

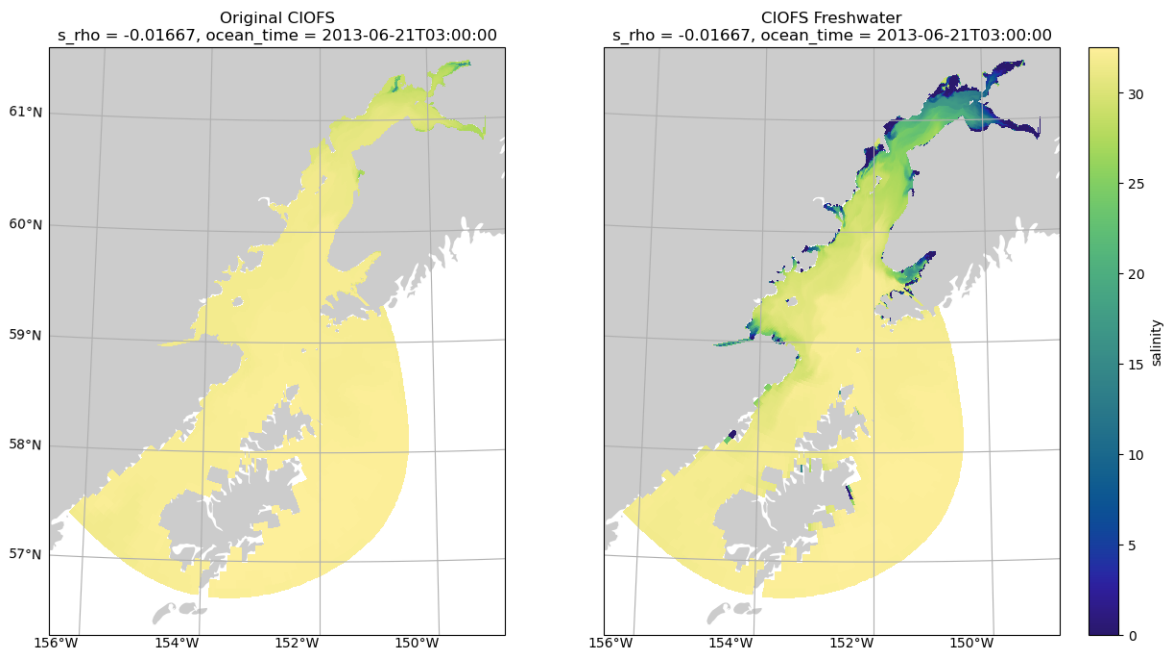
Cook Inlet Circulation Modeling - Freshwater Forcing Experiment and Lagrangian Analysis

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- Moorings (KBNERR): Historical, Kachemak Bay
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- Moorings (NOAA): across Cook Inlet
- Moorings (UAF): Kodiak Island, Peterson Bay

Final Report to the National Oceanic Atmospheric Administration National Centers for Coastal Ocean Science Kasitsna Bay Lab



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October 11, 2024

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Online report: <https://ciofs-fresh.axds.co/>

PDFs of parts of report:

- [Main content](#)
- [Model-data comparison: moorings](#)
- [Model-data comparison: CTD transects](#)
- [Model-data comparison: CTD profiles](#)
- [Model-data comparison: HF Radar](#)
- [Model-data comparison: ADCP](#)
- [Model-data comparison: drifters](#)

Overview Mooring Data

In the map below, some stations are at the same or nearly same location, in which case the marker representing their location is shifted slightly to allow for both to be seen. Datasets that span more than 1 year are represented by the number of years they span: one marker per year. By necessity these markers are moved in space from the actual station location and arranged into a grid so they can all be seen. Therefore, their locations in the skill score plots do not represent their actual locations.

The skill scores below represent the skill of each model by variable and processing listed. The models perform similarly for sea surface height: they capture the tidal signal well and the subtidal signal less well, though some improvement is noticeable for CIOFS fresh as compared with CIOFS hindcast for the subtidal sea surface height. The models perform similarly for temperature; they capture the tidal and subtidal seasonal cycles and do moderately well on the subtidal temperature with the monthly anomaly subtracted. For salinity, CIOFS fresh shows moderate improvement over CIOFS hindcast.

[91MB zipfile of plots and stats files](#)

Map of Stations

Fig. 1 All mooring stations, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

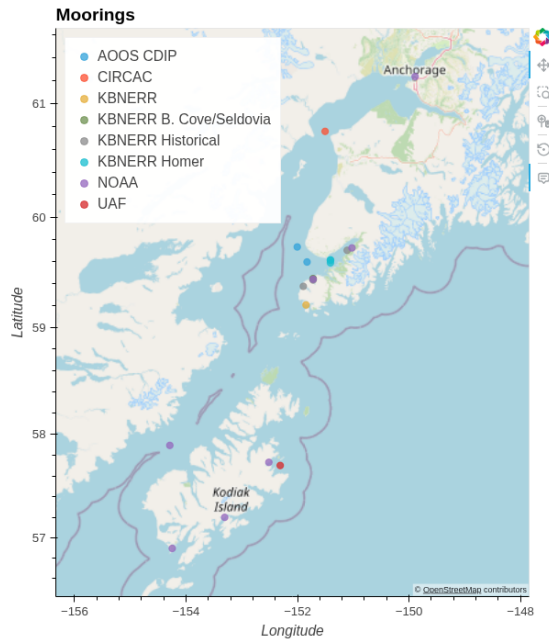


Fig. 2 All mooring stations, by project. (PNG screenshot, available for PDF and for saving image.)

Taylor Diagrams

Taylor diagrams summarize the skill of the two models in capturing the moorings datasets. The data has been grouped by region (Figs. 3, 4, and 5). Sea surface height (Fig. 3) is captured well by the models outside of Cook Inlet and in Upper Cook Inlet, but less well in Kachemak Bay. Both models have too low variance and correlation in capturing the subtidal sea surface height, but is better for CIOFS Fresh than Hindcast. Temperature (Fig. 4) is medium to well-captured in both models for the full and subtidal signals. For the subtidal anomaly, the models perform similarly to each other but none of the regions show good performance. Salinity time series (Fig. 5) are poorly captured across the board for both models. Skill scores are shown in the next plots for each dataset.

Moorings by Region

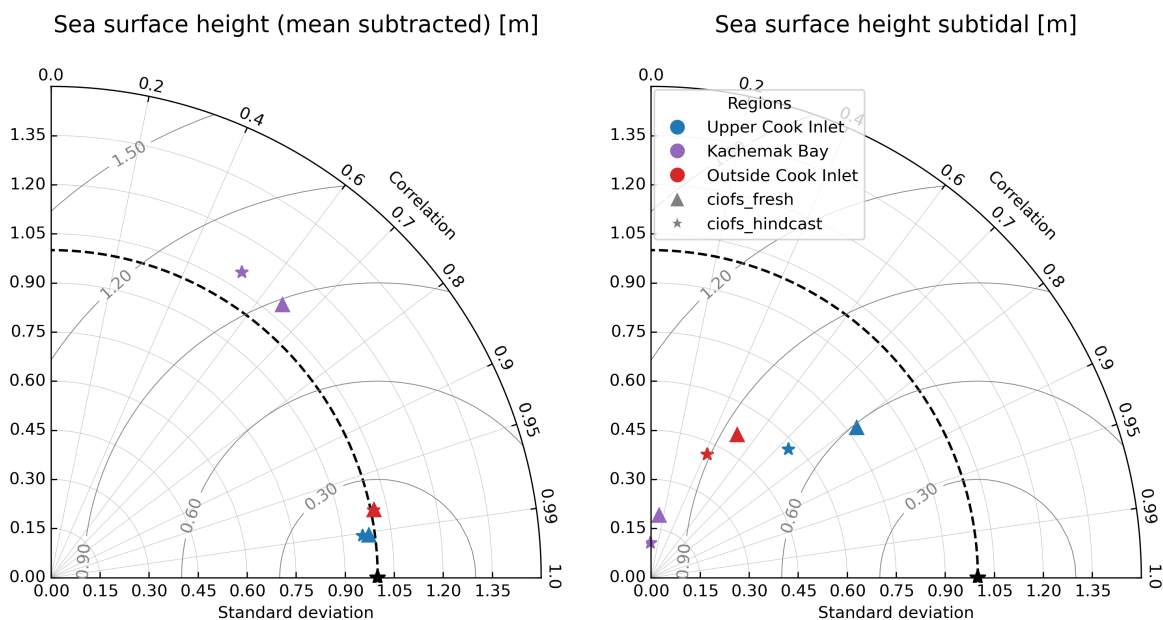


Fig. 3 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for sea surface height: full signal minus the mean (left) and subtidal, grouped by region of Cook Inlet, for moorings.

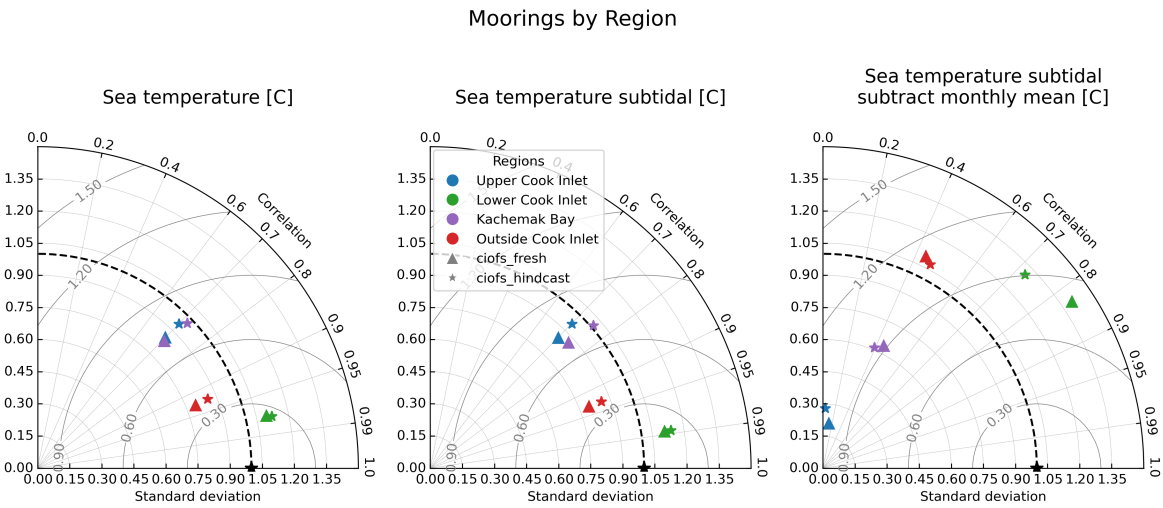


Fig. 4 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for temperature: full signal (left), subtidal (center), and subtidal (right) minus the monthly mean, grouped by region of Cook Inlet, for moorings.

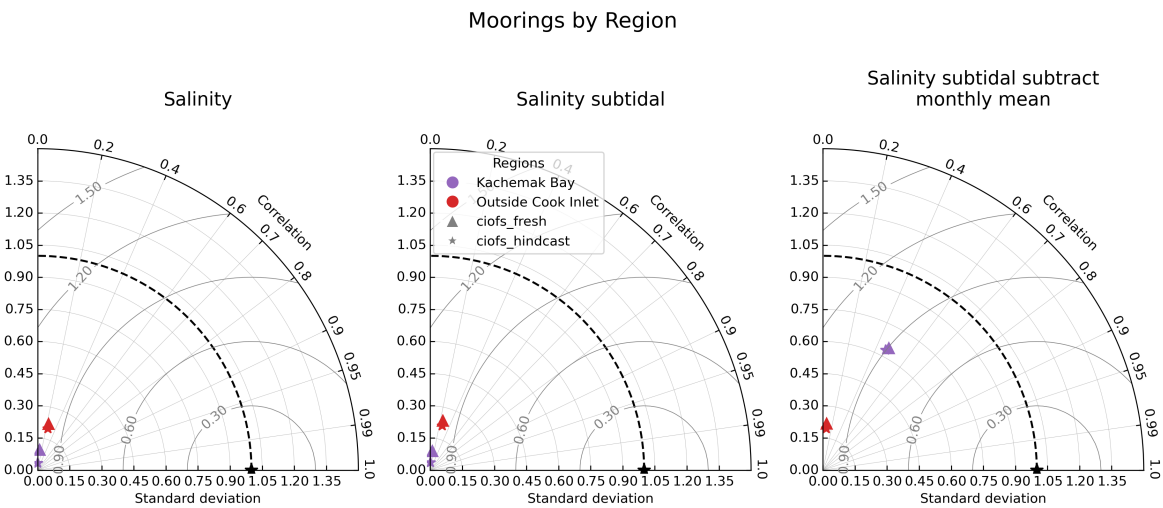
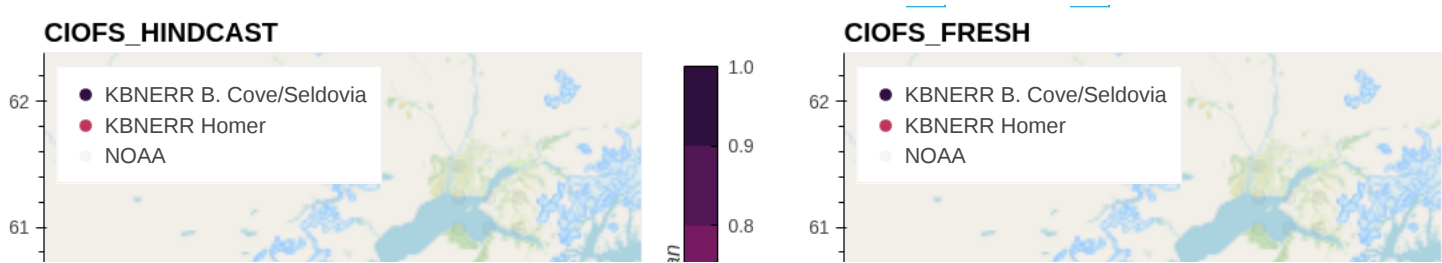


Fig. 5 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for salinity: full signal (left), subtidal (center), and subtidal (right) minus the monthly mean, grouped by region of Cook Inlet, for moorings.

Sea Surface Height

Full signal, mean subtracted



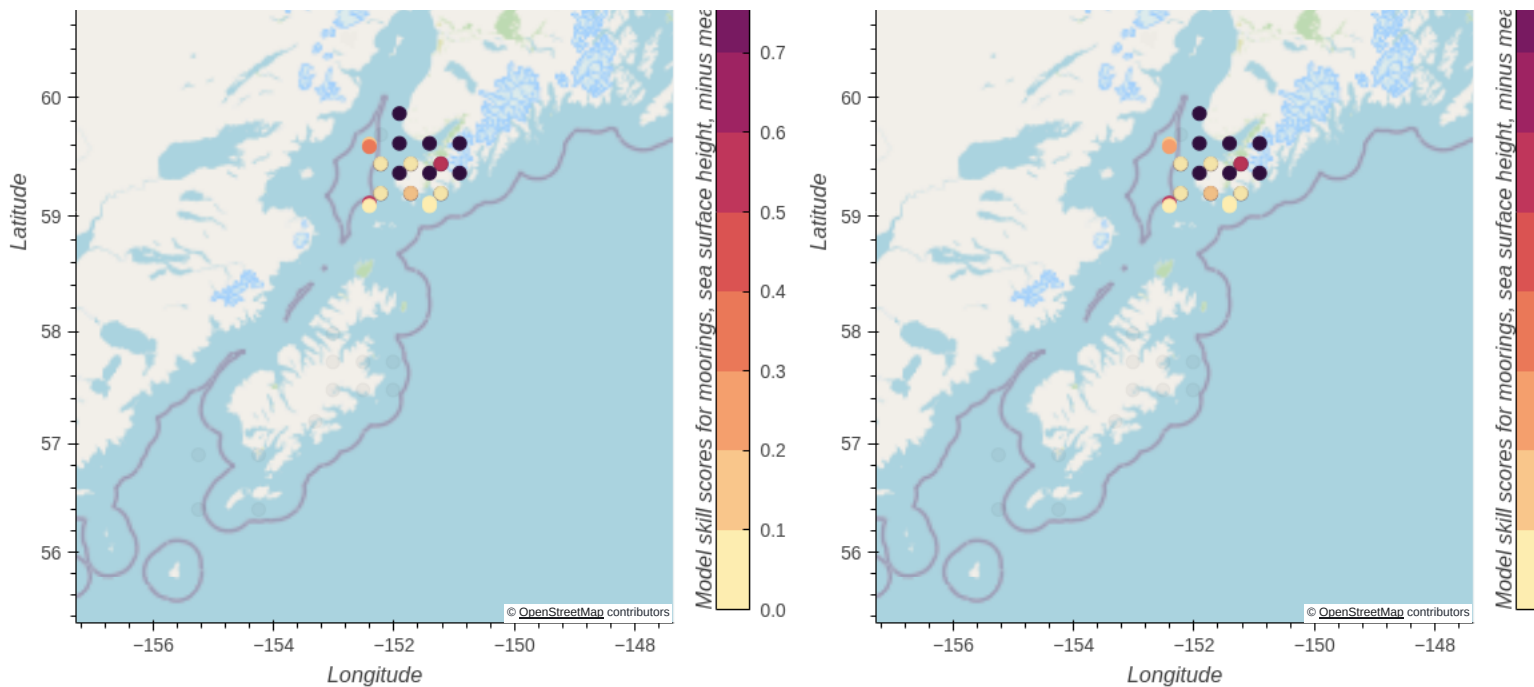


Fig. 6 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for sea surface height with mean subtracted, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

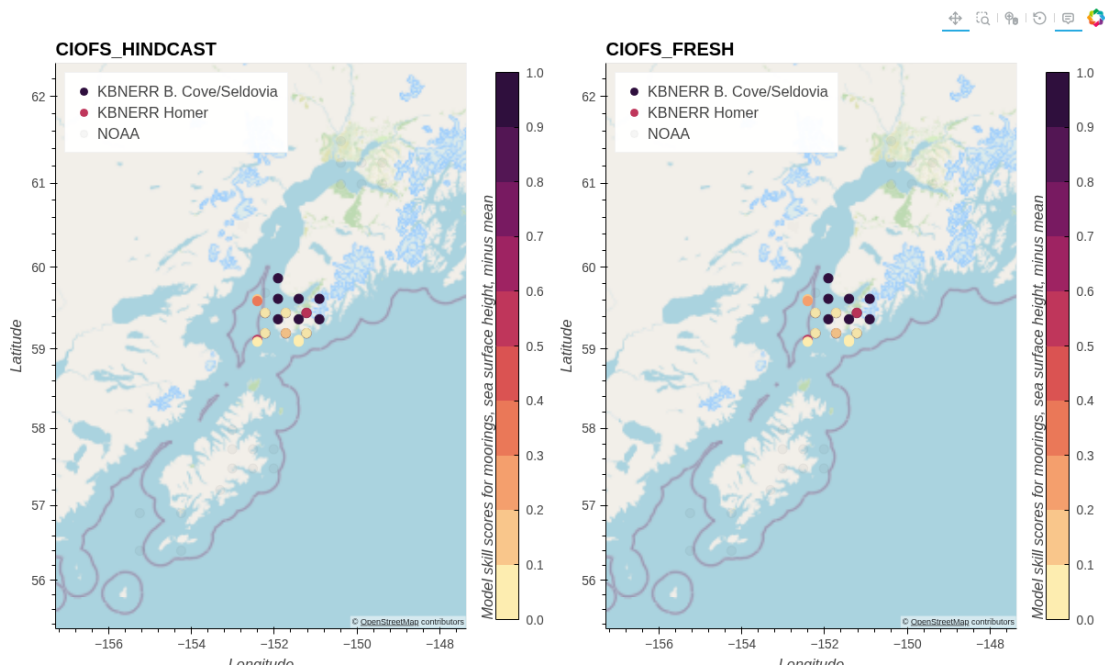
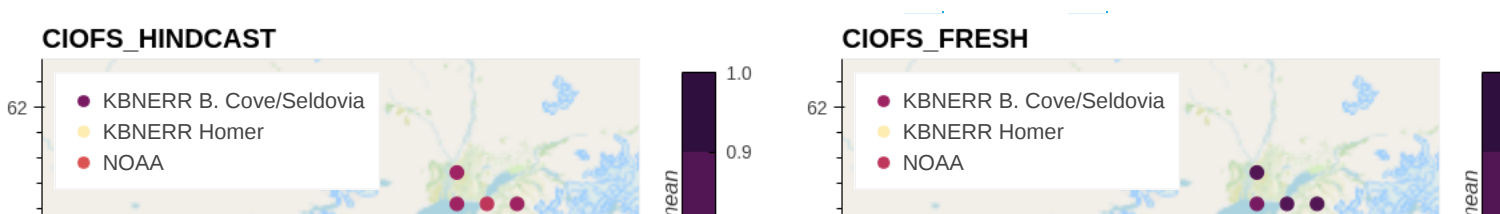


Fig. 7 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for sea surface height with mean subtracted, by project. (PNG screenshot, available for PDF and for saving image.)

Subtidal, mean subtracted



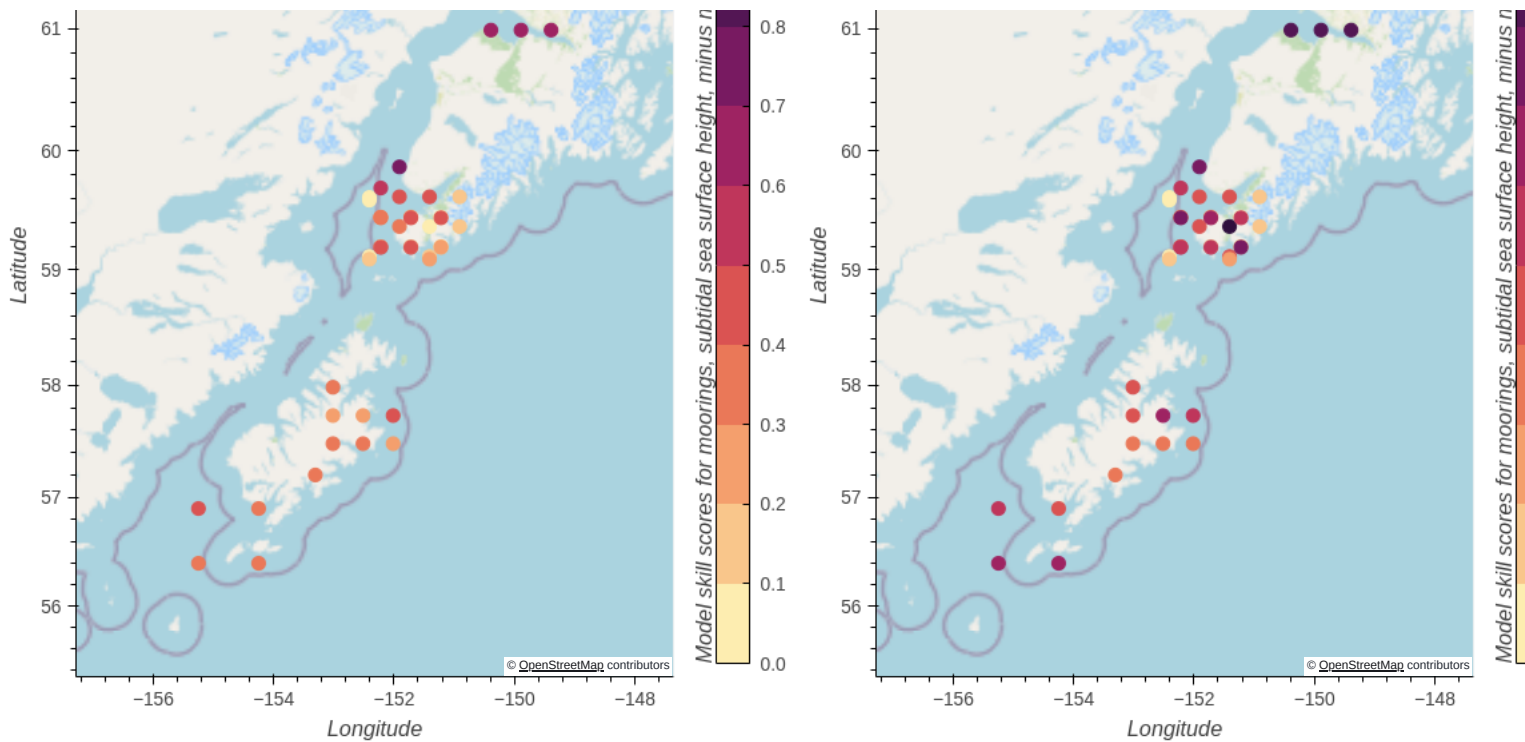


Fig. 8 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal sea surface height with mean subtracted, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

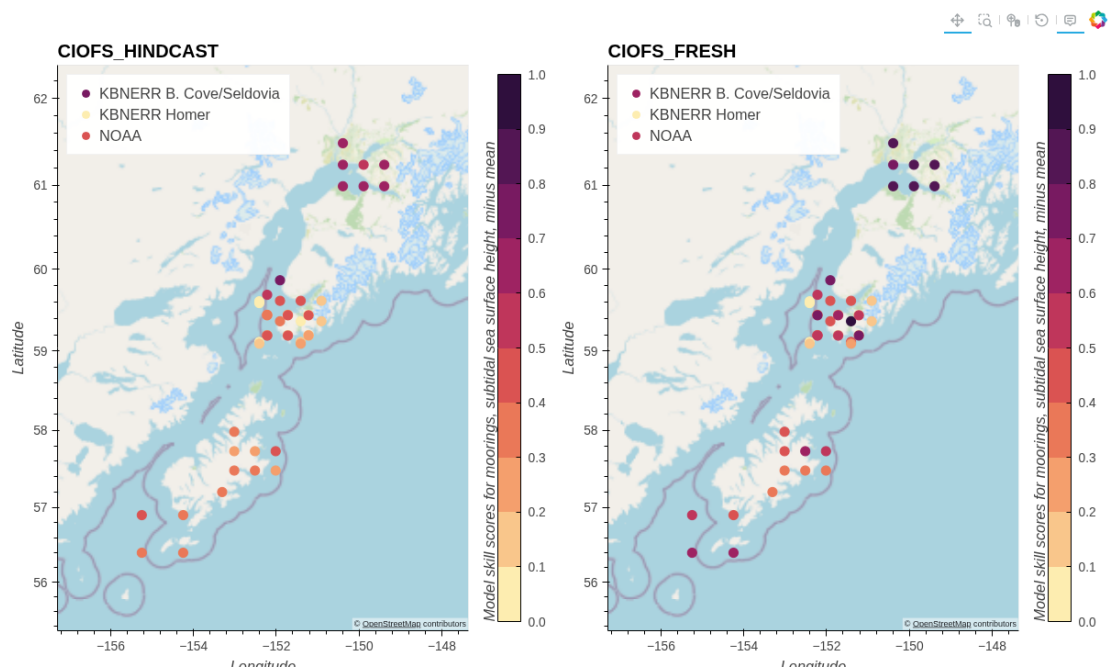


Fig. 9 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal sea surface height with mean subtracted, by project. (PNG screenshot, available for PDF and for saving image.)

Temperature

Full signal

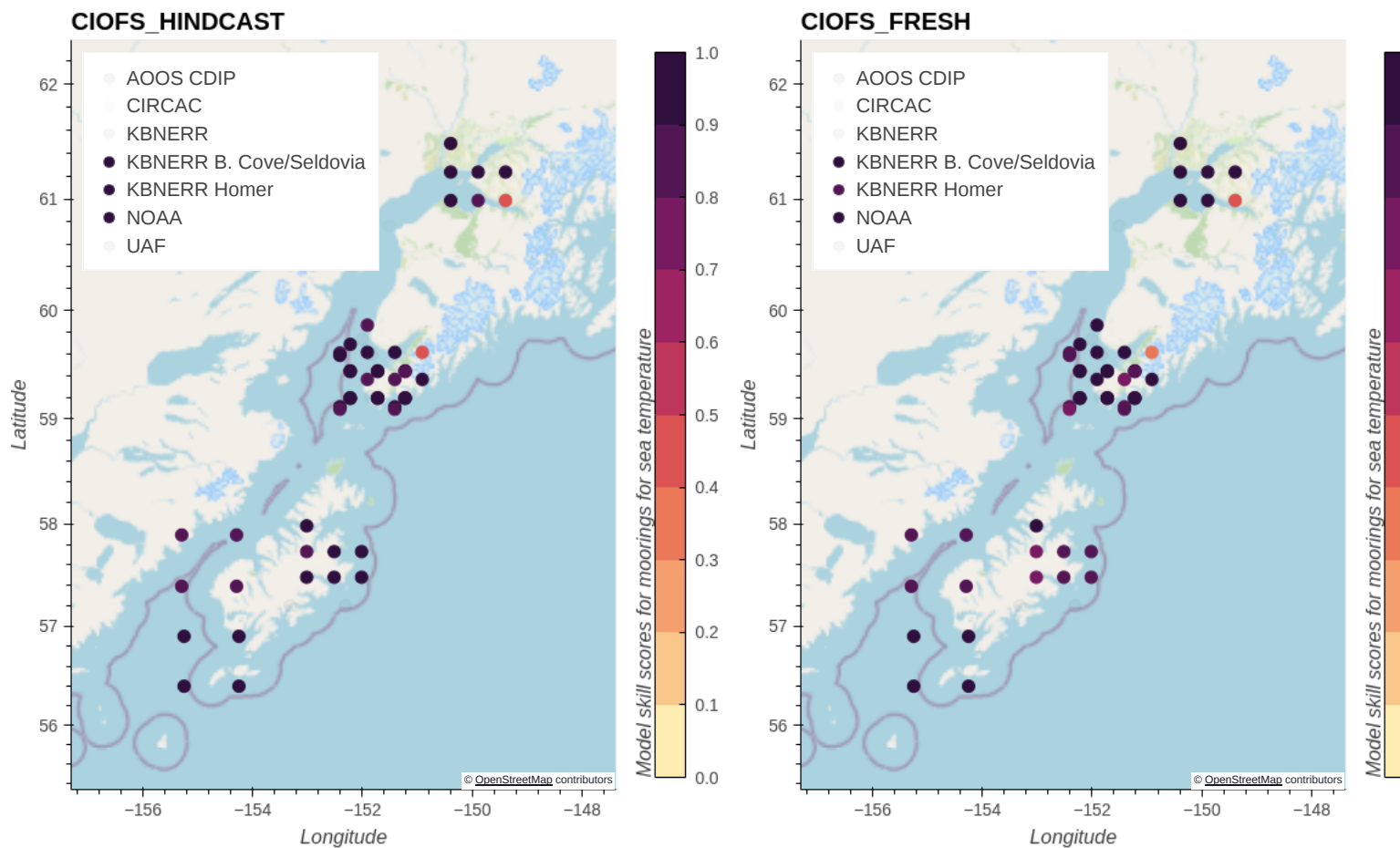


Fig. 10 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for temperature, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

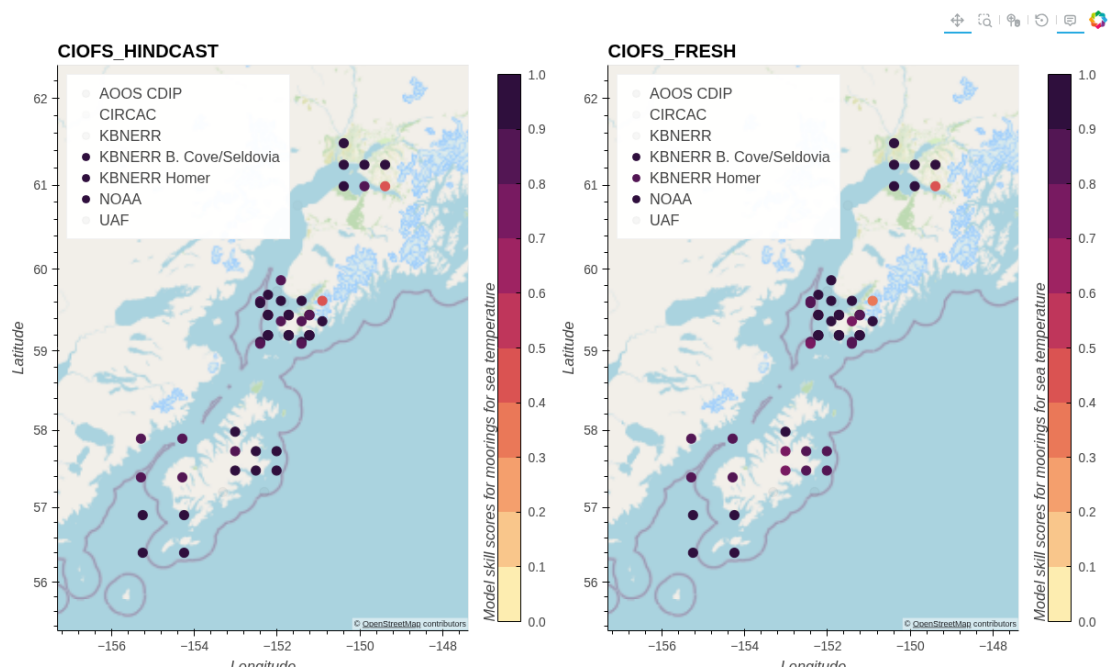


Fig. 11 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal sea surface height with mean subtracted, by project. (PNG screenshot, available for PDF and for saving image.)

Subtidal

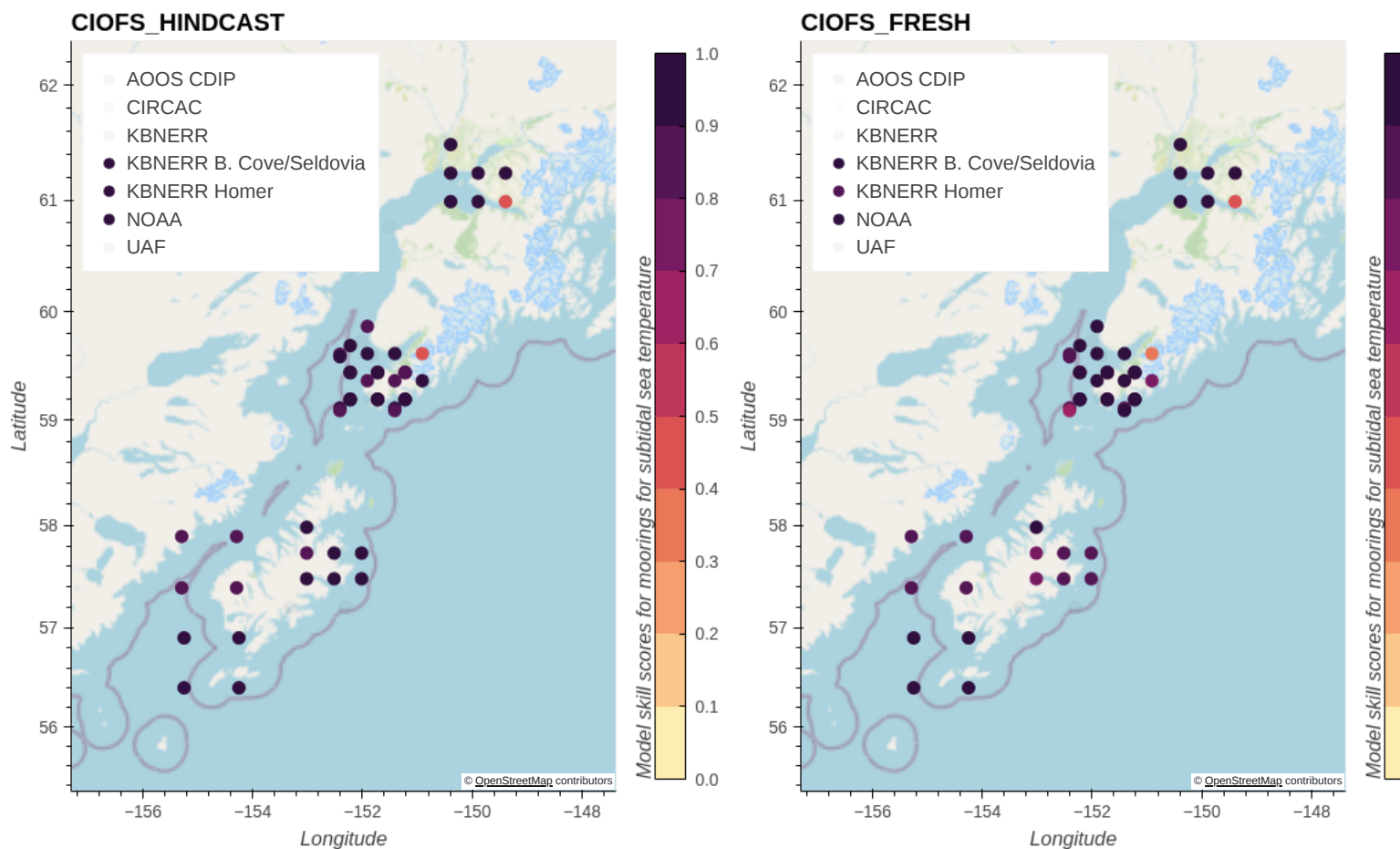


Fig. 12 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal temperature, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

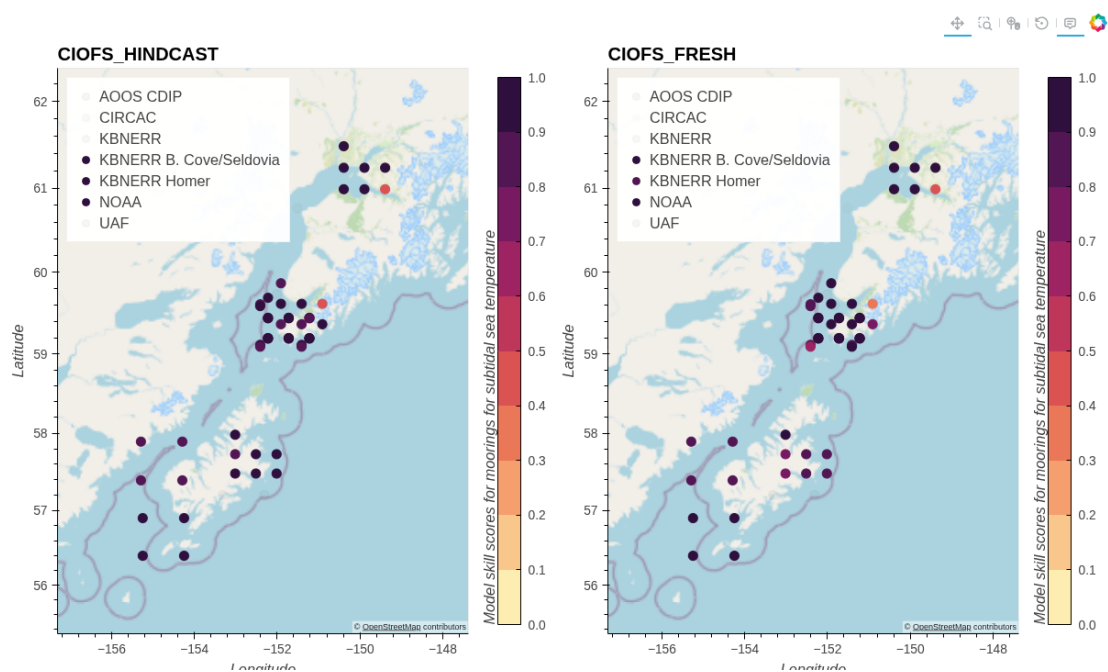


Fig. 13 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal temperature, by project. (PNG screenshot, available for PDF and for saving image.)

Subtidal with monthly-averaged climatology subtracted

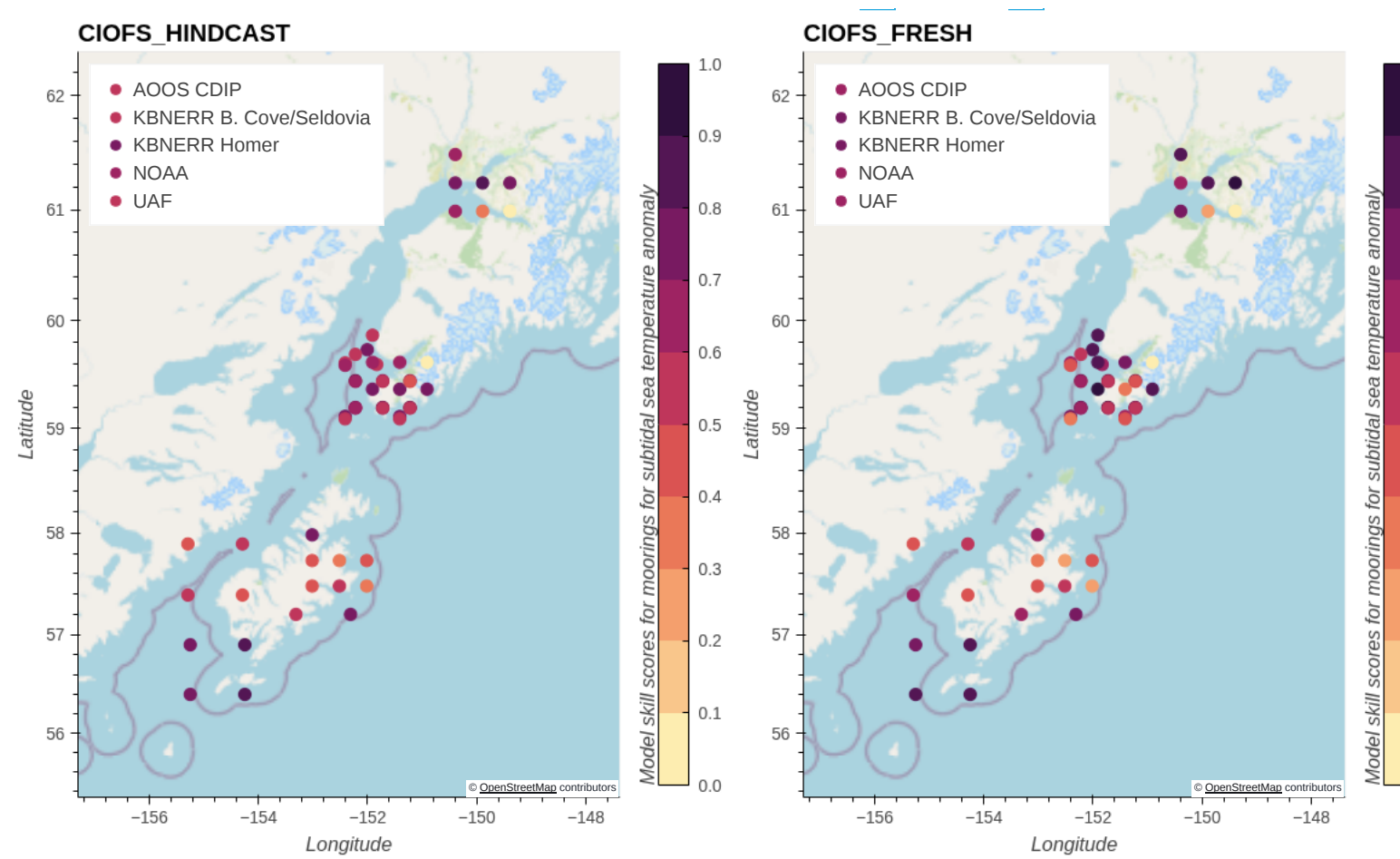


Fig. 14 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal temperature anomaly, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

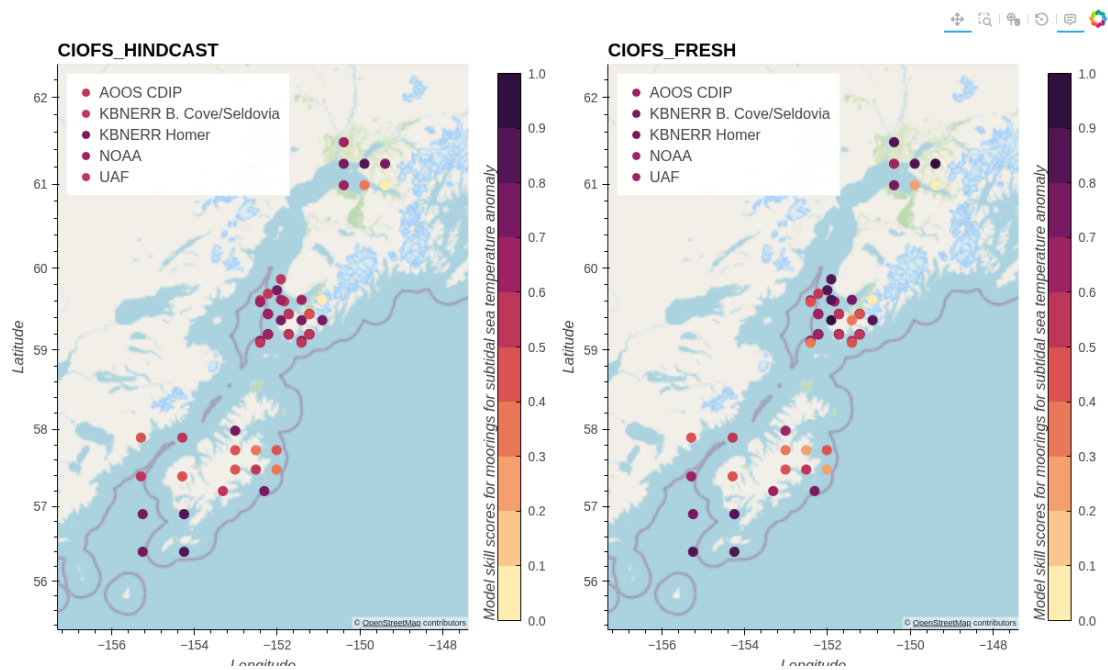


Fig. 15 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal temperature anomaly, by project. (PNG screenshot, available for PDF and for saving image.)

Salinity

Full signal

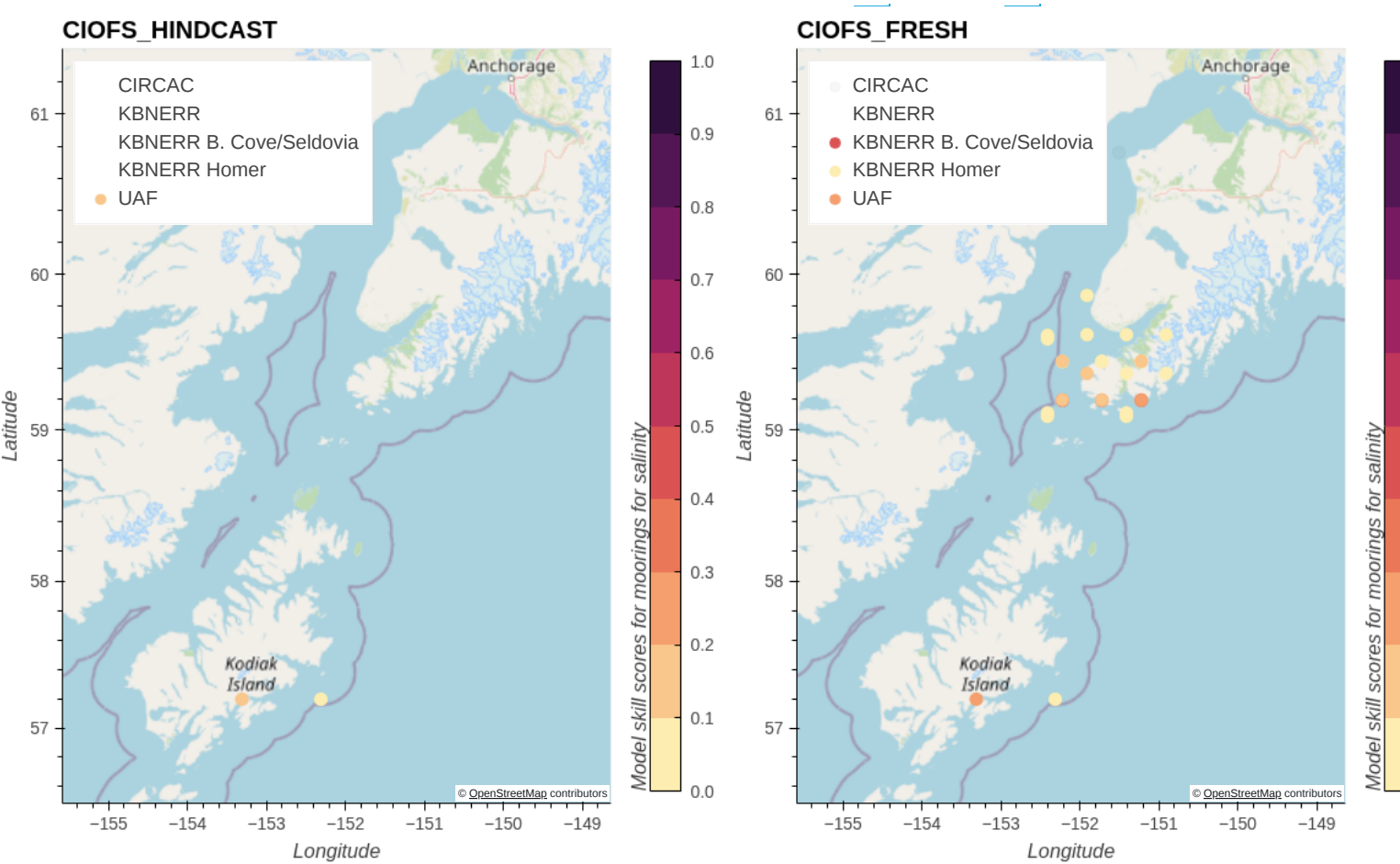


Fig. 16 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for salinity, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

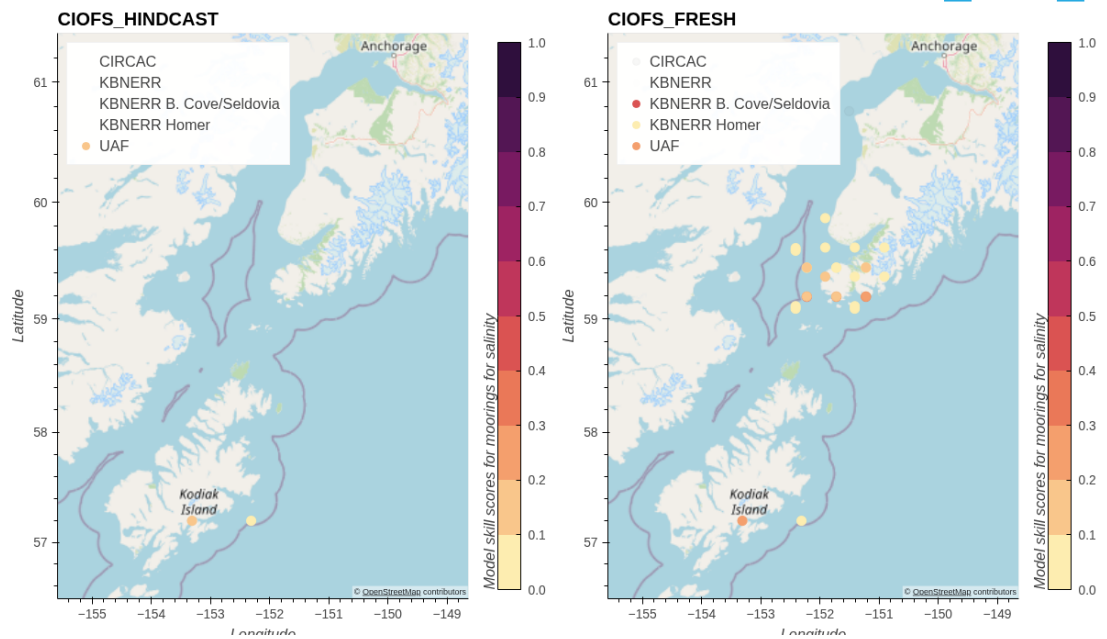


Fig. 17 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for salinity, by project. (PNG screenshot, available for PDF and for saving image.)

Subtidal

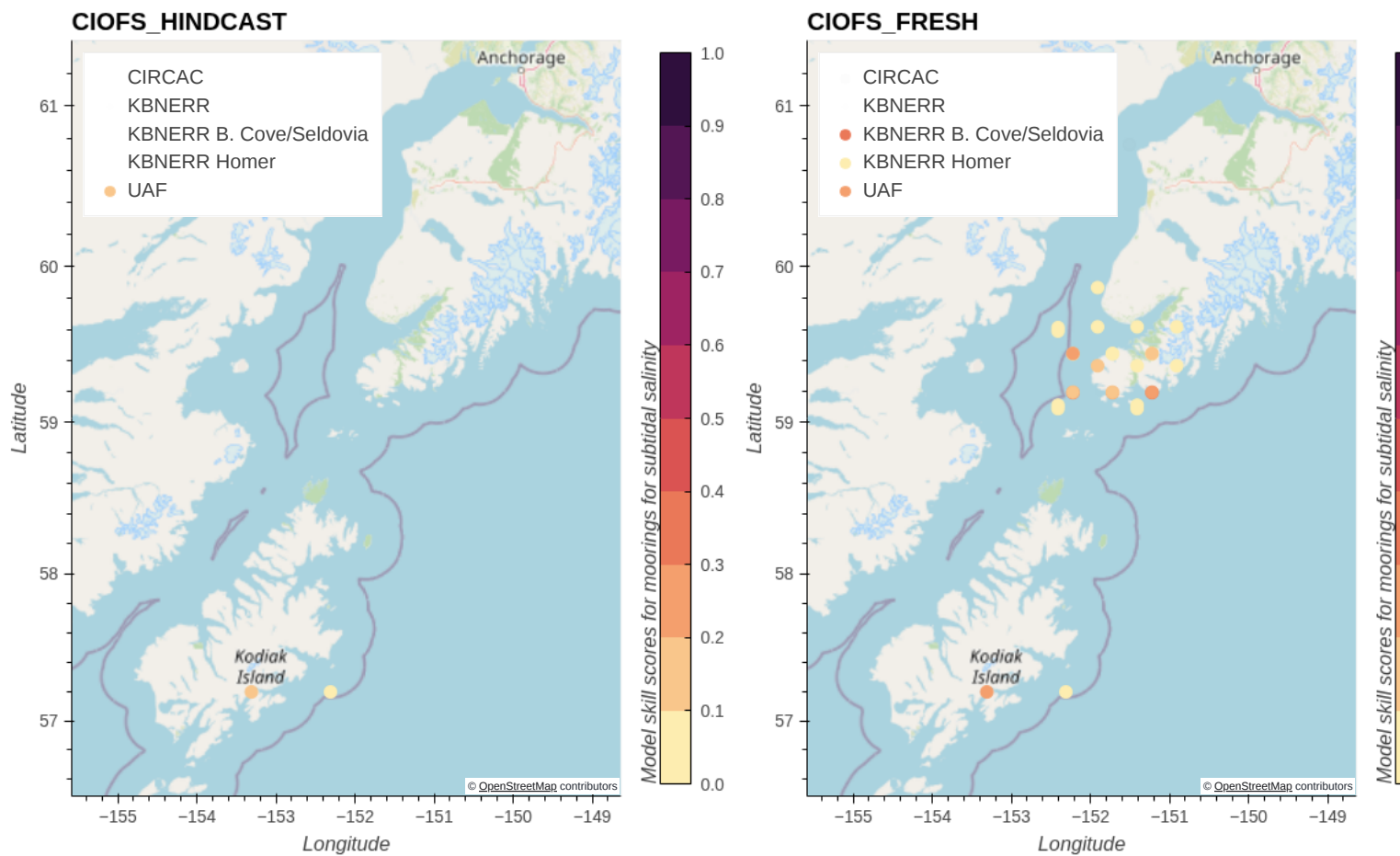


Fig. 18 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal salinity, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

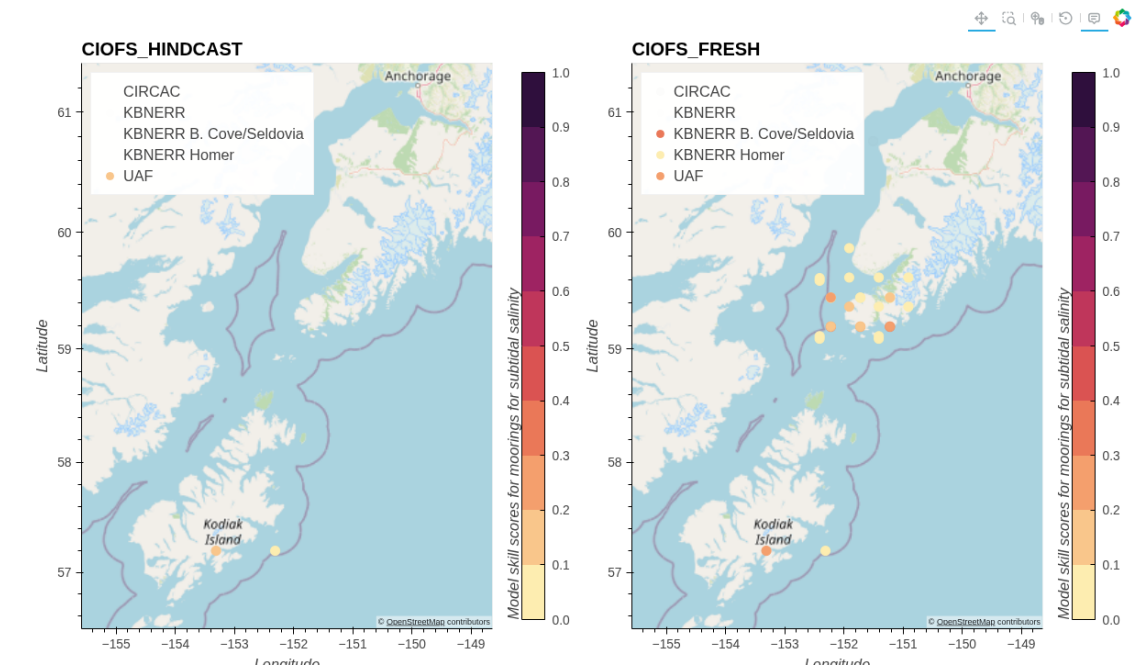
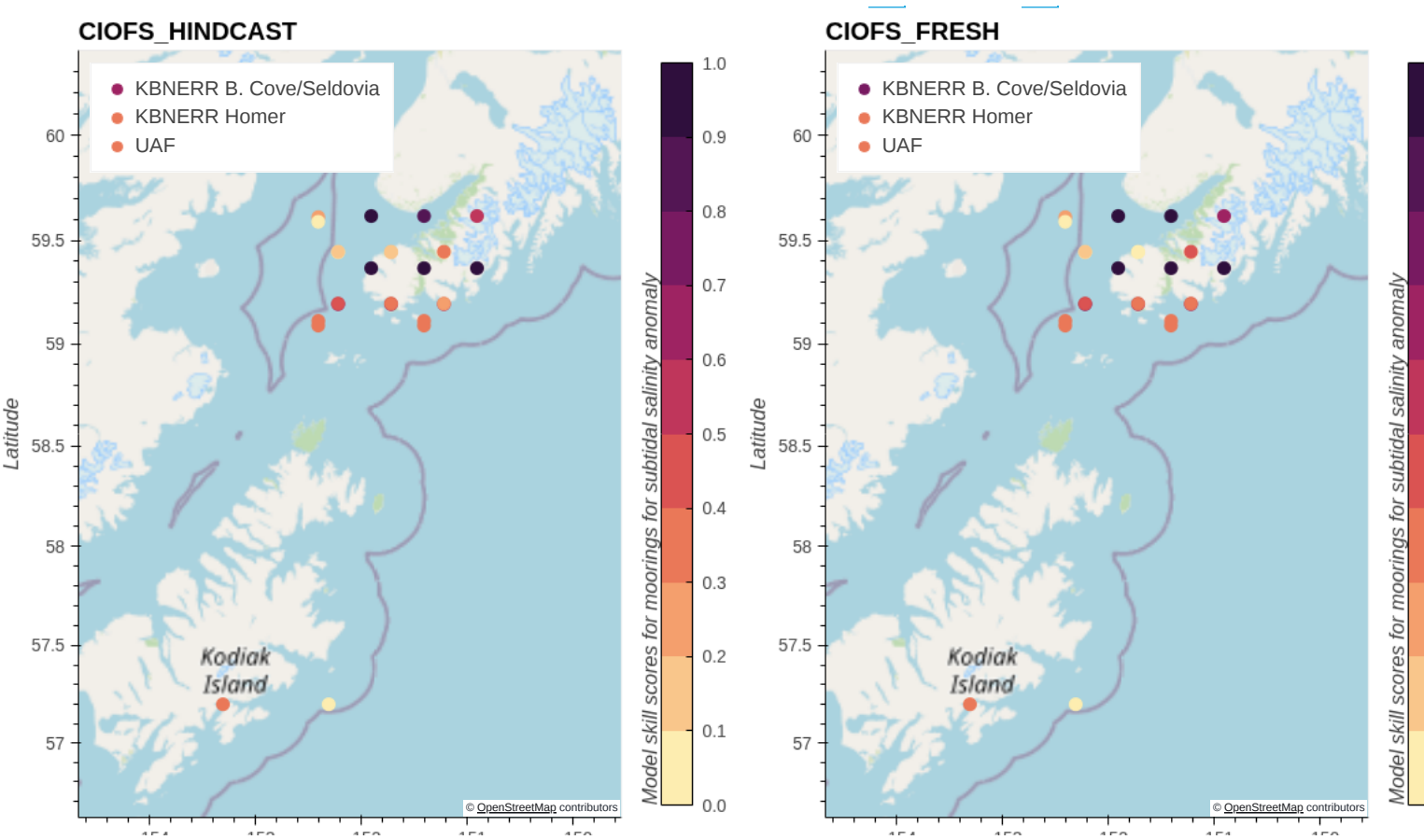


Fig. 19 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal salinity, by project. (PNG screenshot, available for PDF and for saving image.)

Subtidal with monthly-averaged climatology subtracted



-154 -153 -152 -151 -150 -154 -153 -152 -151 -150
Longitude Longitude

Fig. 20 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal salinity anomaly, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

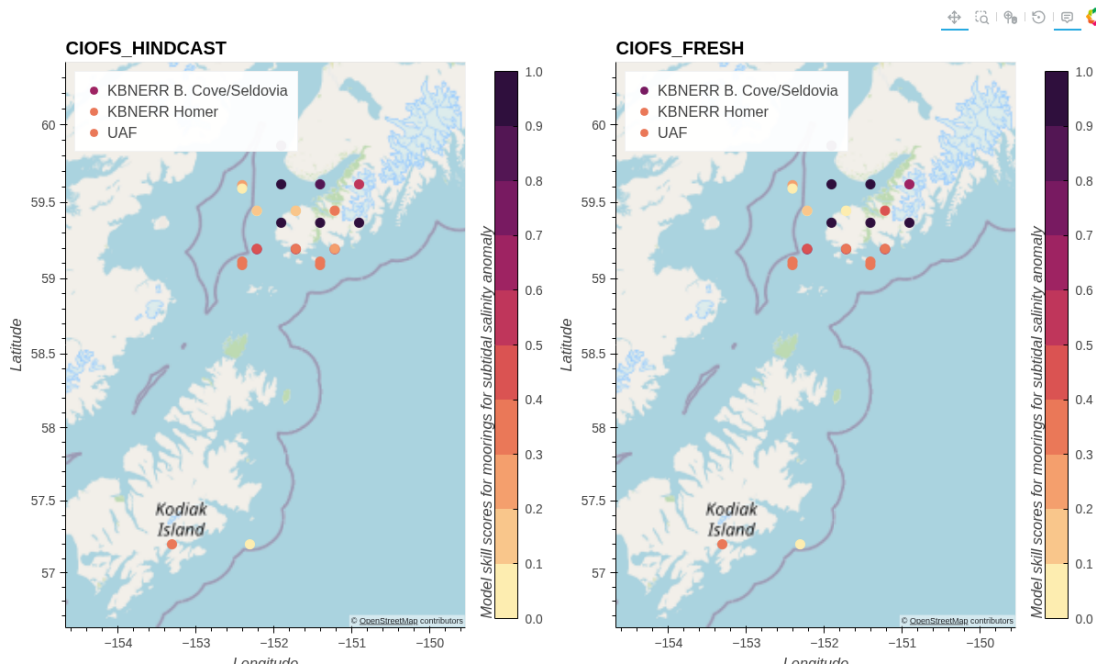


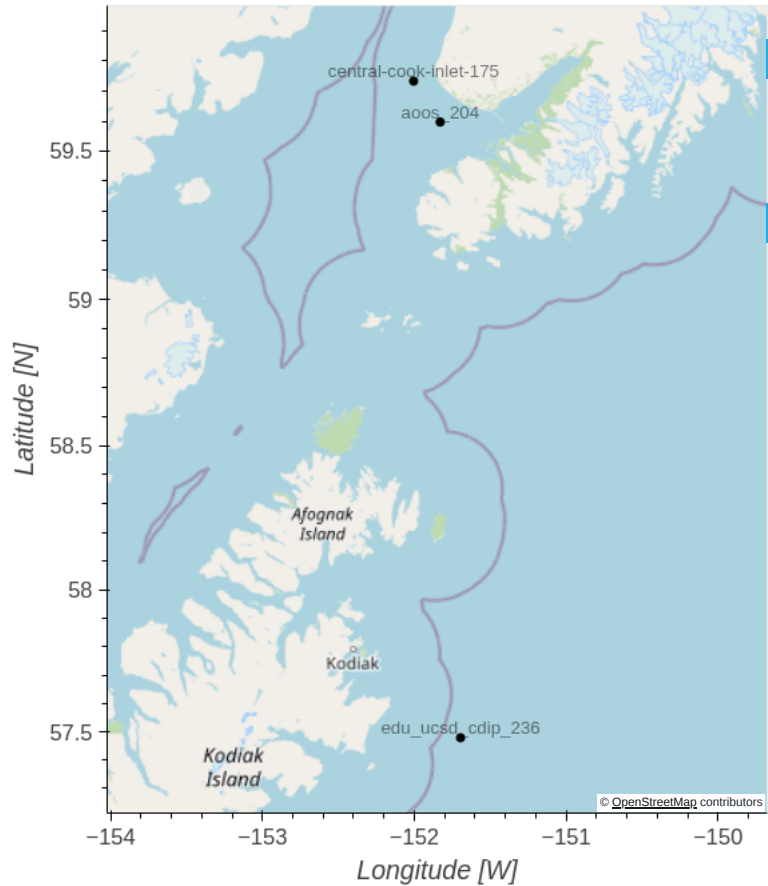
Fig. 21 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with moorings for subtidal salinity anomaly, by project. (PNG screenshot, available for PDF and for saving image.)

Moorings (CDIP): Lower and Central Cook Inlet, Kodiak Island

- moorings_aaos_cdip

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).

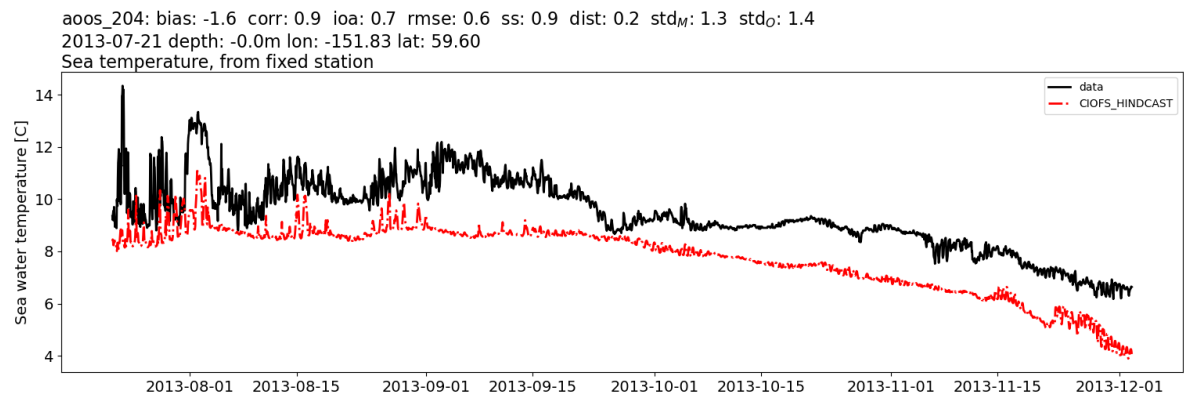
moorings_aaos_cdip



aaos_204

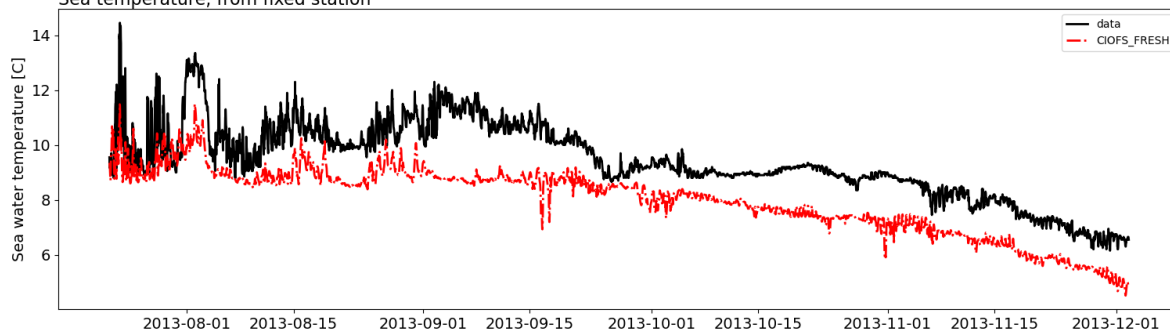
Sea water temperature:

CIOFS_HINDCAST



CIOFS_FRESH

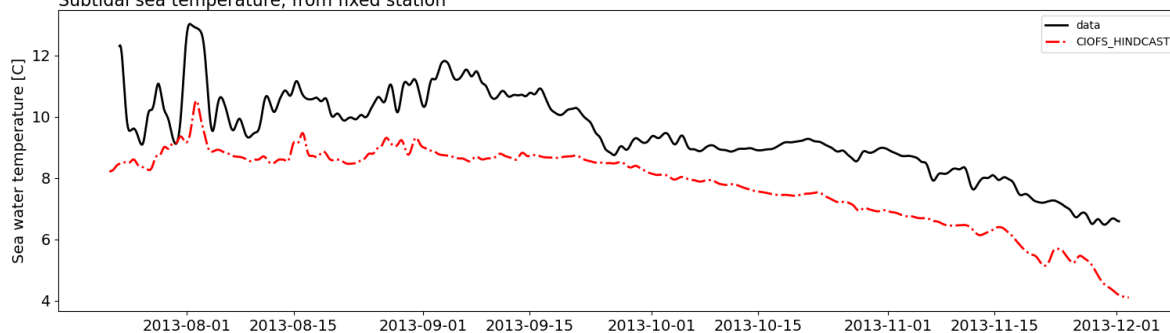
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2013-07-21 depth: -0.0m lon: -151.83 lat: 59.60
Sea temperature, from fixed station



Sea water temperature: tidally-filtered

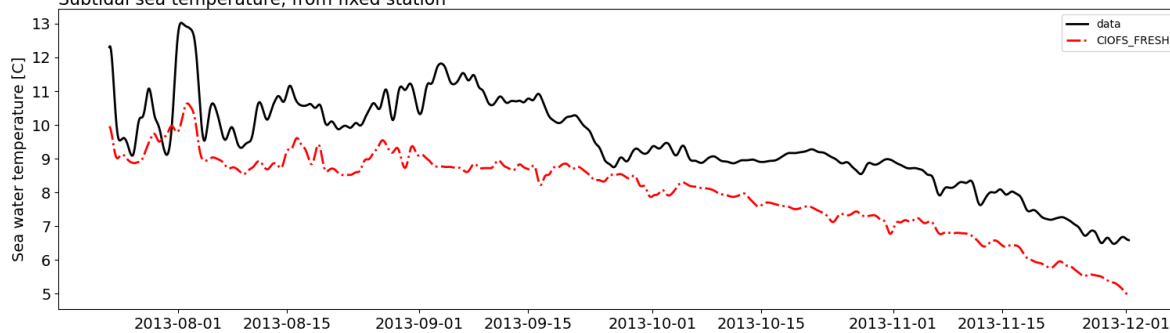
CIOFS_HINDCAST

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Subtidal sea temperature, from fixed station



CIOFS_FRESH

aoos_204: bias: -1.4 corr: 0.9 ioa: 0.7 rmse: 0.5 ss: 0.9 dist: 0.2 std_M: 1.2 std_O: 1.3
2013-07-21 depth: -0.0m lon: -151.83 lat: 59.60
Subtidal sea temperature, from fixed station



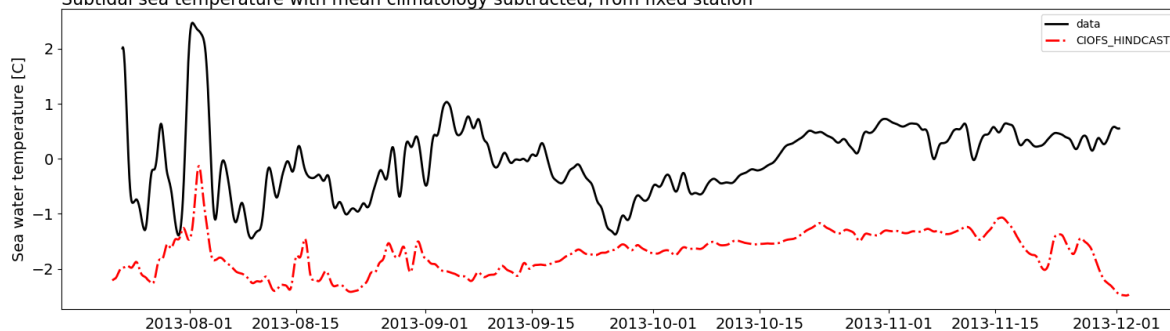
Sea water temperature: tidally-filtered, then monthly mean from data subtracted

CIOFS_HINDCAST

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2013-07-21 depth: -0.0m lon: -151.83 lat: 59.60

Subtidal sea temperature with mean climatology subtracted, from fixed station

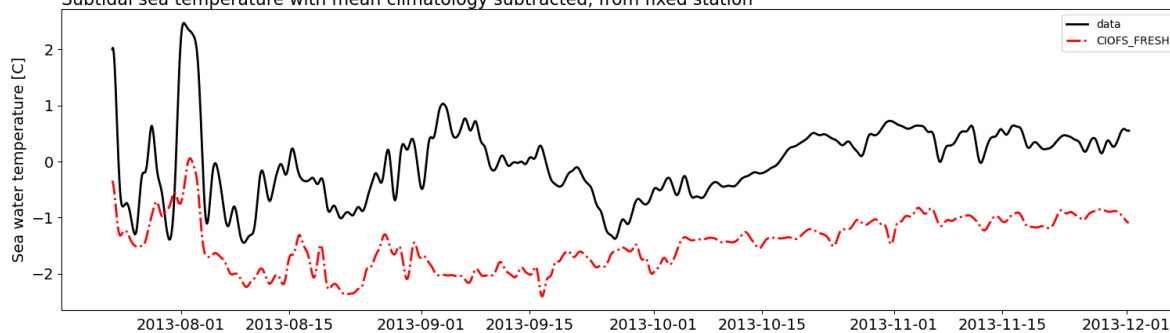


CIOFS_FRESH

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2013-07-21 depth: -0.0m lon: -151.83 lat: 59.60

Subtidal sea temperature with mean climatology subtracted, from fixed station



central-cook-inlet-175

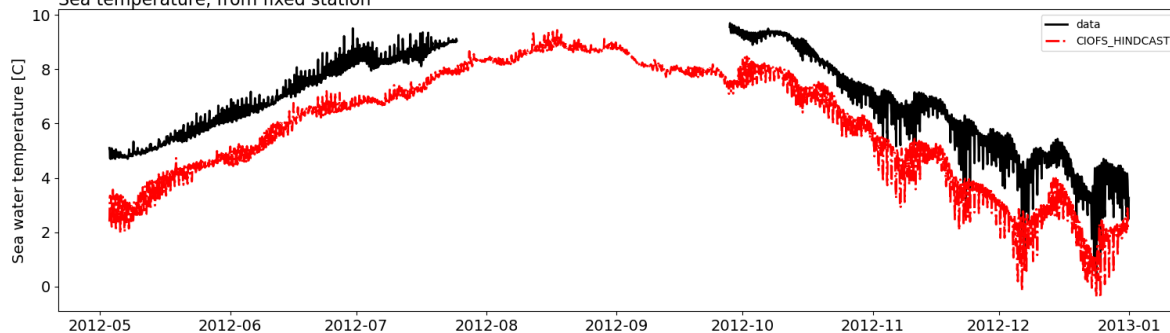
Sea water temperature:

CIOFS_HINDCAST

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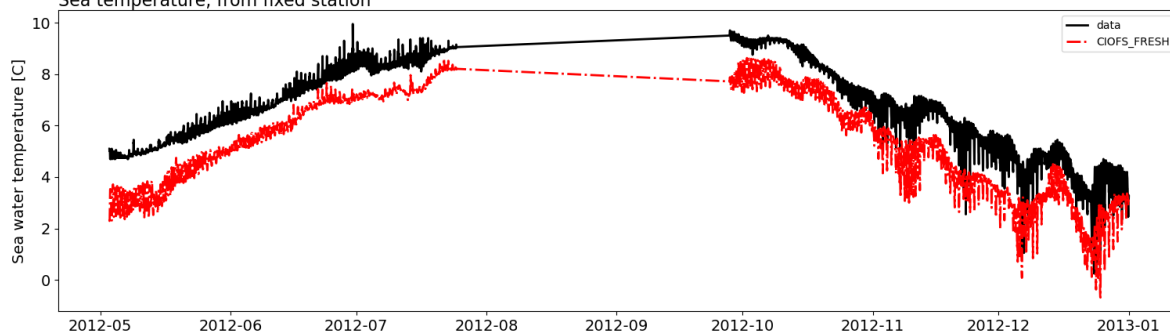
2012-05-03 depth: -0.0m lon: -152.00 lat: 59.73

Sea temperature, from fixed station



CIOFS_FRESH

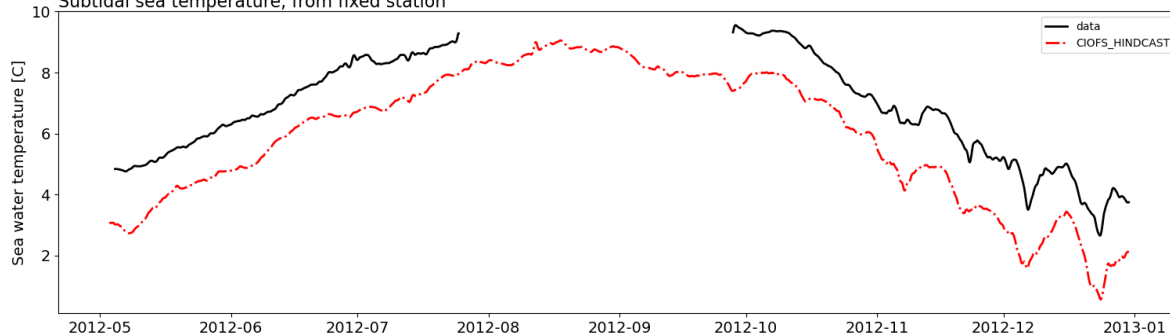
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 Sea temperature, from fixed station



Sea water temperature: tidally-filtered

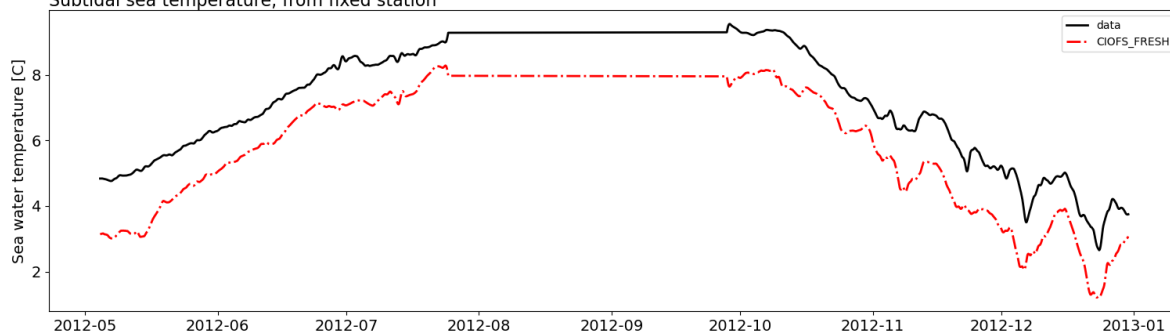
CIOFS_HINDCAST

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 Subtidal sea temperature, from fixed station



CIOFS_FRESH

central-cook-inlet-175: bias: -1.3 corr: 1.0 ioa: 0.9 rmse: 0.3 ss: 1.0 dist: 0.5 std_M: 1.9 std_O: 1.7
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 Subtidal sea temperature, from fixed station



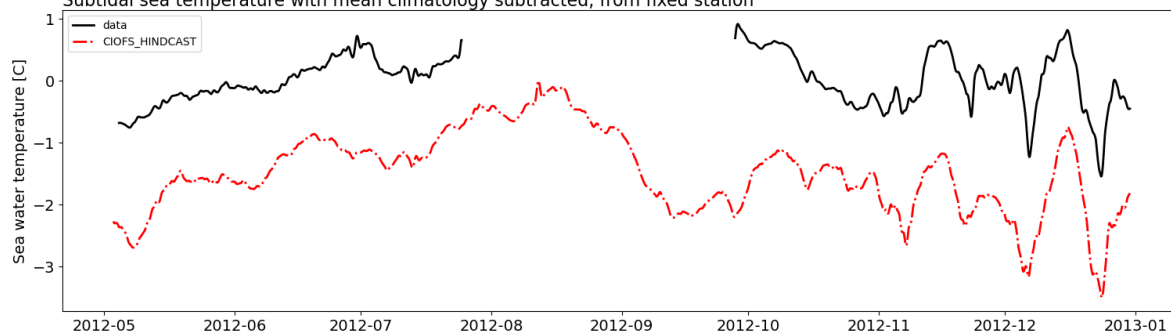
Sea water temperature: tidally-filtered, then monthly mean from data subtracted

CIOFS_HINDCAST

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2012-05-03 depth: -0.0m lon: -152.00 lat: 59.73

Subtidal sea temperature with mean climatology subtracted, from fixed station

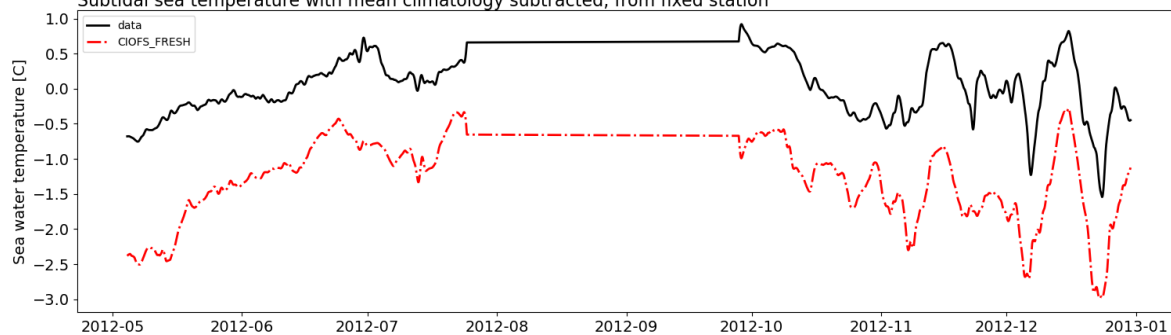


CIOFS_FRESH

central-cook-inlet-175: bias: -1.3 corr: 0.8 ioa: 0.4 rmse: 0.3 ss: 0.8 dist: 0.5 std_M: 0.6 std_O: 0.4

2012-05-03 depth: -0.0m lon: -152.00 lat: 59.73

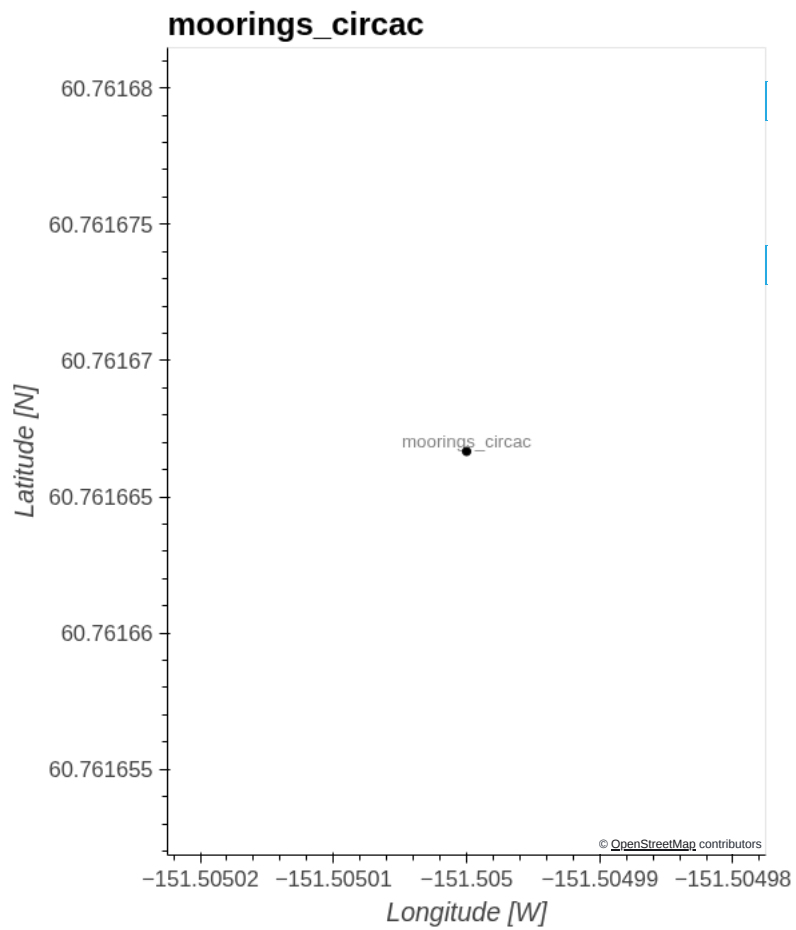
Subtidal sea temperature with mean climatology subtracted, from fixed station



Mooring (CIRCAC): Central Cook Inlet Mooring

- moorings_circac

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).

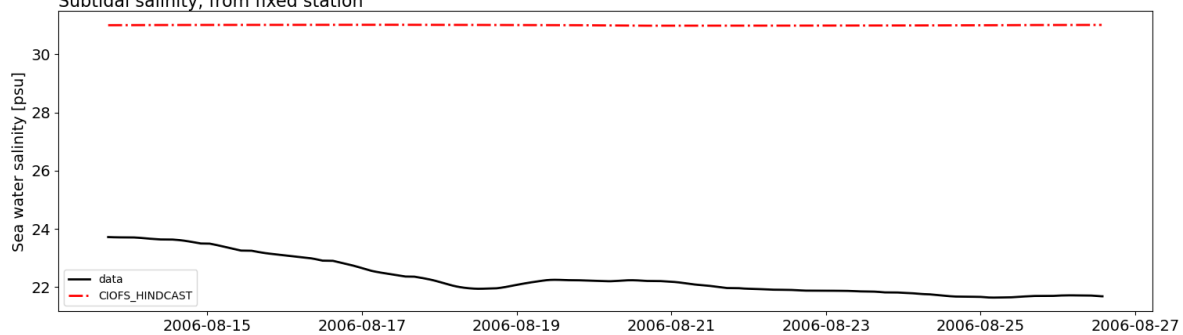


moorings_circac

Sea water salinity: tidally-filtered

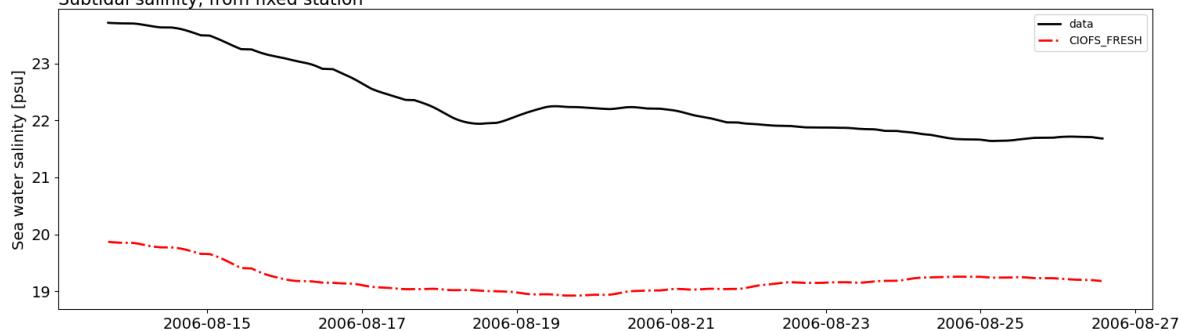
CIOFS_HINDCAST

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2006-08-11 depth: -0.67m lon: -151.50 lat: 60.76
Subtidal salinity, from fixed station



CIOFS_FRESH

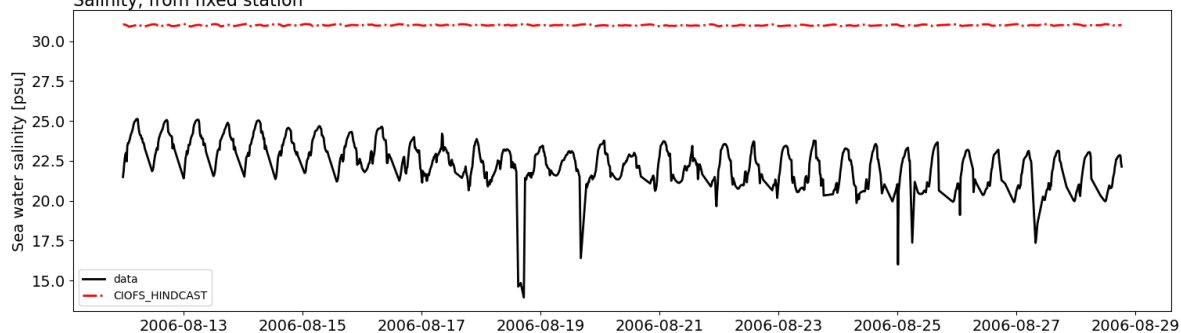
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Subtidal salinity, from fixed station



Sea water salinity:

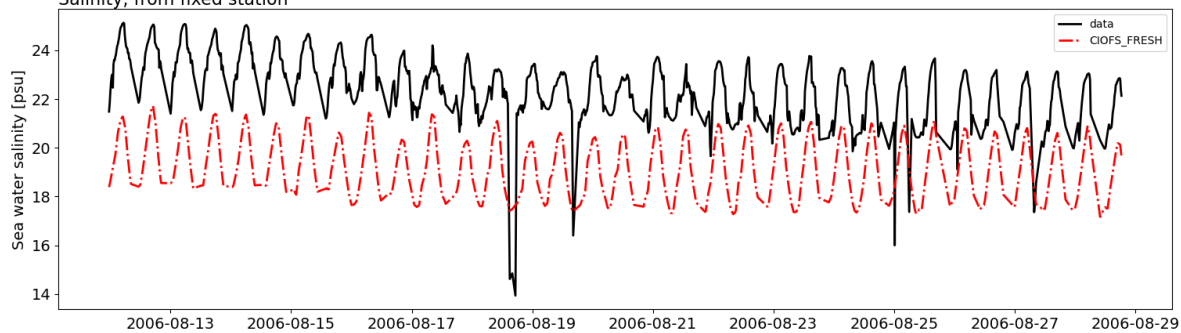
CIOFS_HINDCAST

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Salinity, from fixed station



CIOFS_FRESH

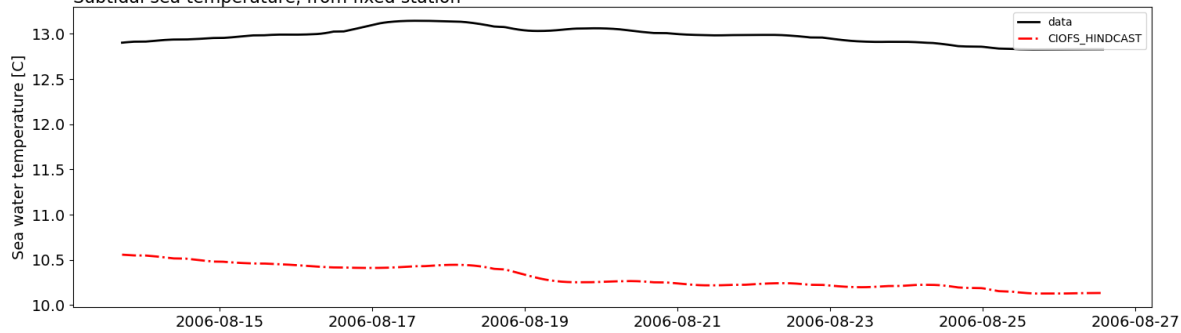
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Salinity, from fixed station



Sea water temperature: tidally-filtered

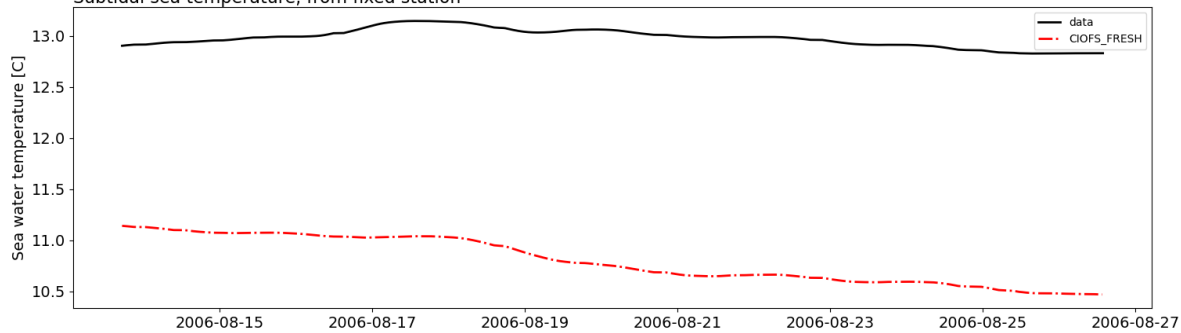
CIOFS_HINDCAST

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Subtidal sea temperature, from fixed station



CIOFS_FRESH

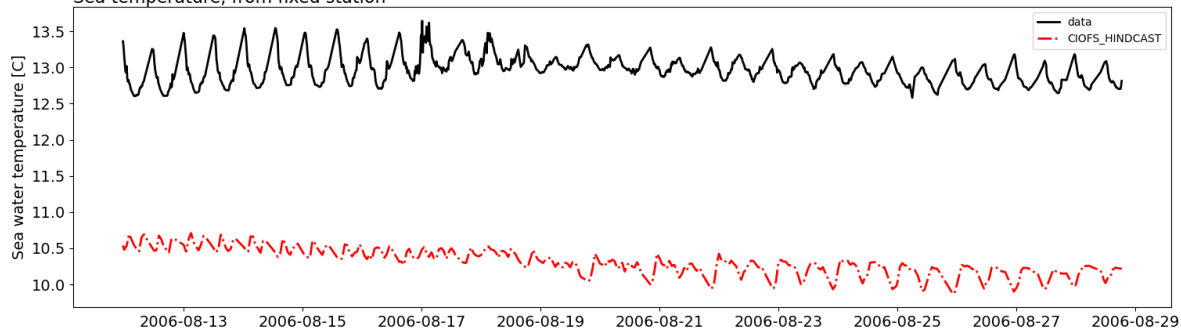
moorings_circac: bias: -2.2 corr: 0.6 ioa: 0.1 rmse: 0.2 ss: 0.4 dist: 0.2 std_M: 0.2 std_O: 0.1
2006-08-11 depth: -0.67m lon: -151.50 lat: 60.76
Subtidal sea temperature, from fixed station



Sea water temperature:

CIOFS_HINDCAST

moorings_circac: bias: -2.6 corr: -0.1 ioa: 0.1 rmse: 0.3 ss: 0.4 dist: 0.2 std_M: 0.2 std_O: 0.2
2006-08-11 depth: -0.67m lon: -151.50 lat: 60.76
Sea temperature, from fixed station

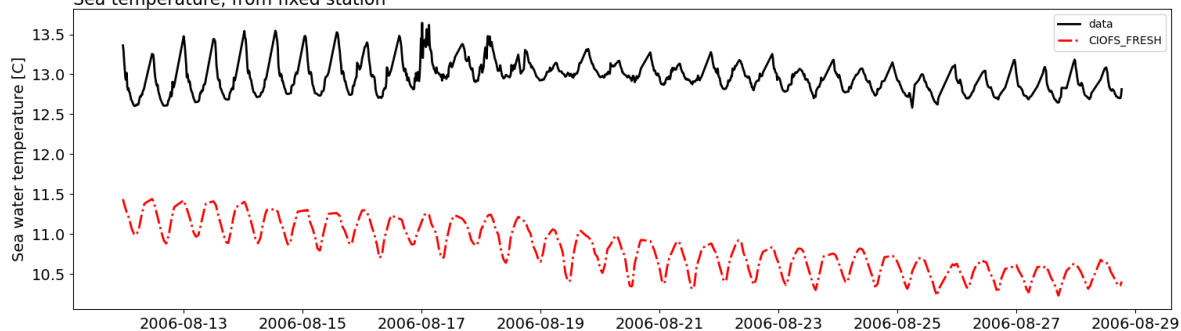


CIOFS_FRESH

moorings_circac: bias: -2.1 corr: 0.5 ioa: 0.1 rmse: 0.3 ss: 0.6 dist: 0.2 std_M: 0.3 std_O: 0.2

2006-08-11 depth: -0.67m lon: -151.50 lat: 60.76

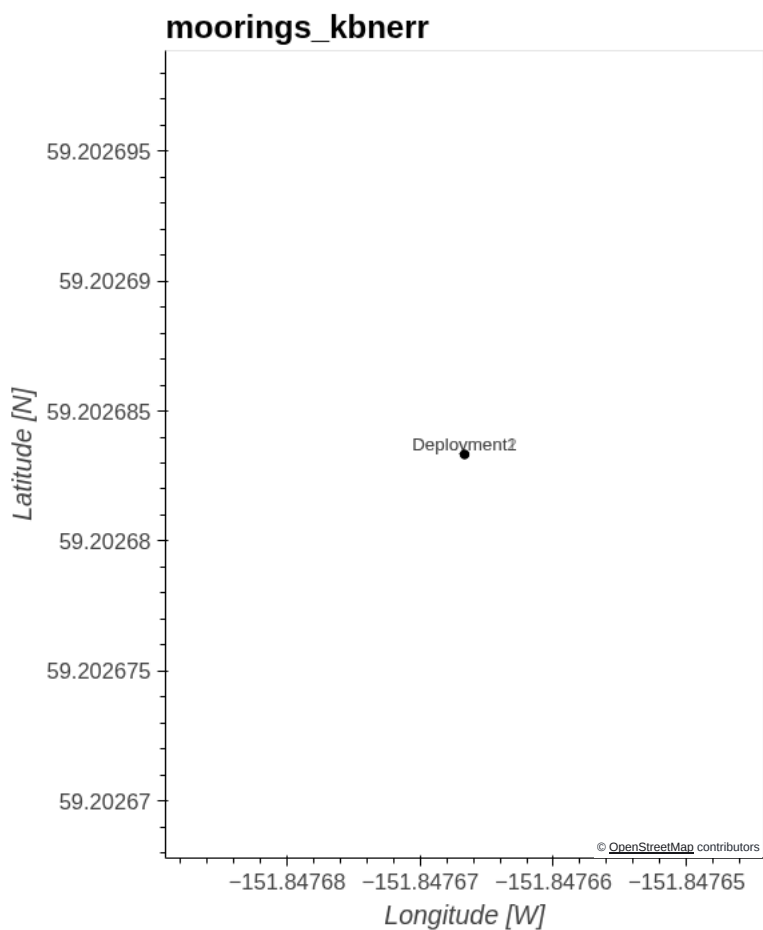
Sea temperature, from fixed station



Moorings (KBNERR): Lower Cook Inlet Mooring

- moorings_kbnerr

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).

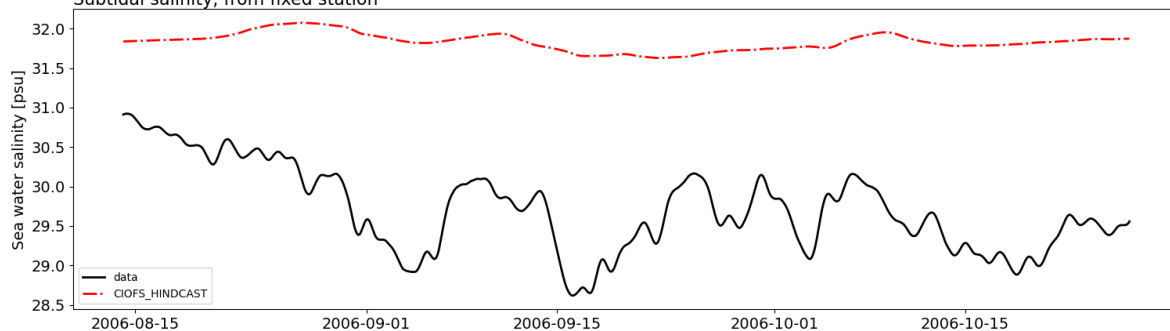


Deployment1

Sea water salinity: tidally-filtered

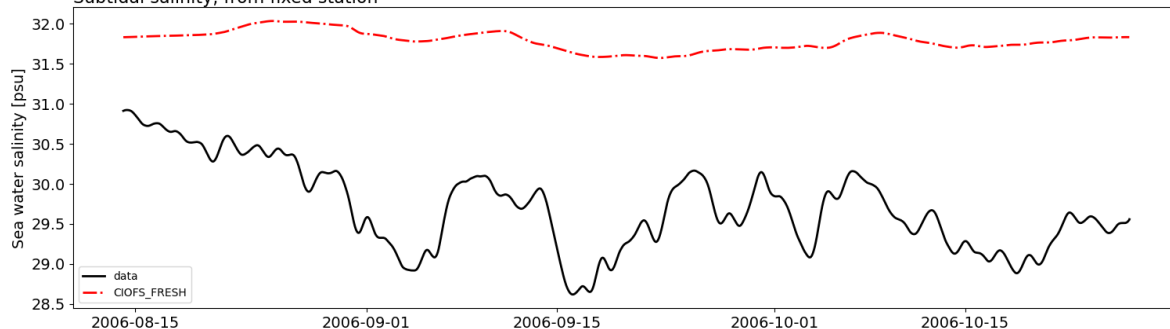
CIOFS_HINDCAST

Deployment1: bias: 2.1 corr: 0.5 ioa: 0.3 rmse: 0.5 ss: 0.1 dist: 0.5 std_M: 0.1 std_O: 0.5
2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20
Subtidal salinity, from fixed station



CIOFS_FRESH

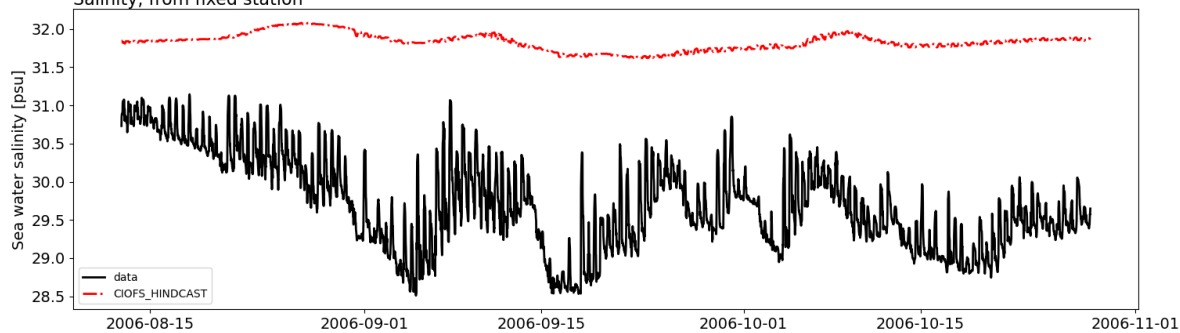
Deployment1: bias: 2.1 corr: 0.6 ioa: 0.3 rmse: 0.5 ss: 0.1 dist: 0.5 std_M: 0.1 std_O: 0.5
2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20
Subtidal salinity, from fixed station



Sea water salinity:

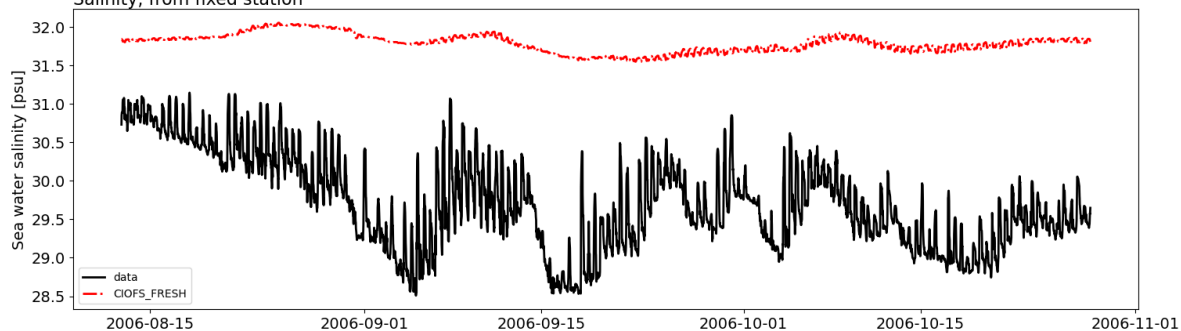
CIOFS_HINDCAST

Deployment1: bias: 2.1 corr: 0.4 ioa: 0.3 rmse: 0.6 ss: 0.1 dist: 0.5 std_M: 0.1 std_O: 0.6
2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20
Salinity, from fixed station



CIOFS_FRESH

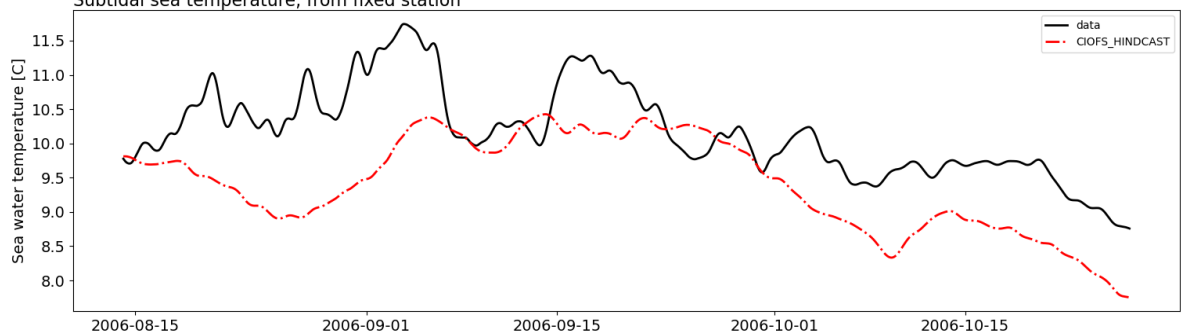
Deployment1: bias: 2.1 corr: 0.5 ioa: 0.3 rmse: 0.6 ss: 0.1 dist: 0.5 std_M: 0.1 std_O: 0.6
2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20
Salinity, from fixed station



Sea water temperature: tidally-filtered

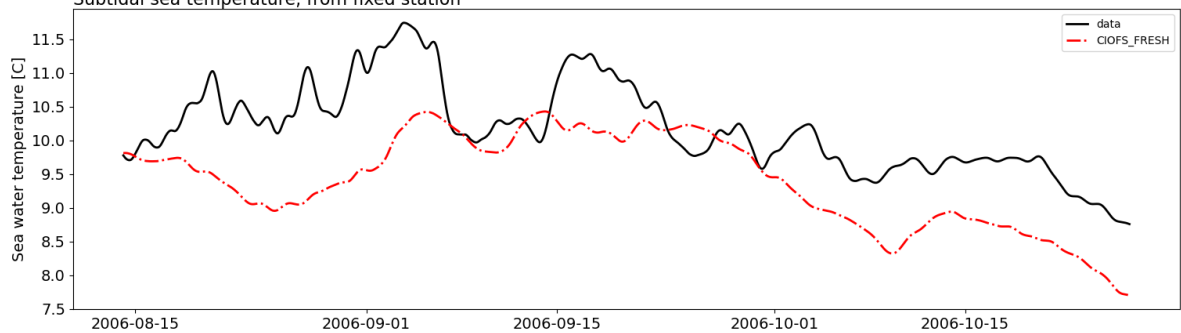
CIOFS_HINDCAST

Deployment1: bias: -0.8 corr: 0.7 ioa: 0.6 rmse: 0.6 ss: 0.8 dist: 0.5 std_M: 0.7 std_O: 0.7
2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20
Subtidal sea temperature, from fixed station



CIOFS_FRESH

Deployment1: bias: -0.8 corr: 0.7 ioa: 0.6 rmse: 0.5 ss: 0.8 dist: 0.5 std_M: 0.7 std_O: 0.7
2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20
Subtidal sea temperature, from fixed station



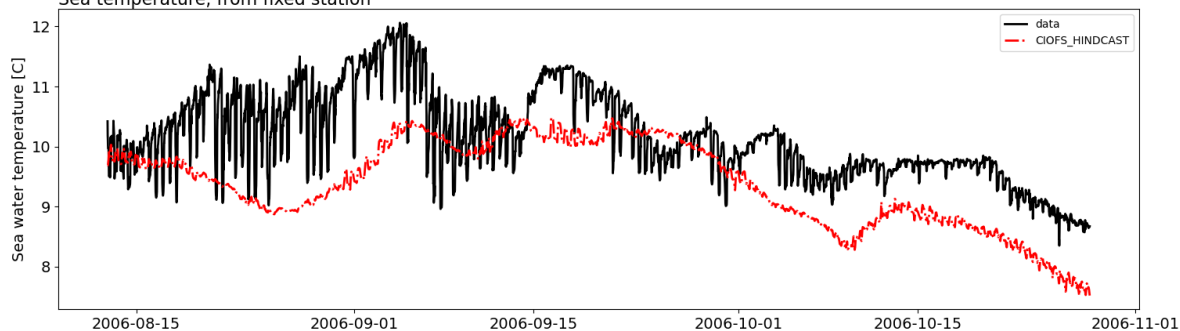
Sea water temperature:

CIOFS_HINDCAST

Deployment1: bias: -0.8 corr: 0.6 ioa: 0.6 rmse: 0.6 ss: 0.8 dist: 0.5 std_M: 0.7 std_O: 0.7

2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20

Sea temperature, from fixed station

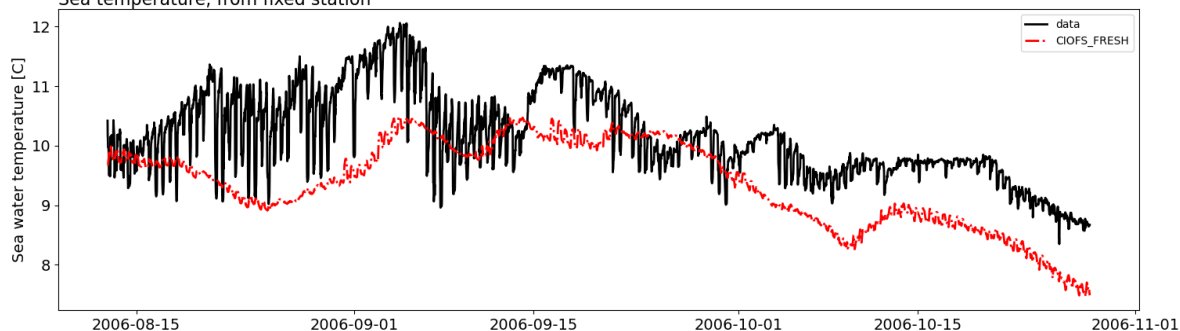


CIOFS_FRESH

Deployment1: bias: -0.8 corr: 0.6 ioa: 0.7 rmse: 0.6 ss: 0.8 dist: 0.5 std_M: 0.7 std_O: 0.7

2006-08-12 depth: -24.21m lon: -151.85 lat: 59.20

Sea temperature, from fixed station

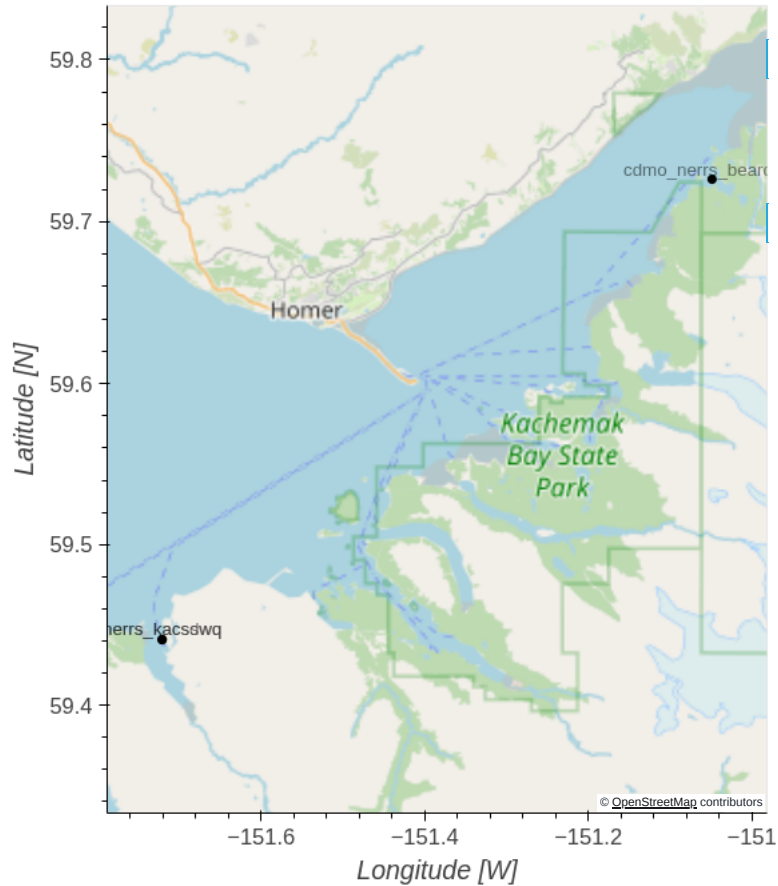


Moorings (KBNERR): Kachemak Bay: Bear Cove, Seldovia

- moorings_kbnerr_bear_cove_seldovia

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).

moorings_kbnerr_bear_cove_seldovia



nerrs_kacsdwq

Sea water salinity:

CIOFS_HINDCAST

Comparison plots by year

CIOFS_FRESH

Comparison plots by year

Sea water salinity: tidally-filtered

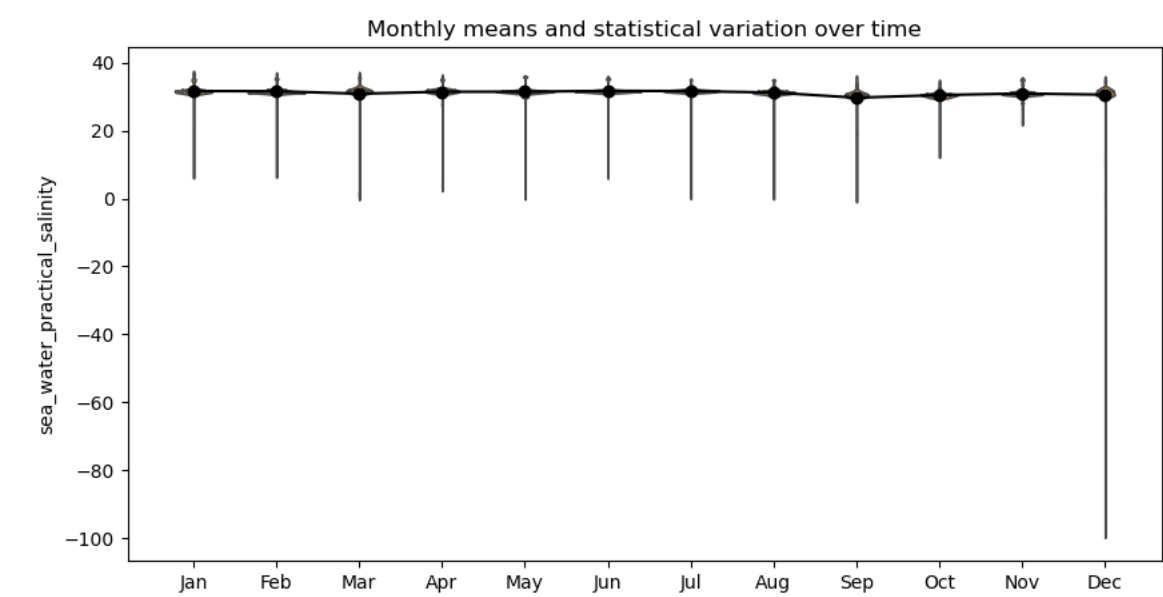
CIOFS_HINDCAST

Comparison plots by year

CIOFS_FRESH

Comparison plots by year

Sea water salinity: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

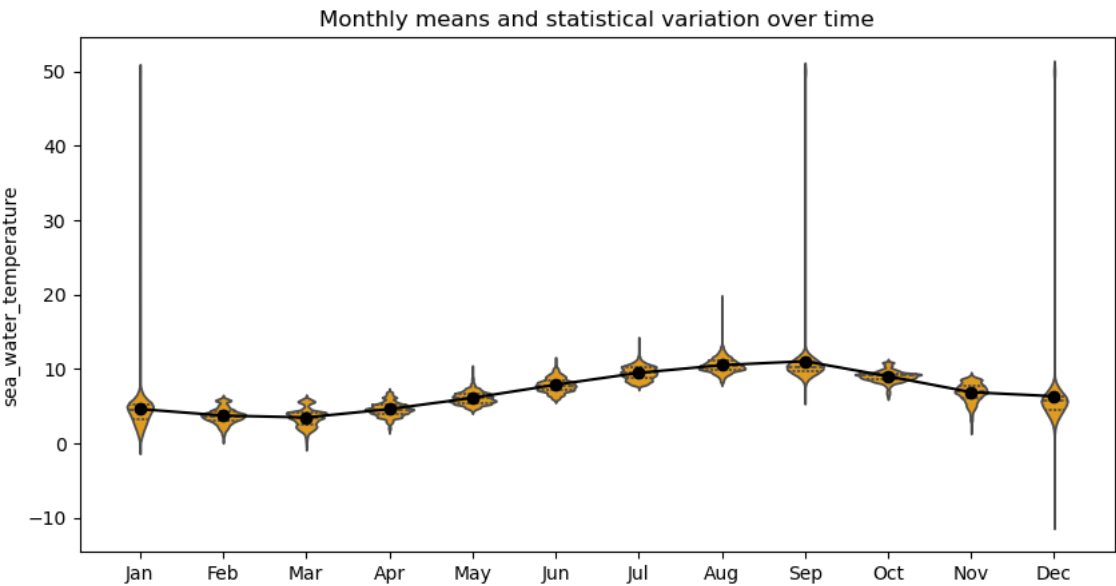
>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

nerrs_kacsswq

Sea water salinity:

CIOFS_HINDCAST

Comparison plots by year

CIOFS_FRESH

Comparison plots by year

Sea water salinity: tidally-filtered

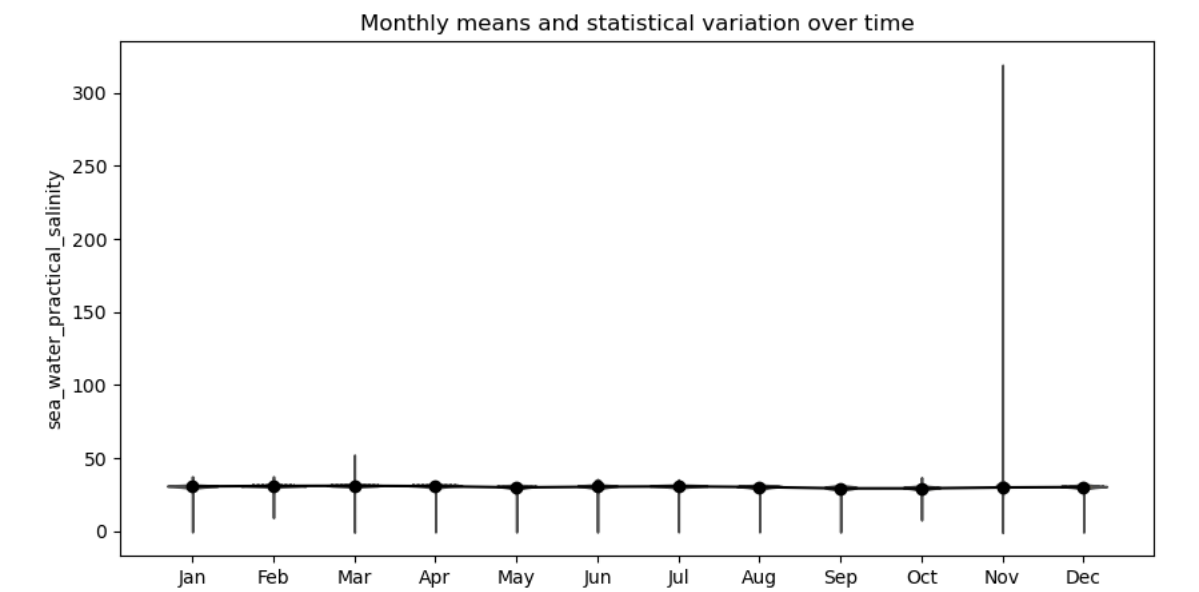
CIOFS_HINDCAST

Comparison plots by year

CIOFS_FRESH

Comparison plots by year

Sea water salinity: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year

CIOFS_FRESH

Comparison plots by year

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

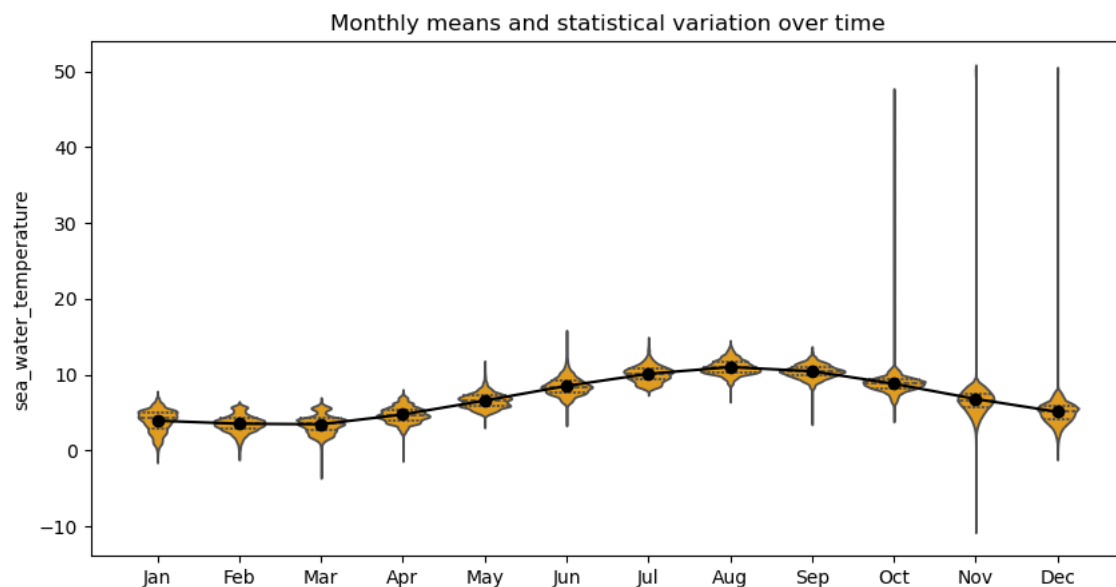


CIOFS_FRESH

Comparison plots by year



Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

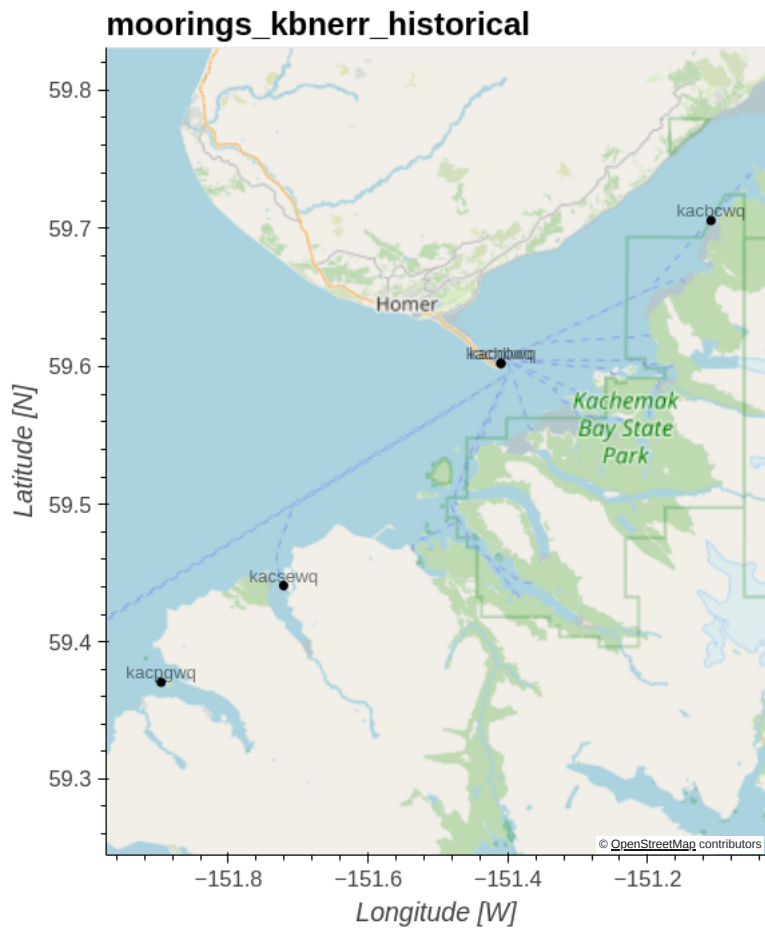
Comparison plots by year



Moorings (KBNERR): Historical, Kachemak Bay

- moorings_kbnerr_historical

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).

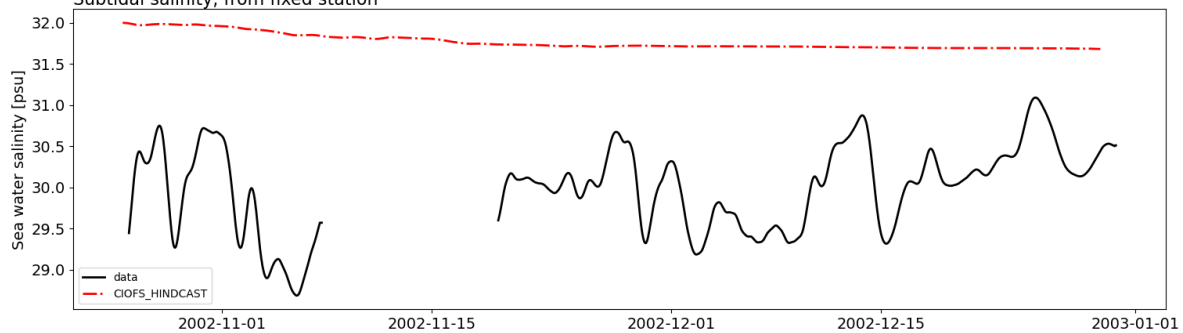


kacdlwq

Sea water salinity: tidally-filtered

CIOFS_HINDCAST

kacdlwq: bias: 1.8 corr: -0.1 ioa: 0.3 rmse: 0.5 ss: 0.1 dist: 0.3 std_M: 0.1 std_O: 0.5
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Subtidal salinity, from fixed station



CIOFS_FRESH

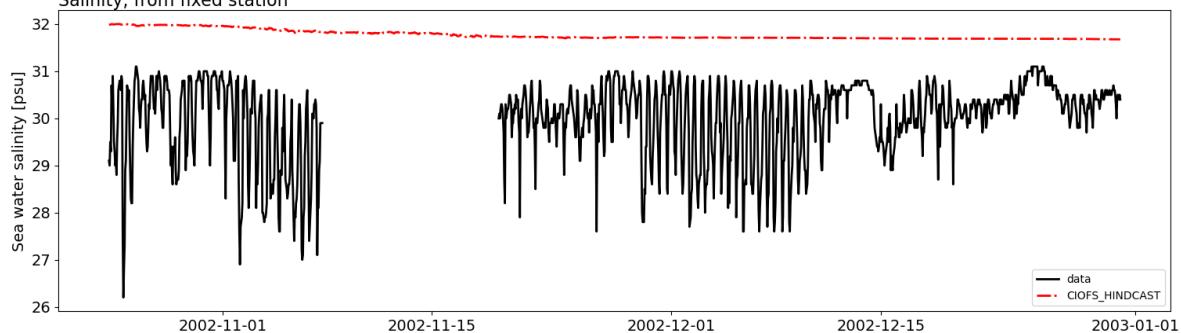
kacdlwq: bias: 1.3 corr: -0.0 ioa: 0.4 rmse: 0.5 ss: 0.1 dist: 0.3 std_M: 0.1 std_O: 0.5
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Subtidal salinity, from fixed station



Sea water salinity:

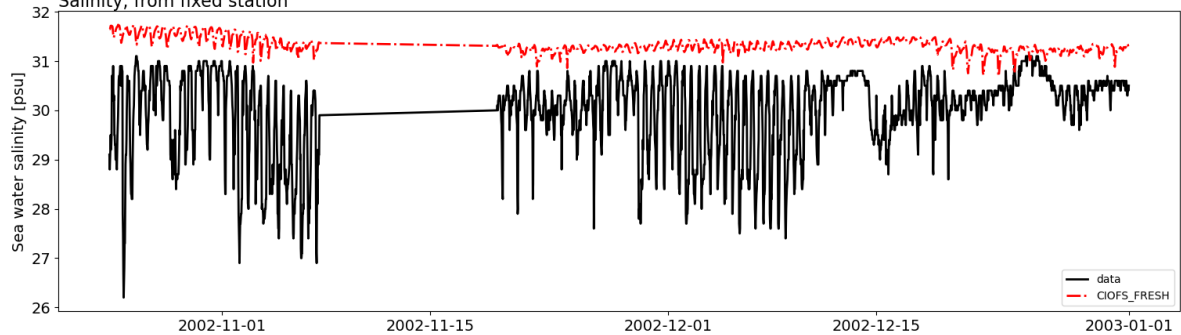
CIOFS_HINDCAST

kacdlwq: bias: 1.8 corr: -0.1 ioa: 0.4 rmse: 0.9 ss: 0.0 dist: 0.3 std_M: 0.1 std_O: 0.8
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Salinity, from fixed station



CIOFS_FRESH

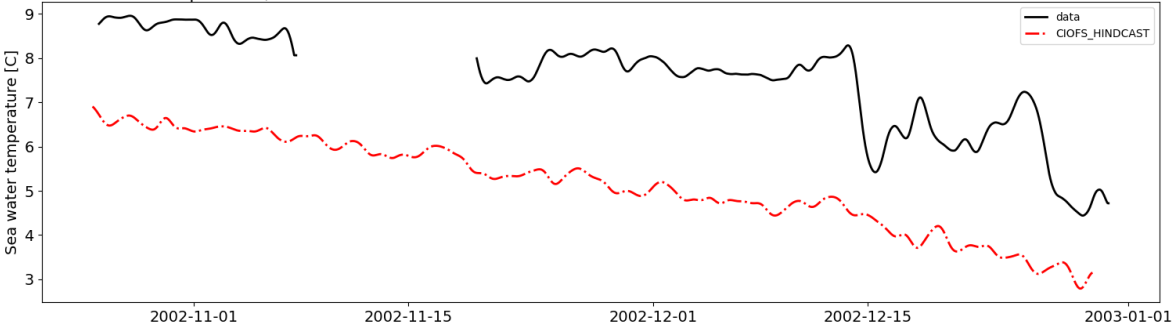
kacdlwq: bias: 1.3 corr: -0.1 ioa: 0.4 rmse: 0.9 ss: 0.1 dist: 0.3 std_M: 0.2 std_O: 0.8
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Salinity, from fixed station



Sea water temperature: tidally-filtered

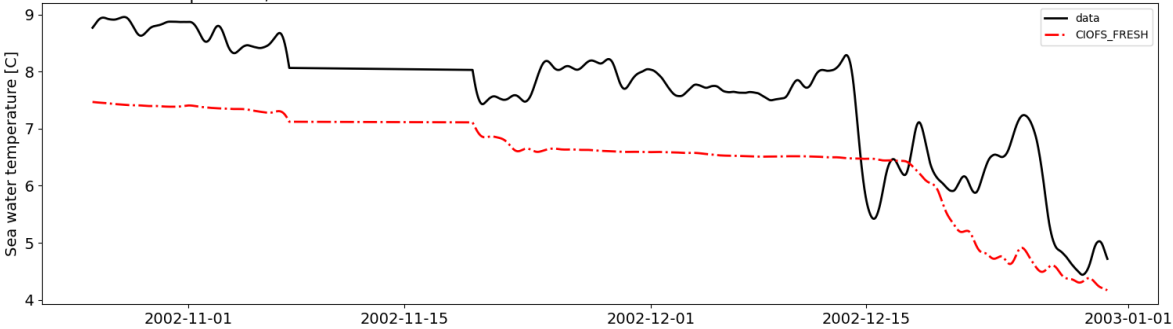
CIOFS_HINDCAST

kacdwlq: bias: -2.6 corr: 0.9 ioa: 0.5 rmse: 0.6 ss: 0.9 dist: 0.3 std_M: 1.0 std_O: 1.1
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Subtidal sea temperature, from fixed station



CIOFS_FRESH

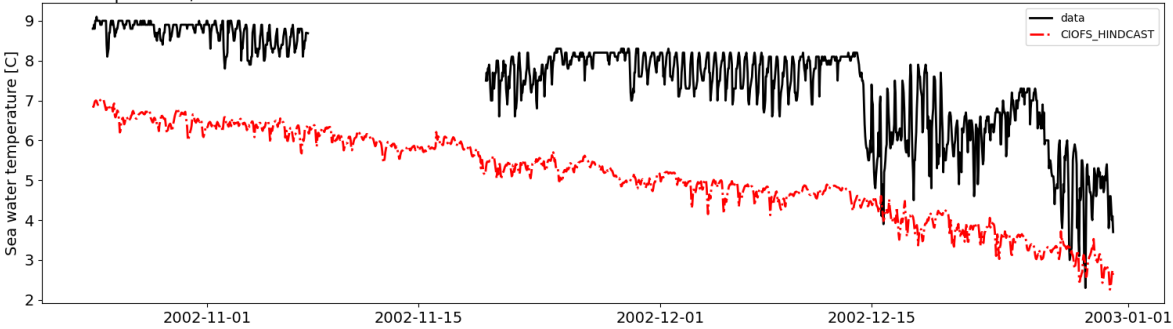
kacdwlq: bias: -1.1 corr: 0.9 ioa: 0.7 rmse: 0.6 ss: 0.9 dist: 0.3 std_M: 0.9 std_O: 1.1
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Subtidal sea temperature, from fixed station



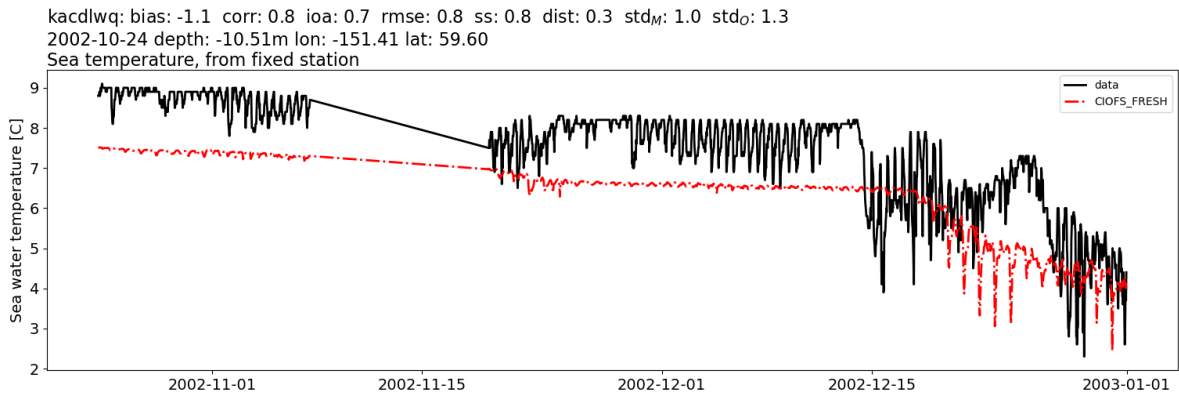
Sea water temperature:

CIOFS_HINDCAST

kacdwlq: bias: -2.5 corr: 0.8 ioa: 0.5 rmse: 0.7 ss: 0.9 dist: 0.3 std_M: 1.1 std_O: 1.2
2002-10-24 depth: -10.51m lon: -151.41 lat: 59.60
Sea temperature, from fixed station



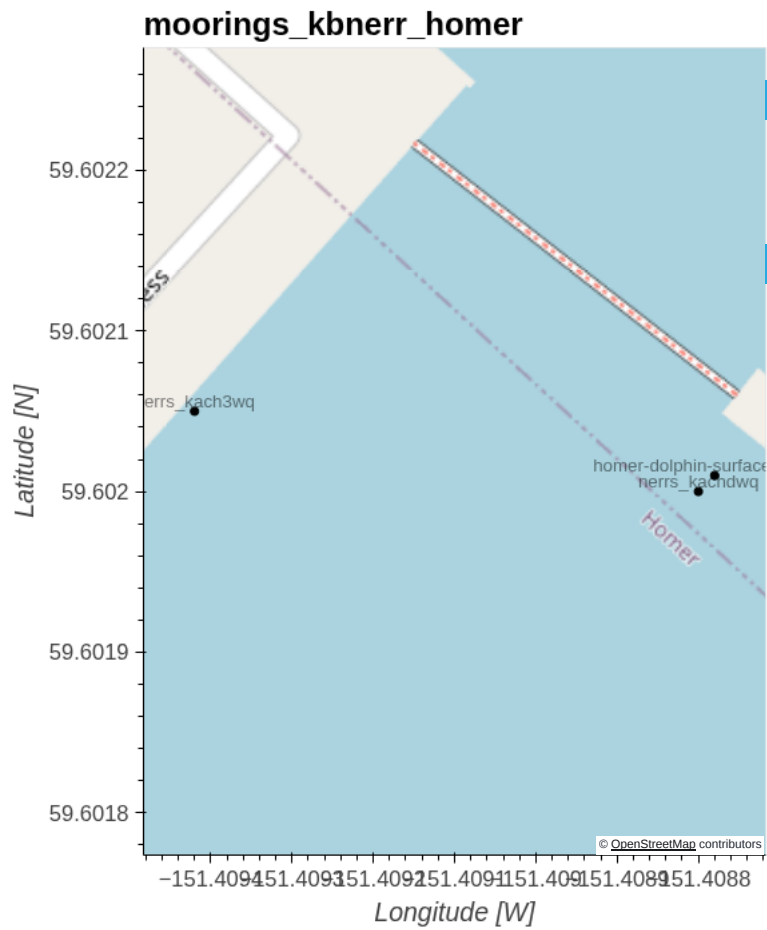
CIOFS_FRESH



Moorings (KBNERR): Kachemak Bay, Homer stations

- moorings_kbnerr_homer

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).



homer-dolphin-surface-water-q

Sea water salinity:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water salinity: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

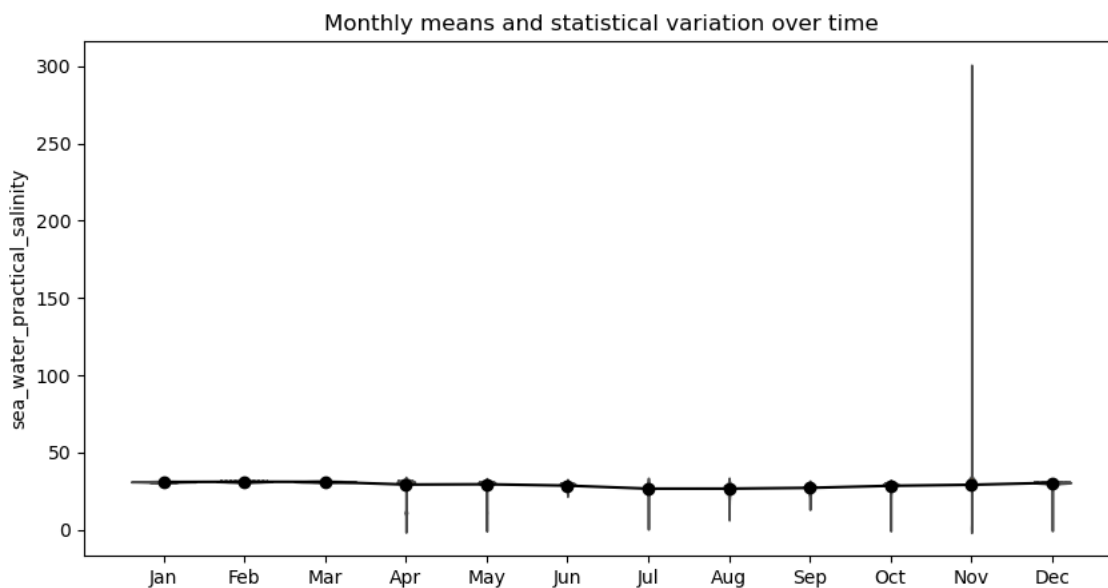


CIOFS_FRESH

Comparison plots by year



Sea water salinity: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

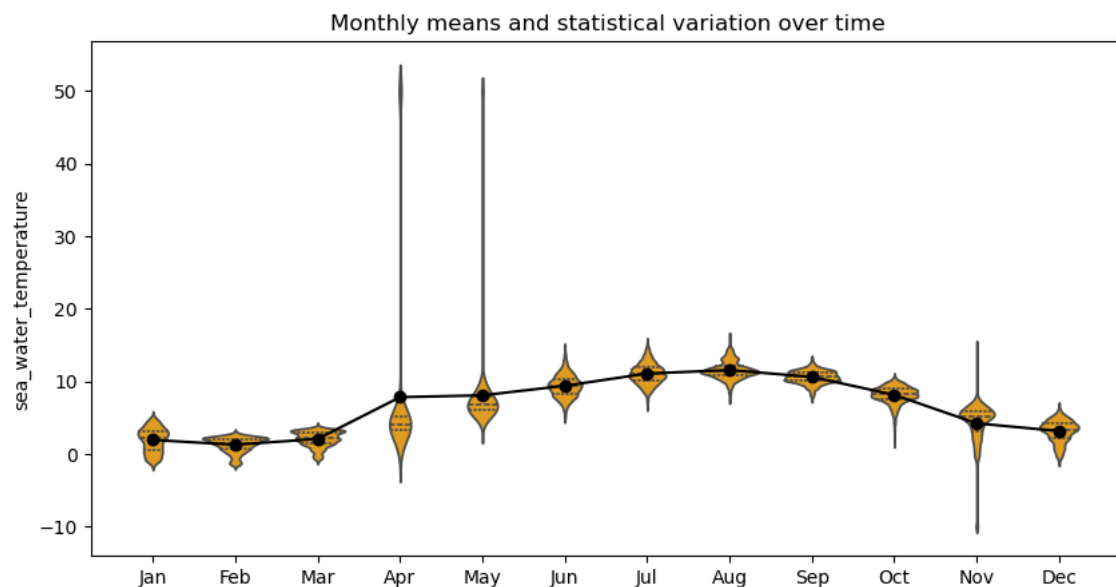


CIOFS_FRESH

Comparison plots by year



Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



nerrs_kach3wq

Sea water salinity:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water salinity: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

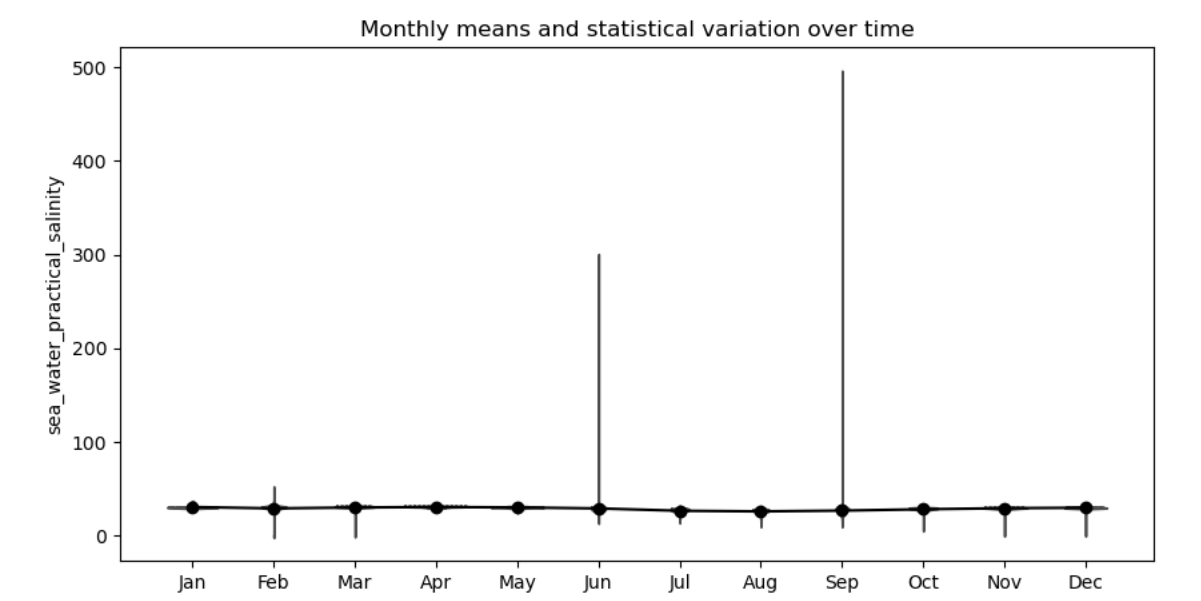


CIOFS_FRESH

Comparison plots by year



Sea water salinity: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

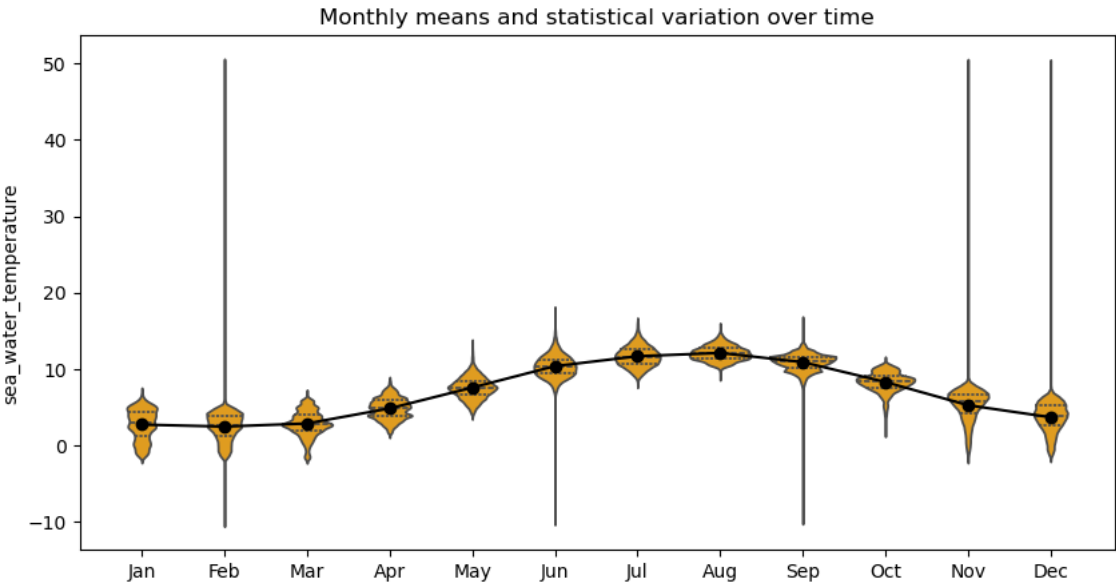
>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

nerrs_kachdwq

Sea water salinity:

CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea water salinity: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

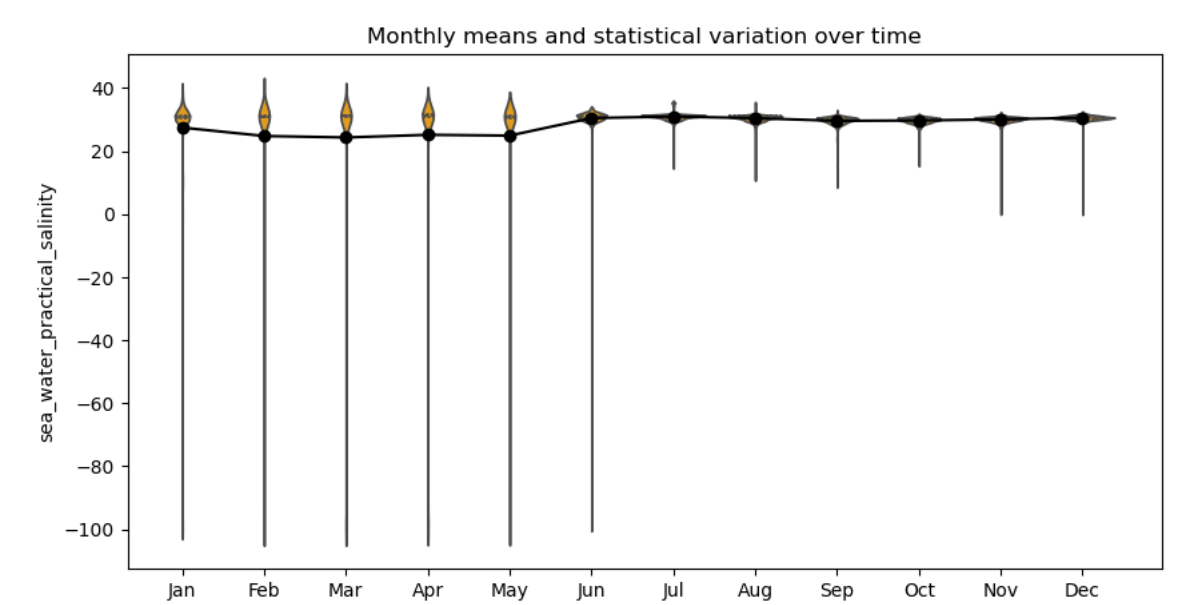
>

CIOFS_FRESH

Comparison plots by year

>

Sea water salinity: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

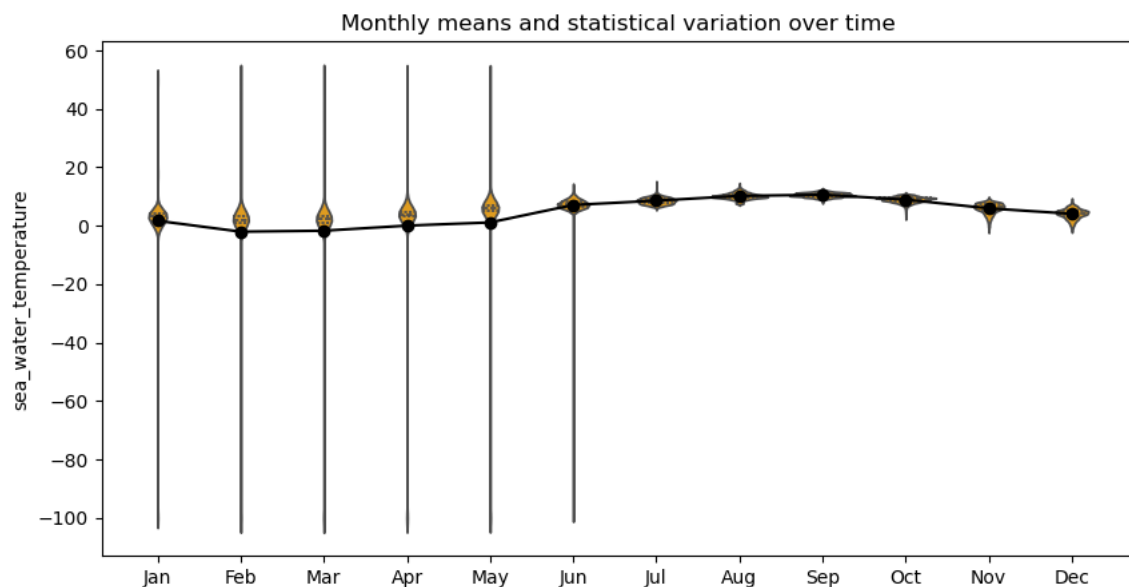


CIOFS_FRESH

Comparison plots by year



Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

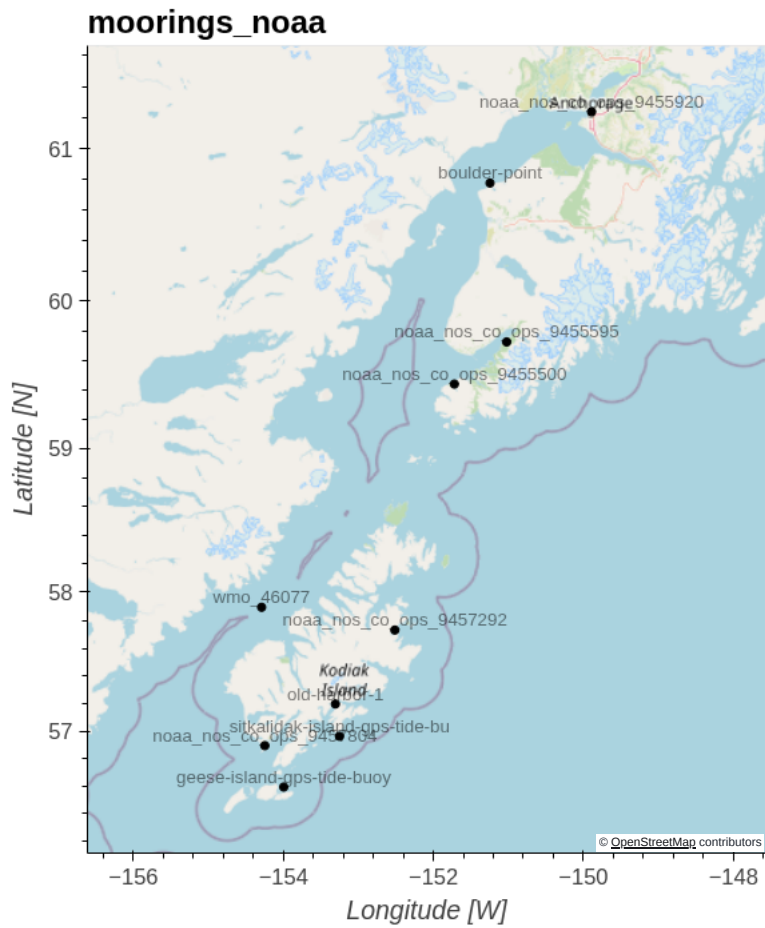
Comparison plots by year



Moorings (NOAA): across Cook Inlet

- moorings_noaa

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).



noaa_nos_co_ops_9455500

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered

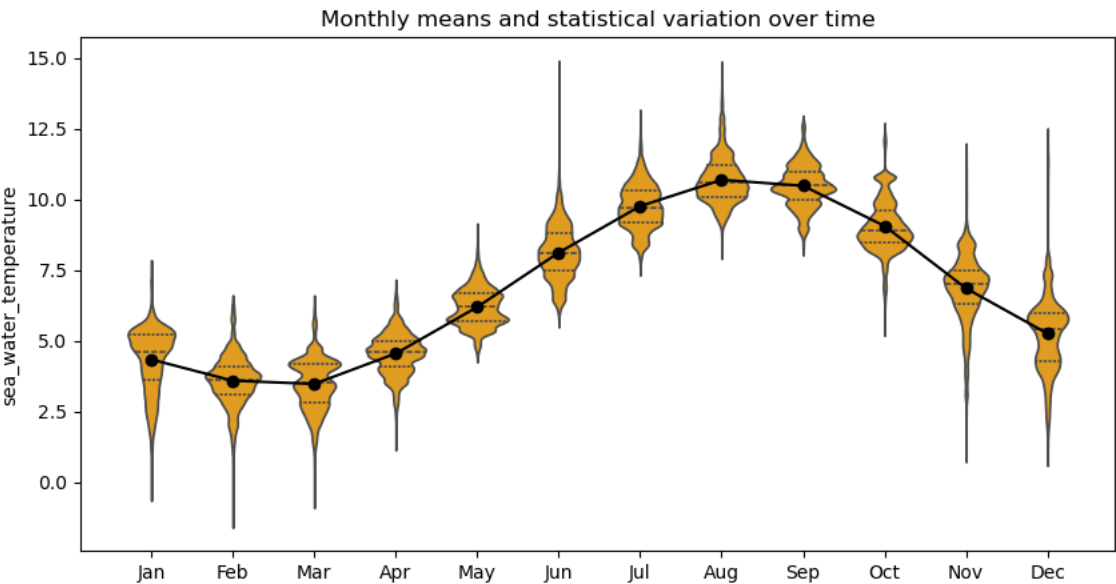
CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

noaa_nos_co_ops_9455920

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

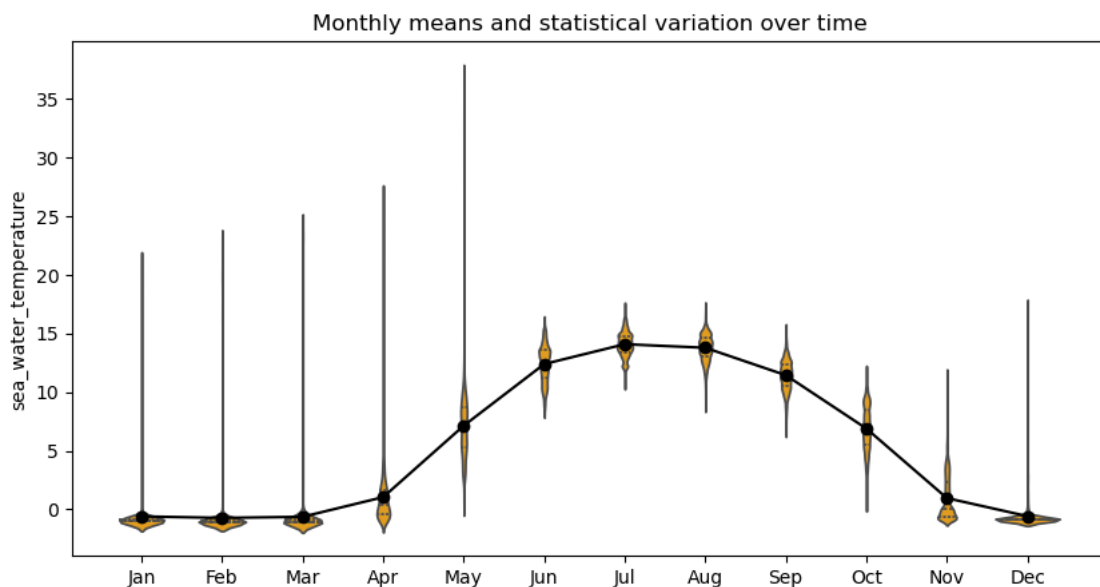
>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



noaa_nos_co_ops_9457292

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered

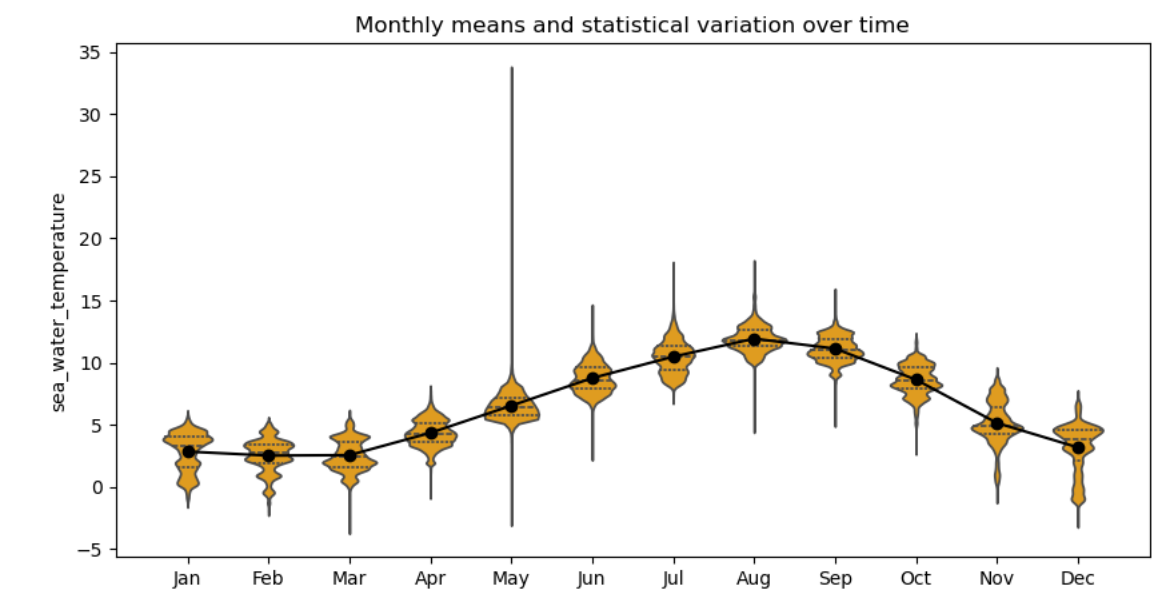
CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

noaa_nos_co_ops_9457804

Sea surface height: mean subtracted

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered

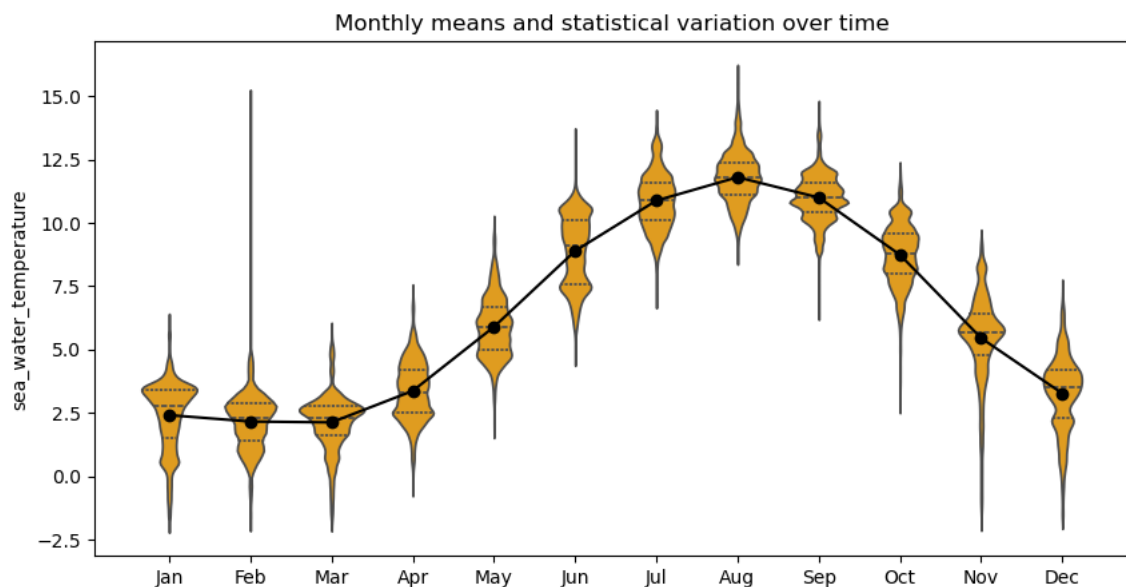
CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

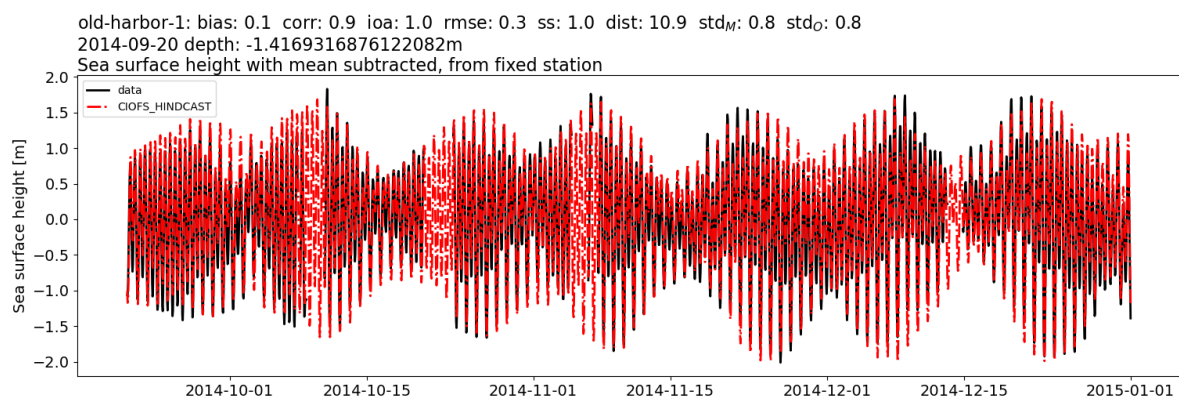
Comparison plots by year



old-harbor-1

Sea surface height: mean subtracted

CIOFS_HINDCAST

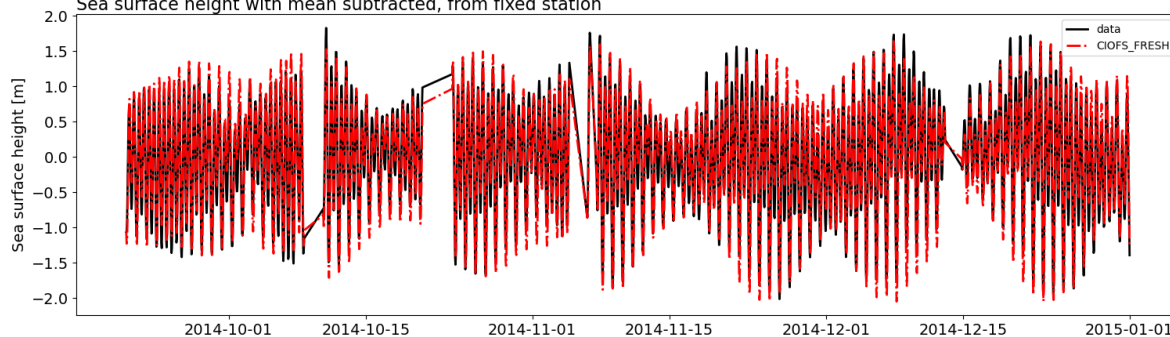


CIOFS_FRESH

old-harbor-1: bias: -0.0 corr: 1.0 ioa: 1.0 rmse: 0.2 ss: 1.0 dist: 10.9 std_M: 0.8 std_O: 0.8

2014-09-20 depth: -1.4169316876122082m

Sea surface height with mean subtracted, from fixed station



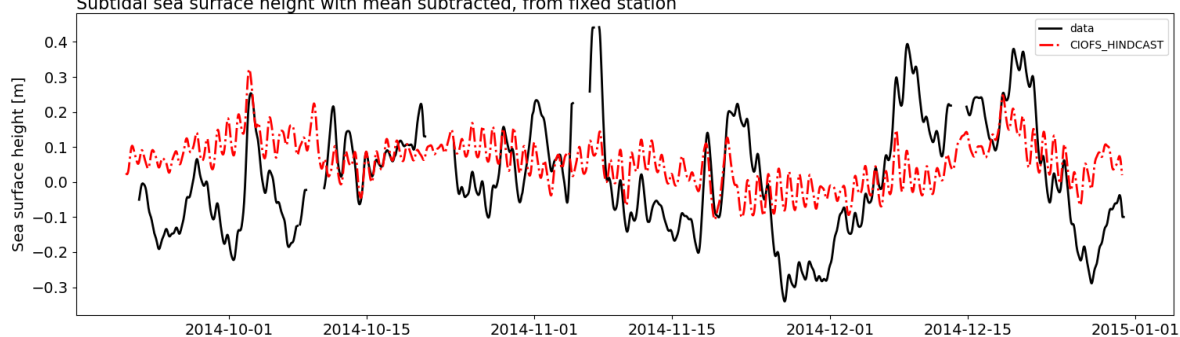
Sea surface height: mean subtracted, then tidally-filtered

CIOFS_HINDCAST

old-harbor-1: bias: 0.0 corr: 0.4 ioa: 0.5 rmse: 0.1 ss: 0.4 dist: 10.9 std_M: 0.1 std_O: 0.2

2014-09-20 depth: -1.4169316876122082m

Subtidal sea surface height with mean subtracted, from fixed station

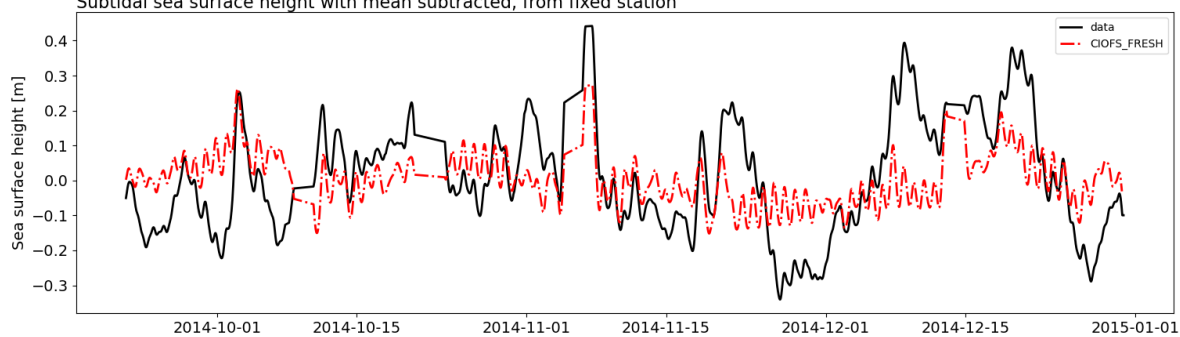


CIOFS_FRESH

old-harbor-1: bias: -0.0 corr: 0.4 ioa: 0.6 rmse: 0.1 ss: 0.4 dist: 10.9 std_M: 0.1 std_O: 0.2

2014-09-20 depth: -1.4169316876122082m

Subtidal sea surface height with mean subtracted, from fixed station



wmo_46077

Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

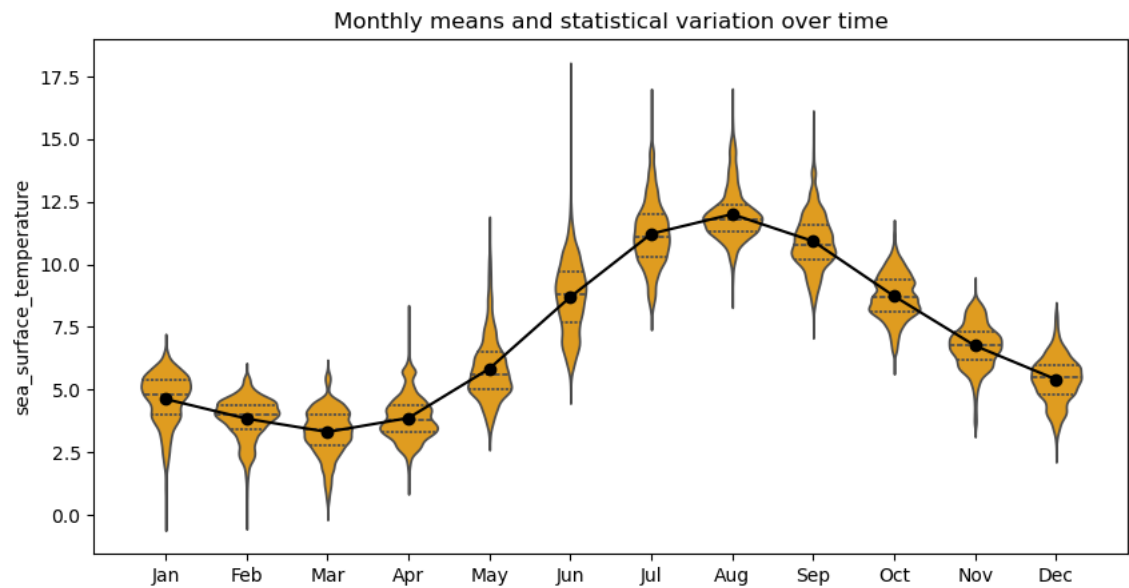
>

CIOFS_FRESH

Comparison plots by year

>

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year

>

CIOFS_FRESH

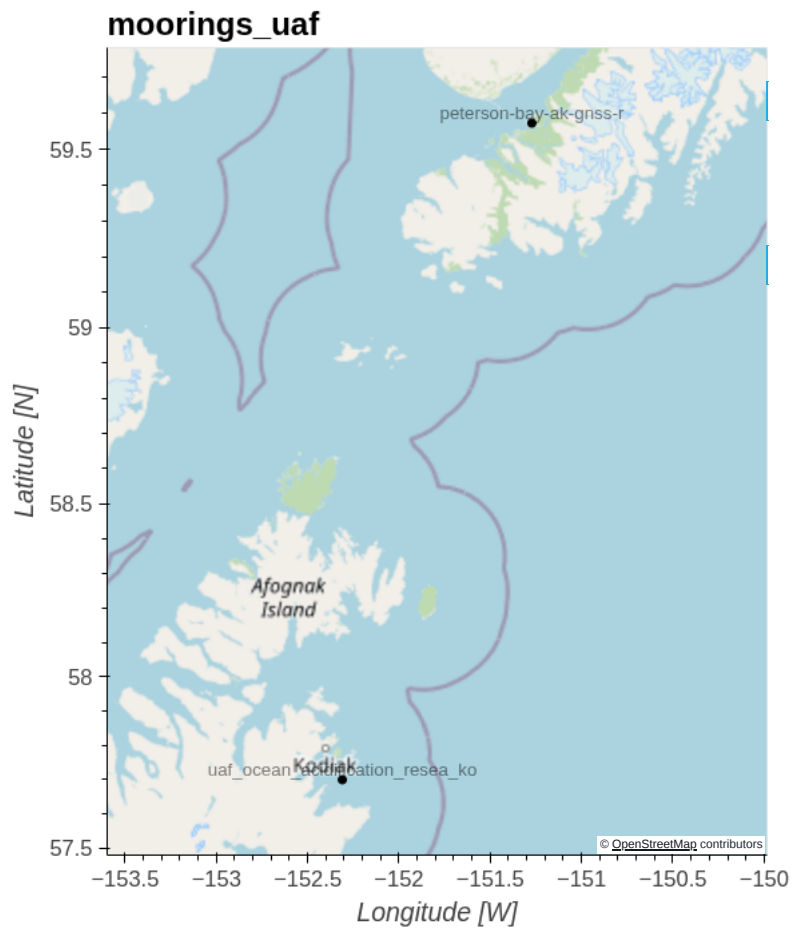
Comparison plots by year

>

Moorings (UAF): Kodiak Island, Peterson Bay

- moorings_uaf

See the original full dataset description page in the [original report](#) for more information or the new [catalog page](#).



uaf_ocean_acidification_resea_ko

Sea water salinity:

CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year



Sea water salinity: tidally-filtered

CIOFS_HINDCAST

Comparison plots by year

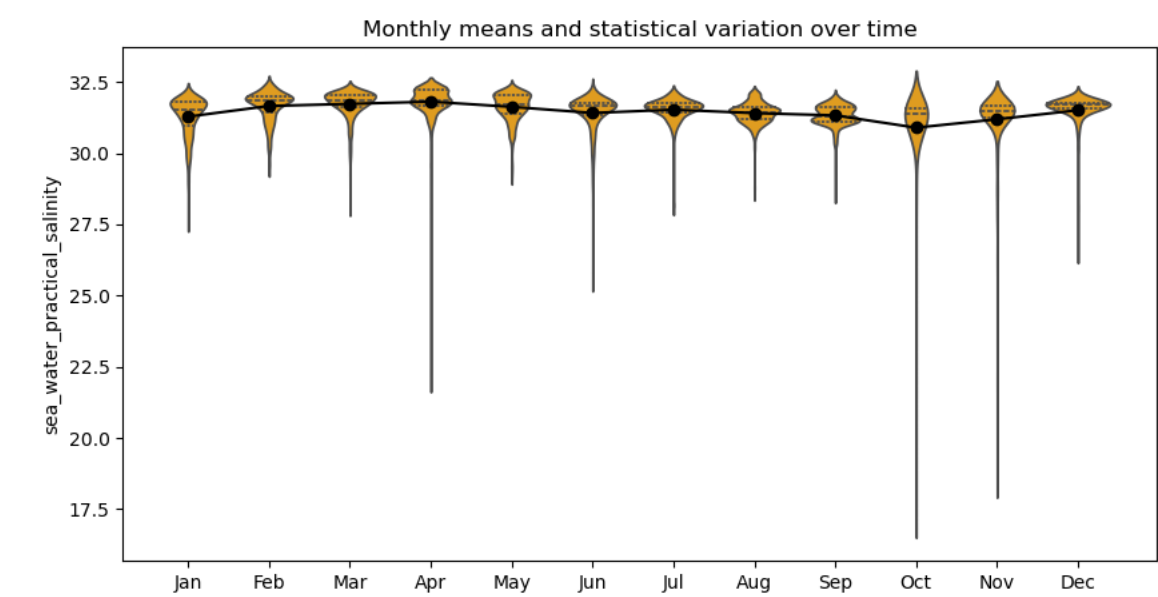


CIOFS_FRESH

Comparison plots by year



Sea water salinity: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature:

CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered

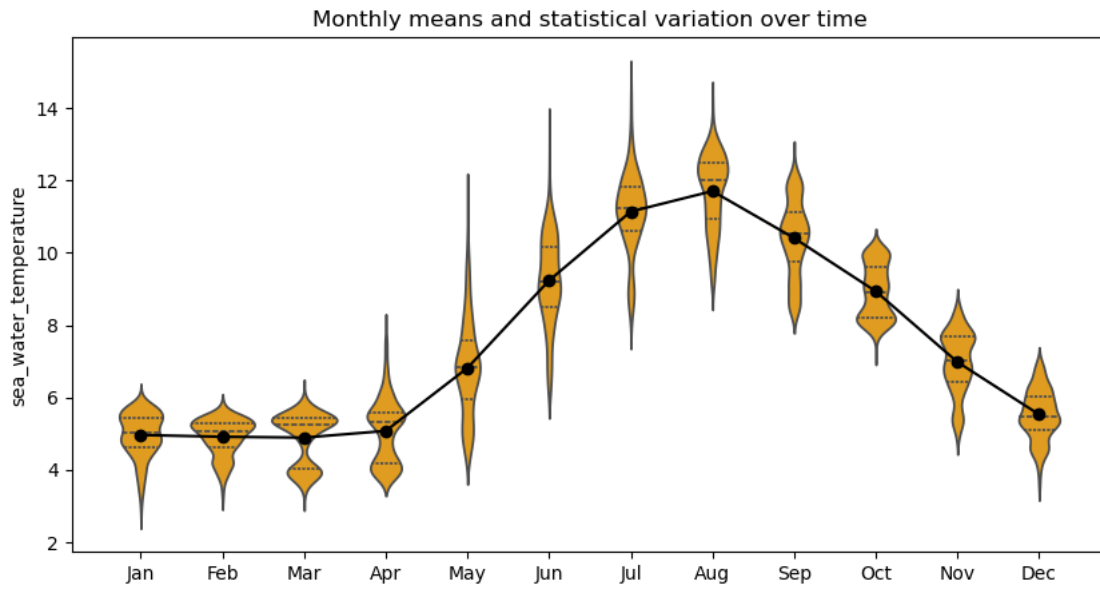
CIOFS_HINDCAST

Comparison plots by year >

CIOFS_FRESH

Comparison plots by year >

Sea water temperature: tidally-filtered, then monthly mean from data subtracted



CIOFS_HINDCAST

Comparison plots by year



CIOFS_FRESH

Comparison plots by year

