**Contrasting responses of phytoplankton productivity between coastal and offshore surface waters in the Taiwan Strait and the South China Sea to short-term seawater acidification**

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**Table S1** Parameters of the seawater carbonate system under ambient and enriched CO2 levels. Total alkalinity (TA), and pHNBS were used to derive all other parameters using a CO2 system analyzing software (CO2SYS). Data are the means ± SD of 3 measurements. There were no replications for the measurement of initial carbonate parameters as they had been measured before the seawater was dispensed to three incubation tubes.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Station | Longitude  (o) | Latitude  (o) | Treatment | pHtotal | *p*CO2  (μatm) | DIC  (μmol kg-1) | HCO3-  (μmol kg-1) | CO32-  (μmol kg-1) | CO2  (μmol kg-1) | TA  (μmol kg-1) |
| 1 | 120.00 | 26.05 | LC-0h | 8.20 | 241 | 1738 | 1479 | 253 | 6.4 | 2100 |
|  |  |  | HC-0h | 7.77 | 822 | 2014 | 1874 | 119 | 22.0 | 2163 |
|  |  |  | LC-24h | 8.26±0.01 | 205±5 | 1729±16 | 1441±13 | 282±5 | 5.5±0.1 | 2133±20 |
|  |  |  | HC-24h | 7.84±0.01 | 700±19 | 2000±9 | 1845±6 | 135±4 | 18.7±0.5 | 2175±15 |
| 2 | 120.21 | 25.87 | LC-0h | 8.03 | 433 | 2065 | 1840 | 212 | 12.0 | 2359 |
|  |  |  | HC-0h | 7.64 | 1262 | 2321 | 2183 | 103 | 35.0 | 2432 |
|  |  |  | LC-24h | 7.94±0.00 | 574±5 | 2165±9 | 1966±7 | 183±3 | 15.9±0.1 | 2411±13 |
|  |  |  | HC-24h | 7.69±0.01 | 1109±27 | 2315±15 | 2169±12 | 115±4 | 30.8±0.8 | 2448±20 |
| 3 | 120.44 | 25.71 | LC-0h | 8.04 | 424 | 2046 | 1814 | 221 | 11.4 | 2352 |
|  |  |  | HC-0h | 7.66 | 1187 | 2254 | 2115 | 107 | 31.9 | 2376 |
|  |  |  | LC-24h | 8.07±0.01 | 396±8 | 2061±16 | 1814±14 | 237±5 | 10.6±0.2 | 2389±20 |
|  |  |  | HC-24h | 7.68±0.01 | 1117±36 | 2259±19 | 2115±18 | 114±3 | 30.0±1.0 | 2391±20 |
| 4 | 119.43 | 25.07 | LC-0h | 8.03 | 428 | 2032 | 1794 | 227 | 11.1 | 2346 |
|  |  |  | HC-0h | 7.64 | 1233 | 2249 | 2109 | 109 | 32.0 | 2371 |
|  |  |  | LC-24h | 8.05±0.01 | 410±9 | 2053±18 | 1803±16 | 239±5 | 10.6±0.2 | 2382±22 |
|  |  |  | HC-24h | 7.70±0.01 | 1083±27 | 2242±14 | 2092±11 | 122±4 | 28.1±0.7 | 2387±20 |
| 5 | 119.61 | 24.97 | LC-0h | 8.04 | 414 | 2024 | 1785 | 227 | 10.9 | 2339 |
|  |  |  | HC-0h | 7.65 | 1196 | 2243 | 2103 | 109 | 31.4 | 2367 |
|  |  |  | LC-24h | 8.07±0.00 | 394±6 | 2046±24 | 1794±21 | 241±4 | 10.3±0.2 | 2379±27 |
|  |  |  | HC-24h | 7.68±0.01 | 1111±20 | 2221±15 | 2077±13 | 115±3 | 29.2±0.5 | 2355±19 |
| 6 | 119.80 | 24.84 | LC-0h | 7.99 | 475 | 2016 | 1798 | 205 | 12.2 | 2298 |
|  |  |  | HC-0h | 7.65 | 1194 | 2205 | 2067 | 108 | 30.8 | 2328 |
|  |  |  | LC-24h | 8.01±0.01 | 456±10 | 2037±19 | 1809±17 | 216±4 | 11.8±0.3 | 2333±22 |
|  |  |  | HC-24h | 7.69±0.00 | 1078±4 | 2173±27 | 2030±24 | 115±3 | 27.8±0.1 | 2309±30 |
| 7 | 118.69 | 24.52 | LC-0h | 8.00 | 446 | 1963 | 1755 | 196 | 11.9 | 2234 |
|  |  |  | HC-0h | 7.62 | 1255 | 2186 | 2057 | 96 | 33.5 | 2290 |
|  |  |  | LC-24h | 8.05±0.01 | 395±8 | 1969±16 | 1740±14 | 218±4 | 10.5±0.2 | 2272±20 |
|  |  |  | HC-24h | 7.68±0.01 | 1103±27 | 2181±14 | 2044±11 | 108±4 | 29.5±0.7 | 2305±19 |
| 8 | 118.76 | 24.44 | LC-0h | 8.01 | 448 | 2036 | 1812 | 212 | 11.9 | 2328 |
|  |  |  | HC-0h | 7.63 | 1267 | 2275 | 2137 | 104 | 33.6 | 2389 |
|  |  |  | LC-24h | 8.06±0.01 | 397±8 | 2052±9 | 1804±8 | 237±4 | 10.6±0.2 | 2380±12 |
|  |  |  | HC-24h | 7.68±0.01 | 1132±18 | 2271±15 | 2126±12 | 115±3 | 30.1±0.5 | 2405±20 |
| 9 | 118.83 | 24.34 | LC-0h | 8.03 | 433 | 2036 | 1808 | 216 | 11.6 | 2335 |
|  |  |  | HC-0h | 7.64 | 1262 | 2283 | 2145 | 104 | 33.8 | 2398 |
|  |  |  | LC-24h | 8.08±0.01 | 384±8 | 2051±9 | 1800±8 | 241±4 | 10.3±0.2 | 2386±13 |
|  |  |  | HC-24h | 7.69±0.01 | 1109±27 | 2277±14 | 2130±11 | 117±4 | 29.7±0.7 | 2414±20 |
| 10 | 118.90 | 24.25 | LC-0h | 8.02 | 439 | 2006 | 1775 | 220 | 11.2 | 2309 |
|  |  |  | HC-0h | 7.63 | 1285 | 2256 | 2116 | 107 | 32.8 | 2374 |
|  |  |  | LC-24h | 8.07±0.01 | 387±8 | 2007±16 | 1753±14 | 244±5 | 9.9±0.2 | 2344±19 |
|  |  |  | HC-24h | 7.68±0.01 | 1148±18 | 2252±15 | 2105±12 | 118±3 | 29.3±0.5 | 2390±20 |
| 11 | 118.48 | 24.08 | LC-0h | 8.00 | 475 | 2050 | 1837 | 200 | 12.8 | 2325 |
|  |  |  | HC-0h | 7.63 | 1303 | 2285 | 2150 | 100 | 35.0 | 2392 |
|  |  |  | LC-24h | 8.05±0.01 | 422±9 | 2068±9 | 1832±8 | 224±4 | 11.4±0.2 | 2376±12 |
|  |  |  | HC-24h | 7.68±0.01 | 1145±28 | 2280±14 | 2136±12 | 112±4 | 30.8±0.8 | 2408±20 |
| 12 | 117.84 | 23.53 | LC-0h | 7.99 | 468 | 2023 | 1826 | 184 | 13.3 | 2278 |
|  |  |  | HC-0h | 7.63 | 1219 | 2203 | 2077 | 91 | 34.8 | 2300 |
|  |  |  | LC-24h | 8.04±0.01 | 417±8 | 2042±9 | 1824±8 | 206±4 | 11.9±0.2 | 2328±12 |
|  |  |  | HC-24h | 7.68±0.01 | 1091±17 | 2201±15 | 2068±12 | 101±3 | 31.1±0.5 | 2316±19 |
| 13 | 118.82 | 22.65 | LC-0h | 8.03 | 422 | 1996 | 1757 | 228 | 10.7 | 2313 |
|  |  |  | HC-0h | 7.63 | 1256 | 2220 | 2080 | 108 | 31.9 | 2341 |
|  |  |  | LC-24h | 8.07±0.01 | 379±13 | 1998±22 | 1739±20 | 250±6 | 9.6±0.3 | 2346±25 |
|  |  |  | HC-24h | 7.68±0.01 | 1121±18 | 2215±15 | 2068±12 | 119±3 | 28.5±0.5 | 2356±19 |
| 14 | 119.07 | 22.41 | LC-0h | 8.05 | 403 | 2003 | 1754 | 238 | 10.2 | 2335 |
|  |  |  | HC-0h | 7.67 | 1143 | 2223 | 2076 | 118 | 29.0 | 2361 |
|  |  |  | LC-24h | 8.11±0.01 | 349±11 | 2008±10 | 1731±10 | 268±7 | 8.9±0.3 | 2382±16 |
|  |  |  | HC-24h | 7.70±0.01 | 1057±37 | 2224±22 | 2071±22 | 127±3 | 26.8±0.9 | 2377±21 |
| 15 | 117.81 | 22.72 | LC-0h | 8.08 | 367 | 1931 | 1685 | 237 | 9.3 | 2260 |
|  |  |  | HC-0h | 7.65 | 1192 | 2172 | 2035 | 106 | 30.3 | 2292 |
|  |  |  | LC-24h | 8.13±0.01 | 322±7 | 1930±19 | 1660±16 | 262±6 | 8.2±0.2 | 2294±24 |
|  |  |  | HC-24h | 7.68±0.01 | 1111±25 | 2175±19 | 2033±18 | 114±2 | 28.3±0.6 | 2307±19 |
| 16 | 117.97 | 22.56 | LC-0h | 8.05 | 404 | 1966 | 1727 | 229 | 10.2 | 2282 |
|  |  |  | HC-0h | 7.64 | 1238 | 2197 | 2060 | 106 | 31.3 | 2316 |
|  |  |  | LC-24h | 8.10±0.01 | 356±7 | 1968±19 | 1706±15 | 253±6 | 9.0±0.2 | 2319±25 |
|  |  |  | HC-24h | 7.67±0.01 | 1145±40 | 2199±20 | 2056±20 | 114±3 | 28.9±1.0 | 2331±19 |
| 17 | 118.13 | 22.40 | LC-0h | 8.08 | 367 | 1932 | 1684 | 239 | 9.3 | 2264 |
|  |  |  | HC-0h | 7.66 | 1168 | 2175 | 2036 | 110 | 29.5 | 2301 |
|  |  |  | LC-24h | 8.11±0.01 | 336±10 | 1940±22 | 1673±21 | 258±5 | 8.5±0.2 | 2299±25 |
|  |  |  | HC-24h | 7.70±0.01 | 1043±17 | 2171±14 | 2023±11 | 122±3 | 26.3±0.4 | 2316±19 |
| 18 | 118.30 | 22.24 | LC-0h | 8.08 | 367 | 1980 | 1717 | 253 | 9.3 | 2335 |
|  |  |  | HC-0h | 7.66 | 1175 | 2238 | 2091 | 117 | 29.8 | 2375 |
|  |  |  | LC-24h | 8.13±0.01 | 327±11 | 1993±7 | 1705±9 | 280±7 | 8.3±0.3 | 2386±13 |
|  |  |  | HC-24h | 7.69±0.01 | 1086±38 | 2239±21 | 2085±21 | 126±3 | 27.5±1.0 | 2390±20 |
| 19 | 118.42 | 22.12 | LC-0h | 8.04 | 410 | 2004 | 1755 | 239 | 10.4 | 2339 |
|  |  |  | HC-0h | 7.63 | 1267 | 2254 | 2110 | 112 | 32.0 | 2381 |
|  |  |  | LC-24h | 8.09±0.01 | 360±7 | 2002±14 | 1729±11 | 264±5 | 9.1±0.2 | 2372±18 |
|  |  |  | HC-24h | 7.68±0.01 | 1131±18 | 2249±15 | 2097±12 | 124±3 | 28.6±0.5 | 2397±20 |
| 20 | 118.85 | 21.69 | LC-0h | 8.05 | 404 | 2025 | 1768 | 246 | 10.2 | 2369 |
|  |  |  | HC-0h | 7.65 | 1213 | 2263 | 2115 | 117 | 30.7 | 2399 |
|  |  |  | LC-24h | 8.10±0.01 | 357±8 | 2037±9 | 1754±8 | 274±5 | 9.0±0.2 | 2421±13 |
|  |  |  | HC-24h | 7.68±0.01 | 1107±33 | 2237±17 | 2084±16 | 125±4 | 28.0±0.8 | 2387±19 |
| 21 | 116.90 | 22.67 | LC-0h | 7.99 | 469 | 1998 | 1785 | 201 | 12.2 | 2274 |
|  |  |  | HC-0h | 7.63 | 1247 | 2205 | 2071 | 102 | 32.5 | 2317 |
|  |  |  | LC-24h | 8.04±0.01 | 417±8 | 2014±9 | 1779±8 | 225±4 | 10.9±0.2 | 2324±12 |
|  |  |  | HC-24h | 7.69±0.01 | 1095±27 | 2199±14 | 2056±11 | 114±4 | 28.6±0.7 | 2332±19 |
| 22 | 117.46 | 22.13 | LC-0h | 8.08 | 368 | 1957 | 1703 | 244 | 9.3 | 2298 |
|  |  |  | HC-0h | 7.65 | 1208 | 2218 | 2076 | 111 | 30.6 | 2344 |
|  |  |  | LC-24h | 8.13±0.01 | 326±10 | 1954±15 | 1678±13 | 268±7 | 8.3±0.3 | 2329±21 |
|  |  |  | HC-24h | 7.67±0.01 | 1145±28 | 2223±14 | 2077±11 | 117±4 | 29.0±0.7 | 2359±19 |
| 23 | 117.78 | 21.82 | LC-0h | 8.01 | 445 | 1993 | 1756 | 226 | 11.0 | 2309 |
|  |  |  | HC-0h | 7.60 | 1368 | 2241 | 2102 | 105 | 34.0 | 2358 |
|  |  |  | LC-24h | 8.05±0.01 | 398±14 | 1994±15 | 1737±16 | 248±6 | 9.9±0.3 | 2341±17 |
|  |  |  | HC-24h | 7.64±0.01 | 1254±37 | 2242±21 | 2096±21 | 114±2 | 31.1±0.9 | 2373±19 |
| 24 | 116.17 | 22.70 | LC-0h | 8.06 | 387 | 1979 | 1731 | 239 | 9.9 | 2313 |
|  |  |  | HC-0h | 7.63 | 1266 | 2243 | 2103 | 108 | 32.4 | 2364 |
|  |  |  | LC-24h | 8.11±0.01 | 343±7 | 1992±9 | 1718±8 | 266±5 | 8.8±0.2 | 2364±12 |
|  |  |  | HC-24h | 7.69±0.01 | 1102±18 | 2235±15 | 2085±12 | 122±3 | 28.2±0.5 | 2380±20 |
| 25 | 117.93 | 21.01 | LC-0h | 8.03 | 432 | 2027 | 1778 | 239 | 10.7 | 2358 |
|  |  |  | HC-0h | 7.63 | 1304 | 2283 | 2137 | 114 | 32.3 | 2412 |
|  |  |  | LC-24h | 8.08±0.01 | 379±8 | 2026±17 | 1752±15 | 264±5 | 9.4±0.2 | 2393±22 |
|  |  |  | HC-24h | 7.68±0.01 | 1144±28 | 2276±14 | 2120±11 | 128±4 | 28.3±0.7 | 2428±20 |
| 26 | 118.15 | 20.80 | LC-0h | 8.01 | 456 | 2052 | 1812 | 229 | 11.5 | 2369 |
|  |  |  | HC-0h | 7.65 | 1233 | 2290 | 2141 | 118 | 31.1 | 2425 |
|  |  |  | LC-24h | 8.06±0.01 | 404±8 | 2067±9 | 1802±8 | 255±5 | 10.2±0.2 | 2421±13 |
|  |  |  | HC-24h | 7.70±0.01 | 1100±18 | 2285±15 | 2126±12 | 131±4 | 27.8±0.4 | 2441±20 |
| 27 | 114.77 | 22.17 | LC-0h | 8.04 | 405 | 1951 | 1730 | 210 | 10.9 | 2246 |
|  |  |  | HC-0h | 7.66 | 1138 | 2160 | 2027 | 103 | 30.6 | 2278 |
|  |  |  | LC-24h | 8.06±0.00 | 378±4 | 1948±8 | 1716±6 | 222±3 | 10.2±0.1 | 2260±12 |
|  |  |  | HC-24h | 7.66±0.01 | 1118±27 | 2155±12 | 2021±10 | 104±3 | 30.1±0.7 | 2275±18 |
| 28 | 115.27 | 21.26 | LC-0h | 8.06 | 373 | 1934 | 1696 | 229 | 9.8 | 2258 |
|  |  |  | HC-0h | 7.66 | 1119 | 2164 | 2026 | 109 | 29.4 | 2292 |
|  |  |  | LC-24h | 8.03±0.02 | 412±17 | 1978±18 | 1748±17 | 220±8 | 10.8±0.5 | 2287±23 |
|  |  |  | HC-24h | 7.64±0.01 | 1196±29 | 2172±13 | 2037±10 | 103±3 | 31.5±0.8 | 2289±18 |
| 29 | 115.62 | 20.64 | LC-0h | 8.06 | 374 | 1934 | 1695 | 229 | 9.8 | 2258 |
|  |  |  | HC-0h | 7.67 | 1094 | 2162 | 2022 | 111 | 28.7 | 2294 |
|  |  |  | LC-24h | 8.03±0.02 | 412±17 | 1976±16 | 1745±15 | 220±8 | 10.8±0.5 | 2285±21 |
|  |  |  | HC-24h | 7.64±0.02 | 1177±36 | 2165±19 | 2030±15 | 104±5 | 30.9±0.9 | 2285±26 |
| 30 | 114.87 | 20.34 | LC-0h | 8.05 | 384 | 1941 | 1707 | 224 | 10.1 | 2258 |
|  |  |  | HC-0h | 7.65 | 1150 | 2173 | 2036 | 106 | 30.3 | 2296 |
|  |  |  | LC-24h | 8.03±0.01 | 420±14 | 1983±20 | 1756±19 | 217±6 | 11.1±0.4 | 2287±23 |
|  |  |  | HC-24h | 7.63±0.01 | 1227±27 | 2175±20 | 2042±17 | 100±4 | 32.3±0.7 | 2288±25 |
| 31 | 114.54 | 20.93 | LC-0h | 8.05 | 401 | 1981 | 1749 | 222 | 10.7 | 2293 |
|  |  |  | HC-0h | 7.66 | 1166 | 2211 | 2073 | 107 | 31.0 | 2334 |
|  |  |  | LC-24h | 8.06±0.01 | 391±16 | 2000±25 | 1759±26 | 230±5 | 10.4±0.4 | 2322±24 |
|  |  |  | HC-24h | 7.68±0.01 | 1123±21 | 2232±2229 | 2089±20 | 113±3 | 29.9±0.5 | 2364±24 |
| 32 | 114.06 | 21.73 | LC-0h | 8.02 | 427 | 1964 | 1751 | 202 | 11.6 | 2246 |
|  |  |  | HC-0h | 7.64 | 1200 | 2180 | 2049 | 98 | 32.5 | 2289 |
|  |  |  | LC-24h | 7.99±0.02 | 472±20 | 2011±24 | 1804±22 | 194±7 | 12.8±0.5 | 2280±29 |
|  |  |  | HC-24h | 7.61±0.02 | 1315±49 | 2224±27 | 2094±25 | 94±4 | 35.6±1.3 | 2323±29 |
| 33 | 113.27 | 21.48 | LC-0h | 8.04 | 405 | 1950 | 1728 | 211 | 10.9 | 2246 |
|  |  |  | HC-0h | 7.65 | 1176 | 2176 | 2043 | 101 | 31.5 | 2291 |
|  |  |  | LC-24h | 8.01±0.01 | 444±15 | 1994±24 | 1779±22 | 204±6 | 11.9±0.4 | 2278±27 |
|  |  |  | HC-24h | 7.62±0.01 | 1277±39 | 2218±26 | 2087±24 | 97±3 | 34.2±1.0 | 2324±27 |
| 34 | 113.79 | 20.55 | LC-0h | 8.06 | 369 | 1915 | 1680 | 225 | 9.7 | 2235 |
|  |  |  | HC-0h | 7.66 | 1114 | 2155 | 2018 | 108 | 29.4 | 2282 |
|  |  |  | LC-24h | 8.03±0.02 | 408±17 | 1959±18 | 1731±17 | 217±8 | 10.8±0.4 | 2264±23 |
|  |  |  | HC-24h | 7.64±0.01 | 1209±36 | 2194±22 | 2059±20 | 103±3 | 31.9±0.9 | 2311±24 |
| 35 | 114.16 | 19.91 | LC-0h | 8.05 | 383 | 1933 | 1701 | 222 | 10.1 | 2246 |
|  |  |  | HC-0h | 7.66 | 1124 | 2170 | 2032 | 108 | 29.6 | 2296 |
|  |  |  | LC-24h | 8.02±0.02 | 423±18 | 1977±18 | 1752±17 | 213±8 | 11.2±0.5 | 2275±23 |
|  |  |  | HC-24h | 7.63±0.02 | 1230±46 | 2210±21 | 2075±19 | 103±4 | 32.4±1.2 | 2326±24 |
| 36 | 111.85 | 18.84 | LC-0h | 8.03 | 413 | 1963 | 1734 | 219 | 10.7 | 2270 |
|  |  |  | HC-0h | 7.66 | 1146 | 2193 | 2053 | 111 | 29.8 | 2322 |
|  |  |  | LC-24h | 8.01±0.01 | 451±15 | 2006±20 | 1782±19 | 212±6 | 11.7±0.4 | 2299±23 |
|  |  |  | HC-24h | 7.64±0.01 | 1243±37 | 2233±22 | 2095±21 | 106±3 | 32.3±1.0 | 2352±24 |
| 37 | 111.49 | 19.05 | LC-0h | 8.04 | 401 | 1952 | 1716 | 226 | 10.3 | 2270 |
|  |  |  | HC-0h | 7.65 | 1178 | 2196 | 2056 | 110 | 30.2 | 2324 |
|  |  |  | LC-24h | 8.01±0.02 | 443±19 | 1999±21 | 1770±20 | 218±8 | 11.4±0.5 | 2301±26 |
|  |  |  | HC-24h | 7.63±0.01 | 1280±39 | 2238±25 | 2100±24 | 106±3 | 32.9±1.0 | 2356±27 |
| 38 | 111.13 | 19.26 | LC-0h | 8.05 | 387 | 1921 | 1680 | 231 | 9.8 | 2246 |
|  |  |  | HC-0h | 7.65 | 1174 | 2173 | 2032 | 111 | 29.6 | 2303 |
|  |  |  | LC-24h | 8.02±0.02 | 428±18 | 1966±20 | 1733±19 | 222±8 | 10.8±0.5 | 2277±25 |
|  |  |  | HC-24h | 7.63±0.02 | 1243±46 | 2210±21 | 2069±18 | 109±5 | 31.4±1.1 | 2334±26 |
| 39 | 110.80 | 18.80 | LC-0h | 8.04 | 398 | 1927 | 1690 | 227 | 10.0 | 2246 |
|  |  |  | HC-0h | 7.64 | 1207 | 2179 | 2040 | 109 | 30.5 | 2305 |
|  |  |  | LC-24h | 8.01±0.01 | 436±14 | 1969±20 | 1739±19 | 219±6 | 11.0±0.4 | 2275±23 |
|  |  |  | HC-24h | 7.62±0.01 | 1299±34 | 2217±20 | 2079±18 | 105±3 | 32.8±0.9 | 2335±24 |
| 40 | 111.10 | 18.48 | LC-0h | 8.05 | 387 | 1921 | 1681 | 231 | 9.8 | 2246 |
|  |  |  | HC-0h | 7.66 | 1149 | 2173 | 2031 | 114 | 29.0 | 2307 |
|  |  |  | LC-24h | 8.02±0.02 | 429±18 | 1968±22 | 1735±20 | 222±8 | 10.8±0.5 | 2278±27 |
|  |  |  | HC-24h | 7.64±0.01 | 1238±33 | 2215±24 | 2073±22 | 110±4 | 31.2±0.8 | 2340±28 |
| 41 | 111.40 | 18.19 | LC-0h | 8.04 | 402 | 1950 | 1712 | 228 | 10.2 | 2270 |
|  |  |  | HC-0h | 7.65 | 1188 | 2204 | 2062 | 112 | 30.2 | 2333 |
|  |  |  | LC-24h | 8.01±0.02 | 444±19 | 1996±20 | 1765±19 | 219±8 | 11.3±0.5 | 2300±25 |
|  |  |  | HC-24h | 7.62±0.01 | 1290±39 | 2245±24 | 2105±23 | 107±3 | 32.8±1.0 | 2365±26 |
| 42 | 110.80 | 17.50 | LC-0h | 8.03 | 413 | 1964 | 1734 | 219 | 10.7 | 2270 |
|  |  |  | HC-0h | 7.65 | 1183 | 2211 | 2071 | 109 | 30.7 | 2335 |
|  |  |  | LC-24h | 8.01±0.01 | 452±15 | 2006±20 | 1783±19 | 211±6 | 11.7±0.4 | 2299±23 |
|  |  |  | HC-24h | 7.63±0.01 | 1284±38 | 2250±22 | 2113±21 | 104±3 | 33.4±1.0 | 2366±24 |
| 43 | 110.65 | 17.75 | LC-0h | 8.03 | 415 | 1972 | 1741 | 221 | 10.7 | 2281 |
|  |  |  | HC-0h | 7.65 | 1191 | 2223 | 2082 | 110 | 30.8 | 2350 |
|  |  |  | LC-24h | 8.00±0.02 | 459±19 | 2019±23 | 1795±21 | 213±8 | 11.9±0.5 | 2314±27 |
|  |  |  | HC-24h | 7.63±0.01 | 1294±40 | 2266±27 | 2127±25 | 106±3 | 33.5±1.0 | 2383±28 |
| 44 | 110.35 | 18.25 | LC-0h | 8.03 | 416 | 1965 | 1729 | 226 | 10.5 | 2281 |
|  |  |  | HC-0h | 7.64 | 1232 | 2225 | 2083 | 111 | 31.1 | 2352 |
|  |  |  | LC-24h | 8.00±0.02 | 460±19 | 2011±21 | 1782±19 | 217±8 | 11.6±0.5 | 2312±26 |
|  |  |  | HC-24h | 7.61±0.02 | 1349±50 | 2268±23 | 2128±21 | 106±4 | 34.1±1.3 | 2384±26 |
| 45 | 111.01 | 15.45 | LC-0h | 8.01 | 440 | 1979 | 1751 | 217 | 11.2 | 2281 |
|  |  |  | HC-0h | 7.65 | 1173 | 2176 | 2036 | 110 | 29.8 | 2304 |
|  |  |  | LC-24h | 7.98±0.01 | 481±16 | 2021±20 | 1799±19 | 210±6 | 12.2±0.4 | 2311±24 |
|  |  |  | HC-24h | 7.62±0.01 | 1273±38 | 2215±22 | 2077±20 | 106±3 | 32.4±1.0 | 2334±24 |
| 46 | 111.50 | 15.45 | LC-0h | 8.02 | 427 | 1974 | 1744 | 220 | 10.9 | 2281 |
|  |  |  | HC-0h | 7.65 | 1171 | 2179 | 2040 | 110 | 30.0 | 2306 |
|  |  |  | LC-24h | 7.99±0.02 | 472±120 | 2022±23 | 1798±21 | 211±8 | 12.1±0.5 | 2314±27 |
|  |  |  | HC-24h | 7.62±0.01 | 1273±39 | 2222±26 | 2084±24 | 105±3 | 32.6±1.0 | 2339±28 |
| 47 | 112.00 | 15.45 | LC-0h | 8.03 | 411 | 1949 | 1718 | 220 | 10.5 | 2258 |
|  |  |  | HC-0h | 7.64 | 1189 | 2163 | 2027 | 106 | 30.5 | 2285 |
|  |  |  | LC-24h | 8.00±0.02 | 454±19 | 1994±20 | 1770±19 | 212±8 | 11.7±0.5 | 2289±25 |
|  |  |  | HC-24h | 7.62±0.01 | 1269±23 | 2201±24 | 2065±22 | 103±2 | 32.6±0.6 | 2316±26 |
| 48 | 112.50 | 15.45 | LC-0h | 8.02 | 427 | 1975 | 1744 | 219 | 10.9 | 2281 |
|  |  |  | HC-0h | 7.63 | 1235 | 2192 | 2055 | 105 | 31.6 | 2311 |
|  |  |  | LC-24h | 7.99±0.01 | 467±15 | 2017±20 | 1793±19 | 212±6 | 12.0±0.4 | 2311±24 |
|  |  |  | HC-24h | 7.60±0.01 | 1321±32 | 2199±13 | 2065±10 | 100±3 | 33.8±0.8 | 2308±18 |
| 49 | 113.00 | 15.45 | LC-0h | 8.01 | 434 | 1949 | 1726 | 212 | 11.1 | 2246 |
|  |  |  | HC-0h | 7.65 | 1161 | 2152 | 2014 | 108 | 29.6 | 2278 |
|  |  |  | LC-24h | 7.98±0.02 | 480±20 | 1996±22 | 1779±21 | 204±7 | 12.2±0.5 | 2278±27 |
|  |  |  | HC-24h | 7.62±0.01 | 1238±27 | 2153±20 | 2020±17 | 102±4 | 31.6±0.7 | 2269±26 |
| 50 | 113.50 | 15.45 | LC-0h | 8.02 | 429 | 1974 | 1743 | 220 | 10.9 | 2281 |
|  |  |  | HC-0h | 7.65 | 1183 | 2188 | 2047 | 110 | 30.0 | 2315 |
|  |  |  | LC-24h | 7.99±0.02 | 475±20 | 2020±21 | 1796±19 | 212±8 | 12.1±0.5 | 2312±26 |
|  |  |  | HC-24h | 7.62±0.02 | 1273±39 | 2191±18 | 2055±14 | 104±5 | 32.3±1.0 | 2307±25 |
| 51 | 113.50 | 14.70 | LC-0h | 8.02 | 431 | 1991 | 1757 | 223 | 11.0 | 2302 |
|  |  |  | HC-0h | 7.65 | 1190 | 2210 | 2067 | 112 | 30.3 | 2339 |
|  |  |  | LC-24h | 7.99±0.01 | 472±16 | 2034±20 | 1806±19 | 216±6 | 12.0±0.4 | 2332±24 |
|  |  |  | HC-24h | 7.62±0.01 | 1291±38 | 2249±22 | 2109±21 | 108±3 | 32.8±1.0 | 2370±24 |
| 52 | 113.01 | 14.72 | LC-0h | 8.02 | 425 | 1963 | 1733 | 219 | 10.8 | 2270 |
|  |  |  | HC-0h | 7.64 | 1202 | 2184 | 2046 | 108 | 30.7 | 2308 |
|  |  |  | LC-24h | 7.99±0.02 | 469±20 | 2010±22 | 1787±21 | 211±8 | 12.0±0.5 | 2302±27 |
|  |  |  | HC-24h | 7.61±0.01 | 1306±40 | 2227±26 | 2090±24 | 104±3 | 33.4±1.0 | 2341±28 |
| 53 | 112.49 | 14.71 | LC-0h | 8.02 | 425 | 1963 | 1734 | 219 | 10.9 | 2270 |
|  |  |  | HC-0h | 7.65 | 1173 | 2183 | 2043 | 110 | 30.0 | 2310 |
|  |  |  | LC-24h | 7.99±0.02 | 469±19 | 2009±21 | 1786±19 | 211±8 | 12.0±0.5 | 2300±25 |
|  |  |  | HC-24h | 7.62±0.02 | 1285±48 | 2225±23 | 2087±21 | 105±4 | 32.9±1.2 | 2342±26 |
| 54 | 111.98 | 14.70 | LC-0h | 8.02 | 429 | 1984 | 1752 | 221 | 11.0 | 2293 |
|  |  |  | HC-0h | 7.63 | 1249 | 2216 | 2077 | 107 | 31.9 | 2336 |
|  |  |  | LC-24h | 7.99±0.01 | 469±15 | 2027±20 | 1801±19 | 214±6 | 12.0±0.4 | 2322±24 |
|  |  |  | HC-24h | 7.60±0.01 | 1355±40 | 2255±22 | 2118±21 | 103±3 | 34.6±1.0 | 2367±24 |
| 55 | 111.50 | 14.70 | LC-0h | 8.02 | 409 | 1901 | 1655 | 236 | 9.7 | 2235 |
|  |  |  | HC-0h | 7.63 | 1213 | 2142 | 1997 | 116 | 28.7 | 2279 |
|  |  |  | LC-24h | 7.99±0.02 | 453±19 | 1948±22 | 1709±20 | 228±8 | 10.7±0.5 | 2267±27 |
|  |  |  | HC-24h | 7.61±0.01 | 1318±41 | 2184±26 | 2041±24 | 112±3 | 31.2±1.0 | 2312±27 |
| 56 | 111.01 | 14.70 | LC-0h | 8.01 | 434 | 1948 | 1723 | 213 | 11.0 | 2246 |
|  |  |  | HC-0h | 7.65 | 1169 | 2166 | 2027 | 109 | 29.7 | 2294 |
|  |  |  | LC-24h | 7.98±0.02 | 479±20 | 1993±20 | 1775±19 | 205±7 | 12.2±0.5 | 2277±25 |
|  |  |  | HC-24h | 7.62±0.02 | 1280±48 | 2208±23 | 2071±21 | 104±4 | 32.6±1.2 | 2325±26 |
| 57 | 110.99 | 13.99 | LC-0h | 8.03 | 410 | 1955 | 1722 | 223 | 10.5 | 2270 |
|  |  |  | HC-0h | 7.65 | 1171 | 2190 | 2050 | 111 | 30.0 | 2320 |
|  |  |  | LC-24h | 8.01±0.01 | 448±15 | 1998±20 | 1770±19 | 216±6 | 11.5±0.4 | 2299±23 |
|  |  |  | HC-24h | 7.63±0.01 | 1270±38 | 2230±22 | 2091±21 | 106±3 | 32.6±1.0 | 2350±24 |
| 58 | 111.50 | 13.98 | LC-0h | 8.02 | 422 | 1948 | 1717 | 220 | 10.7 | 2258 |
|  |  |  | HC-0h | 7.65 | 1174 | 2180 | 2038 | 112 | 29.7 | 2310 |
|  |  |  | LC-24h | 7.99±0.02 | 467±20 | 1995±22 | 1771±21 | 212±8 | 11.8±0.5 | 2290±27 |
|  |  |  | HC-24h | 7.62±0.01 | 1276±39 | 2222±26 | 2083±24 | 107±3 | 32.3±1.0 | 2343±28 |
| 59 | 112.00 | 14.00 | LC-0h | 8.01 | 429 | 1933 | 1707 | 215 | 10.9 | 2235 |
|  |  |  | HC-0h | 7.63 | 1223 | 2166 | 2029 | 106 | 30.9 | 2288 |
|  |  |  | LC-24h | 7.98±0.02 | 474±20 | 1977±20 | 1759±19 | 206±7 | 12.0±0.5 | 2265±25 |
|  |  |  | HC-24h | 7.60±0.02 | 1340±50 | 2208±23 | 2073±21 | 101±4 | 33.9±1.3 | 2319±26 |
| 60 | 112.50 | 14.01 | LC-0h | 8.02 | 408 | 1855 | 1633 | 212 | 10.1 | 2155 |
|  |  |  | HC-0h | 7.66 | 1110 | 2078 | 1940 | 110 | 27.5 | 2209 |
|  |  |  | LC-24h | 7.99±0.01 | 446±15 | 1895±19 | 1679±18 | 205±6 | 11.0±0.4 | 2183±22 |
|  |  |  | HC-24h | 7.63±0.01 | 1205±36 | 2116±21 | 1980±20 | 106±3 | 29.8±0.9 | 2238±23 |
| 61 | 113.01 | 14.00 | LC-0h | 8.04 | 387 | 1862 | 1637 | 216 | 9.8 | 2169 |
|  |  |  | HC-0h | 7.65 | 1141 | 2102 | 1967 | 106 | 28.9 | 2225 |
|  |  |  | LC-24h | 8.01±0.02 | 428±18 | 1908±21 | 1689±20 | 208±7 | 10.8±0.5 | 2200±26 |
|  |  |  | HC-24h | 7.62±0.01 | 1240±38 | 2143±25 | 2009±24 | 102±3 | 31.4±1.0 | 2257±27 |
| 62 | 113.51 | 14.00 | LC-0h | 8.01 | 413 | 1841 | 1629 | 201 | 10.4 | 2126 |
|  |  |  | HC-0h | 7.66 | 1091 | 2058 | 1924 | 106 | 27.6 | 2184 |
|  |  |  | LC-24h | 7.98±0.02 | 456±19 | 1884±19 | 1679±18 | 193±7 | 11.5±0.5 | 2155±24 |
|  |  |  | HC-24h | 7.63±0.02 | 1195±45 | 2098±22 | 1966±20 | 101±4 | 30.2±1.1 | 2213±24 |
| 63 | 113.50 | 12.99 | LC-0h | 8.03 | 395 | 1856 | 1634 | 211 | 10.0 | 2155 |
|  |  |  | HC-0h | 7.66 | 1107 | 2088 | 1953 | 108 | 28.0 | 2216 |
|  |  |  | LC-24h | 8.00±0.01 | 433±14 | 1896±19 | 1681±18 | 204±6 | 10.9±0.4 | 2183±22 |
|  |  |  | HC-24h | 7.63±0.01 | 1184±29 | 2096±12 | 1964±9 | 102±3 | 30.0±0.7 | 2213±17 |
| 64 | 113.00 | 13.00 | LC-0h | 8.03 | 396 | 1856 | 1635 | 211 | 10.0 | 2155 |
|  |  |  | HC-0h | 7.65 | 1138 | 2095 | 1960 | 105 | 28.8 | 2218 |
|  |  |  | LC-24h | 8.00±0.02 | 438±18 | 1901±21 | 1687±20 | 203±7 | 11.1±0.5 | 2186±26 |
|  |  |  | HC-24h | 7.62±0.01 | 1213±26 | 2096±20 | 1966±17 | 99±4 | 30.7±0.7 | 2209±25 |
| 65 | 112.50 | 13.00 | LC-0h | 8.02 | 409 | 1864 | 1647 | 207 | 10.3 | 2155 |
|  |  |  | HC-0h | 7.67 | 1085 | 2090 | 1953 | 109 | 27.5 | 2220 |
|  |  |  | LC-24h | 7.99±0.02 | 451±19 | 1907±20 | 1697±18 | 199±7 | 11.4±0.5 | 2185±24 |
|  |  |  | HC-24h | 7.65±0.01 | 1138±12 | 2090±20 | 1956±17 | 105±3 | 28.8±0.3 | 2212±24 |
| 66 | 112.01 | 13.01 | LC-0h | 8.02 | 409 | 1866 | 1651 | 205 | 10.4 | 2155 |
|  |  |  | HC-0h | 7.67 | 1085 | 2094 | 1958 | 109 | 27.7 | 2222 |
|  |  |  | LC-24h | 7.99±0.01 | 447±15 | 1907±19 | 1697±18 | 198±5 | 11.4±0.4 | 2183±22 |
|  |  |  | HC-24h | 7.67±0.00 | 1109±24 | 2123±24 | 1985±23 | 109±1 | 28.3±0.6 | 2251±23 |
| 67 | 111.51 | 13.01 | LC-0h | 8.03 | 410 | 1948 | 1717 | 221 | 10.5 | 2258 |
|  |  |  | HC-0h | 7.67 | 1098 | 2147 | 2006 | 113 | 28.2 | 2281 |
|  |  |  | LC-24h | 8.00±0.02 | 454±19 | 1995±22 | 1770±21 | 213±8 | 11.6±0.5 | 2290±27 |
|  |  |  | HC-24h | 7.65±0.01 | 1194±37 | 2189±26 | 2050±24 | 108±3 | 30.6±0.9 | 2313±27 |
| 68 | 111.00 | 13.00 | LC-0h | 8.02 | 422 | 1952 | 1723 | 218 | 10.8 | 2258 |
|  |  |  | HC-0h | 7.66 | 1130 | 2152 | 2012 | 111 | 28.8 | 2283 |
|  |  |  | LC-24h | 7.99±0.02 | 467±19 | 1997±20 | 1775±19 | 210±7 | 11.9±0.5 | 2289±25 |
|  |  |  | HC-24h | 7.63±0.02 | 1238±46 | 2193±23 | 2056±21 | 106±4 | 31.6±1.2 | 2314±26 |
| 69 | 111.00 | 12.01 | LC-0h | 8.03 | 396 | 1859 | 1640 | 209 | 10.1 | 2155 |
|  |  |  | HC-0h | 7.64 | 1147 | 2065 | 1935 | 101 | 29.2 | 2181 |
|  |  |  | LC-24h | 8.00±0.01 | 433±14 | 1899±19 | 1686±18 | 202±6 | 11.0±0.4 | 2183±22 |
|  |  |  | HC-24h | 7.61±0.01 | 1244±37 | 2102±21 | 1974±19 | 97±3 | 31.7±0.9 | 2210±23 |
| 70 | 111.50 | 12.01 | LC-0h | 8.00 | 432 | 1887 | 1676 | 200 | 11.0 | 2169 |
|  |  |  | HC-0h | 7.65 | 1122 | 2075 | 1943 | 104 | 28.6 | 2197 |
|  |  |  | LC-24h | 7.98±0.01 | 464±15 | 1926±27 | 1718±26 | 196±3 | 11.9±0.4 | 2200±26 |
|  |  |  | HC-24h | 7.63±0.01 | 1198±36 | 2113±27 | 1982±27 | 101±1 | 30.6±0.9 | 2229±26 |
| 71 | 112.00 | 12.01 | LC-0h | 8.00 | 432 | 1887 | 1676 | 200 | 11.0 | 2169 |
|  |  |  | HC-0h | 7.64 | 1153 | 2081 | 1950 | 102 | 29.4 | 2199 |
|  |  |  | LC-24h | 7.98±0.01 | 468±13 | 1925±21 | 1719±20 | 195±4 | 11.9±0.3 | 2197±22 |
|  |  |  | HC-24h | 7.62±0.01 | 1240±32 | 2118±22 | 1988±21 | 98±2 | 31.6±0.8 | 2228±23 |
| 72 | 112.50 | 12.00 | LC-0h | 7.97 | 470 | 1902 | 1700 | 190 | 12.0 | 2169 |
|  |  |  | HC-0h | 7.61 | 1245 | 2094 | 1966 | 96 | 31.7 | 2202 |
|  |  |  | LC-24h | 7.94±0.01 | 513±17 | 1942±19 | 1745±18 | 184±5 | 13.1±0.4 | 2197±22 |
|  |  |  | HC-24h | 7.58±0.01 | 1350±40 | 2131±21 | 2005±20 | 92±3 | 34.4±1.0 | 2230±23 |
| 73 | 113.00 | 12.00 | LC-0h | 8.00 | 433 | 1885 | 1672 | 202 | 11.0 | 2169 |
|  |  |  | HC-0h | 7.65 | 1129 | 2080 | 1947 | 105 | 28.6 | 2204 |
|  |  |  | LC-24h | 7.97±0.02 | 479±20 | 1929±22 | 1723±20 | 194±7 | 12.1±0.5 | 2200±26 |
|  |  |  | HC-24h | 7.62±0.01 | 1227±38 | 2121±25 | 1989±23 | 101±3 | 31.1±1.0 | 2235±26 |
| 74 | 113.50 | 12.00 | LC-0h | 8.00 | 435 | 1901 | 1690 | 200 | 11.2 | 2183 |
|  |  |  | HC-0h | 7.65 | 1133 | 2098 | 1965 | 104 | 29.1 | 2220 |
|  |  |  | LC-24h | 7.99±0.01 | 459±21 | 1936±29 | 1726±31 | 198±2 | 11.8±0.6 | 2212±24 |
|  |  |  | HC-24h | 7.64±0.01 | 1190±52 | 2133±29 | 2000±29 | 103±1 | 30.5±1.3 | 2250±25 |
| 75 | 112.99 | 10.99 | LC-0h | 8.00 | 435 | 1899 | 1686 | 202 | 11.1 | 2183 |
|  |  |  | HC-0h | 7.66 | 1106 | 2095 | 1960 | 107 | 28.2 | 2222 |
|  |  |  | LC-24h | 7.97±0.01 | 475±16 | 1939±20 | 1732±18 | 195±5 | 12.1±0.4 | 2211±23 |
|  |  |  | HC-24h | 7.63±0.01 | 1200±36 | 2133±21 | 1999±20 | 103±3 | 30.6±0.9 | 2251±23 |
| 76 | 112.50 | 10.99 | LC-0h | 8.00 | 432 | 1887 | 1676 | 200 | 11.0 | 2169 |
|  |  |  | HC-0h | 7.66 | 1100 | 2084 | 1950 | 106 | 28.1 | 2210 |
|  |  |  | LC-24h | 7.99±0.01 | 451±5 | 1921±19 | 1709±14 | 200±5 | 11.5±0.1 | 2200±26 |
|  |  |  | HC-24h | 7.65±0.01 | 1145±10 | 2118±22 | 1983±20 | 106±3 | 29.2±0.3 | 2242±27 |
| 77 | 112.00 | 11.01 | LC-0h | 8.00 | 432 | 1887 | 1676 | 200 | 11.0 | 2169 |
|  |  |  | HC-0h | 7.66 | 1100 | 2086 | 1952 | 106 | 28.1 | 2212 |
|  |  |  | LC-24h | 7.99±0.02 | 451±26 | 1919±31 | 1709±34 | 199±4 | 11.5±0.7 | 2198±24 |
|  |  |  | HC-24h | 7.65±0.02 | 1145±61 | 2119±30 | 1984±31 | 106±2 | 29.3±1.6 | 2242±25 |
| 78 | 111.50 | 11.01 | LC-0h | 8.00 | 430 | 1875 | 1666 | 199 | 11.0 | 2155 |
|  |  |  | HC-0h | 7.65 | 1126 | 2079 | 1947 | 104 | 28.7 | 2201 |
|  |  |  | LC-24h | 7.99±0.01 | 444±11 | 1904±14 | 1694±8 | 199±7 | 11.3±0.3 | 2183±22 |
|  |  |  | HC-24h | 7.64±0.01 | 1144±34 | 2079±15 | 1948±15 | 102±3 | 29.2±0.9 | 2198±17 |
| 79 | 111.00 | 11.04 | LC-0h | 7.99 | 445 | 1892 | 1684 | 197 | 11.3 | 2169 |
|  |  |  | HC-0h | 7.65 | 1133 | 2094 | 1960 | 105 | 28.9 | 2217 |
|  |  |  | LC-24h | 7.98±0.02 | 468±24 | 1925±25 | 1718±26 | 195±6 | 11.9±0.6 | 2197±23 |
|  |  |  | HC-24h | 7.64±0.02 | 1168±44 | 2090±21 | 1959±19 | 102±4 | 29.8±1.1 | 2208±25 |
| 80 | 117.50 | 19.50 | LC-0h | 8.00 | 438 | 1928 | 1707 | 211 | 11.1 | 2226 |
|  |  |  | HC-0h | 7.60 | 1292 | 2138 | 2007 | 99 | 32.7 | 2248 |
|  |  |  | LC-24h | 7.97±0.01 | 481±13 | 1979±12 | 1762±8 | 205±6 | 12.2±0.3 | 2265±19 |
|  |  |  | HC-24h | 7.58±0.01 | 1365±54 | 2135±22 | 2007±22 | 94±2 | 34.5±1.4 | 2237±18 |
| 81 | 119.00 | 17.00 | LC-0h | 8.01 | 419 | 1902 | 1677 | 214 | 10.6 | 2206 |
|  |  |  | HC-0h | 7.6 | 1276 | 2119 | 1988 | 99 | 32.3 | 2230 |
|  |  |  | LC-24h | 7.99±0.01 | 450±8 | 1942±13 | 1721±11 | 210±4 | 11.4±0.2 | 2237±18 |
|  |  |  | HC-24h | 7.58±0 | 1325±26 | 2115±20 | 1986±19 | 95±0 | 33.5±0.7 | 2220±19 |
| 82 | 117.00 | 18.00 | LC-0h | 8.02 | 405 | 1881 | 1653 | 218 | 10.2 | 2194 |
|  |  |  | HC-0h | 7.65 | 1120 | 2088 | 1950 | 110 | 28.1 | 2220 |
|  |  |  | LC-24h | 7.99±0.01 | 443±12 | 1922±8 | 1700±2 | 211±6 | 11.1±0.3 | 2221±16 |
|  |  |  | HC-24h | 7.63±0.01 | 1184±49 | 2087±24 | 1953±24 | 104±2 | 29.7±1.2 | 2210±20 |
| 83 | 116.50 | 18.00 | LC-0h | 8.02 | 406 | 1891 | 1664 | 218 | 10.3 | 2202 |
|  |  |  | HC-0h | 7.64 | 1152 | 2103 | 1967 | 107 | 29.1 | 2231 |
|  |  |  | LC-24h | 7.99±0.01 | 447±13 | 1942±11 | 1719±8 | 212±6 | 11.3±0.3 | 2241±19 |
|  |  |  | HC-24h | 7.62±0.01 | 1207±35 | 2100±20 | 1967±20 | 102±1 | 30.5±0.9 | 2219±18 |
| 84 | 115.50 | 18.00 | LC-0h | 8.01 | 425 | 1927 | 1699 | 218 | 10.7 | 2236 |
|  |  |  | HC-0h | 7.61 | 1267 | 2150 | 2016 | 103 | 31.9 | 2268 |
|  |  |  | LC-24h | 7.99±0.01 | 463±12 | 1977±10 | 1752±4 | 213±6 | 11.7±0.3 | 2276±19 |
|  |  |  | HC-24h | 7.59±0.01 | 1334±59 | 2141±31 | 2010±31 | 97±1 | 33.6±1.5 | 2248±28 |
| 85 | 115.00 | 18.00 | LC-0h | 7.94 | 516 | 1959 | 1754 | 192 | 13.0 | 2228 |
|  |  |  | HC-0h | 7.56 | 1435 | 2163 | 2034 | 93 | 36.1 | 2261 |
|  |  |  | LC-24h | 7.92±0.01 | 556±8 | 2006±13 | 1804±9 | 189±4 | 14.0±0.2 | 2267±19 |
|  |  |  | HC-24h | 7.54±0.01 | 1537±20 | 2209±16 | 2080±14 | 91±2 | 38.6±0.5 | 2301±19 |
| 86 | 112.50 | 18.00 | LC-0h | 7.99 | 450 | 1933 | 1710 | 212 | 11.2 | 2233 |
|  |  |  | HC-0h | 7.60 | 1303 | 2153 | 2019 | 102 | 32.5 | 2268 |
|  |  |  | LC-24h | 7.96±0.01 | 493±12 | 1981±14 | 1763±7 | 206±7 | 12.3±0.3 | 2268±23 |
|  |  |  | HC-24h | 7.58±0.01 | 1393±16 | 2196±20 | 2062±17 | 99±3 | 34.8±0.4 | 2304±23 |
| 87 | 110.00 | 18.00 | LC-0h | 8.02 | 413 | 1915 | 1681 | 223 | 10.3 | 2233 |
|  |  |  | HC-0h | 7.63 | 1208 | 2143 | 2005 | 108 | 30.1 | 2271 |
|  |  |  | LC-24h | 7.99±0.01 | 454±13 | 1966±12 | 1738±8 | 217±6 | 11.3±0.3 | 2272±19 |
|  |  |  | HC-24h | 7.61±0.01 | 1265±37 | 2140±21 | 2005±21 | 104±1 | 31.6±0.9 | 2259±18 |
| 88 | 115.00 | 14.00 | LC-0h | 7.95 | 506 | 1975 | 1766 | 196 | 12.8 | 2249 |
|  |  |  | HC-0h | 7.56 | 1450 | 2191 | 2061 | 93 | 36.7 | 2289 |
|  |  |  | LC-24h | 7.92±0.01 | 555±15 | 2026±12 | 1821±9 | 190±6 | 14.1±0.4 | 2288±19 |
|  |  |  | HC-24h | 7.54±0.01 | 1553±20 | 2238±16 | 2107±14 | 91±2 | 39.3±0.5 | 2329±19 |
| 89 | 114.50 | 14.00 | LC-0h | 7.94 | 525 | 1970 | 1777 | 180 | 13.8 | 2220 |
|  |  |  | HC-0h | 7.55 | 1491 | 2179 | 2055 | 85 | 39.2 | 2262 |
|  |  |  | LC-24h | 7.92±0.01 | 565±8 | 2017±13 | 1826±10 | 176±4 | 14.8±0.2 | 2259±19 |
|  |  |  | HC-24h | 7.53±0.01 | 1596±21 | 2225±16 | 2100±15 | 83±2 | 41.9±0.5 | 2302±19 |
| 90 | 114.50 | 12.00 | LC-0h | 7.94 | 508 | 1936 | 1737 | 187 | 12.9 | 2198 |
|  |  |  | HC-0h | 7.57 | 1382 | 2143 | 2015 | 92 | 35.2 | 22427.92 |
|  |  |  | LC-24h | 7.92±0.01 | 547±8 | 1983±13 | 1785±9 | 183±4 | 13.9±0.2 | 2237±19 |
|  |  |  | HC-24h | 7.55±0.01 | 1480±19 | 2189±16 | 2061±14 | 90±2 | 37.7±0.5 | 2282±19 |
| 91 | 115.00 | 12.00 | LC-0h | 7.95 | 489 | 1915 | 1716 | 187 | 12.5 | 2179 |
|  |  |  | HC-0h | 7.56 | 1404 | 2131 | 2006 | 89 | 36.0 | 2225 |
|  |  |  | LC-24h | 7.93±0.01 | 537±15 | 1965±12 | 1770±9 | 182±6 | 13.8±0.4 | 2218±18 |
|  |  |  | HC-24h | 7.54±0.01 | 1503±20 | 2177±16 | 2051±14 | 87±2 | 38.6±0.5 | 2264±19 |
| 92 | 115.50 | 12.00 | LC-0h | 7.95 | 494 | 1939 | 1739 | 188 | 12.8 | 2203 |
|  |  |  | HC-0h | 7.56 | 1418 | 2158 | 2032 | 89 | 36.6 | 2252 |
|  |  |  | LC-24h | 7.93±0.01 | 532±8 | 1986±13 | 1787±9 | 184±4 | 13.7±0.2 | 2242±19 |
|  |  |  | HC-24h | 7.55±0.01 | 1472±58 | 2153±22 | 2029±22 | 86±2 | 38.0±1.5 | 2240±18 |
| 93 | 116.00 | 12.00 | LC-0h | 7.94 | 511 | 1940 | 1742 | 185 | 13.0 | 2198 |
|  |  |  | HC-0h | 7.55 | 1464 | 2159 | 2033 | 88 | 37.4 | 2249 |
|  |  |  | LC-24h | 7.93±0.01 | 535±8 | 1981±13 | 1782±9 | 185±4 | 13.7±0.2 | 2237±19 |
|  |  |  | HC-24h | 7.54±0.01 | 1528±20 | 2201±16 | 2074±14 | 88±2 | 39.0±0.5 | 2289±19 |
| 94 | 118.00 | 10.00 | LC-0h | 7.91 | 553 | 1964 | 1775 | 175 | 14.3 | 2207 |
|  |  |  | HC-0h | 7.53 | 1535 | 2177 | 2053 | 84 | 39.7 | 2260 |
|  |  |  | LC-24h | 7.89±0.01 | 597±11 | 2000±15 | 1815±11 | 170±4 | 15.4±0.3 | 2233±20 |
|  |  |  | HC-24h | 7.51±0.01 | 1633±19 | 2211±17 | 2087±16 | 82±2 | 42.2±0.5 | 2287±20 |
| 95 | 117.50 | 10.00 | LC-0h | 7.95 | 494 | 1929 | 1731 | 185 | 12.8 | 2189 |
|  |  |  | HC-0h | 7.55 | 1455 | 2156 | 2031 | 87 | 37.6 | 2244 |
|  |  |  | LC-24h | 7.93±0.01 | 541±13 | 1977±18 | 1783±13 | 180±6 | 14.0±0.3 | 2226±26 |
|  |  |  | HC-24h | 7.53±0.01 | 1570±31 | 2201±21 | 2077±19 | 84±3 | 40.6±0.8 | 2282±26 |
| 96 | 117.00 | 10.00 | LC-0h | 7.98 | 454 | 1914 | 1707 | 195 | 11.8 | 2189 |
|  |  |  | HC-0h | 7.58 | 1349 | 2148 | 2021 | 92 | 35.0 | 2246 |
|  |  |  | LC-24h | 7.96±0.01 | 498±14 | 1964±12 | 1762±9 | 189±6 | 12.4±0.4 | 2227±18 |
|  |  |  | HC-24h | 7.56±0.01 | 1444±19 | 2193±16 | 2066±14 | 90±2 | 37.5±0.5 | 2285±19 |
| 97 | 116.50 | 10.00 | LC-0h | 7.97 | 467 | 1927 | 1726 | 189 | 12.3 | 2194 |
|  |  |  | HC-0h | 7.59 | 1315 | 2153 | 2026 | 93 | 34.5 | 2253 |
|  |  |  | LC-24h | 7.95±0.02 | 507±19 | 1971±11 | 1773±3 | 185±8 | 13.3±0.5 | 2228±21 |
|  |  |  | HC-24h | 7.57±0.02 | 1405±45 | 2194±16 | 2067±13 | 90±4 | 36.9±1.2 | 2288±22 |
| 98 | 116.00 | 10.00 | LC-0h | 7.98 | 458 | 1919 | 1712 | 195 | 11.8 | 2194 |
|  |  |  | HC-0h | 7.60 | 1296 | 2150 | 2020 | 96 | 33.4 | 2255 |
|  |  |  | LC-24h | 7.96±0.01 | 503±14 | 1969±12 | 1766±9 | 190±6 | 13.0±0.4 | 2232±19 |
|  |  |  | HC-24h | 7.58±0.01 | 1388±18 | 2196±16 | 2066±14 | 94±2 | 35.8±0.5 | 2295±19 |
| 99 | 115.50 | 10.00 | LC-0h | 7.98 | 458 | 1920 | 1713 | 195 | 11.8 | 2194 |
|  |  |  | HC-0h | 7.58 | 1364 | 2160 | 2032 | 92 | 35.2 | 2257 |
|  |  |  | LC-24h | 7.96±0.02 | 498±20 | 1968±11 | 1765±10 | 190±7 | 12.9±0.5 | 2232±19 |
|  |  |  | HC-24h | 7.56±0.02 | 1461±49 | 2206±13 | 2078±11 | 90±4 | 37.8±1.3 | 2297±19 |
| 100 | 115.00 | 10.00 | LC-0h | 8.00 | 429 | 1901 | 1686 | 203 | 11.1 | 2189 |
|  |  |  | HC-0h | 7.58 | 1357 | 2155 | 2027 | 93 | 35.0 | 2255 |
|  |  |  | LC-24h | 7.98±0.01 | 470±12 | 1947±11 | 1738±5 | 197±6 | 12.1±0.3 | 2224±20 |
|  |  |  | HC-24h | 7.56±0.01 | 1450±17 | 2197±17 | 2069±15 | 91±2 | 37.4±0.4 | 2290±21 |
| 101 | 114.50 | 10.00 | LC-0h | 7.96 | 481 | 1919 | 1719 | 187 | 12.4 | 2180 |
|  |  |  | HC-0h | 7.56 | 1429 | 2158 | 2033 | 88 | 36.9 | 2248 |
|  |  |  | LC-24h | 7.94±0.01 | 525±13 | 1960±14 | 1766±9 | 180±6 | 13.6±0.3 | 2210±23 |
|  |  |  | HC-24h | 7.54±0.01 | 1523±16 | 2195±20 | 2070±18 | 86±2 | 39.4±0.4 | 2278±23 |

**Table S2** Pearson Correlation coefficients between seawater acidification induced effects on primary productivity and in situ pHtotal, temperature, salinity, total alkalinity (TA), light intensity (PAR), and chlorophyll a concentration (Chl *a*). ‘*r*’ represents correlation coefficient and *p* (two tailed)represents the probability that a hypothesis test with a correlation coefficient of 0 is established. "\*" represents significant difference (*p* < 0.05, Pearson correlation analysis).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | pHtotal | Temperature | Salinity | TA | PAR | Chl *a* |
| OA Effects | *r* | **0.425** | 0.028 | **-0.418** | 0.132 | **0.311** | 0.130 |
| *p* | <0.001\* | 0.784 | <0.001\* | 0.187 | 0.002\* | 0.195 |

**Table S3** Mean solar PAR radiation (W m-2) during daytime in July and September of 2017-2021 at Xiamen (118.10 oE, 24.46 oN) which locates in the coast of the Taiwan Strait.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2017 | 2018 | 2019 | 2020 | 2021 | Mean | SD |
| July September | 198 | 190 | 174 | 197 | 195 | 191 | 9 |
| 181 | 175 | 176 | 134 | 179 | 169 | 18 |

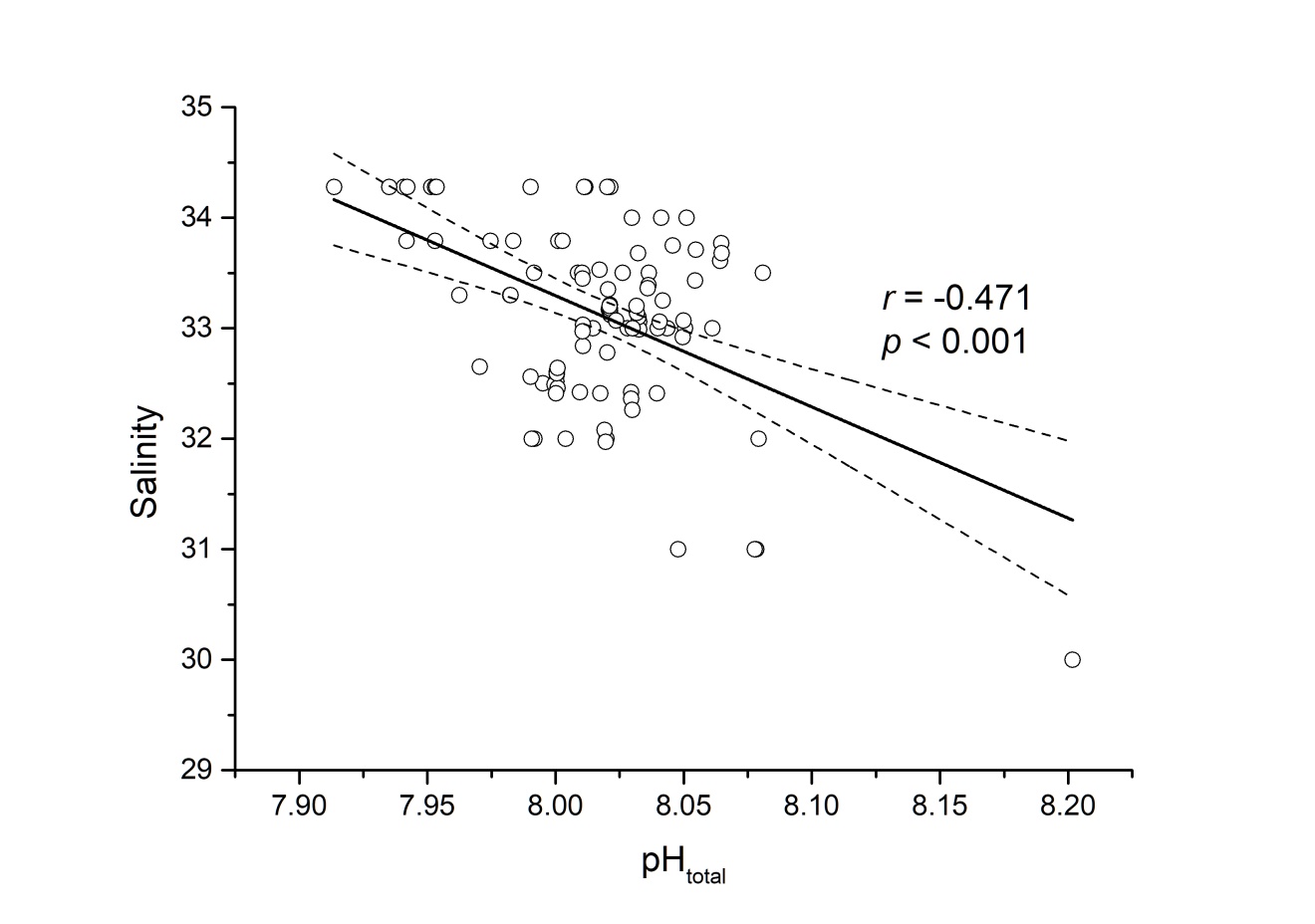


Fig. S1 Correlation between in situ salinity and in situ pHtotal. ‘*r*’ represents correlation coefficient and *p* (two tailed)represents the probability that a hypothesis test with a correlation coefficient of 0 is established.