Laser Source Performance During SM10 Running

NOTE : CORRECTED VERSION – ORIGINAL HAD PLOTS FOR 440nm/800nm SWAPPED

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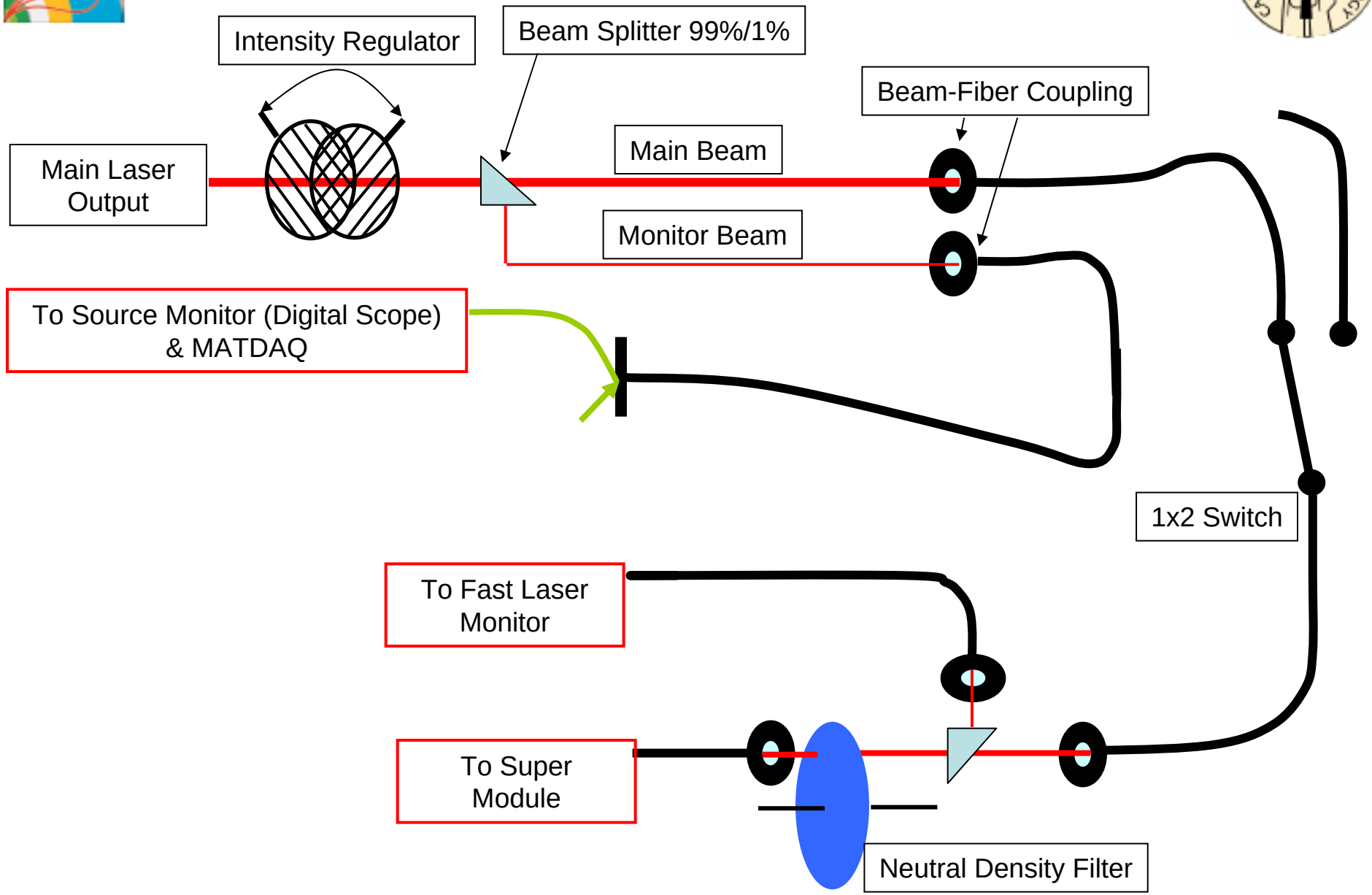
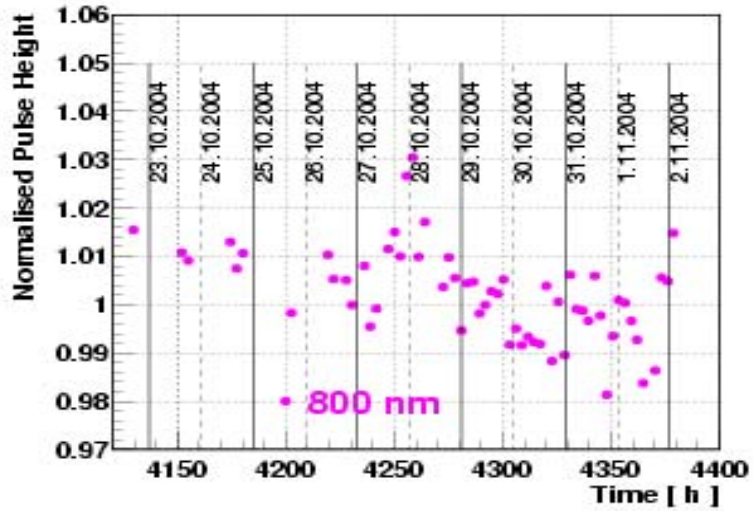
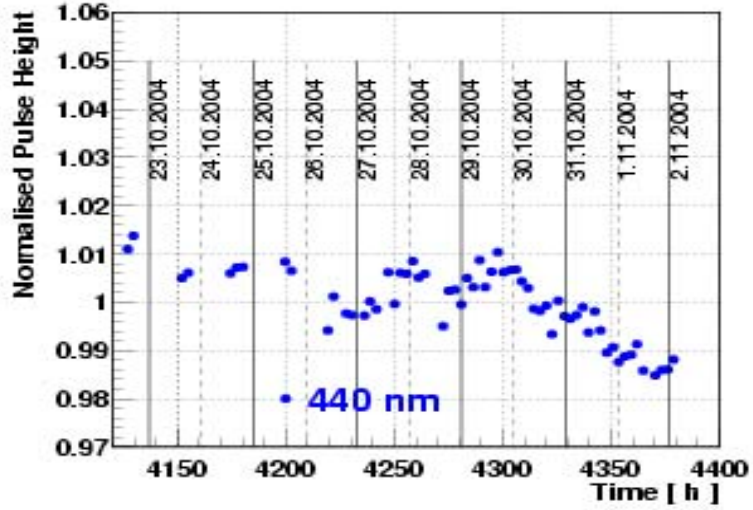
Details of the Source Monitors (2004)



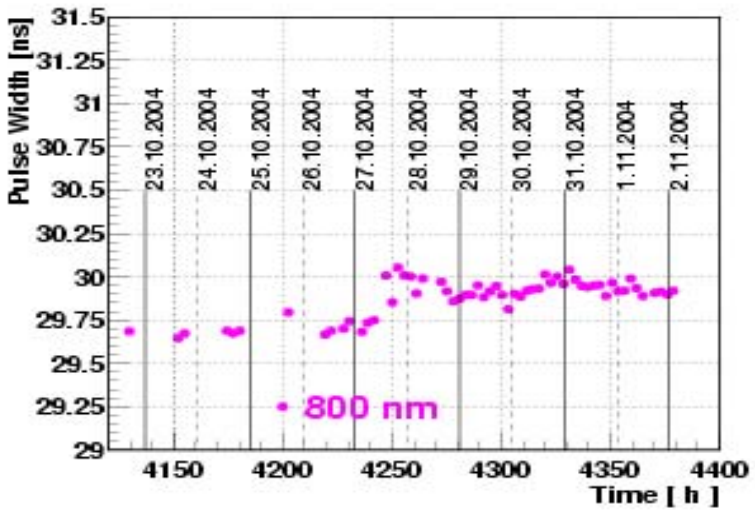
Laser Source Stability

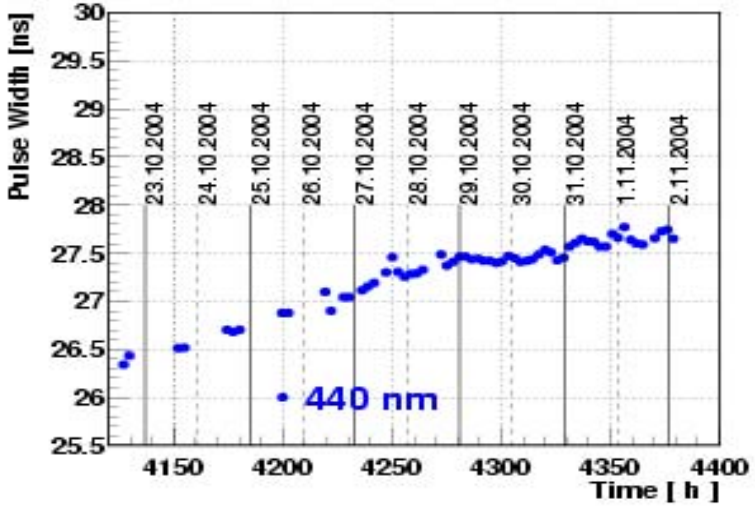
Pulse Height History





Pulse Width History

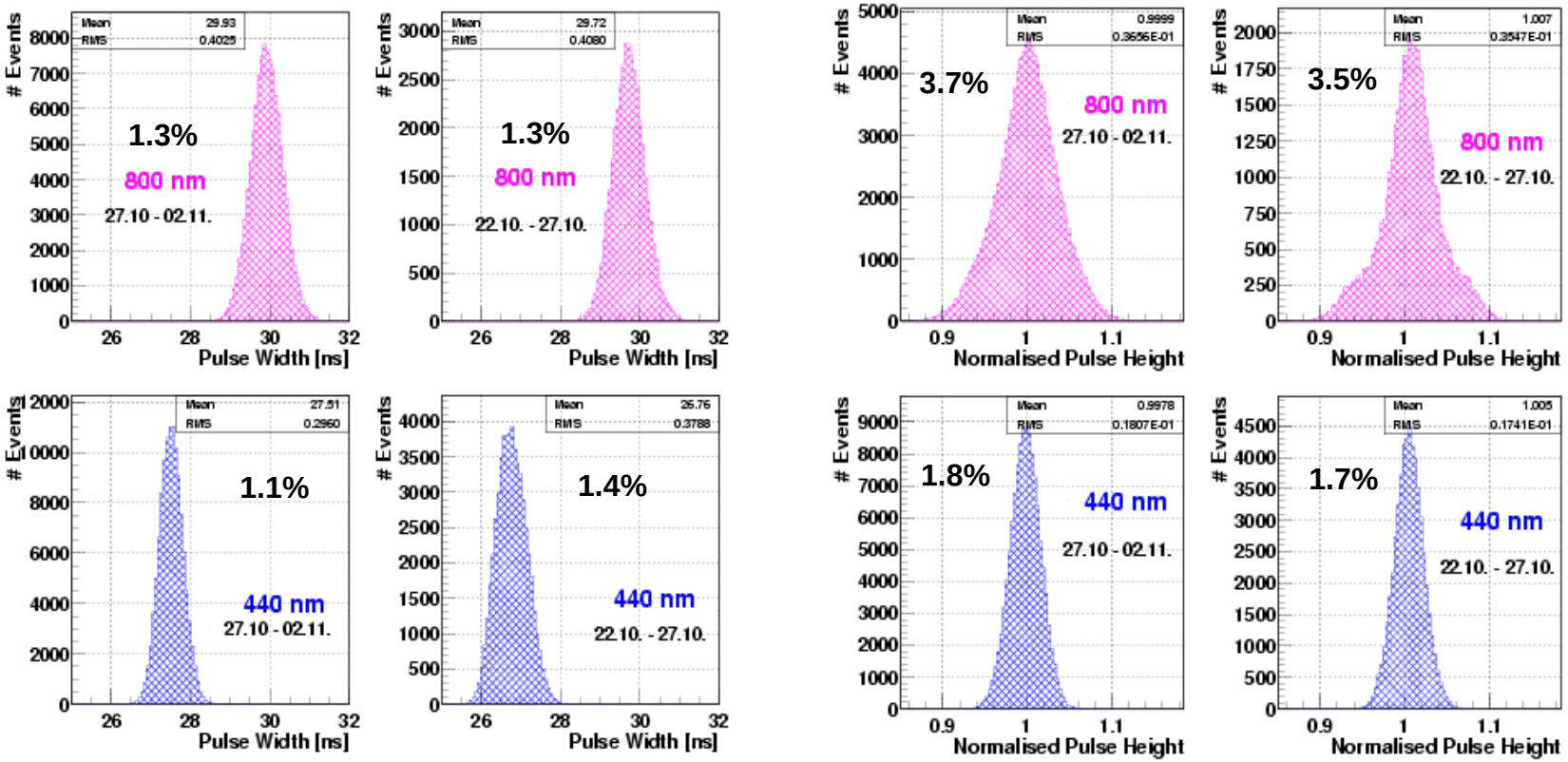




Very stable operation so far !

Laser Source Performance

Stability over periods of 5 days :

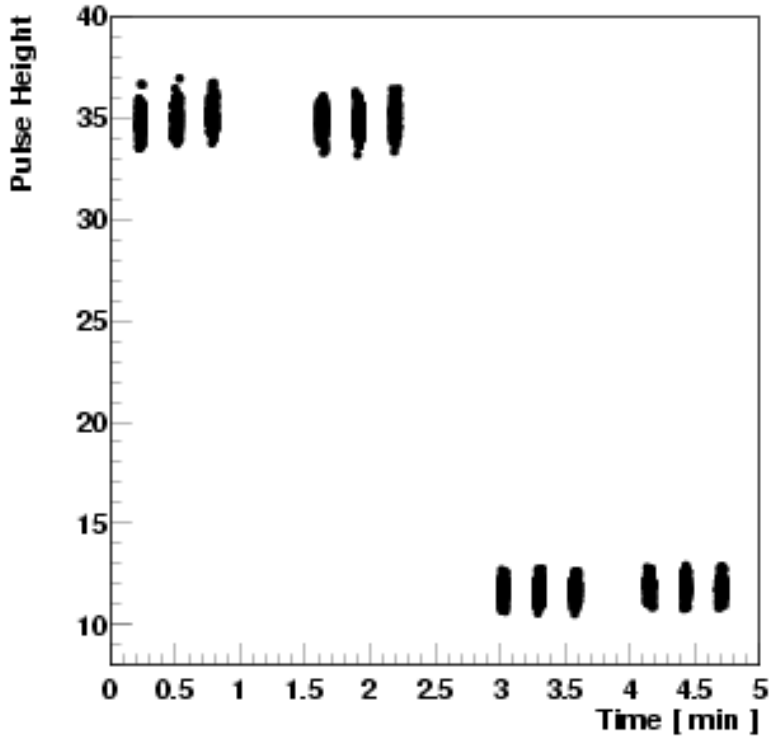


The lasers were tuned to optimize the pulse width stability – seems to work.

2003 :	440 nm	800 nm
Pulse Height :	2.6% / 25 hours	3.2% / 25 hours
	1.5%/ 30 min	2.8% / 30 min
	0.4%/day (long term)	0.06%/day (long term)
Pulse Width :	2.7% / 25 hours	2.6% /25 hours

Fast Monitor Event by Event Info

One Laser Run (4x3x200 events) as seen by the fast monitor :



Fast Monitor Timing seems to work (note : NOT a real time operating system).
Note : MATDAQ data not available so far. Fast Monitoring Data could be provided if needed.

Summary

- Laser Source Performance so far very good.
- Pulse width stability best ever. (better than 2003)
- Pulse energy stability good. (as 2003)
- Fast event by event monitoring works.
- Due to the stable lasers pulse width and pulse height nonlinearities should be small. (level of few (1 or 2 ?) ‰ on R=APD/PN based on 06.10.2004 talk ?)
- Fast monitoring data could be made available if needed.
- Pulse width scan to be done.