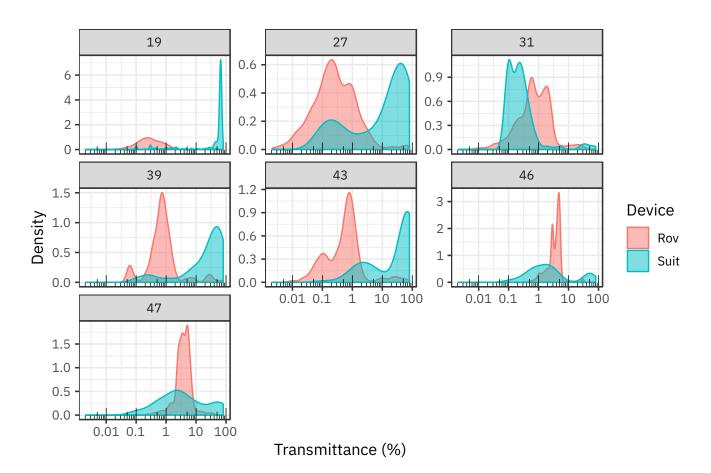
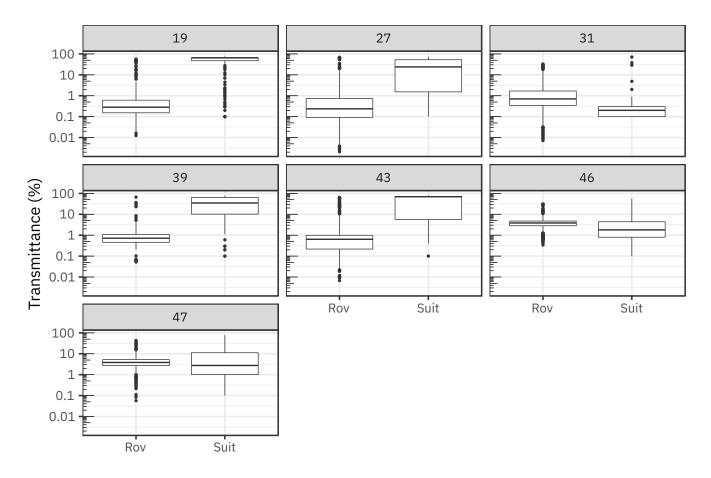
## **Figures**

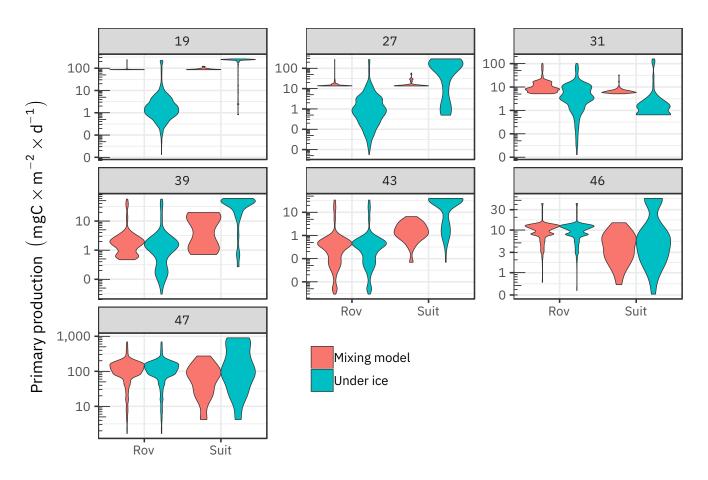


**Figure 1:** Density plots showing the distribution of transmittance values measured by the ROV and the SUIT devices between 0-3 meters under sea ice. Numbers on top of the gray boxes identify the stations.



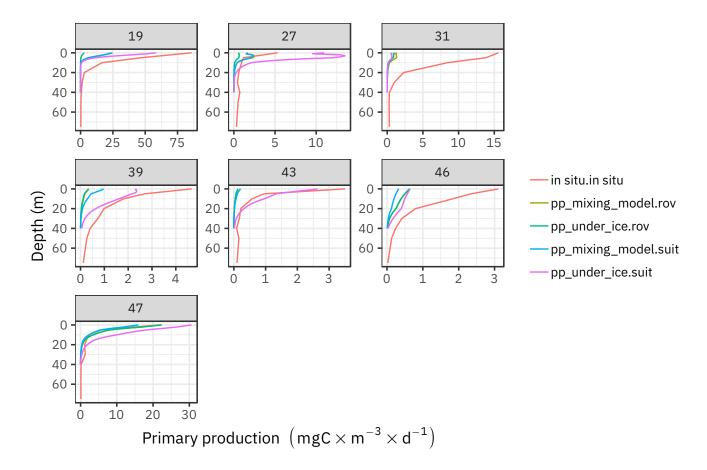
**Figure 2:** Boxplots, just an idea for the moment.

|           | Df   | Sum Sq  | Mean Sq | F value | Pr(>F) |
|-----------|------|---------|---------|---------|--------|
| .\$source | 1    | 3965.49 | 3965.49 | 2307.06 | 0.0000 |
| Residuals | 1720 | 2956.43 | 1.72    |         |        |



**Figure 3:** Violin plots of primary production calculated from ROV and SUIT transmittance data. For SUIT data, mixing models were calculated using only transmittance  $\leq 0.1$  whereas the under ice models were calculated using all transmittance data. The next table shows the SIC values used for the mixing models.

|   | station | cast | sic_9 |
|---|---------|------|-------|
| 1 | 19      | 5    | 0.71  |
| 2 | 27      | 3    | 0.96  |
| 3 | 31      | 3    | 0.97  |
| 4 | 32      | 5    | 0.98  |
| 5 | 39      | 8    | 0.99  |
| 6 | 43      | 5    | 1.00  |
| 7 | 46      | 2    | 1.00  |
| 8 | 47      | 4    | 1.00  |



**Figure 4:** Vertical profiles of daily primary production. For SUIT data, mixing models were calculated using only transmittance  $\leq 0.1$  whereas the under ice models were calculated using all transmittance data.