

1 UIUC Analysis Error Table, 11th Oct. 2006

	Prod50		NatH2	
	Value [s ⁻¹]	Error [s ⁻¹]	Value [s ⁻¹]	Error [s ⁻¹]
λ_{fit} from Lifetime Spectrum ^a	455433.98	± 12.11	456471.71	± 35.51
$Z > 1$ Impurities ^b	-13.90	± 6.00	-88.00	± 5.00
$\delta\lambda$ from D-Extrapolation ^c	-11.90	± 1.08		
μp Diffusion ^d	-3.11	± 0.20		
Seen $\mu + p$ Scatters	-1.10			
Unseen $\mu + p$ Scatters ^e	-2.00?	± 2.00		
10 ns MuSC Deadtime	-0.06			
MuPCXorY Inefficiency ^f	1.10?			
Averaging with CathodeAND ^g	-3.07	± 3		
Cut/No Cut Difference		± 5		
Corrected λ	455400.84	± 14.95		

^aCathodeOR, 120 mm Impact Parameter Cut

^bUsing naive correction based on nitrogen impurities. The correction for Prod50 will be improved to include our knowledge of water in the gas. The NatH2 correction will be improved to include effects of deuterium on the capture yield.

^cUsing $\tilde{c}^{-1} = 0.0122 \pm 0.0010$ from the λ vs. impact parameter studies.

^dUsing Model Diffusion Parameter $k = 0.4911 \pm 0.0070$ mm/ $\sqrt{\mu s}$

^eThis is a very rough estimate at the moment. Improvements to the mu-stop definition will fix this value; in the meantime the correction is not applied to the net result.

^fNot included in the net result.

^gThe statistically allowed difference between CathodeAND and CathodeOR is ≈ 3 Hz, and the observed difference is -6.14.