

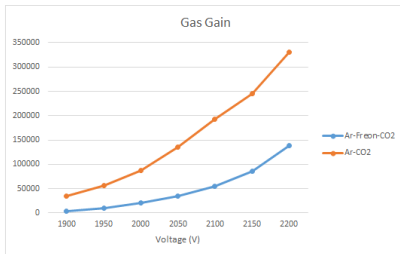
# Ar-CO<sub>2</sub>/Ar-Freon-CO<sub>2</sub> Gas Gain

Michael Roberts

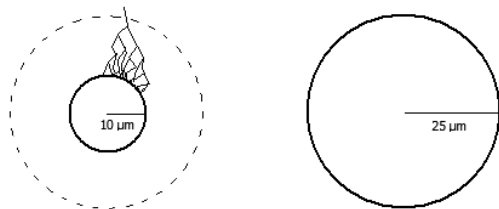
October 1, 2015

# Gas Gain

| Voltage | Gain         |              |
|---------|--------------|--------------|
|         | Ar-CO2 80:20 | Ar-Freon-CO2 |
| 1900    | 34691        | 4130         |
| 1950    | 55616        | 10187        |
| 2000    | 87555        | 21200        |
| 2050    | 135737       | 34691        |
| 2100    | 191905       | 54515        |
| 2150    | 245955       | 86453        |
| 2200    | 330947       | 138216       |



## Calibrating Kowalski Data



$$V' = \frac{C_{Kowalski}}{C_{Ours}} V$$

$$GainFactor = \left(\frac{25}{10}\right)^{\ln 2 \frac{\lambda}{2\pi\epsilon_0} \frac{1}{\Delta V}}$$

# Comparison with Kowalski Data

