

# LP1 Infrastructure Status

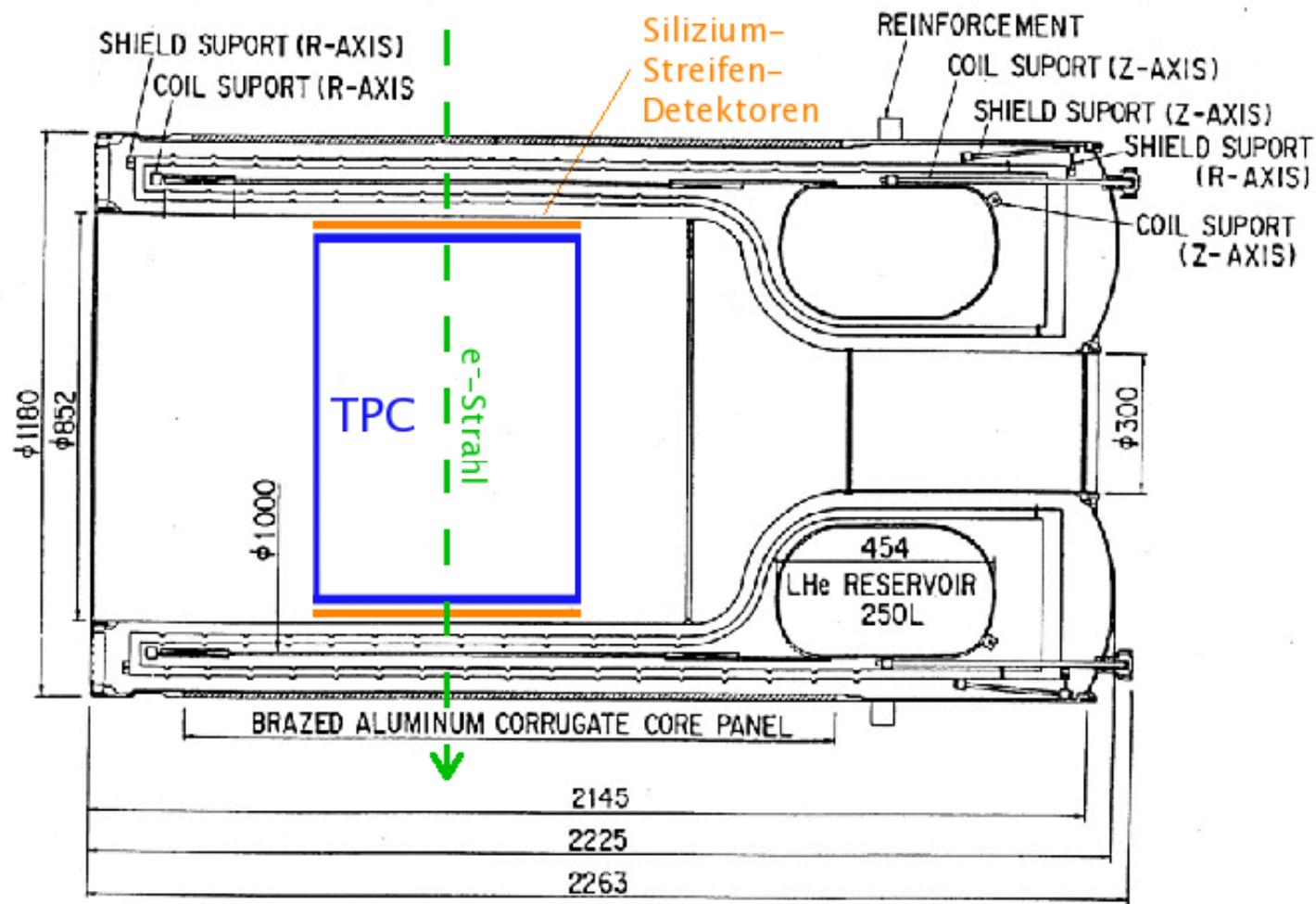
LCTPC Collaboration  
Meeting  
04-June-2007

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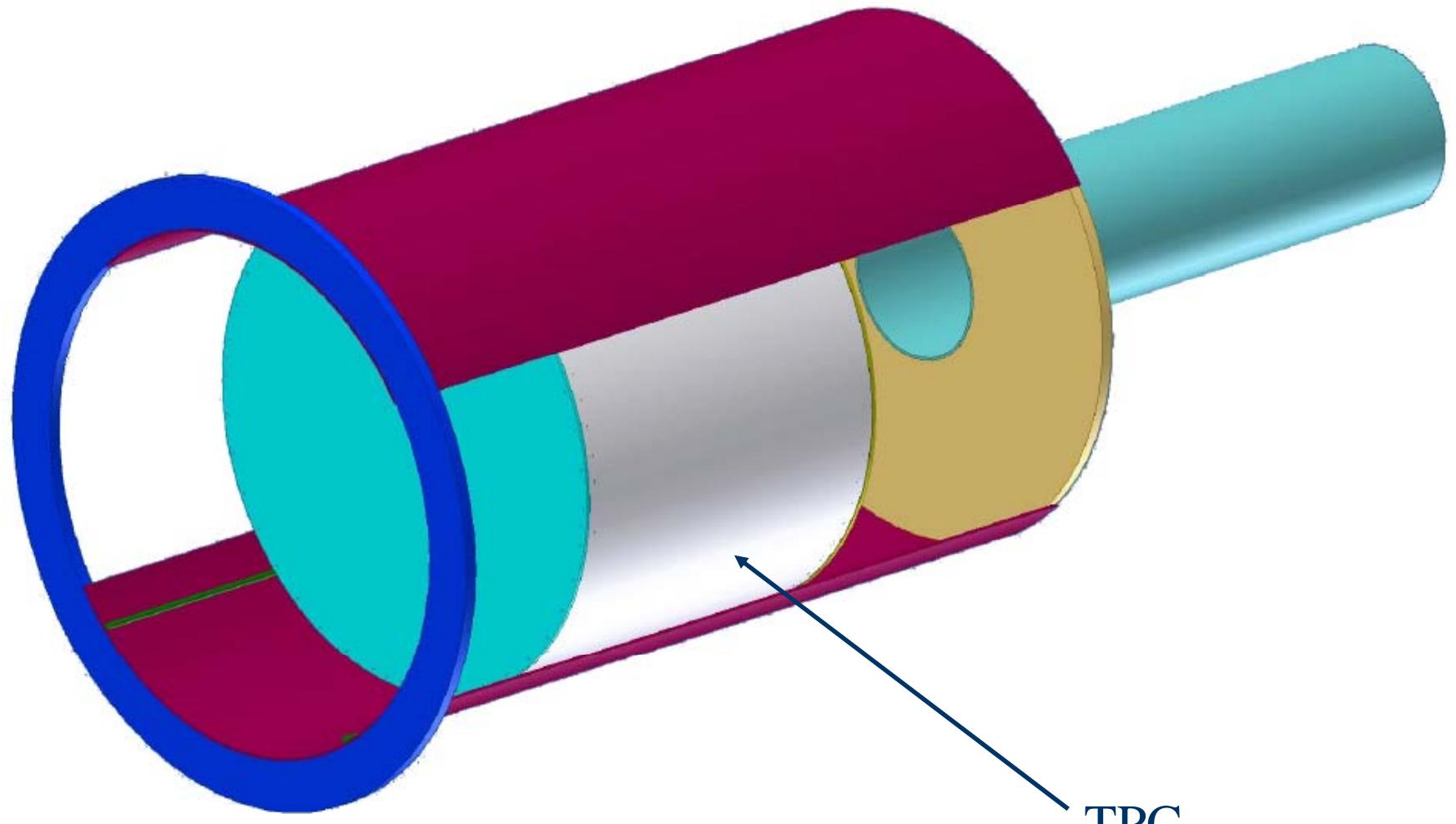
Klaus Dehmelt

# LP1 Support Structure

## Top View



# LP1 Support Structure



TPC

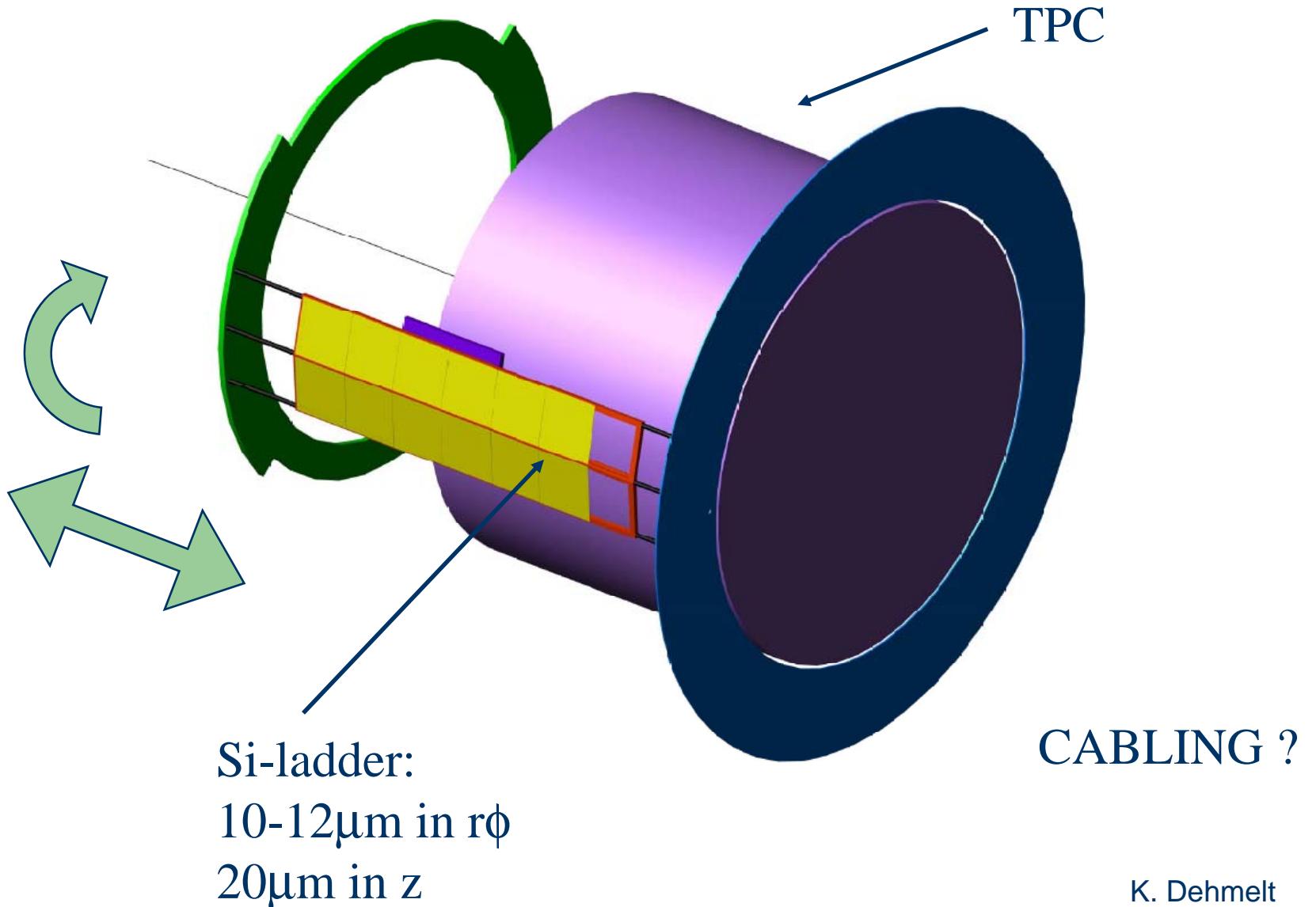
K. Dehmelt

# LP1 Support Structure

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- Discussion w/ SiLC group during LCWS:  
Thomas Bergauer, Stephan Haensel from  
HEPHY Wien  
H.-J. Simonis from FZK
- Idea: install Si-ladder such that it can be  
moved → beam spot always on module(s)

# LP1 Support Structure



# LP1 Support Structure

Lifting table



# PCMAG & T24



K. Dehmelt

# PCMAG & T24



K. Dehmelt

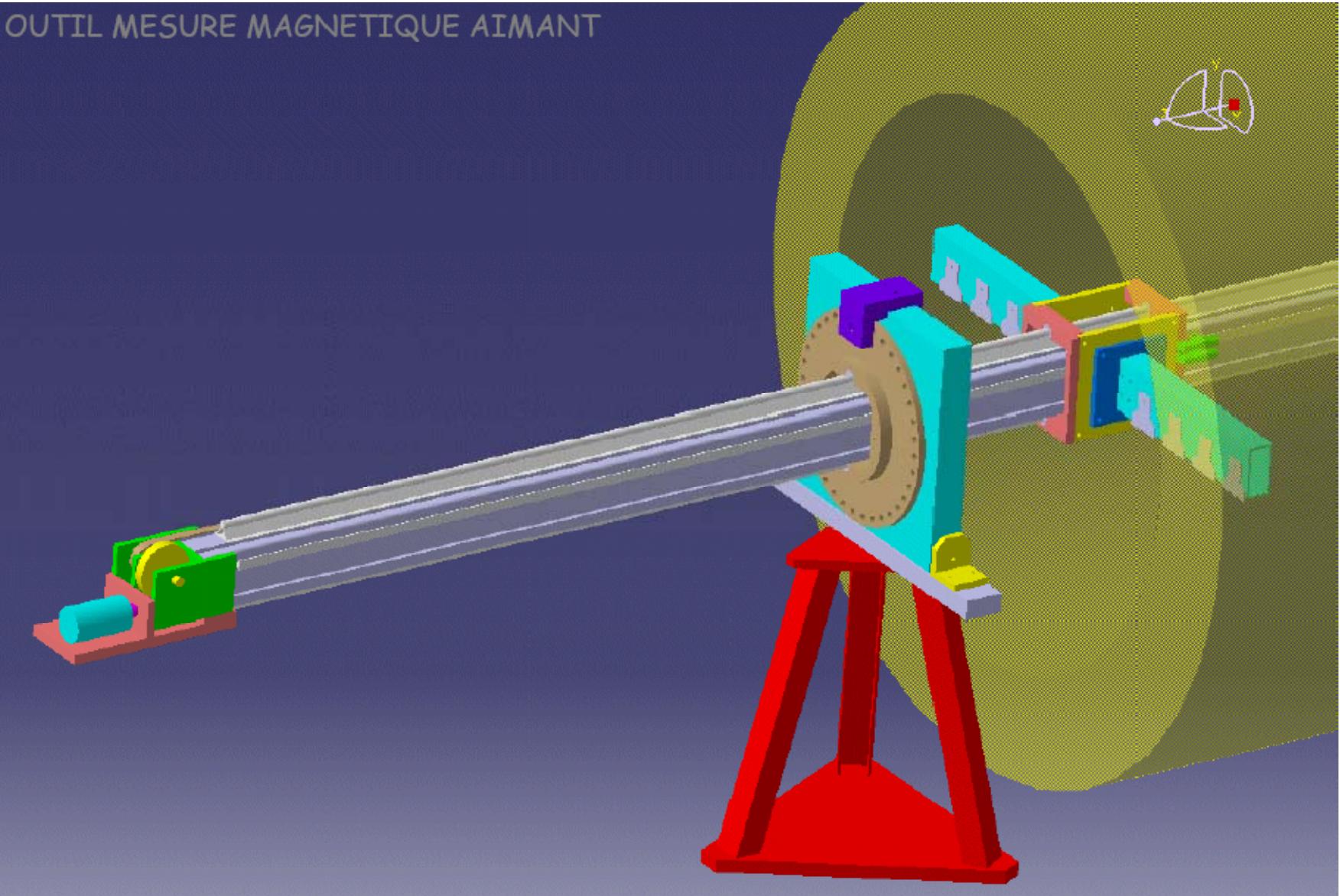
# PCMAG & T24



K. Dehmelt

# B-Field Mapping

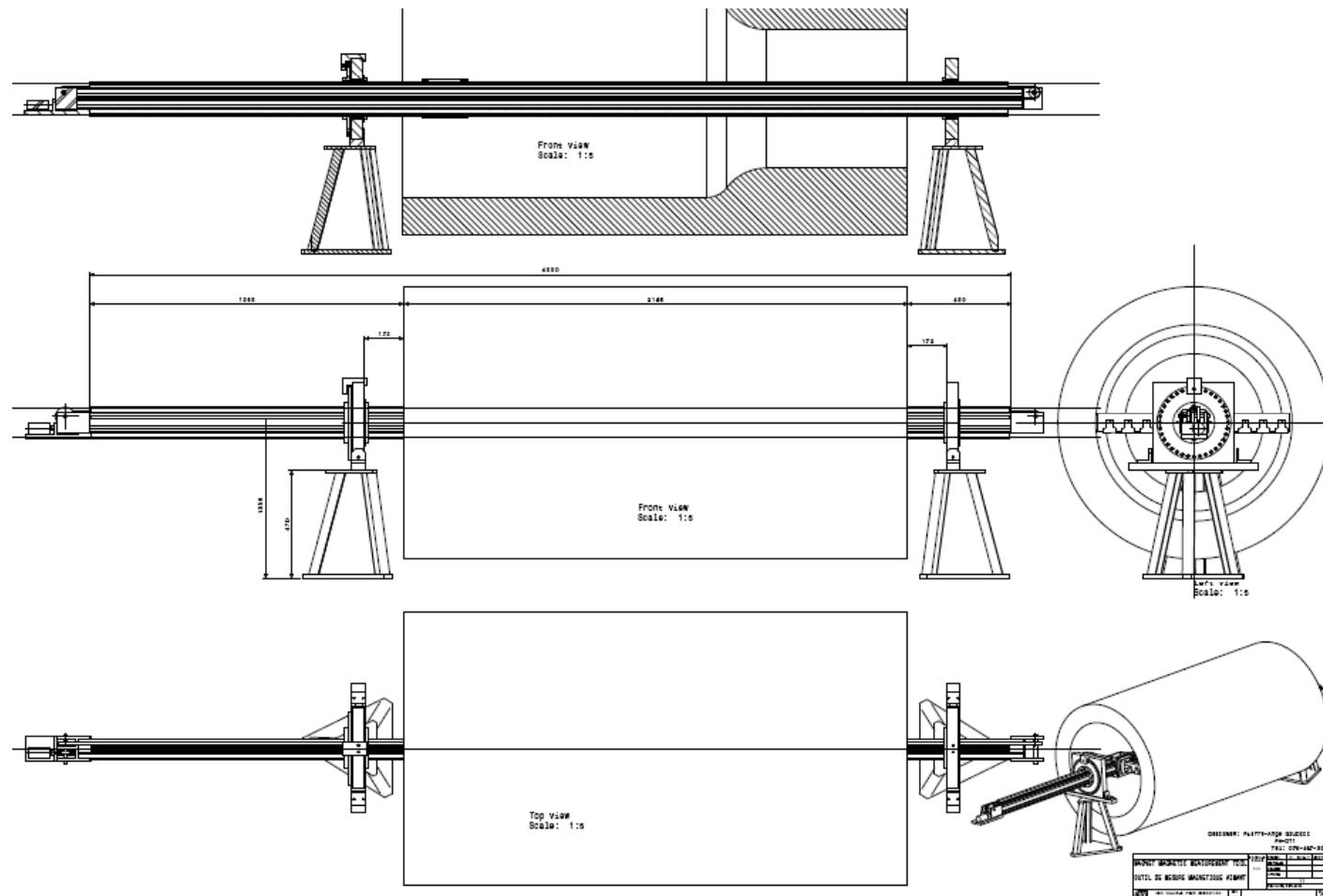
OUTIL MESURE MAGNETIQUE AIMANT



K. Dehmelt

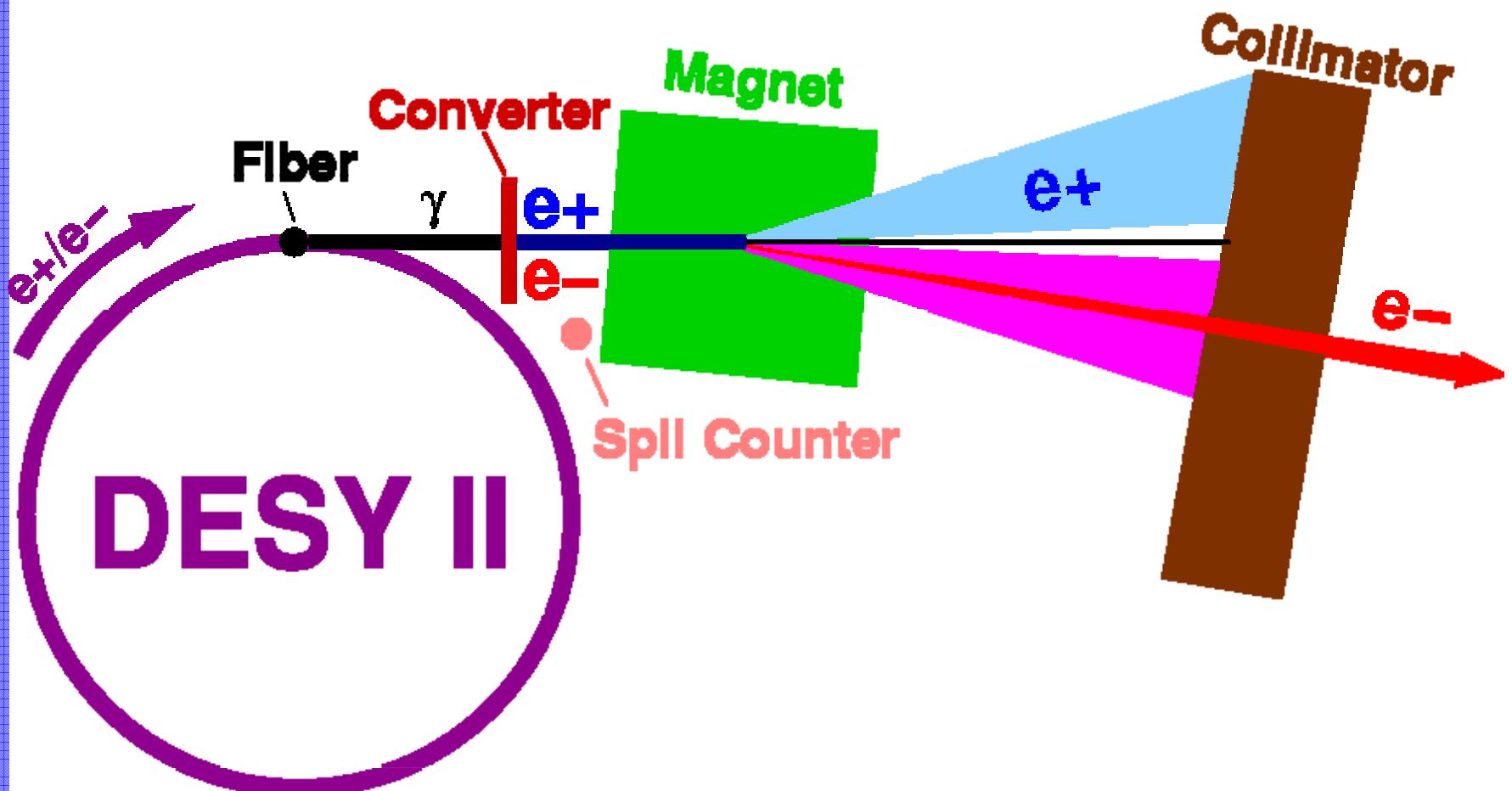
# B-Field Mapping

Measurements will be performed in the week starting  
23-July-2007

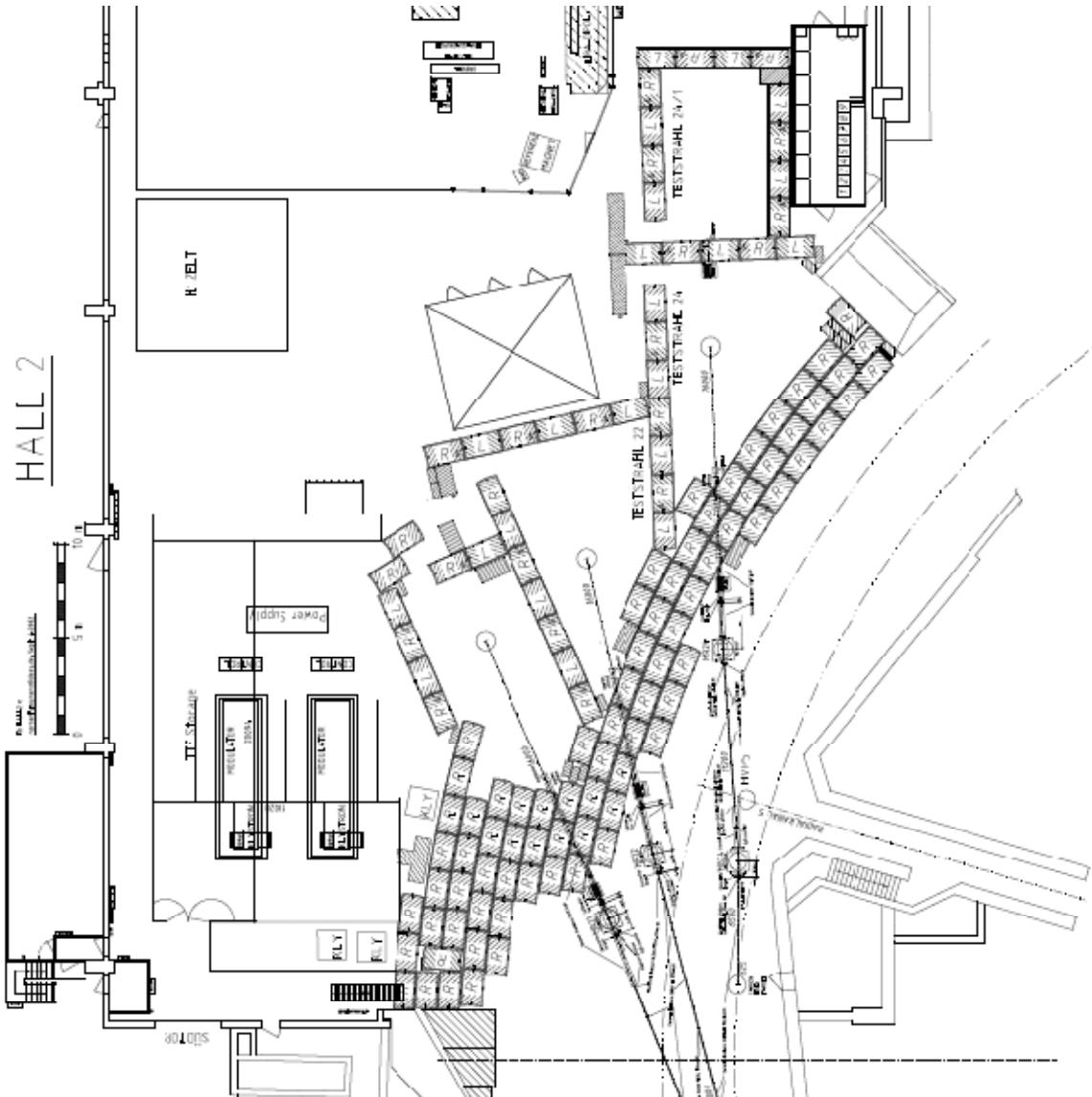


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# Test Beam Area T24



# Test Beam Area T24



K. Dehmelt

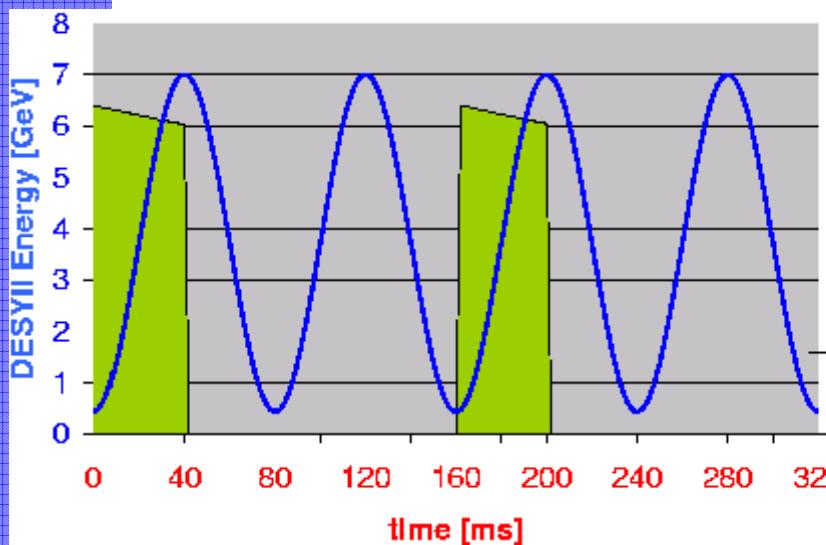
# Test Beam Area T24

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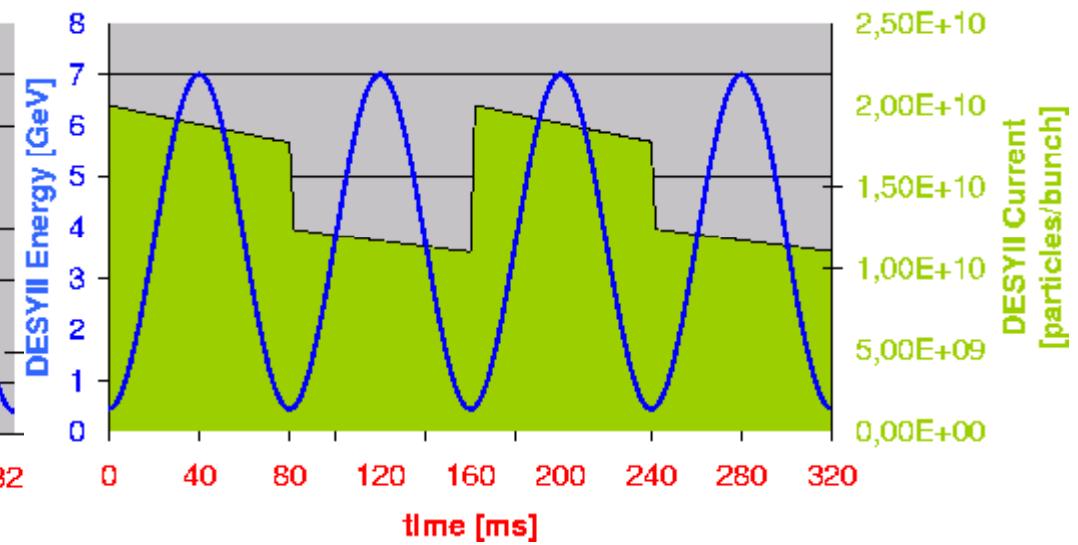
- Converted bremsstrahlung beams from C-fiber targets → DESY II
- Bremsstrahlung →  $1/E$  dependence
- Energy distribution of electron/positron pair conversion nearly flat
- Geometry fixed by beam pipe
- Varying magnet current → beam momentum

# Test Beam Area T24

- Spill structure:  
in general ~40 ms spills every ~160 ms



w/ extraction



w/o extraction

# Test Beam Area T24

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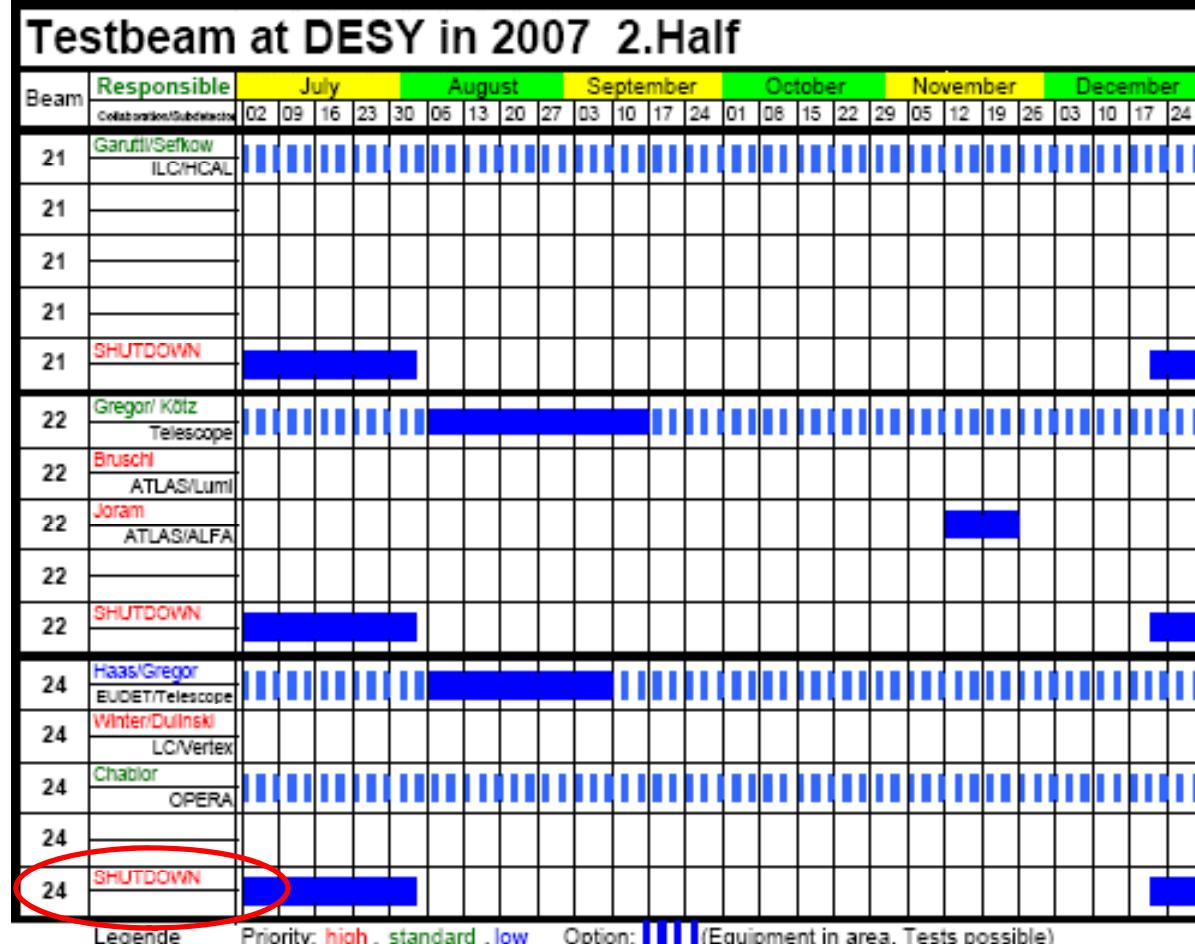
- Typical momenta of electrons reaching T24:  
1 ... 6 GeV/c  
spread ~ 5%, divergence ~ 2mrad
- Magnet currents, choice of target and collimator opening is under control of user
- Accelerator control room handles the fiber target

# Test Beam Area T24

Estimated rates (per cm<sup>2</sup>)

Energy / GeV	Rate (3mm Cu) / Hz	Rate (1mm Cu) / Hz
1	330	220
2	500	330
3	1000	660
5	500	330
6	250	160

# Test Beam Area T24



K. Dehmelt

# Test Beam Area T24

Testbeam at DESY in 2008 1. Half

Beam	Responsible Collaboration/Institute	January		February		March		April		May		June														
		07	14	21	28	04	11	18	25	03	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23
21	Gautil/Sefkow ILC/IHCAL																									
21																										
21																										
21																										
21	SHUTDOWN																									
22	Gregor/ Kötz Telescope																									
22																										
22																										
22	SHUTDOWN																									
24	Haas/Gregor EUDET/Telescope																									
24																										
24																										
24	SHUTDOWN																									

Testbeam at DESY in 2008 2.Half

Responsible	July		August		September		October		November		December															
	07	14	21	28	04	11	18	25	01	08	15	22	29	06	13	20	27	03	10	17	24	01	08	15	22	
Garutti/Sefkow ILC/IHCAL																										
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Legende

Priority: high , standard , low

Option: (Equipment in area, Tests possible)