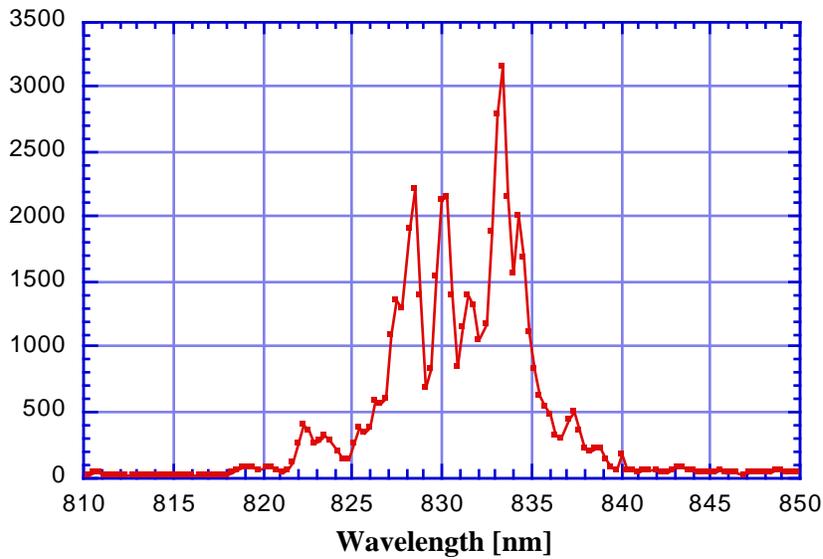
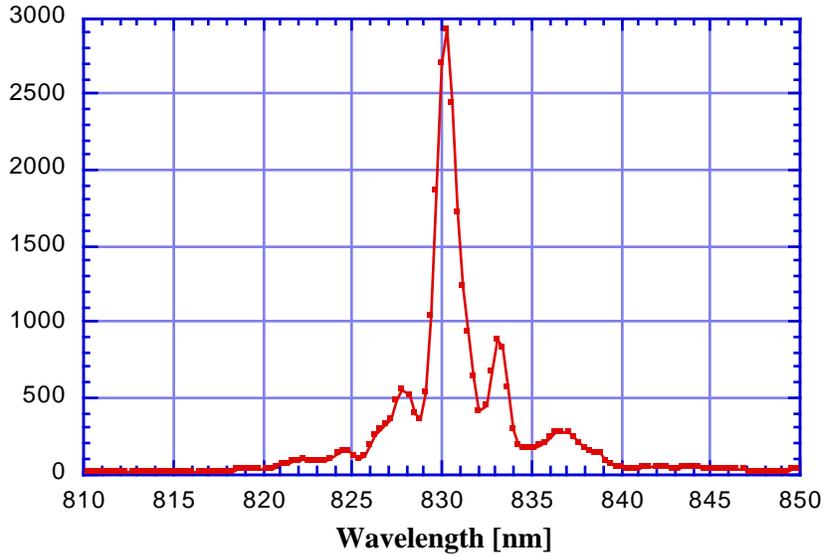
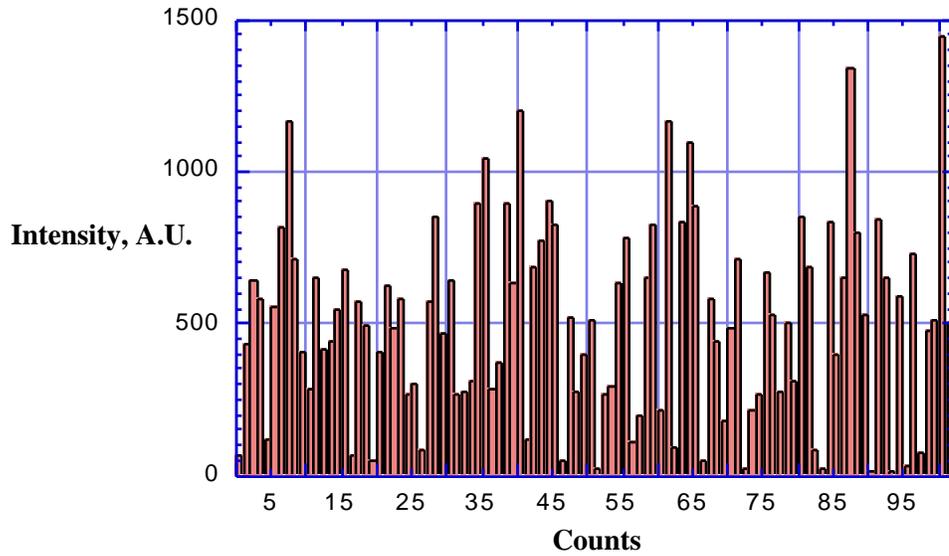


Spectrum measurements for VISA-FEL

The spectrometer was positioned at the end of the beam line, behind the collimating lens. The dynamic range was set to 400 - 950 nm, with resolution 1.5 nm. After picking up the signal, we've measured narrow and well defined pick at around 830 nm. The energy was 71 MeV
Typical spectrum plots for good shots:



The software that came with the spectrometer, allowed us to record intensity and spectrum of every shot, within certain time interval. Here is a diagram of 100 consecutive shots:



The intensity above was measured at 830 nm with the bandwidth of 30 nm. It is important to keep in mind, that fluctuations may not necessarily reflect FEL process only, but rather include some of the phase jitter.

From the above data, we can plot an example of spectra for different intensity ranges:

