**Reference**

**Data set -** <https://archive.ics.uci.edu/ml/datasets/Beijing+Multi-Site+Air-Quality+Data>

**WHO guidelines -** <https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health>

**What is PM2.5 -**

<https://blissair.com/what-is-pm-2-5.htm>

**Beijing Multi-Site Air-Quality Data Set**

<https://archive.ics.uci.edu/ml/datasets/Beijing+Multi-Site+Air-Quality+Data>

**Target Population**: Site (Aotizhongxin) Rows (year 2016, month 2) Columns (year, month, day, hour, CO)

<https://royalsocietypublishing.org/doi/pdf/10.1098/rspa.2017.0457>

<https://www.math.ucdavis.edu/files/2015/2717/8083/Mingy_Yang_Spring_2018.pdf>

<https://www.epa.gov/sites/production/files/2014-05/documents/zell-aqi.pdf>

<https://blissair.com/what-is-pm-2-5.htm>

<https://www.youtube.com/watch?v=wGW9M93YswY>

<https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health>

pdf of dainel’s paper, sam’s paper, chapter 5, chatper 3.

New target pop is

2017, month 1 72 bad out of 744 aotiz site one missing

2016, month 11 chan

2017, month 1, 77 bad out of 744 dong one missing ---

2017, month 1, 81 bad out of 744 shunyi one missing ###

2017, month 1, 93 bad out of 744 wanshouxigong one missing \*\*\* day 25, hour 14

Mean of day 25 – 196.2173913

Levels of pm2.5

<https://aqicn.org/faq/2013-09-09/revised-pm25-aqi-breakpoints/>

**Target Population Mean**

129.9792

**Unadjusted Target Population Variance**

17016.67

**Unadjusted Target Population Standard Deviation**

130.448

**Adjusted Target Population Variance**

17583.9

**Adjusted Target Population Standard Deviation**

132.6043

**Reduced Target Population**: df4 – using 5 number summary, mean, and 2 random numbers

**Reduced Target Population Mean**

105.645

**Unadjusted Reduced Target Population Variance**

7522.227

**Unadjusted Reduced Target Population Standard Deviation**

86.73077

**Adjusted Reduced Target Population Variance**

8596.831

**Adjusted Reduced Target Population Standard Deviation**

92.7191

**Mean of the Sampling Distribution of the Sample Means**

105.65

**Variance of the Sampling Distribution of the Sample Means**

1791.006

**Variance of the Sample Mean from Three Random Samples**

(plug in s^2 with numbers from var(q\_2\_transpose$V1…V3) and compare the result to the 940859.2)

= 3545.414

2.

= 1376.934

= 1709.624