Optimizing PToF timing and averaging and saving

2012 AMS Clinic

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Requirements for Zeppelin-AMS settings

- As short as possible saving intervals
- V- and W-Mode MS
  - -> wait time for TPS required
- V-Mode PToF
- Good size resolution
Big m/z range or good size resolution?

- Raising nr of samples (m/z range) increases memory requirements
- Raising ToF Spectra/Chopper (size resolution) increases memory requirements

- Solution: Split V-Mode into MS and PToF menus
  - Putting them in one calibration group transports m/z calibration settings, IE calibration results, etc. made with MS menu to PToF menu

V-Mode MS timing
V-Mode PToF timing

Now the switch between V-MS and V-PToF also waits for TPS
  • unnecessarily decreased duty cycle

Solution: turn off TPS wait time and add 4 seconds wait time at start of every run for V-MS and W-MS
TPS wait time?

- Now the switch between V-MS and V-PToF also waits for TPS
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V-Mode
W-Mode

Are these acceptable times?

- Full cycle of 90 seconds
  - about 9% TPS wait time
  - more time lost due to chopper movement (open <-> closed)