

File name goes at the top .mzML

Time Between Precursors (Left Plot)

The delta time plot shows how much time has passed between each detected precursor ion and the next in seconds. This graph can be used find the dynamic exclusion time set by the MS instrument.

- **Blue Bars:** The raw histogram of differences.
- **Blue Line – Time Decay Fit:** A fitted curve over the instrument's dynamic exclusion time:
 - **Initial Level:** Baseline before exclusion time (Generally noise).
 - **Pulse Start:** The dynamic exclusion time (point on the x-axis when the blue line pulses up).
 - **Pulse Duration:** Variance of the exclusion window time.
 - **Peak Level:** Fit height of the peak at the **Pulse Start** time (dose not always indicate the count).
 - **Decay Constant:** How quickly the amount of precursor ions found after the dynamic exclusion window declines.
 - **Final Level:** Where the curve levels out after the decay (Generally noise).
- **Chi² Time:** How well the predicted curve fits the data.

Precursor m/z Variance in PPM (Right Plot)

The delta ppm plot shows the differences in m/z (mass-to-charge ratio) values, in parts per million (ppm), between consecutive precursors. This graph can be used to find the precursor tolerance of the MS instrument.

- **Red Bars:** The raw histogram of differences.
- **Red Line – Gaussian Fit:**
 - **μ (Mu):** Center of the Gaussian – average ppm difference (should be ≈ 0).
 - **σ (Sigma):** Standard deviation – used to calculate precursor tolerance window.
 - 3σ gives the lower and upper bounds often used to define an acceptable range.
 - **Amplitude:** Height of the fitted peak.
 - **Y Offset:** Vertical shift to better match the baseline noise.
- **Chi² PPM:** How well the predicted curve fits the data.