# NASA Dawn Mission
GRaND@Vesta Browse Charts
Ceres cth DA600 15182_0

- Number of science records: 83
  368 missing science packets with 12 gaps.
  Start/End: 2015-07-01T00:01:08 to 2015-07-01T05:44:08

- Number of SOH records: 1208
  4720 missing SOH packets with 1 gaps.
  Start/End: 2015-07-01T00:00:34 to 2015-07-08T00:59:34

- Comments: Browse charts.
  - Provides an overview of data contained within this directory.
  - Refer to the .STA file for detailed state information.
  - The energy scale for calibrated spectra may not be accurate.
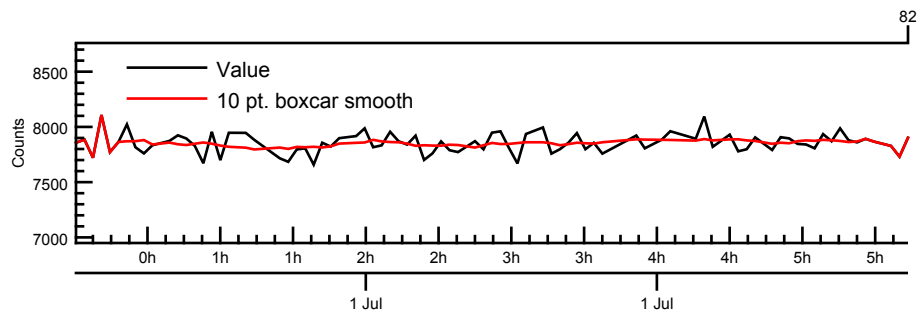 - Missing data count may be in error when power on data are present.

- Number of states = 113
- Instrument settings for first state (STATE_INDEX 909):

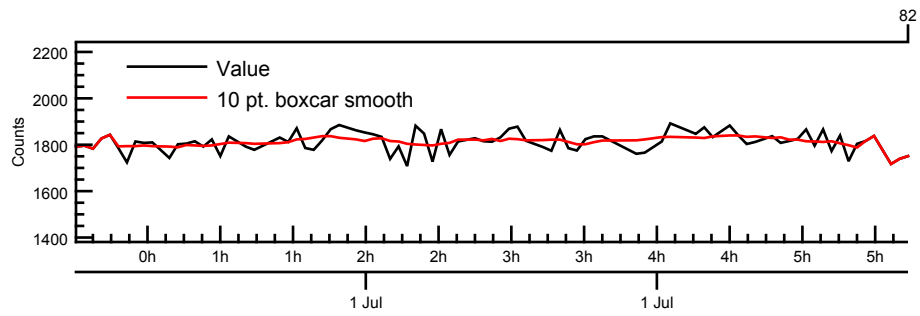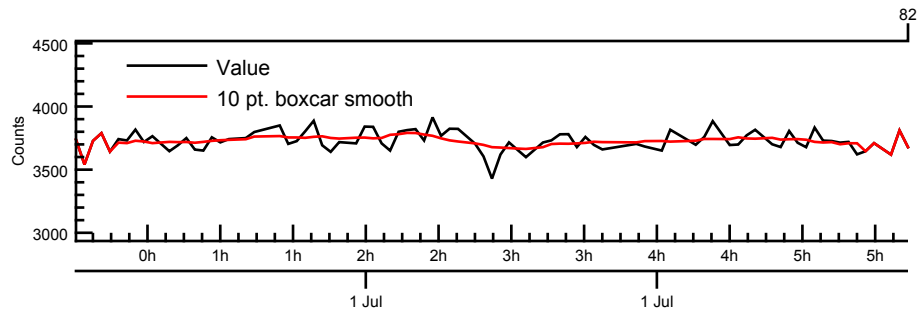|			
TELREADOUT	210	NEMG_TOT_EVTS	3876
TELSOH	35	NEMG_CZT_EVTS	3376
MODE	1	NEMN_TOT_EVTS	2800
HVPS1	1	L_BGO_CW	1
HVPS1_SET	180	H_BGO_CW	64
HVPS2	1	L_BGO_ROI	1
HVPS2_SET	170	H_BGO_ROI	64
HVPS3	1	L_BLP_MY_CW	1
HVPS3_SET	175	H_BLP_MY_CW	64
HVPS4	1	L_BLP_MY_ROI	1
HVPS4_SET	180	H_BLP_MY_ROI	64
HVPS5	1	L_BLP_PY_CW	1
HVPS5_SET	127	H_BLP_PY_CW	64
HVPS6	1	L_BLP_PY_ROI	1
HVPS6_SET	170	H_BLP_PY_ROI	64
PM5_LVPS	1	L_BLP_MZ_CW	1

Dead time counts
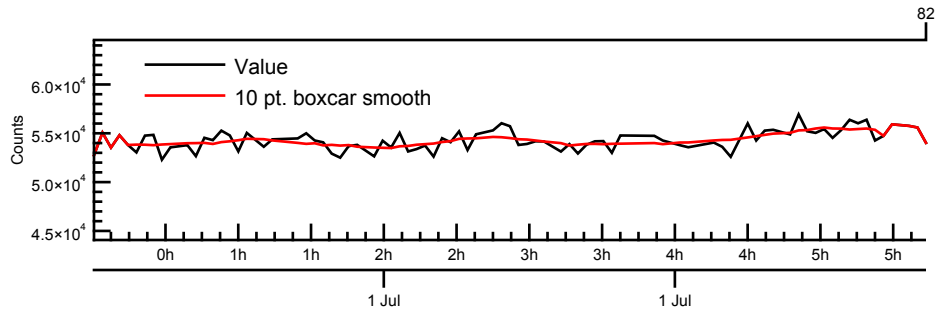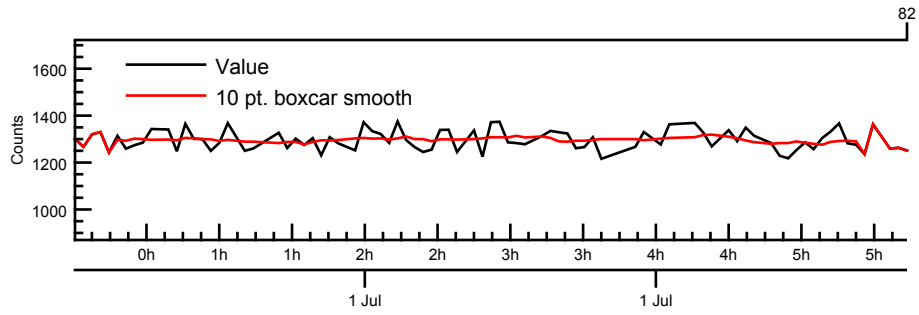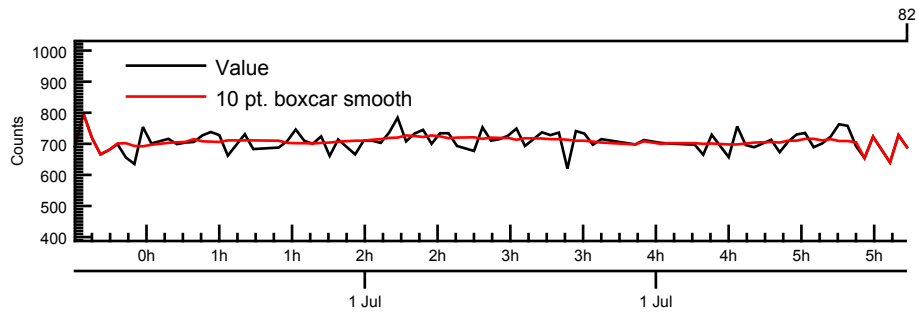

BGO overload events
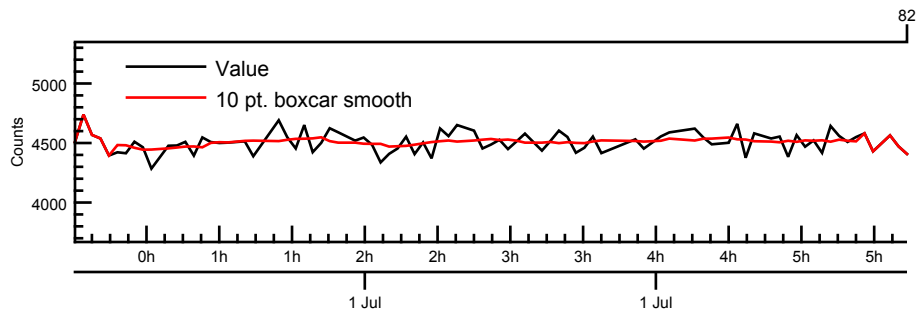

CZT overload events

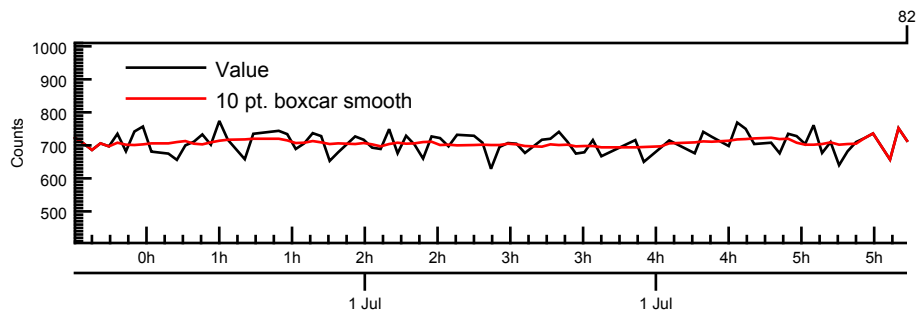## +Z phoswich overload events

-Y BLP overload events

Counts

- Value
- 10 pt. boxcar smooth

1600
1400
1200
1000

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul

+Y BLP overload events

Counts

- Value
- 10 pt. boxcar smooth

1000
900
800
700
600
500
400

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul

-Z phoswich overload events

Counts

- Value
- 10 pt. boxcar smooth

5000

4500

4000

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul

+Z phoswich CAT4 events

Counts

- Value
- 10 pt. boxcar smooth

1000
900
800
700
600
500

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

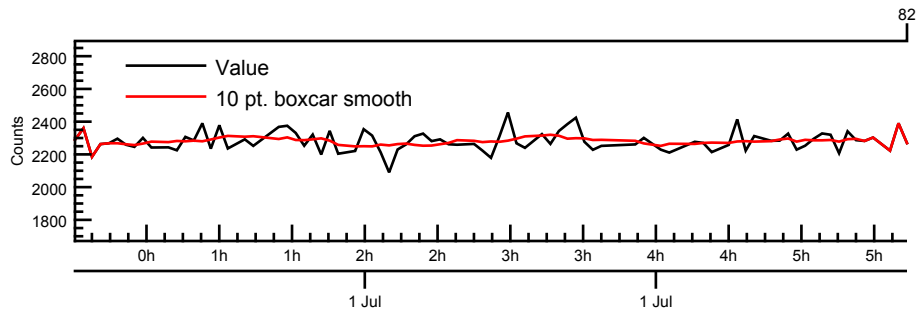1 Jul   1 Jul

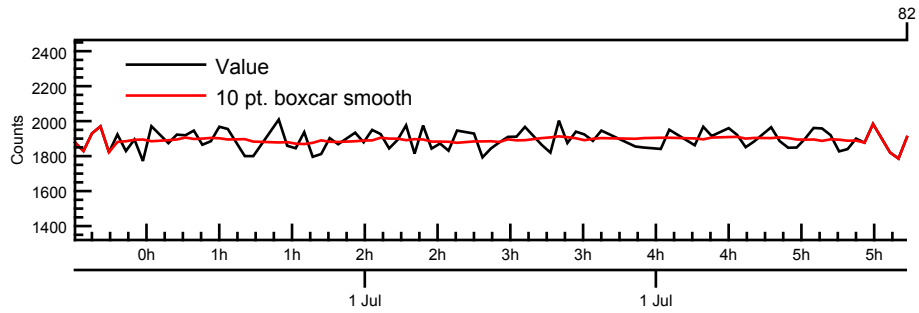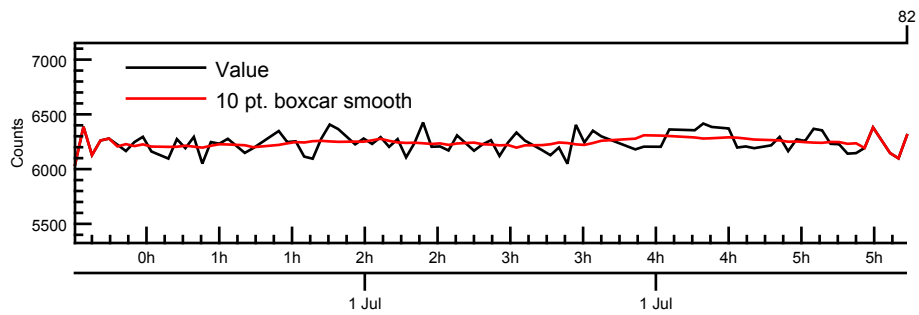## -Y BLP CAT4 events
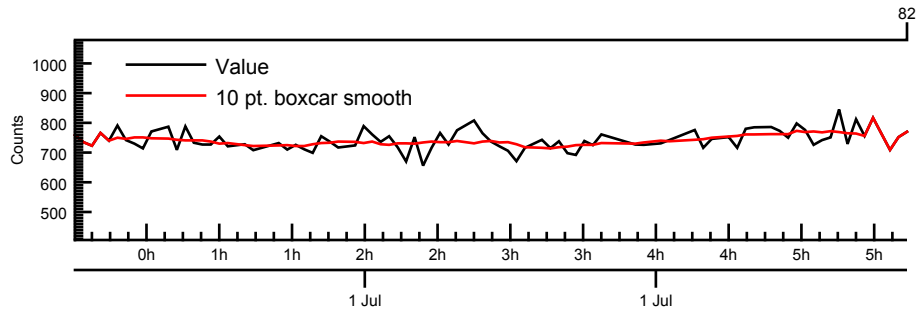
+Y BLP CAT4 events
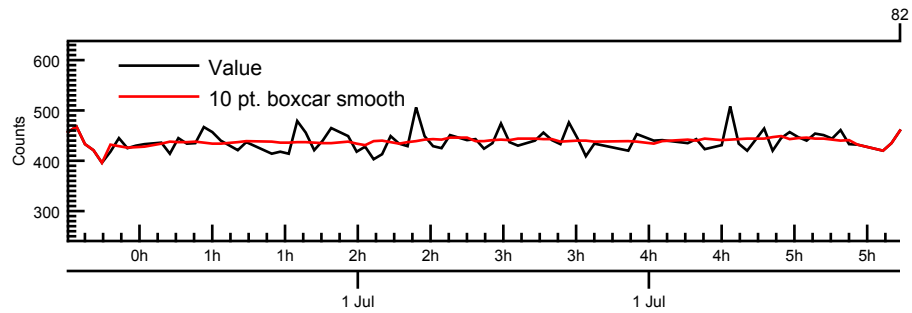
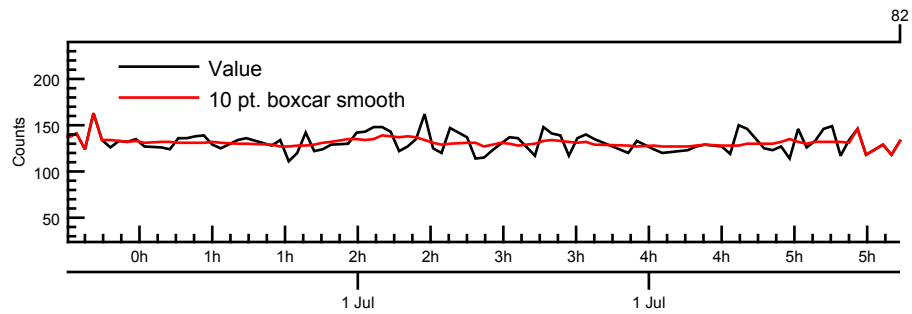## -Z phoswich CAT4 events
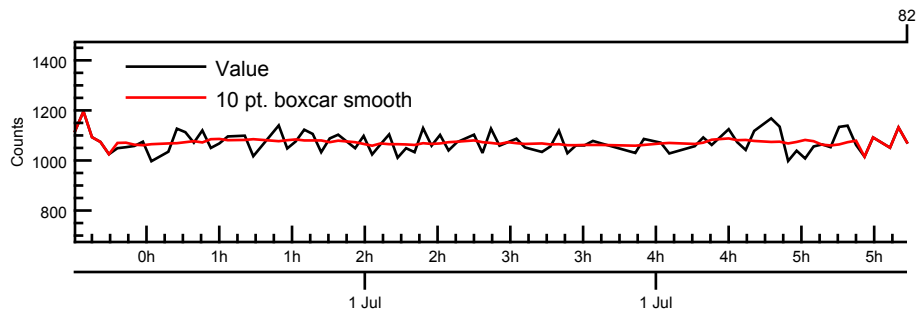
Early second interaction events

Multiple-crystal CZT events

Counts

— Value
— 10 pt. boxcar smooth

2400
2200
2000
1800
1600
1400

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul

Valid CZT events (CAT10)

Counts

— Value
— 10 pt. boxcar smooth

7000
6500
6000
5500

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul

Coincidence BGO and CZT events (CAT7)

Counts

— Value
— 10 pt. boxcar smooth

200
150
100
50

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul

Coincidence of three or more sensor elements

Counts

— Value
— 10 pt. boxcar smooth

2.10×10^4
2.05×10^4
2.00×10^4
1.95×10^4
1.90×10^4
1.85×10^4

0h 1h 1h 2h 2h 3h 3h 4h 4h 5h 5h

1 Jul   1 Jul
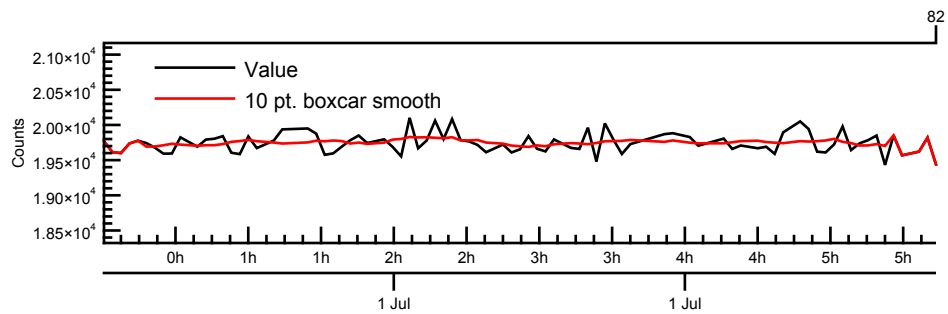
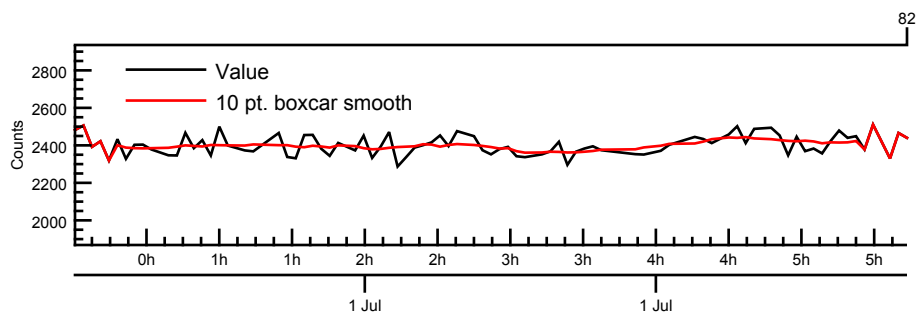## Total events processed by GRaND
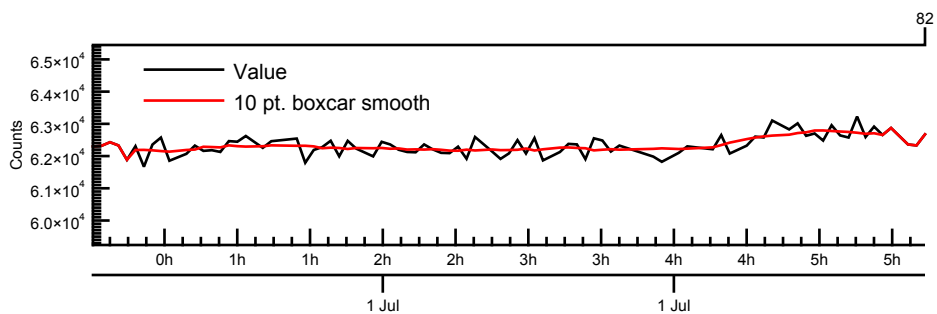
Number of single CZT events (CAT10) in the gamma ray event buffer
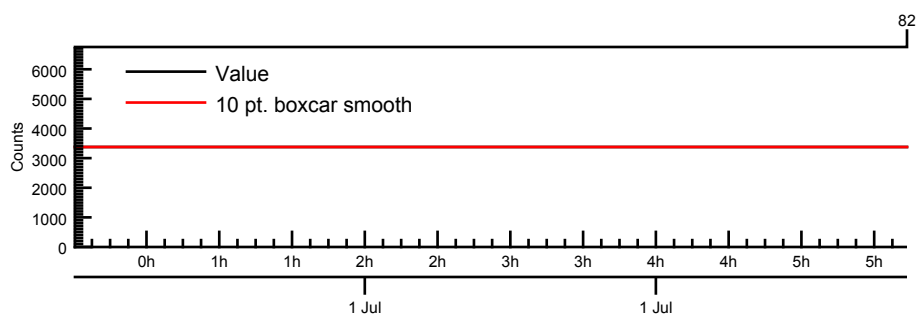
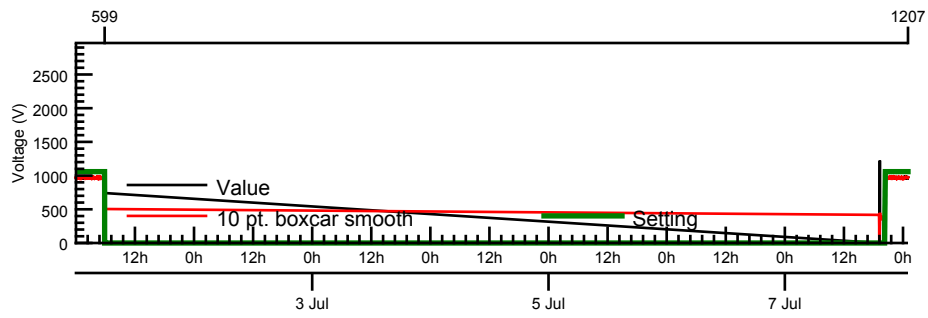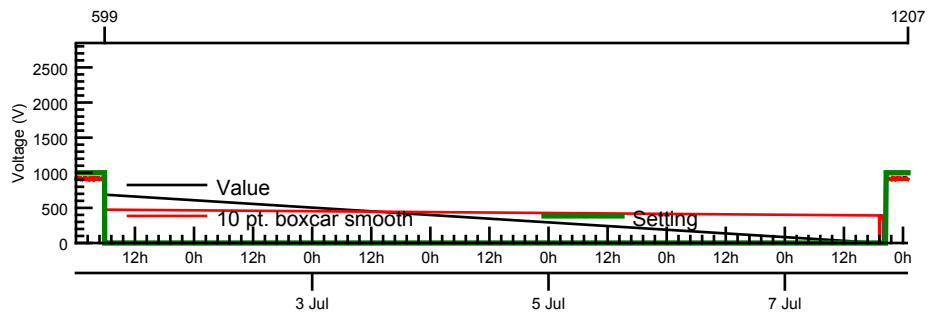## Number of BGO-CZT events (CAT7) in the gamma ray event buffer
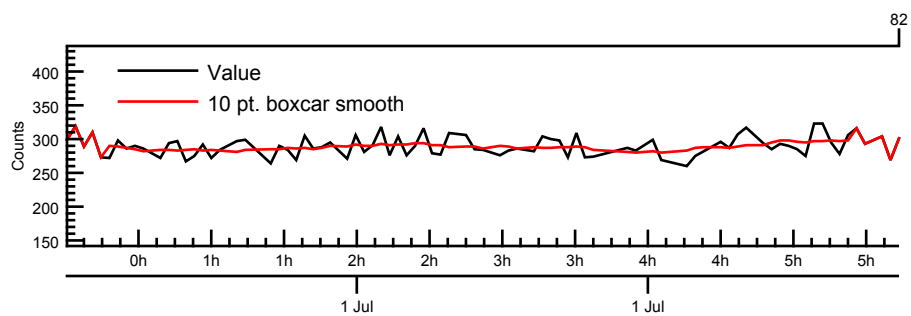
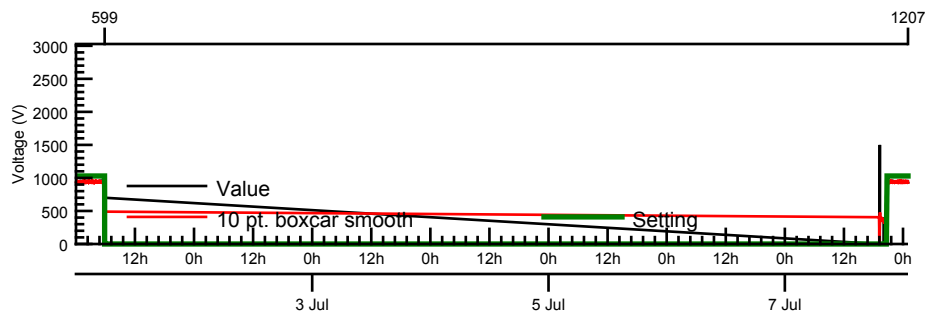## Number of events (CAT4) in the neutron event buffer

HVPS1 (+Z)

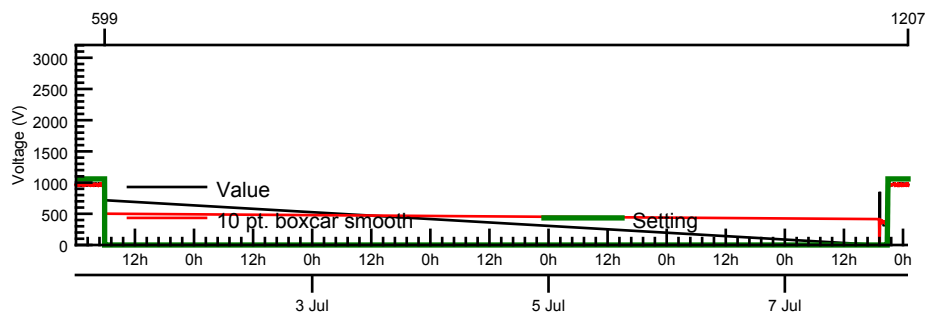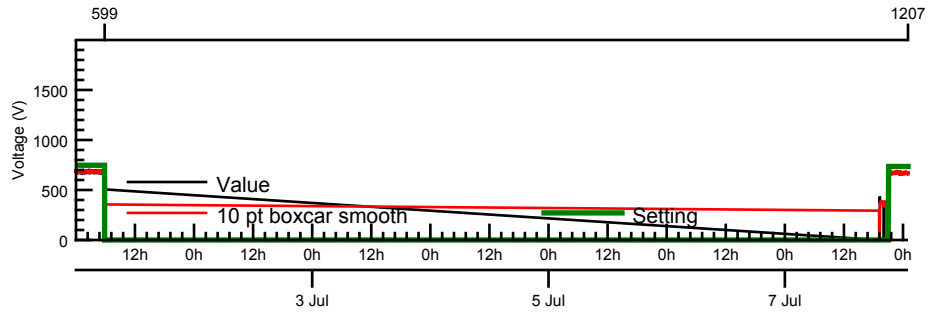599   1207

Value

10 pt. boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

HVPS2 (-Y)

599   1207

Value

10 pt. boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

HVPS3 (+Y)

599   1207

Value

10 pt. boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

HVPS4 (-Z)

599   1207

Value

10 pt. boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

HVPS5 (BGO)

599   1207

Voltage (V)

1500 —
1000 —
500 —
0 —

Value

10 pt boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

HVPS6 (CZT)

599   1207

Voltage (V)

3000 —
2000 —
1000 —
0 —

Value

10 pt boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

HVPS70 (CZT grid bias)

599   1207

Voltage (V)

300 —
250 —
200 —
150 —
100 —
50 —
0 —

Value

10 pt boxcar smooth   Setting

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

TCZT<1,2,3>

599   1207

Temperature (C)

100 —
80 —
60 —
40 —
20 —
0 —

Value

10 pt boxcar smooth

12h   0h   12h   0h   12h   0h   12h   0h   12h   0h   12h   0h

3 Jul   5 Jul   7 Jul

TCZT4

TLVPS

THVPS

TBGO

TPMT
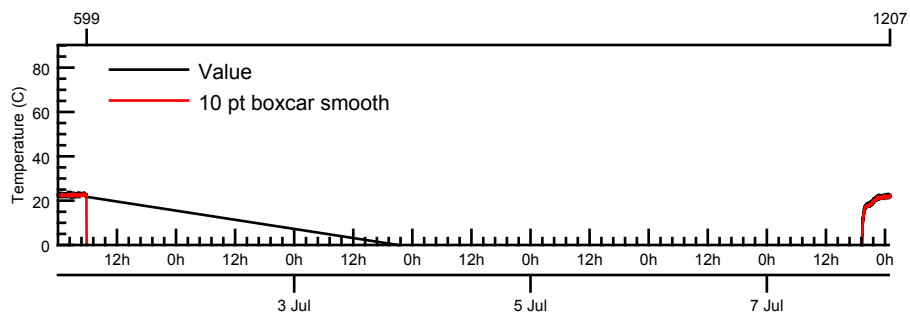
TINTERFACE
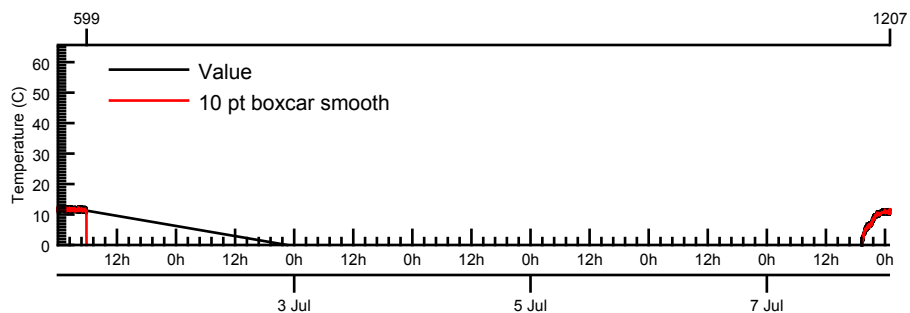
BGO Pulse Height Spectrum
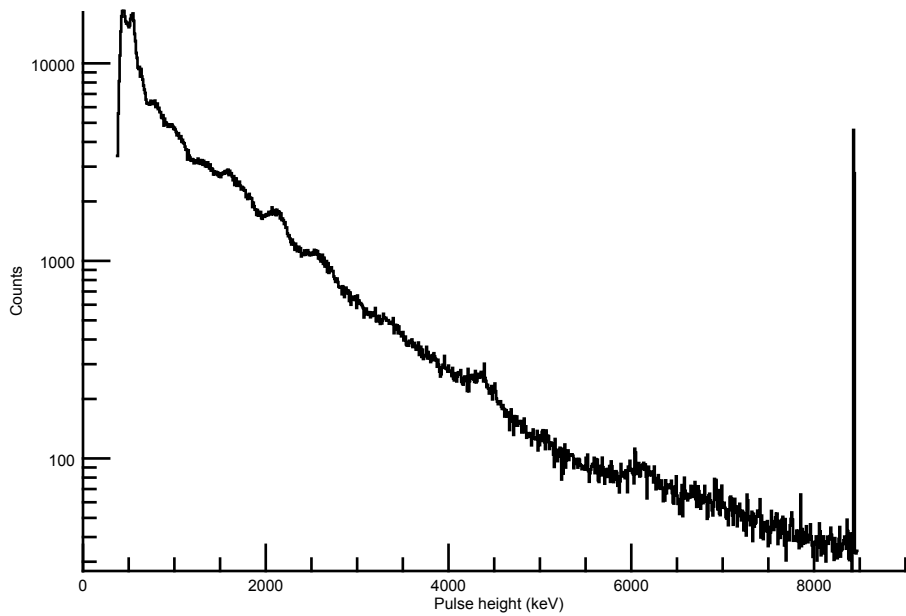
BGO-CZT pair spectrum: BGO
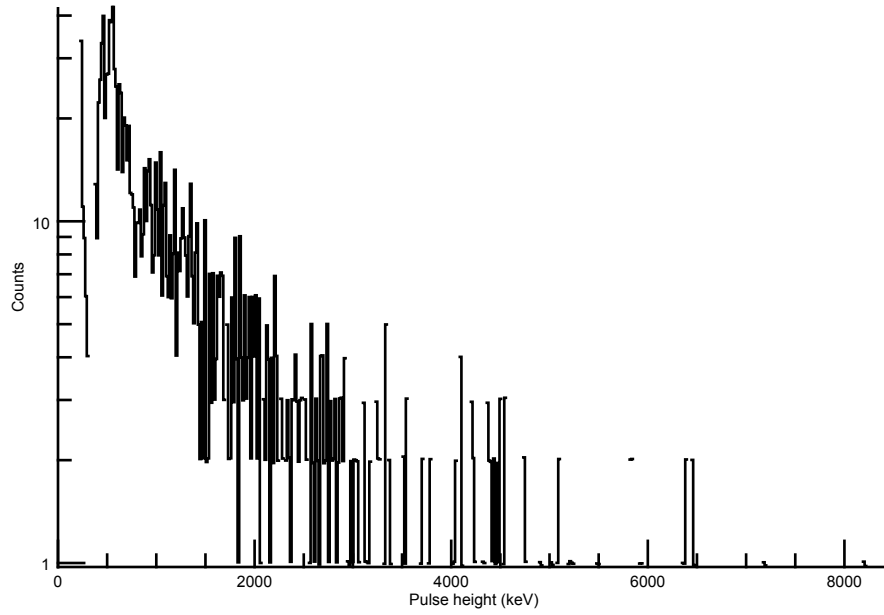
BGO-CZT pair spectrum: CZT
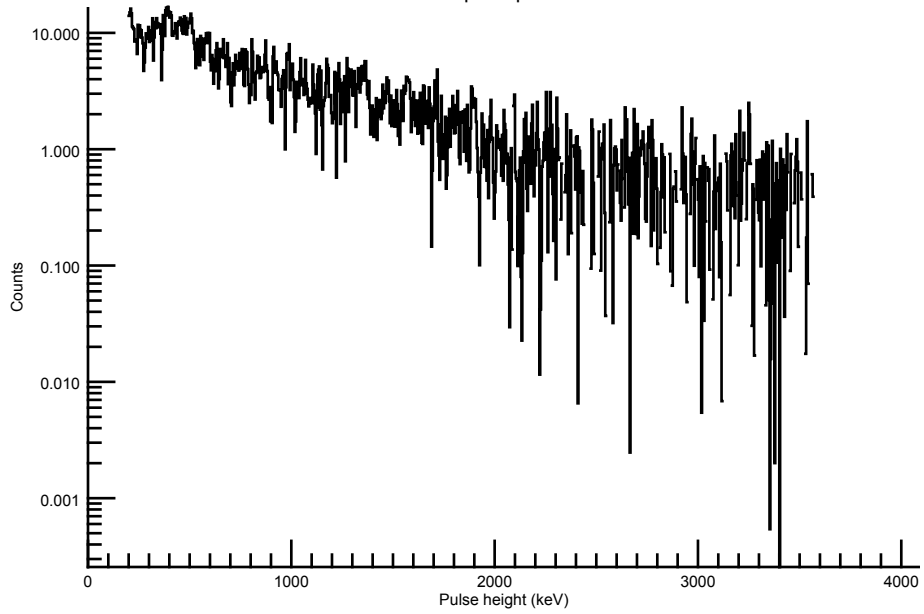
CAT10 pulse height spectrum: CZT11
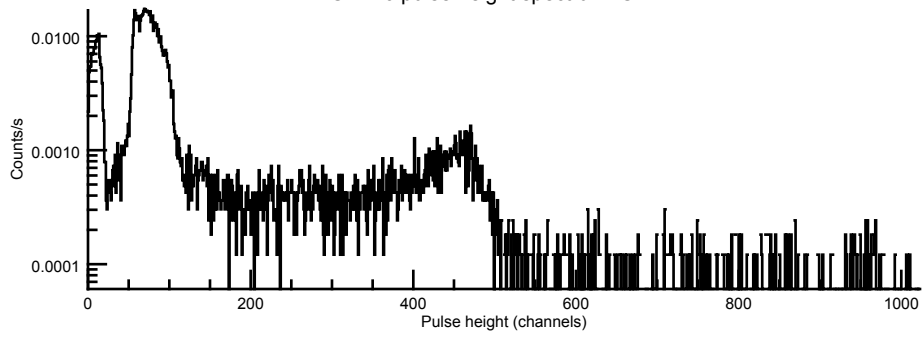
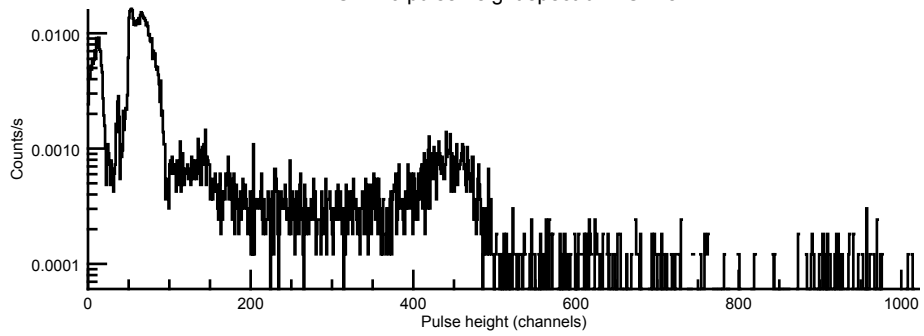CAT10 pulse height spectrum: CZT3
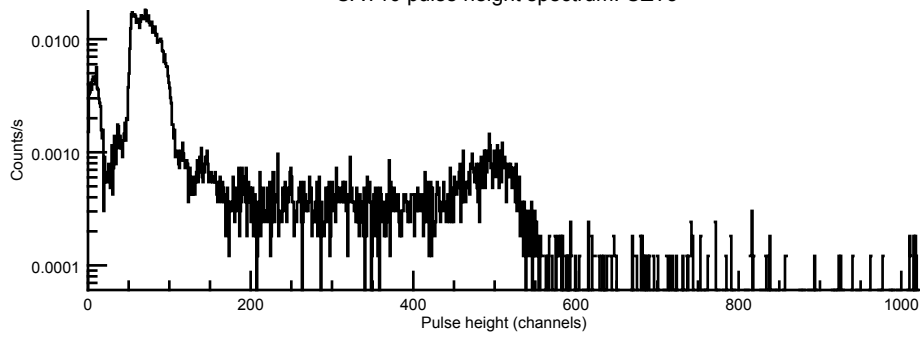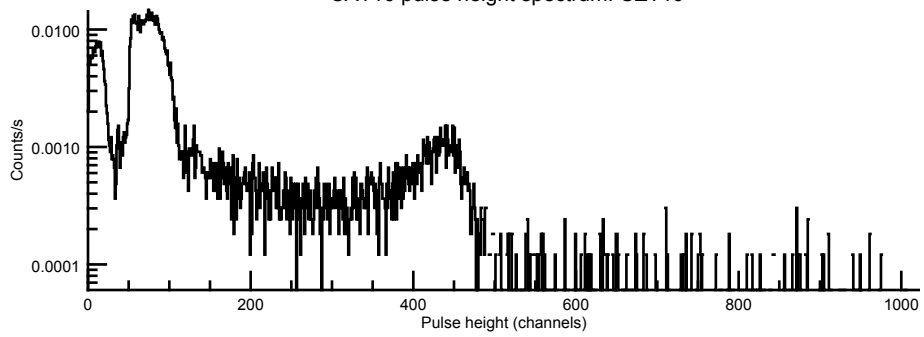

CAT10 pulse height spectrum: CZT1
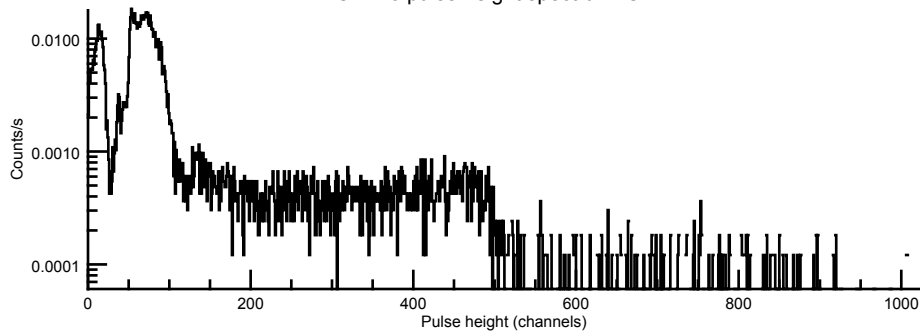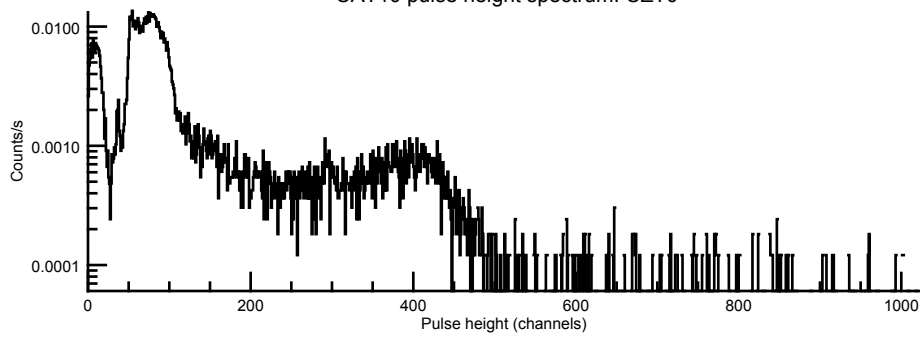
CAT10 pulse height spectrum: CZT2
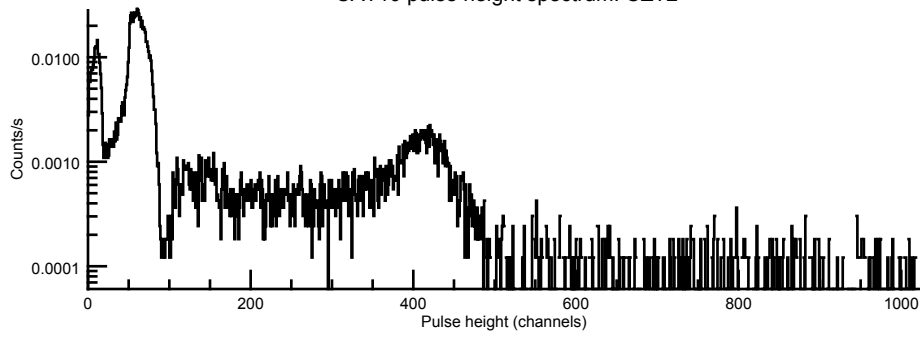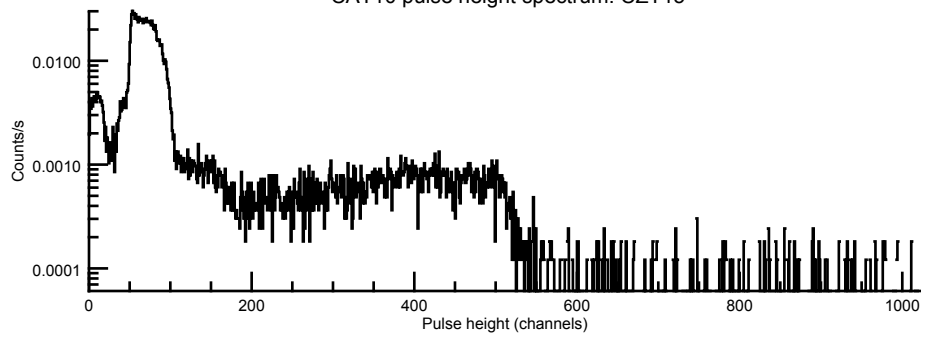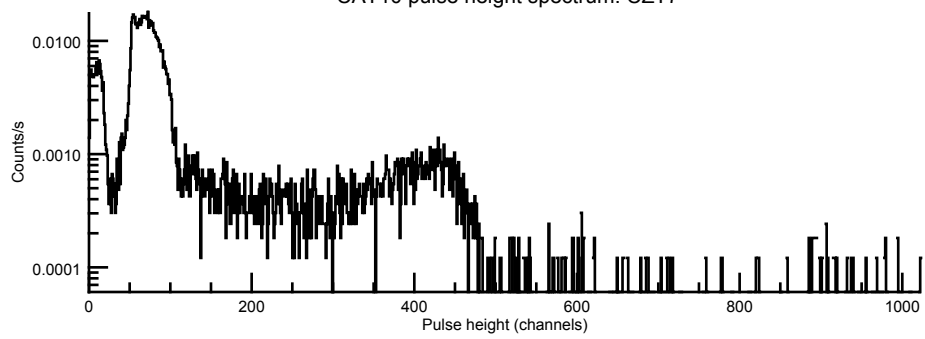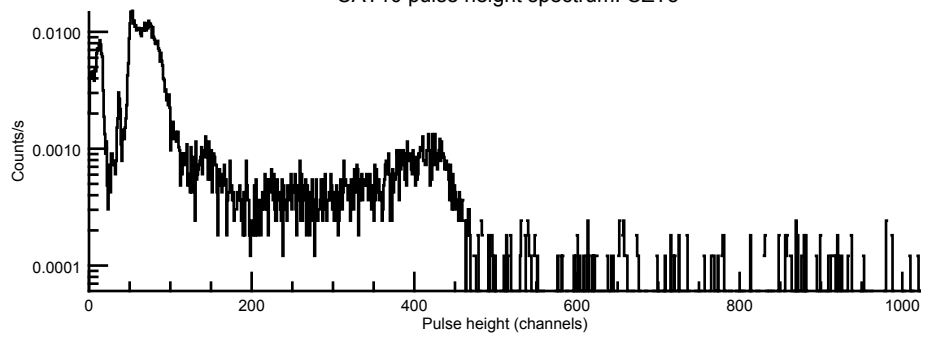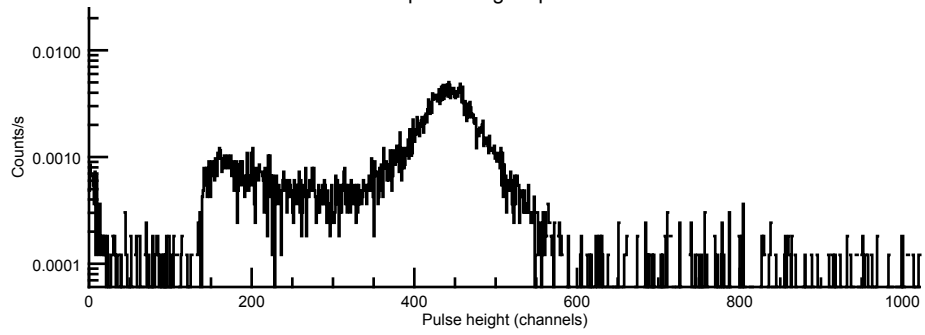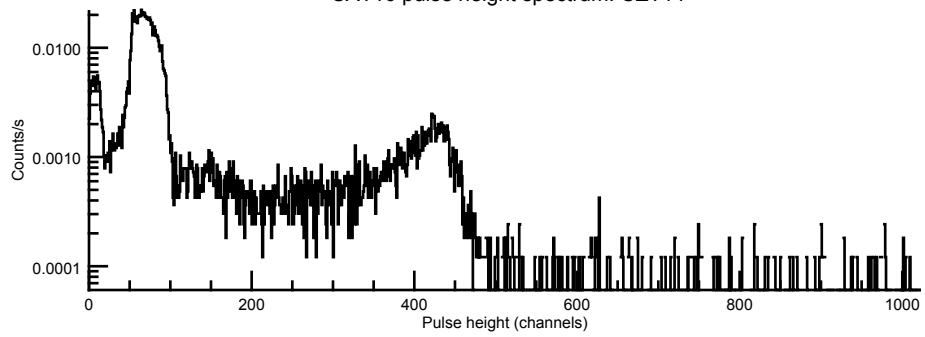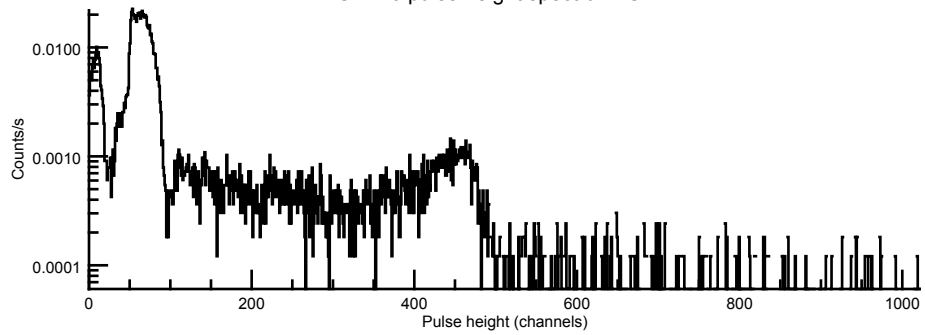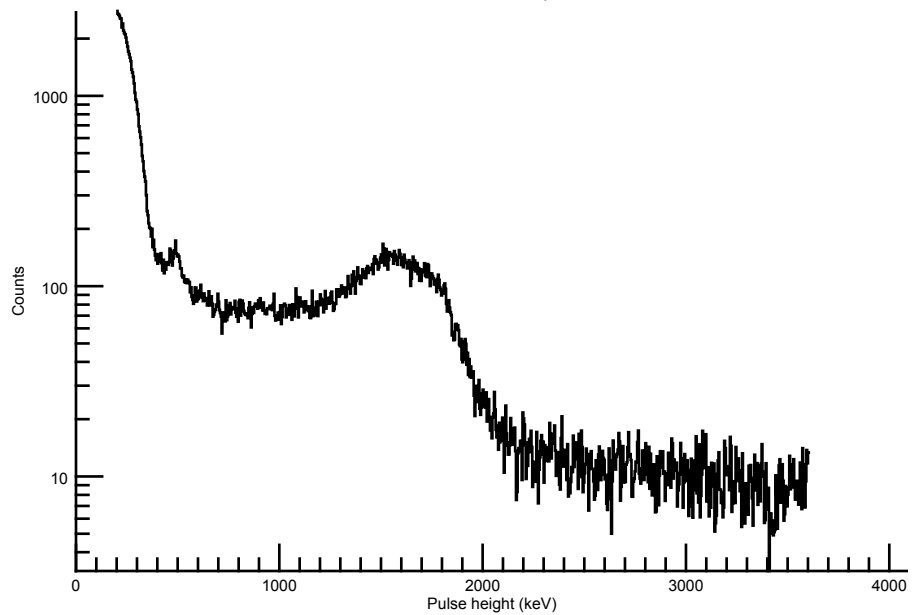
CAT10 pulse height spectrum: CZT8

CAT10 pulse height spectrum: CZT10

CAT10 pulse height spectrum: CZT0

CAT10 pulse height spectrum: CZT15

CAT10 pulse height spectrum: CZT7

CAT10 pulse height spectrum: CZT5

CAT10 pulse height spectrum: CZT6

CAT10 pulse height spectrum: CZT14

CAT10 pulse height spectrum: CZT4

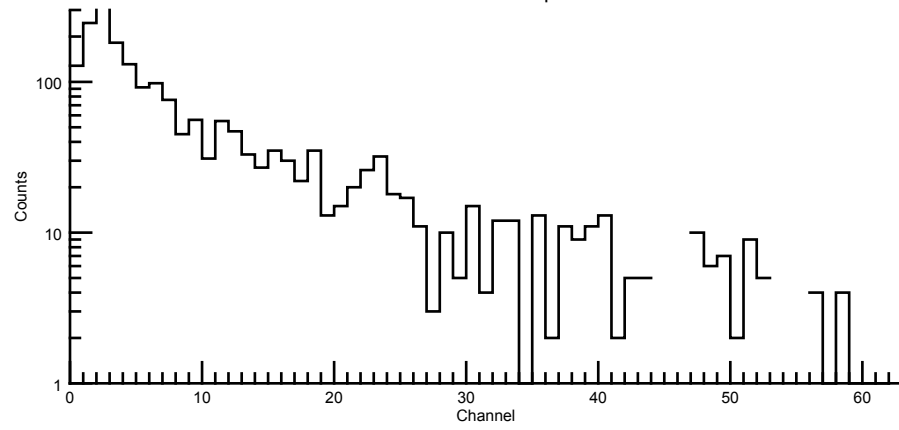## CAT10 CZT composite

CAT1 histograms
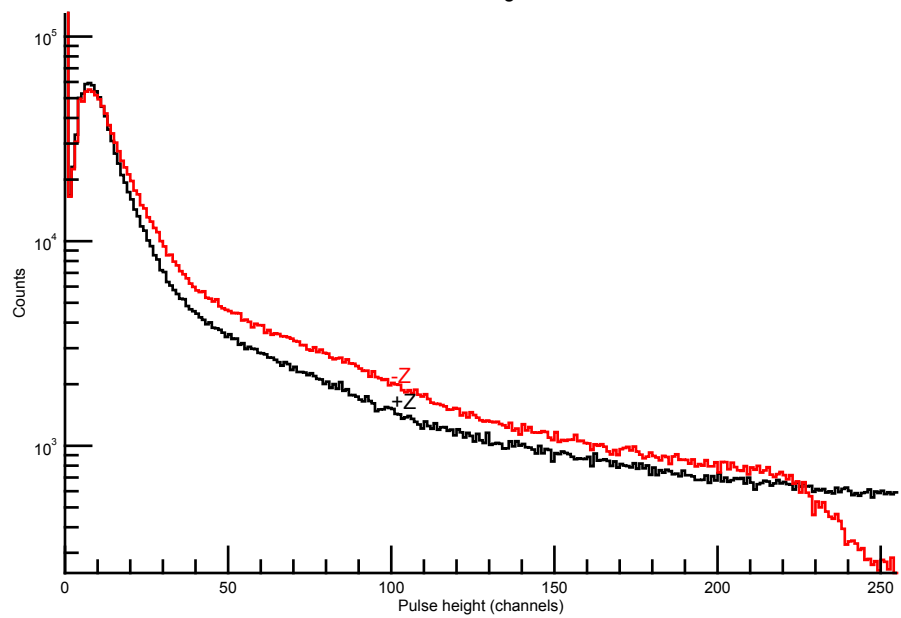
+Z BLP CAT4 first pulse
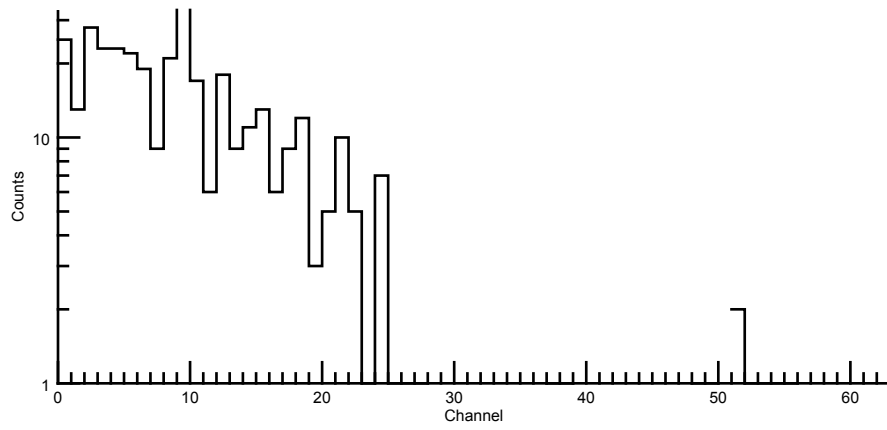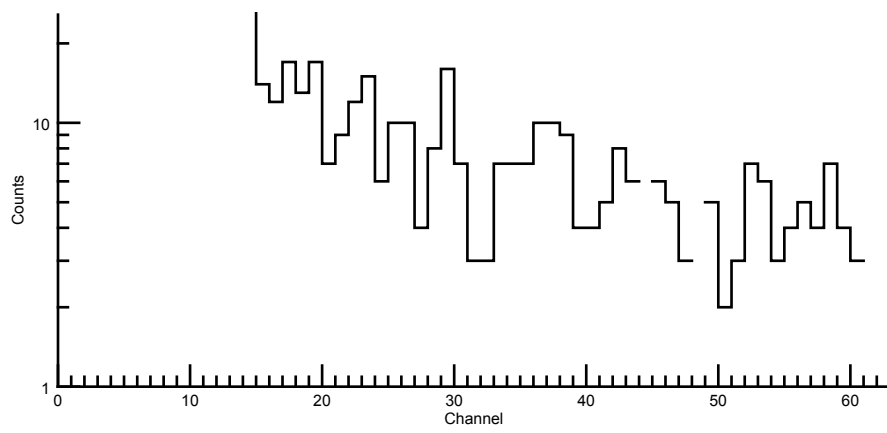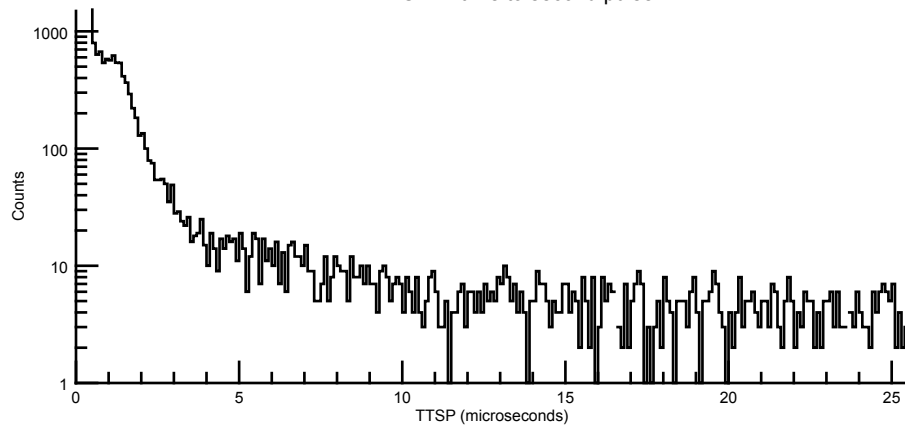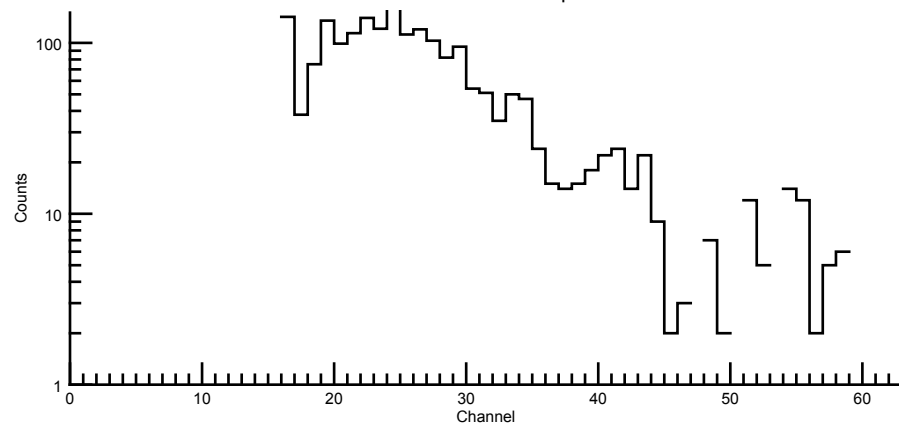

+Z BLP CAT4 second pulse
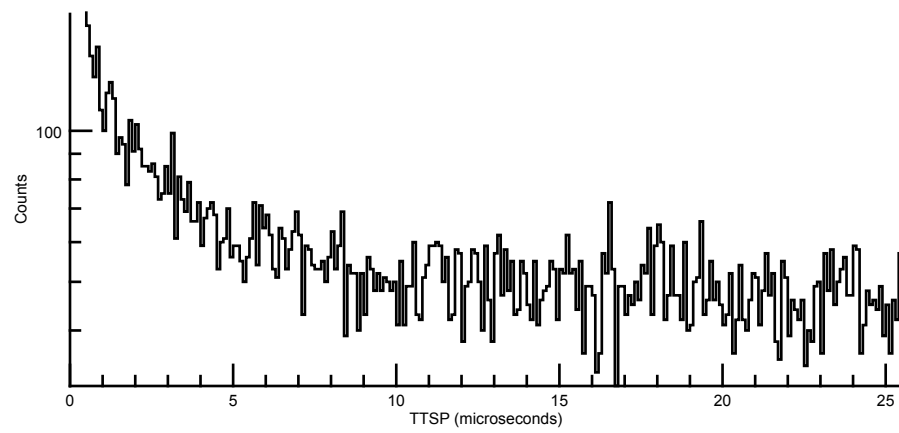

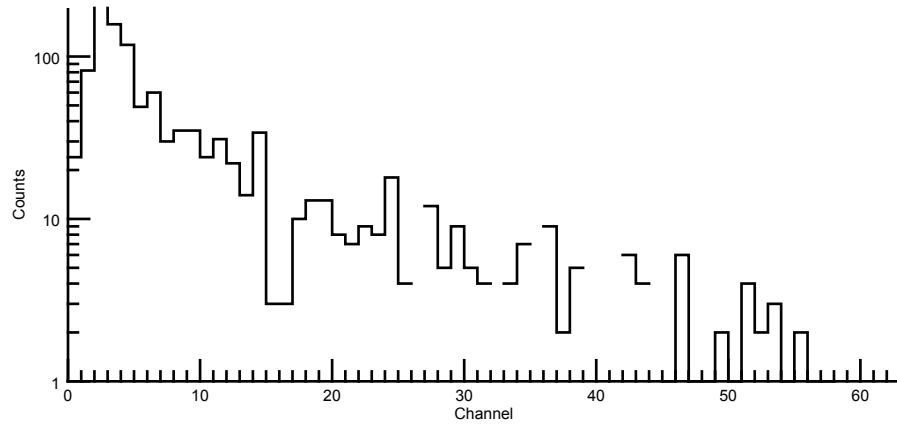+Z BLP CAT4 time to second pulse

-Y BLP CAT4 first pulse
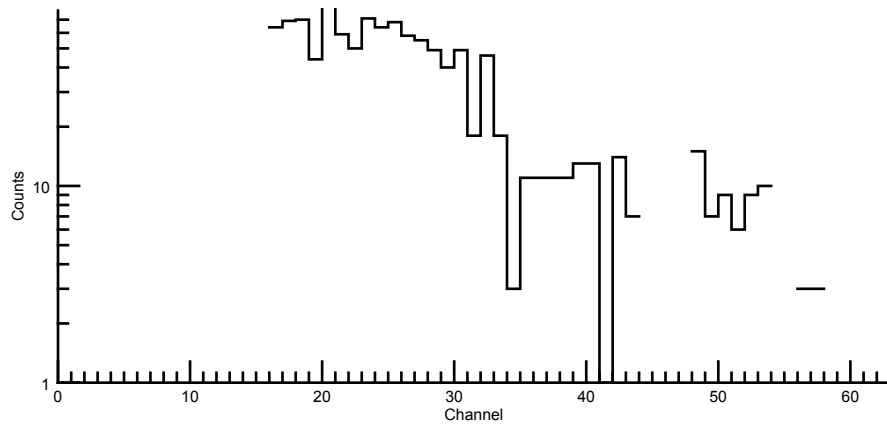
-Y BLP CAT4 second pulse

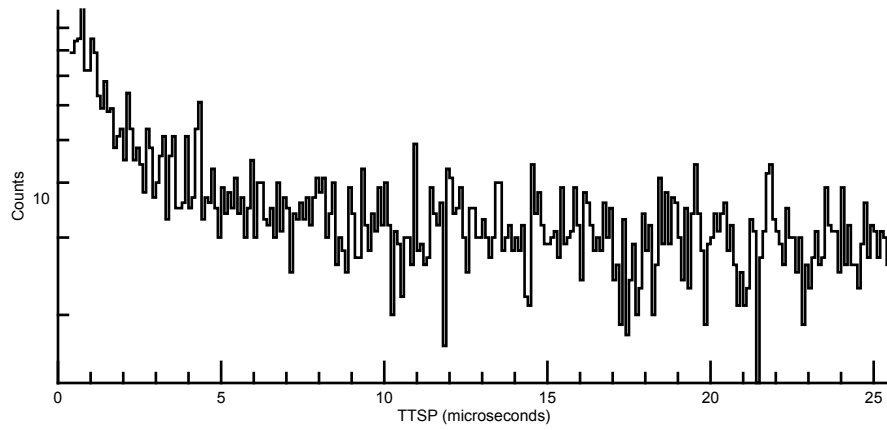-Y BLP CAT4 time to second pulse
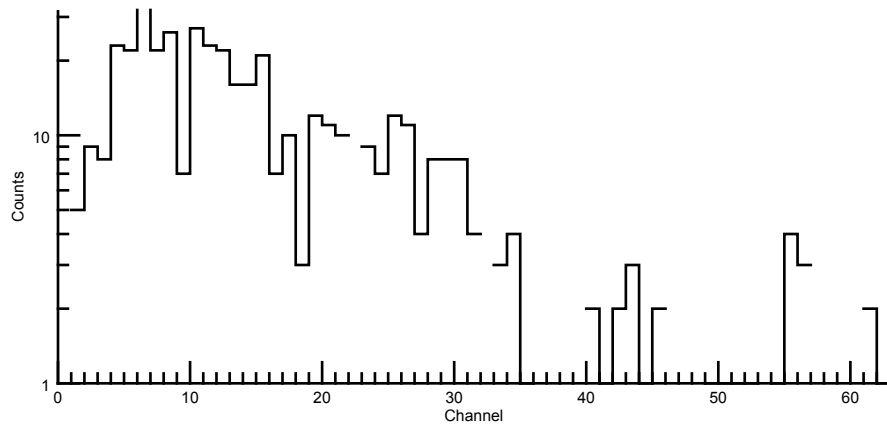
+Y BLP CAT4 first pulse
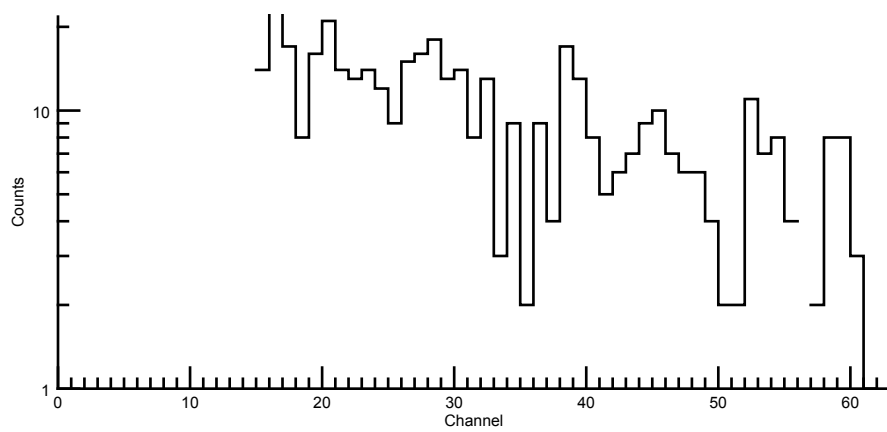
+Y BLP CAT4 second pulse

+Y BLP CAT4 time to second pulse

-Z BLP CAT4 first pulse

-Z BLP CAT4 second pulse

-Z BLP CAT4 time to second pulse