

Plans for COMPASS Trigger Changeover 2016/2017

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Grounding of Hodoscopes

- Check grounding of Hodoscope frames
- Proper isolation of PMTs and shieldings.
 - Kapton foil between μ -metall shielding and softirone-shielding.
 - Kapton tape between softirone shielding and frame holder.
 - investigation if signal ripple/reflections on long cables

Planing for Exchange of Outer Bases

- Exchange of resistor bases against new transistor bases in Outer 3/4

HO03

typ	used inner thread	used outer thread
active	4	1
resitor		31

HO04

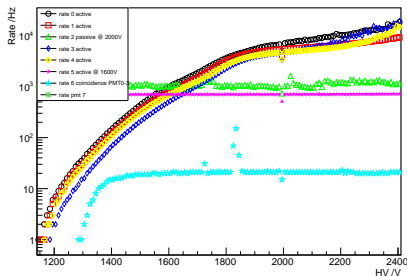
typ	used inner thread	used outer thread
active	3	12
resitor	3	14

For Exchange: 45 external thread, 3 internal thread

Available: 32 outer thread 4 inner thread

Characterization of Scintillator Counters

- HV-Scan of all Hodoscope channels to find the right working point.
- Find out temperature dependency of transition time for old Bases
- Parameter scan for efficiencies and timing (HV, Discriminator threshold, temperature)



ongoing... - timing scan at different HV over Christmas holiday...

Planing for Scaler Readout

- 15x LVDS Splitter (32ch each) (Thanks to Rainer)
- Need LV power supply 3,3V@3A for each Splitter (approx. 600 Euro)
- 8x CATCH Scaler (32ch each)

Trigger system	Channels	Scaler/Splitter needed
Outer	100	4
Middle Horizontal	128	4
LAST	192	6
Ladder	128	4
INNER	64	2
Middle Vertical	80	4
Vetos	52	?
Summe	748	24

9 splitter and 10 scaler still needed

New Bases for XP2020

- Active design based on the EMI9813KB active bases.
- → Fix of broken channels in Ladder
- → Decrease veto deadtime. Exchange of resistor bases against new transistor bases in VO/VI1/Vbl.

Trigger Commissioning 2017

- Check for light leaks on all Hodoscopes.
- Investigation of double peaks in TDC-Histos.
- Scan of discriminator thresholds and matrix gate length.
- Include old Lecroy HV (256 channels) in DCS via DIM.
- Make BeamKiller remote move able.

Changes on Veto Electronic

- Exchange of broken LVDS flat-cables (Discriminator/Matrix)
- New veto logics on Gandalf (work of John)
- Add attempts for all physics trigger and delayed veto for all physics trigger to scaler (Request by Andrea)

List of used PMTs and Spare parts:

Typ	Size	# used PMTs	# spare PMTs	# spare Bases	used in Hodo
XP2090	1.5"	32	33	3	HL4/HL5
XP2900	1"	352	12	100+	H1,HL4,HL5,HI4,HMV
EMI9813KB	2"	100	70+	128+	HO03,HO04
XP2072	1.5"	40	28	1	HM04V
9954B	2"	40	1	0	HM05V
XP2020	2"	80	43	100+ CERN Shieldings 0 Ladder 4 Veto	HL4/HL5/VI/Vo/Vbl/Vup/Vdn
9814KB	2"	128	7	8x1 10xA	H2