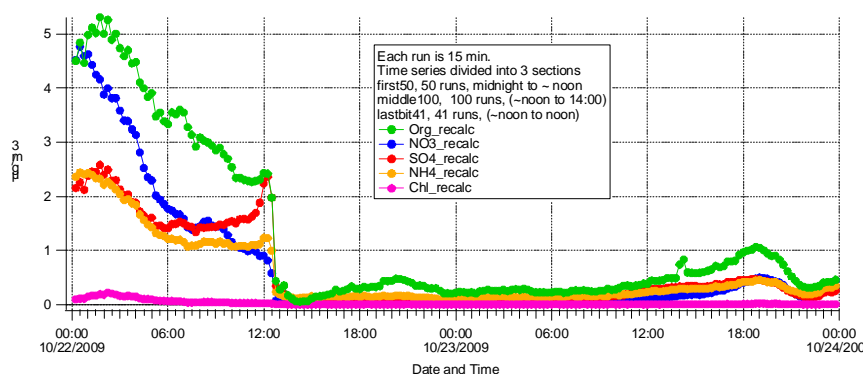


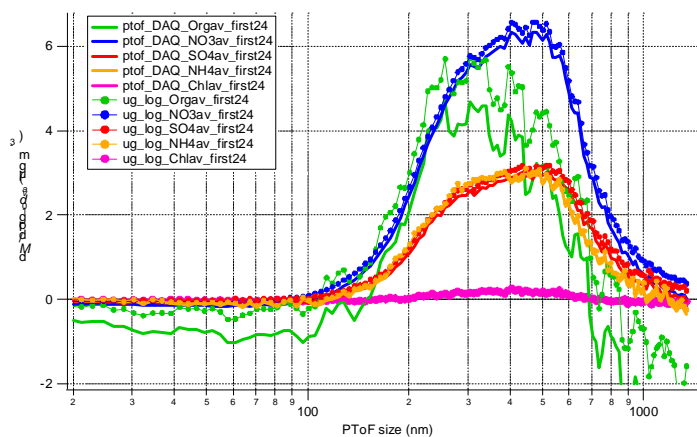
PToF curiosities

Donna Sueper playing with
anonymous data
C-mode, 15 min runs, ground based
data, decently tuned
Thurs Nov 12, 2009



2 days of 15 min runs in gen alt, MS and PToF, C ToF
Divide regions into 3 todo waves, first one of high signal, second of
low signal, third of medium-low.

Results of PToF size distributions using defaults and corrected DC markers .



Strange step-like changes in PToF space!

Default DC markers Applying new DC markers:

Org is 0.39885

Org loading is 3.9988

MS Org_recalc; V_avg= 4.45637;

NO3 is 3.0804

NO3 loading is 3.62

MS NO3_recalc; V_avg= 3.38105;

SO4 is 1.4706

SO4 loading is 1.7844

MS SO4_recalc; V_avg= 2.00407;

NH4 is 1.773

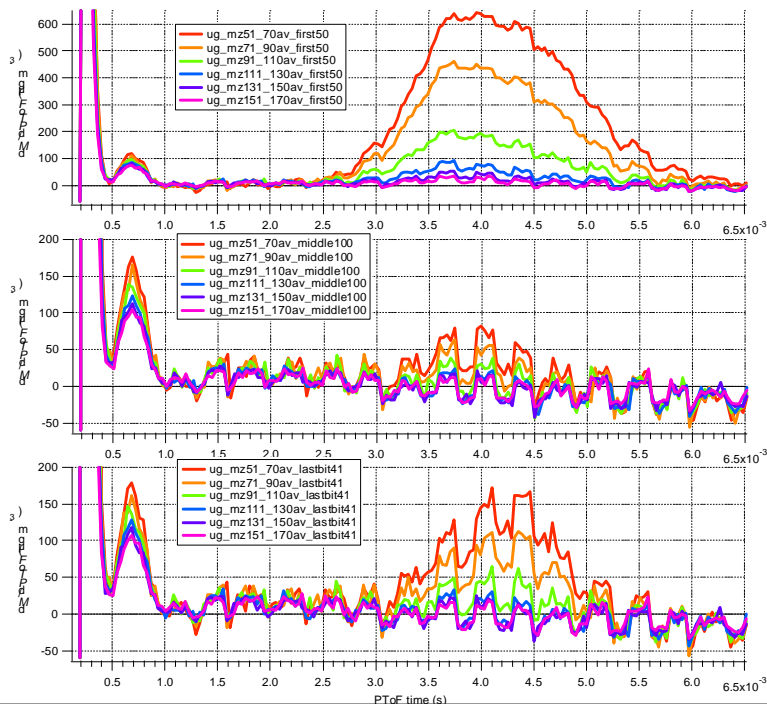
NH4 loading is 1.9005

MS NH4_recalc; V_avg= 1.93117;

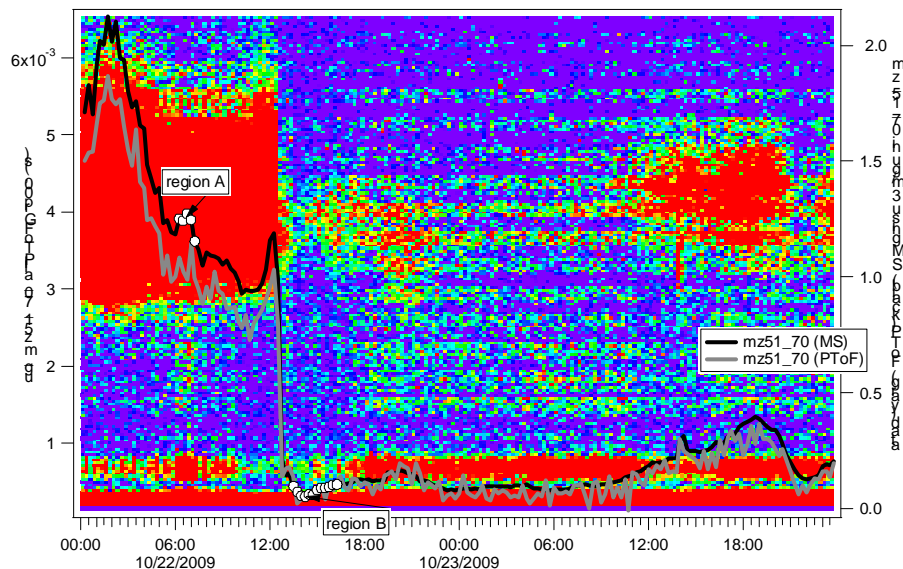
ChI is 0.013982

ChI loading is 0.096733

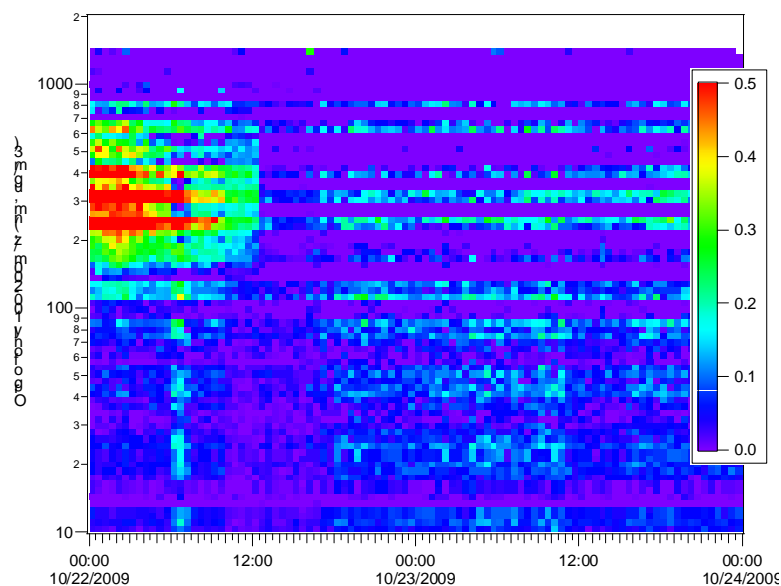
MS ChI_recalc; V_avg= 0.133354;



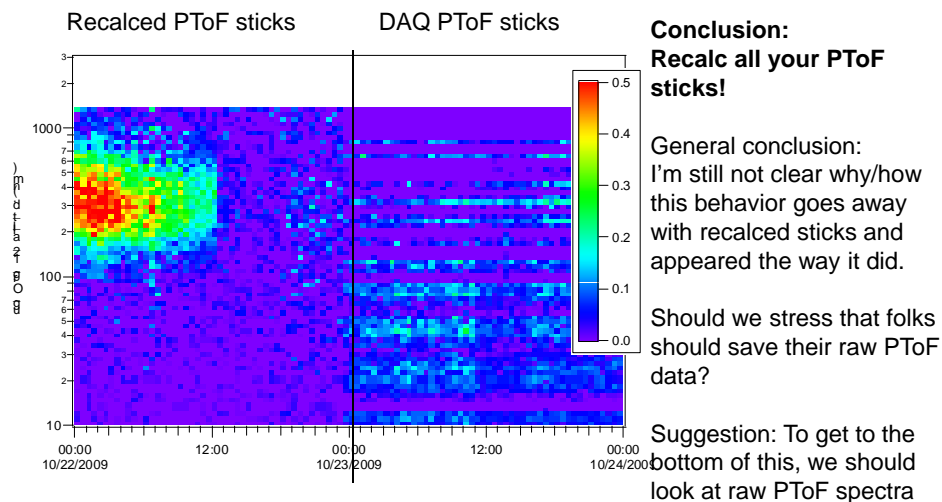
I try to see if this behavior is episodic (maybe one bad run every few runs?). Below is PToF image plot of m/z 51_70 with MS and PToF data in $\mu\text{g}/\text{m}^3$ units; image plot diameter axis is time (s) at left; MS and PToF (summed across diameters) on right. One gets similar results if using different m/z ranges or averages over longer times.



I average over time and diameter size, plot only Organics between 100 and 200 m/z with similar results.



I try many things. I look at raw PToF spectra and average a bunch of ways. I look at the average mass spec of different size bins. About ready to give up, I recalced my PToF sticks from the raw spectra and reapplied DC markers. I could only do about half of my runs cuz that was all the raw PToF sticks data I had. Shazam! The funky step behavior is gone!! (Same image plot as previous!)



One more confirmation. Old is DAQ PToF sticks. There is a small hint of the old behavior, but it is not horrible.

