# Mike Wong

Online site for SAM-related scripts contributed by Mike Wong (generally atmospheric). See also  Melissa Trainer's page.

# Igor scripts for SAM data anaylsis

## Background Correction

Things to do to your data before using
this BG script:

- Import SAM data into Igor as waves: one wave for the time series, one for the cps
- Apply your own deadtime correction to the data
- Figure out what experiment interval you'll use for the BG correction, convert to sec if needed
- Determine whether BG interval is better fit by a constant or a decaying exponential

What this BG script does:

- Fit BG to selected interval
- Create a new, BG-corrected wave
- Create a new BG-uncertainty wave (same value at every point)
- BG correction applied is constant (i.e., choosing exponential BG only helps determine accurate constant BG level)
- BG uncertainty is empirically based on scatter in data within BG region
- Some details of BG fit are stored in the "Notes" field of the new BG-corrected wave

Example screen shot:

Bg.ipf.screenshot.png

## Subtract Contamination

Things to do to your data before using this subtraction script:

- Import SAM data into Igor as waves: one wave for the time series, one for the cps
- Apply your own deadtime and background correction to all data used
  What this subtraction script does:
- Iterpolate parent cps to timesteps of daughter m/z
- Create new wave, `[new] = [daughter] - frac * [parent]`, where frac is the user-specified expected daughter/parent count ratio
  Example screen shot:

Killfrag.ipf.screenshot.png

## Make Count Ratio

Things to do to your data before using this ratio script:

- Import SAM data into Igor as waves: one wave for the time series, one for the cps
- Apply your own deadtime and background correction to all data used
  What this ratio script does:
- Interpolate numerator cps to timesteps of denominator m/z
- Create new wave, ratio of the input waves

Example screen shot:

[Makeratio.ipf.screenshot.png](Makeratio.ipf.screenshot.png)

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