



List of  
**DT Type Names**  
Shown  
on a Drawing of the Wheel  
(for Each Wheel)  
  
and a Schematic Drawing  
Showing an  
**Overview of Services**  
(Orientation, Location of Services, etc.)

H. Reithler  
Status 050912

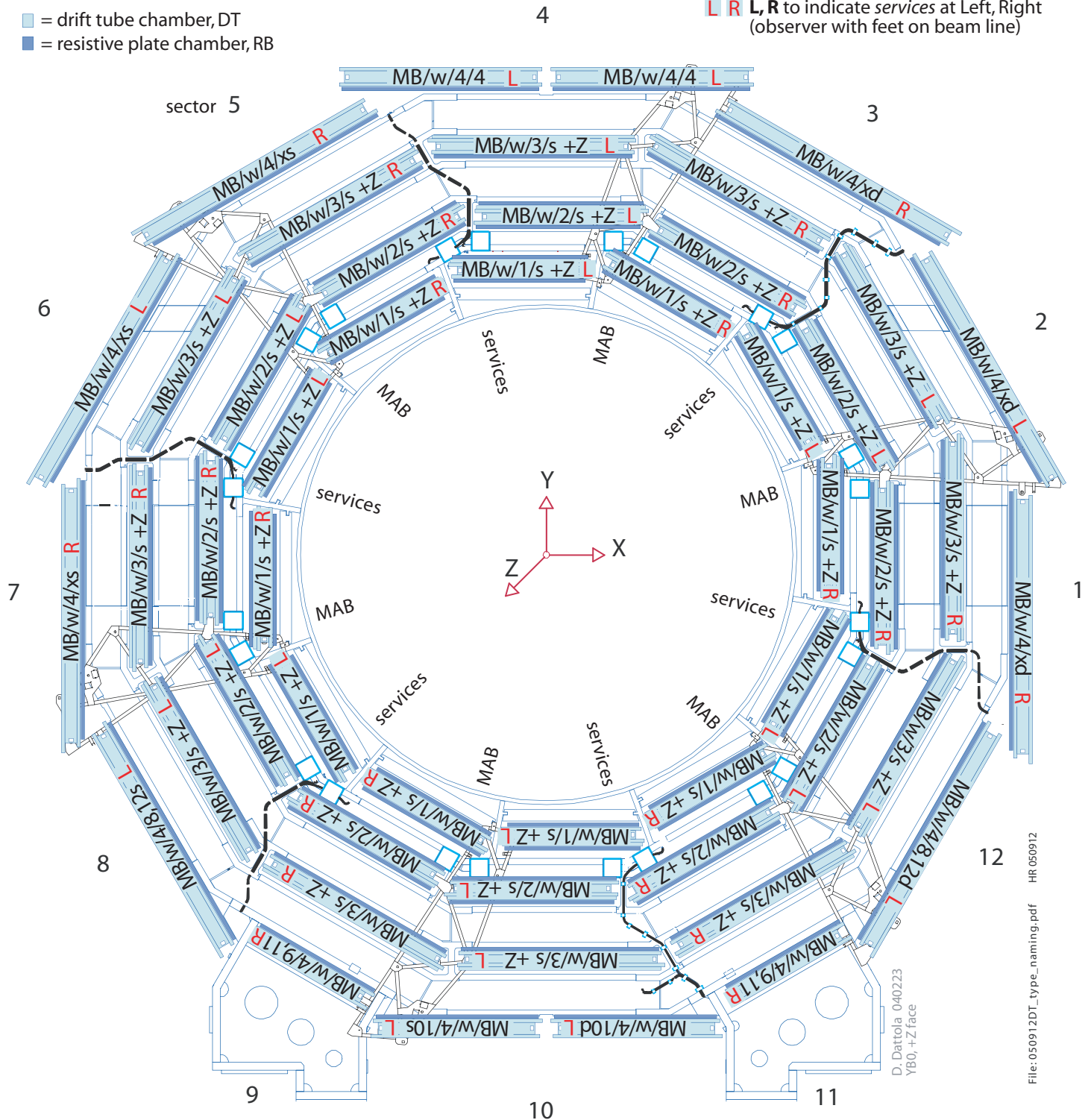
# CMS DT Type Naming for +Z View: YB+2



MB/w/r/s:  
 w = wheel barrel yoke YB (+2, +1, 0, -1, -2)  
 r = station (1, 2, 3, 4)  
 s = sector (1, 2, ..., 12)

■ = drift tube chamber, DT  
 ■ = resistive plate chamber, RB

Add:  
 +Z, -Z to indicate wheel type/view  
 (for MB1, MB2 and MB3 chambers)  
 s, d to indicate left (sinistra), right (destra)  
 hemisphere (for some MB4 chambers)  
 L, R to indicate services at Left, Right  
 (observer with feet on beam line)



D. Dattola 040223  
 YB0, +Z face

File: 050912DT\_type\_naming.pdf HR 050912

Naming of CMS DT chamber type: The convention is to look at the FrontEnd side of the chambers, having the feet on the beam axis and to name the chamber TYPE according to its construction. Services (HV, gas, cooling) add an asymmetry to the chambers, and to reflect whether services are at the left or right side the (reserved) letters L or R are added to the name.

Some chambers are of same type on all wheels: MB/4/4, MB/4/9, 11.

The majority of chambers are different for +Z and -Z wheels: MB/w/1/s, MB/w/2/s, MB/w/3/s; quote +Z or -Z.

Some chambers are different for left and right hemisphere (w.r.t. a vertical line!) of the wheel: MB/w/4/s; quote s or d.

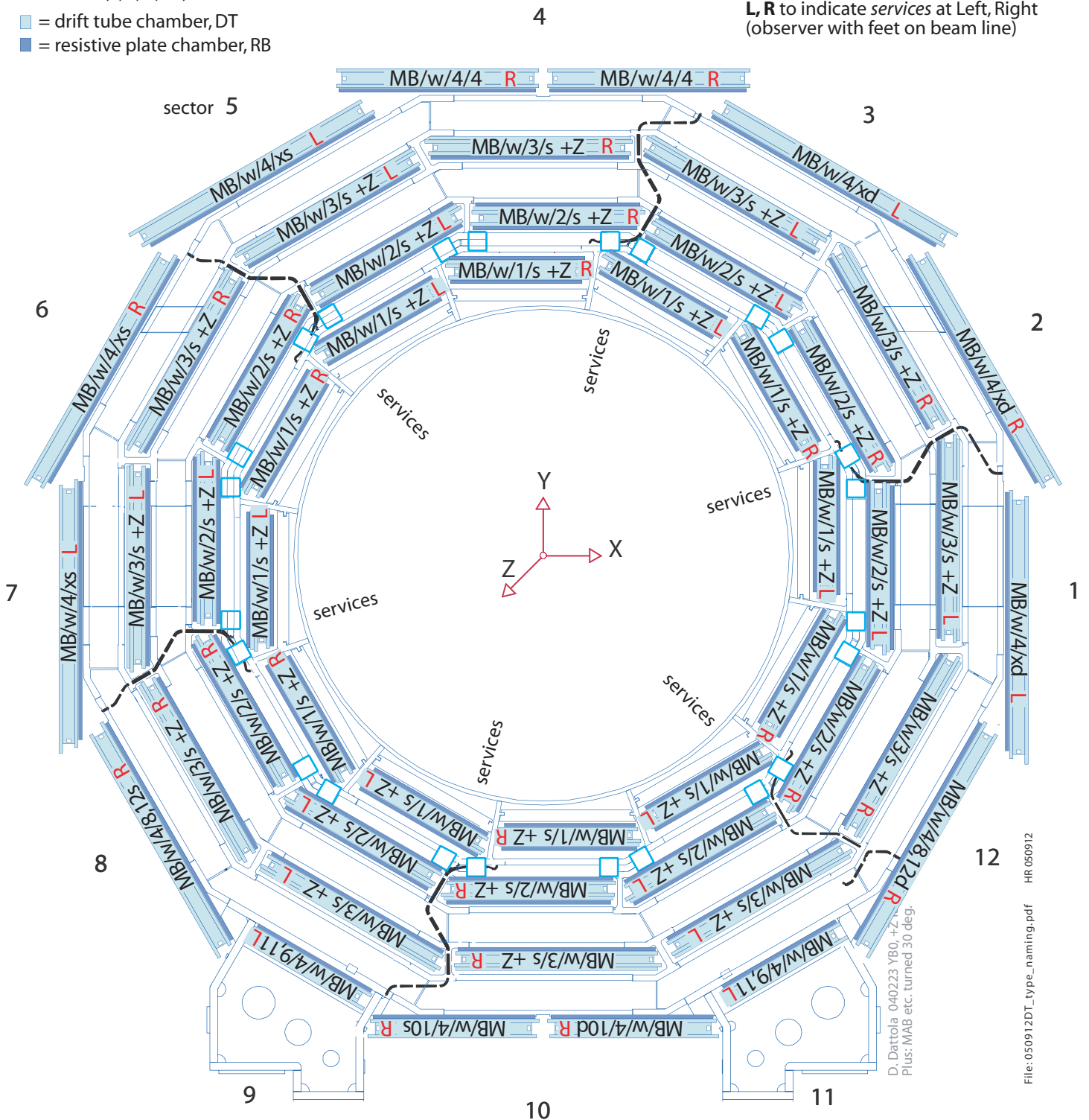
Although the twin chambers MB/w/4/4 are of identical type, their positions should be given appending an s and d, respectively, to distinguish them.

# CMS DT Type Naming for +Z View: YB+1



MB/w/r/s:  
 w = wheel barrel yoke (+2, +1, 0, -1, -2)  
 r = station (1, 2, 3, 4)  
 s = sector (1, 2, ..., 12)  
 □ = drift tube chamber, DT  
 ■ = resistive plate chamber, RB

Add:  
 +Z, -Z to indicate wheel type/view  
 (for MB1, MB2 and MB3 chambers)  
 L R s, d to indicate left (sinistra), right (destra)  
 hemisphere (for some MB4 chambers)  
 L, R to indicate services at Left, Right  
 (observer with feet on beam line)



File: 050912DT\_type\_naming.pdf HR 050912

Naming of CMS DT chamber type: The convention is to look at the FrontEnd side of the chambers, having the feet on the beam axis and to name the chamber TYPE according to its construction. Services (HV, gas, cooling) add an asymmetry to the chambers, and to reflect whether services are at the left or right side the (reserved) letters L or R are added to the name.

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Some chambers are different for left and right hemisphere (w.r.t. a vertical line!) of the wheel: MB/w/4/s; quote s or d.

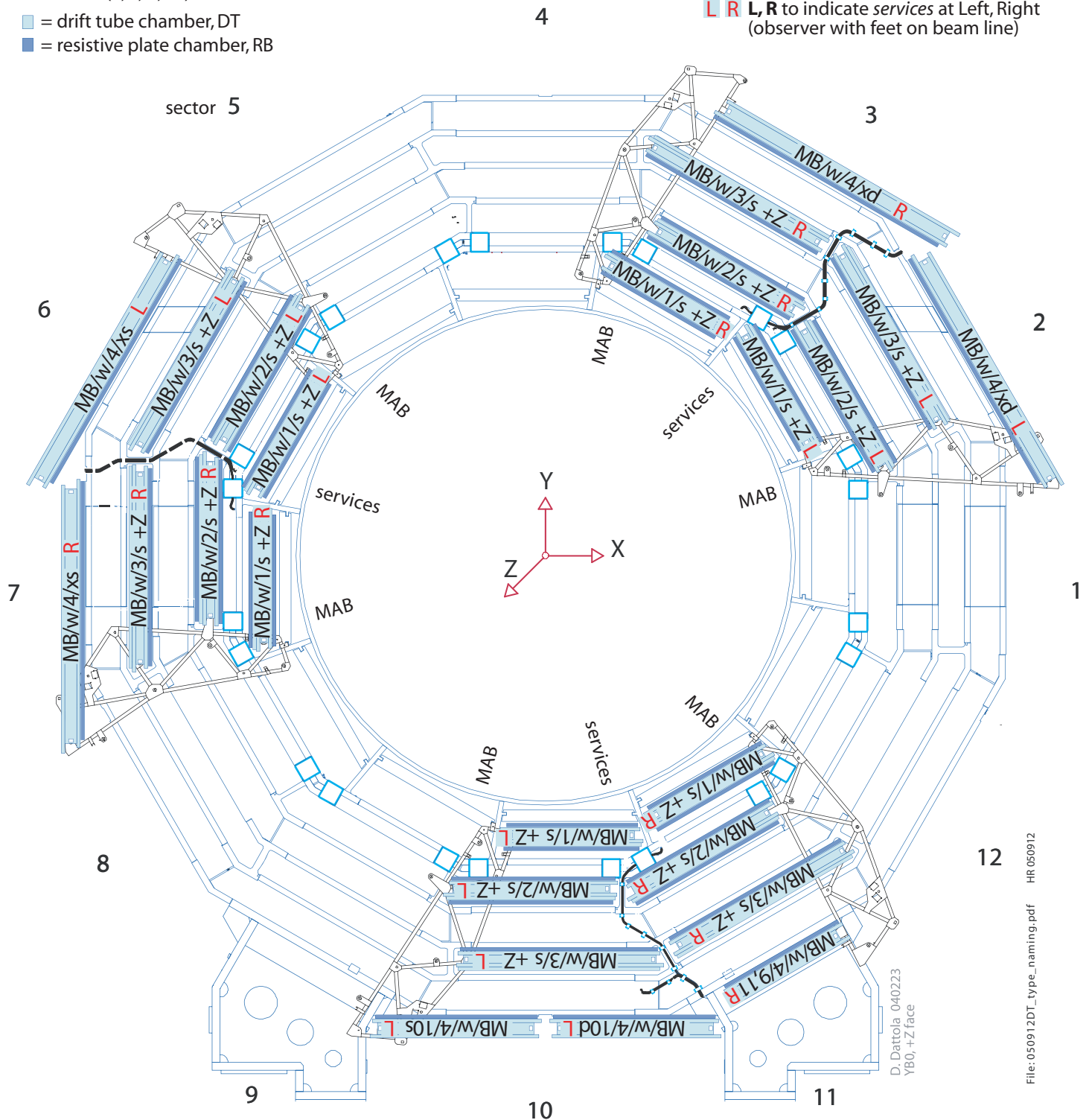
Although the twin chambers MB/w/4/4 are of identical type, their positions should be given appending an s and d, respectively, to distinguish them.

# CMS DT Type Naming for +Z View: YB+0



MB/w/r/s:  
 w = wheel barrel yoke (+2, +1, 0, -1, -2)  
 r = station (1, 2, 3, 4)  
 s = sector (1, 2, ..., 12)  
 □ = drift tube chamber, DT  
 ■ = resistive plate chamber, RB

Add:  
 +Z, -Z to indicate wheel type/view  
 (for MB1, MB2 and MB3 chambers)  
 s, d to indicate left (sinistra), right (destra)  
 hemisphere (for some MB4 chambers)  
 L, R to indicate services at Left, Right  
 (observer with feet on beam line)



D. Dattola 040223  
 YB0, +Z face

File: 050912DT\_type\_naming.pdf HR 050912

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Some chambers are different for left and right hemisphere (w.r.t. a vertical line!) of the wheel: MB/w/4/s; quote s or d.

Although the twin chambers MB/w/4/4 are of identical type, their positions should be given appending an s and d, respectively, to distinguish them.

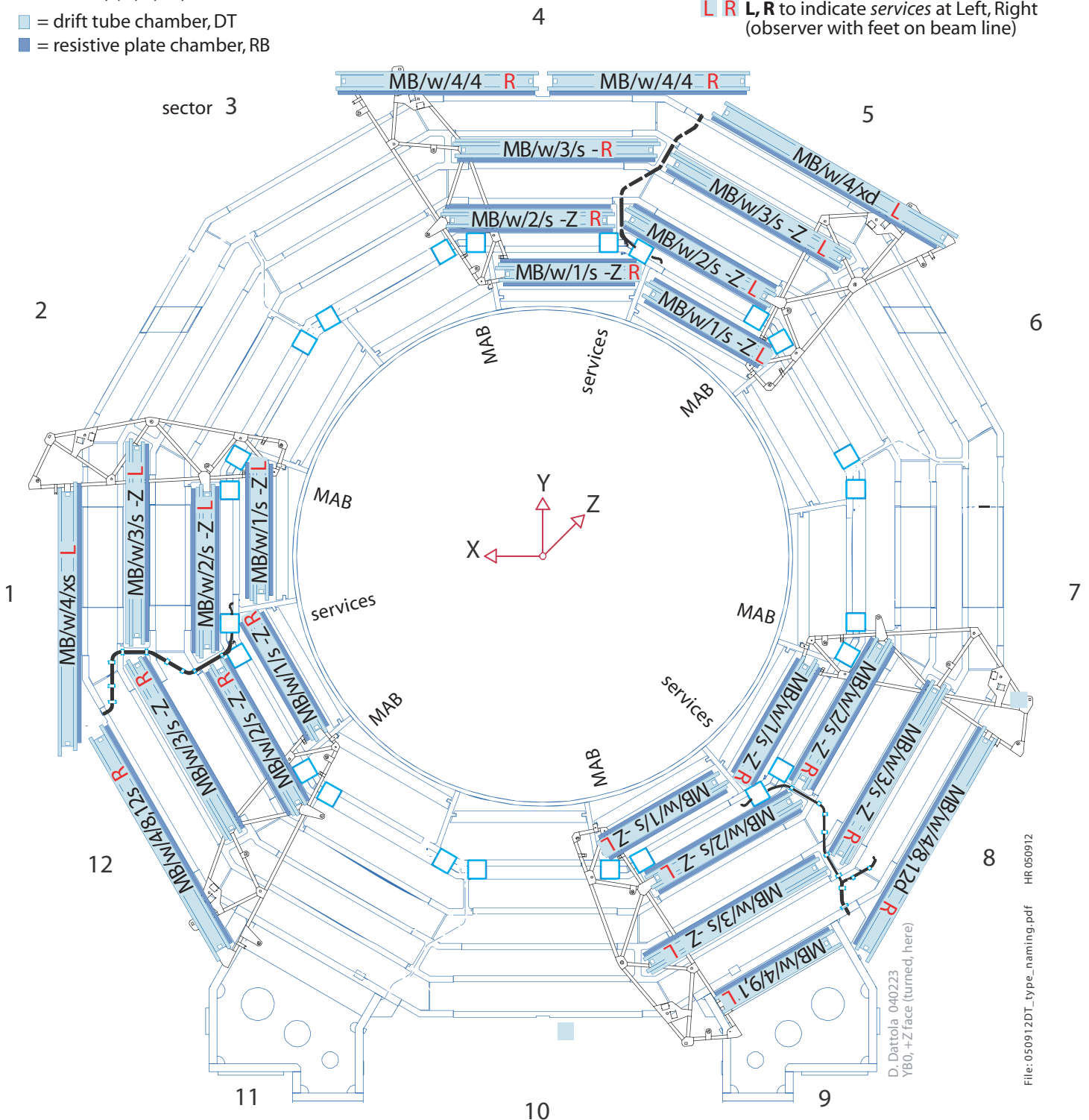


# CMS DT Type Naming for -Z View: YB-0



MB/w/r/s:  
 w = wheel barrel yoke YB (+2, +1, 0, -1, -2)  
 r = station (1, 2, 3, 4)  
 s = sector (1, 2, ..., 12)  
 ■ = drift tube chamber, DT  
 ■ = resistive plate chamber, RB

Add:  
 +Z, -Z to indicate wheel type/view  
 (for MB1, MB2 and MB3 chambers)  
 s, d to indicate left (sinistra), right (destra)  
 hemisphere (for some MB4 chambers)  
 L R L, R to indicate services at Left, Right  
 (observer with feet on beam line)



Naming of CMS DT chamber type: The convention is to look at the FrontEnd side of the chambers, having the feet on the beam axis and to name the chamber TYPE according to its construction. Services (HV, gas, cooling) add an asymmetry to the chambers, and to reflect whether services are at the left or right side the (reserved) letters L or R are added to the name.

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Although the twin chambers MB/w/4/4 are of identical type, their positions should be given appending an s and d, respectively, to distinguish them.

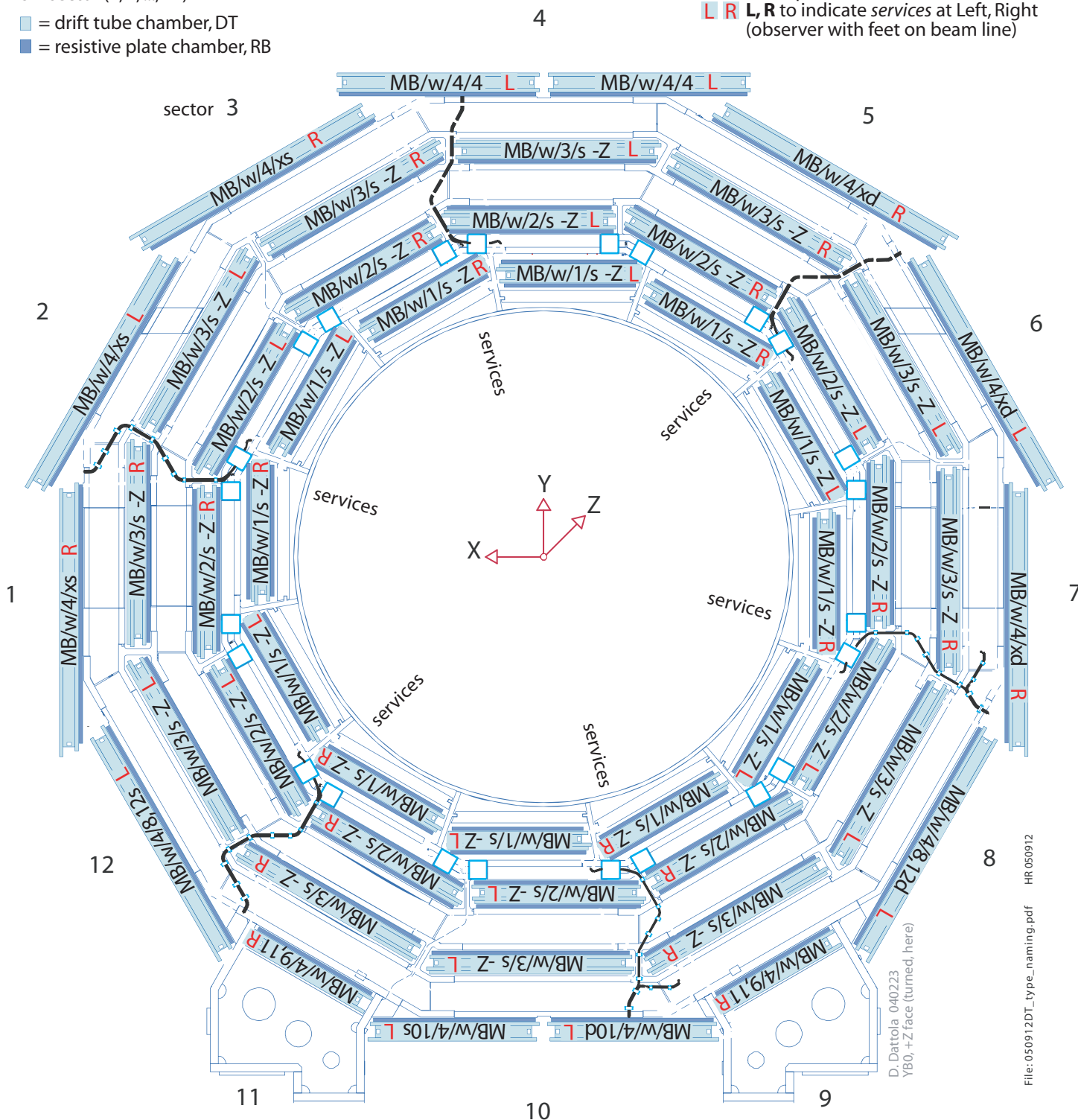


# CMS DT Type Naming for -Z View: YB-1

MB/w/r/s:  
 w = wheel barrel yoke (+2, +1, 0, -1, -2)  
 r = station (1, 2, 3, 4)  
 s = sector (1, 2, ..., 12)

■ = drift tube chamber, DT  
■ = resistive plate chamber, RB

Add:  
 +Z, -Z to indicate wheel type/view  
 (for MB1, MB2 and MB3 chambers)  
 s, d to indicate left (sinistra), right (destra)  
 hemisphere (for some MB4 chambers)  
 L, R to indicate services at Left, Right  
 (observer with feet on beam line)



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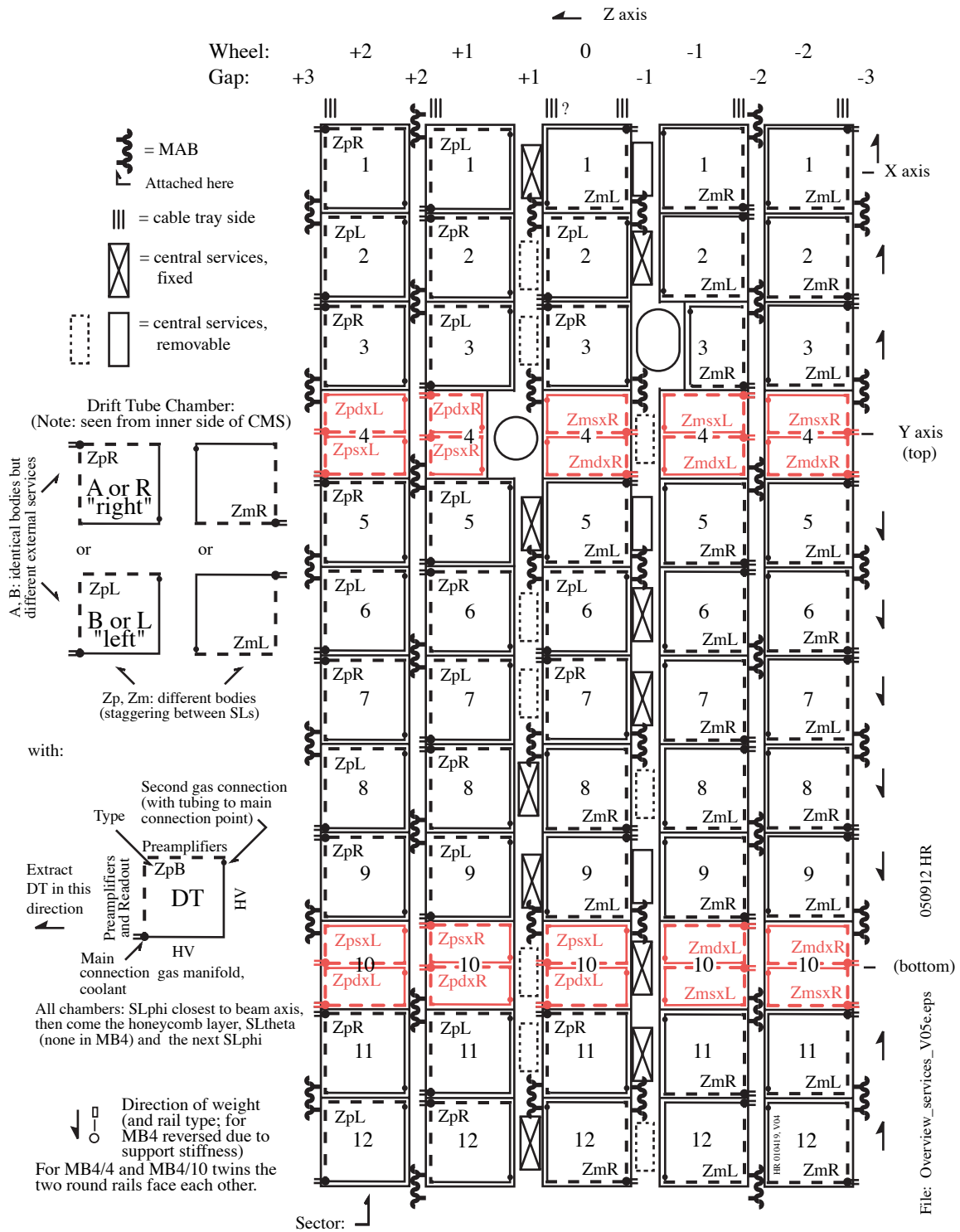
The majority of chambers are different for +Z and -Z wheels: MB/w/1/s, MB/w/2/s, MB/w/3/s; quote +Z or -Z.

Some chambers are different for left and right hemisphere (w.r.t. a vertical line!) of the wheel: MB/w/4/s; quote s or d.

Although the twin chambers MB/w/4/4 are of identical type, their positions should be given appending an s and d, respectively, to distinguish them.







**Installation of CMS Barrel Muon Chambers.** Sectors as seen from inside. Sectors 4 and 10 have the chambers subdivided in two, as shown here in red, only at station MB4. The difference between R (or A; right) and L (or B; left) types is the location of gas, coolant, HV and LV external connection; the bodies are identical. The staggering between the SuperLayers is, however, different between the Zp and Zm types for MB1, MB2 and MB3 chambers (have to extract the chambers in opposite directions in Z+ and Z- wheels, but the wheels have all the same orientation and are made left-right asymmetric to ensure an hermetic coverage in azimuth). For MB4 chambers the distinction of chambers types is related to the hemisphere (wrt a vertical line) and is indicated by d (destra=right) and s (sinistra=left). The cable and piping trays along the periphery of the wheel are close to the face with the main connections; on the central wheel the Barrel Muon gas and cooling piping is on the Zm side. The "bottom" side of a chamber has one, the "top" side has two SuperLayers (SL) attached to the honeycomb structure (not applicable to MB4 chambers, which have only two SLs).