



The ILD placeholder model as a basis for an engineering





ILD meeting @ ECFA2010







- Motivations for a placeholder model
 - Current situation
 - Needs
- The placeholder model
 - Definition
 - Production process and status
 - Use of this tool
- Summary and outlook





Placeholder model = *simplified CAD model of every components*

• Motivations :

- Light model which ease the work of integration
 - no needs to use detailed model
- Define a common basis of work for the ILD community :
 - Catherine will show differences between official parameters and the one used by sub detectors groups
 - Provide an efficient and safe communication
 - Then could became the official ILD reference model
- Allow to quickly check differences between the different model and also take measurements with the use of the EDMS system
 - Placeholder/detailed/simulation
 - See L. Hagge presentation in July at DESY





- Define integration boxes for each sub systems including : Ir
 - Shape and overall dimensions
 - Gaps for fixing system
 - Tolerances, deformations
 - Services inside the system
 - Room for mechanical alignment and for monitoring



→ Provides a natural boundary between sub system and integration work

- Proposal : cables and services routed from the sub systems to the main supply will have their own placeholder
 - Under responsibility of the integration group (see Catherine's talk)
- Questions about the level of details ?
 - Start with simple model (= integration boxes)
 - Could evolve to something more detailed to make a real integration
 - We might need to handle different placeholder models due to the different possible technologies (e.g. barrel of AHCal and DHCal)





- Current process with a simple model :
 - Production is not automatic
 - At the moment it's made by R. Volkenborn and I
 - Managed by the integration team
 - Based on reference parameters sheet

http://www.ilcild.org/groups/mdi/ILD0dimensions-weigth130209.xls

Several steps are needed







- For the moment we are making the placeholder model
- In the future, they would probably be providen by sub systems groups when ILD would become a collaboration









- Process has begun in last June
- First placeholder model is finished at about 50%
- Big effort is need to finalise it
 - Add forward and inner region
 - Segment the Yoke to show gaps
 - Add first services?







- A placeholder model represents a powerful tool :
 - For the integration : light model
 - For the communication : « official ILD reference model »
- BUT to make it efficient and useful, I really think we need :
 - A configuration control process and board (as suggested by Karsten in July at DEY)
 - This board could be composed by: Sub-detector technical contacts, Representatives from physics and simulations, Global integration experts and ILD management representatives
 - Discuss proposed changes to the configuration
 - Sends suggestion to ILD-EB for approval

To open this tool to the ILD community

- Let ILD workers to use this tool
- EDMS must be accessible

Thanks for your attention