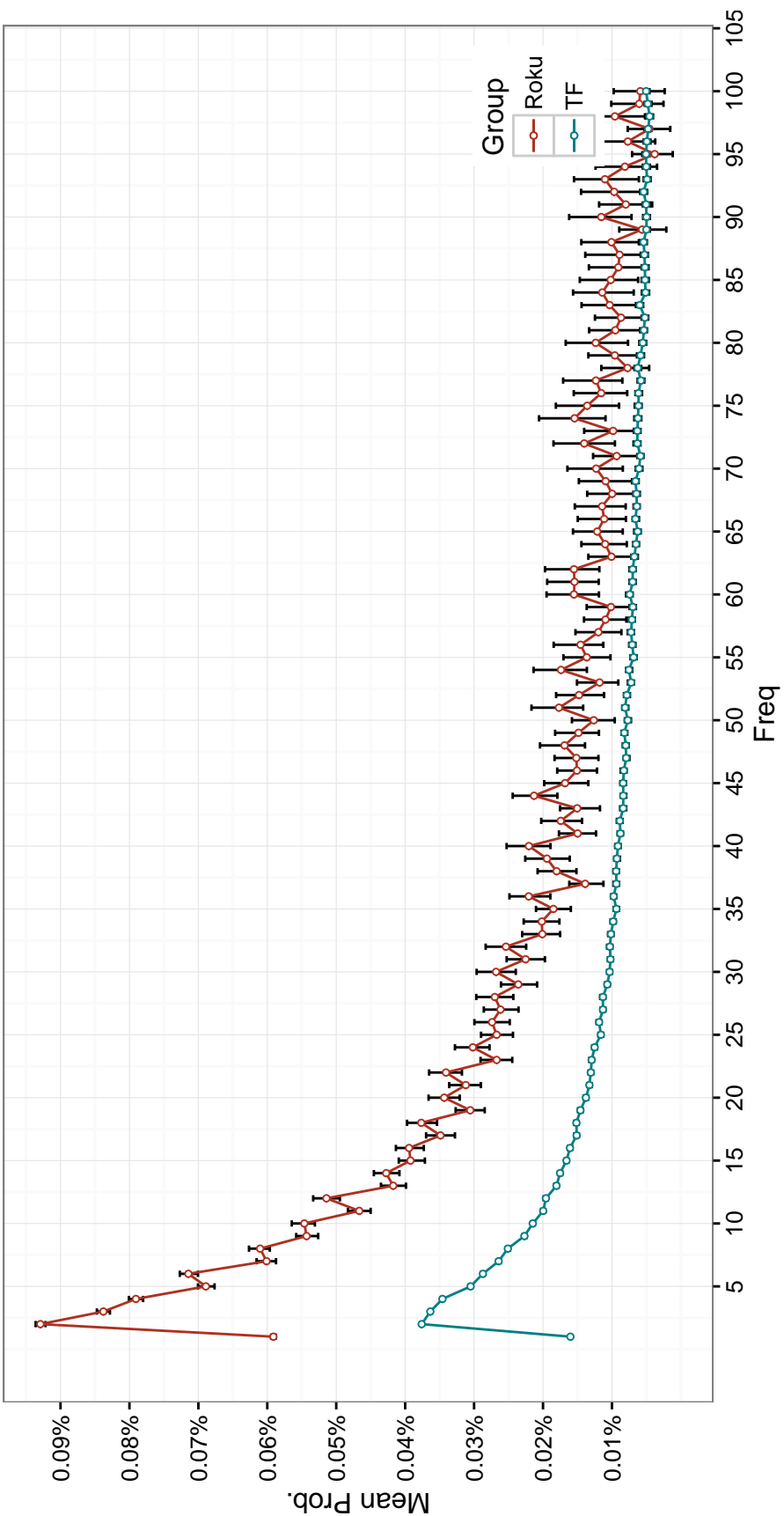


Roku Incrementality Test

Roku Incrementality Test for 2016-10-20

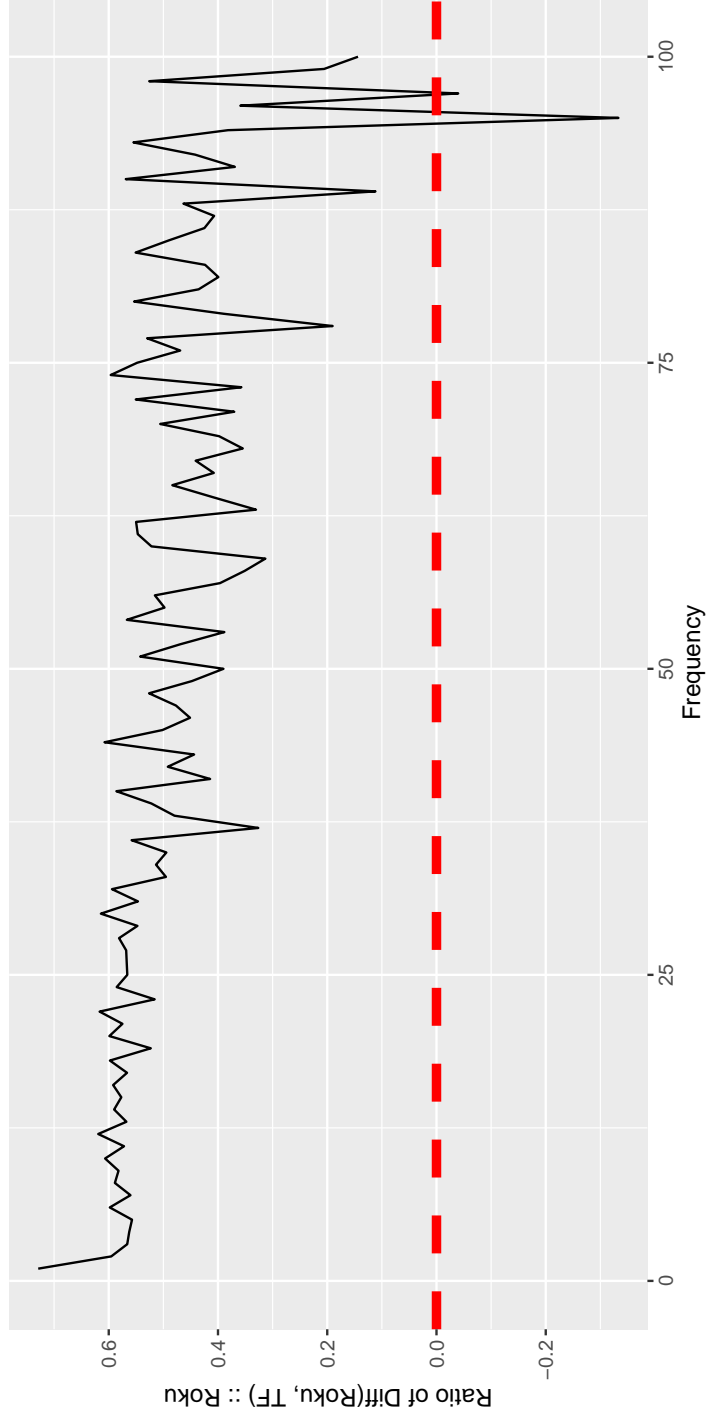
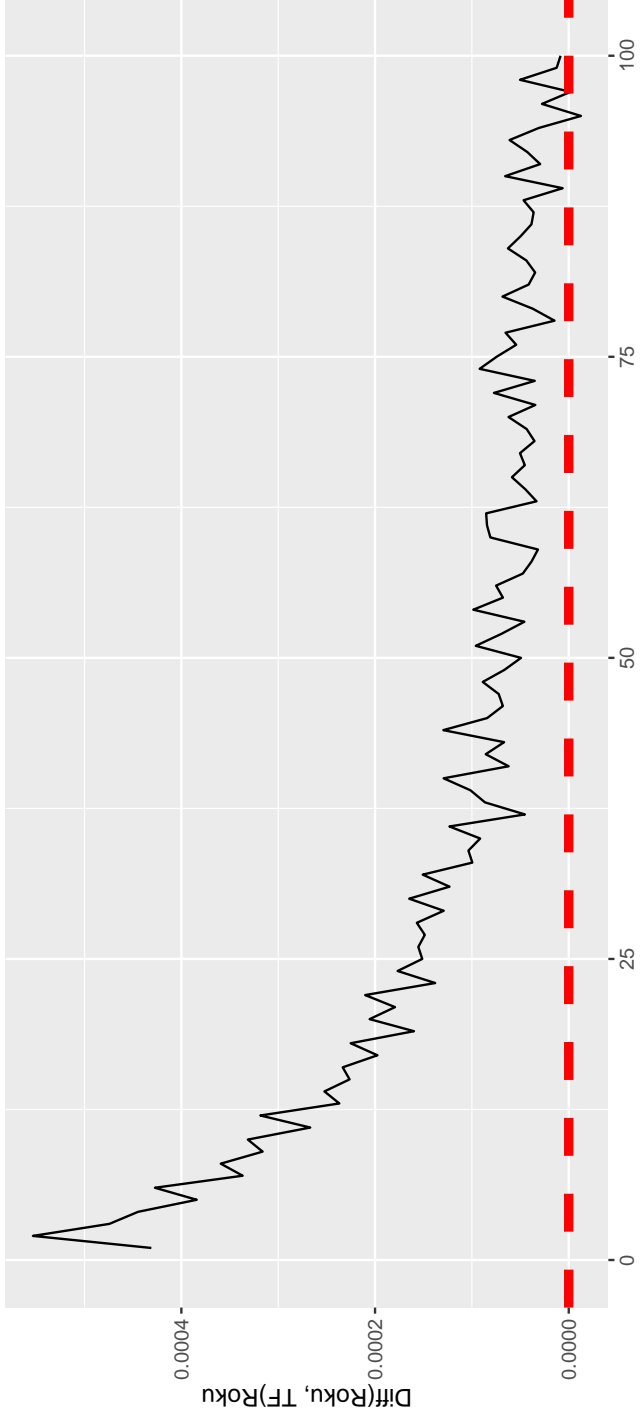
Freq	Group	Mean	HDlup	HDllo	Mean_diff	Ratio
1	Roku	0.00059117	0.00059433	0.00058778	0.00043100	0.72905413
1	TF	0.00016018	0.00016077	0.00015957	0.00043100	0.72905413
2	Roku	0.00092924	0.00093606	0.00092177	0.00055327	0.59539913
2	TF	0.00037597	0.00037755	0.00037421	0.00055327	0.59539913
3	Roku	0.00083781	0.00084722	0.00082832	0.00047430	0.56611628
3	TF	0.00036351	0.00036540	0.00036151	0.00047430	0.56611628
4	Roku	0.00079063	0.00080074	0.00078016	0.00044471	0.56247381
4	TF	0.00034592	0.00034806	0.00034382	0.00044471	0.56247381
5	Roku	0.00068912	0.00070050	0.00067652	0.00038409	0.55735571
5	TF	0.00030504	0.00030750	0.00030265	0.00038409	0.55735571
6	Roku	0.00071448	0.00072690	0.00070055	0.00042731	0.59806260
6	TF	0.00028718	0.00028969	0.00028463	0.00042731	0.59806260
7	Roku	0.00060110	0.00061560	0.00058734	0.00033671	0.56016179
7	TF	0.00026439	0.00026677	0.00026158	0.00033671	0.56016179
8	Roku	0.00061035	0.00062656	0.00059641	0.00035935	0.58875634
8	TF	0.00025100	0.00025351	0.00024804	0.00035935	0.58875634
9	Roku	0.00054305	0.00055806	0.00052620	0.00031609	0.58205861
9	TF	0.00022696	0.00022948	0.00022415	0.00031609	0.58205861
10	Roku	0.00054624	0.00056450	0.00053098	0.00033137	0.60663952
10	TF	0.00021487	0.00021745	0.00021205	0.00033137	0.60663952
11	Roku	0.00046658	0.00048301	0.00045007	0.00026689	0.57200888
11	TF	0.00019969	0.00020258	0.00019678	0.00026689	0.57200888
12	Roku	0.00051421	0.00053342	0.00049466	0.00031842	0.61924229
12	TF	0.00019579	0.00019896	0.00019308	0.00031842	0.61924229
13	Roku	0.00041734	0.00043509	0.00039882	0.00023688	0.56759273
13	TF	0.00018046	0.00018364	0.00017757	0.00023688	0.56759273
14	Roku	0.00042754	0.00044539	0.00040830	0.00025229	0.59010592
14	TF	0.00017525	0.00017802	0.00017219	0.00025229	0.59010592
15	Roku	0.00039223	0.00040923	0.00037138	0.00022630	0.57694360
15	TF	0.00016594	0.00016900	0.00016302	0.00022630	0.57694360
16	Roku	0.00039431	0.00041340	0.00037296	0.00023341	0.59193142
16	TF	0.00016091	0.00016393	0.00015773	0.00023341	0.59193142
17	Roku	0.00034871	0.00036962	0.00032777	0.00019753	0.56644628
17	TF	0.00015119	0.00015460	0.00014808	0.00019753	0.56644628
18	Roku	0.00037667	0.00039722	0.00035376	0.00022518	0.59781599
18	TF	0.00015149	0.00015495	0.00014839	0.00022518	0.59781599
19	Roku	0.00030553	0.00032676	0.00028455	0.00015980	0.52302486
19	TF	0.00014573	0.00014904	0.00014253	0.00015980	0.52302486
20	Roku	0.00034335	0.00036604	0.00032082	0.00020562	0.59886227
20	TF	0.00013773	0.00014109	0.00013446	0.00020562	0.59886227

Relative Conversion Rates (Roku v. TF)

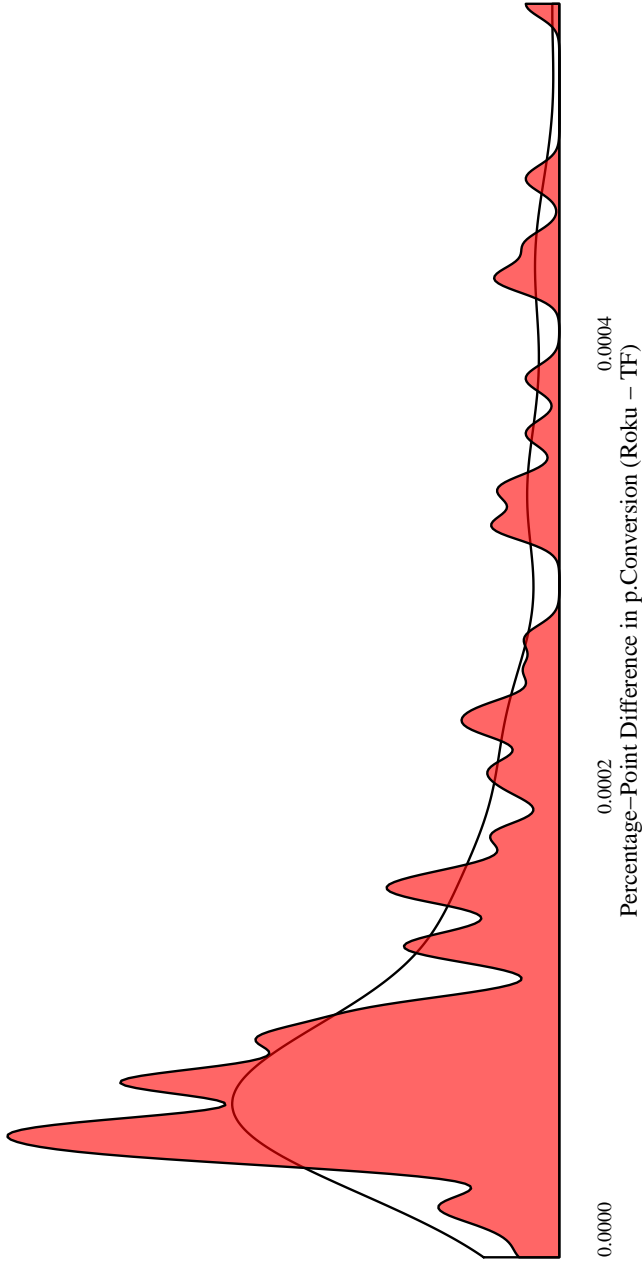


The maximal frequency (where lower-bound of Roku <= upper-bound of Tracfone) is: 59 impressions.

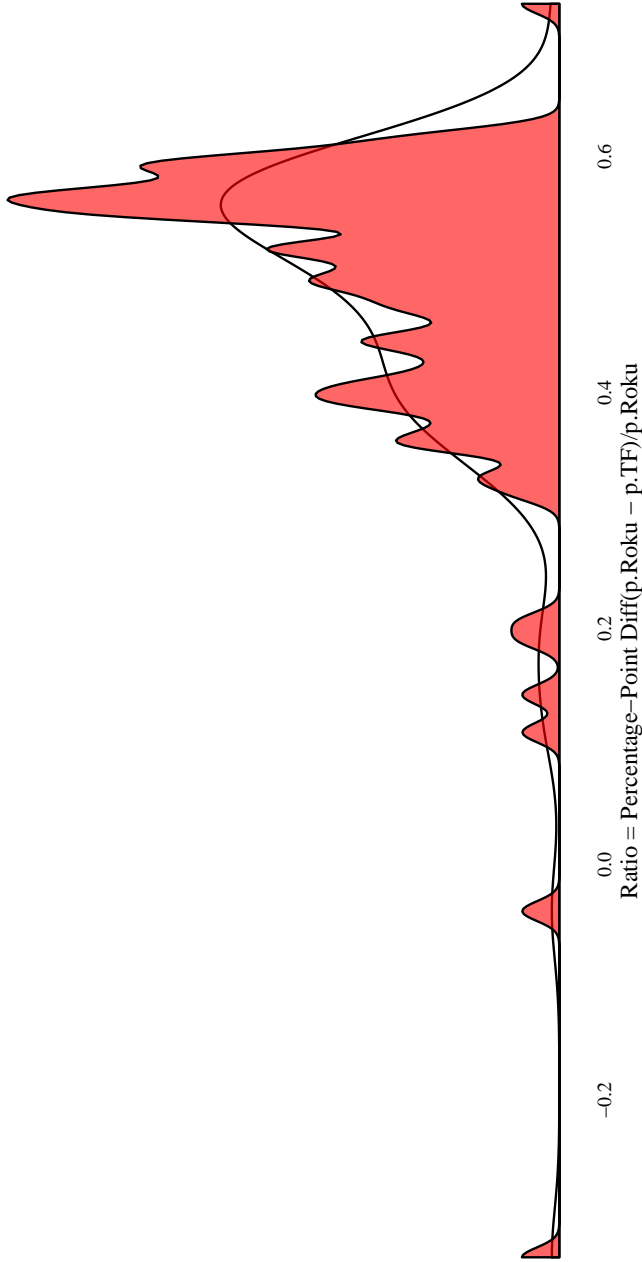
Difference and Incremental Effect of Roku v. TF (baseline) CR



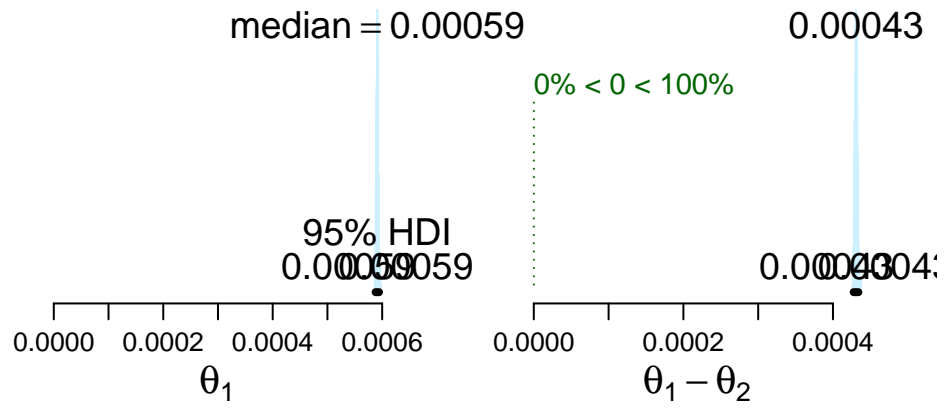
Distribution of $\text{Diff}(p.\text{Roku}, p.\text{TF})$



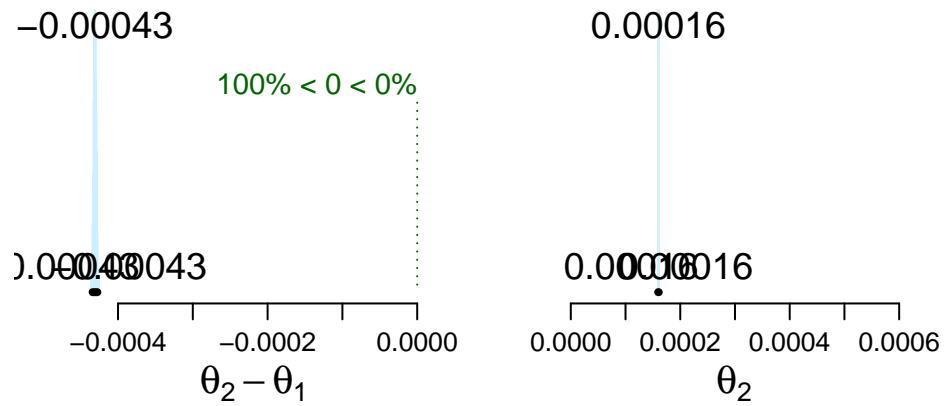
Distribution of $\text{Ratio}[\text{Diff}(p.\text{Roku}, p.\text{TF})/p.\text{Roku}]$



Rel. Freq. Group 1

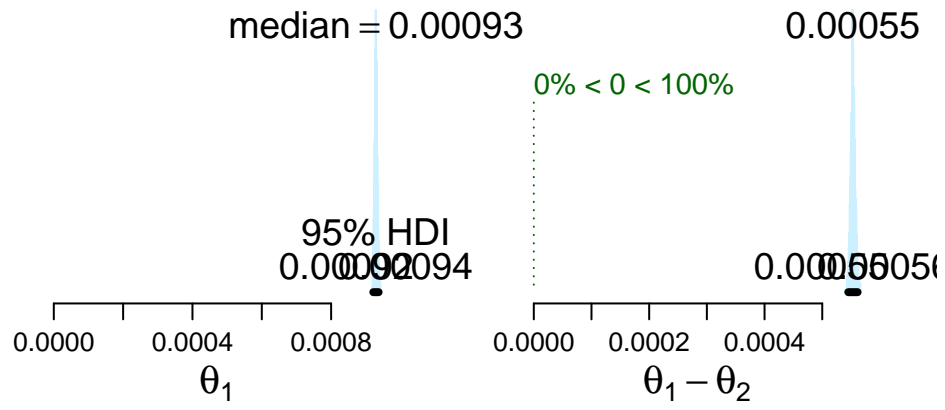


Group 2

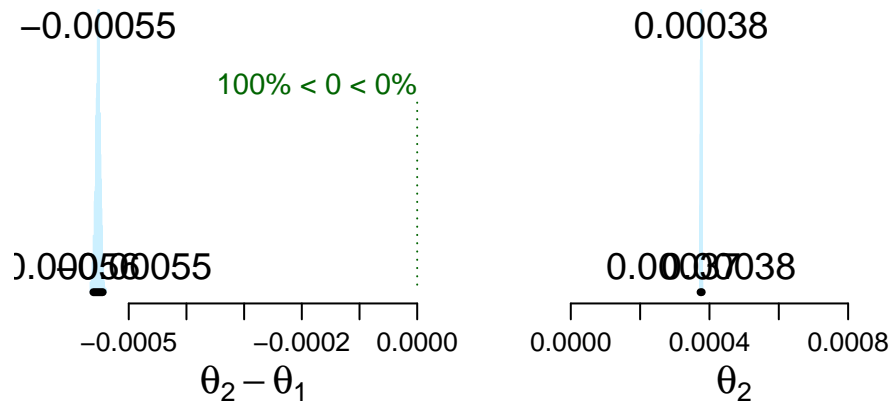


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 1

Rel. Freq. Group 1

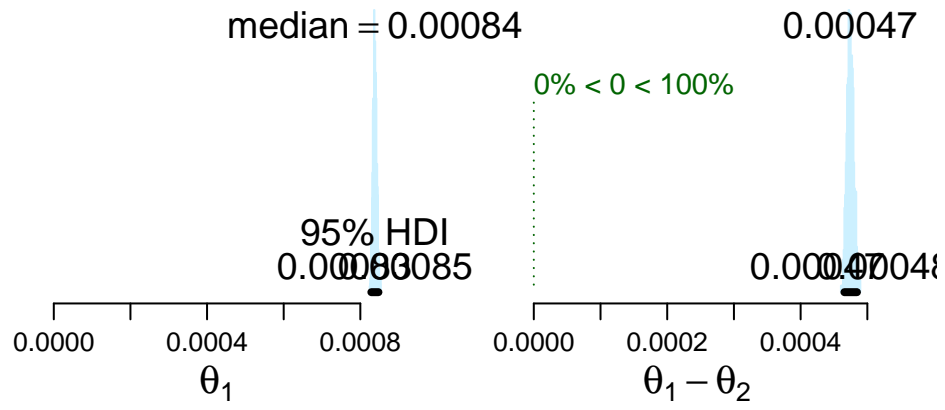


Group 2

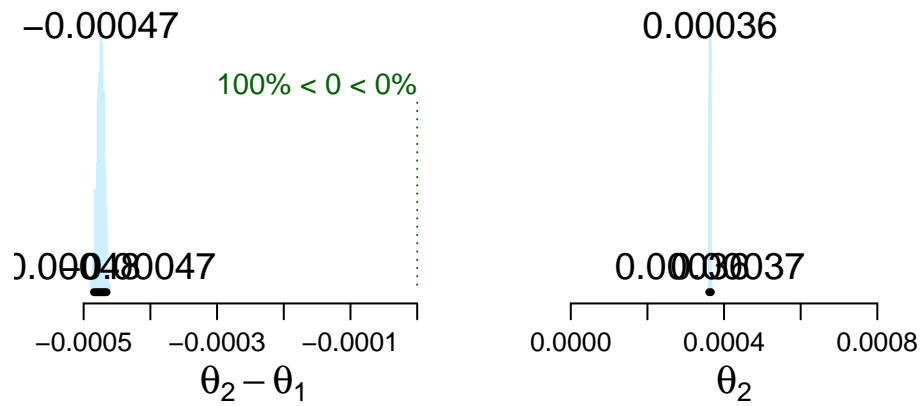


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 2

Rel. Freq. Group 1

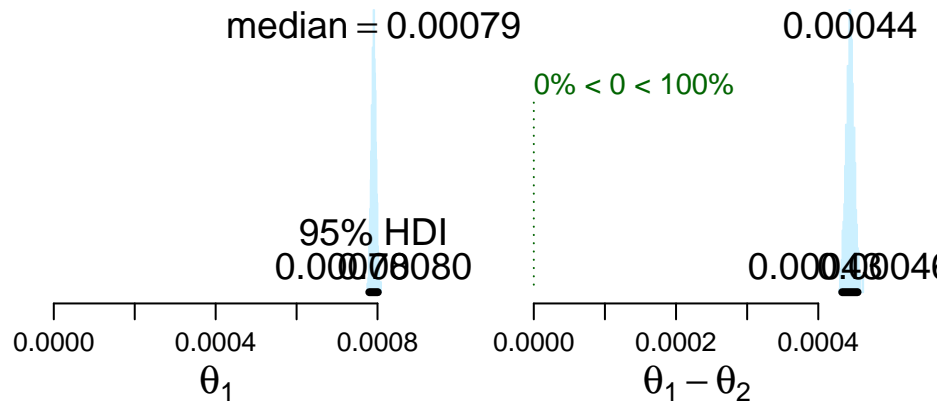


Group 2

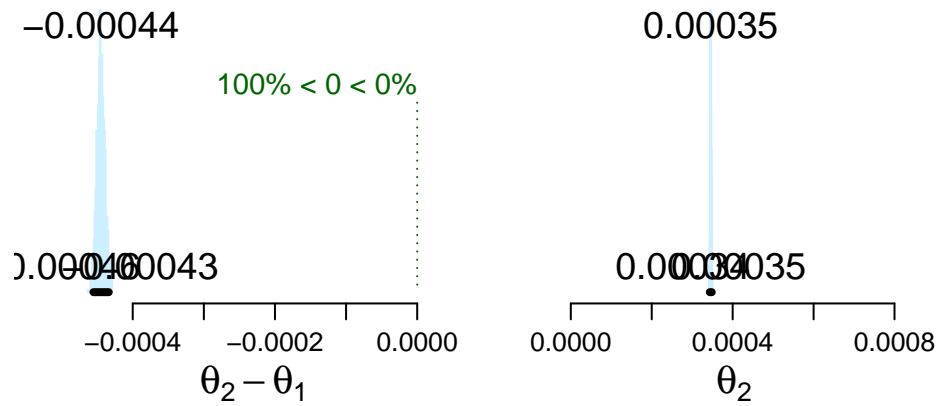


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 3

Rel. Freq. Group 1

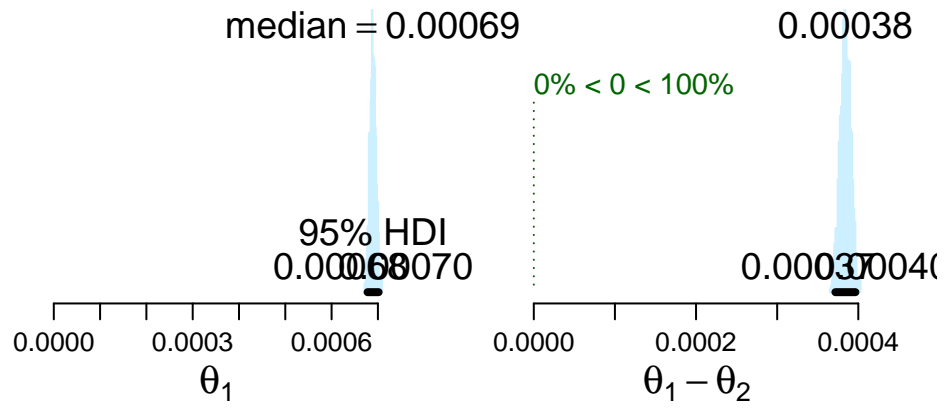


Group 2

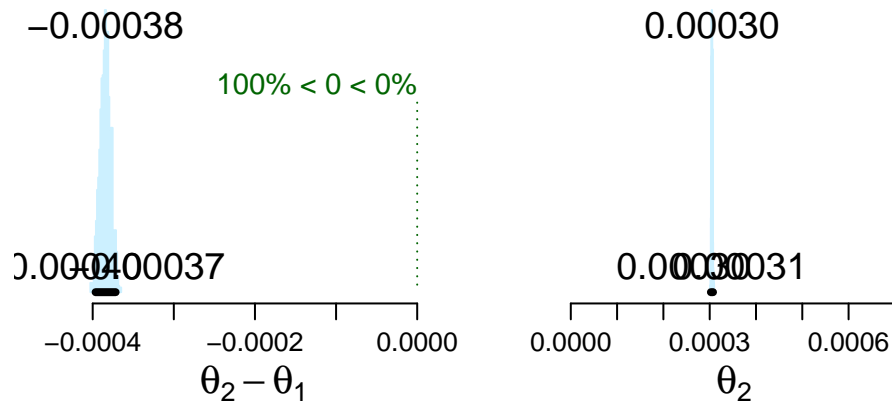


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 4

Rel. Freq. Group 1

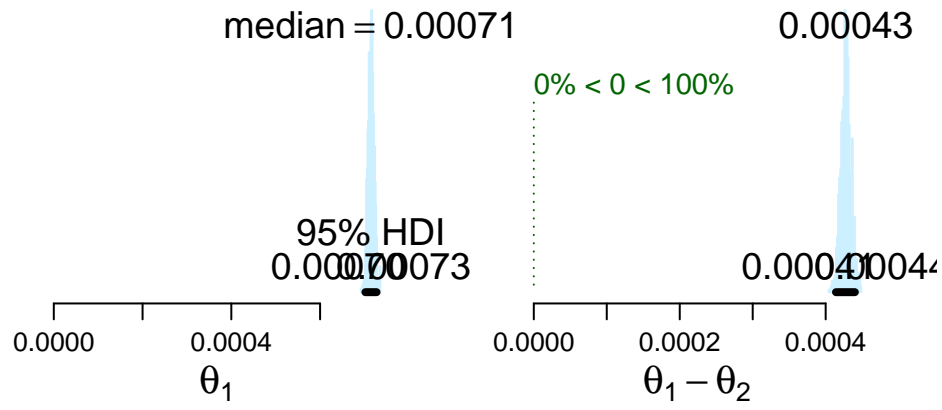


Group 2

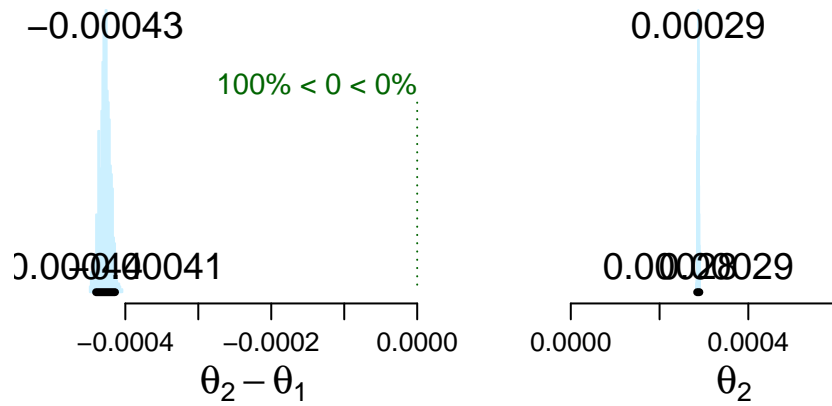


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 5

Rel. Freq. Group 1

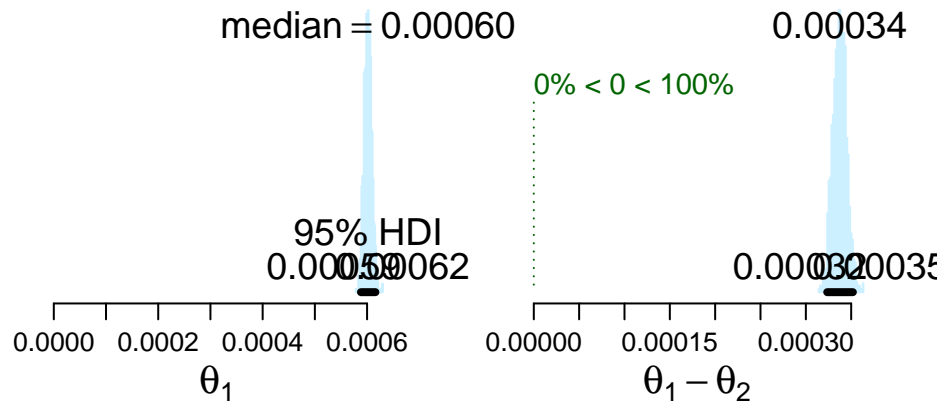


Group 2

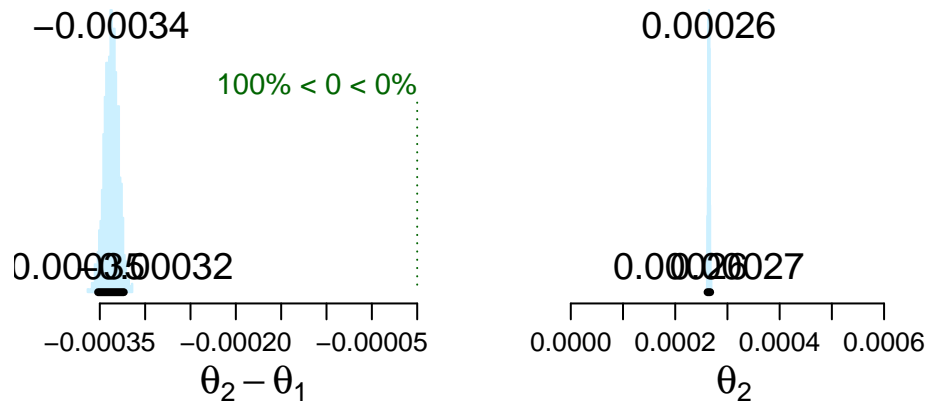


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 6

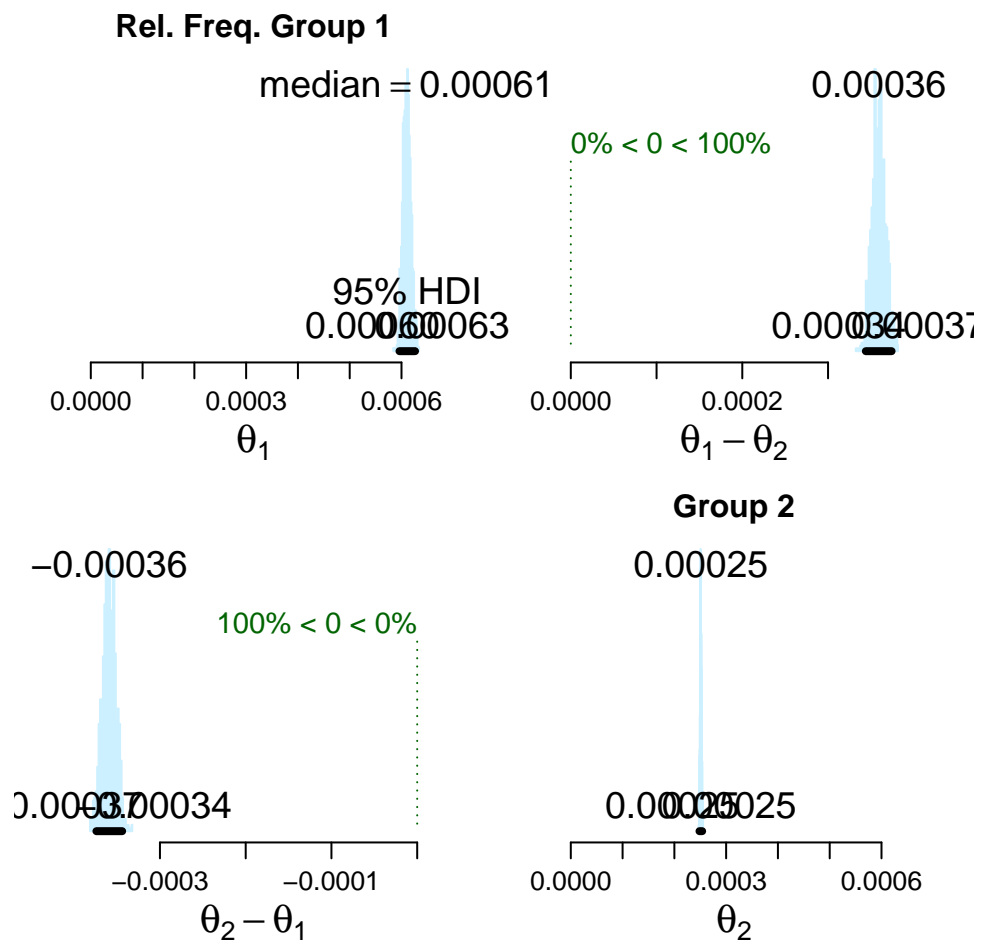
Rel. Freq. Group 1



Group 2

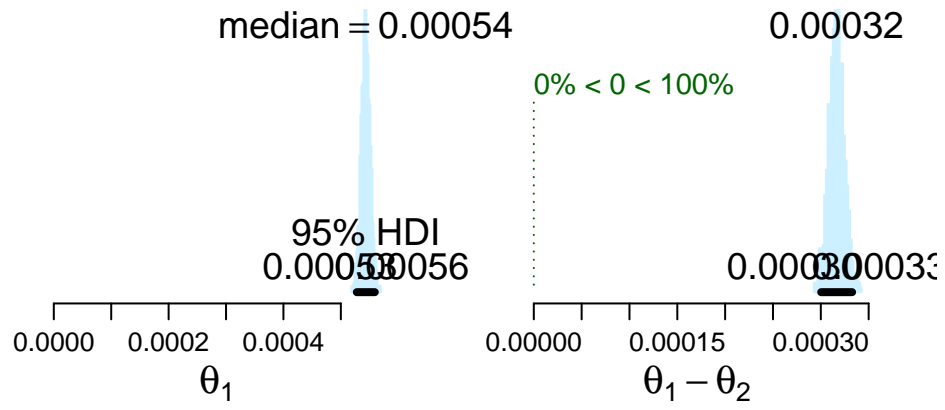


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 7

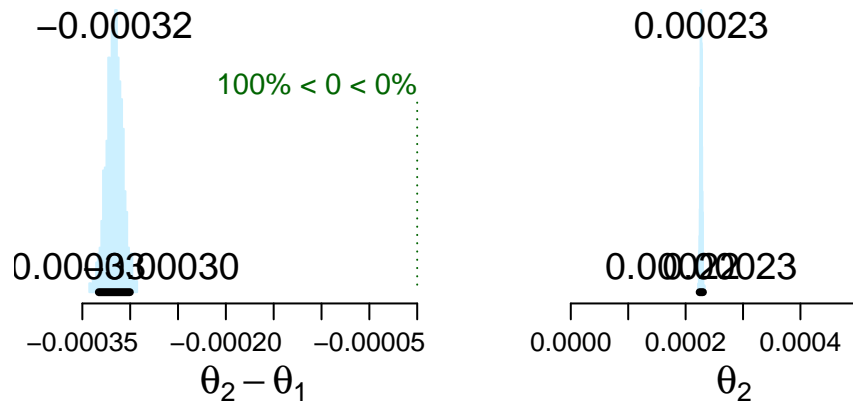


Group 1: Roku -- Group 2: Tracfone -- for Frequency: 8

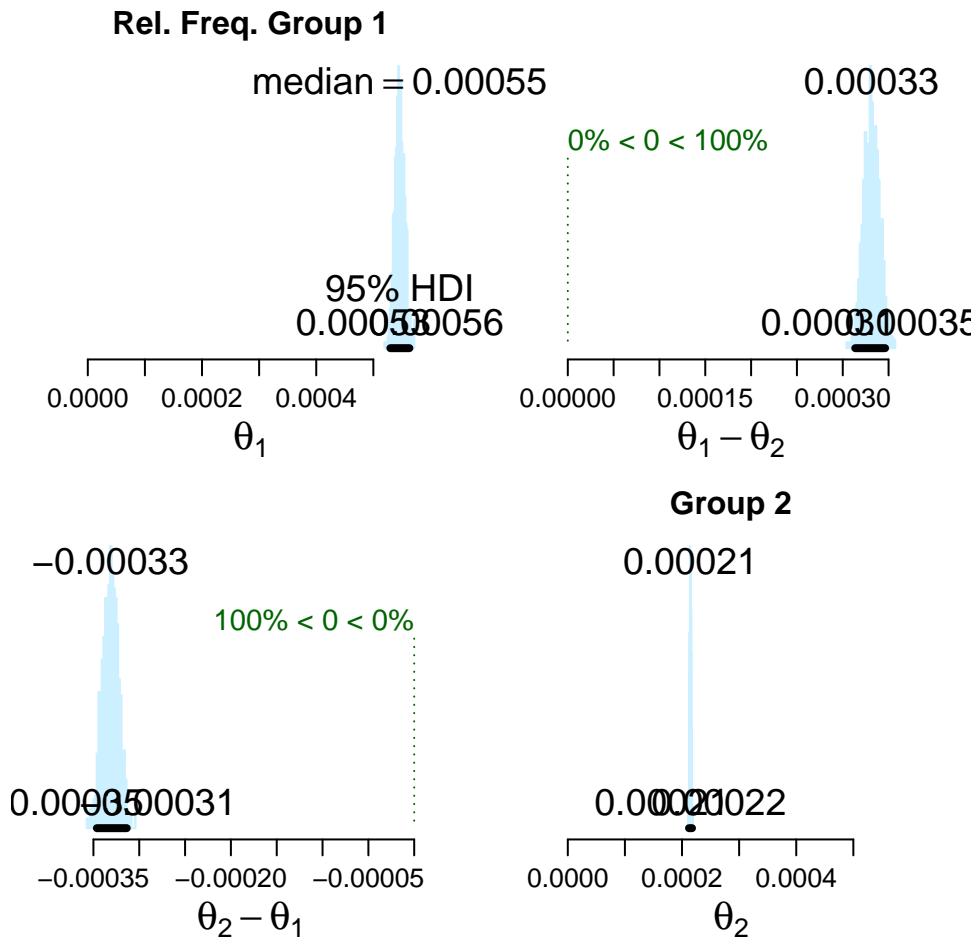
Rel. Freq. Group 1



Group 2



Group 1: Roku -- Group 2: Tracfone -- for Frequency: 9



Group 1: Roku -- Group 2: Tracfone -- for Frequency: 10

```
## $`1`
## NULL
##
## $`2`
## NULL
##
## $`3`
## NULL
##
## $`4`
## NULL
##
## $`5`
## NULL
##
## $`6`
## NULL
##
## $`7`
## NULL
##
## $`8`
## NULL
##
## $`9`
## NULL
```


\$`10`
NULL