Discussion

We saw a slight drop in mean RMR between 1000-1day (2.598) and 1000-7day (2.111), demonstrating that longer exposure to even light OA conditions affected the octopuses more strongly.

We saw a more significant change between 1000-1day (mean=2.598) and 1800-1day (mean=1.977) treatments, demonstrating a stronger effect of lower pH on metabolic rate.

These data suggest that *Muusoctopus leioderma* may be physiologically impaired by OA. OA is progressing quickly, and so these results raise questions about how this species will fare as ocean pH decreases. It is notable that ANOVA post-HOC on pCrit revealed no significant results. These data may have been biased by errors in the daily spectrometry and weekly alkalinity autotitration procedures, or equipment error. Regardless,these results merit further research to understand the full scope of the impact of OA on this octopus.