Delay (ns)	Counts
0	73
2	218
3	294
4	346
6	324
10	347
11	304
12	321
13	302
16	310
18	329
19	304
20	263
24	40
63	29
61	17

Table 1: Data for the prompt curve.

The fitted function has $\chi^2 = 4.70339820191849$, with 11 data points (9 degrees of freedom), which means a $P = 0.8594$; thus we would make a Type 1 error (a correct null hypothesis is rejected) with P probability if we rejected the null-hypothesis, which for the χ^2 test is that there is no significant error between the observed and the expected values.
(source:
http://www.statisticssolutions.com/chi-square-goodness-of-fit-test/
https://www.graphpad.com/quickcalcs/pValue2/)
The first two correspond to 7 cm detector range, the second two to 10 cm. Time interval: 40 seconds. For 400 seconds, multiply data by 10; results: 1000 pm 30, 1200 pm 32, 3600 pm 60, 4500 pm 65, based on this it is worth to use 7 cm.

Scale unit	Detector 1	Detector 2	Error 1	Error 2
25	3,138	2,714	56.0179	52.0961
50	3,594	3,380	59.95	58.1378
75	4,459	3,658	66.7757	60.4814
100	5,258	4,306	72.5121	65.6201
125	4,919	3,522	70.1356	59.3464
150	3,824	3,058	61.8385	55.2992
175	3,195	2,620	56.5243	51.1859
200	2,734	2,073	52.2877	45.5302
225	2,557	1,967	50.5668	44.3509
250	2,390	1,812	48.8876	42.5676
275	2,276	1,657	47.7074	40.7063
300	2,346	1,695	48.4355	41.1704
325	2,353	1,689	48.5077	41.0974
350	2,329	1,672	48.2597	40.8901
375	2,479	1,901	49.7896	43.6005
400	2,619	1,971	51.1762	44.3959
425	2,734	1,980	52.2877	44.4972
450	2,529	2,111	50.2892	45.9456
475	2,166	1,895	46.5403	43.5316
500	1,809	1,591	42.5323	39.8873
525	1,851	1,341	43.0232	36.6197
550	3,108	1,603	55.7494	40.0375
537	2,335	1,405	48.3218	37.4833
565	3,952	1,953	62.8649	44.1928
580	3,752	2,550	61.2536	50.4975
595	2,651	2,926	51.4879	54.0925
610	1,904	2,619	43.6348	51.1762
625	2,113	1,858	45.9674	43.1045
640	2,828	1,427	53.1789	37.7757
655	2,901	1,707	53.8609	41.3159
670	2,073	2,058	45.5302	45.3652
685	1,045	1,982	32.3265	44.5197
700	358	1,471	18.9209	38.3536
715	128	817	11.3137	28.5832
740	30	184	5.47723	13.5647
765	35	39	5.91608	6.245
780	18	31	4.24264	5.56776
800	25	18	5.00000	4.24264

Table 2: Spectra of detectors. The window width was set to 150 on the potentiometers, which corresponds to a window width of 15. The second and third columns show the detector counts after a measurement for 10 seconds.

Angle	UC	UC-norm.	SCA1	SCA2	time	UC-accidental	SCA1-norm.	SCA2-norm.	UC-Err	SCA1-Err	SCA2-Err
90	5,576	3,717.33	2.6908e+06	2.4491e+06	600	3,571.19	1.79387e+06	1.63273e+06	60.978	1,343.69	1,282.04
110	3,837	3,837	1.792e+06	1.6393e+06	400	3,690.86	1.792e+06	1.6393e+06	61.9514	1,343	1,284.6
130	3,892	3,892	1.7917e+06	1.6445e+06	400	3,745.86	1.7917e+06	1.6445e+06	62.3938	1,342.89	1,286.62
150	4,102	4,102	1.7962e+06	1.6523e+06	400	3,955.86	1.7962e+06	1.6523e+06	64.0545	1,344.56	1,289.65
170	4,222	4,222	1.7947e+06	1.6578e+06	400	4,075.86	1.7947e+06	1.6578e+06	64.9845	1,344	1,291.78
180	6,331	4,220.67	2.6926e+06	2.4844e+06	600	4,074.53	1.79507e+06	1.65627e+06	64.9742	1,344.14	1,291.19
200	4,165	4,165	1.7954e+06	1.6612e+06	400	4,018.86	1.7954e+06	1.6612e+06	64.5444	1,344.26	1,293.1
220	4,085	4,085	1.7965e+06	1.6615e+06	400	3,938.86	1.7965e+06	1.6615e+06	63.9217	1,344.67	1,293.21
240	3,807	3,807	1.7942e+06	1.6584e+06	400	3,660.86	1.7942e+06	1.6584e+06	61.7088	1,343.82	1,292.01
260	3,797	3,797	1.7968e+06	1.6537e+06	400	3,650.86	1.7968e+06	1.6537e+06	61.6278	1,344.78	1,290.19
190	4,306	4,306	1.7981e+06	1.6563e+06	400	4,159.86	1.7981e+06	1.6563e+06	65.6276	1,345.27	1,291.2

Table 3: The measured counts by **SCA1, SCA2** and **UC** as a function of the angle in degrees. The abbreviation *norm.* means normalized to 400 seconds.