• This is a
  – **Summary of**
    – What we currently have in the software
  – **Proposal for**
    – What we want
    – Where we want it
Glt Variables in Merit

- Global Trigger Glt variables are currently calculated in
  - AnalysisNtuple
  - From the digis
- GltWord is an exception:
  - Copied from the trigger word from TriggerAlg
  - Must run TriggerAlg to have GltWord!
- Glt variables are NOT from the trigger!
  - Documentation should be updated to reflect this fact
Proposal:

- We keep the Glt variables in Merit as they currently are
  - Calculated from the digis
  - Both in MC and in Real Data

- This means we will run TriggerAlg on real data
  - Can be dangerous!
  - Must set correct TriggerAlg trigger mask to pass all events
  - This is currently the default and should stay that way
  - If not you risk rejecting real data events that did not pass TriggerAlg

Advantages:

- We don't break or redefine the current Glt part
  - Legacy analysis code will still work as before
- Glt part is 'independent' of the GEM contribution
- Makes for easy 'consistency' checks/tests with the GEM
GEM, TDS and Merit: Proposal

• Proposal:
  – Keep GEM unpacked in TDS
  – Put GEM contribution in Merit:
    – Separate and independent from the Glt variables i.e. GEMxxxx
    – Sub-detector vectors (see GEM talk from last week):
      » Bit-encoded words
      » Users must decode the bits themselves
      » ACD ROI, TKR, CAL LE, CAL HE, ACD CNO vectors
      » Condition summary (cf GltWord)
    – Time and event counters:
      » Integers i.e. numbers, not bit-encoded words
      » Livetime, Trigger time, 1-PPS time, Delta event time
      » Prescale, Discarded, Sent counters
  – Add the complete ACD tile list as bit-encoded words?
TEM and the Trigger Primitives: Proposal

• Trigger Primitives are already in the
  – TDS and the Digi root files
  – SVAC ntuple
    – Electronics space
    – Physical space
• Proposal:
  – Will not put them in Merit:
    – Too detailed/low level
    – Not obvious how to implement them