

ILD Integration „Placeholder model“ - short overview -

Robert Volkenborn, Matthieu Joré

Currently situation:

- ▶ existing of several international work groups and collaborations for the ILC-ILD project (Coil, Yoke, Calorimetry, Inner Region...)
- ▶ Even a sub detector consists of quite a few study groups
- ▶ Different work groups have different ideas concerning R&D of the detector components
- ▶ Currently there are numbers of different (in detail) worked out CAD models
- ▶ Different CAD models on different CAD programs (I-DEAS, CATIA, Solid Edge...)
- ▶ A lot of „*different*“, so...

Question: How to proceed easily with those several CAD models / ~programs in respect to the whole ILD?

- ▶ Integration with EDMS: The Engineering Data Management System
- ▶ Idea: creation of at least one „team“ within the EDMS for each sub detector group
- ▶ Simplified exchange of CAD data from different CAD systems (I-DEAS, CATIA, Solid Edge, ...)
- ▶ Collecting and archiving of all CAD files (3D-models, drawings, FEMs, etc.) as well as papers, documents, technical reports, tables...

Introduction of the "Placeholder model"

- ▶ In EDMS a placeholder-model is a very simplified CAD model of each sub detector
- ▶ CAD models of all sub detectors have to match their given "cross-section"
- ▶ Each placeholder represents the cross-section for every sub detector (max. inner and outer geometry)
- ▶ Each placeholder should will be adjustable in respect to an efficient ILD-model
- ▶ Via EDMS each on a sub detector working engineer / scientist will have access to the placeholder model of his/her detector component

User surface of EDMS in the ILD_CAD_Integration_Team

You are here: ILD_CAD_Integration_Team : CAD Working Data									
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User surface of EDMS in the ILD_CAD_Integration_Team

 **Part , D00000001520522.A,1,1 , Item Info : Summary**

Summary Properties Related Items Assignment Classification Reviewer/Approver All Versions

Related Items	Properties	Preview Image(s)
Attaches There are no attached files	Name: VTX_placeholder Access Scheme in Use: Team: ILD_CAD_Integration_Team Designated Access Scheme (Project): Creator: Volkenborn_Robert Work Status: Working	
Is In Team Folder : 1 object	More Properties...	
Name		
 CAD Working Data...		

Vertex

Zeichenelementname

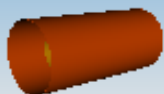
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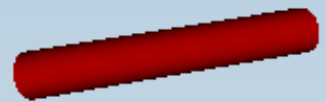


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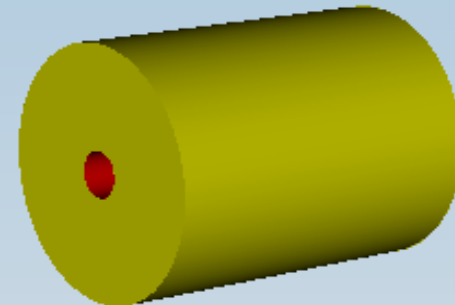
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FTD



TPC

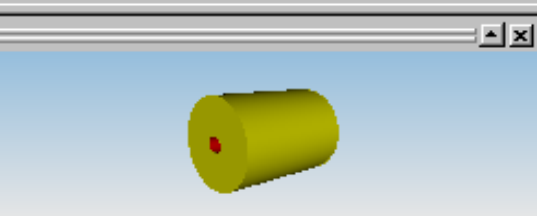


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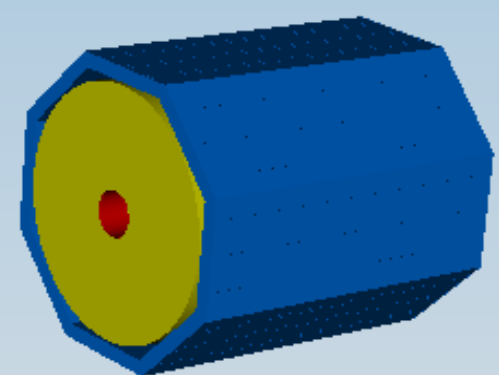
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ECAL-Barrel

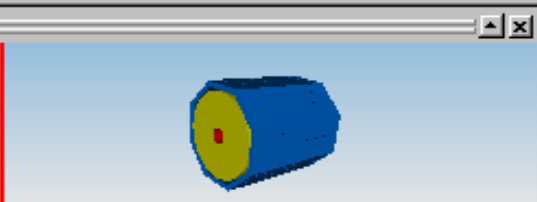


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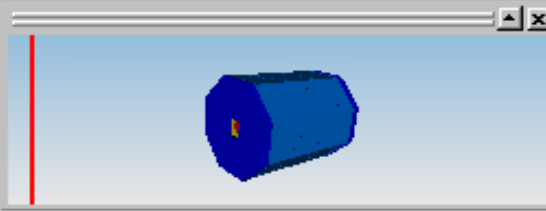
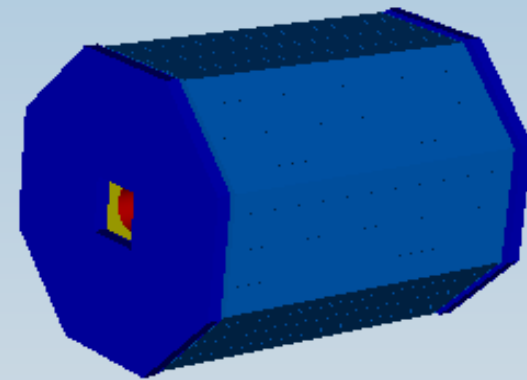
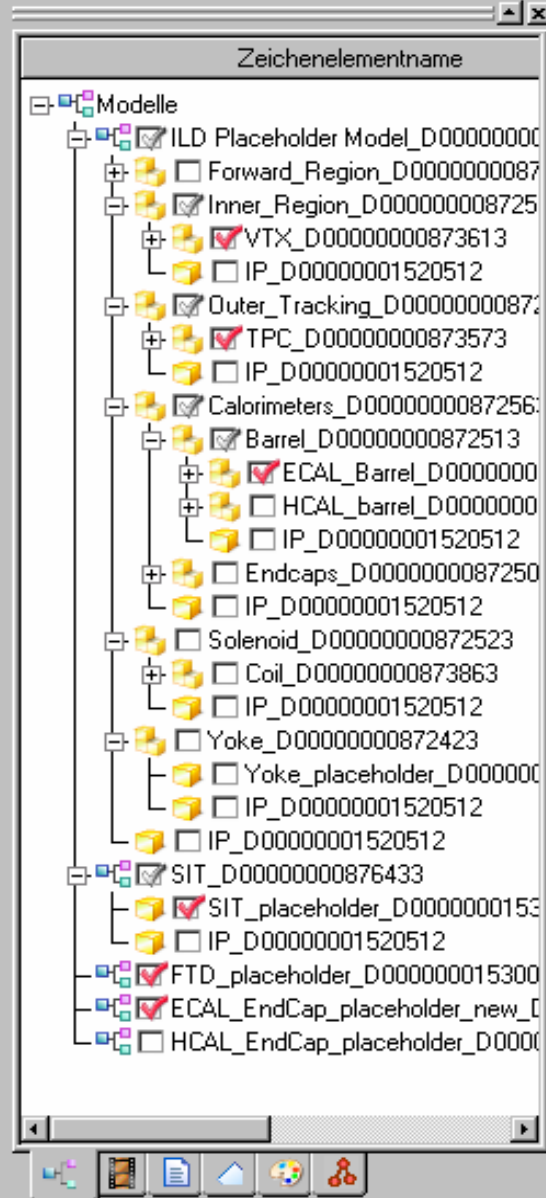
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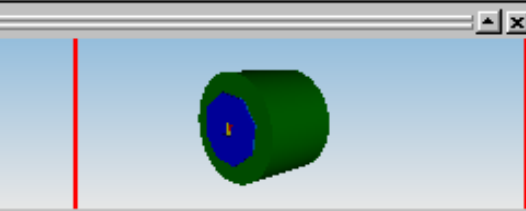
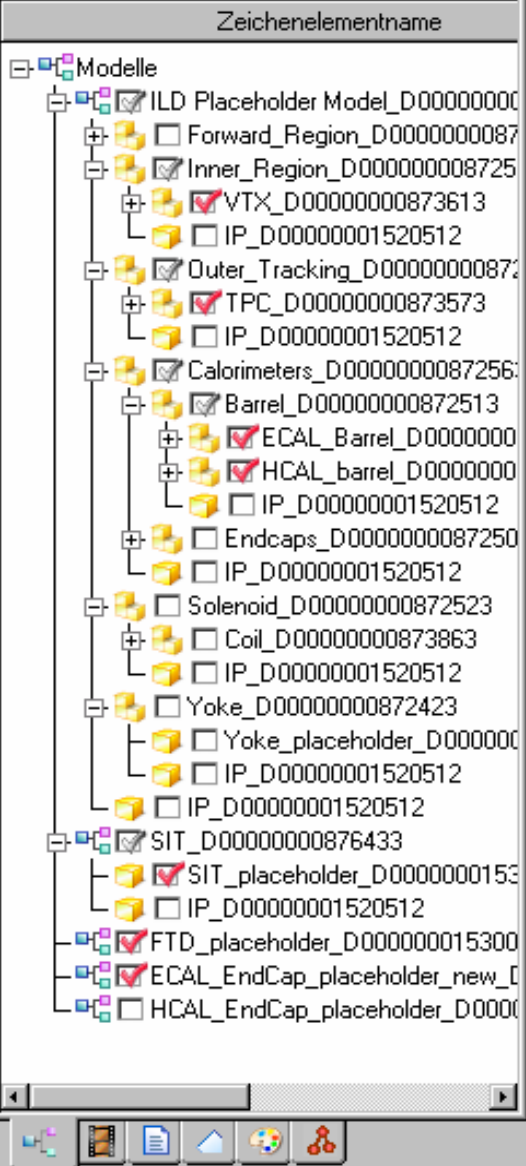
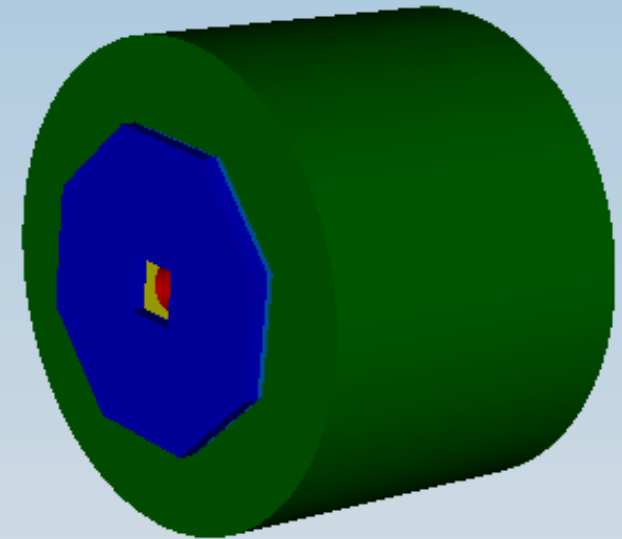
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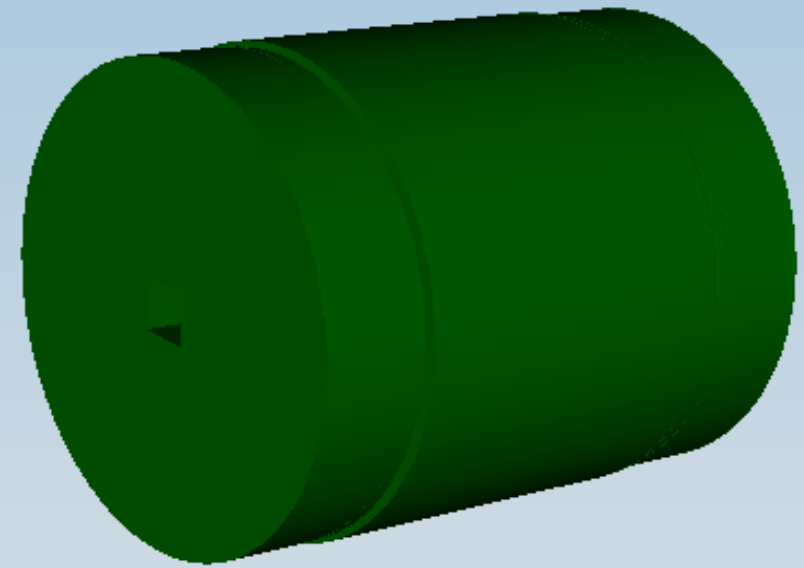
ECAL-Endcaps



HCAL-Barrel



HCAL-Endcaps

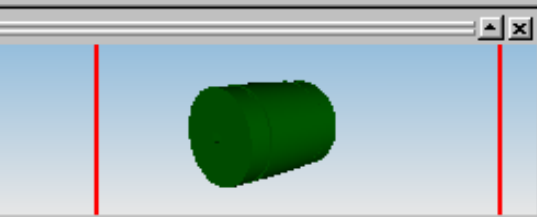


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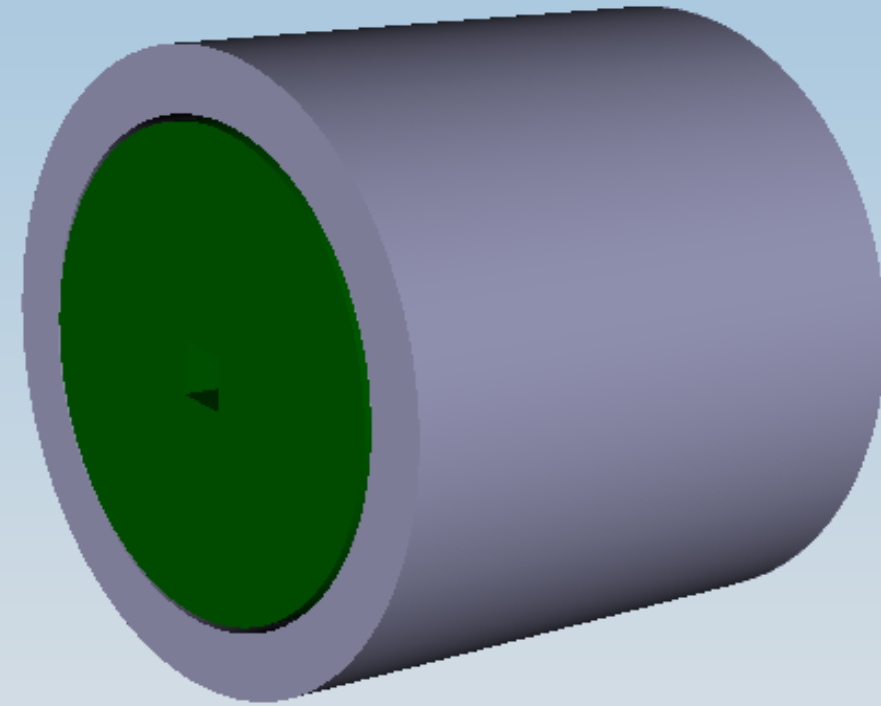
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Navigation icons: Home, Back, Forward, Refresh, Print, etc.



Solenoid

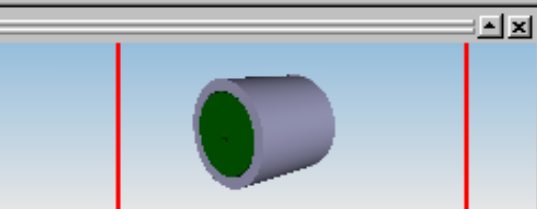


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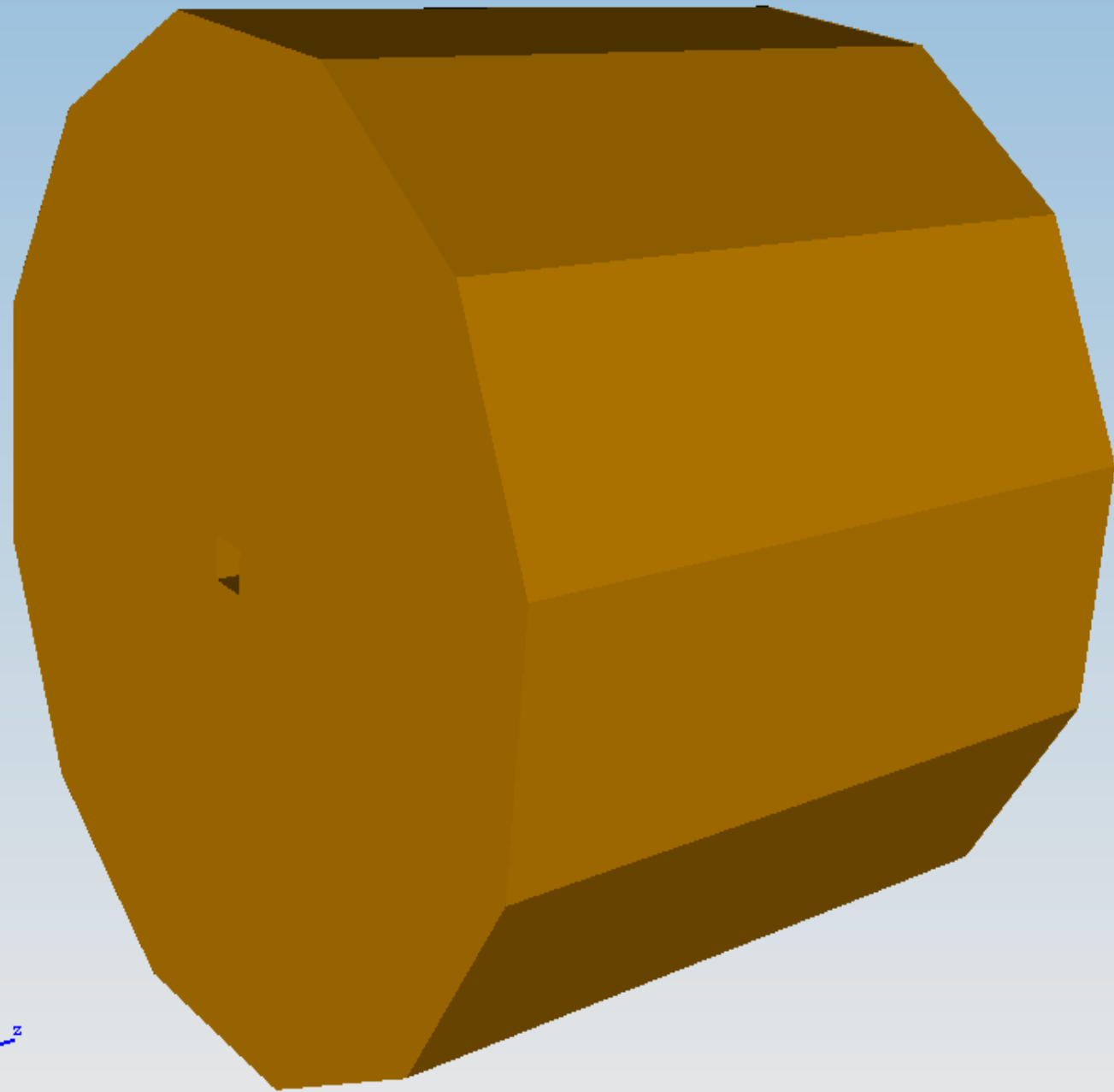
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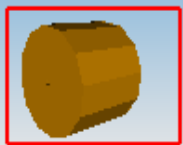
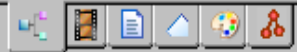


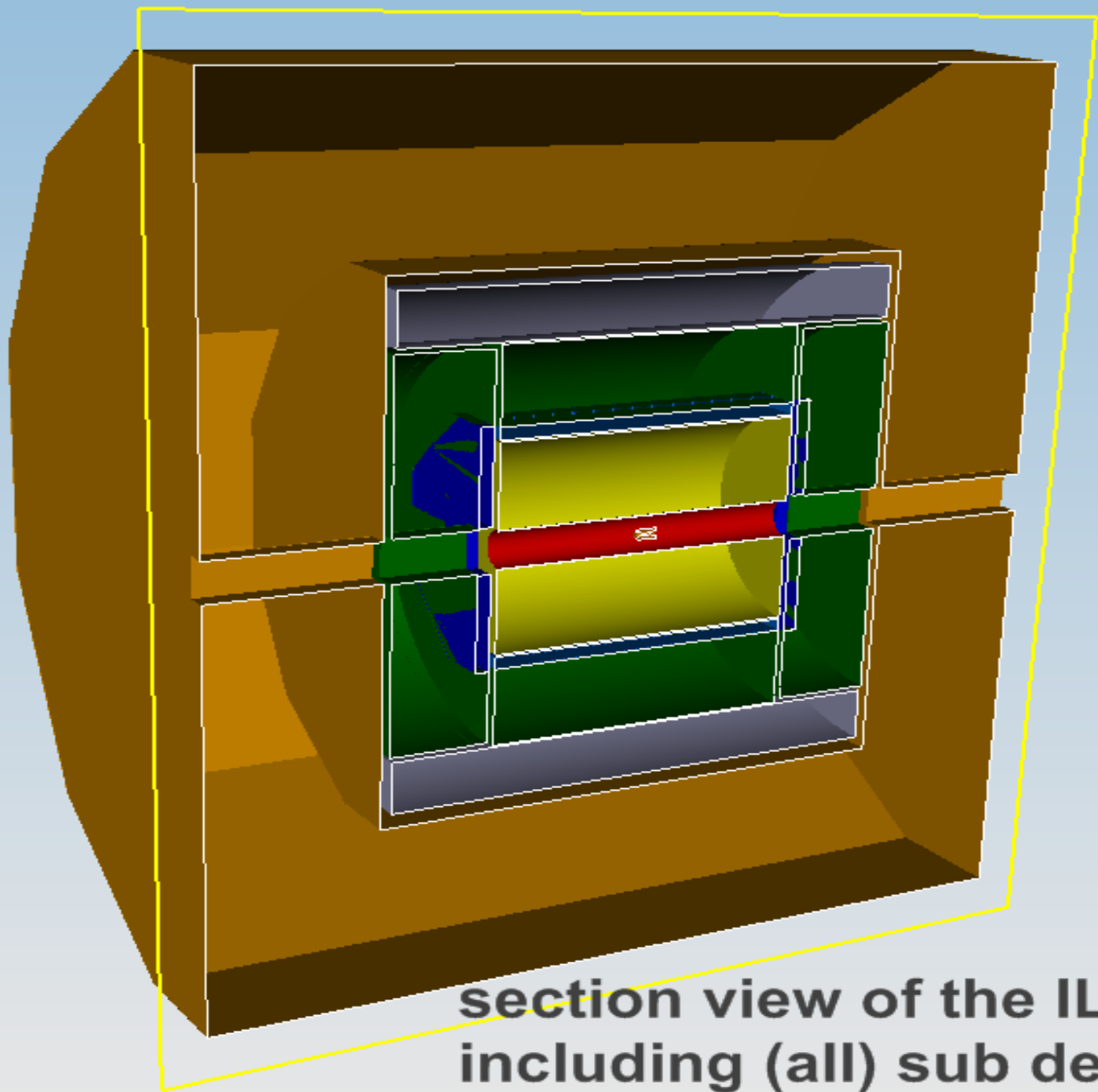
Yoke



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**section view of the ILD
including (all) sub detectors**

Collision check

- There will be a continuous collision check of all current CAD models

Possible scenario: CAD model of the TPC is not fitting into its placeholder

→ TPC model interferes with the ECAL model, shown during placeholder collision check

TPC- and **ECAL group** have to discuss AND solve this issue

To be discussed:

- **placeholder for dead space material (cabling, cooling system, support etc.)**
 - Each sub detector has its own „sub-placeholder“
 - The placeholder of each sub detector already „includes“ the dead space
 - one central „infrastructure-placeholder“ for all dead spaces (sub divided)...