

## RPC docs

- Resistive Plate Chambers [↗](#) chapter in Muon TDR
  - ◆ Barrel
    - ◇ Physics requirements demand that in each station the strips, running always along the beam direction, be divided into two parts for stations MB1, MB3 and MB4. Station MB2, which represents a special case for the trigger algorithm, will have strips divided into three parts.
    - ◇ For each double-gap 96 strips will be read out.
  - ◆ Endcap

## (sw) Geometry

- Visualization Offline Guide
- <http://cmslrx.fnal.gov/lxr/source/DetectorDescription/Parser/test/dumpDDCompactView.cpp> [↗](#)
- [RPCDetId.h](#) [↗](#)
  - ◆ **Region id:**
    - ◇ 0 for Barrel
    - ◇ +/-1 For +/- Endcap
  - ◆ **Ring id:**
    - ◇ **Barrel:** Wheel number from -2 to +2
    - ◇ **Endcap:** Ring Number from 1 to 3
    - ◇ Ring has a different meaning in Barrel and Endcap! In Barrel it is wheel, in Endcap it is the physical ring located on a disk (a disk contains three rings). In Endcap the ring is the group of chambers with same r (distance of beam axis) and increasing phi
  - ◆ **Station id :**
    - ◇ **Barrel:** the 4 groups of chambers at same r (distance from beam axis) and increasing phi
    - ◇ **Endcap:** the 3 groups of chambers at same z (distance from interaction point), i.e. the disk
  - ◆ **Sector id:**
    - ◇ the group of chambers at same phi (and increasing r)
  - ◆ **Layer id:** each station can have two layers of chambers: layer 1 is the inner chamber and layer 2 is the outer chamber (when present). **Only in Barrel: RB1 and RB2.**
  - ◆ **SubSector id :** some sectors are divided along the phi direction in subsectors
    - ◇ **Barrel:** from 1 to 4
    - ◇ **Endcap:** from 1 to 6
  - ◆ **Roll** (also known as **eta partition**) id: each chamber is divided along the strip direction in
    - ◇ **Barrel:** 2 or 3 parts (rolls)
    - ◇ **Endcap:** 2, 3 or 4 parts

### Misc

- Each LB reads 96 strips of one partition (1 roll = half RPC)

### Geant4 and GDML

- [GDML Home](#) [↗](#), having link to [Getting started](#) [↗](#)

-- NikolayDarmenov - 27 Jan 2009

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