Upgraded data system software, reduced licor interrupts

The data system was re-installed on Aug 15. It is the same hardware (CPU, serial cards, usb disk, enclosure and interface panels) as before.

The Linux kernel has been upgraded, from 2.6.16 to 2.6.35. This kernel has PPS support, so an extra patch was not needed to get the PPS from the GPS. It also does not have the bug where executables could not be run from compact flash. Therefore they are not copied to ram disk at bootup.

This kernel also sets the PC104 CPLD to do the default linux-style interrupt handling, where AUTO_CLR and RETRIG are not enabled as before. The GPIO interrupt that serves the PC104 is now an edge detect interrupt. It has a patched handler for the edge detected interrupts.

The Licors are also modified with a fix that was found when testing at FLAB. Because the CTS line into the DSM was allowed to float,then it generated interrupts over a long cable. They occur when the TX line from the Licor is active, so it must be some sort of cross talk. It is not simple to disable CTS interrupts in the kernel. Instead, the CTS to the DSM was looped back to RTS from the DSM in the Licor box and not allowed to float. The Licor CTS was already looped back to its RTS in the box, so this is a symmetrical loopback.

We shouldn't see any of the "spurious interrupt" messages, primarily because the kernel now doesn't complain about them, but also since we are not getting the storm of CTS interrupts, then things should be much more predictable.