

KLM-CRT meeting

Sector wiring and data format

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Current KLM sector config: 7/28/2015

SCROD on MB1 ESN: 000013ccf59001

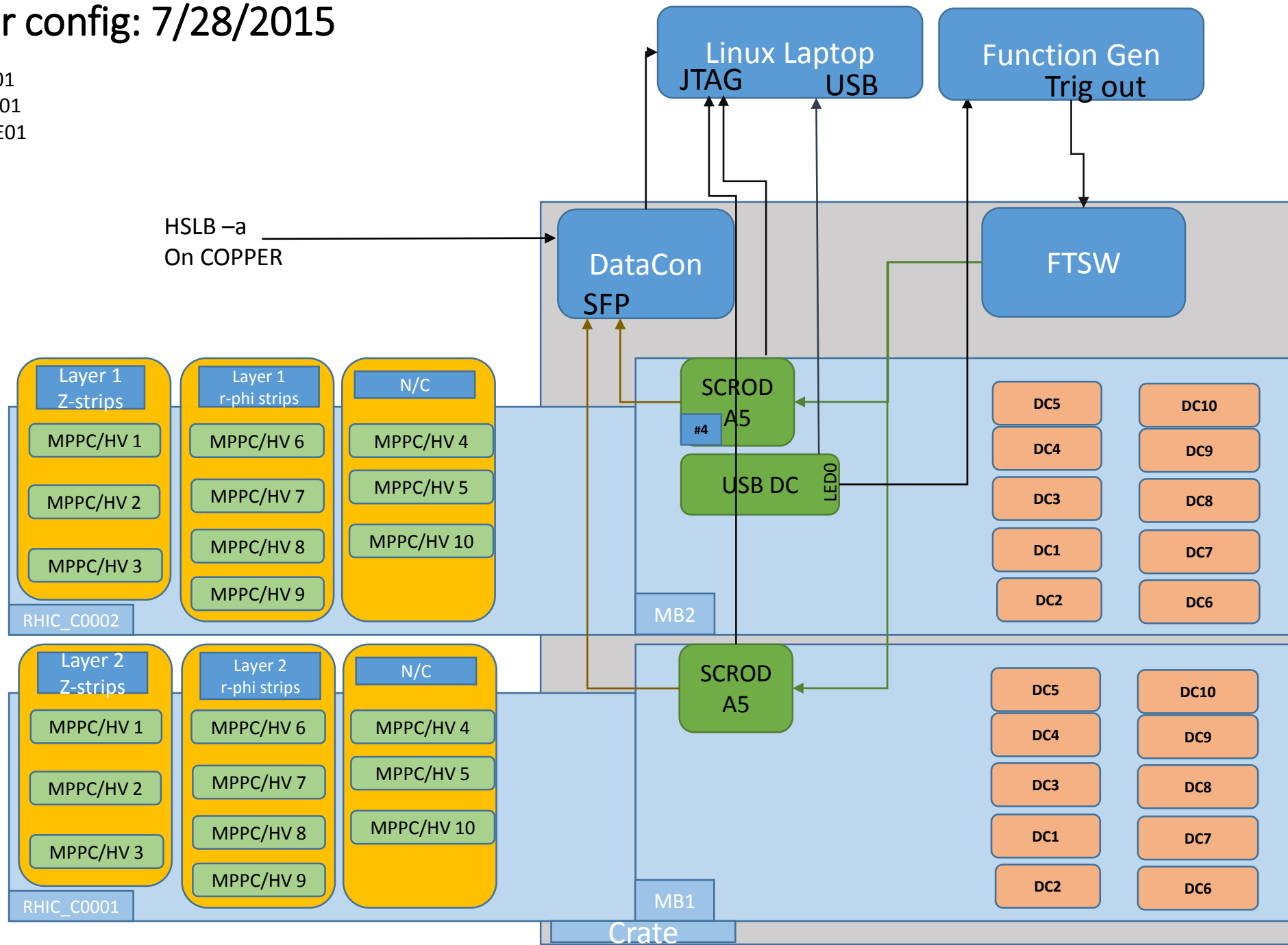
SCROD on MB2 ESN: 000013cab23b01

Data Con ESN: 000014D2F2DE01

Ribbon cable map:
Detector=>MB

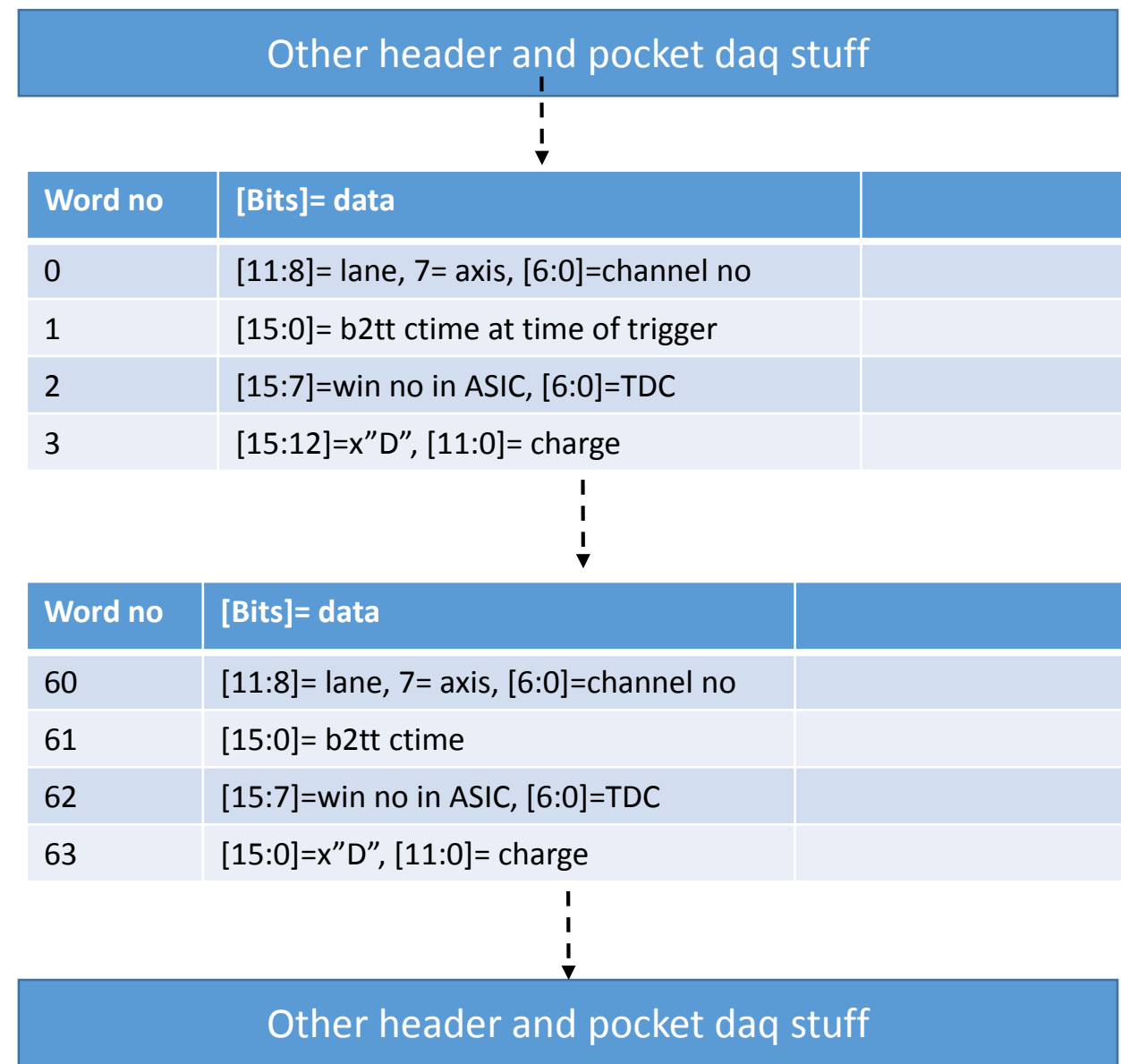
| Detector /chs | MB /chs |
|---------------|---------|
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 6 |
| 5 | 7 |
| 6 | 8 |
| 7 | 9 |

DC= Daughtercard aka ASIC no
N/C= No Connect
MB= Motherboard
chs= channels



SROOT file contents

- Each trigger will cause at least ONE 64 word data packet from each of the lanes (layers) or an empty packet
- Each 64wd can be one of these:
 - Empty set, where no ASIC had any trigger data in the look-back window
 - Actual C&T of readout for ASICs that had a trigger bit in look-back



Definition of terms

- **WDno: 0, bit [11:8]= lane**
 - Lane= Layer= Data Concentrator port= 1 or 2 for this setup
- **WDno: 0, bit [7]= Axis bit=**
 - 0 when $1 \leq \text{ASICno} \leq 5$
 - 1 when $6 \leq \text{ASICno} \leq 10$
- **WDno: 0, bit [6:0]= Channel no in data stream=**
 - $(\text{ASICno}-1) * 15 + \text{ASICchno} + 1$ when $1 \leq \text{ASICno} \leq 5$
 - $(\text{ASICno}-5) * 15 + \text{ASICchno} + 1$ when $6 \leq \text{ASICno} \leq 10$
 - ASICno= ASIC slot number on the scintillator MB: 1~10
 - ASICchno= channel on the ASIC: ~0-15

Definition of terms

- **WDno: 1**= “b2tt ctime.
- **WDno: 2, bit [15:7]**= win no in ASIC
 - The position of the read pointer in the ASIC at readout time.
- **WDno: 2, bit [6:0]**= TDC
 - Position of the peak sample within a 4 consecutive window readout.
- **WDno: 3, bit [11:0]**= Charge
 - Pedestal subtracted peak value associated with TDC