







Figure 3. Heart Rate of heteropod molluscs (left) and cranchiid squids (right) measured using digital video analysis through transparent tissues. For comparison the oxygen consumption rate of both groups is presented. The critical oxygen levels are similar using both measures.

We used a relatively narrow band UV illumination source couple with a number of highly selective filters used in series. We plan to use a UV laser of the right wavelength as the illumination source for the Fall 2011 cruise and the QE65000 spectrometer as the detector. The laser has extremely high out-of-band rejection and the spectrometer (unlike a camera system) will clearly be able to separate light leakage from actual fluorescence. The results of this project have also been presented in a number of scientific and public talks, described elsewhere in this report.