Geometrical coverage of RPC

Minutes of CMS Collaboration Board Meeting of 23.09.1994

The Management Board recommends that no dedicated muon trigger detector beyond $|\eta|$ = 2 be included in the Technical Proposal.

However, space should be left free in the iron to allow for the possibility that such a detector be implemented as a future upgrade.

The Collaboration Board endorsed this MB recommendation.

Main aguments:

- **RPC cannot stand the rate > 500 Hz/cm^2**
- **PPC covering 2.1<$|\eta|$<2.45 cost ~2.2 MCHF**

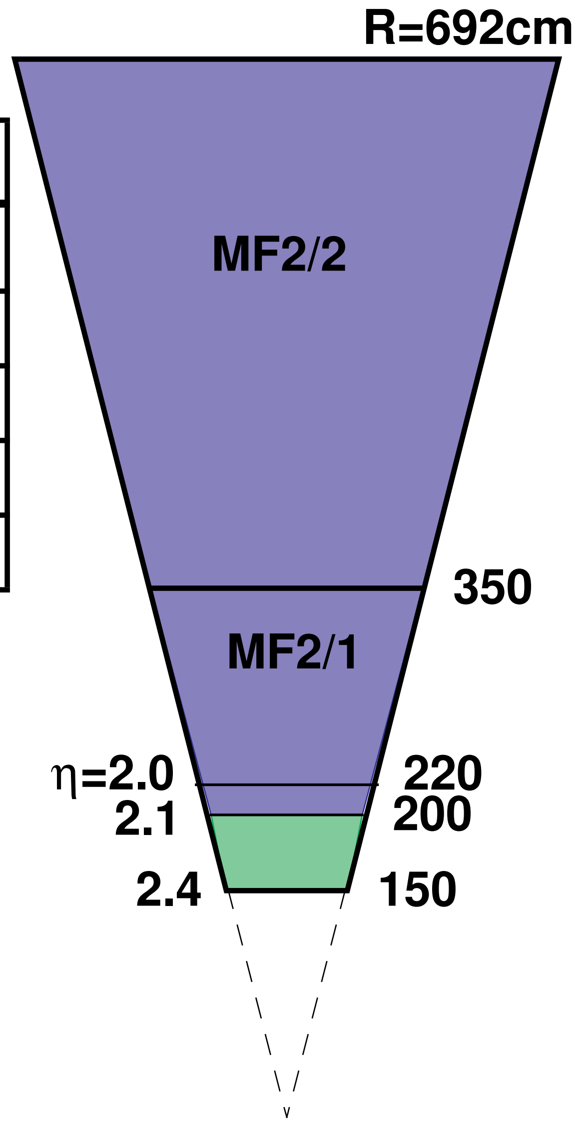
Present situation:

- **RPC can stand the rate > 5000 Hz/cm^2**
- **how “the space can be left free” in practice?**

Cost of the RPC upgrade

Costing in CORE-7 is done up to η_{max}=2.1

η_{max}	2.0	2.1	2.4	
area	1062	1092	1152	m^2
channels	78	88	115	$\times$1000
chambers	-18	1400	+36	kCHF
front-end	-80	1000	+250	kCHF
trigger&DAQ	-159	4000	+654	kCHF



Proposal:

- build chambers to $|\eta|$=2.4
- leave electronics for future upgrade