

Update on Funny Interleave Events

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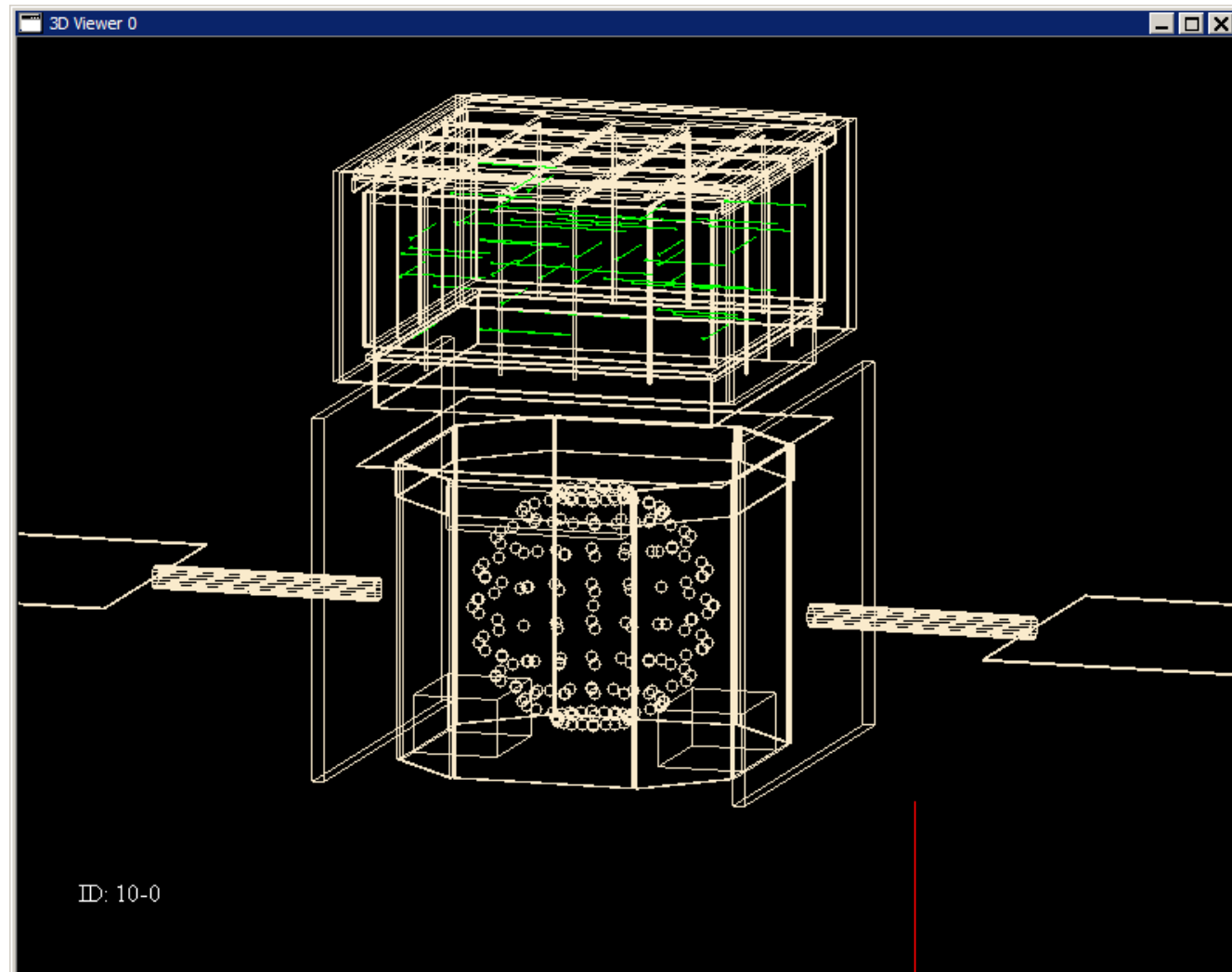
General Software VRVS Meeting

28 June 2007

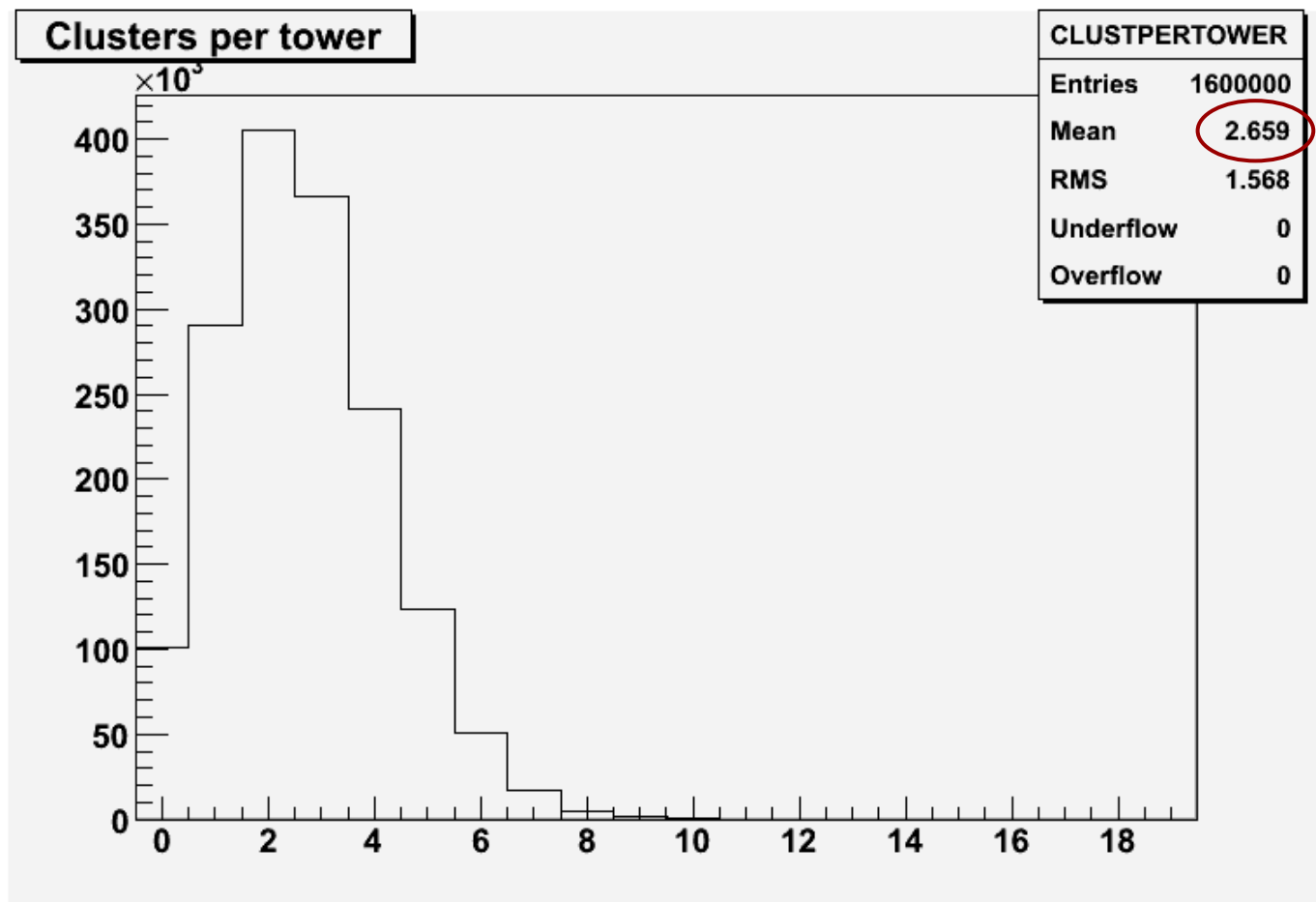
Summary of the problem

- What makes them funny?
 - Source Ids are 1000 and 2000 (generic background)
 - McEnergy = 0
 - (18 events out of 500K)
- How can this happen?
 - Interleave event generated (Ids 1000&2000, McEnergy 0)
 - Noise is added, 3-in-a-row is satisfied
 - Event passes trigger test
- Is this plausible?

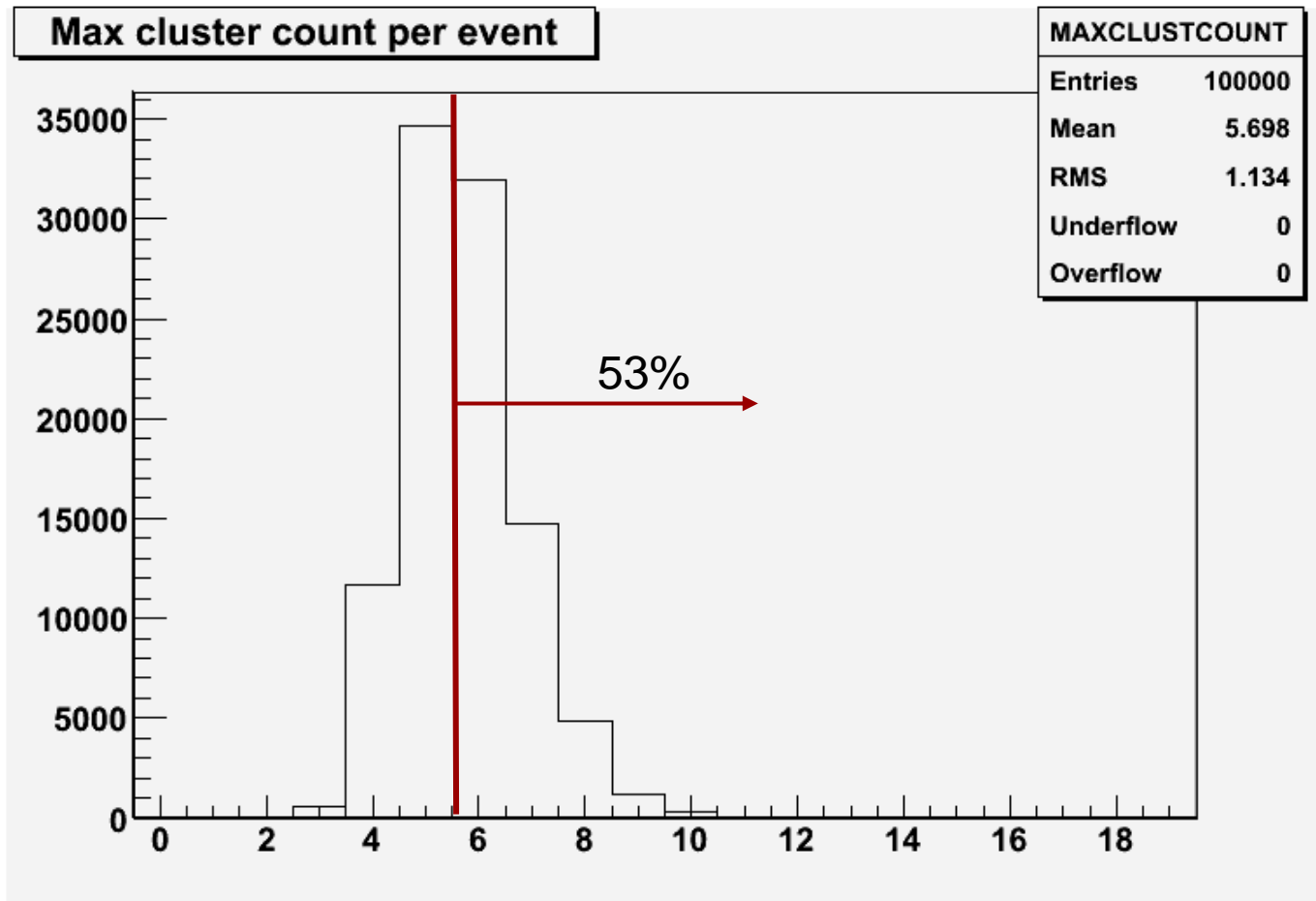
Generate a test run (100K events)



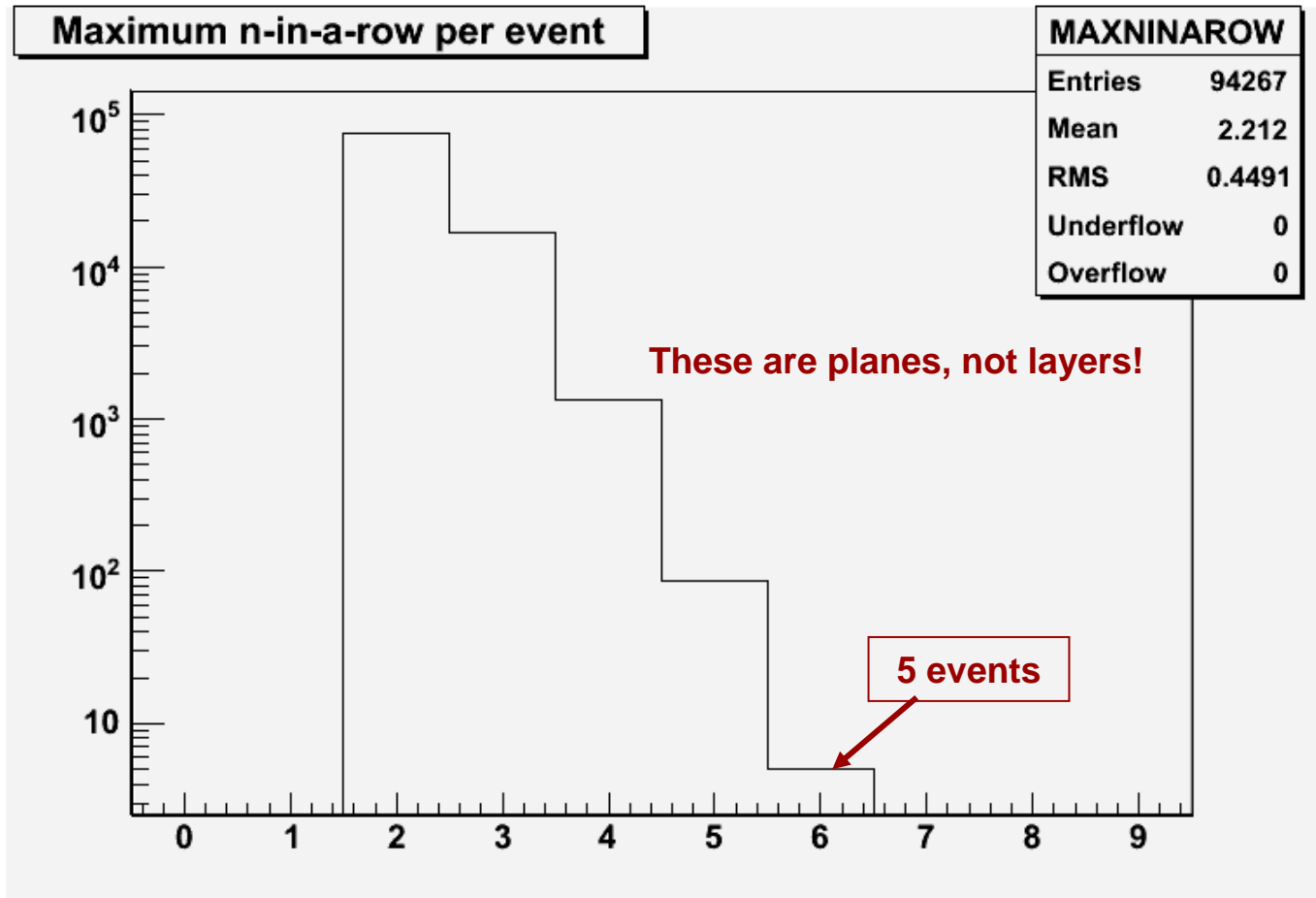
Distribution of Hit Planes per Tower



Highest Plane Count per Event



Highest N-in-a-row per Event



5/100K events -> 50/500K, but only half will be “3-in-a-row”s
so we can expect ~25 events, 18 seen.

Conclusion

- The test run gives an effect comparable to that found in pipeline interleave run.
- The number of funny events is a **very** strong function of the average noise level.
- The current strategy for testing for interleave events in TriggerAlg is not adequate.