

**Representative Emission Profiles for Fe⁵⁵ spectrum (from MCA)
for ~20,000 cps per detector channel output counts and 2 μsec
shaping time**

Each element (diode) is 1 mm x 1mm and the arrangement is in a 20 x 20 square. There is a hole in the middle of the array for beam pass-through omitting a 4 x 4 array (hence there are 384 elements). This hole can be used for normal incidence measurements with a modified detector casing.



Fig. 1. View of detector showing pass through hole.

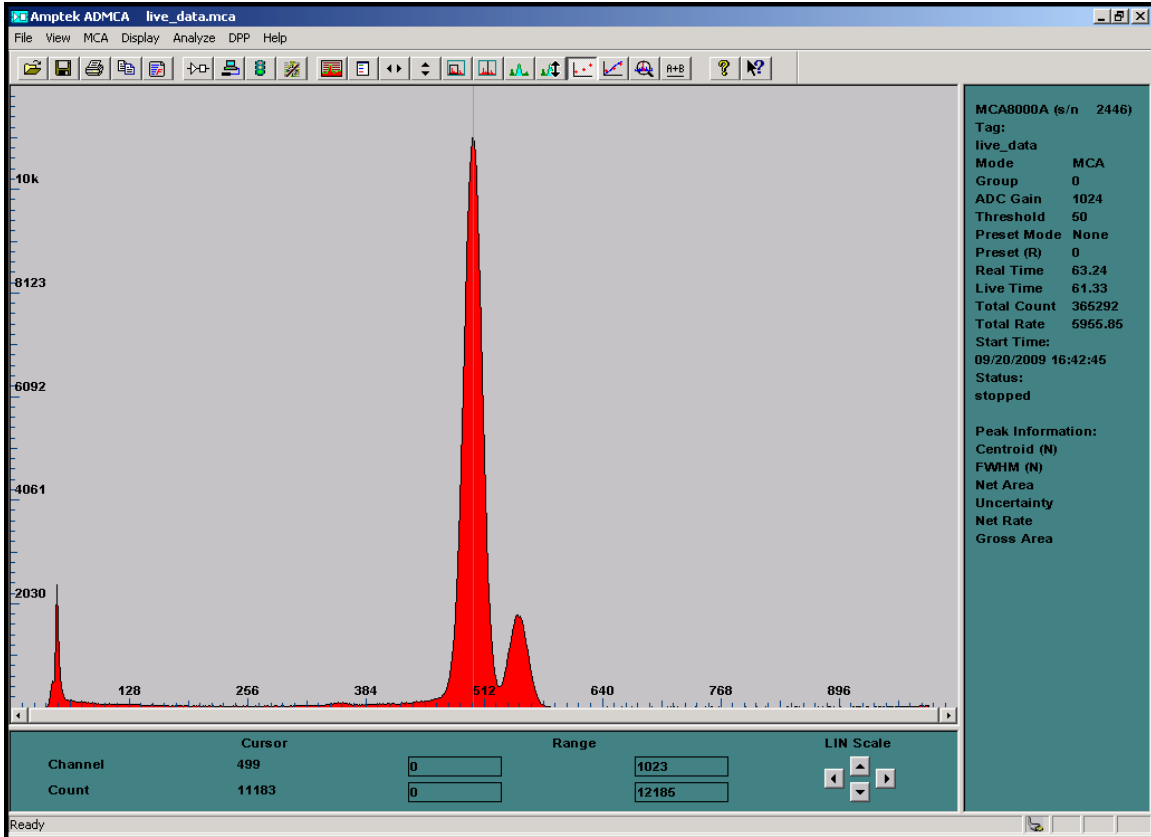
	319	318	317	316	315	314	313	312	64	72	80	88	32	47	48	63	7	15	23	31				
	311	310	309	308	307	306	305	304	65	73	81	89	33	40	55	62	6	14	22	30				
	303	302	301	300	299	298	297	296	66	74	82	90	34	41	54	61	5	13	21	29				
	295	294	293	292	291	290	289	288	67	75	83	91	35	42	53	60	4	12	20	28				
	351	350	349	348	347	346	345	344	68	76	84	92	36	43	52	59	3	11	19	27				
	336	343	342	341	340	339	338	337	69	77	85	93	37	44	51	58	2	10	18	26				
	335	328	329	330	331	332	333	334	70	78	86	94	38	45	50	57	1	9	17	25				
	320	321	322	323	324	325	326	327	71	79	87	95	39	46	49	56	0	8	16	24				
	376	377	378	379	380	381	382	383	Sample side								167	166	165	164	163	162	161	160
	368	369	370	371	372	373	374	375									175	174	173	172	171	170	169	168
	360	361	362	363	364	365	366	367									183	182	181	180	179	178	177	176
	352	353	354	355	356	357	358	359									191	190	189	188	187	186	185	184
cooling hose side	216	208	200	192	248	241	238	231	287	279	271	263	135	134	133	132	131	130	129	128				
	217	209	201	193	249	242	237	230	286	278	270	262	142	141	140	139	138	137	136	143				
	218	210	202	194	250	243	236	229	285	277	269	261	145	146	147	148	149	150	151	144				
	219	211	203	195	251	244	235	228	284	276	268	260	152	153	154	155	156	157	158	159				
	220	212	204	196	252	245	234	227	283	275	267	259	96	97	98	99	100	101	102	103				
	221	213	205	197	253	246	233	226	282	274	266	258	104	105	106	107	108	109	110	111				
	222	214	206	198	254	247	232	225	281	273	265	257	112	113	114	115	116	117	118	119				
	223	215	207	199	255	240	239	224	280	272	264	256	120	121	122	123	124	125	126	127				

Fig. 2. Schematic of layout with elements labeled.

$K\alpha$ and $K\beta$ emission lines from FE55 follow for representative detector channels. The channels examined are: 1, 3, 4, 6, 41, 43, 53, 77, 94, 103, 106, 116, 119, 121, 125, 137, 143, 155, 160, 193, 196, 199, 209, 212, 223, 234, 235, 238, 241, 295, 296, 300, 305, 306, 312, 316, 319, 324 and 327. The MCA screen shots follow. Note the "Total rate" for the output counts for the given channel.

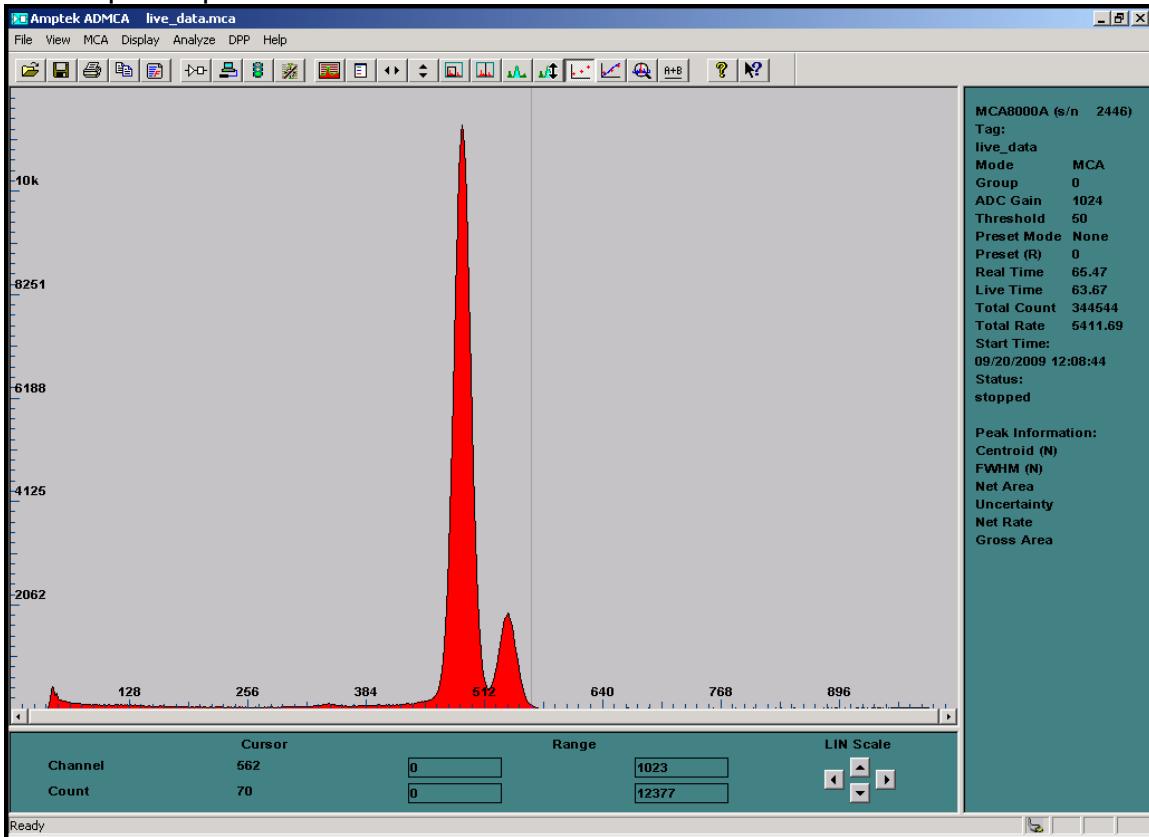
Detector Element=1 Shaping Time = 2 μ sec

6 kcps Output Counts

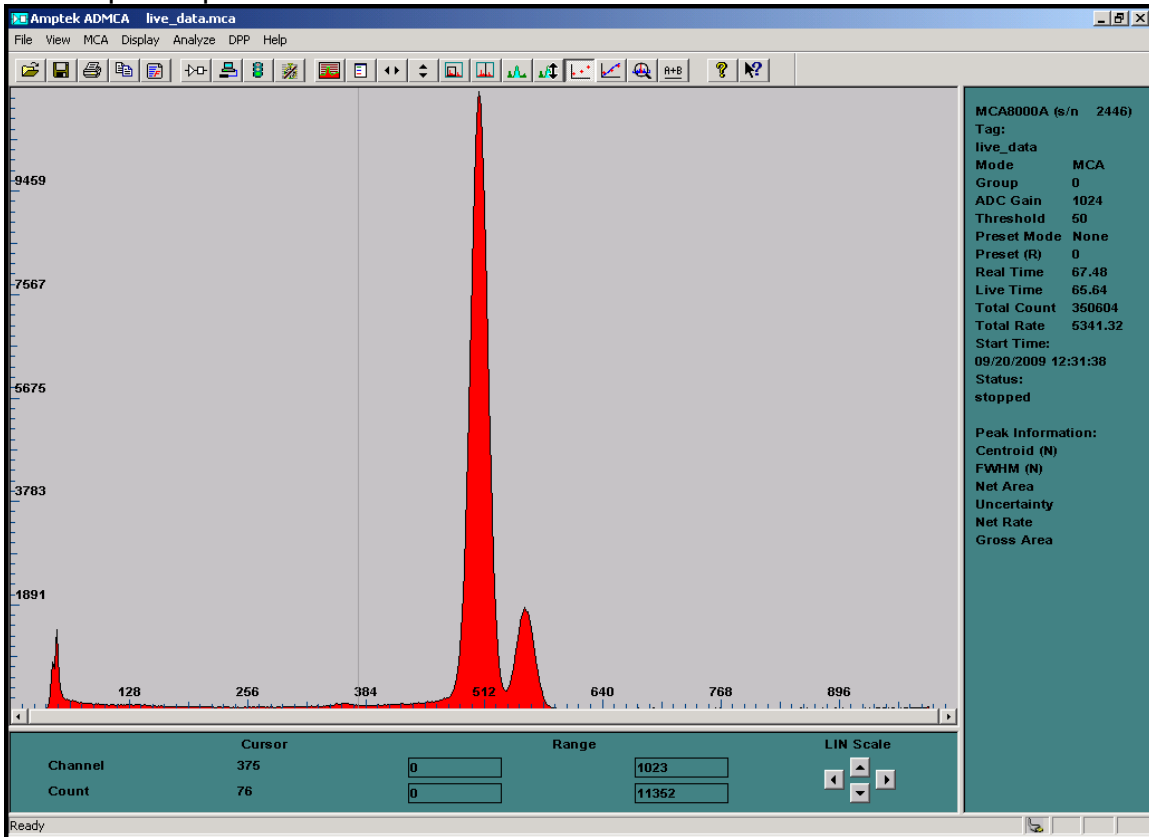


Detector Element= 3 Shaping Time = 2 μ sec

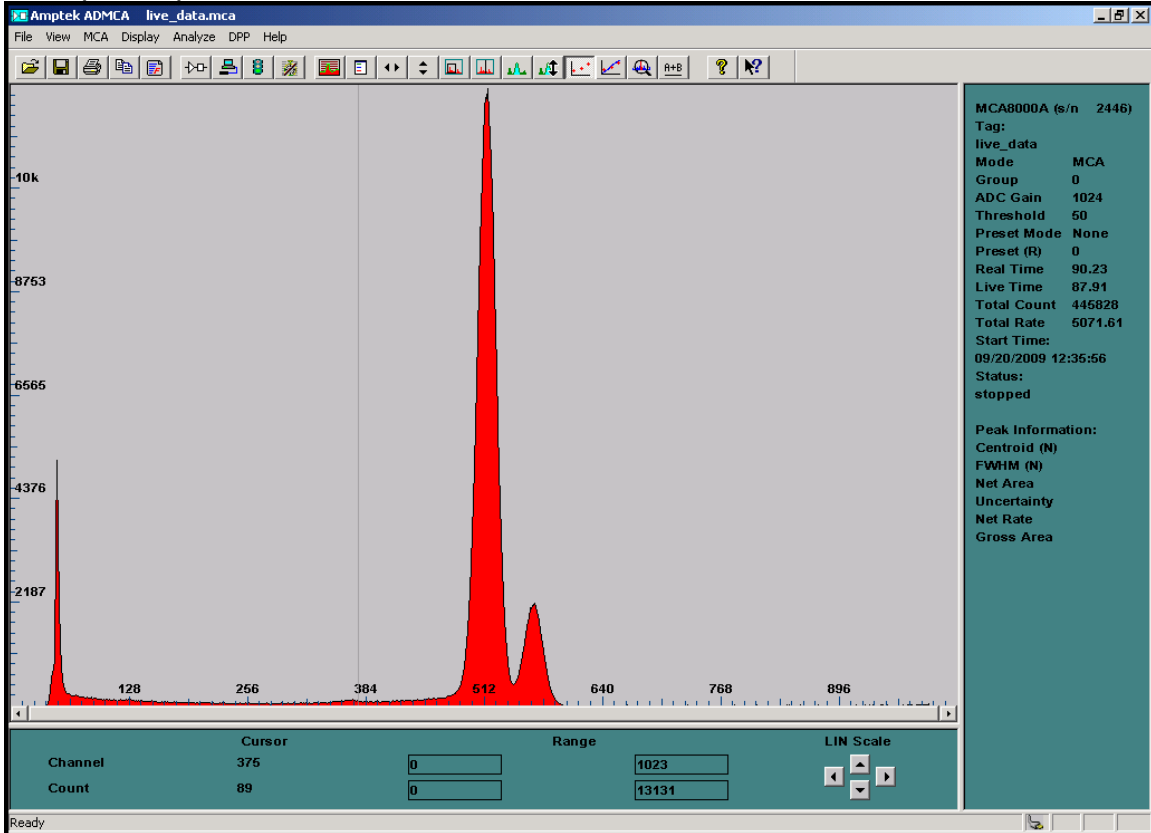
~5.4 kcps Output Counts



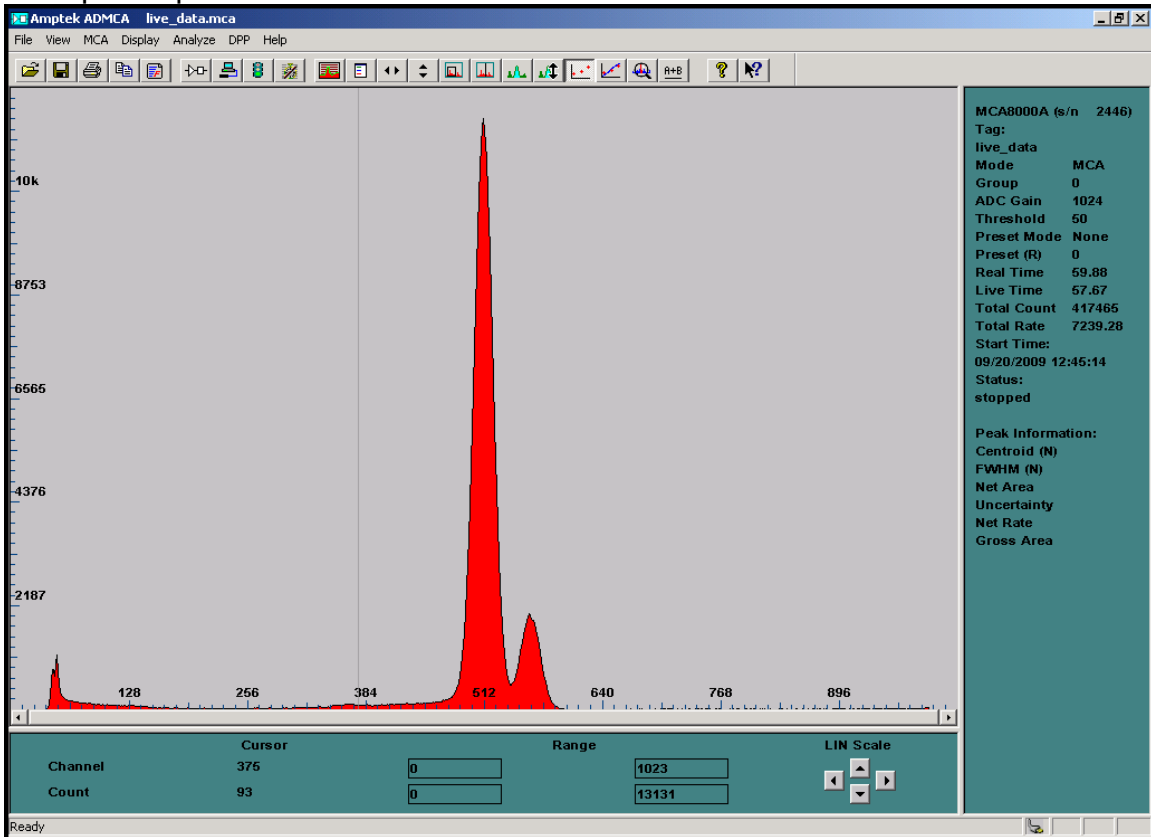
Detector Element=4 Shaping Time = 2 μ sec
~5.3 kcps Output Counts



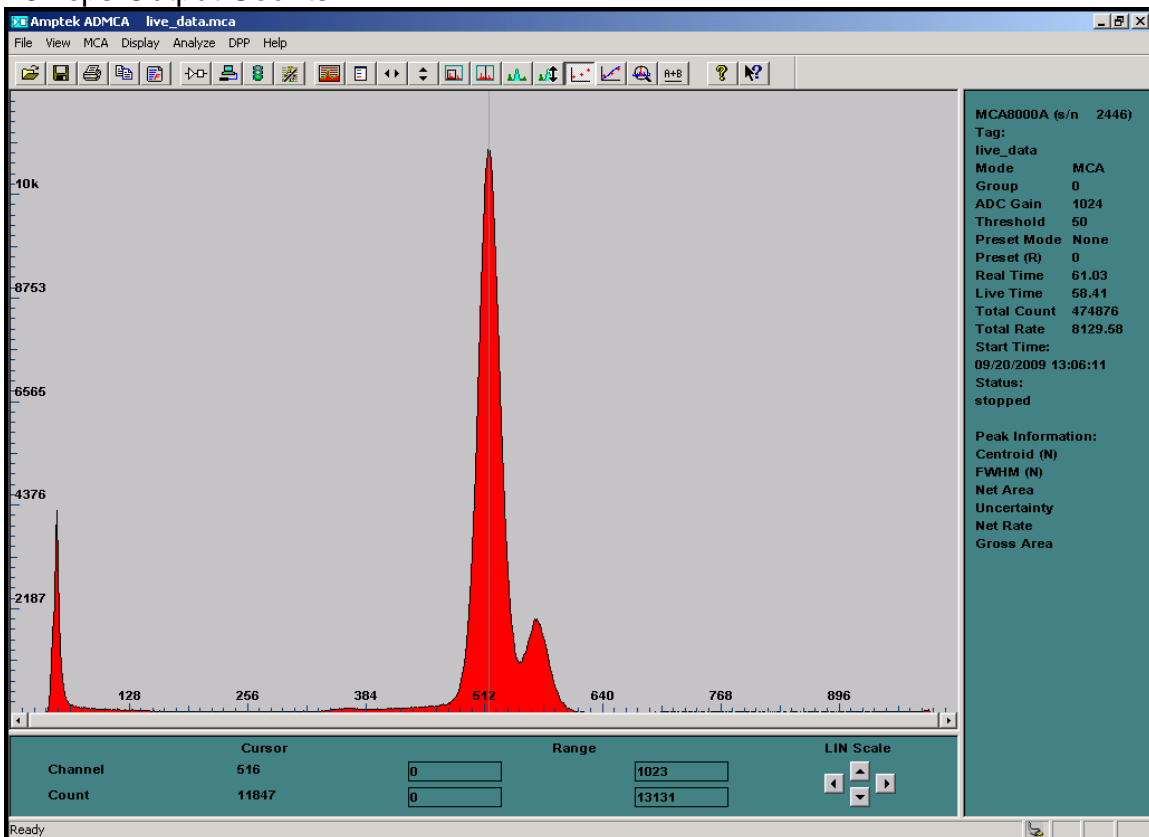
Detector Element=6 Shaping Time = 2 μ sec
~5 kcps Output Counts



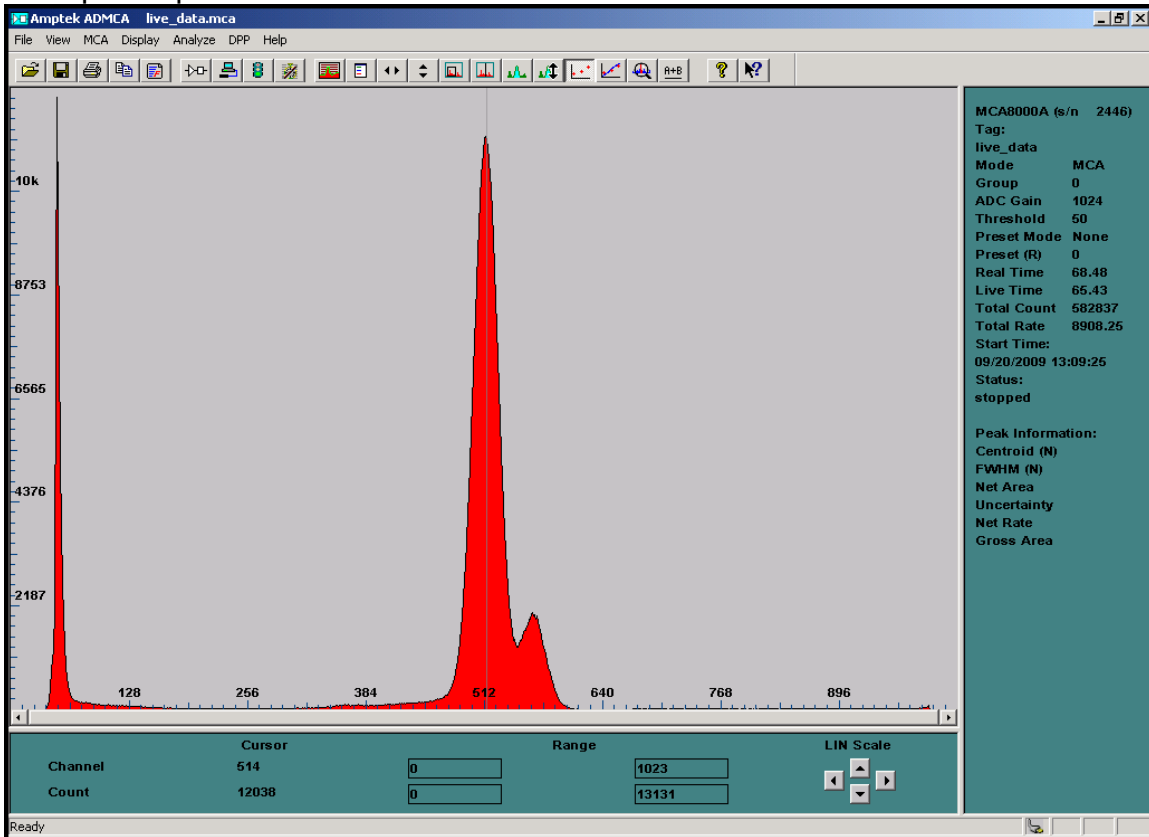
Detector Element=41 Shaping Time = 2 μ sec
~7 kcps Output Counts



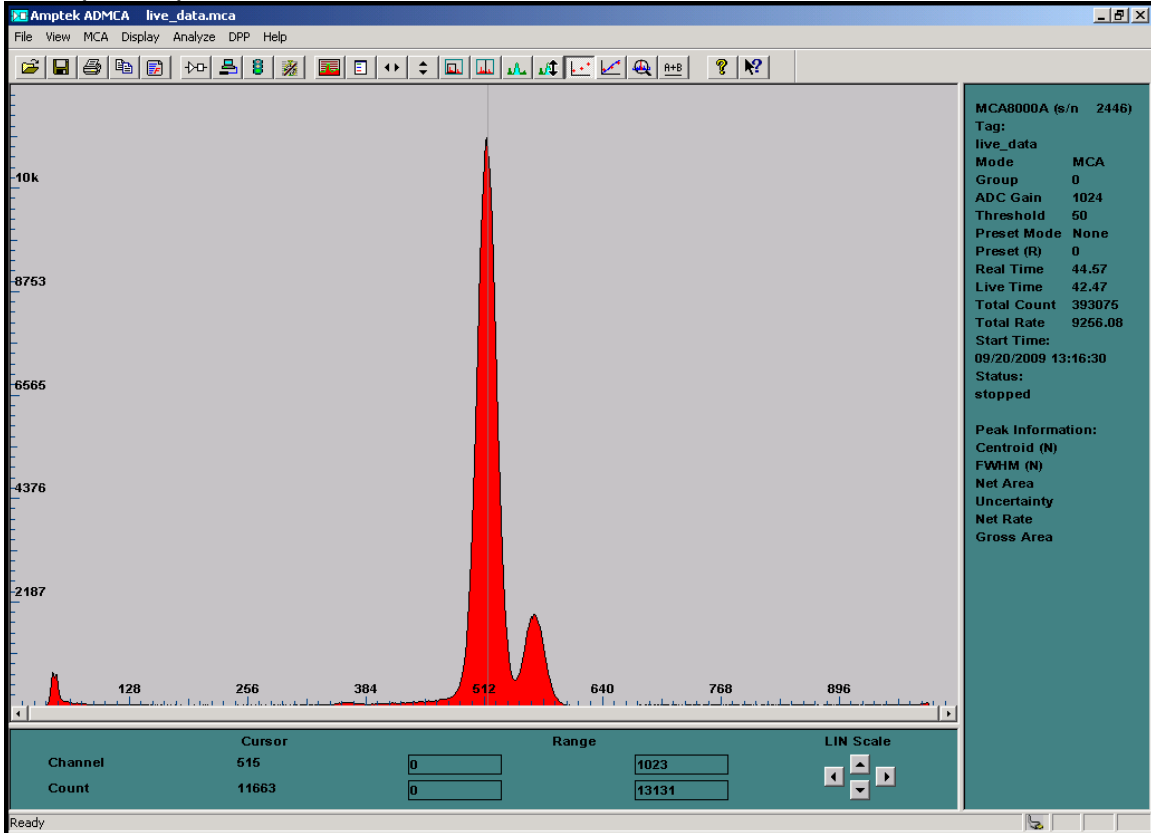
Detector Element=43 Shaping Time = 2 μ sec
~8 kcps Output Counts



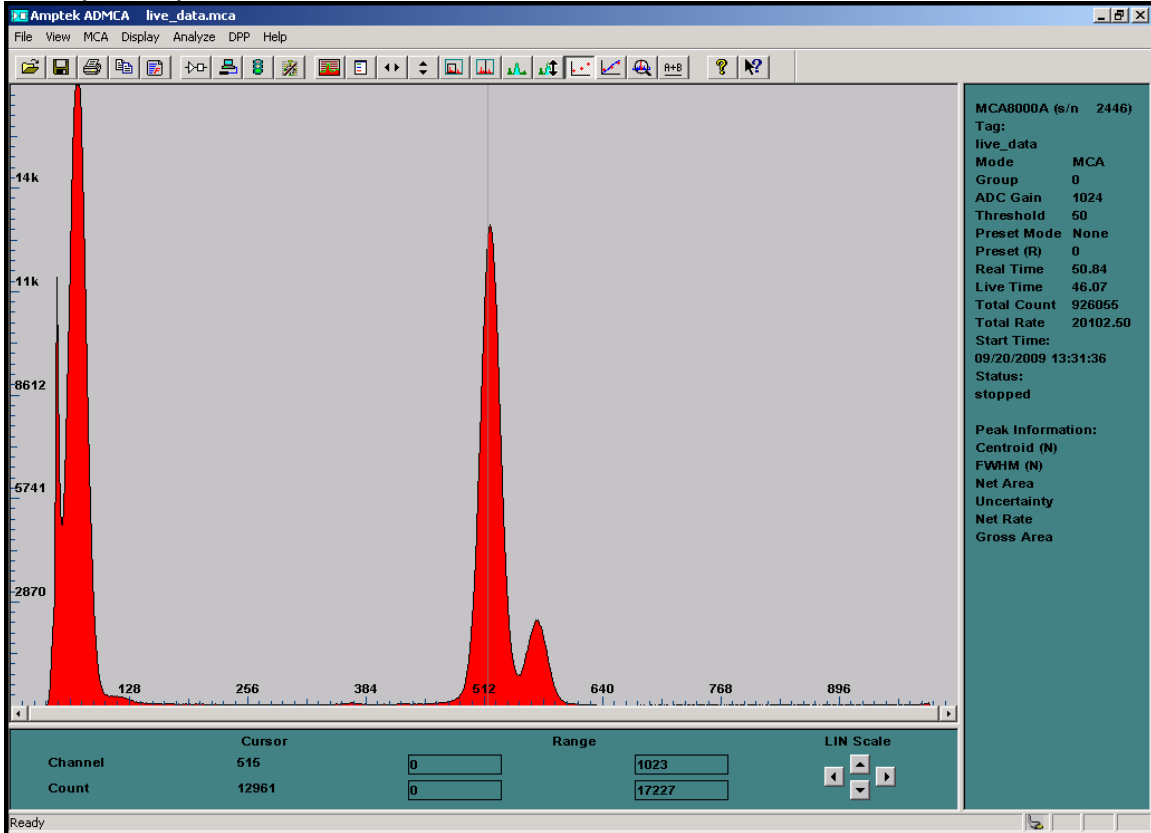
Detector Element=53 Shaping Time = 2 μ sec
~9 kcps Output Counts



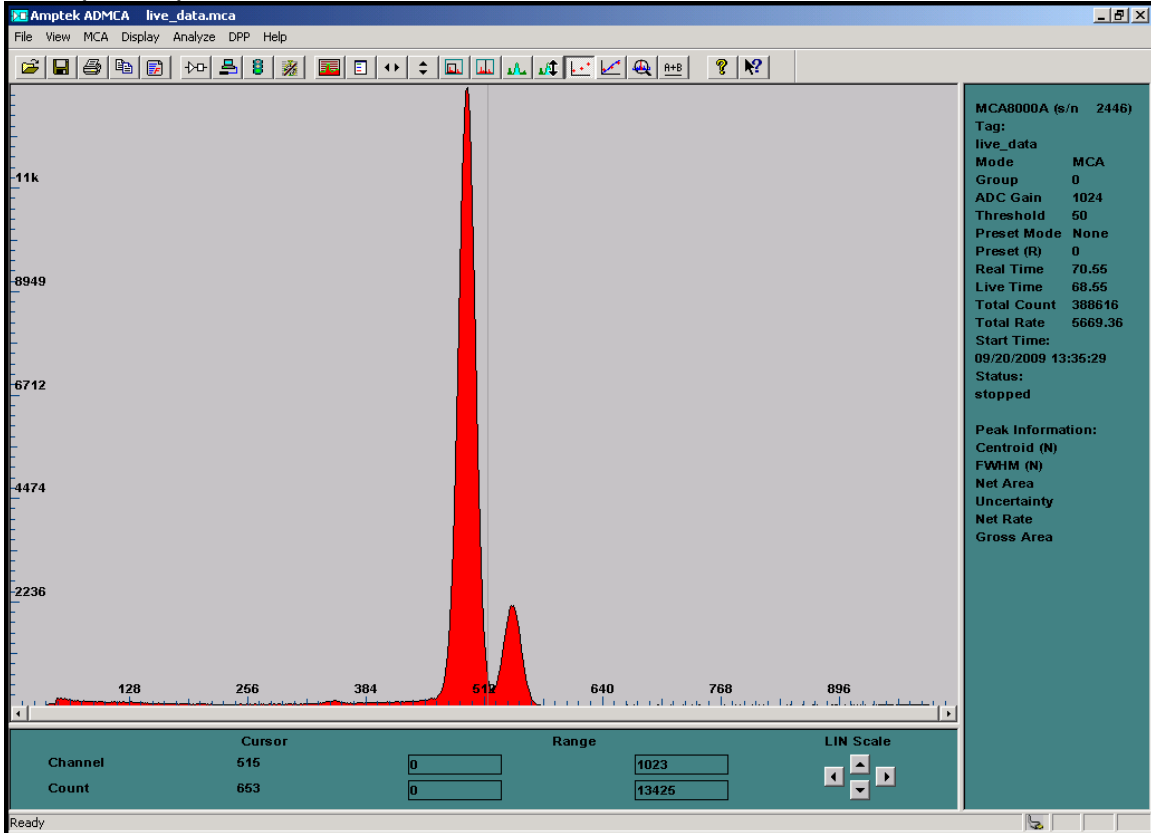
Detector Element=77 Shaping Time = 2 μ sec
~9 kcps Output Counts



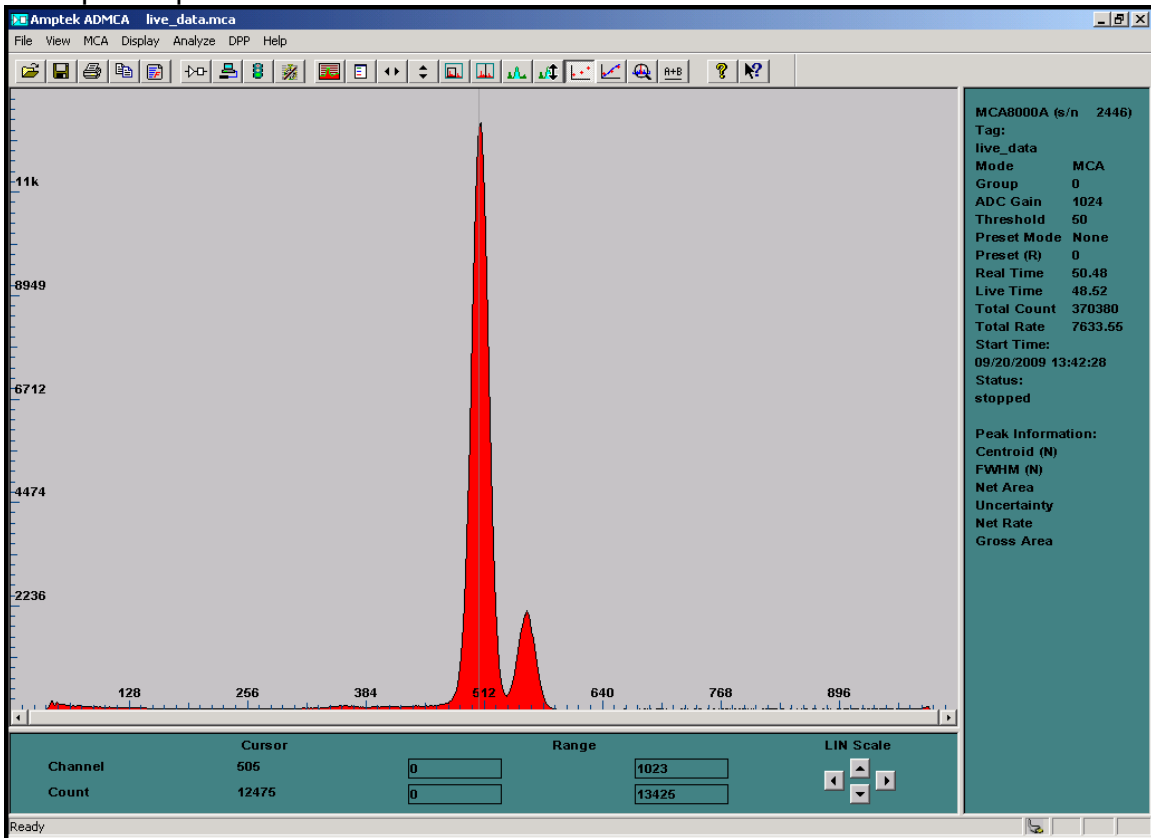
Detector Element=94 Shaping Time = 2 μ sec
~9 kcps Output Counts



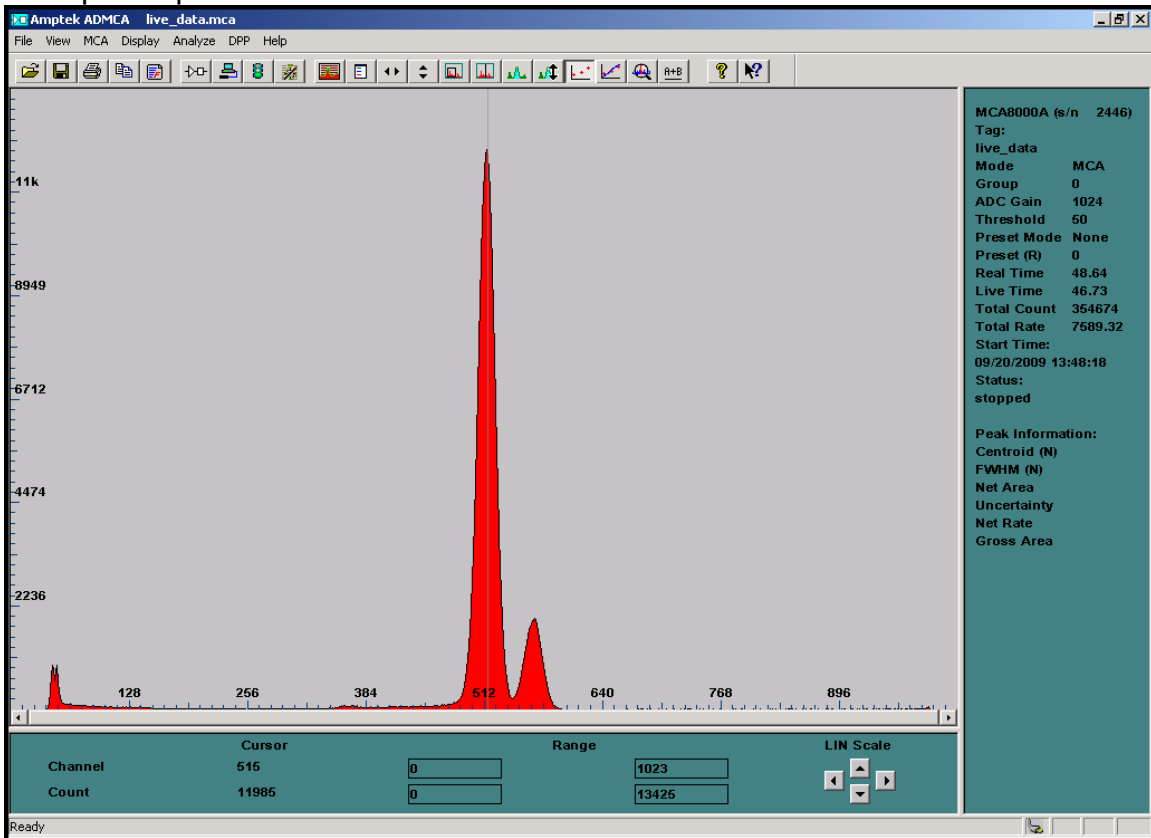
Detector Element=103 Shaping Time = 2 μ sec
~6 kcps Output Counts



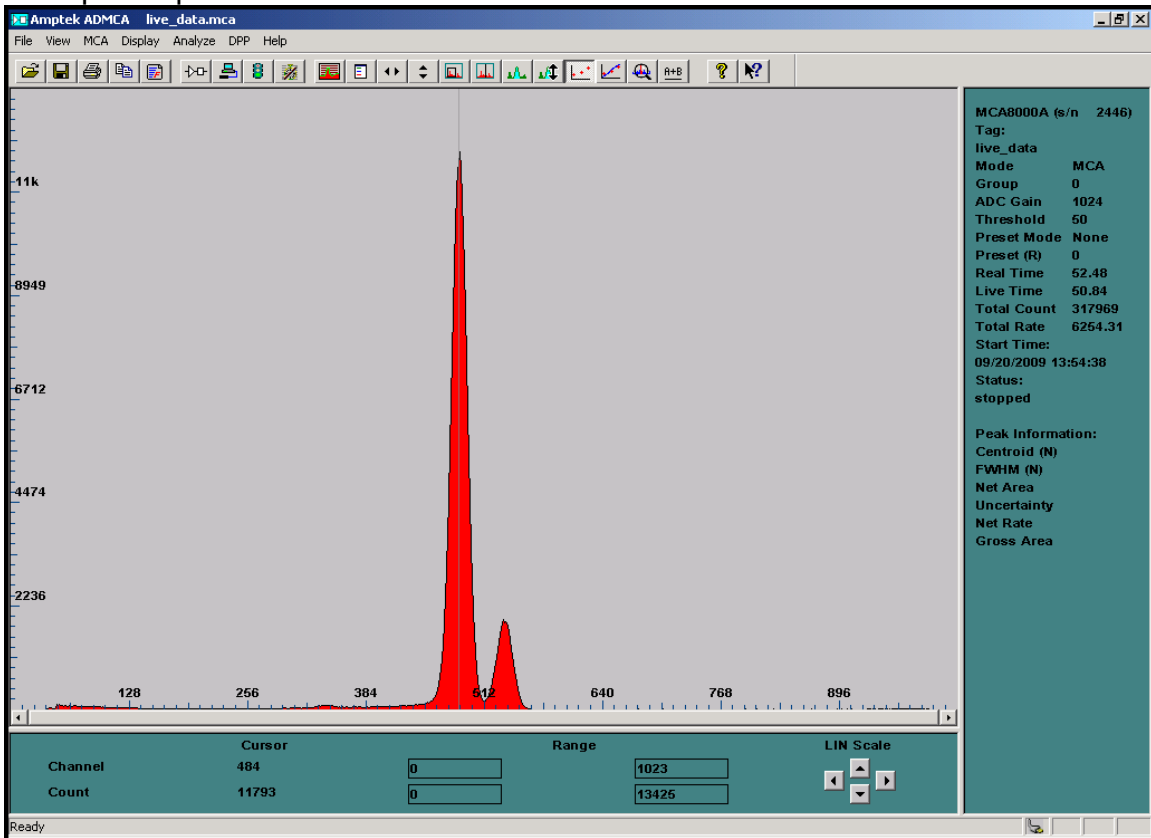
Detector Element=106 Shaping Time = 2 μ sec
~8 kcps Output Counts



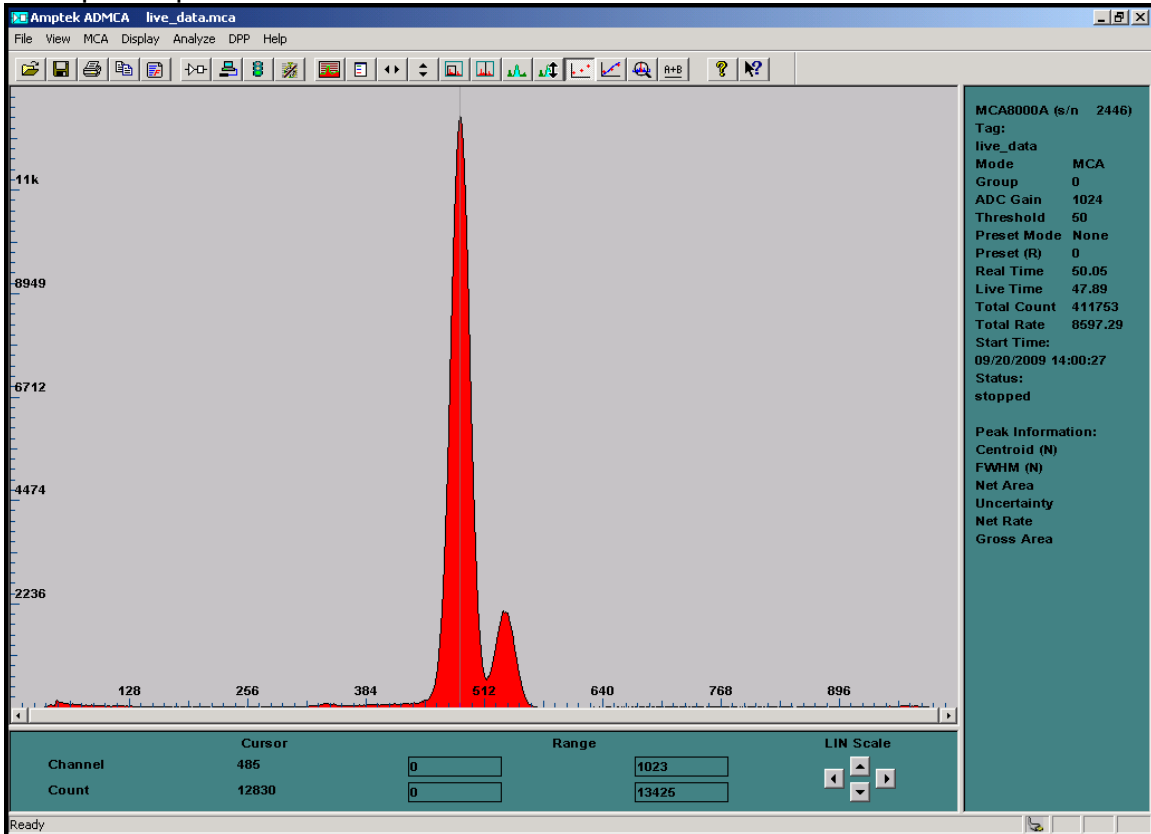
Detector Element=116 Shaping Time = 2 μ sec
~8 kcps Output Counts



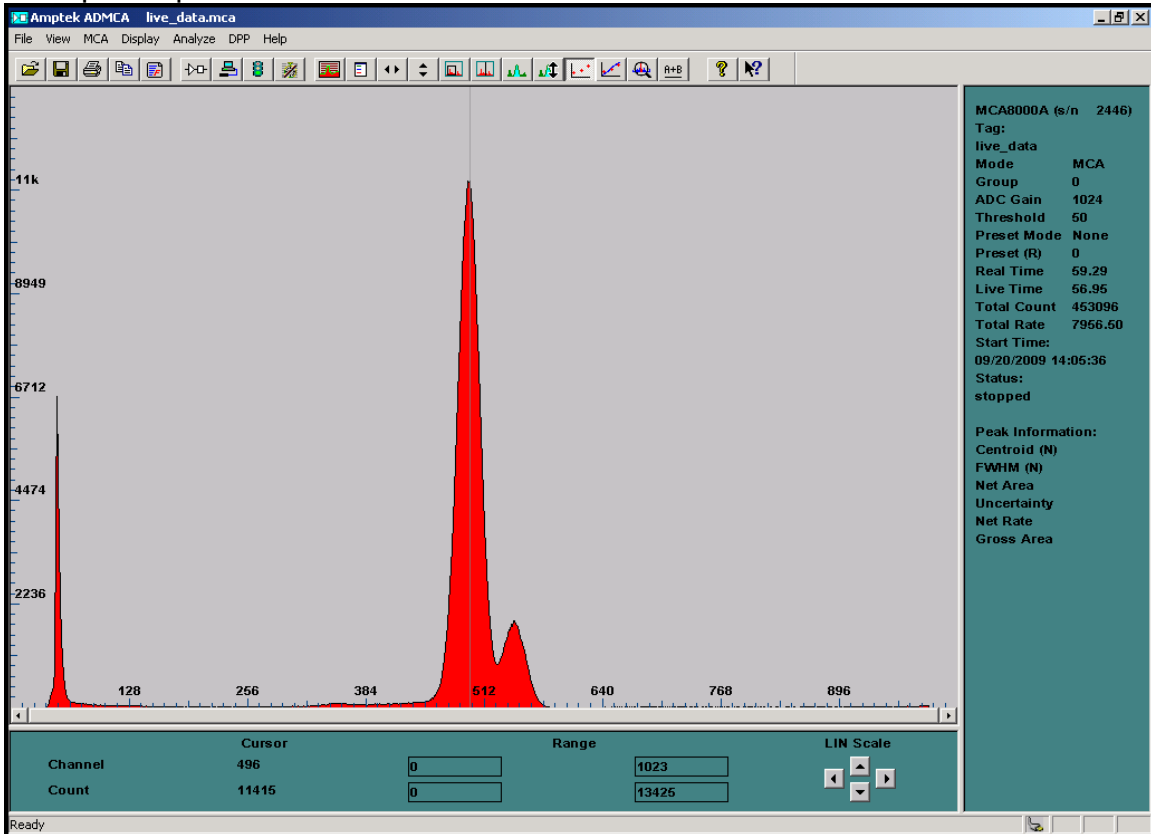
Detector Element=119 Shaping Time = 2 μ sec
~6 kcps Output Counts



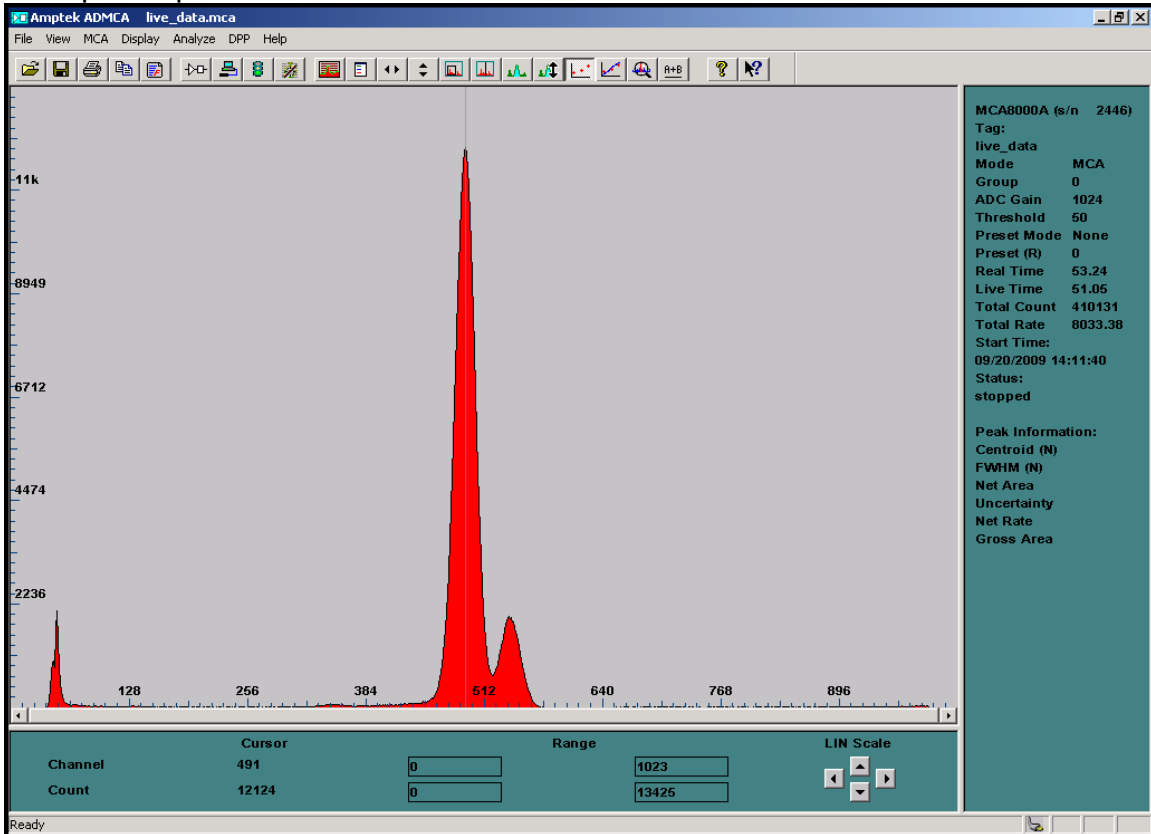
Detector Element=121 Shaping Time = 2 μ sec
~9 kcps Output Counts



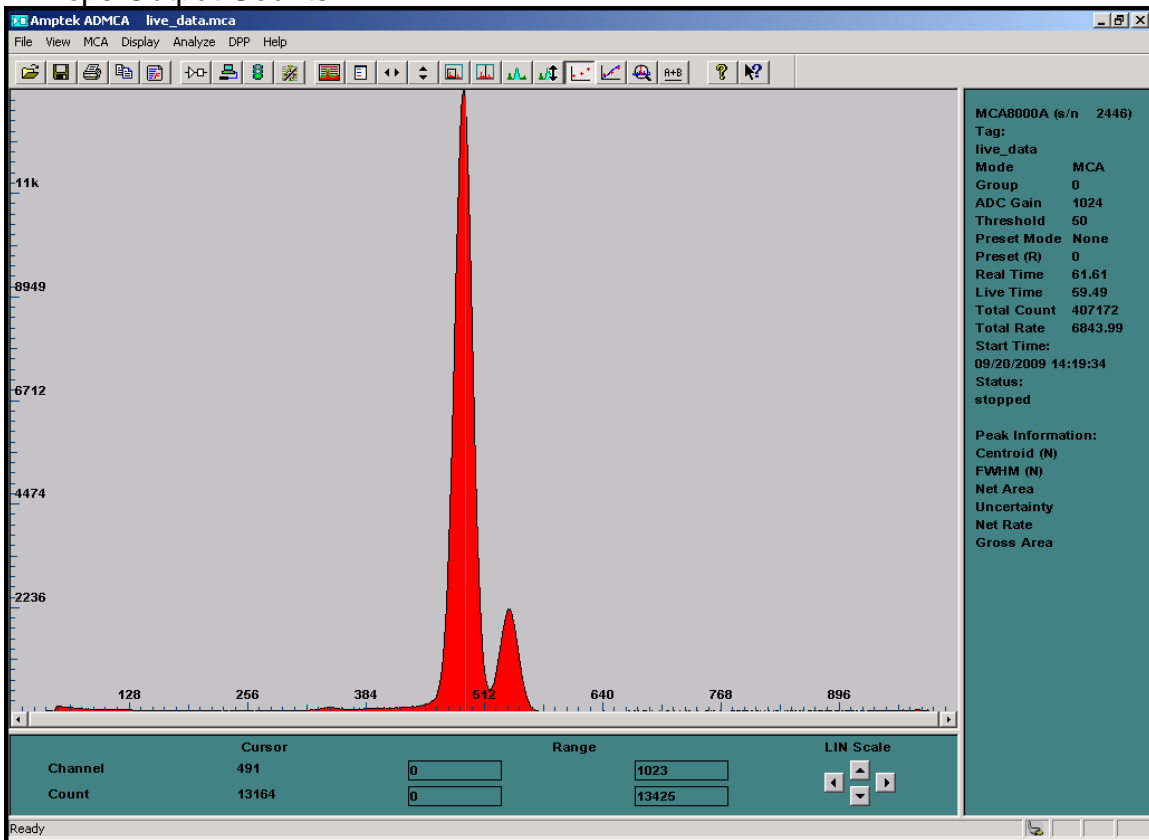
Detector Element=125 Shaping Time = 2 μ sec
~8 kcps Output Counts



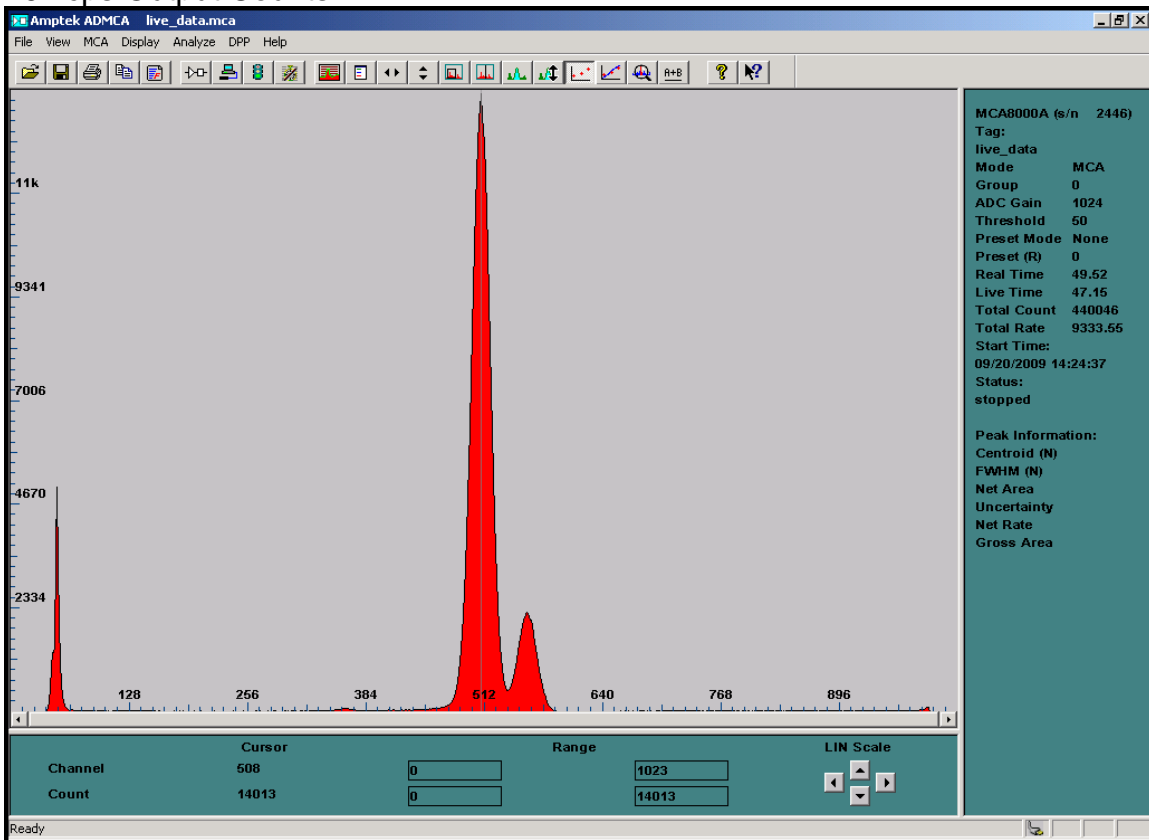
Detector Element=137 Shaping Time = 2 μ sec
~8 kcps Output Counts



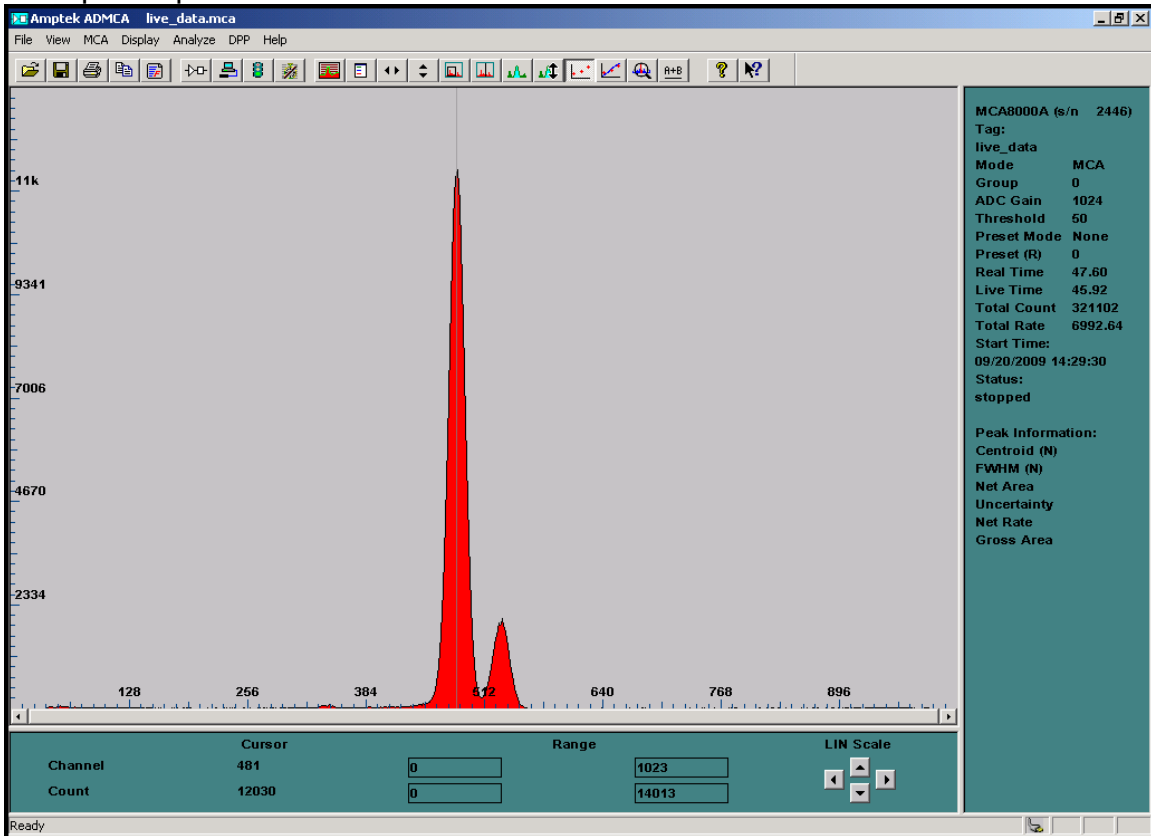
Detector Element=143 Shaping Time = 2 μ sec
~7 kcps Output Counts



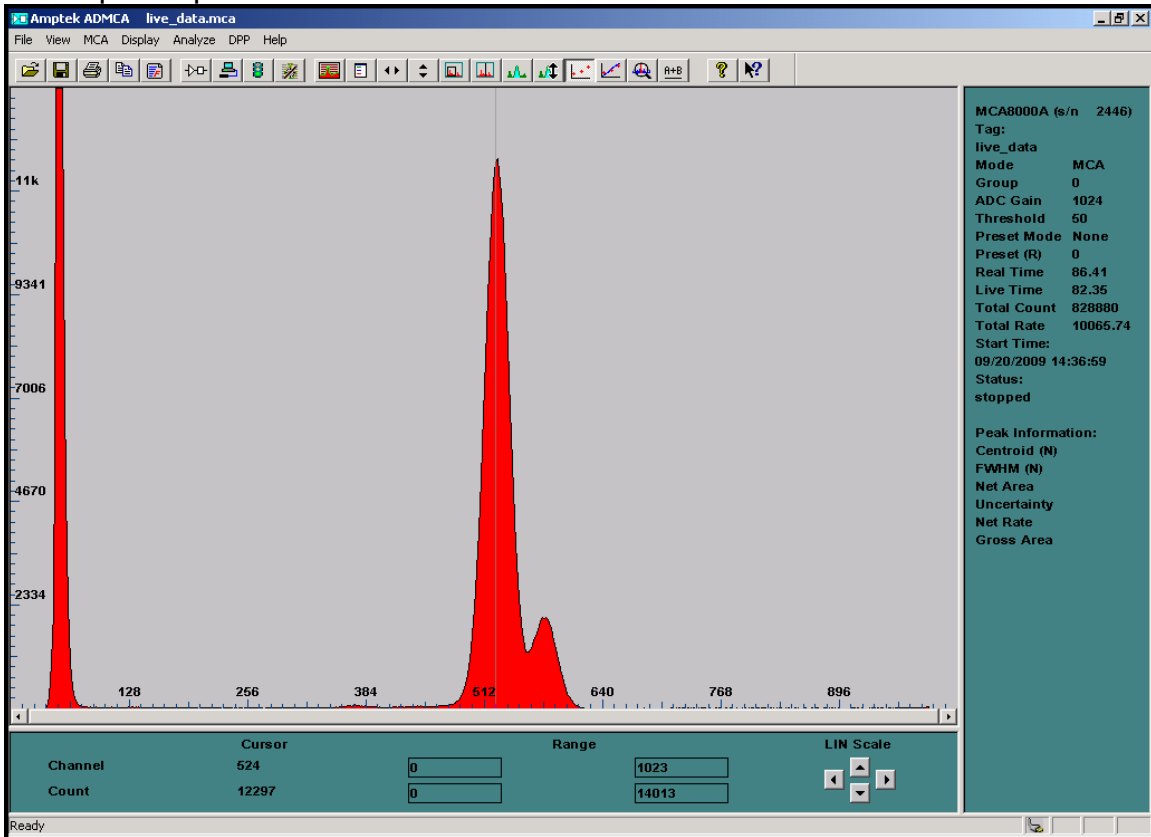
Detector Element=155 Shaping Time = 2 μ sec
~9 kcps Output Counts



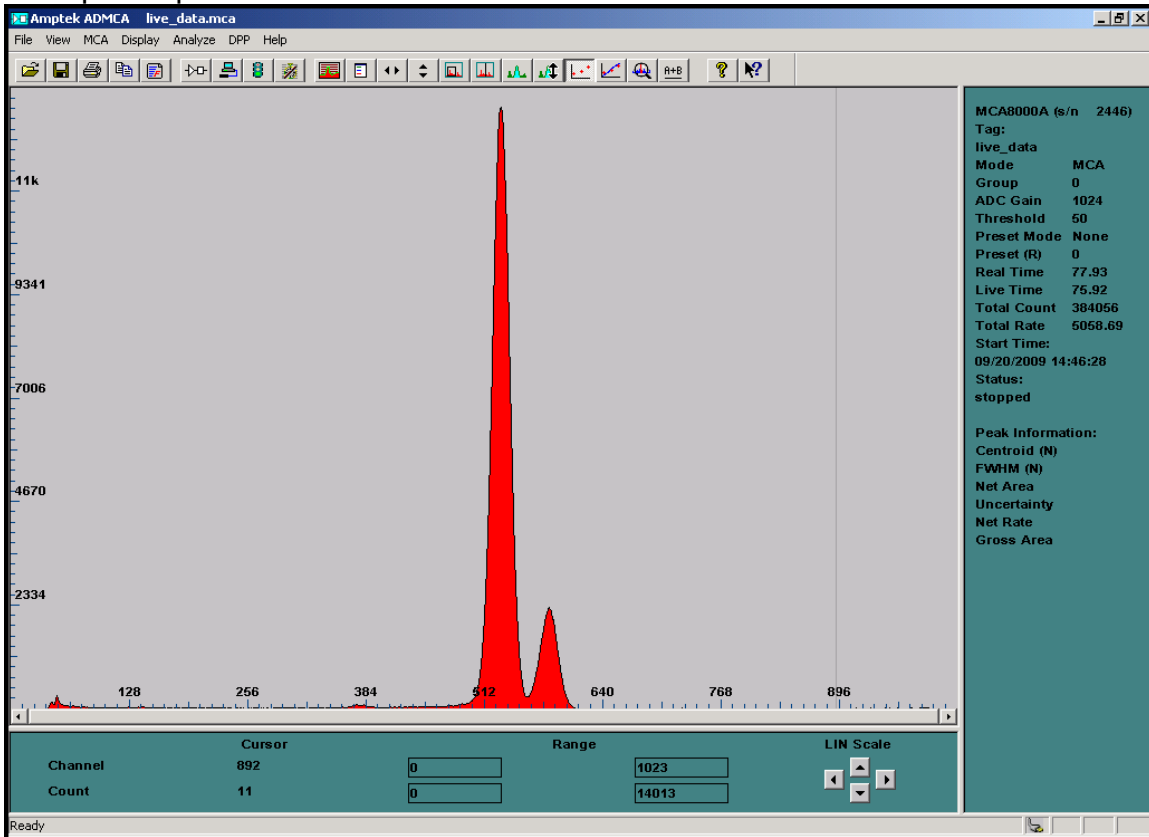
Detector Element=160 Shaping Time = 2 μ sec
~7 kcps Output Counts



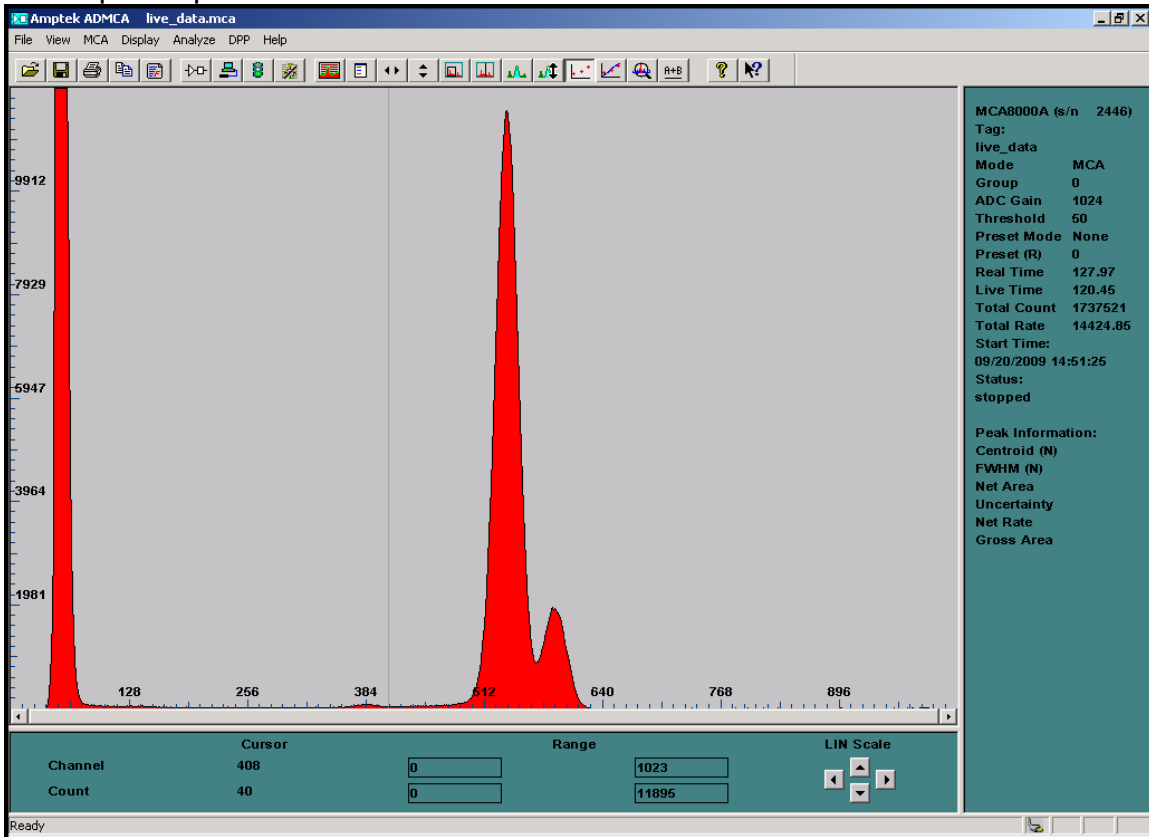
Detector Element=193 Shaping Time = 2 μ sec
~10 kcps Output Counts



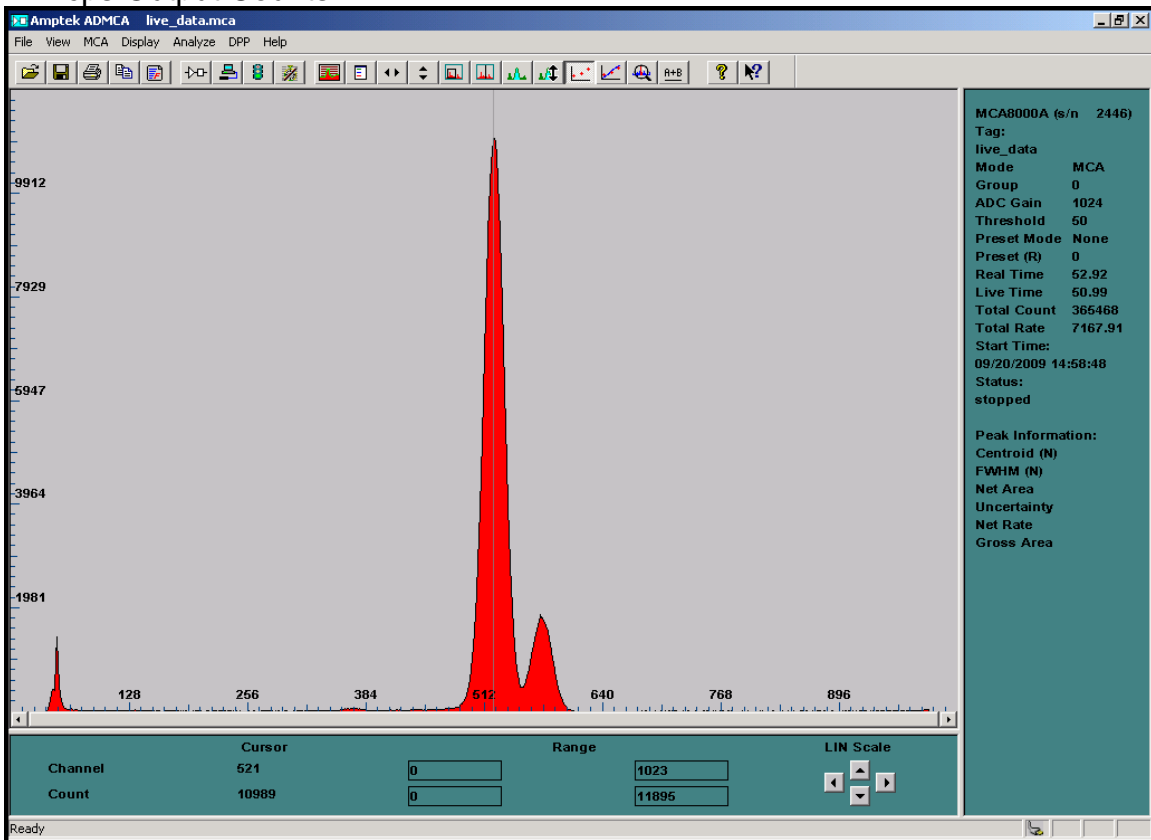
Detector Element=196 Shaping Time = 2 μ sec
~5 kcps Output Counts



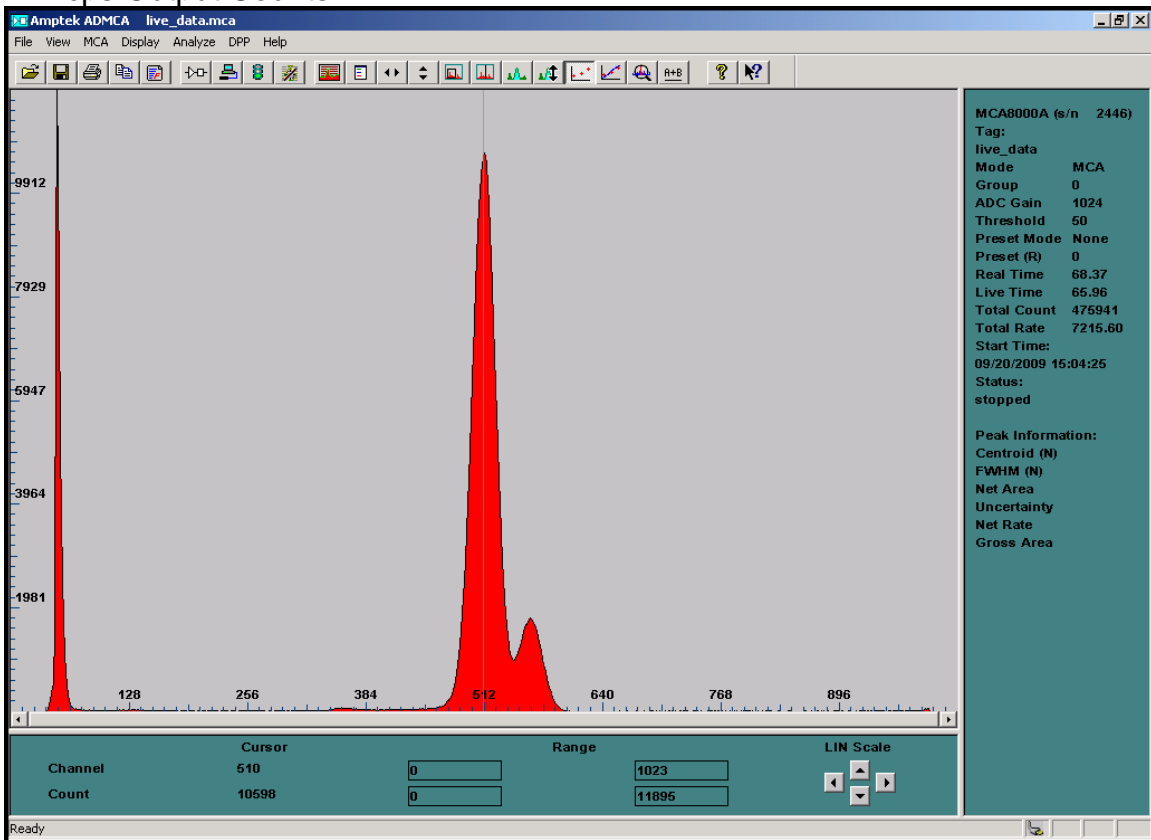
Detector Element=199 Shaping Time = 2 μ sec
~14 kcps Output Counts



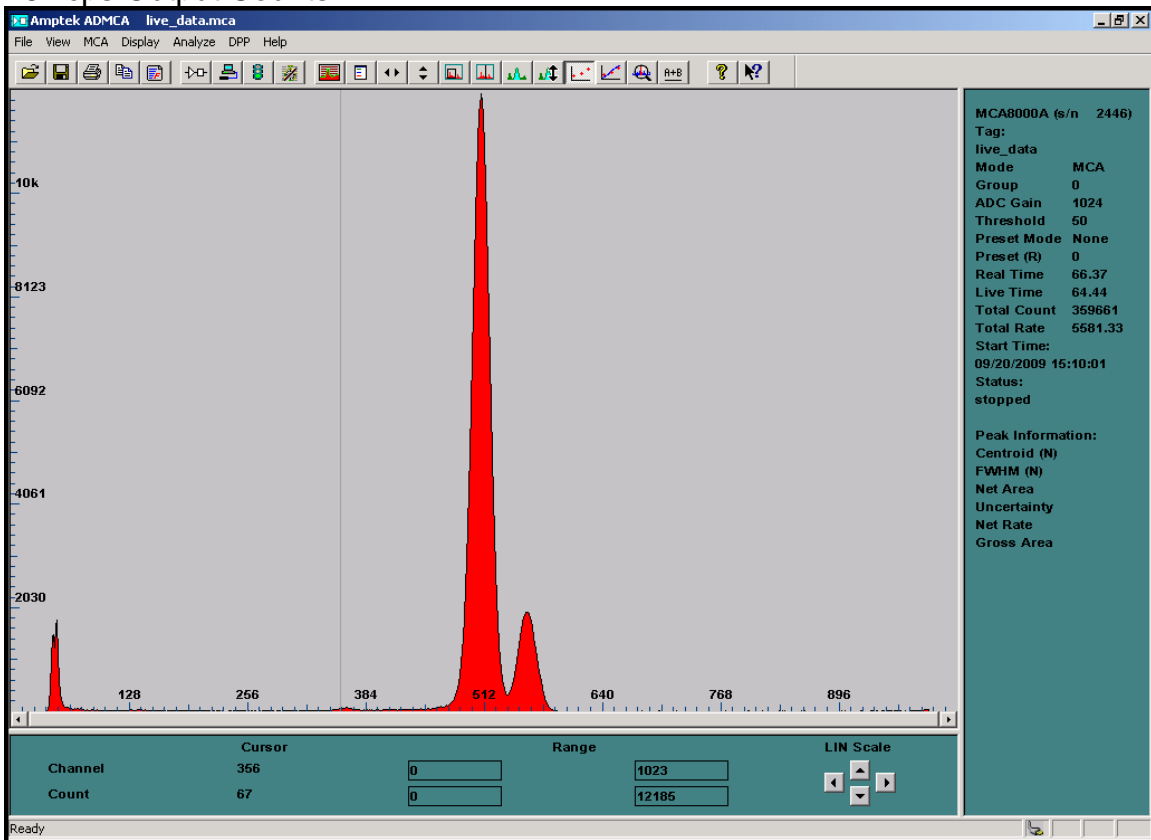
Detector Element=209 Shaping Time = 2 μ sec
 ~7 kcps Output Counts



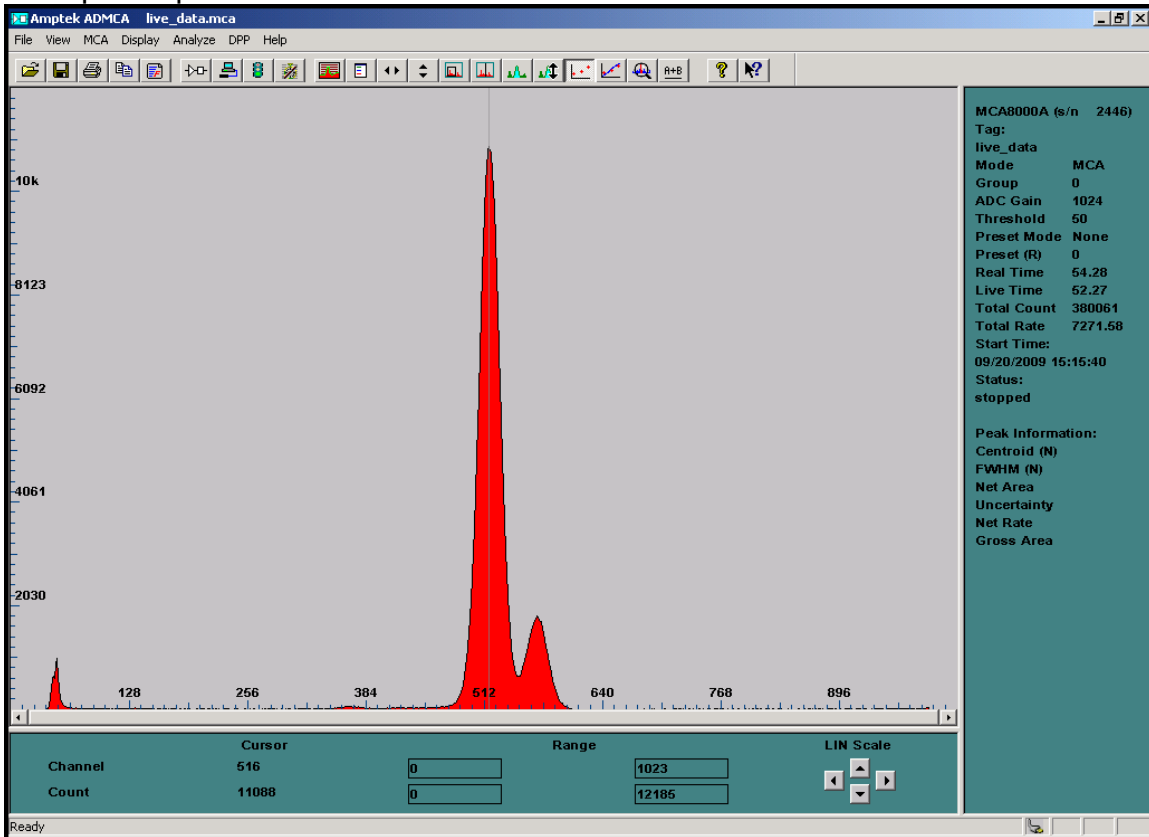
Detector Element=212 Shaping Time = 2 μ sec
~7 kcps Output Counts



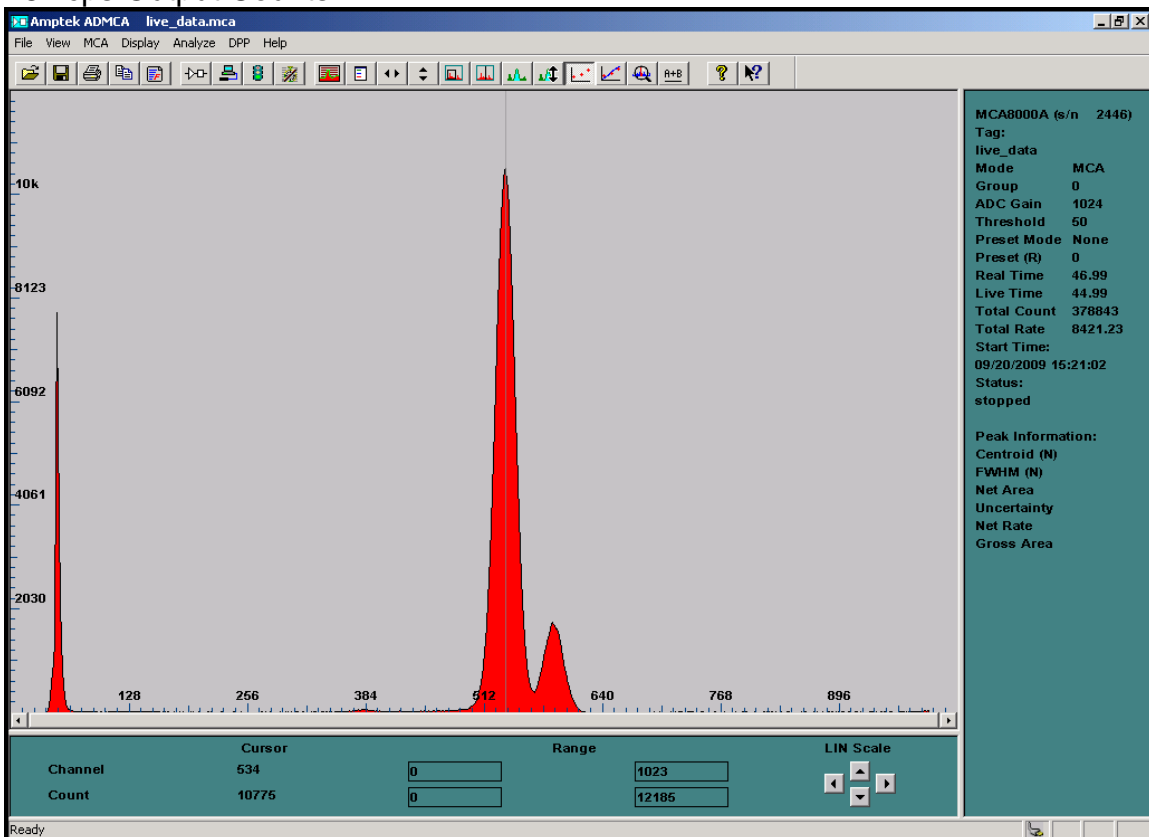
Detector Element=223 Shaping Time = 2 μ sec
~6 kcps Output Counts



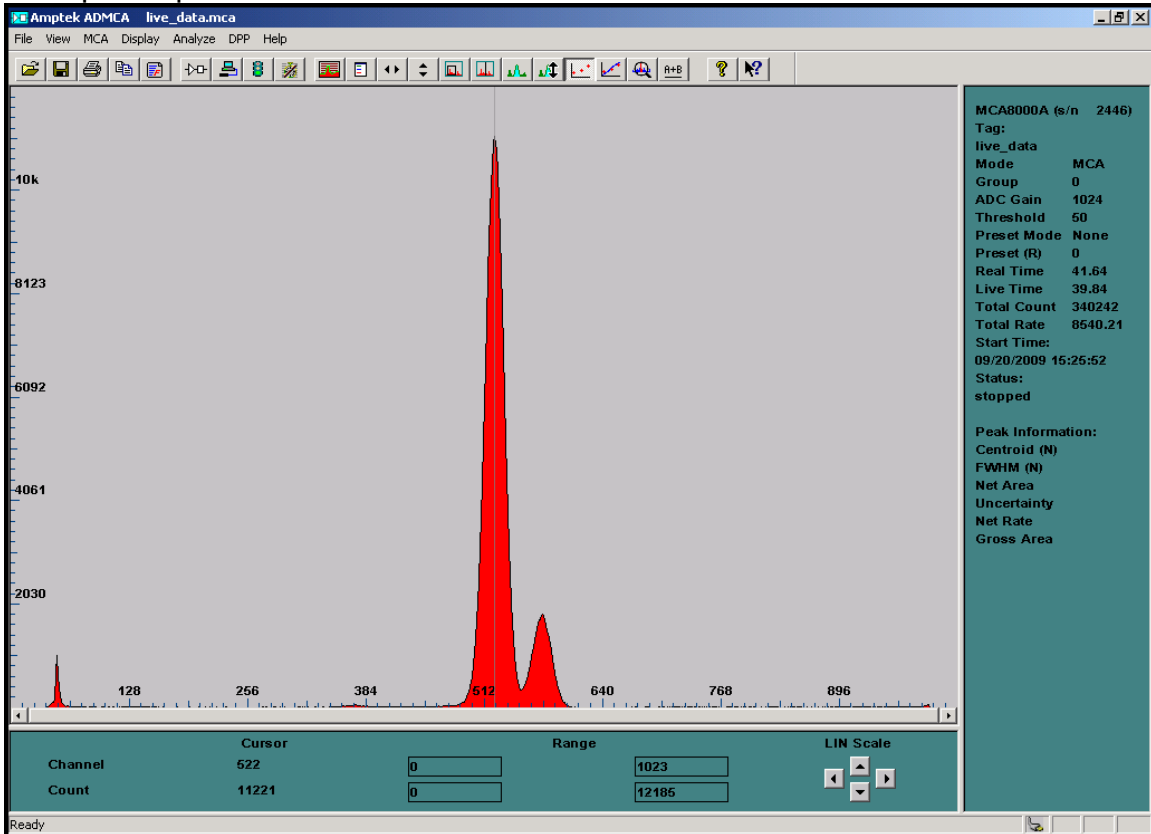
Detector Element=234 Shaping Time = 2 μ sec
~7 kcps Output Counts



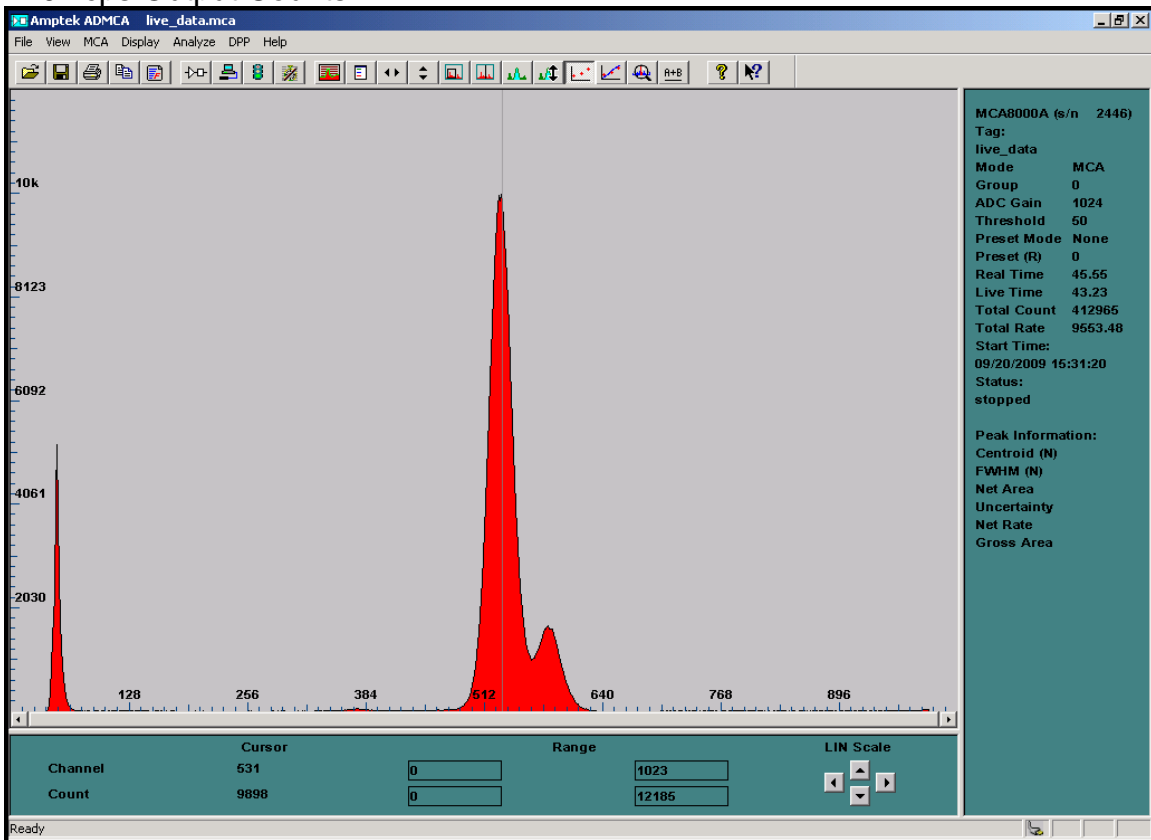
Detector Element=235 Shaping Time = 2 μ sec
~8 kcps Output Counts



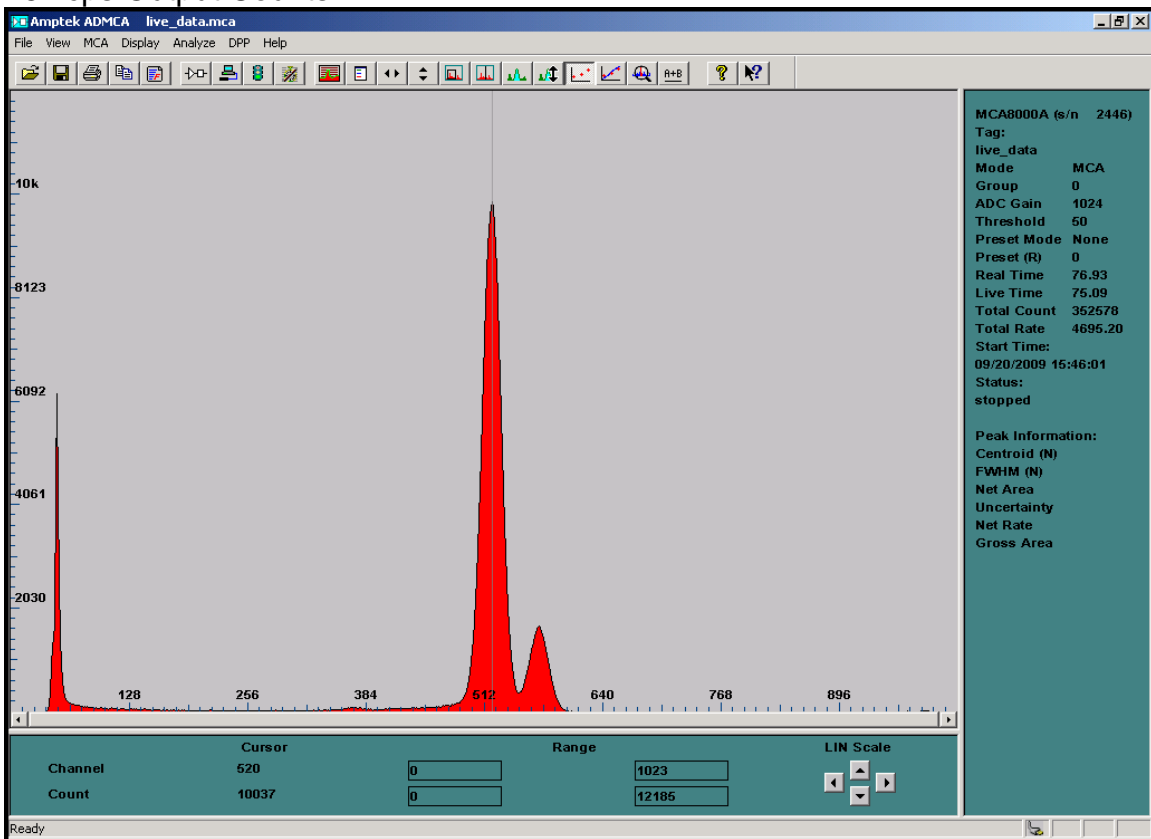
Detector Element=238 Shaping Time = 2 μ sec
~9 kcps Output Counts



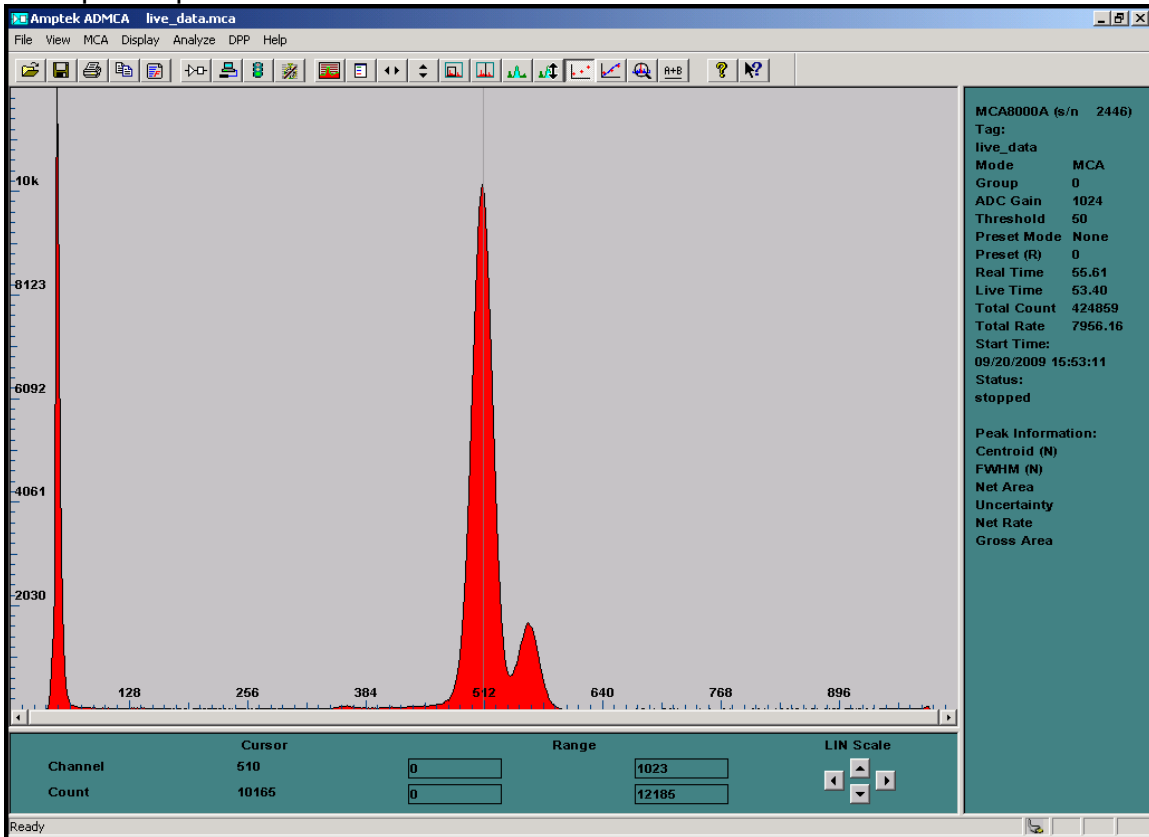
Detector Element=241 Shaping Time = 2 μ sec
~10 kcps Output Counts



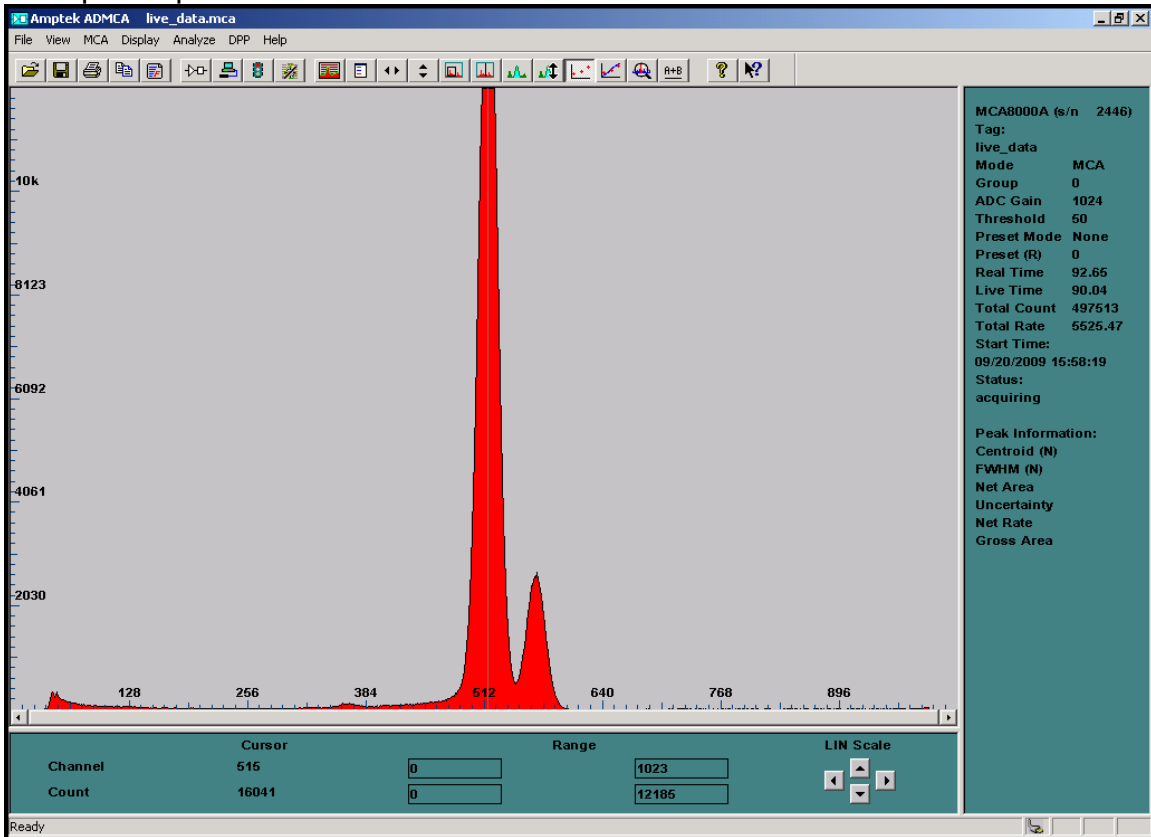
Detector Element=295 Shaping Time = 2 μ sec
~5 kcps Output Counts



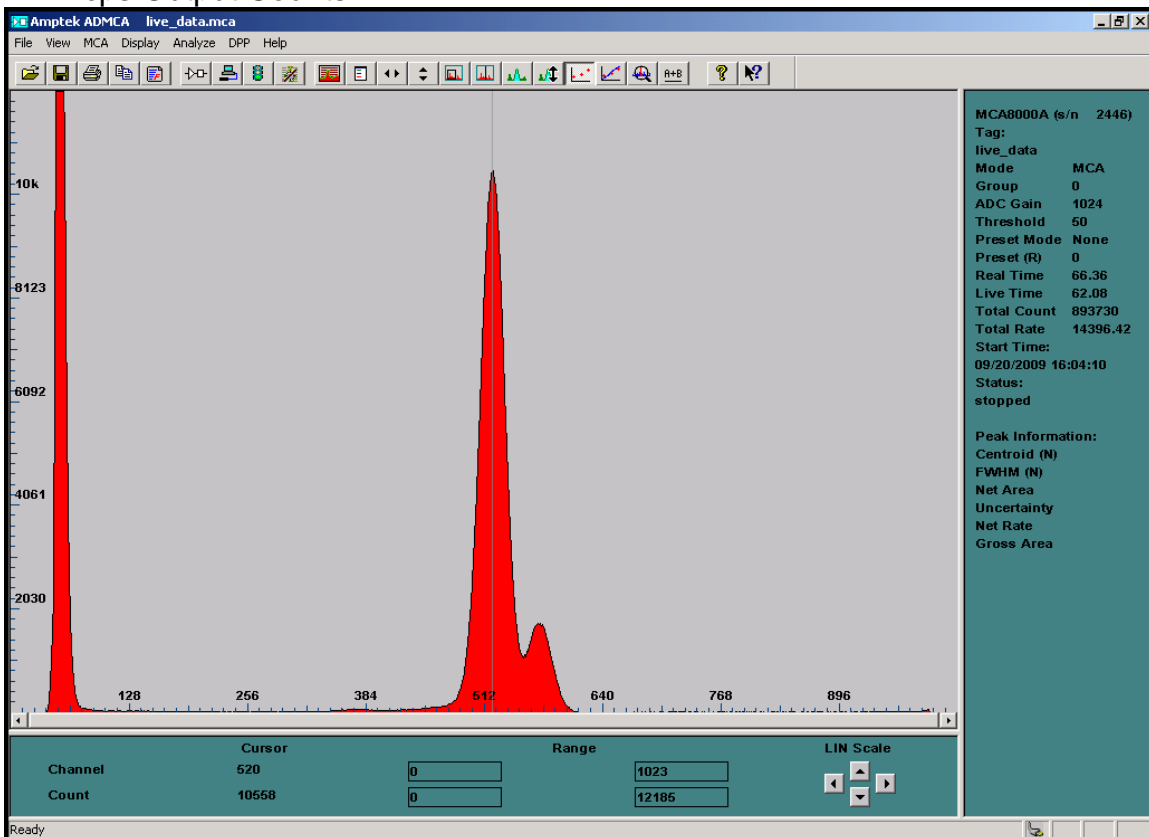
Detector Element=296 Shaping Time = 2 μ sec
~8 kcps Output Counts



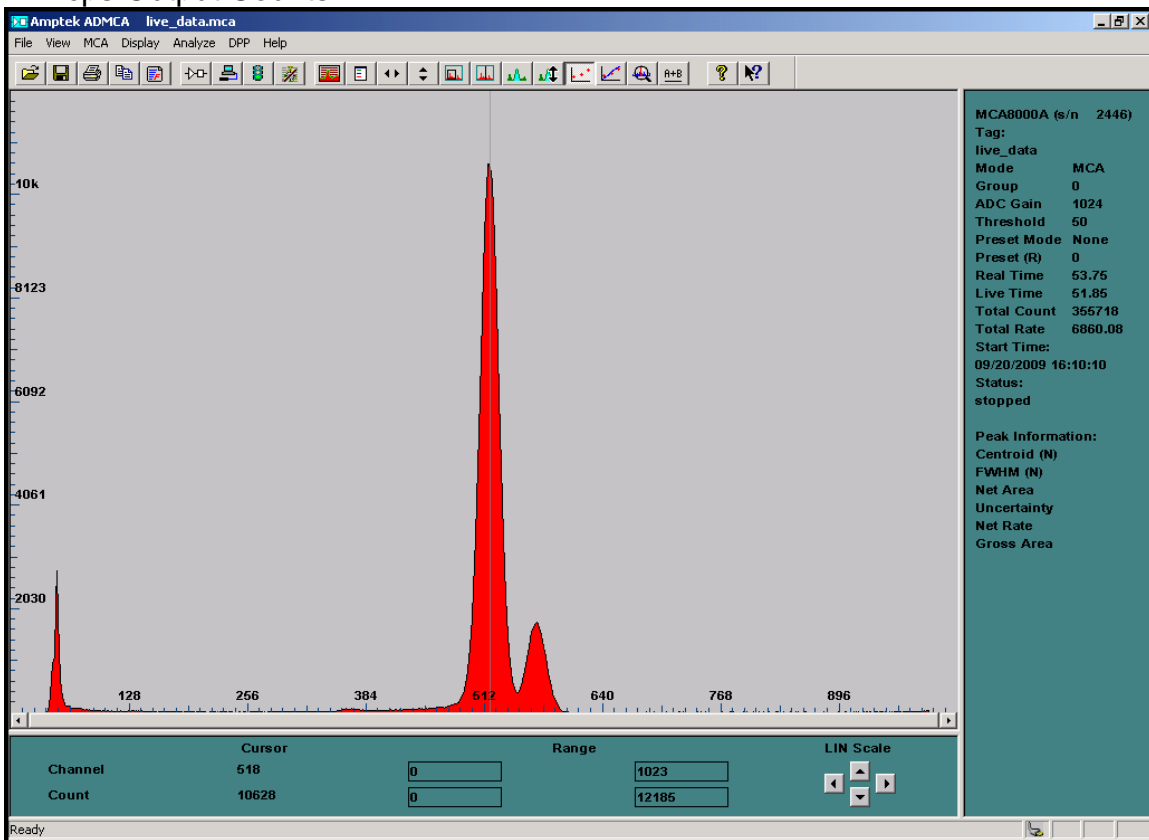
Detector Element=300 Shaping Time = 2 μ sec
~6 kcps Output Counts



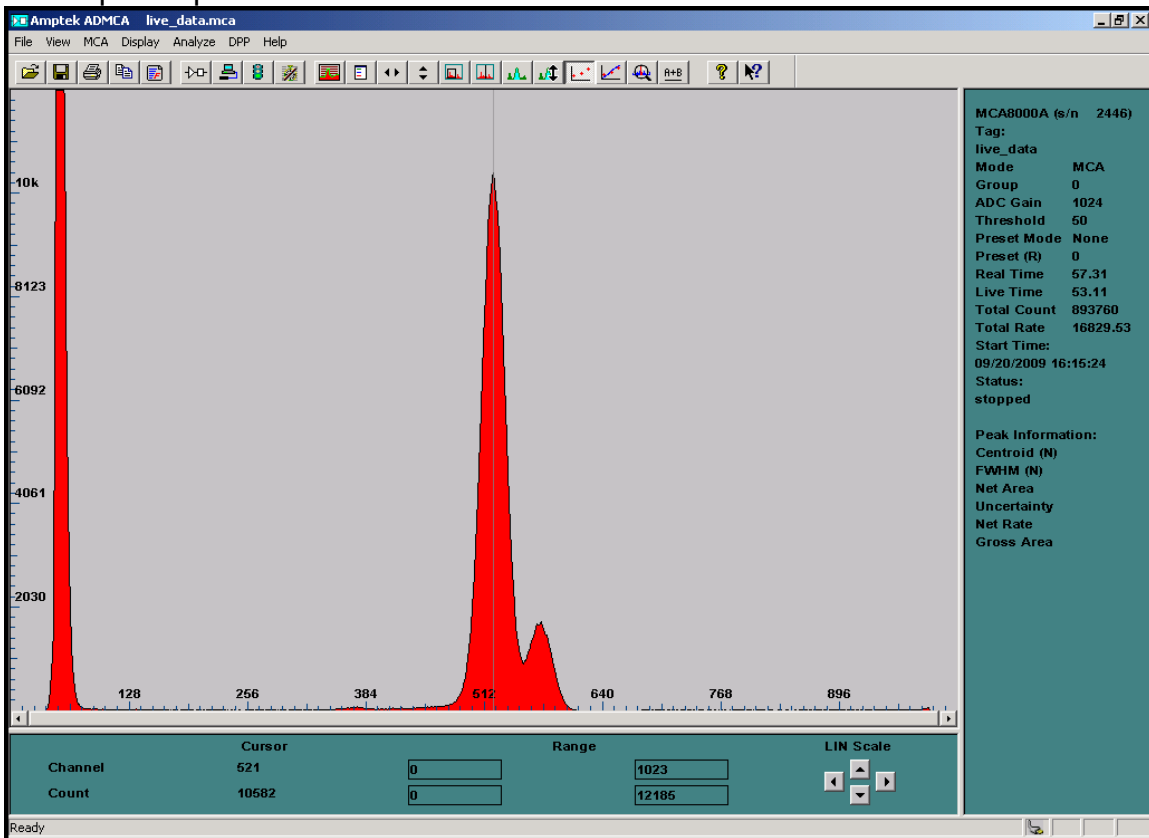
Detector Element=305 Shaping Time = 2 μ sec
~14 kcps Output Counts



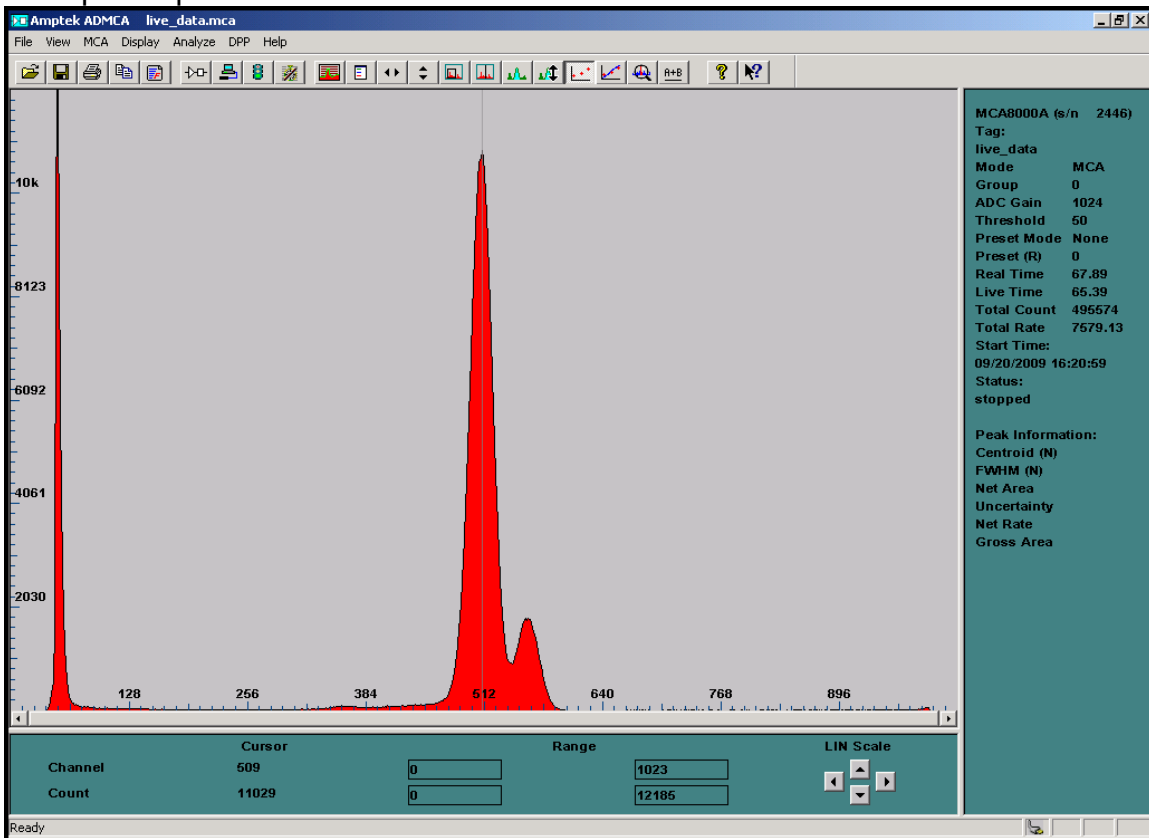
Detector Element=306 Shaping Time = 2 μ sec
~7 kcps Output Counts



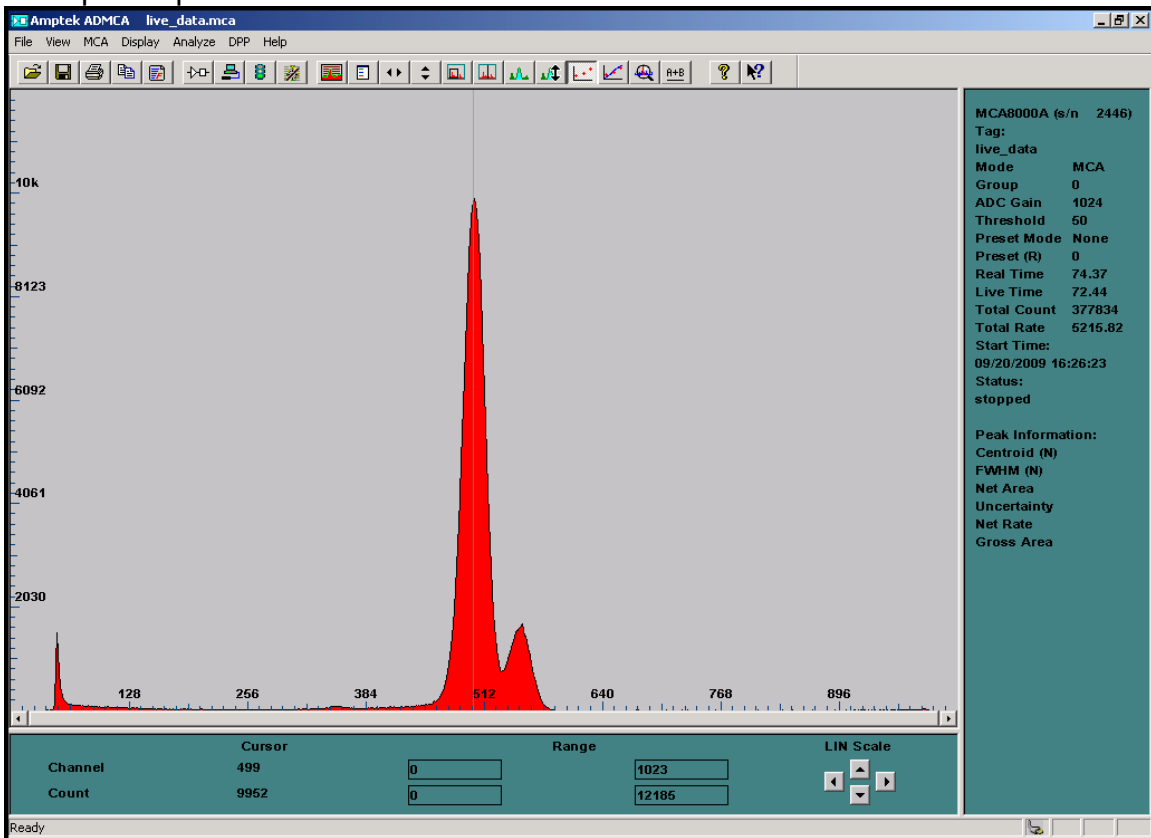
Detector Element=312 Shaping Time = 2 μ sec
~17 kcps Output Counts



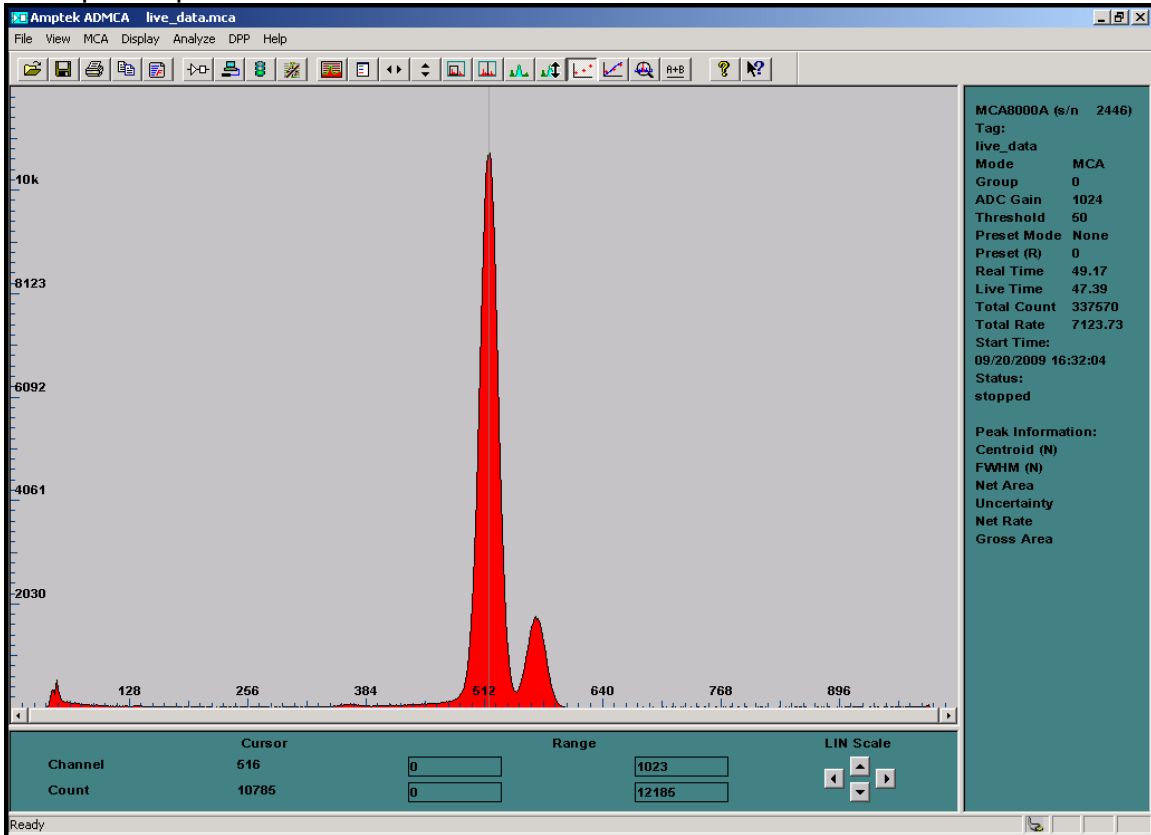
Detector Element=316 Shaping Time = 2 μ sec
~8 kcps Output Counts



Detector Element=319 Shaping Time = 2 μ sec
~5 kcps Output Counts



Detector Element=324 Shaping Time = 2 μ sec
~7 kcps Output Counts



Detector Element=327 Shaping Time = 2 μ sec
~9 kcps Output Counts

