Number of Data Points in 2D Experiment

- Resolution in F_1 is Determined by Number of t_1 Values Sampled
  - Each t_1 Value is a Complete 1D Experiment
  - t_1 is Increased Before Each 1D Experiment
  - Time Required for the Whole Experiment is Proportional to the Number of t_1 Values Sampled
- Bruker Parameter **td**(F_1) is Number of t_1 Values
  - 128 is a Quick Experiment
  - 512 is Good
  - 750 is Deluxe: Best F_1 Resolution
- Number of Data Points in t2 is Larger
- Sampling of t2 Data Points is Real Time FID
- Typical 2048 Data Points (Real + Imaginary)
- In HSQC the Acquistion Time (**aq**) Must be Limited:
  - 220 ms (0.22 s) Maximum t_2 Acquisition Time
  - ^{13}C Decoupling Uses Lots of Power and Heats Probe
  - **td** = 2 * **swh** * **aq**: Every Change in **sw** Changes **aq**
  - **aq** Is Proportional to **td**, So Divide **td**(F_2) by Two to Reduce **aq** By a Factor of Two
- Experiment Time is Proportional to Number of Scans
  - Bruker Parameter **ns**: For Each t_1 Value one FID of ns Scans is Acquired