



3.9.2019

IDR STATUS

IDR Status/ Schedule



Significant progress in finalising the document:

- Version sent to ILD on July 6, comments received and implemented
- Editing days at DESY last week
- Version now is nearly complete, with very few exceptions,
- Polishing is ongoing

Plan:

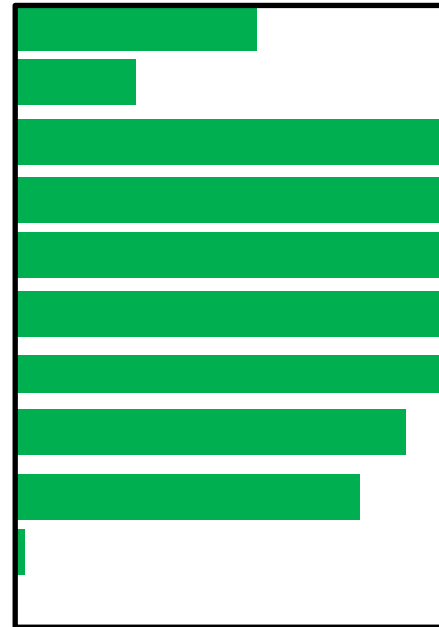
- Send each chapter to ILD internal reviewers first half of September
- Circulate the complete document to ILD early in October
- In parallel send the complete document to a (small) number of external reviewers for overall review early October
- Discuss a close to final version at LCWS on November 1.

IDR Structure



1. Introduction
2. Science with ILD
3. The ILC Environment
4. The ILD Detector Concept
5. Detector Layout and Technologies
6. ILD Global Integration
7. Physics and Detector Modelling
8. Detector and Physics Performance
9. Costing
10. Summary

Degree of readiness



ILD definition



Updated table of dimensions for ILD

L and S in one table

Barrel system						
System	r_{in}	r_{out} [mm]	z_{max}	technology	comments	
VTX	16	60	125	silicon pixel sensors	3 double layers at $\sigma_{r\phi,z} = 3.0 \mu\text{m}$ $\sigma_t = 2\text{-}4 \mu\text{s}$	$r_0 = 16, 37, 58 \text{ mm}$ (layers 1-6)
SIT	153	303	644	silicon pixel sensors	2 double layers at $\sigma_{r\phi,z} = 5.0 \mu\text{m}$ $\sigma_t = 0.5\text{-}1 \mu\text{s}$	$r = 155, 301 \text{ mm}$ (layers 1-4)
TPC	329	1770 1427 ^e	2350	MPGD readout	220 layers $1 \times 6 \text{ mm}^2$ pads	$\sigma_{r\phi} \approx 60\text{-}100 \mu\text{m}$
SET	1773 1430 ^e	1776 1433 ^e	2300	silicon strip sensors	1 double layer at $\sigma_{r\phi} = 7.0 \mu\text{m}$	$r = 1774 \text{ mm}$ $\phi_{\text{stereo}} = 7^\circ$
ECAL	1805 1462 ^e	2028 1685 ^e	2350	W absorber	30 layers	
				silicon sensor scintillator sensor	$5 \times 5 \text{ mm}^2$ cells $5 \times 45 \text{ mm}^2$ strips	SiECAL ScECAL
HCAL	2058 1715 ^e	3345 3002 ^e	2350	Fe absorber	48 layers	
				scintillator sensor, analogue	$3 \times 3 \text{ cm}^2$ cells	AHCAL
				RPC gas sensor, semi-digital	$1 \times 1 \text{ cm}^2$ cells	SDHCAL
Coil	3425 3082 ^e	4175 3832 ^e	3872		3.5 T field	int.lengths = 2λ
Muon	4450 4107 ^e	7755 7412 ^e	4047	scintillator sensor	14 layers $3 \times 3 \text{ cm}^2$ cells	

IDR on overleaf



<https://www.overleaf.com/project/5b30eafb30cd6f754b3f3fc5>

The document is visible under the address above.

If you have further comments please sent them to ild-et@desy.de

Costing



Large (top)

and small (bottom)

Modell

All numbers are very preliminary!

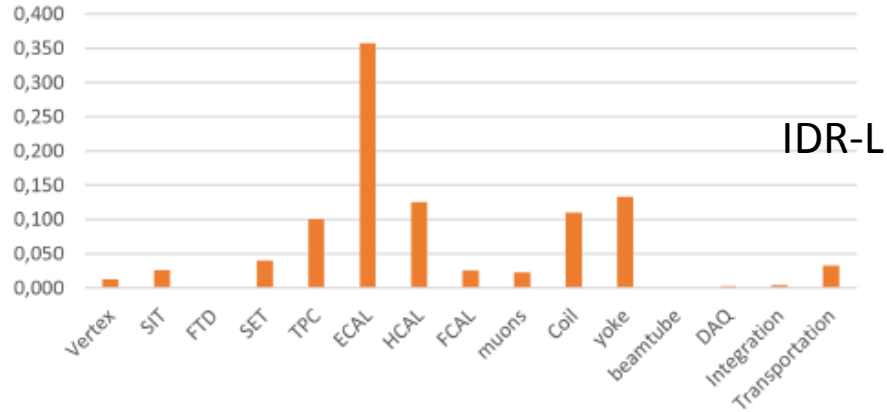
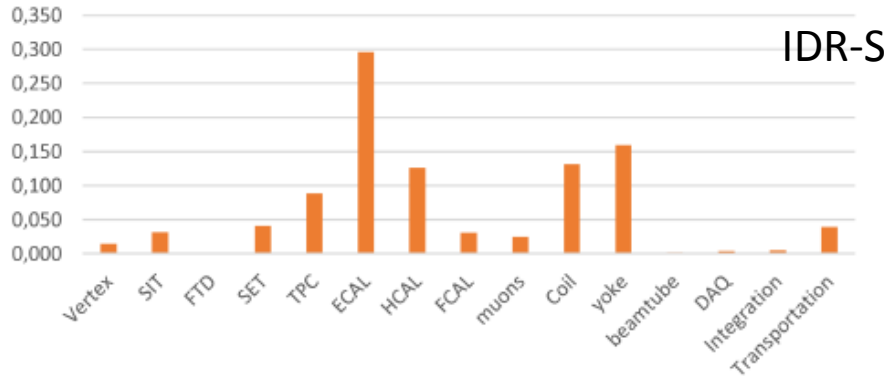


Figure 9.3. ILD cost sharing in the large model. Empty FTD to be corrected.

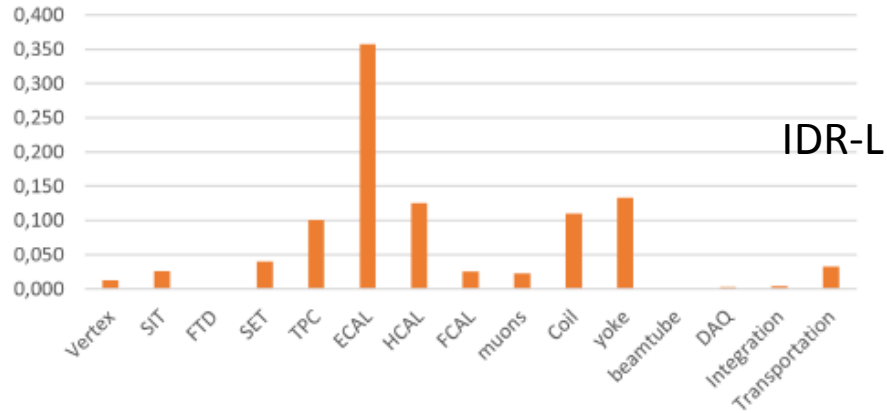


Costing

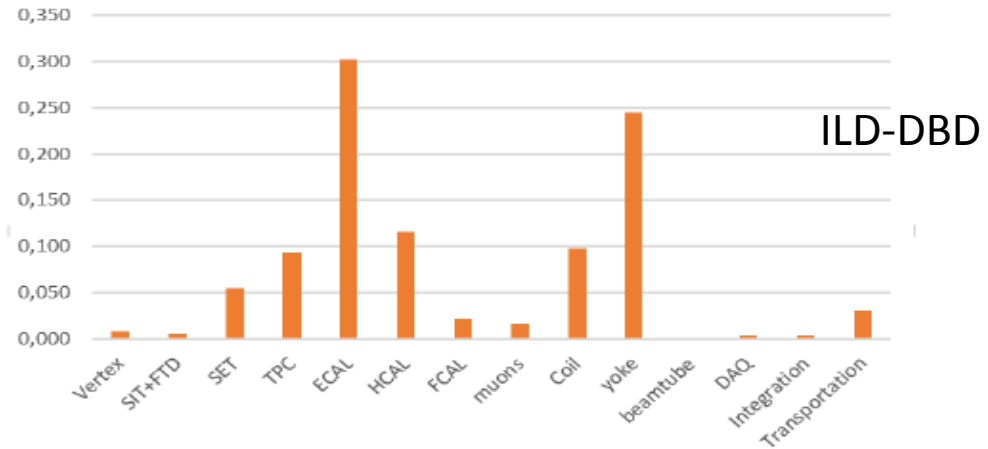


Large (top)
and DBD (bottom)
Modell

All numbers are very
preliminary!



Figure



Summary



- Great progress on the document since early summer
- We are getting there: the document is nearly complete
- Significant amount of new information contained in the document: well worth the effort
- Some parts need final touches and additional effort
 - Costing: inputs are still needed and would be very helpful!