

## **Reply to Referee#3**

### **comment #1**

The authors acknowledge that the temperature in the incubators exceeded that of surface seawater, but that the temperature increase was  $<1^{\circ}\text{C}$ . This indicates to me that temperature measurements were made, and therefore they should be reported. This might seem pedantic, but it becomes critically important as the authors need to demonstrate that the observed effects of light intensity are independent of temperature.

### **Author response:**

We agree the referee's opinion that we need to demonstrate the observed effects of light intensity are independent of temperature. In this version we added 'The surface cooling seawater was connected with incubators in parallel to keep the temperature variations in six incubators were synchronous. Thus, temperature was not a variable parameter that could influence the variability of final rates.' in text (page 7, line 9-11)

### **comment #2**

The authors also need to improve their statistical reporting as 'R squares' is incorrect.

### **Author response:**

Corrected.