

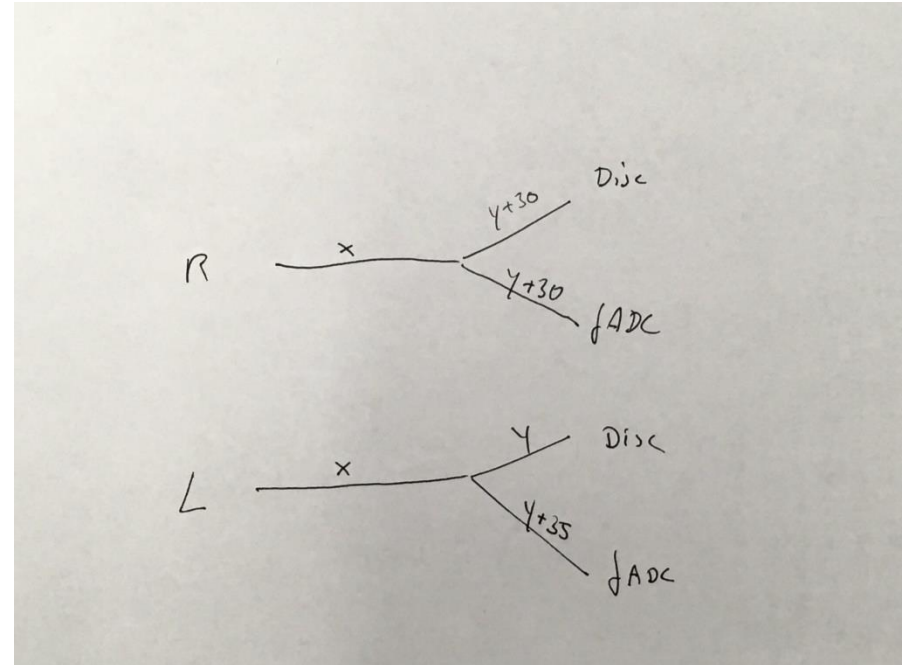
HRS S2m Cable Study Update 9/12/17

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fADC and Discriminated Signal Delay

- On the Left arm, it's assumed that the fADC signal on left PMTs have a 30 ns delay, while on right PMTs there is a 30 ns delay on both discriminated and fADC signals



LHRS fADC Disc Delays	
Signals	Delay (ns)
LfADC+LDisc	35
LfADC+RfADC	5
LfADC+RDisc	6
LDisc+RfADC	29
LDisc+RDisc	30
RfADC+RDisc	3

Fig 1. LHRS delay schematic

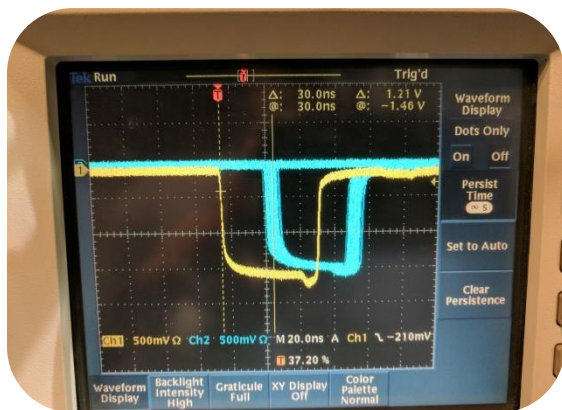


Fig 2. LDisc(yellow)+RDisc(cyan)
30 ns delay

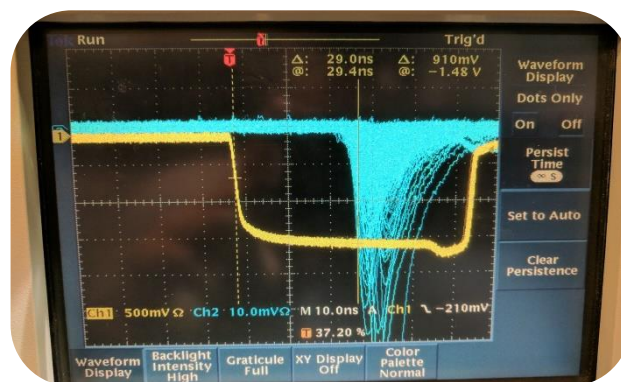


Fig 3. LDisc(yellow)+RfADC(cyan)
29 ns delay

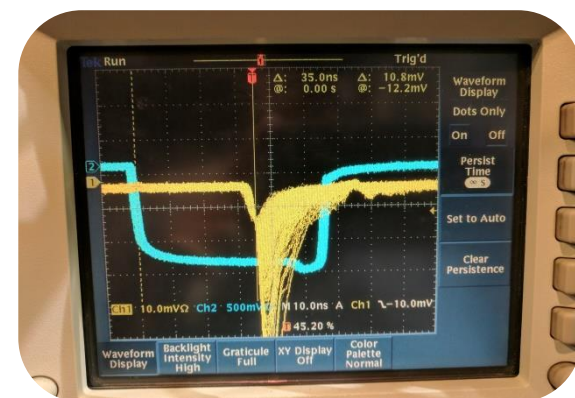


Fig 4. LfADC(yellow)+RDisc(cyan)
35 ns delay

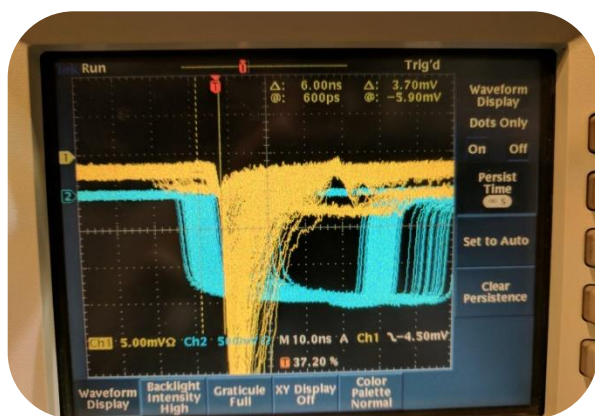


Fig 5. LfADC(yellow)+RDisc(cyan)
6 ns delay

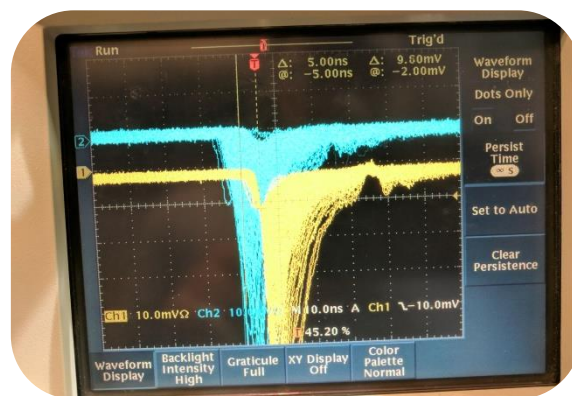


Fig 6. LfADC(yellow)+RfADC(cyan)
5 ns delay

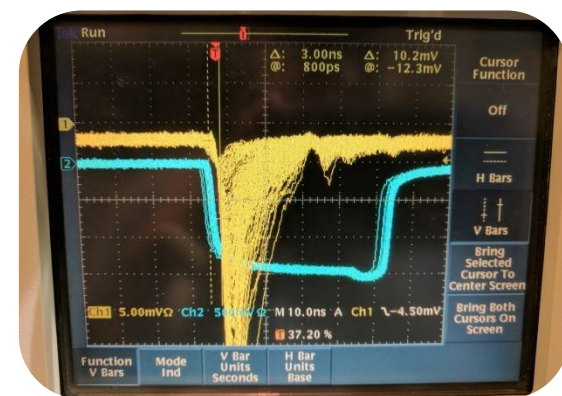


Fig 7. RfADC(yellow)+RDisc(cyan)
3 ns delay