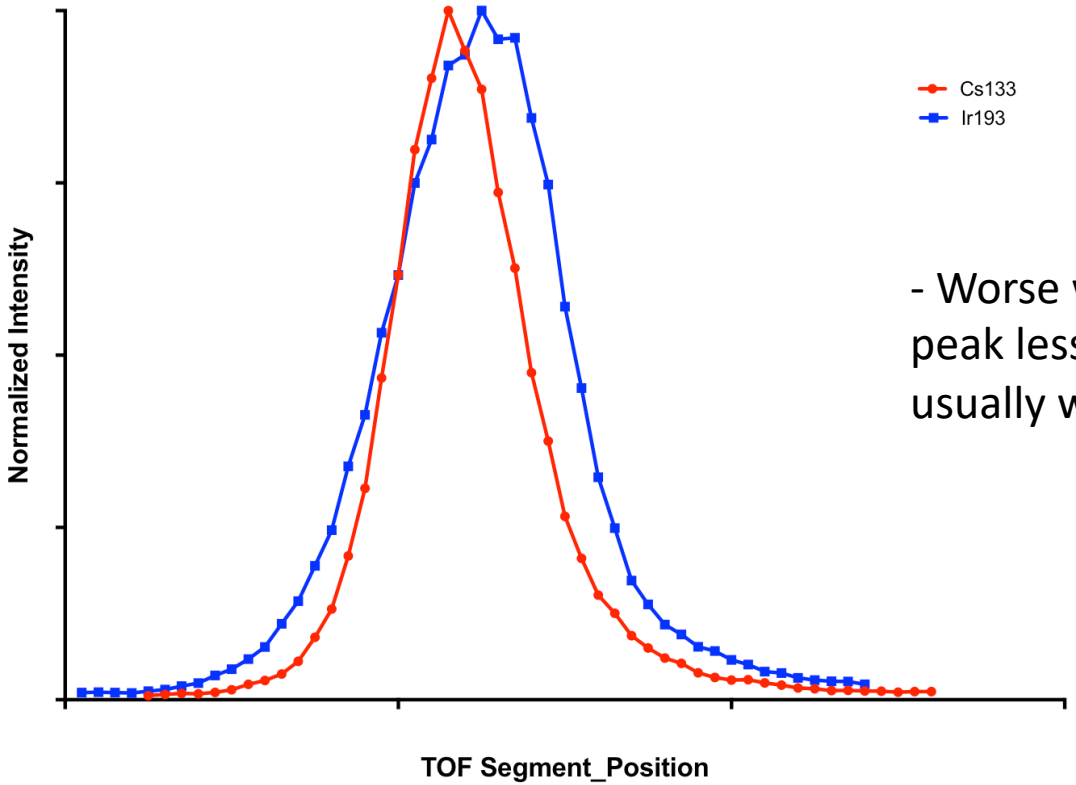
Background Signals – Instrument Factors

4. Instrument Abundance Sensitivity
   – left (M-1) and right (M+1) leg of ion peak
      - CyTOFv1: 0-1%
      - CyTOFv2: <0.3%



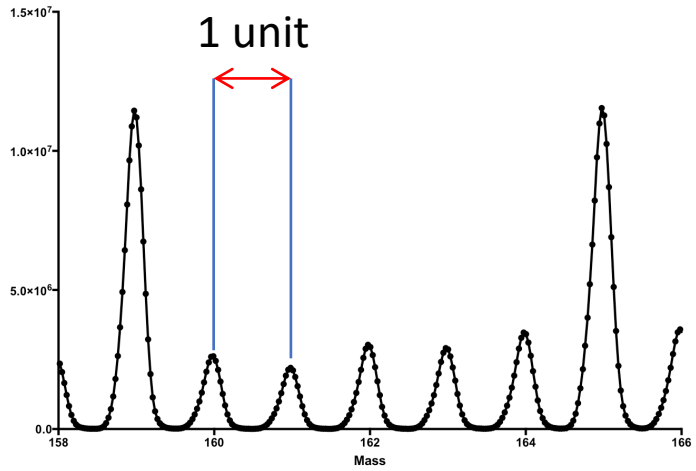
- Worse with high AW masses: peak less Gaussian, M+1 leg usually wider

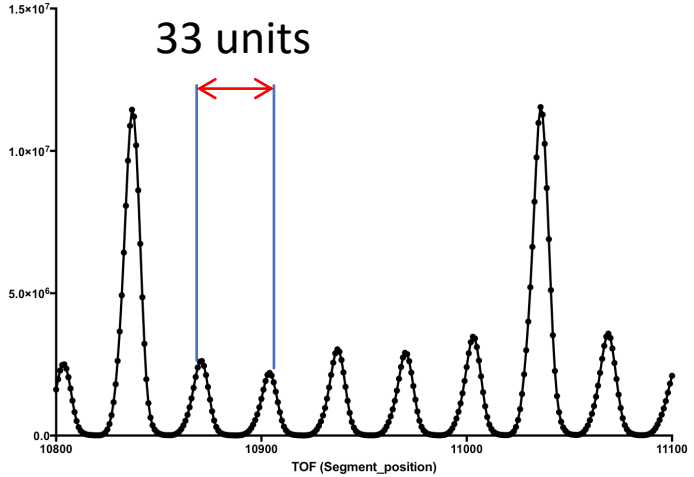
Mass-Resolution of the TOF

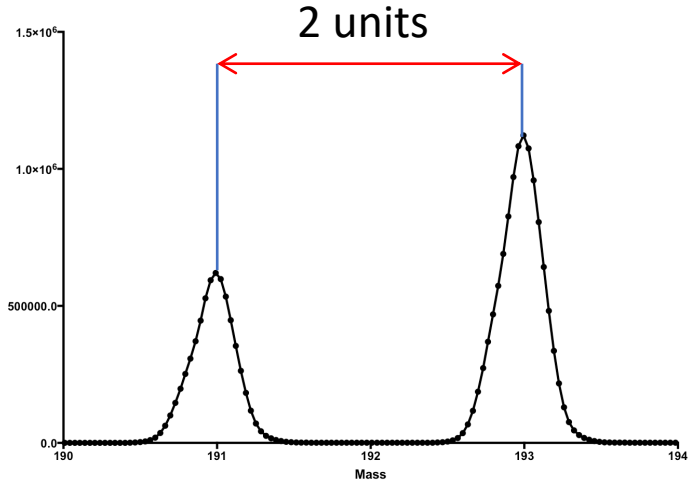
Mass Scale

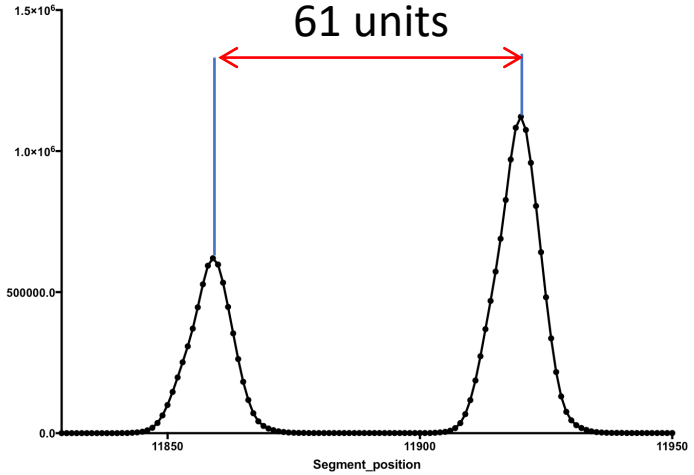
TOF Scale

Signal Intensity





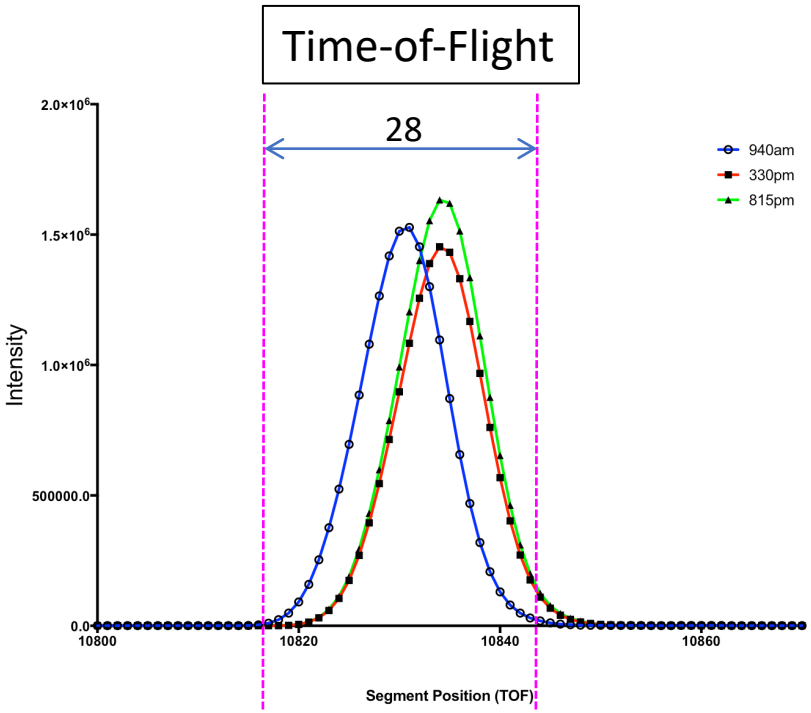


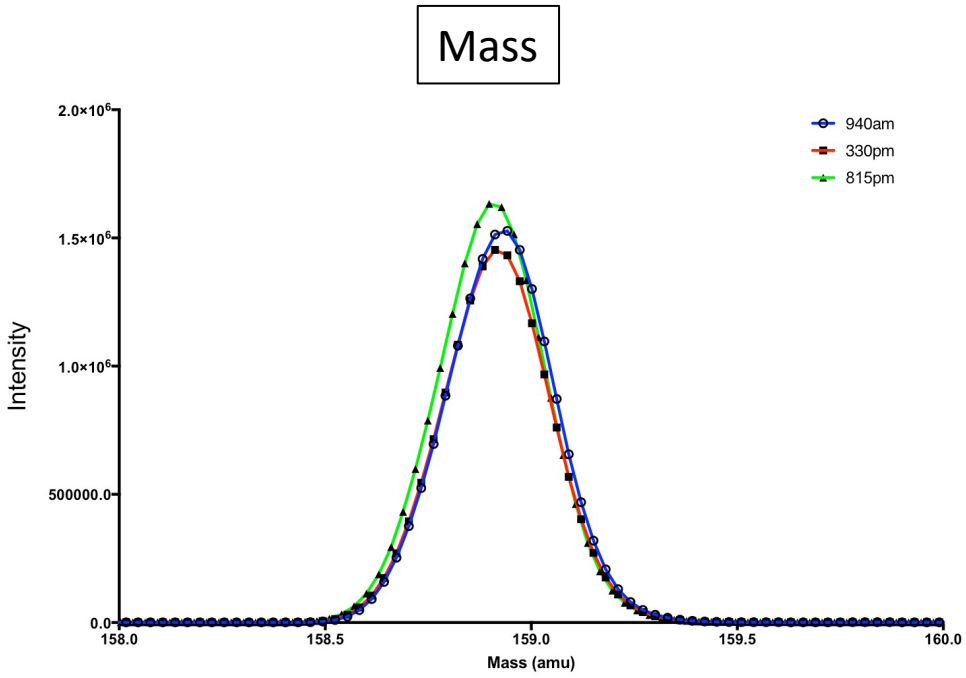


Mass Calibration Shift Over Long Runtime

- Tuning Solution used to tune the instrument three times over the day
    - Instrument tuned, then data acquired in Solution mode

- Ion peak shift in TOF spectrum, but not in Mass spectrum due to Mass re-Calibration during tuning



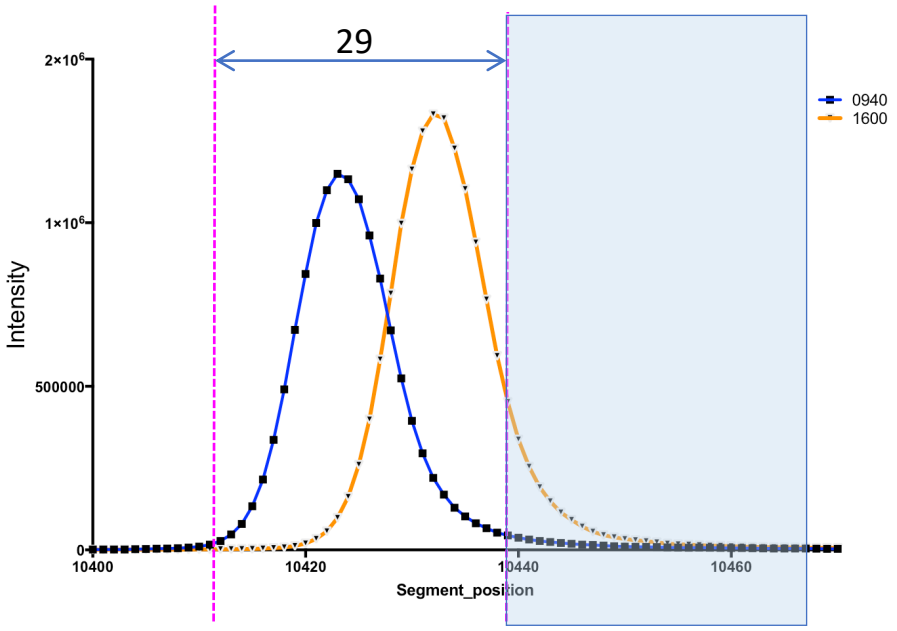


- Helios fairly stable over 10.5hr; CyTOFv1 usually not…….

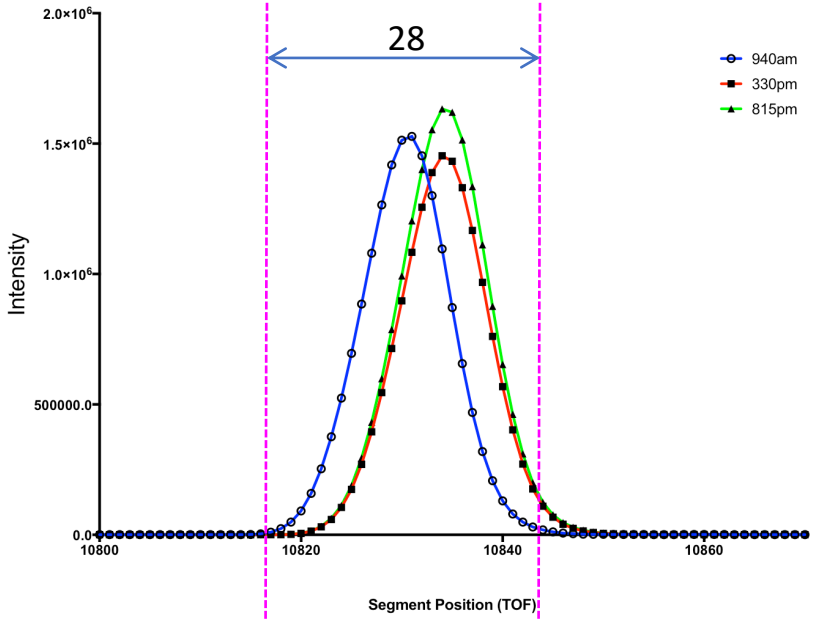
Mass Calibration Shift Over Long Runtime

- CyTOFv1 – continuous shifting, larger shift in same 6-7hr
- Helios(v3) – main shift happens in first 4-6hr, fairly stable over 10.5hr

CyTOFv1



Helios



- Signal decrease at “M”
- Possible spillover into M+1