/d/grid7/clasg12

56855

List of the g12 trigger configurations

From G12_wiki

Contents

grid8: 56565 - 57177 ?
(random A^2 s)

grid 7: 56504 - 57317

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-> 50754 files

Known Problems

- Runs 56573-56747 have a shift in the start counter numbering (http://clasweb.jlab.org/clasonline/servlet/newloginfo?action=logentry&entryId=25514) that affects the data quality.

Production Configurations

Runs: 56572 and earlier

- DAQ configuration file : g12_PROD_noL2.cfg
- V1495 configuration file: g12_v1495_test.dat
- V1495 firmware version: 2
- MORA: 1-47 (runs 56363-56400), 1-25 (runs 56401-56459), 1-19 (run 56519 and leter)
- MORB: 20-25 (run 56519 and later)
- Pretrigger thresholds (not used):
  - CC: 50/50

    - EC A (photon): 15/30
    - EC B (electron): 15/30
- Trigger bits:

Bit	Definition	L2 multiplicity	Prescale
1	MORA*(ST*TOF)^2 in sector 1)	-	1
2	MORA*(ST*TOF)^2 in sector 2)	-	1
3	MORA*(ST*TOF)^2 in sector 3)	-	1
4	MORA*(ST*TOF)^2 in sector 4)	-	1
5	MORA*(ST*TOF)^2 in sector 5)	-	1
6	MORA*(ST*TOF)^2 in sector 6)	-	1
7	(ST*TOF)	-	1
8	MORA*(ST*TOF)^2	-	1
9			
10			
11	MORB*(ST*TOF)^2	-	1
12	(ST*TOF)^3	-	1

Note: trigger bit 11 was used from run 56519 onward.

Runs: 56573-56594, 56608-56646

- Production runs: 56573, 56575-56580, 56581-56583, 56586, 56588-56594, 56608-56619, 56620-56636, 56638-56646
- DAQ configuration file : g12_LUT_v1.cfg
- V1495 configuration file: config.dat
- V1495 firmware version: 3.0 and 3.1
- MORA: 1-19
- MORB: 20-25
- Pre-trigger thresholds (not used):
    - CC: 50/50
    - EC A (photon): 15/30
    - EC B (electron): 15/30
- Trigger bits:

Bit	Definition	L2 multiplicity	Prescale
1	MORA*(ST*TOF)^2 in sector 1)	-	1
2	MORA*(ST*TOF)^2 in sector 2)	-	1
3	MORA*(ST*TOF)^2 in sector 3)	-	1
4	MORA*(ST*TOF)^2 in sector 4)	-	1
5	MORA*(ST*TOF)^2 in sector 5)	-	1
6	MORA*(ST*TOF)^2 in sector 6)	-	1
7	(ST*TOF)	-	1
8	MORA*(ST*TOF)^2	-	1
9			
10			
11	MORB*(ST*TOF)^2	-	1
12	(ST*TOF)^3	-	1

Runs: 56601-56604, 56648-56660

- Production runs: 56601-56604, 56648-56651, 56653-56660
- DAQ configuration file: g12_LUT_L2.cfg
- V1495 configuration file: g12_single_bits.dat
- V1495 firmware version: 3
- MORA: 1-19
- MORB: 20-25
- Pre-trigger thresholds:
  - CC: 20/20
  - EC A (photon): 50/100
  - EC B (electron): 60/80
- Trigger bits:

Bit	Definition	L2 multiplicity	Prescale
1	MORA*(ST*TOF)	1	1000
2	MORA*(ST*TOF)^2	2	1
3	MORB*(ST*TOF)^2	2	1
4	(ST*TOF)	1	1000
5	(ST*TOF)*EC^2	1	1
6	(ST*TOF)*(EC*CC)	2	1
7	MORA*(ST*TOF)*(EC*CC)	-	1
8			
9			
10			
11	EC*CC)^2	-	1
12	(ST*TOF)^3	-	1

Runs: 56665-56667

- DAQ configuration file: g12_LUT_L2exceptbit2.cfg
- Everything as for g12_LUT_L2.cfg above, except no L2 for bit 2.

Runs: 56605, 56607, 56647

- DAQ configuration file: g12_LUT_noL2.cfg
- Everything as for g12_LUT_L2.cfg above, except no L2 for any bit.

Runs: 56668-56670

- DAQ configuration file: g12_LUT_all.cfg
- V1495 configuration file: g12_LUT_all.dat
- V1495 firmware version: 3.1
- MORA: 1-19
- MORB: 20-25
- Pre-trigger thresholds:
    - CC: 20/20

- EC A (photon): 50/100
- EC B (electron): 60/80

- Trigger bits:

Bit	Definition	L2 multiplicity	Prescale
1	MORA*(ST*TOF)	1	300
2	MORA*(ST*TOF)^2	-	1
3	MORB*(ST*TOF)^2	2	1
4	MORB*(ST*TOF)	1	300
5	(ST*TOF)*EC^2	1	1
6	(ST*TOF)*(EC*CC)	2	1
7	MORA*(ST*TOF)*(EC*CC)	-	1
8			
9			
10			
11	EC*CC)^2	-	1
12	(ST*TOF)^3	-	1

Runs: 56897 and later on

- DAQ configuration file: g12_LUT_L2_102212.cfg
- V1495 configuration file: g12_LUT_L2_102212.dat
- V1495 firmware version: 3.2
- MORA: 1-19
- MORB: 20-25
- Pre-trigger thresholds:
  - CC: 20/20
  - EC A (photon): 50/100
  - EC B (electron): 60/80
- Trigger bits: THE SAME as before

It was found that we triggered on the trailing edge of signals coming out from the trigger box. The new cable was inserted between V1495 and TS, that inverted the signal coming out of the trigger box. As a result we started to trigger on the leading edge. The trigger delay was changed by 20 ns. That takes into account the difference between new trigger and the old one. No recalibrations of the detectors are required. It doesn't affect the data quality.

Runs 57094 and later on

- Start counter ADC gate was cjanged from 175 ns to 80 ns.
- Start counter ADC spectra have to be recalibrated

see Start Counter ADC gate adjustment

Single-Sector Configurations

Runs 56585, 56619, and 56637

- DAQ configuration file: g12_LUT_single_sector_v1.cfg
- V1495 configuration file: config.dat
- V1495 firmware version: 3
- MORA: 1-31
- Pretrigger thresholds (not used):
  - CC: 50/50
  - EC A (photon): 15/30
  - EC B (electron): 15/30
- Trigger bits:

Bit	Definition	matched L2	Prescale
1	MORA*(ST*TOF) in sector 1	sector 1	1
2	MORA*(ST*TOF) in sector 2	sector 2	1
3	MORA*(ST*TOF) in sector 3	sector 3	1
4	MORA*(ST*TOF) in sector 4	sector 4	1
5	MORA*(ST*TOF) in sector 5	sector 5	1
6	MORA*(ST*TOF) in sector 6	sector 6	1
7			
8			
9			
10			
11			
12			

Runs 56663 and later

- DAQ configuration file: g12_LUT_single_sector.cfg
- V1495 configuration file: g12_single_sectors.dat
- V1495 firmware version: 3.2
- MORA: 1-31
- Pretrigger thresholds:
  - CC: 20/20
  - EC A (photon): 50/100
  - EC B (electron): 60/80
- Trigger bits:

Bit	Definition	matched L2	Prescale
1	MORA*(ST*TOF) in sector 1	sector 1	1
2	MORA*(ST*TOF) in sector 2	sector 2	1
3	MORA*(ST*TOF) in sector 3	sector 3	1
4	MORA*(ST*TOF) in sector 4	sector 4	1
5	MORA*(ST*TOF) in sector 5	sector 5	1
6	MORA*(ST*TOF) in sector 6	sector 6	1
7			
8			
9			
10			
11			
12			
