

Geek's Guide, Election 2008
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This document presents

- a) Key states to watch early in the evening;
- b) Ways to identify polling biases such as the Bradley effect;
- c) One key close Senate race and one key Presidential race to watch; and
- d) A list of poll closing times.

General Overview

I call races "safe" if they have win probabilities >95%. The safe states are

Obama (311 EV): CA CO CT DC DE HI IL IA ME MD MA MI MN NV NH NJ NM NY OH OR PA RI VT VA WA WI.

McCain (145 EV): AL AK AZ AR ID KS KY LA MS MT NE OK SC SD TN TX UT WV WY.

This leaves the following states with intermediate polling margins:

| <u>State (electoral votes)</u> | <u>Poll margin</u> |
|---------------------------------------|---------------------------|
| Florida (27 EV) | Obama +2% |
| Georgia (15 EV) | McCain +3% |
| Indiana (11 EV) | Tie |
| Missouri (11 EV) | Tie |
| North Carolina (15 EV) | McCain +0.5% |
| North Dakota (3 EV) | Tie |

The first two states are likely to go to Obama and McCain, leaving 40 EV up in the air. A purely poll-based view leaves little room for uncertainty about who will reach 270 EV. Tests to estimate the amount by which polls may be inaccurate are on pp. 3-4.

Rank Order of States

This list runs from most likely Obama to most likely McCain. Toss-ups are in **bold**. Anomalies (e.g. if McCain wins a state left of Florida) indicate an unexpected result. Even if there is polling bias, the rank order of Obama-McCain margins should correlate well with this sequence.

Obama <<< DC / HI / NY / CA / IL / VT / MA / DE / CT / ME / NJ / OR / MD / WA / RI / IA / MI / MN / NH / WI / NM / PA <K> / CO <270> / NV / OH / VA / **FL / IN / MO / ND / NC / GA** / MT / AZ / SD / AR / WV / SC / TX / LA / KS / MS / KY / TN / AK / NE / WY / AL / UT / OK / ID >>> **McCain**

EV left of <270> sum to 273, enough to win.

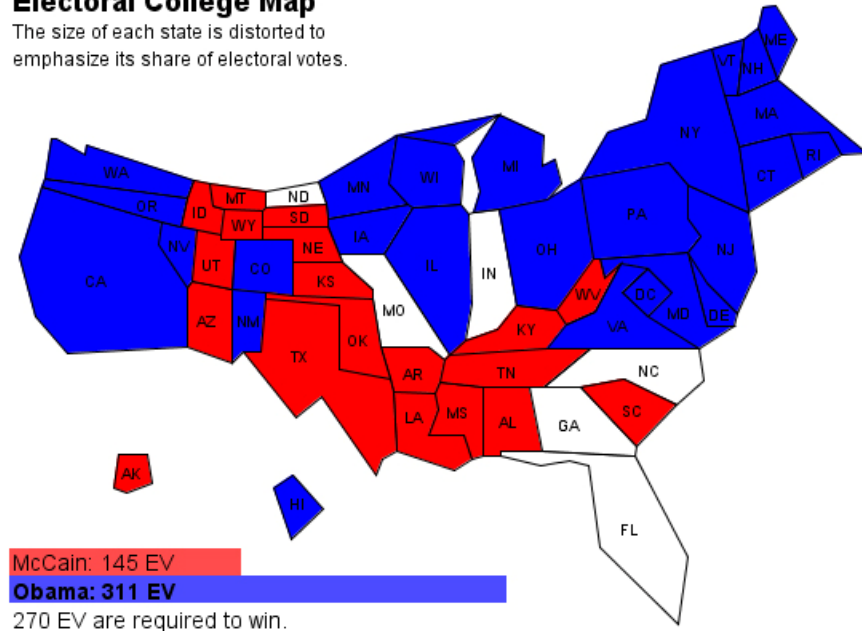
In 2004, Kerry won states left of <K> except for IA and NM.

State-by-state predictions from polling data

Safe states only:

Electoral College Map

The size of each state is distorted to emphasize its share of electoral votes.



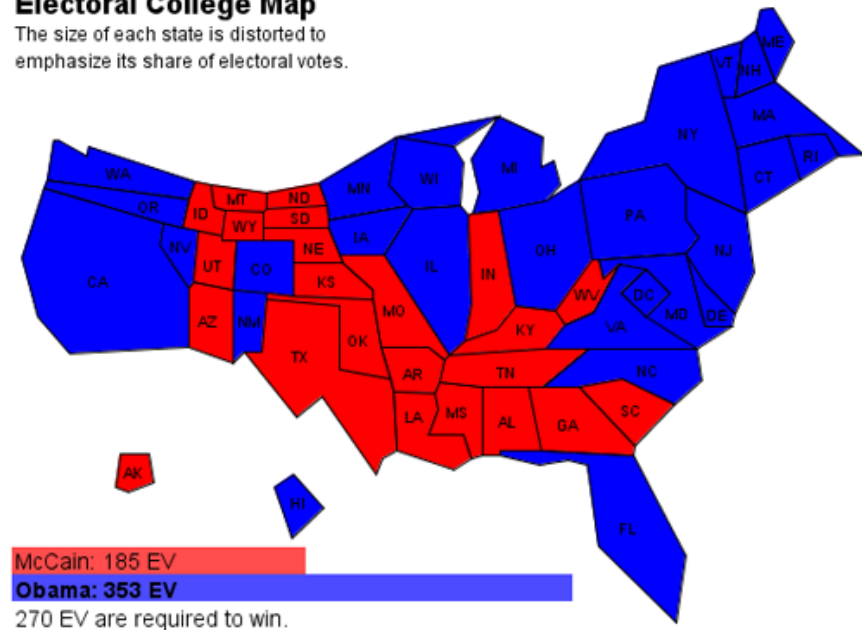
This map is using the current polling data

Blue States are currently polling for Barack Obama
Red States are currently polling for John McCain

With leaners included:

Electoral College Map

The size of each state is distorted to emphasize its share of electoral votes.



Canaries in the Coalmine

Surprising results in certain Eastern states would suggest that results differ by 4 points or more from pre-election polls. The likely cause would be biases such as unexpected turnout effects, missing cell phone users, or the Bradley effect.

Early warnings for a big win: Georgia (closing time 7:00 pm EST; McCain leading by +3%) and **North Carolina** (closing time 7:30 pm, McCain +0.5%). An Obama win in either state would foretell a landslide.

Early warnings for a closer race than expected: Virginia (closing time 7:00 pm, Obama +4%) and **Ohio** (closing time 7:30 pm, Obama +4%). If McCain wins in either of these states, the race is much closer than indicated by polls.

For Quantitative Geeks and Lovers of Suspense

For quantitative geeks. The number one state to watch tonight is **New Hampshire** (closing time 7:00pm, Obama +11%). The outcome is not in doubt. But New Hampshire is a homogeneous and quickly-reporting state. If Obama wins by less than 7%, tonight will be a nail-biter. More than 13%, get ready for a massive national win.

The Senate. The biggest question on my mind is in **Minnesota**. Can Norm Coleman (R) defend his Senate seat from challenger and comedian Al Franken (D)? Polls are totally mixed. This race may determine the difference between 56 and 57 Democratic seats.

Another question is whether in **Georgia**, Senator Saxby Chambliss (R) can get over 50% and avoid a risky runoff against Jim Martin (D).

These two races are unresolved aspects of Democratic gains in Congress. Not counting them, Democrats should gain 7 seats to reach **Senate 56 D, 42 R, 2 I**.

In other key Senate races:

Democrats lead in Alaska (Begich over Stevens), North Carolina (Hagan over Dole), and Oregon (Merkley over Smith).

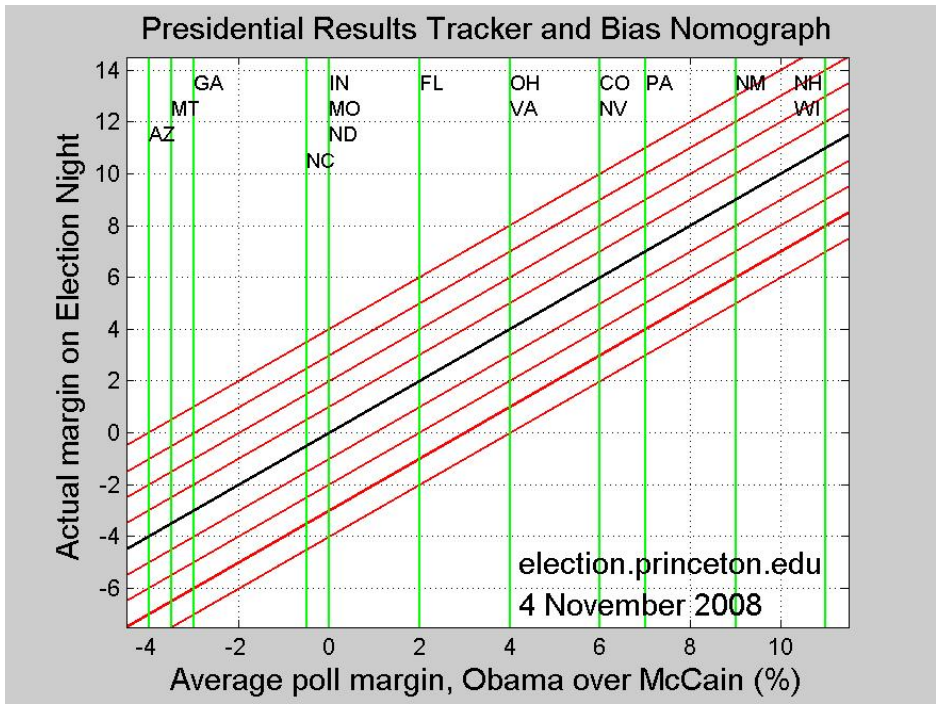
Republicans lead in Georgia (Chambliss over Martin), Kentucky (McConnell over Lunsford), and Mississippi (Wicker over Musgrove).

The House. Democrats should gain about 22 House seats and end up with a split of **257 D, 178 R (± 3 seats)**. However, we will not find out on Election Night.

Close Presidential races. The early knife-edge states to watch are **Indiana** (11 EV, closing 6:00/7:00 pm EST), **North Carolina** (15 EV, closing 7:30 pm), and **Missouri** (11 EV, closing 8:00 pm). If either Obama or McCain wins any of these states by more than 2 points, again this suggests some kind of systematic pollster error.

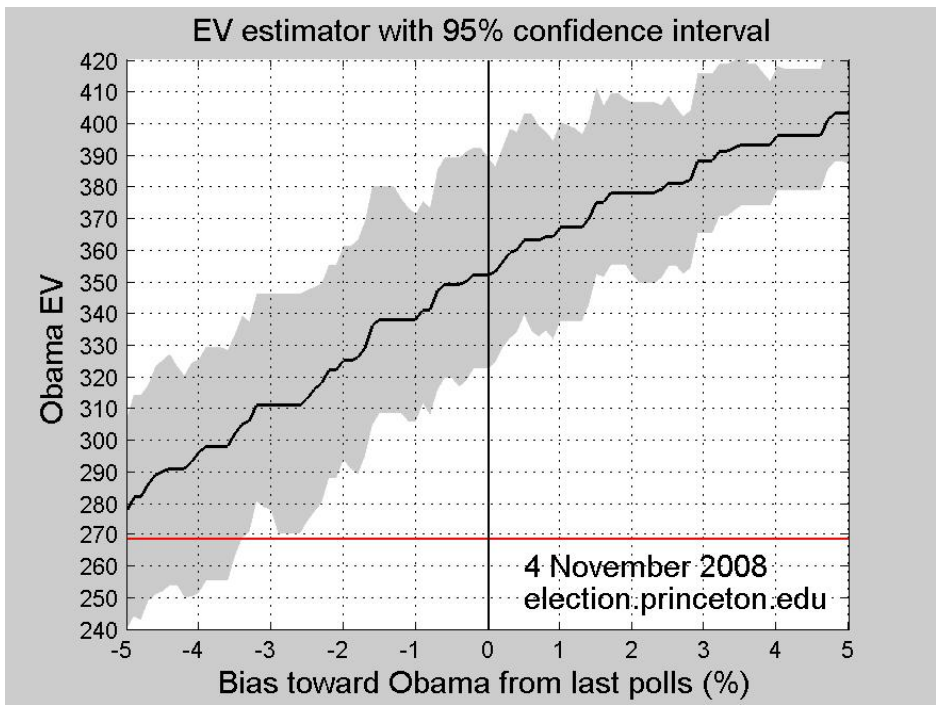
Find your inner geek! Use the chart on the next page to plot the Obama-McCain margin as a function of the decided-voter polling margin. When a margin becomes available, plot it on the appropriate vertical line. Points near the center diagonal suggest that polls were accurate. **If points fall predominantly on one side or the other, this indicates a systematic difference between polls and voting.**

PRESIDENTIAL RESULTS TRACKER



Plot results on the vertical line for that state. The black diagonal indicates no bias. Red diagonals are spaced at 1% intervals.

OVERALL POLLING BIAS CALCULATOR



After the election, use this graph to estimate how far results differed from polls.

Poll closing times

All times are Eastern Standard. The numbers following each state's postal abbreviation indicate electoral votes.

6:00 PM - IN (majority) 11, KY 8

7:00 PM - IN (Gary/Hammond), VA 13, FL (EST) 27, GA 15, NH 4, SC 8, VT 3

7:30 PM - OH 20, WV 5, NC 15

8:00 PM - CT 7, DE 3, DC 3, FL (panhandle) 27, ME 4, MD 10, MA 12, MI 17, NJ 15, PA 21, TN 11, AL 9, IL 21, MS 6, MO 11, OK 7, TX 34, SD 3

8:30 PM - AR 6

9:00 PM - CO 9, NY 31, KS 6, LA 9, MN 10, NE 5, WI 10, RI 4, AZ 10, NM 5, WY 3

10:00 PM - IA 7, ND 3, ID 4, MT 3, UT 5, NV 5

11:00 PM - CA 55, OR 7, WA 11, HI 4

12:00 PM - AK 3

Senate scorecard

| State | D | R | Poll margin | D win prob | Outcome |
|----------------|----------|-----------|-------------|------------|---------|
| Alaska | Begich | Stevens | D +8% | 88% | |
| Georgia | Martin | Chambliss | R +4% | 4% | |
| Kentucky | Lunsford | McConnell | R +5% | 1% | |
| Minnesota | Franken | Coleman | R +3% | 15% | |
| Mississippi | Musgrove | Wicker | R +11% | 1% | |
| North Carolina | Hagan | Dole | D +6% | 100% | |
| Oregon | Merkley | Smith | D +6% | 100% | |

The error bar on the Minnesota race is +/- 2.4%.

| State | EV | Obama margin (%) | Win prob (%) | Outcome | EV Obama | EV McCain |
|-------|----|------------------|--------------|---------|----------|-----------|
| AL | 9 | -25 | 0 | | | |
| AK | 3 | -17.5 | 0 | | | |
| AZ | 10 | -4 | 2 | | | |
| AR | 6 | -10 | 0 | | | |
| CA | 55 | 24 | 100 | | | |
| CO | 9 | 6 | 100 | | | |
| CT | 7 | 17 | 100 | | | |
| DC | 3 | 75 | 100 | | | |
| DE | 3 | 18 | 100 | | | |
| FL | 27 | 2 | 84 | | | |
| GA | 15 | -3 | 7 | | | |
| HI | 4 | 31 | 100 | | | |
| ID | 4 | -34 | 0 | | | |
| IL | 21 | 24 | 100 | | | |
| IN | 11 | 0 | 50 (<<50) | | | |
| IA | 7 | 12.5 | 100 | | | |
| KS | 6 | -13 | 0 | | | |
| KY | 8 | -14 | 0 | | | |
| LA | 9 | -12 | 0 | | | |
| ME | 4 | 17 | 100 | | | |
| MD | 10 | 15 | 100 | | | |
| MA | 12 | 21.5 | 100 | | | |
| MI | 17 | 12.5 | 100 | | | |
| MN | 10 | 12 | 100 | | | |
| MS | 6 | -13 | 0 | | | |
| MO | 11 | 0 | 50 (<<50) | | | |
| MT | 3 | -3.5 | 4 | | | |
| NE | 5 | -19 | 0 | | | |
| NV | 5 | 6 | 100 | | | |
| NH | 4 | 11 | 100 | | | |
| NJ | 15 | 16 | 100 | | | |
| NM | 5 | 9 | 100 | | | |
| NY | 31 | 31 | 100 | | | |
| NC | 15 | -0.5 | 40 (>50) | | | |
| ND | 3 | 0 | 50 (<50) | | | |
| OH | 20 | 4 | 98 | | | |
| OK | 7 | -29 | 0 | | | |
| OR | 7 | 16 | 100 | | | |
| PA | 21 | 7 | 100 | | | |
| RI | 4 | 14 | 100 | | | |
| SC | 8 | -11 | 0 | | | |
| SD | 3 | -9 | 0 | | | |
| TN | 11 | -15 | 0 | | | |
| TX | 34 | -11 | 0 | | | |
| UT | 5 | -25 | 0 | | | |
| VT | 3 | 22 | 100 | | | |
| VA | 13 | 4 | 98 | | | |
| WA | 11 | 15 | 100 | | | |
| WV | 5 | -10 | 0 | | | |
| WI | 10 | 11 | 100 | | | |
| WY | 3 | -23 | 0 | | | |

Win probabilities are calculated from z-scores except for unguaranteed (secret sauce).