

PROGRESS REPORT ON LUMICAL IN DD4hep

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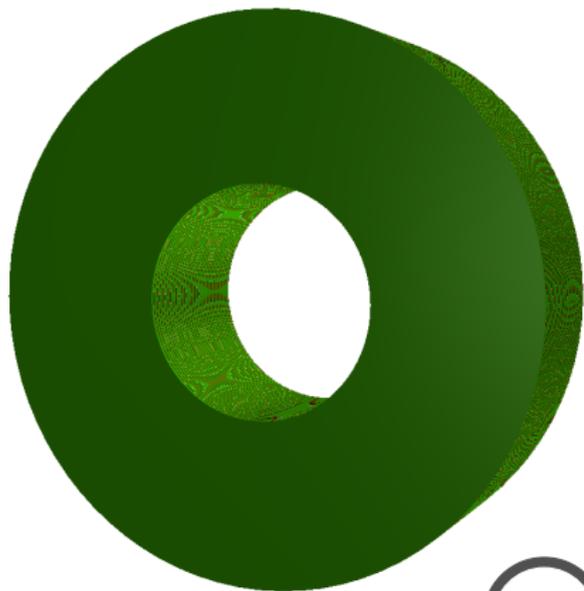
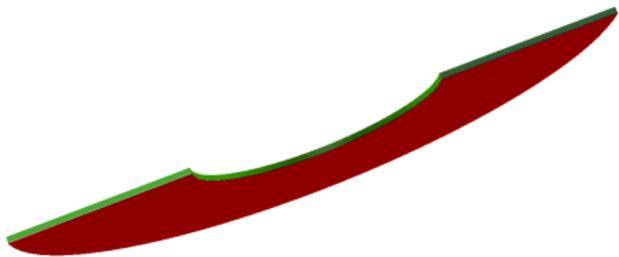
Jožef Stefan Institute

Clustering WG Meeting

3rd November 2014

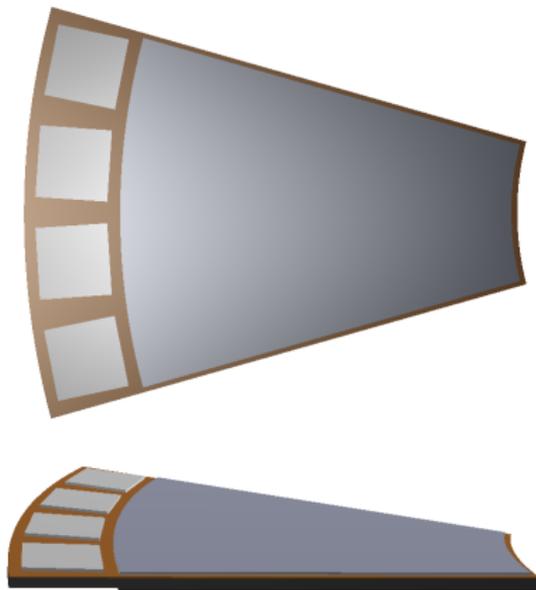
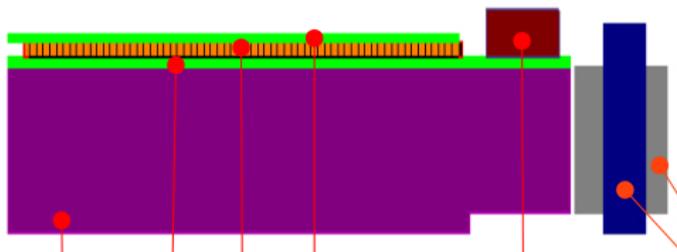
LumiCal in DD4hep V. 1.0

- Leaning on the implementation of BeamCal
 - Layer composed of tubular plates
 - Layer multiplied to create detector
 - Proper positioning onto beam pipe
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- Tested in simulation, works well
 - Segmentation done via DDSegmentation PolarGridRPhi



LumiCal in DD4hep V. 2.0

- Some input from Bogdan
- Redesign tubes \rightarrow sectors



- Implemented additional metallization layer, readout chips, cooling space, tile gaps
- Some “hardcoded” implicit assumptions, e.g. uniform spacing of chips, layer ordering
 - can be removed in future version

LumiCal in DD4hep V. 2.0

- Some input from Bogdan
- Added support structure

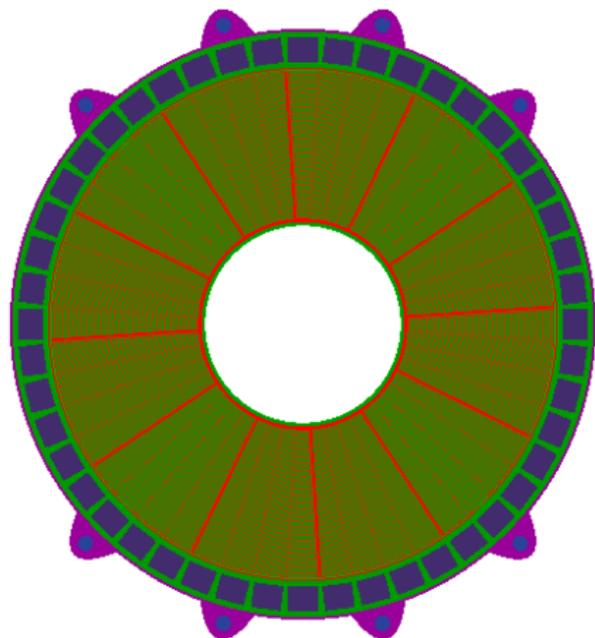


- Some sizes remain unclear → can be modified in XML
- Some “hardcoded” implicit assumptions, e.g. bolt spacing
 - can be removed in future version

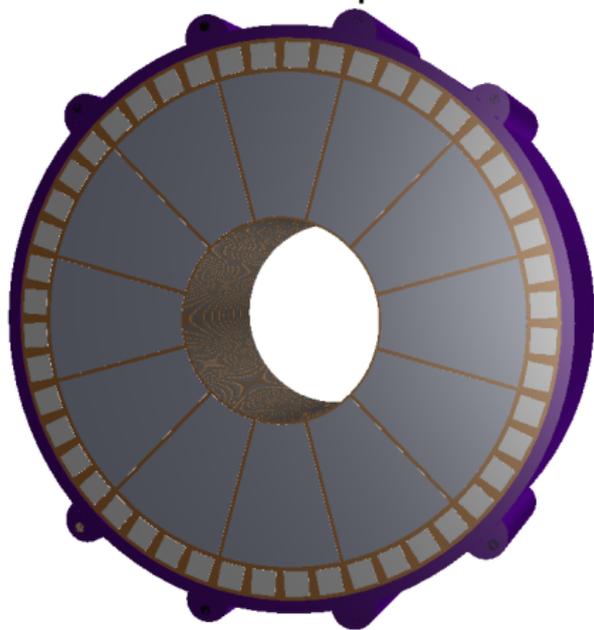
LumiCal in DD4hep V. 2.0

- First detailed version ready

Mokka



DD4hep



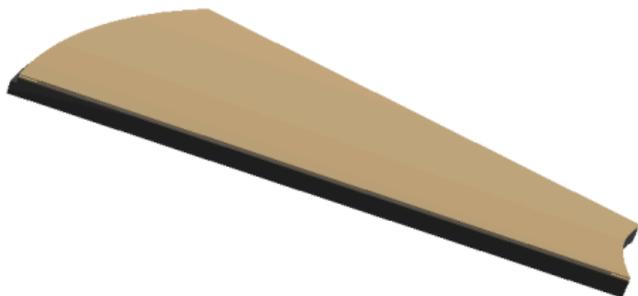
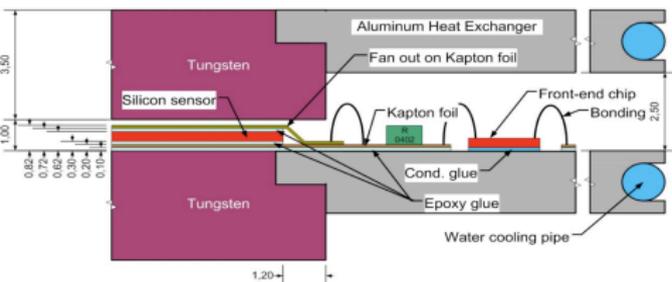
- Not yet submitted to SVN, some testing needed and fitting to the whole detector
- Need real input for “guessed” values (e.g chip size etc.)

LumiCal in DD4hep V. 2.1

- Modifications towards EUDET-Memo-2010-06

Memo

DD4hep



- More detailed layers and gaps
- Added aluminum support for readout electronics
- Will modify support structure towards EUDET-Memo-2010-06
 - Current support follows Eudet-Memo-2009-10