

# LHCb 2012 Trigger Diagram

**40 MHz bunch crossing rate**

**L0 Hardware Trigger : 1 MHz readout, high  $E_T/P_T$  signatures**

**450 kHz  
 $h^\pm$**

**400 kHz  
 $\mu/\mu\mu$**

**150 kHz  
 $e/\gamma$**

**Software High Level Trigger**

**29000 Logical CPU cores**

**Offline reconstruction tuned to trigger time constraints**

**Mixture of exclusive and inclusive selection algorithms**

**5 kHz (0.3 GB/s) to storage**

**2 kHz  
Inclusive  
Topological**

**2 kHz  
Inclusive/  
Exclusive  
Charm**

**1 kHz  
Muon and  
DiMuon**