

Progress in mechanical design of CEPC **detector** TDR

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1. General Drawing

Undetermined:
Silicon Tracker

Update 1:

Overall dimension

L 13450 → **11870**
H 12230 → **11090**

Update 2:

ECAL

Ø3800 → **Ø3660**
Ø4500 → **Ø4260**
L5900 → **L5800**

Update 5:

Yoke (7 layers)

6 layers 100

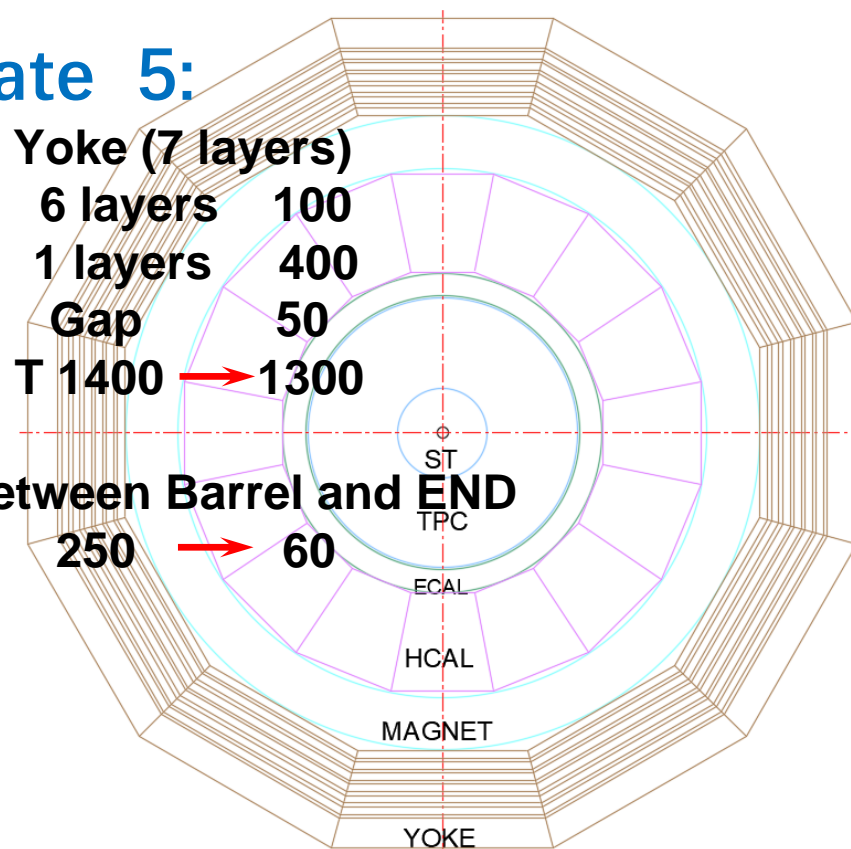
1 layers 400

Gap 50

T 1400 → **1300**

Gap Between Barrel and END

250 → **60**



Update 3:

GAP between TPC and ECAL

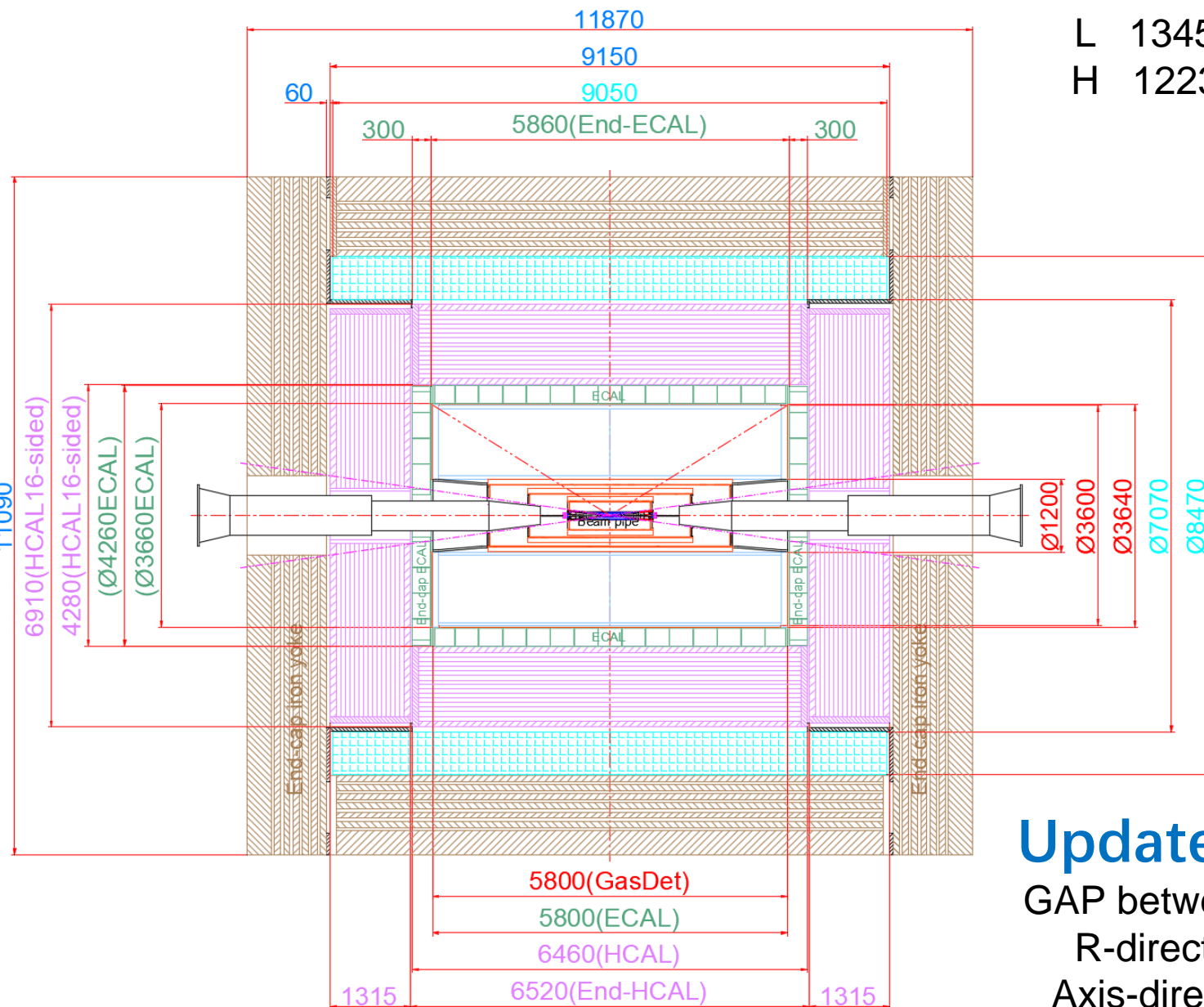
R-direction 100 → 30

Axis-direction 150 → 30

Update 4:

OTK

T 50 → 20



1. General Drawing

Basic dimensions and interrelationships of sub detectors (see table below): **Starting from IP**

	R (mm)	Axis (mm)
Yoke (T: 1300 mm)	4245 ~ 5545 (12-sided) (Barrel Yoke) L: 4575 X 2 = 9150	4635 ~ 5935 (End Yoke) (Total L: 5935 X 2 =11870)
Magnet (T: 700 mm)	R3535 ~ R4235 L: 4525 X 2 = 9050	0 ~ 4525
HCAL (T: 1315 mm)	2140 ~ 3455 (16-sided) (Barrel HCAL) L: 3230 X 2 = 6460	3260 ~ 4575 (End HCAL) 外形待定
ECAL (T: 300 mm)	R1830 ~ R2130 (参考圆, 待定) (Barrel ECAL) L: 2900 X 2 = 5800	2930 ~ 3230 (End ECAL) 外形待定
OTK	R1800 ~ R1820 (Barrel OTK)	2910 ~ 2930 (End OTK)
TPC	R600 ~ R1800 L: 2900 X 2 = 5800	0 ~ 2900
ST	R79 ~ R590 (暂定和待定)	待定
Beampipe	0 ~ R76.5	0 ~ 700

Note: The data in the table are radius and half length

2. Work schedule

	Work	Time
STEP 1	Complete the mechanical framework structure of all sub detectors	End of May ?
STEP 2	Detailed structure, simulation, investigate and survey	End of June ?
STEP 3	Connection structure and installation design	End of June ?

Clarify design requirements: → **Precondition**

1. Detector Design Requirements
2. Mechanical design requirements

Thanks