

Window Functions: Shaping the FID

Before the Fourier Transform, the FID can be massaged or “weighted” in several ways:

- **Sensitivity Enhancement:** Emphasize the First (Early) Part of the FID and De-Emphasize the Last (Late) Part

The Signal is Strongest at the Beginning, the Later Part of the FID is Mostly Noise

- **Resolution Enhancement:** Add Weight to the Later Part of the FID and Give Less Weight to the Early Part

This Makes the FID Decay More Slowly, Leading to Sharper (Narrower) Peaks in the Spectrum

- **Apodization:** Smooth the Abrupt Edge at the End of the FID.

The Sudden Drop to Zero of the FID Signal at the End of the FID Leads to “Wiggles” in the Baseline Around the Peak in the Spectrum.