

A Few Final Comments

- We often cite the
 - “challenge of taking data, analyzing data, and upgrading the detector”
 - However, we also recognize that
 - It is the absolutely BEST position to be in
 - We need to plan and execute this R&D and planning phase of the upgrade to be as efficient as possible and to align wherever possible with the ongoing activities
 - On the detector side
 - Learn as much as possible from the functioning of the current detector
 - **How do they compare with expectations?**
 - » **How good is our simulation**
 - **Have any unexpected strengths or weaknesses appeared**
 - **Have new analysis techniques improved the performance from our expectations**
 - On the physics sided
 - Do the “typical” events look like we expect
 - **We can begin to use super-positions of real events to study future detector layouts**
 - We need to see how the early physics impacts our view of what strengths the upgraded detectors need to have
 - New technologies being investigated for the upgrade may help solve problems with the existing detector
- We need to take advantage of opportunities to simplify, collaborate and share solutions

Inclusiveness

- In addition to the groups that have been heavily involved in past activities, we have included an ECAL session to make sure that their issues are on the table
- We need to make sure we include the applications developers in the process
 - To strengthen and complete the simulation tools effort
 - To use our real experience with event reconstruction to help evaluate proposals, especially for track reconstruction
- Eventually, we need to include the computing resources for the upgrade
- While people work efficiently if they maintain a certain focus, we have to make sure that people continue to talk across subprojects
- We need to maintain momentum between workshops
 - Upgrade Days
 - Working groups should execute the work plans presented here

Thanks

- Jordan and I want to thank everyone for attending
 - Many of you had to travel long distances
 - We appreciate that and the effort that you put forward during the workshop and, of course, your ongoing effort on the upgrade and on the experiment
 - Face-to-face meetings with people you may only have interacted with by email, phone, or videoconference is an important aspect of these workshops
- Finally, we wish you a safe and pleasant trip home or wherever your travels take you and for those of you who we won't see again this year, a happy holiday season and to everyone and to all CMS a prosperous new year!