



## *Supplement of*

# **Tidal mixing of estuarine and coastal waters in the western English Channel is a control on spatial and temporal variability in seawater CO<sub>2</sub>**

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- bg-19-1657-2022-supplement-title-page.pdf
- L4 horizontal CO<sub>2</sub> - supplement.docx
- Paper data
  - Data -Membrane equilibrator processed
    - \* Sims\_2016\_highfrequency\_WCO\_fCO<sub>2</sub>.csv
  - Data-RV Plymouth Quest Underway - 2016
    - \* 20160404\_083958.txt
    - \* 20160405\_071048.txt
    - \* 20160411\_081116.txt
    - \* 20160414\_084409.txt
    - \* 20160418\_091106.txt
    - \* 20160419\_075356.txt
    - \* 20160420\_073212.txt
    - \* 20160421\_103842.txt
    - \* 20160425\_081841.txt
    - \* 20160427\_091115.txt
    - \* 20160503\_073136.txt
    - \* 20160504\_065546.txt
    - \* 20160505\_081339.txt
    - \* 20160506\_055457.txt
    - \* 20160523\_075045.txt
    - \* 20160524\_070721.txt
    - \* 20160525\_072334.txt
    - \* 20160526\_084900.txt
    - \* 20160527\_063320.txt
    - \* 20160601\_092851.txt
    - \* 20160602\_072235.txt

- \* 20160607\_103534.txt
- \* 20160608\_074111.txt
- \* 20160609\_080533.txt
- \* 20160610\_084124.txt
- \* 20160613\_085845.txt
- \* 20160615\_074736.txt
- \* 20160616\_080301.txt
- \* 20160620\_090500.txt
- \* 20160621\_064737.txt
- \* 20160622\_090911.txt
- \* 20160623\_070025.txt
- \* 20160627\_085001.txt
- \* 20160628\_075122.txt
- \* 20160630\_094827.txt
- \* 20160704\_085208.txt
- \* 20160705\_071446.txt
- \* 20160706\_083316.txt
- \* 20160707\_081100.txt
- \* 20160712\_080331.txt
- \* 20160713\_091853.txt
- \* 20160718\_091139.txt
- \* 20160719\_063645.txt
- \* 20160720\_090104.txt
- \* 20160721\_064810.txt
- \* 20160725\_080136.txt
- \* 20160726\_080102.txt
- \* 20160727\_091048.txt
- \* 20160801\_084934.txt
- \* 20160803\_080548.txt
- \* 20160804\_092537.txt
- \* 20160808\_075454.txt
- \* 20160809\_064437.txt
- \* 20160810\_085546.txt
- \* 20160812\_081712.txt
- \* 20160815\_082343.txt
- \* 20160817\_091259.txt
- \* 20160818\_064413.txt
- \* 20160822\_082639.txt
- \* 20160823\_061919.txt
- \* 20160824\_083617.txt
- \* 20160825\_075529.txt
- \* 20160901\_092003.txt
- \* 20160902\_085519.txt
- \* 20160905\_080417.txt
- \* 20160906\_061601.txt
- \* 20160907\_080943.txt
- \* 20160913\_090807.txt

- \* 20160915\_083459.txt
- \* 20160919\_083730.txt
- \* 20160920\_084453.txt
- \* 20160921\_064805.txt
- \* 20160928\_060010.txt
- \* 20161010\_080519.txt
- \* 20161011\_064310.txt
- \* 20161013\_082809.txt
- \* 20161014\_083624.txt
- \* 20161019\_084917.txt
- \* 20161021\_075814.txt
- \* 20161025\_090318.txt
- \* 20161026\_080542.txt
- \* 20161101\_100209.txt
- \* 20161103\_075222.txt
- \* 20161107\_093227.txt
- \* 20161114\_093728.txt
- \* 20161115\_081218.txt
- Data-RV Plymouth Quest Underway CO2 -2014 and 2016
  - \* Quest\_2016\_fCO2\_L4\_only.csv
  - \* Quest\_2016\_fCO2\_all.csv
  - \* WCO\_2014\_data.csv
  - \* WCO\_2016\_data.csv
- Data-River Tamar bottle data 2014
  - \* 20141001\_Estuary Transect\_CTD data.xlsx
  - \* tamar\_2014\_carbon\_Helen\_pH.xlsx
- Processing scripts CO2 data
  - \* getCO2calSeasonalStudy.m
  - \* getCTDseasonalstudy.m
  - \* getLicorSeasonalStudy.m
  - \* getPT100seasonalstudy.m
  - \* get\_CO2profiles\_SeasonalStudy.m
  - \* get\_import\_Tamar\_bottles.m
  - \* get\_lag\_seasonalstudy.m
  - \* get\_map\_seasonal\_study.m
  - \* get\_plot\_seasonalstudy.m
  - \* get\_und\_timeseries\_figures\_seasonal\_study.m
  - \* get\_underwayCO2\_seasonalstudy.m
  - \* get\_underwayseasonal\_study.m
  - \* get\_underwayseasonal\_studyinterp.m
  - \* getflowSeasonalStudy.m
  - \* getpumpSeasonalStudy.m
  - \* getunderwaySeasonalStudy.m
- Processing scripts model data
  - \* flux\_calc\_tidal.py
  - \* flux\_calc\_funcs.py

- \* long\_term\_flux.py
- \* long\_term\_flux\_1pt.py
- \* validation\_plots.py
- \* validation\_plots\_2.py

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