

# MAROC Digital Output

www.maroc-digital-output.com

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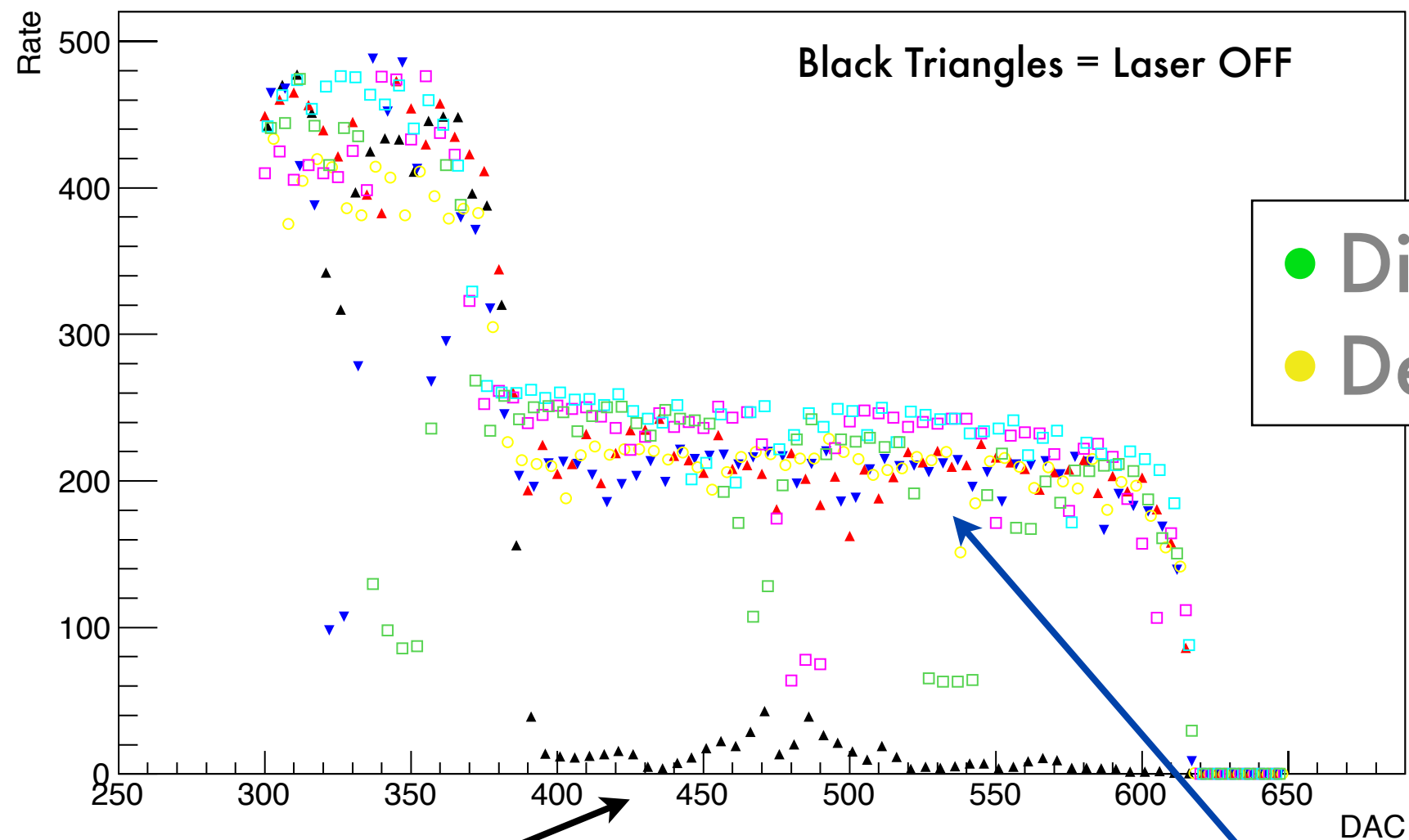
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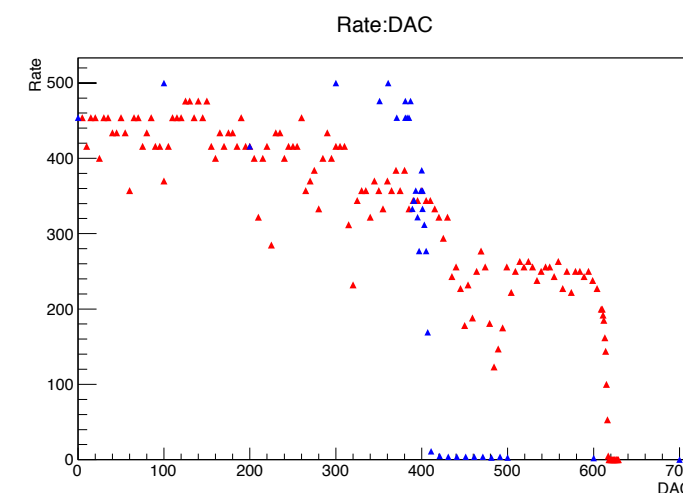
# Rate Measurement

Rate:DAC



Run conditions:  
Self Trigger on one channel  
Laser at 1kHz

- Discretization removed
- Dedicated PC

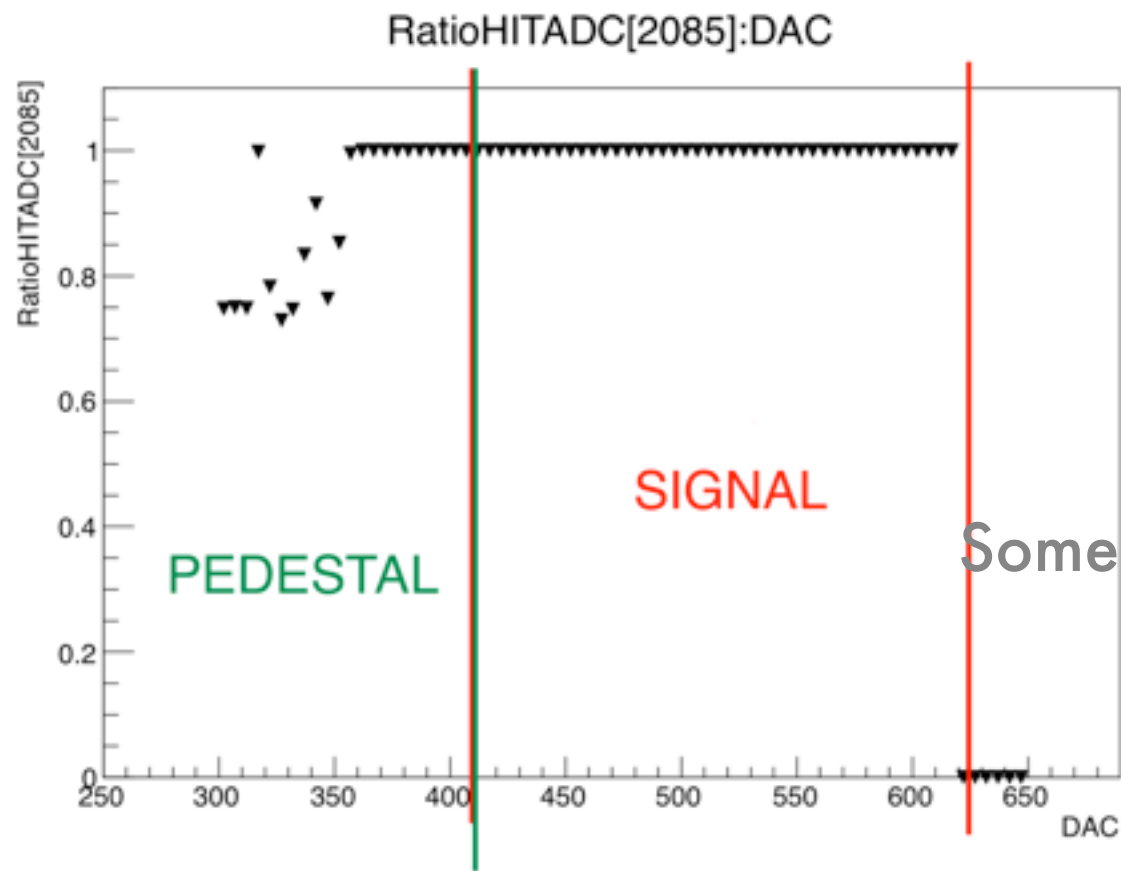


Dark Rate per channel  
(Raw Estimation 20-30 Hz)

~ Laser Rate x Q.E.

# Digital Output Efficiency

## Internal Trigger on ONE CHANNEL



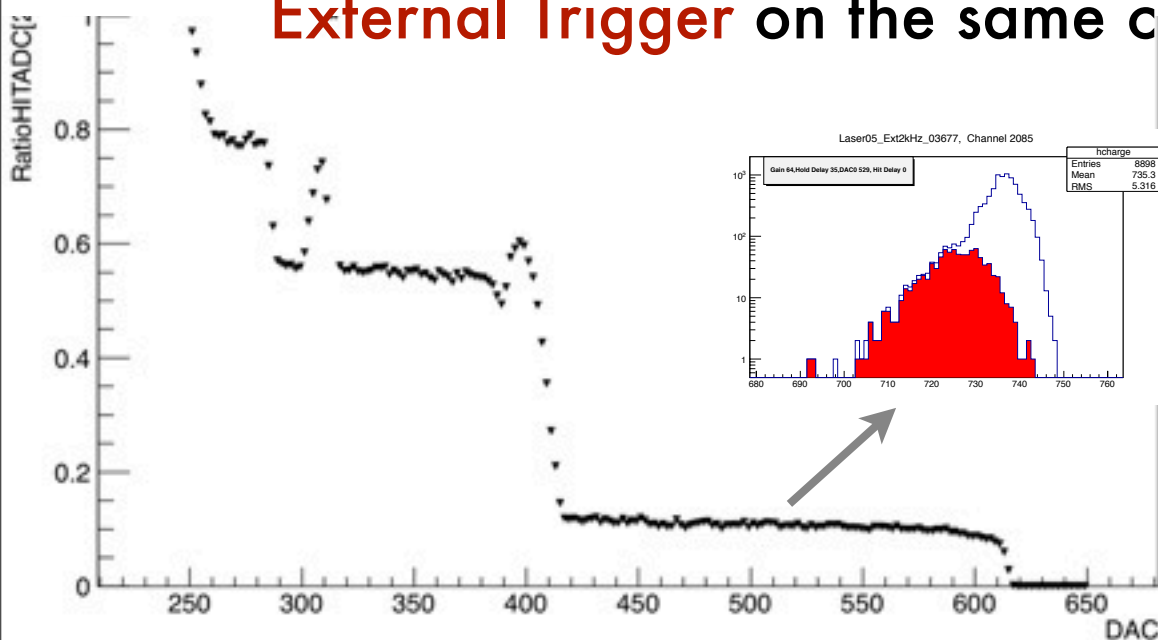
Trigger bits = MAROC digital output

Reliable at signal level

Some bug when DAC threshold at pedestal level (firmware)  
Crucial having a good timing for the HOLD

Digital pipeline holds past not future!

## External Trigger on the same channel



Past problems due to an HOLD signal premature!

Added 100 ns external delay

# Conclusion

- DAC accurate enough for spe
- Digital Timing understood at signal level
- Optimization in progress but Digital MAROC is reliable
- Next: design digital readout