Garmin eTrex 20: Accuracy Comparison of GPS versus GPS+GLONASS Modes

1 meter grid
EPSG:3614, NH ft

04
06
26
33 31
18
05
03
35 <= Red, GPS+GLONASS
01 <= Blue, GPS-only
07
11
20
32
09 27
17
13
19 08 24 10
21 02
29 30 15 22 36
25
16
28
23
14
12 34
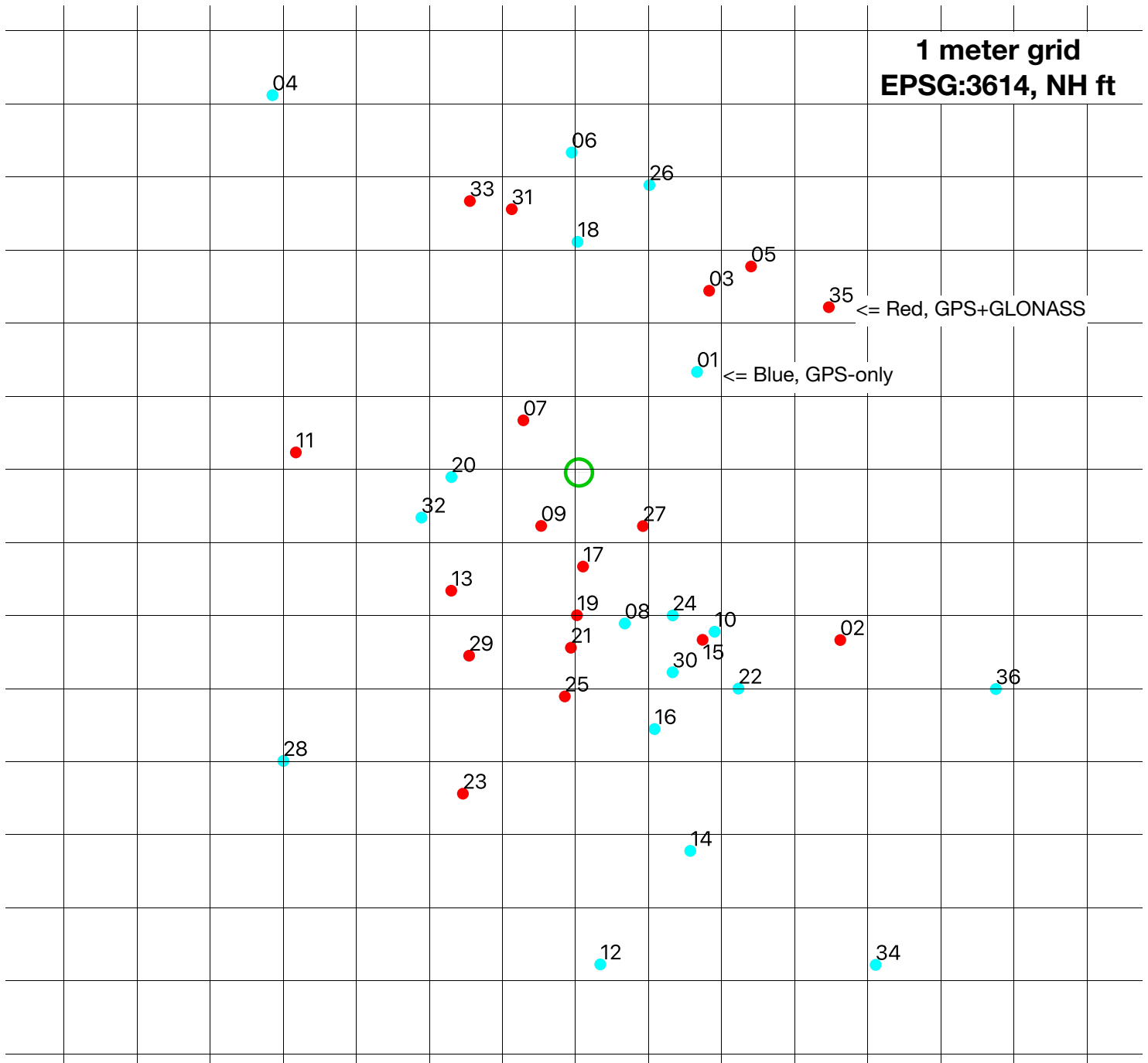
A Sep 2019 Forest Service comparison of GPS receivers, https://www.fs.fed.us/database/gps/mtdcrept/accuracy/
documents/GPS%20accuracy%209-6-2019.pdf, reported that the Garmin eTrex 30 errors were ~ 3X larger when GLONASS
satellites were included than when only GPS satellites were used. This seemed very unlikely!
I have tested this possibility using my eTrex 20 and find that GPS+GLONASS slightly improves accuracy over GPS only.
Garmin eTrex 20 (firmware rev 4.9) in a fixed location (42.716126,-71.805306) marked by green circle with +, determined with
350 minute occupation with dual-freq GNSS; post-processing 95% probability error ellipse = 2.4 cm x 1.2 cm.
38 readings ("Mark Waypoint") were taken, distributed over an 8 hour period, alternating GPS only v GPS+GLONASS mode:
  Blue dots: using only GPS
  Red dots: using GPS+GLONASS
In each case the mode was changed to either GPS only or GPS+GLONASS and then allowed to settle until all satellites
indicated WAAS correction (indicated by "D" in satellite bars). Displayed error estimates were in 9' to 13' range.
Averaged errors abs(known location - eTrex report) in micro-degrees of Lat, Long (1 µ° = ~0.11 m in Lat, 0.08 m in Long)

	Avg. Lat	Avg. Long	Max Lat	Max Long	
GPS only	29.8 ±16.8	23.6 ±19.4	60.6	69.7	
GPS+GLONASS	19.6 ±10.2	18.0 ±14.7	39.6	47.3	indicating a small but significant improvement in accuracy.

No "methods" section could be found for the FS report. The settling time is quite long when switching to GPS+GLONASS
mode, perhaps the experimenters did not provide enough time. thus recording un-settled GPS+GLONASS?