

Stability of π^0 lifetime fit

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Table 1: Number of bins in π^0 mass plot (per 30MeV range)

Nbin mass plot	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
25	8.001	0.305	0.93	22.25
30	8.085	0.325	0.90	22.34
35	7.996	0.329	1.04	22.27
40	7.950	0.285	1.10	22.18
45	8.143	0.303	1.07	22.15
50	7.964	0.295	1.14	22.20
55	8.032	0.292	1.20	22.16
60	8.038	0.285	1.29	22.17
65	8.026	0.275	1.26	22.20
70	8.140	0.280	1.23	22.02
75	7.975	0.279	1.34	22.08
80	7.946	0.273	1.20	22.09
85	7.940	0.268	1.28	22.02
90	8.043	0.293	1.09	21.99
95	7.902	0.278	1.47	22.15
100	8.164	0.269	1.38	22.40
105	7.947	0.272	1.31	22.04
110	8.017	0.270	1.37	22.13
115	7.749	0.280	0.99	22.10
120	7.790	0.280	1.25	22.10

Table 2: Artificial beam slope

θ_X beam slope, rad	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
-0.002	4.350	0.158	9.20	22.04
-0.001	6.968	1.186	1.85	22.22
0.0	8.038	0.285	1.29	22.17
0.001	7.275	0.267	2.37	22.30
0.002	4.446	0.167	6.80	22.08

Table 3: Artificial beam shift

X beam shift, cm	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
-1.0	6.190	0.208	3.35	21.99
0.0	8.038	0.285	1.29	22.17
1.0	7.292	0.324	2.78	22.23

Table 4: Artificial gain smear

gain smear, %	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
0.5	8.124	0.287	0.97	21.48
1	7.975	0.280	1.28	21.39
1.5	7.982	0.278	1.04	21.41
2	7.538	0.256	0.96	21.40
2.5	7.684	0.311	1.03	21.39

Table 5: tdif cut

tdif cut, ns	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
1.0	4.665	0.191	1.54	12.59
1.5	5.945	0.244	1.50	16.84
2.0	6.971	0.276	1.29	19.54
2.5	7.590	0.274	1.12	21.13
3.0	7.833	0.276	1.34	21.79
3.5	7.890	0.295	1.18	21.94
4.0	8.038	0.285	1.29	22.17
4.5	8.025	0.282	1.17	22.12
5.5	7.879	0.284	1.13	22.19
6.0	7.871	0.281	1.26	22.12
6.5	7.861	0.303	1.24	22.02
7.0	7.788	0.310	1.25	22.02
7.5	7.995	0.308	1.15	21.94
8.0	7.936	0.308	1.30	21.89

Table 6: Elasticity cut

Elasticity cut	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
0.7	8.131	0.298	1.42	22.30
0.75	8.007	0.291	1.19	22.28
0.8	5.943	0.284	3.12	21.98
0.85	7.902	0.277	1.45	22.03
0.9	7.760	0.246	2.07	22.91

Table 7: Part of T-counters

Tcounters	Γ , eV	$\sigma(\Gamma)$	χ^2 of the fit	Sum of events for all θ bins, K
1 off	7.806	0.298	1.42	20.19
2 off	7.838	0.302	1.16	19.83
3 off	8.036	0.324	1.33	19.33
4 off	7.816	0.293	1.45	20.30
5 off	7.734	0.299	1.34	20.15
6 off	8.074	0.302	1.00	20.20
7 off	7.967	0.310	1.35	20.49
8 off	7.952	0.281	1.15	20.38
9 off	7.326	0.216	1.44	20.00
10 off	8.422	0.275	1.57	20.33
11 off	7.822	0.282	1.53	19.83
1-5	8.263	0.233	1.14	10.56
6-11	7.116	1.518	1.69	11.80
4-8	7.988	0.302	1.13	9.06
even	7.873	0.399	1.65	9.55
odd	8.016	0.361	1.07	12.62