**DMPS data** (diameters: 10nm 🡪 800 nm)

Raw counts are expressed as dN/dLogDp, per cm3 (per ml)

where N are the counts

Log is the base-10 logarithmic transformation

Dp is the ratio of two consecutive bins (diameters) == Bin\_i+1 / Bin\_i

Particle volume concentration is expressed in µm3/cm3

1L/Min

**APS data** (diameters: 0.835µm 🡪 11.97 µm)

Raw counts are expressed as dN/dLogDp, per cm3 (per ml)

where N are the counts

Log is the base-10 logarithmic transformation

Dp is the ratio of two consecutive bins (diameters) == Bin\_i+1 / Bin\_i

Particle volume concentration is expressed in µm3/cm3

**OPC sensor** (Alpha sense OPCN3) (diameters: 0.35 µm 🡪 40 µm)

Raw counts are expressed as N per seconds (N/sec)

N/ml are calculated from N / SFR

Where SFR is the sampling flow rate ~ 5.5 ml/sec

Total Sampled Air Volume = SFR \* Sampling\_Period 🡪 [ml]

Counts/Volume == N/Total Sampled Air 🡪 [#/ml]

N is the absolute counts

If we want Count / seconds, we need to do: (Counts/Volume) / Sampling\_Period (seconds)

In order to compare counts of DMPS+APS data with OPC sensor it is necessary to divide each raw counts per dLogDp

**THIS WORKS!!!**

Particle volume concentration SHOULD be calculated multiplying the N counts by each particle volume