Notes on Correction factors in FluorEssence

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Correction Factors:

R1 compensates for change or drift in lamp intensity.

- When taking an Excitation scan, you <u>must</u> correct with R1. (S1/R1)

- When taking an Emission scan, it's good to correct if experiment were being conducted over a long period of time (hours). Instrument is pretty stable—expect 1.5% change over ~5h period.

Correction files:
- Xcorr: Don't need to use this--ever. Wavelength range is narrower than R1 and the UV range is not that good.

- MCorr: Valid over ~290-850nm range. Corrects for instrument response not dark counts. Useful if comparing spectra. Not something you would use if you are measuring at a fixed wavelength.

Dark offset doesn't change significantly over time.
Good idea to record. Do this by going to Real Time Control and measuring signal with the shutter closed. Usually ~1000 cps. If you subtract dark offset from blank, also must subtract dark offset from sample scan.

Jim suggested always collecting raw data and correcting if necessary after the fact.