after making the random selections of batches or precincts to be audited before beginning the audit and then going through the ballots which have been selected for auditing prior to the audit; or
- Going through the ballots and duplicating some ballots and substituting them for the voters' ballots prior to the audit.

NONE of the Super Tuesday states' audit sufficient amounts to detect outcome-altering vote miscount in very close races.

[5] Lever machines provide no record of individual ballots, have problems rolling over to the next number when they hit "9" or "99", etc. and historically produce among the highest undervote rates and exit poll discrepancies of any type of voting system.
[6] This information is from John R. Brakey of the group AUDIT_AZ who has observed the audits. AUDITAZ@cox.net

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

NONE of the Super Tuesday states, to our knowledge and belief, publicly publish paper ballot chain of custody procedures. Using the discredited "Security by Obscurity" approach is a recipe for gross incompetence according to computer engineer Charles Corry.[7]

NONE of the Super Tuesday Primary states, to our knowledge and belief, reconcile all printed ballots after the election to ensure that no ballot substitution, pre-election ballot spoiling; or ballot box stuffing has occurred.

The states with the most suspicious results, Massachusetts, New Jersey, Georgia, Arkansas, and Illinois[8] currently fail to subject their election results to any mandatory post-election audits, making these states an easy target for undetected vote fraud and manipulation.

Problems and Limitations of Exit Poll & Election Analysis

The raw unadjusted exit poll data is not made publicly available and the methods for conducting the poll, its weighting and adjusting methodology, whether or not early voting and mail-in/absentee voting are included in the surveys via a method such as telephone surveys, and other exit poll methodology are not made publicly available.

We do know that the final exit poll numbers are adjusted to match the vote counts, but we don't know how much the exit polls released earlier are weighted to match the election results. Notice in the above chart that the Obama exit poll shares decrease in most states and eventually the exit poll results are forced to match the reported vote counts. The above data is from CNN.com.

Exit poll error caused by human variation in a given precinct's quality of poll takers ought to cancel out when you add up the statewide polls and not be so lopsided in favor of one candidate. Exit poll error caused by voters lying to pollsters should likewise cancel out unless there is plausible reason to believe that voters who support one political candidate lie more than persons who support another candidate and that voters lie in the same direction to produce such one-sided discrepancy results.

Exit poll analysis can suggest something to look at, but such analysis can never prove that vote fraud occurred. Even less would data analysis alone allow us to know who was responsible. Current unaccountable electronic voting systems are not designed to leave any evidence of fraud or to leave any evidence of a perpetrator so even if miscount is detected, there is no way to tell if it was deliberate. There are possible motives for persons from any political party to interfere with an opposing party's primary, so even if fraud was uncovered, it does not mean that the candidate who benefited from the fraud was involved.

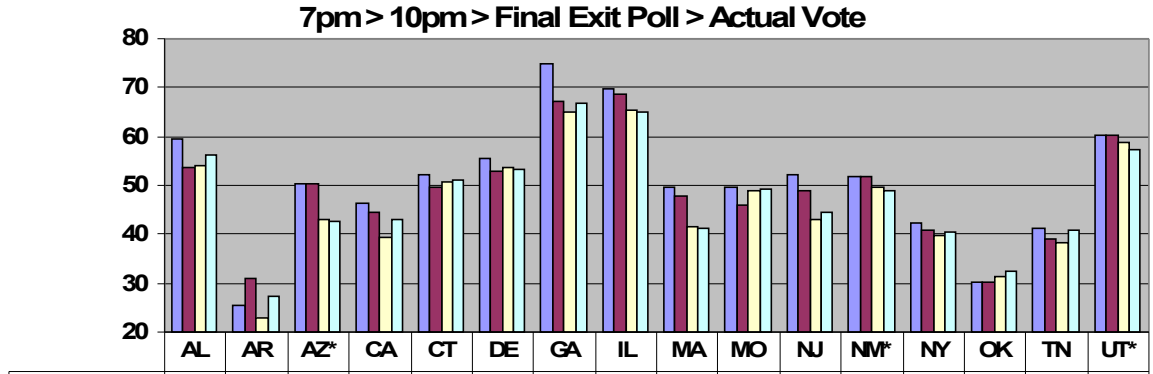
[7] Dr. Charles Corry of Colorado Springs, CO has been on IEEE committees to set U.S. voting system standards.

[8] Illinois has an "audit" procedure in its statutes that is merely post-election machine testing and does not actually check the accuracy of its unofficial vote counts.

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Exit Polls are Forced to Closely Match the Vote Counts by Pollsters

Exit pollsters "adjust" or force the exit poll data to match unofficial vote counts as election night proceeds and unfortunately some election officials risk vote count security by giving exit pollsters direct electronic access to vote tabulators! Consequently, the most reliable and accurate exit poll data is considered by many to be the exit polls which are posted right after the polling locations close.



	AL	AR	AZ*	CA	CT	DE	GA	IL	MA	MO	NJ	NM*	NY	OK	TN	UT*
7pm - 51.8	59.6	25.5	50.5	46.3	52.2	55.6	75.0	69.6	49.8	49.8	52.2	51.8	42.2	30.4	41.1	60.1
10pm - 49.6	53.7	31.0	50.5	44.7	49.7	53.0	67.1	68.7	48.0	45.9	48.8	51.8	40.8	30.4	39.2	60.1
Final - 46.4	54.1	22.8	43.0	39.4	50.7	53.8	64.9	65.2	41.5	49.0	43.2	49.6	39.8	31.4	38.3	58.6
Actual -47.9	56.2	27.3	42.7	42.9	51.1	53.3	66.9	64.8	41.2	49.4	44.4	48.9	40.6	32.4	40.9	57.4

Note * indicates 10pm exit poll data not available

The rightmost green bars are the vote count values. The leftmost blue bars are the initial exit polls, the least "adjusted" to match vote counts. The white bars are the final exit polls which usually have been adjusted to match vote counts. When the blue bars are higher than the green bars, it means that the first exit polls predicted that Obama's vote share would be higher than it turned out to be.

It is interesting to notice that the only state shown in the above chart in which Obama's share rises consistently from the original early exit polls to the final exit poll values and vote counts is Oklahoma which is the only U.S. state which does *not* contract its vote counting out to private companies using trade secret software, and instead writes its own vote counting programs for standard optical scanners counting paper ballots.

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Summary & Recommendations

The early less adjusted Super Tuesday primary exit poll discrepancies in some states are consistent with vote miscount favoring Hillary Clinton or John McCain.

Historically, ballots were hand-counted in the polling places on Election Night, and citizens could evaluate the integrity of the process. It took many persons to rig an election. Today, however, a single rogue or incompetent programmer could miscount an entire state's election results without anyone being aware. ***There is no reason to have confidence in U.S. election results today.***[9]

THE INTEGRITY OF U.S. ELECTIONS IS AT THE GREATEST RISK OF ANY TIME IN HISTORY due to the recent 2006 implementation deadline of the Help America Vote Act (HAVA). HAVA funded the adoption of easily hack-able, invisible-ballot, voting systems which are run by trade secret programs written by private companies. These counting programs are compiled into machine-language and no human being, not even the most brilliant computer scientist, can possibly know what the programs do during an election. Yet no states are adequately checking the accuracy of these secret machine counts after the elections! The following measures are recommended:

1. *Subject vote counts to transparent scientific manual audits to detect vote fraud with at least 95% confidence-level.*[10]
2. *Pass the "Emergency Assistance for Secure Elections Act of 2008"* to fund paper ballots and audits for the November 2008 election.[11]
3. *Publicly post detailed unofficial vote counts* (precinct-level or more detailed) *on the Internet* immediately following elections.
4. *Publicly release copies of all election records* needed to judge the integrity of the process.
5. *Provide pre-printed, voter-marked, paper ballots for all able-bodied voters, and ballot marking devices for voters with disabilities*
6. *Make ballot chain-of-custody and security procedures available for public review*; and invite public oversight of these security procedures.
7. *Fully reconcile to account for all printed, used, unused, and spoiled ballots* after each election.
8. *Conduct public county-level or precinct-level exit polls using transparent methods to provide an effective measure of the accuracy of election results.* Exit polls should ask whether or not respondents voted on provisional or regular ballots, and publicly release their data.

Exit poll discrepancies could be caused by exit poll error, by vote miscount, or by random chance. This analysis has ruled out random chance as the cause for the discrepancy in some states. The exit pollsters have not provided any data or explanation to suggest how exit poll error could have caused the one-sided discrepancies favoring Clinton and McCain. Vote miscount cannot be ruled out and is a coherent, logical explanation for the improbable exit poll discrepancies. Super Primary Democratic exit poll discrepancies in many states are consistent with vote miscount benefiting Hillary Clinton and benefiting John McCain.

There is not sufficient reason to believe that U.S. 2008 primary election results are correct.

---

[9] Although California, Ohio, and Connecticut state election officials seem to be trying and are moving in a direction to bring verifiable election integrity to their states.

[10] Audit principles and methods described in detail in these two documents PowerPoint presentation: http://utahcountvotes.org/legislature/VoteCountAudits.pdf and a full detailed description of 95% confidence-level vote count audit procedures http://utahcountvotes.org/legislature/ElectionAudits4Utah.pdf

[11] See http://holt.house.gov/HR_5036.shtml The League of Women Voters, U.S. endorses this emergency election legislation.

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Acknowledgements

Thanks to Theodore de Macedo Soares for providing the Democratic primary exit poll and vote count data from FoxNews.com and for thinking to display the discrepancy as positive numbers for each candidate. Thanks to "TruthisAll" for providing other earlier and final Democratic exit poll data from CNN.com and for creating the "Obama Super Tuesday Vote Shares - 7pm > 10pm > Final Exit Poll > Actual Vote" chart to show the effect of adjusting the exit polls to match the vote counts. Thanks to Jonathan Simon for providing the Republican primary exit poll data. Thanks to Arthur Keller and other persons in California for providing answers to some questions regarding Super Tuesday election administration problems in California. Thanks to Ron Baiman who helped to decide how to best calculate the standard deviations and probabilities and for suggesting a sentence or two. Thanks to Shirley Jin and William Chirolas for reviewing the paper and making some suggestions. Thanks to John Brakey for filling me in on Arizona election practices.

Author Bios

Kathy Dopp has a Masters of Science degree in mathematics from the University of Utah and has authored dozens of academic papers on voting systems with Ph.D. computer scientists. She has helped to develop new methods for analyzing detailed precinct-level exit poll and vote count data to judge its consistency with exit poll error versus vote miscount; has derived new formulas and procedures for auditing elections and has authored dozens of papers on the topic of election auditing and exit poll analysis with Ph.D. statisticians or mathematicians; and has proven that all the attempts to dismiss the evidence of vote miscount in the 2004 presidential election were mathematically incorrect. Her work analyzing election and exit poll results has been cited by Representative John Conyers and by Robert F. Kennedy, among others. She lives in a passive solar house which she did the architecture for.

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Appendix A: Methodology

The spreadsheet used to do these calculations is posted on the Internet at
http://uscountvotes.org/ucvAnalysis/US/exit-polls/SuperTuesday2008/SuperTuesExitPolls2008.xls

Exit poll discrepancies between the winning and runner-up candidates (Clinton and Obama) are defined as:

(Vote Count Margin) – (Exit Poll Margin)

(Clinton vote share – Obama vote share) – (Clinton poll share – Obama poll share)

Some of the vote counts were obtained from
http://www.cnn.com/ELECTION/2008/primaries/results/dates/index.html#20080205
And the LA County numbers from http://vote.sos.ca.gov/Returns/pres/dem/19.htm
The exit poll data was obtained from http://youdecide08.foxnews.com/states/ Exit poll data was also obtained by other analysts from
http://www.cnn.com/ELECTION/2008/primaries/results/dates/index.html#20080205

The calculations were done to give the most conservative results (show the exit poll discrepancies as being the most reasonable as possible). To do this:

- The margin of error (MOE) was calculated two ways, using both the Clinton and Obama results, assuming a very conservative 30% cluster factor and the largest MOE was used.
- The standard deviations and probabilities were calculated in four ways by using both the exit polls and the vote counts as the expected values, for both Obama and Clinton and the largest probabilities for the result were used and displayed in this analysis.

Due to the privately own exit polls which prevent us from knowing the exact exit poll methodology, our calculations assume that the early voting is taken into account in the exit poll data via telephone or other surveys in states which have early voting, such as Illinois.

The information regarding state audit procedures was obtained from various sources including from:

P. Smith and B. Kibrick, *Manual Audit Requirements*, Verified Voting Foundation (March 17, 2007)
http://www.verifiedvoting.org/downloads/StateManualAuditProvisions-03-07.pdf an updated version (October 2007) will be available at
http://verifiedvoting.org/audits/

Some of the excel formulas used were:

Margin of Error (MoE) = SQRT(exitpollval*(1-exitpollval)/#respondents)*(1+0.30)*1.96
Standard Deviation (SD) = SQRT(exitpollval*(1-exitpollval)/#respondents) *(1+0.30)
or = SQRT(votecountval*(1-votecountval)/#respondents) *(1+0.30)
Probability: = IF(mean<x,1-NORMDIST(x,mean,SD,1),NORMDIST(x,mean,SD,1))

Appendix B: RESOURCES

To Arizona Voters...a story from inside the process
http://www.freedomsphoenix.com/Feature-Article.htm?InfoNo=029892&From=News

San Mateo County - Election complaints build http://www.smdailyjournal.com/article_preview.php?id=87155

Paper Ballots Unavailable at San Mateo County Polls, Feb. 8, 2008 - San Mateo County Democratic Party Calls for Investigation into Election Day Ballot Shortages
http://www.electiondefensealliance.org/san_mateo_protests_paper_ballot_shortage

Tell the Los Angeles County Registrar to count all "Decline-to-State" votes, Feb. 2008

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

http://www.couragecampaign.org/page/s/counteveryvote

Primary rules trip up some Inland decline-to-state voters
http://www.pe.com/localnews/rivcounty/stories/PE_News_Local_D_voting07.391b109.html

Alameda County - Heavy turnout cited for ballot shortage - Alameda County officials say that some voters were given sample voting sheets and later converted to real ballots http://www.contracostatimes.com/news/ci_8194580

Alameda County - Despite mishaps, county survived primary
http://www.insidebayarea.com/argus/localnews/ci_8194029

Los Angeles County - LA County supervisors to investigate 'double-bubble' problem
http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2008/02/06/politics/p194139S12.DTL&type=politics

Los Angeles County – Opinion - Bubble trouble on the ballot A complicated system and confusing ballot may have spoiled the vote for many independents. http://www.latimes.com/news/opinion/la-oe-hasen7feb07,0,4738134.story

Los Angeles County - L.A. County registrar to examine independents' ballots; mix-up leaves many presidential votes uncounted
http://www.latimes.com/news/local/la-me-vote7feb07,1,1604978.story?ctrack=1&cset=true

Santa Clara County - Ballot shortages afflict Palo Alto polling places Voters forced to improvise with sample ballots, touch screens – or simply turned away http://www.paloaltoonline.com/news/show_story.php?id=7085

Warren County, NJ - Voting machines stopped working Hundreds of warren county voters made their choices on emergency ballots.
http://www.nj.com/news/expresstimes/nj/index.ssf?/base/news-7/1202360780241640.xml&coll=2

Tally Against the Machine As told to Edmund Newton Published: February 7, 2008 by the Broward-Palm Beach "New Times" **http://www.browardpalmbeach.com/2008-02-07/news/tally-against-the-machine/**

Bad Voter Lists May Have Botched New Mexico's Democratic Caucus http://www.alternet.org/democracy/76399/

Please call and ask your US Representative to vote for HR5036 and ask the members of the US House Administration Committee to pass HR5036, "The Emergency Assistance for Secure Elections Act of 2008" to the floor with a positive recommendation.

The Members of the US House Administration Committee

Chairs: Robert A Brady (Dem PA 1st) 202 225-4731

Vernon Ehlers (Rep MI 3rd) 202 225-3831

Members: Zoe Lofgren (Dem CA 16th) 202 225-3072

Michael Capuano (Dem-MA 8th) 202 225-5111

Charles Gonzalez (Dem-TX 20th) 202 225-3236

Susan Davis (Dem-CA-53rd) 202 225-2040

Arthur Davis (Dem AL 7th) 202 225-2665

Kevin McCarthy (Rep CA 22nd) 202 225-295

Dan Lungren (Rep CA 3rd) 202 225-5716

US Representatives' Contact Information http://www.house.gov

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

Appendix C: Individual State Exit Poll and Vote Count Data

The exit poll data below was obtained from CNN web site, and the calculations (except for weighted averages weighted by number of respondents) were done by "TruthIsAll" (See http://www.geocities.com/electionmodel/SuperTuesdayShift.htm). The data is included because it contains a complete set of the 7 p.m. exit poll data which is likely to be less adjusted to match the vote counts. The margin of error (MOE) calculations below do not include any cluster factor so are less conservative but would be considered more realistic by some.

Dem Primary 2008 Super Tuesday			7pm Exit Poll			Final Exit Poll		
	Sample Sizes	Estimated MoE	Obama	Clinton	Margin	Obama	Clinton Margin	Margin
WtdAv		2.78	51.82	45.18	6.64	46.37	48.68	-2.31
AL	966	3.2	59.6	37	22.6	54.1	41.2	12.9
AR	1,008	3.1	25.5	71.2	-45.7	22.8	72.8	-50
AZ	1,182	2.9	50.5	44.8	5.7	43	49.2	-6.2
CA	1,879	2.3	46.3	49.6	-3.3	39.4	52.7	-13.3
CT	1,178	2.9	52.2	45	7.2	50.7	46.9	3.9
DE	690	3.7	55.6	41.9	13.7	53.8	42.2	11.6
GA	1,060	3	75	26	49	64.9	32.8	32.1
IL	1,107	2.9	69.6	29.1	40.5	65.2	32.5	32.7
MA	1,365	2.7	49.8	47.3	2.5	41.5	56.1	-14.7
MO	1,005	3.1	49.8	45.1	4.7	49	47.6	1.4
NJ	1,298	2.7	52.2	47	5.2	43.2	53.8	-10.6
NM	905	3.3	51.8	45.6	6.2	49.6	43.5	6.2
NY	1,361	2.7	42.2	55.6	-13.4	39.8	57	-17.2
OK	445	4.6	30.4	60.5	-30.1	31.4	54.5	-23.1
TN	1,326	2.7	41.1	51.6	-10.5	38.3	52.3	-14
UT	410	4.8	60.1	39.9	20.2	58.6	39.5	19.1

Dem Primary 2008 Super Tuesday	Dem	Recorded Vote				
	Obama	Clinton	Margin	Discrepancy Vote - 7p.m Exit Poll	Exceeds MOE	Weights (Vote Count Proportion)
WtdAv	47.85	49.19	-1.30	7.98	7 states	
AL	56.2	41.8	14.5	8.2	yes	3.66%
AR	27.3	70	-42.7	-3		1.88%
AZ	42.7	51.8	-9.1	14.8	yes	2.53%
CA	42.9	52.8	-9.8	6.6	yes	26.28%
CT	51.1	47	4.1	3.1		2.40%
DE	53.3	42.5	10.8	2.9		0.66%
GA	66.9	31.4	35.6	13.5	yes	7.15%
IL	64.8	33.2	31.6	8.9	yes	13.30%
MA	41.2	56.6	-15.3	17.9	yes	8.45%
MO	49.4	48	1.4	3.3		5.63%
NJ	44.4	54.3	-9.9	15.1	yes	7.58%
NM	48.9	49	-0.1	6.3		0.88%
NY	40.6	58.3	-17.7	4.3		11.79%
OK	32.4	56.9	-24.5	-5.6		2.76%
TN	40.9	54.1	-13.3	2.7		4.21%
UT	57.4	39.7	17.7	2.5		0.84%

© 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

The vote counts below, used in this paper's analysis, were downloaded from CNN http://www.cnn.com/ELECTION/2008/primaries/results/dates/index.html#20080205 and the exit polls were downloaded from http://youdecide08.foxnews.com/states/ on February 5, 2008 between 7:30 - 11:27 PM by Theodore de Macedo Soares. Copies of the original web page exit poll data are posted here: http://electionarchive.org/ucvData/US/ExitPolls/SuperTues2008DemPrimary/ The California exit poll was downloaded on February 6, 2008 at 1:21 AM. Exit polls were not available on the FoxNews website on February 5 for the other Super Tuesday Primary states such as NM and UT, but were available on the CNN web site.

State	Results	Clinton	Obama	Download Time	Number of Respondents
AL	Vote Count	41.96%	56.08%		
AL	Exit Poll	42.22%	53.66%	2/5/08 9:53 PM	966
AR	Vote Count	70.38%	26.62%		
AR	Exit Poll	62.90%	30.97%	2/5/08 9:35 PM	983
CA	Vote Count	52.81%	42.98%		
CA	Exit Poll	50.83%	44.67%	2/6/08 1:21 AM	1,811
CT	Vote Count	47.01%	51.16%		
CT	Exit Poll	46.45%	49.72%	2/5/08 10:59 PM	1,117
DE	Vote Count	42.46%	53.27%		
DE	Exit Poll	42.00%	53.00%	2/5/08 9:35 PM	690
GA	Vote Count	31.36%	66.93%		
GA	Exit Poll1	31.92%	67.14%	2/5/08 7:31 PM	690
GA	Exit Poll2	33.11%	65.58%	2/5/08 10:50 PM	1,060
IL	Vote Count	33.08%	64.97%		
IL	Exit Poll	30.27%	68.67%	2/5/08 8:17 PM	1,107
MA	Vote Count	56.99%	41.40%		
MA	Exit Poll1	47.74%	47.98%	2/5/08 9:35 PM	841
MA	Exit Poll2	51.93%	46.26%	2/5/08 10:49 PM	1,364
MO	Vote Count	48.18%	49.40%		
MO	Exit Poll	47.63%	45.89%	2/5/08 11:28 PM	1,005
NJ	Vote Count	54.32%	44.37%		
NJ	Exit Poll	49.77%	48.81%	2/5/08 9:53 PM	1,245
NY	Vote Count	58.31%	40.55%		
NY	Exit Poll	57.01%	40.84%	2/5/08 9:35 PM	1,361
OK	Vote Count	56.93%	32.42%		
OK	Exit Poll	59.10%	30.35%	2/5/08 8:33 PM	423
TN	Vote Count	54.16%	40.83%		
TN	Exit Poll	51.29%	39.16%	2/5/08 9:36 PM	1,026

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.

The Republican Super Tuesday Primary exit poll and vote count data below provided by Jonathan Simon who works with the Election Defense Alliance:

State	McCain	McCain EP	Romney	Romney EP	Huckabee	Huckabee EP	Paul	Paul EP	McCain Votecount-EP Disparity	EPDownloadTime AfterPollClosing (in mins)	# Respon-dents	EP% Female
GA	32	30.5	30	31.0	34	31.5	3	4.5	1.5	12	625	48
MA	41	32.9	51	54.5	4	5.0	3	4.0	8.1	5	355	49
IL	47	45.4	29	30.0	17	15.9	5	6.8	1.6	9	560	44
NJ	55	50.5	28	32.0	8	9.1	5	5.2	4.5	11	?	42
CT	52	50.0	33	31.5	7	7.3	4	5.2	2.0	12	508	45
OK	37	35.9	25	25.7	33	31.9	3	5.0	1.1	14	?	49
TN	32	29.3	24	23.1	34	33.1	6	5.1	2.7	15	864	47
MO	33	32.4	29	30.5	32	26.4	4	6.2	0.6	24	467	47
DE	45	N/A	33	N/A	15	N/A	4	N/A	N/A	N/A	0	N/A
AR	20	23.7	14	16.1	60	54.4	5	5.0	-3.7	6	561	47
AL	37	32.4	18	18.0	41	42.8	3	3.7	4.6	42	755	46
NY	51	47.0	28	34.0	11	10.3	7	5.3	4.0	6	657	43
AZ	48	45.1	34	36.9	9	8.5	4	5.6	2.9	15	856	47
UT	5	4.5	90	90.6	2	2.0	3	3.5	0.5	5	440	51
CA	42	38.3	34	36.8	12	11.4	4	6.5	3.7	7	726	46
Average	**38**	**35.6**	**33**	**35.1**	**21**	**20.7**	**4**	**5.1**	**2.4**			47

 © 2008 by Kathy Dopp for US Count Votes – A one-time non royalty bearing license to use this material is granted, under two conditions: 1) a copy of whatever use is made of this material is sent to kathy@electionarchive.org when it is disseminated, and 2) full attribution is made to Kathy Dopp/National Election Data Archive with this document's URL.