SURVEY DATA ANALASYS REPORT

MISSING FILES

Missing files	c2c	GPS
Vehicles	11, 12, 18, 29, 30, 31, 32, 33	2, 3, 6, 19, 20, 28, 31

GPS FILES

Recording sample rate is not constant. We can see from Figure 1 that almost all vehicle from tested sample, except vehicle 5, haven't a stable sample rate. This issue request continuously timestamp synchronization between two successive vehicles for correct following distance calculation.
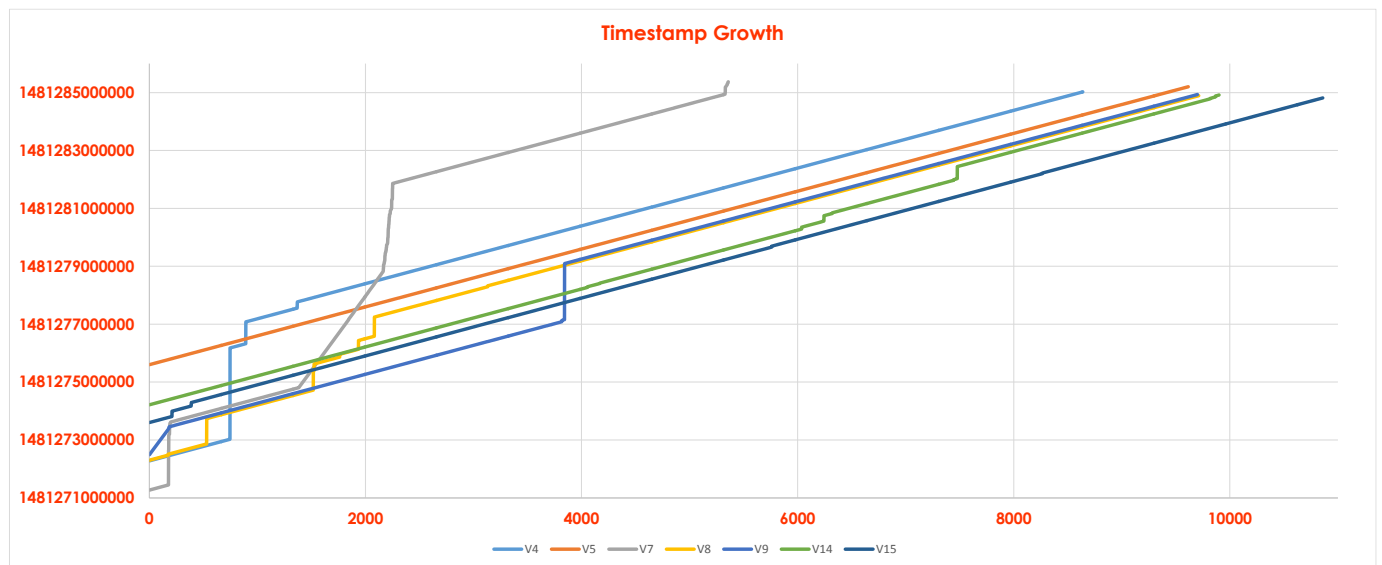

FIGURE 1

For initial data set testing, timestamp synchronization is made by using condition of less than 500 milliseconds difference. For each sample comparison between its timestamp and timestamps of the vehicle ahead is made to find suitable sample with timestamp which differs by less than 500 milliseconds. This method left some of the samples without matched pair. Sample timestamps matching precision condition should be discussed.

For purpose of matching timestamps a simple code in Visual Basic for Application was used.

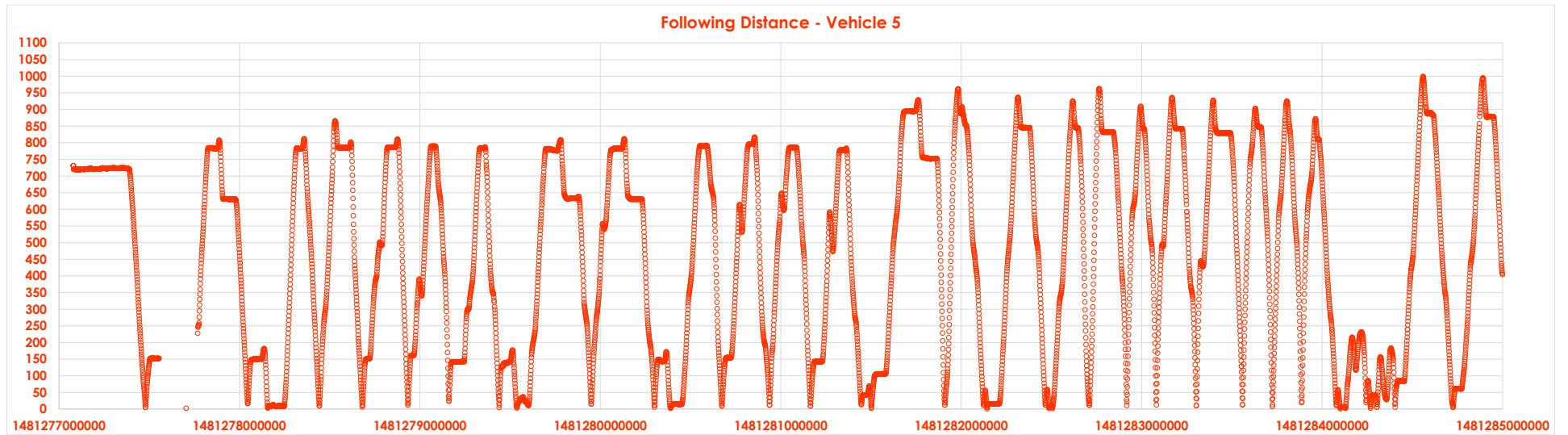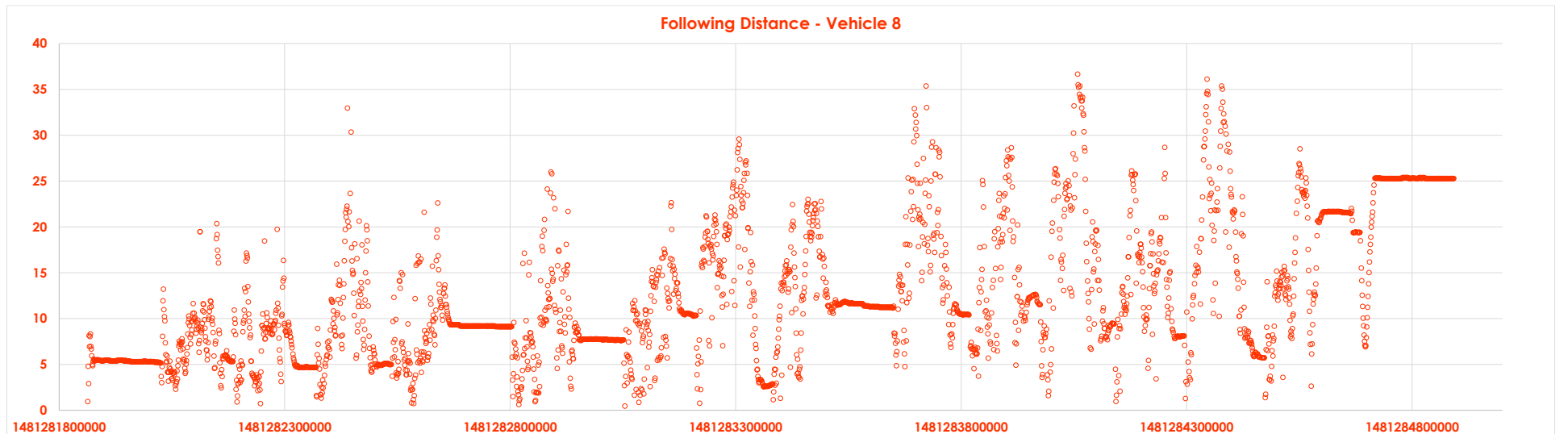# FOLLOWING DISTANCE GRAPHS (SOURCE GPS)

Following Distance - Vehicle 5

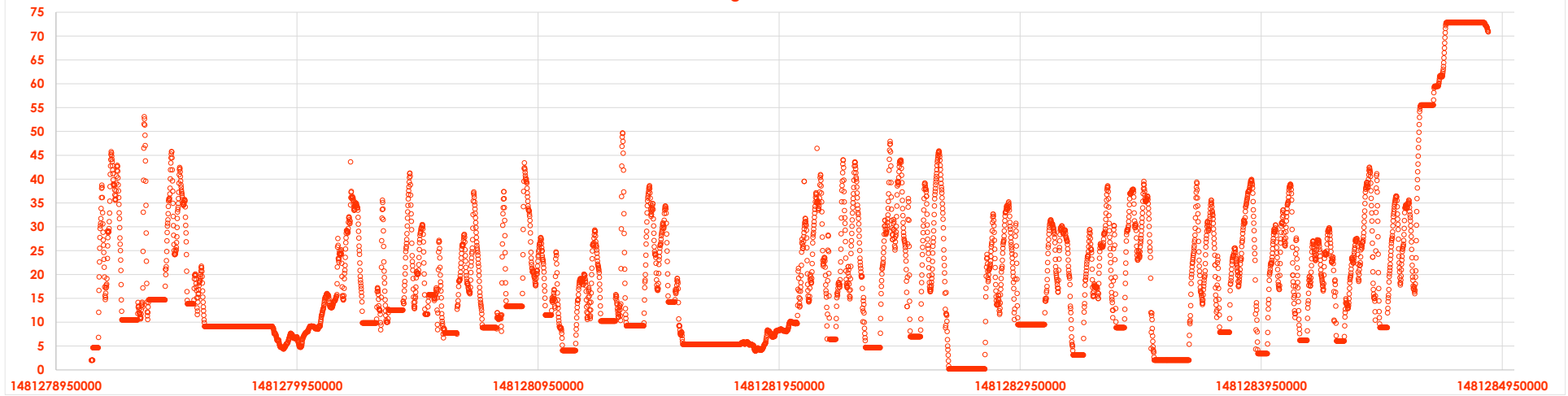**FIGURE 2 FOLLOWING DISTANCE VEHICLE 5**

Following Distance - Vehicle 8

FIGURE 3 FOLLOWING DISTANCE VEHICLE 8

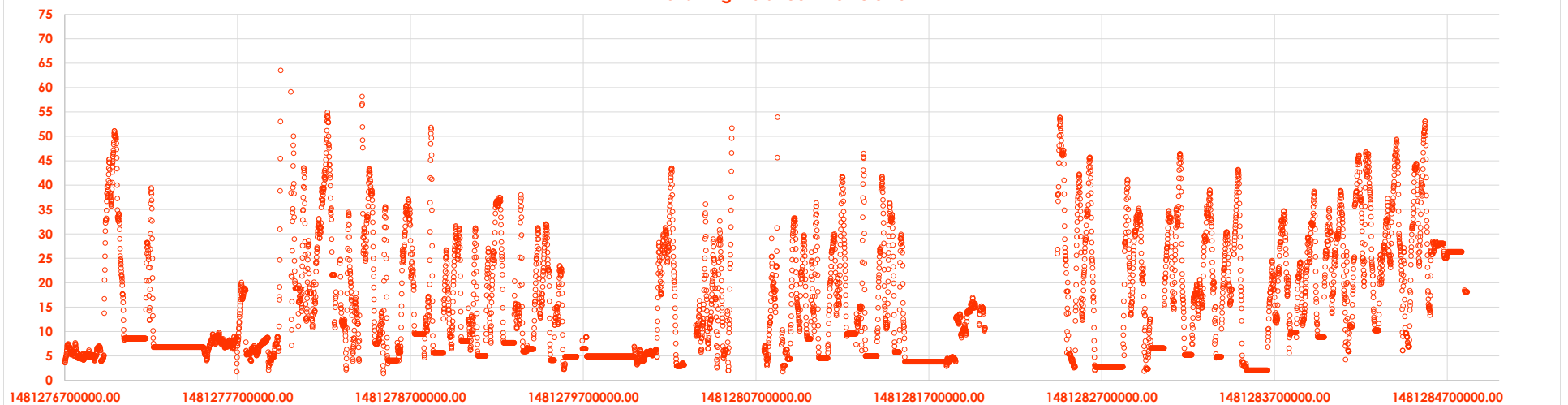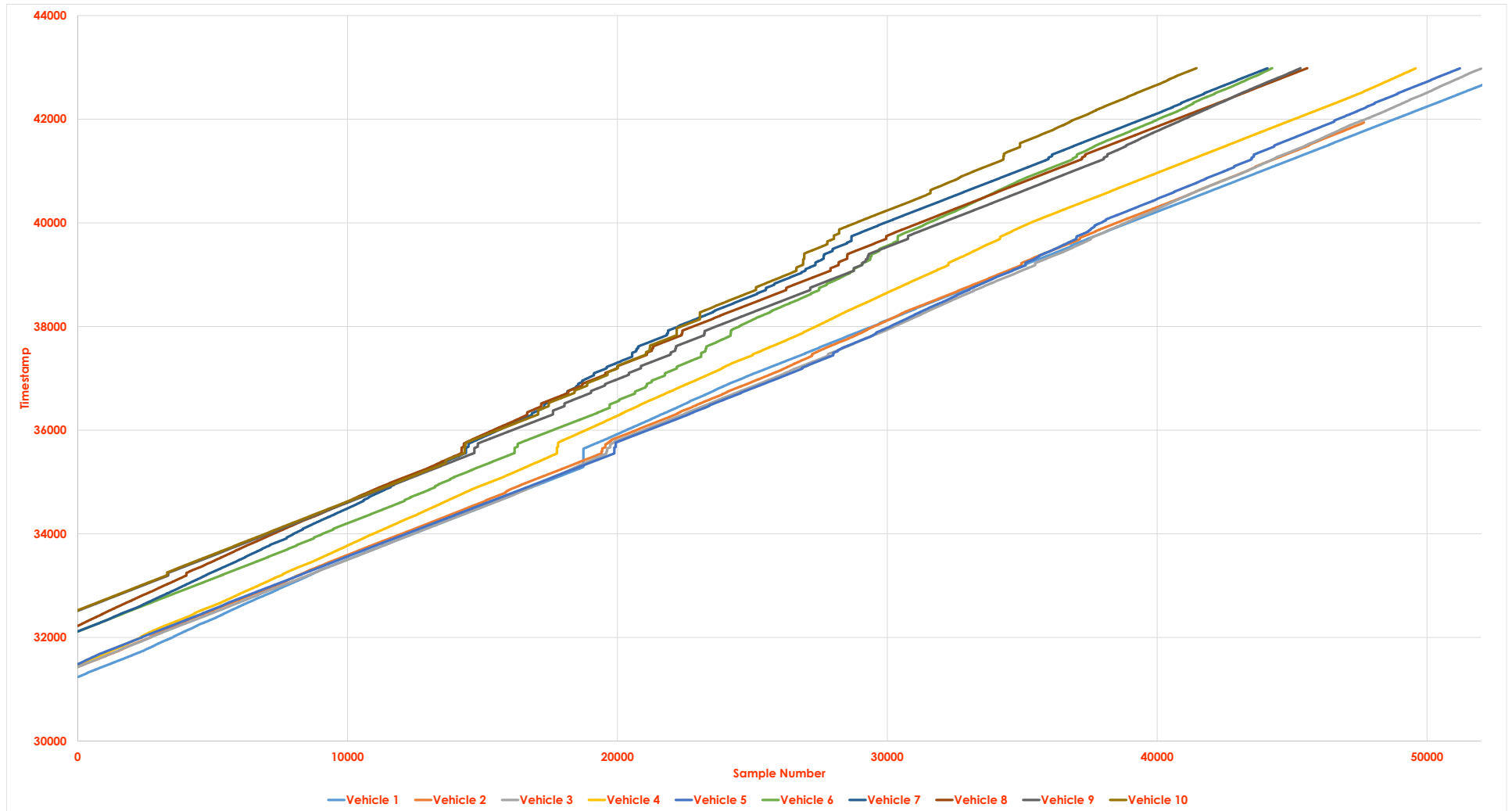**FIGURE 4 FOLLOWING DISTANCE VEHICLE 9**

FIGURE 5 FOLLOWING DISTANCE VEHICLE 15

C2C FILES

By analysing C2C files the same problem with timestamp mismatch is identified (Graph below). The main problem is constant fluctuation of timestamp disappearance that require sample by sample matching.

For the first ten vehicles matching of sample timestamps of each two successive vehicles are matched and following distances are calculated (Below figures).
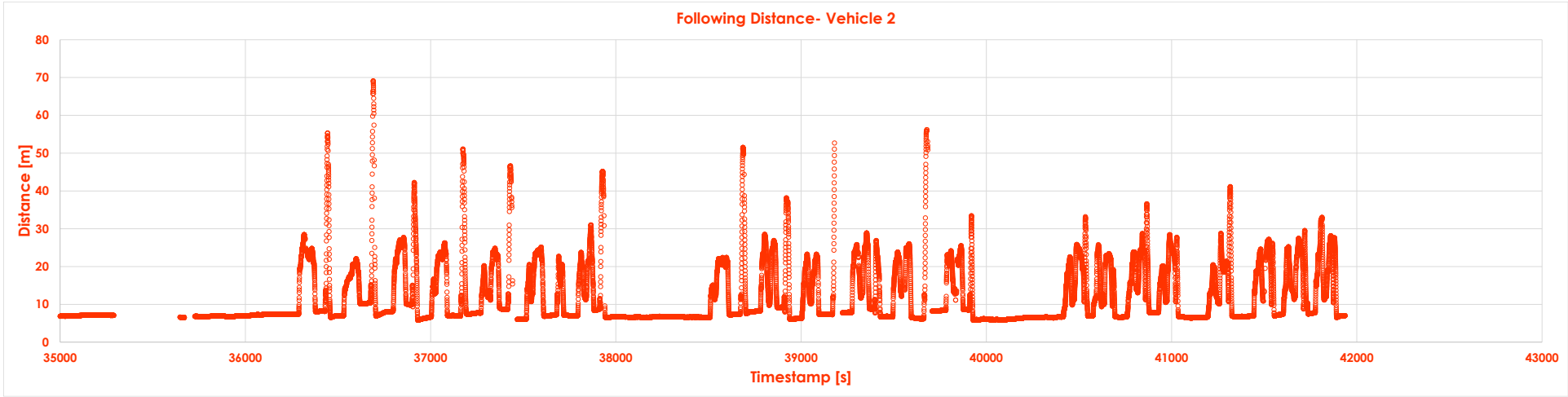

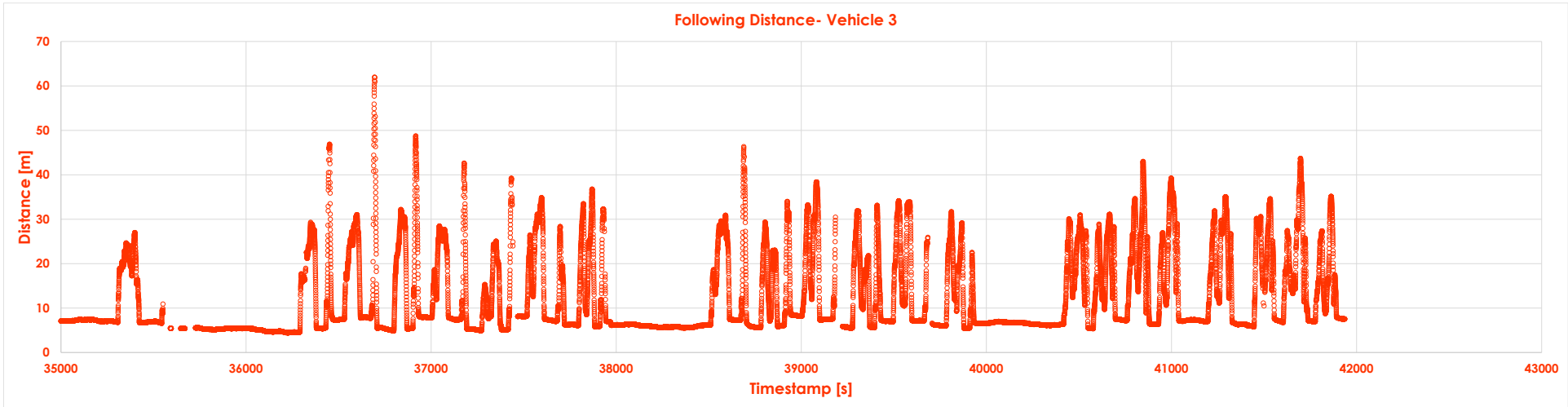**FIGURE 6 FOLLOWING DISTANCE VEHICLE 2 (SOURCE C2C)**

FIGURE 7 FOLLOWING DISTANCE VEHICLE 3 (SOURCE C2C)
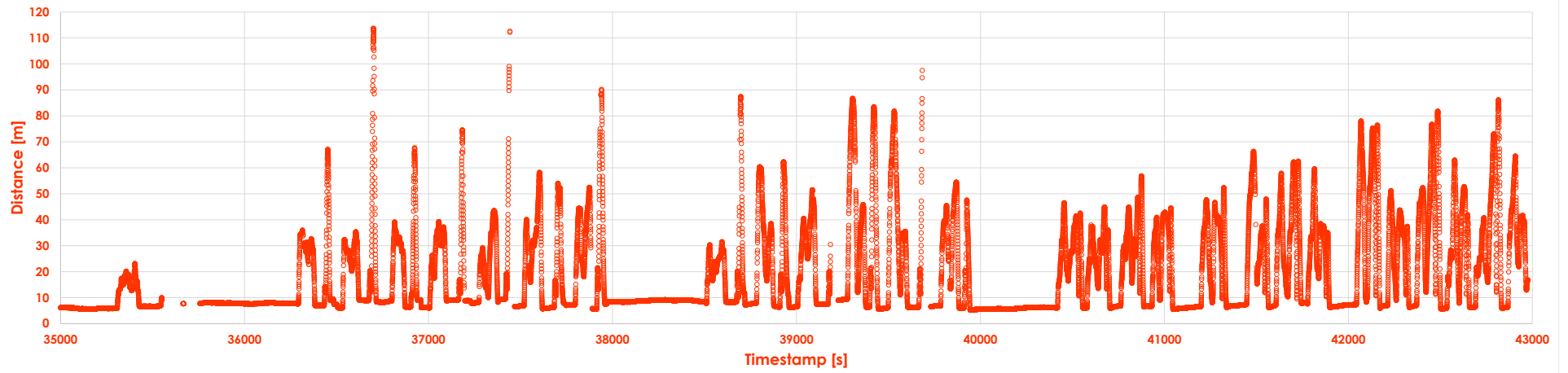
FIGURE 8 FOLLOWING DISTANCE VEHICLE 4 (SOURCE C2C)
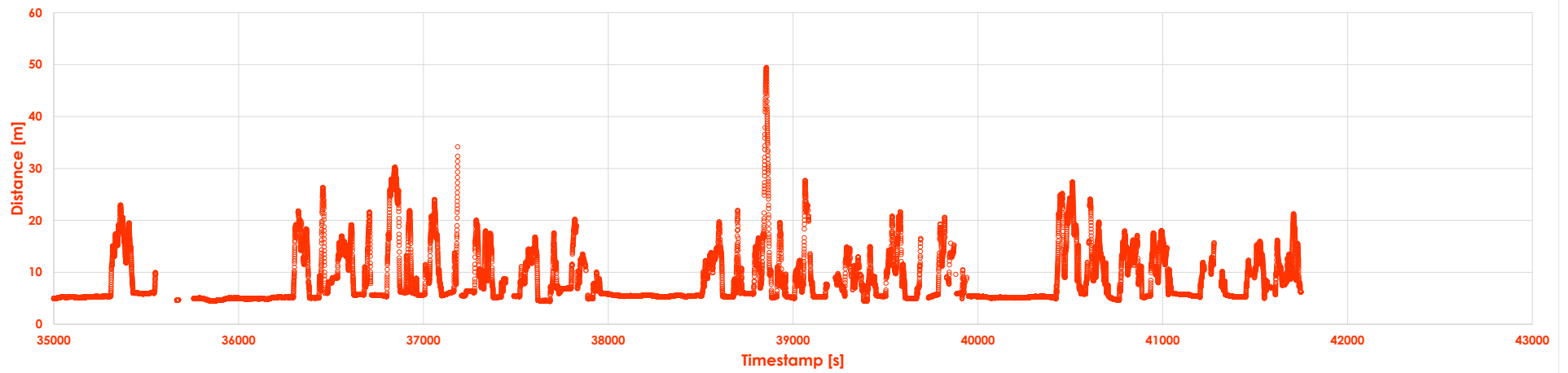
FIGURE 9 FOLLOWING DISTANCE VEHICLE 5 (SOURCE C2C)

FIGURE 10 FOLLOWING DISTANCE VEHICLE 6 (SOURCE C2C)

FIGURE 11 FOLLOWING DISTANCE VEHICLE 7 (SOURCE C2C)
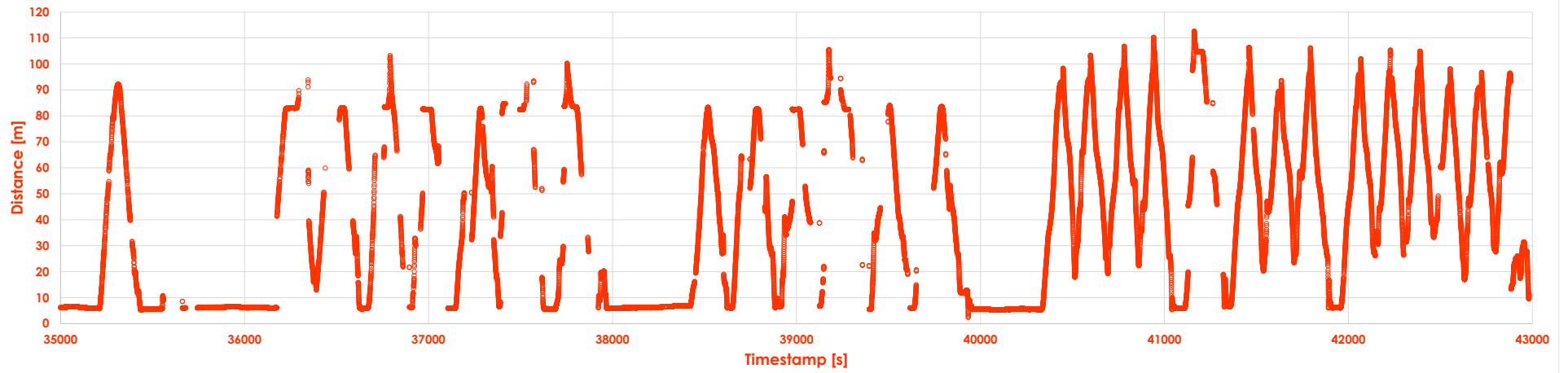
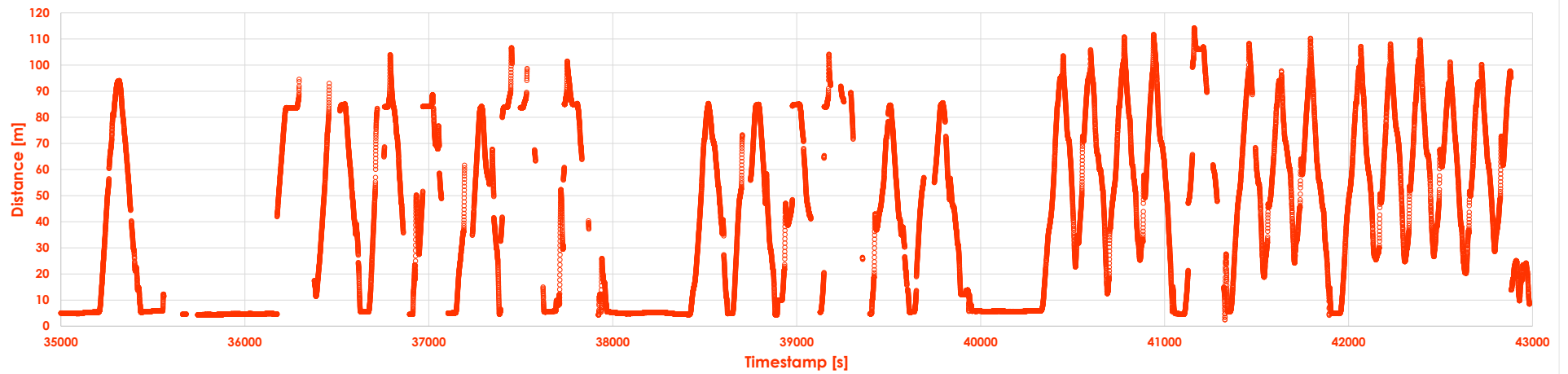**FIGURE 12 FOLLOWING DISTANCE VEHICLE 8 (SOURCE C2C)**
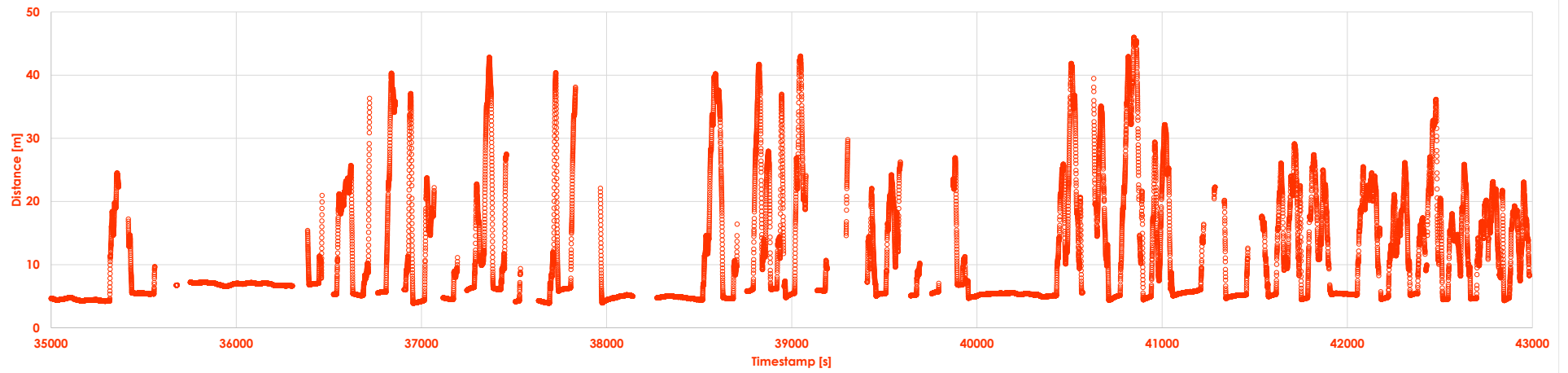

FIGURE 13 FOLLOWING DISTANCE VEHICLE 9 (SOURCE C2C)

Figure 14 Following Distance Vehicle 10 (Source c2c)