

# GlastRelease v15r47p1

## Run Manager Summary

### System Tests v15r47p1

## System Tests Report Summary

Differences for the comparison with the previous release, [GR v15r46p1](#), are in the filter energy as described below. The filter bits have changed and this has apparently caused more events to not have a filter energy assigned by the Onboard Filter? ~~The difference in filter energy only appears for simulations and may be due to problems in simulating GEM bits.~~ Update: the difference in the all event filter energy distribution is expected behavior. Events without a GEM bit no longer have a filter energy set.

Differences with respect to [GR v15r45](#) include these and the shift in filter energy due to the cal peds and gains included in v15r46p1.

This is a candidate for L1Proc. The differences in the comparison with the preceding L1 Proc version, [GR v15r40](#) are understood to be those discussed in [GR v15r42](#), and the differences due to ~~misinterpreting the new gamma filter in MC~~ the new filter behavior for FSW B1-1-3.

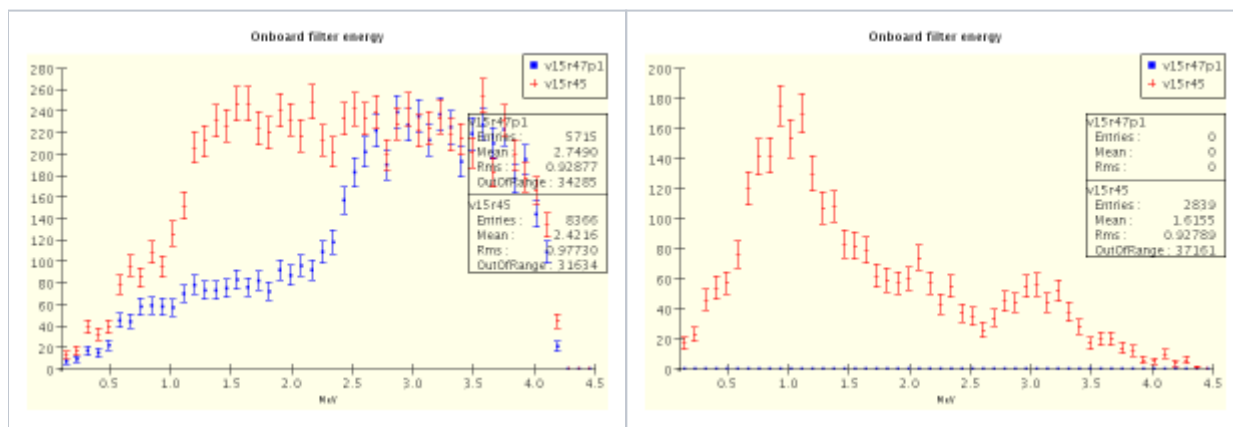
## Changes

- OnboardFilter, OnboardFilterTds, IExternal/obf - filter updates for FSW B1-1-3
- IsfData - fix handling for GammaFilterRsdV3

## Filter Energy

One glance at the filter energy plot shows a substantial chunk of events missing for the all the tests, for example at lower energy for AllGamma (below left). The effect is not present for B1-1-2 in GRv15r46p1. Note that the system test filter energy plot has no cuts applied and the job options are set to pass all events.

~~On the bright side, we are removing background events with a shocking efficiency.~~ Looking into a discrepancy between the system test merit file and this plot for the BackGndMixDC2 test. There should be a few hundred events in it.



**Update September 30:** In the, "nope that's actually what it's supposed to do department", see Tracy's report on the interaction of B1-1-3 with the GEM bits and comparisons to B1-1-2 [here](#). The absence of filter energy for events without a GEM bit set is expected in B1-1-3. Tracy shows that the energy distributions for the various GEM bits are as expected for the simulations.

Tracy took a look at the discrepancy and found that this is ~~a problem in the MC simulations exposed by~~ the new and early processed "non-physics" filter bit in GammaFilterV3. This is not a problem for data and did not appear in the test bed studies. The new filter version makes a cut on GEM bits, and these are ~~not~~ being set properly in the simulation. ~~This will clearly need to be fixed in the simulations, but Tracy concludes it will not impact data processing.~~

I'm also attaching the plots remade from the system test merit files with the trigger and filter conditions applied:  
GltGemSummary>0 && ObfGamStatus>0

The post cuts filter energy distribution for the AllGamma test (left) is close to identical for r47p1 compared to r46p1. Note that the background test (right) does have events with filter energies. Looking into why the above plot for the background test disagrees.

