Gain of the PMT's (Fit)

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16.06.2015

Overview

Fit function of the gain

$$\text{Gain} = \frac{a^n}{(n+1)^{k*n}} * V^{k*n}$$

PMT	n	a	k
R7378A BA1511	10	0.165784	0.735788
R7378A BA1512	10	0.132402	0.784792
R7378A BA1513	10	0.163135	0.742609
R7378A ZN2207	10	0.204533	0.690053
R762 NA0138	10	0.192359	0.690259

Table: Tables of parameters after the fit.
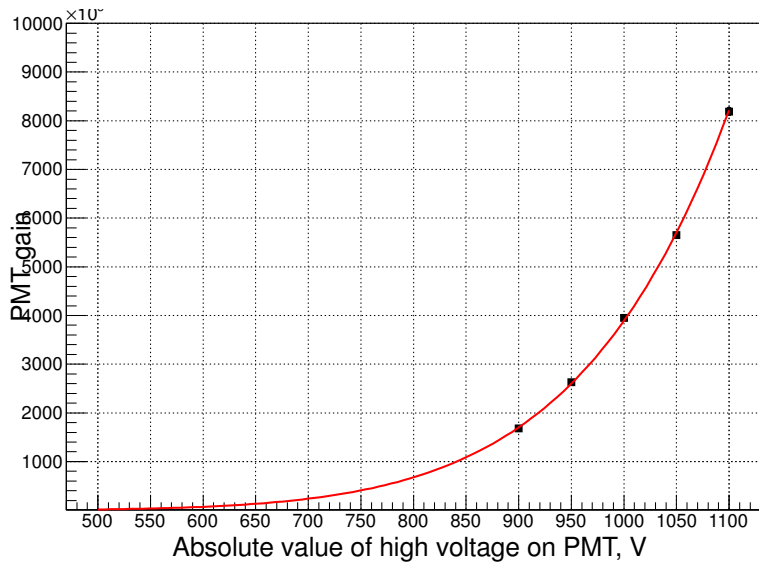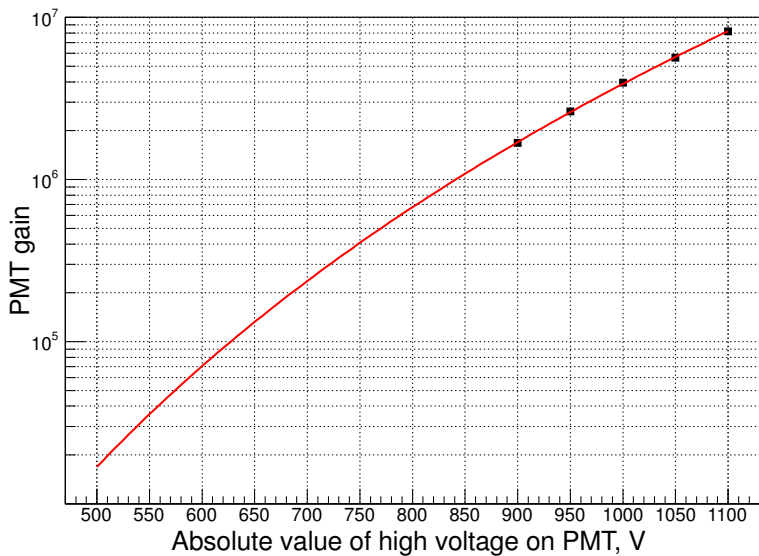
R7378A BA1511
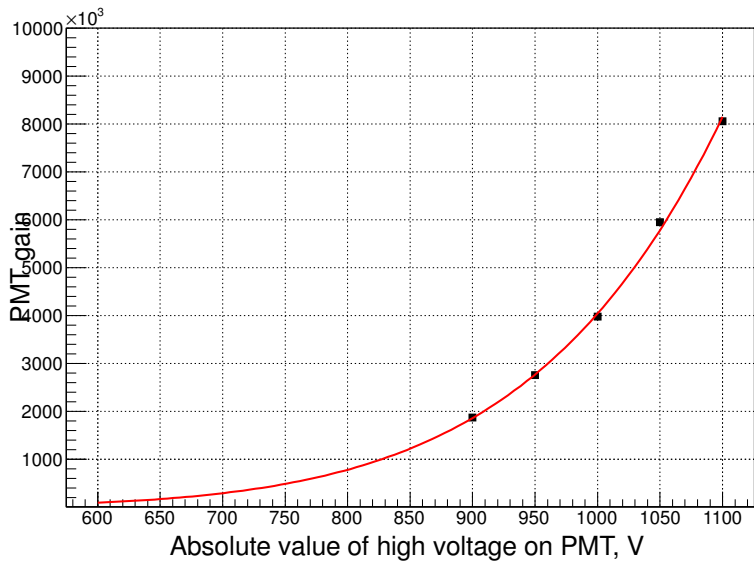
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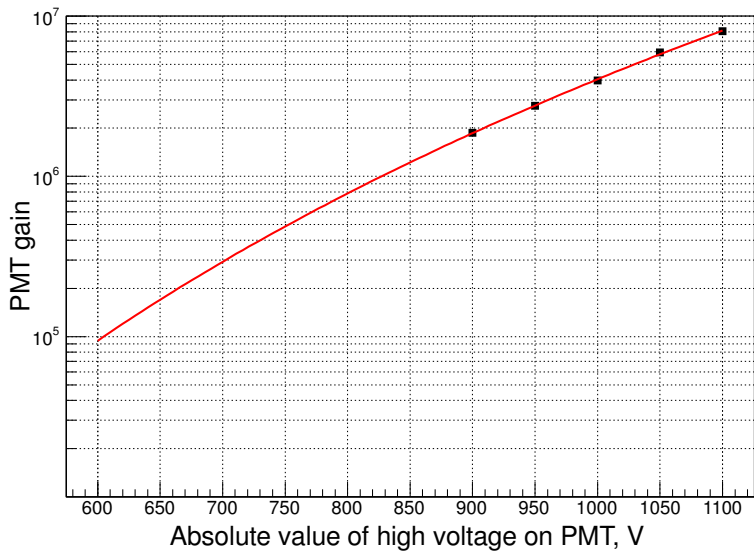
R7378A BA1511

Hight voltage, V	Gain
-500	$2.46423 * 10^4$
-550	$4.96871 * 10^4$
-600	$9.42513 * 10^4$
-650	$1.69849 * 10^5$
-700	$2.93004 * 10^5$
-750	$4.86788 * 10^5$
-800	$7.82657 * 10^5$
-850	$1.22263 * 10^6$
-900	$1.86185 * 10^6$
-950	$2.77151 * 10^6$
-1000	$4.04226 * 10^6$
-1050	$5.78805 * 10^6$
-1100	$8.15054 * 10^6$

Table: Table of gains
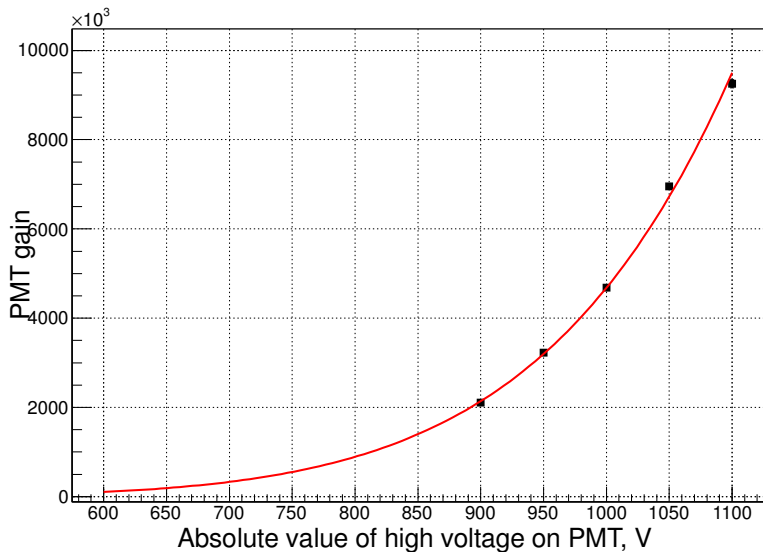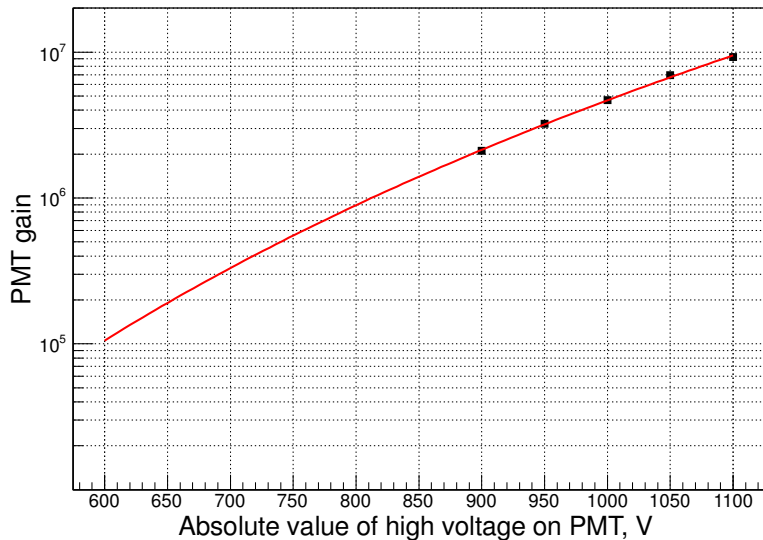
R7378A BA1512

R7378A BA1512

R7378A BA1512

Hight voltage, V	Gain
-500	$1.68842 * 10^4$
-550	$3.56719 * 10^4$
-600	$7.06135 * 10^4$
-650	$1.32342 * 10^5$
-700	$2.36745 * 10^5$
-750	$4.06846 * 10^5$
-800	$6.75145 * 10^5$
-850	$1.08649 * 10^6$
-900	$1.70152 * 10^6$
-950	$2.60085 * 10^6$
-1000	$3.88990 * 10^6$
-1050	$5.70467 * 10^6$
-1100	$8.21837 * 10^6$

Table: Table of gains
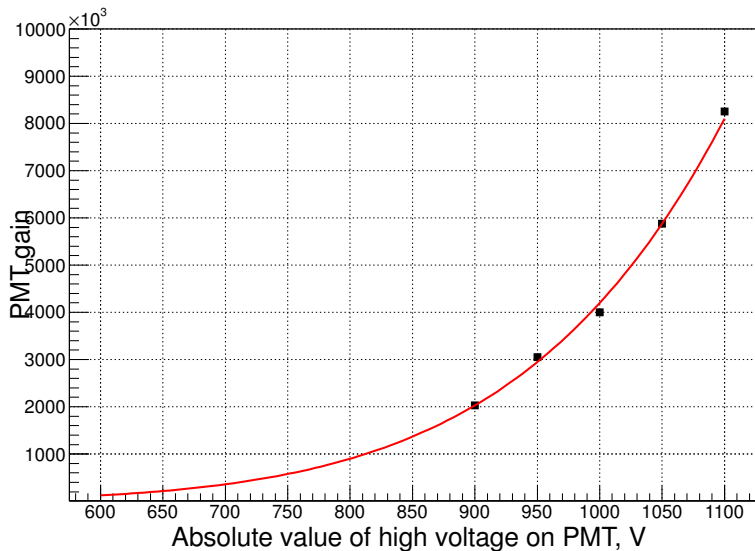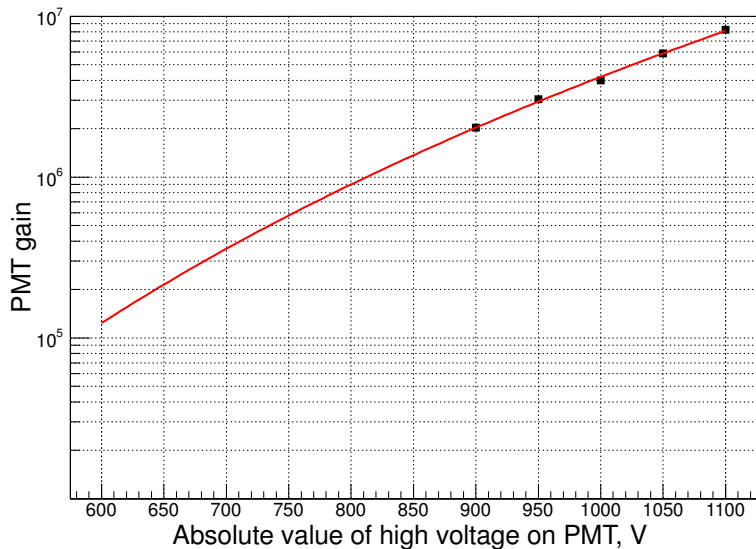
R7378A BA1513

R7378A BA1513

R7378A BA1513

Hight voltage, V	Gain
-500	$2.72138 * 10^4$
-550	$5.52301 * 10^4$
-600	$1.05389 * 10^5$
-650	$1.90960 * 10^5$
-700	$3.31093 * 10^5$
-750	$5.52662 * 10^5$
-800	$8.92490 * 10^5$
-850	$1.39999 * 10^6$
-900	$2.14026 * 10^6$
-950	$3.19771 * 10^6$
-1000	$4.68021 * 10^6$
-1050	$6.72387 * 10^6$
-1100	$9.49842 * 10^6$

Table: Table of gains
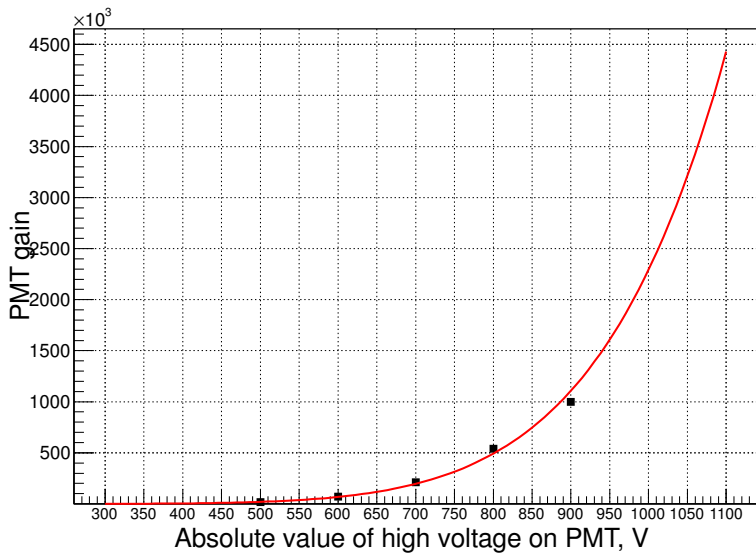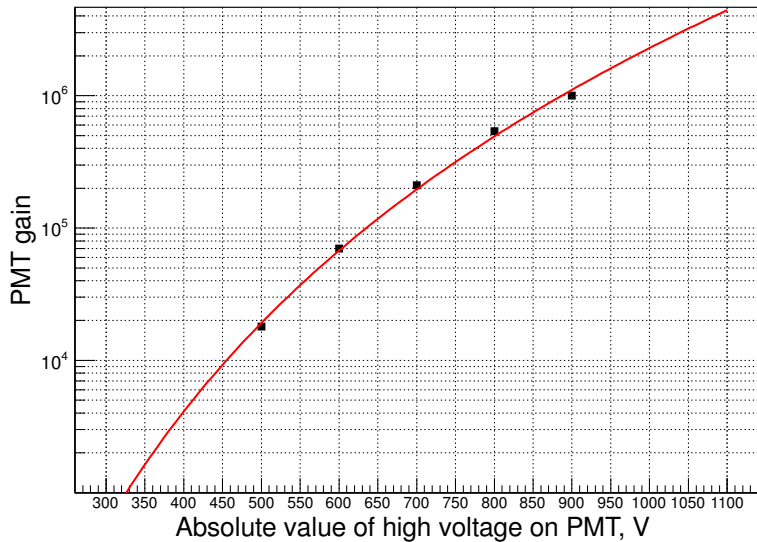
R7378A ZN2207

R7378A ZN2207

R7378A ZN2207

Hight voltage, V	Gain
-500	$3.51395 * 10^4$
-550	$6.78309 * 10^4$
-600	$1.23648 * 10^5$
-650	$2.14815 * 10^5$
-700	$3.58226 * 10^5$
-750	$5.76659 * 10^5$
-800	$9.00185 * 10^5$
-850	$1.36778 * 10^6$
-900	$2.02914 * 10^6$
-950	$2.94675 * 10^6$
-1000	$4.19819 * 10^6$
-1050	$5.87868 * 10^6$
-1100	$8.10390 * 10^6$

Table: Table of gains

R762 NA0138 (typical gain)

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Hight voltage, V	Gain
-400	$4.10934 * 10^3$
-450	$9.26524 * 10^3$
-500	$1.91735 * 10^4$
-550	$3.70185 * 10^4$
-600	$6.74928 * 10^4$
-650	$1.17275 * 10^5$
-700	$1.95598 * 10^5$
-750	$3.14911 * 10^5$
-800	$4.91653 * 10^5$
-850	$7.47130 * 10^5$
-900	$1.10852 * 10^6$
-950	$1.60999 * 10^6$
-1000	$2.29397 * 10^6$
-1050	$3.21255 * 10^6$
-1100	$4.42899 * 10^6$

The End