

GlastRelease v15r26

Run Manager Summary

System Tests v15r26

System Tests Report Summary

Minor differences in the comparison with [GR v15r25](#).
MIP filter status and state have changed - this is expected from the updates to the OnboardFilter.

Changes

- OnboardFilter - Fix to calibration file names. Change default MC filter behavior to match data - do not leak all MC events
- OnboardFilterTDS - Methods to provide enumerated state information added (as opposed to bits).
- AcdUtil - alignment added

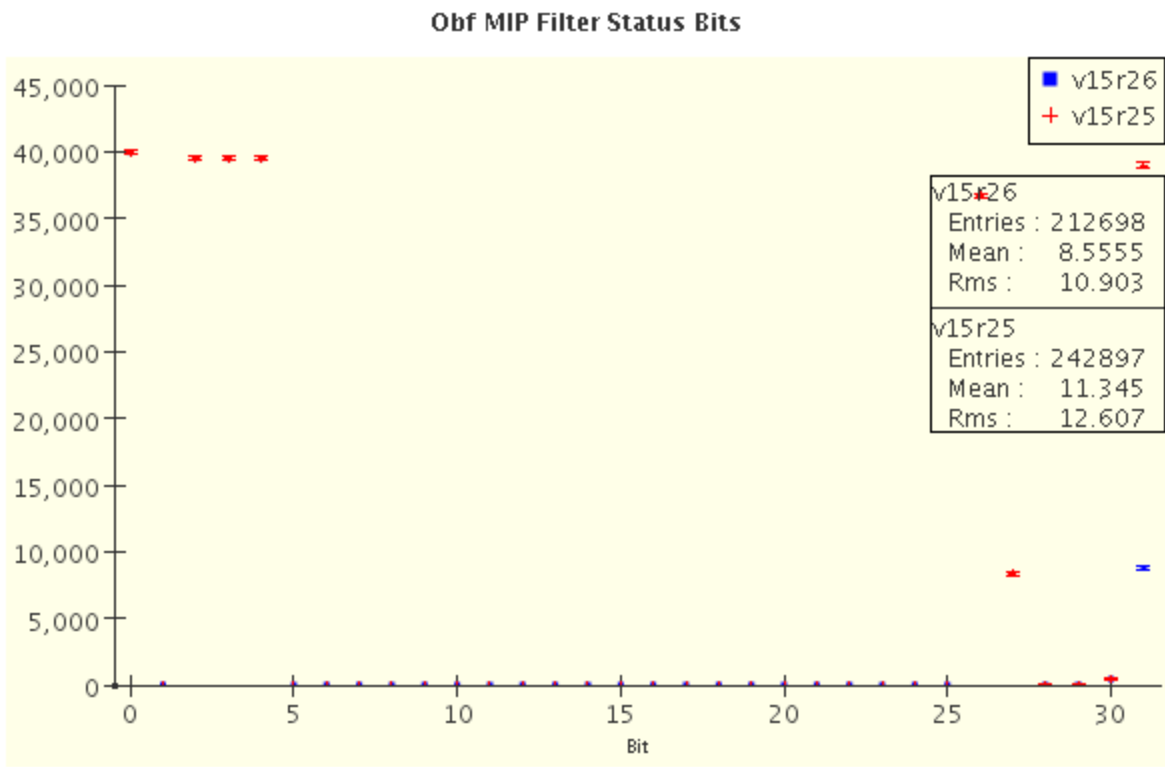
MIP Status Bits

Update July 23: Tracy informed me that the new behavior of the MIP filter comes from Fred noting that events were being improperly vetoed for MC simulations. This GR version updates the **MC interpretation** of the results reported by the filter to handle changes in the flight software between B1-0-6 and B1-0-8. Veto line 26 should be disabled in the filter configuration, but was not previously. This is consistent with the behavior shown below.

The ObfMipStatus and ObfMipState (merit variables) distributions show more events passing the MIP filter in GRv15r26. Protons are shown below, but this occurs at varying levels for all the system tests, more noticeably for the proton, muon, and 100 MeV gamma tests. The change to leaked events does not impact anything here because the job options still specify that events should be leaked.

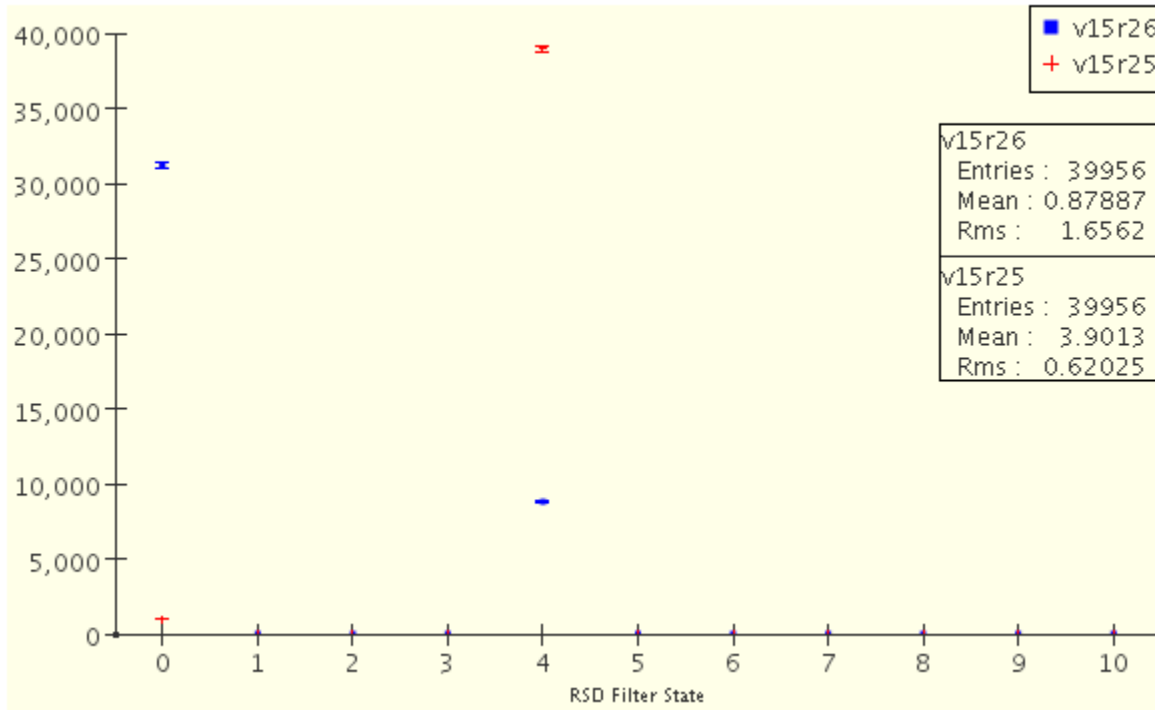
```
OnboardFilter.GammaFilterTool.LeakAllEvents=true;  
OnboardFilter.HIPFilterTool.LeakAllEvents=true;  
OnboardFilter.MIPFilterTool.LeakAllEvents=true;  
OnboardFilter.DGNFilterTool.LeakAllEvents=true;
```

The MIP filter status plot from the system tests for the VerticalProton1GeV test (below) shows less vetos (bit 31) being set (note that this distribution is per bit, not event). The other bits are unchanged.



The MIP filter state shows a corresponding increase in passing events (state 0 = pass, state 4 = veto). The trend is strongest for low E gamma, proton, and muon tests, but appears at some level in all.

MIP Filter State



The MIP filter bit counts from the GLEAM output suggest that veto line 26 is excluded in r26. (The last listing is bit 31, which indicates any veto.)

GRv15r25 veto bit summary

MFC_STATUS_M_NO_TKR_ADJ	36682
MFC_STATUS_M_LYR_COUNTS	8328
MFC_STATUS_M_NO_ACD_TKR	2
MFC_STATUS_M_GEM_NOTKR	58
MFC_STATUS_M_GEM_CNO	438
MFC_STATUS_M_VETOED	39015

GRv15r26 veto bit summary

MFC_STATUS_M_NO_TKR_ADJ	36681
MFC_STATUS_M_LYR_COUNTS	8324
MFC_STATUS_M_NO_ACD_TKR	2
MFC_STATUS_M_GEM_NOTKR	58
MFC_STATUS_M_GEM_CNO	439
MFC_STATUS_M_VETOED	8823

This plot shows that events with status bit 26 set (and not bits 27-30) used to be vetoed are now passed. GRv15r25 is black, GRv15r26 is red.

