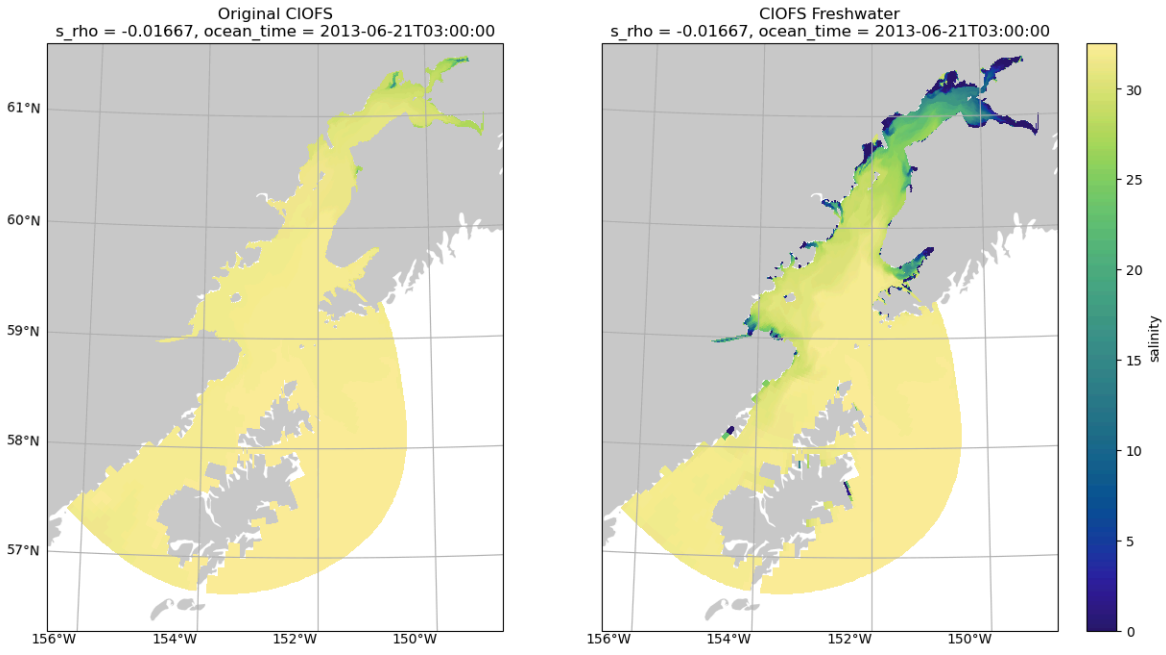
Cook Inlet Circulation Modeling - Freshwater Forcing Experiment and Lagrangian Analysis

Contents

ADCP Model Comparisons

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



This project has been supported by the National Oceanic Atmospheric Administration National Centers for Coastal Ocean Science Kasitsna Bay Lab.

October 11, 2024

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

PDFs of parts of report:

Overview ADCP Data

Comparisons between each model and ADCP datasets are shown below, first in Taylor diagrams, then in maps of skill scores where each marker is colored to indicate the skill score of the comparison.

The two models perform similarly to each other with the exception of increased variance in CIOFS Fresh for subtidal variable comparisons. They both generally perform well for tidal time series and only moderately well for subtidal time series.

77MB zipfile of plots and stats files

Map of Stations

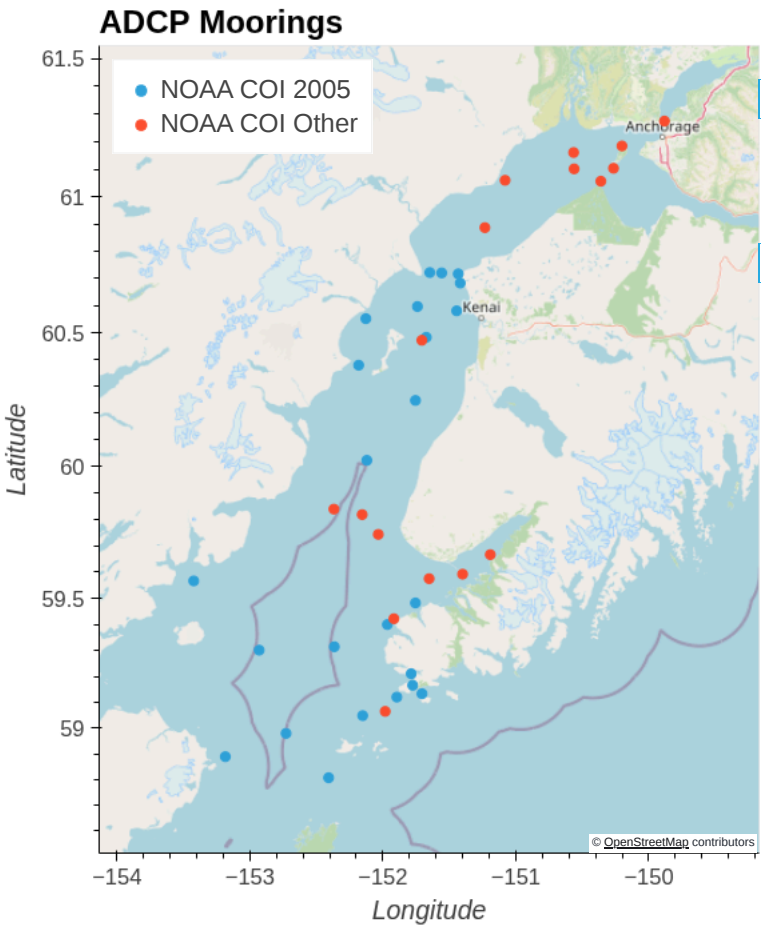


Fig. 1 All ADCP deployments, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

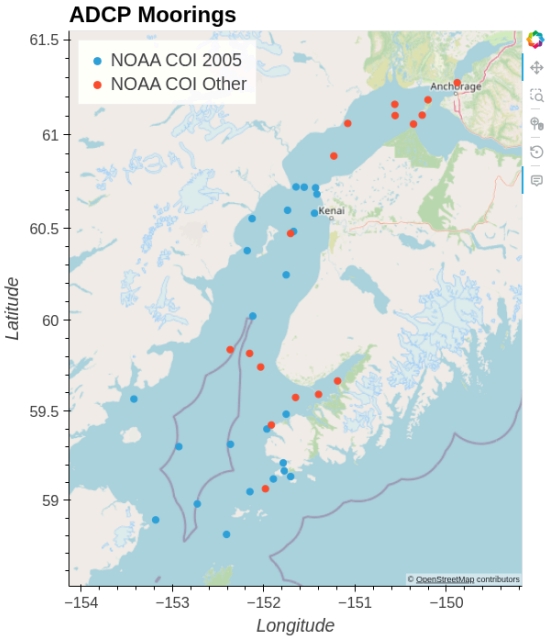


Fig. 2 All ADCP deployments, by project. (PNG screenshot, available for PDF and for saving image.)

Taylor Diagrams

Taylor diagrams summarize the skill of the two models in capturing the ADCP moorings. The data has been grouped by region (Figs. 3, 4, 5) and season (Figs. 6, 7, 8). The results show that CIOFS fresh and CIOFS hindcast perform similarly for tidal results. For the subtidal along-channel velocity component by region, CIOFS Hindcast and CIOFS Fresh have mostly similar correlation coefficients, but CIOFS Fresh has more accurate variance. By season, CIOFS Fresh has more accurate variance again though in the spring both models have too high of variance. For the across-channel subtidal component, the two models again have similar correlation coefficients but CIOFS Fresh has more accurate variance in Upper Cook Inlet; in Kachemak Bay and Central Cook Inlet CIOFS Hindcast is more accurate. When considering subtidal speed, we see that the two models perform similarly to each other. Skill scores are shown in the next plots for each dataset.

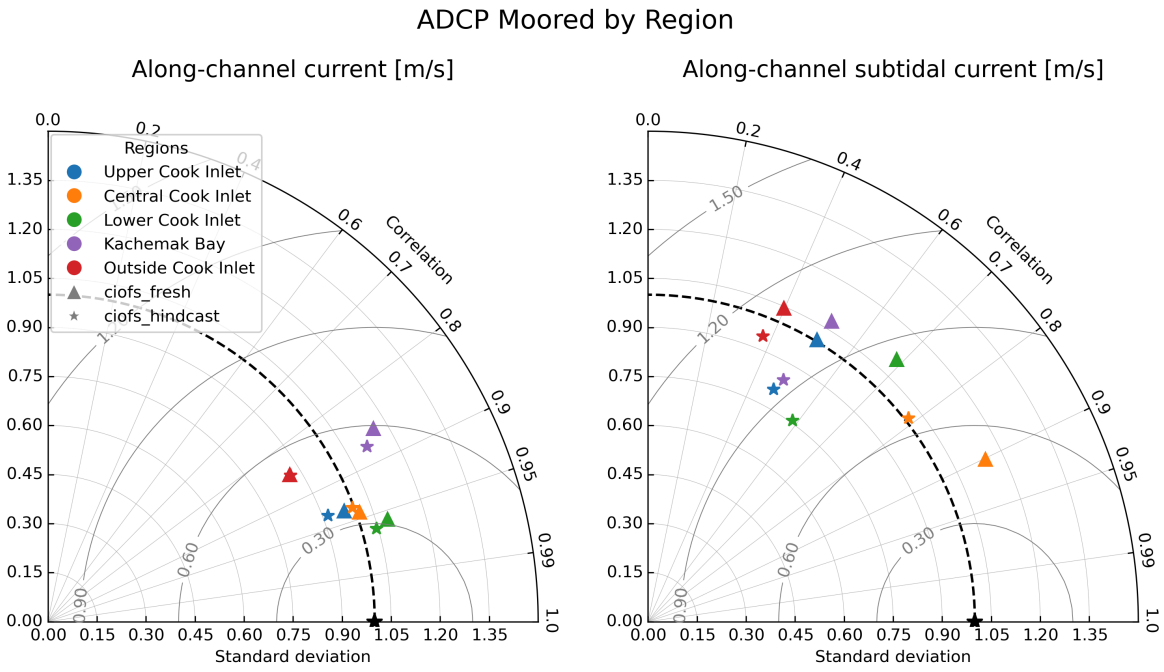


Fig. 3 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for the along-channel component of velocity with tides (left) and subtidal (right), grouped by region of Cook Inlet, for moored ADCP datasets.

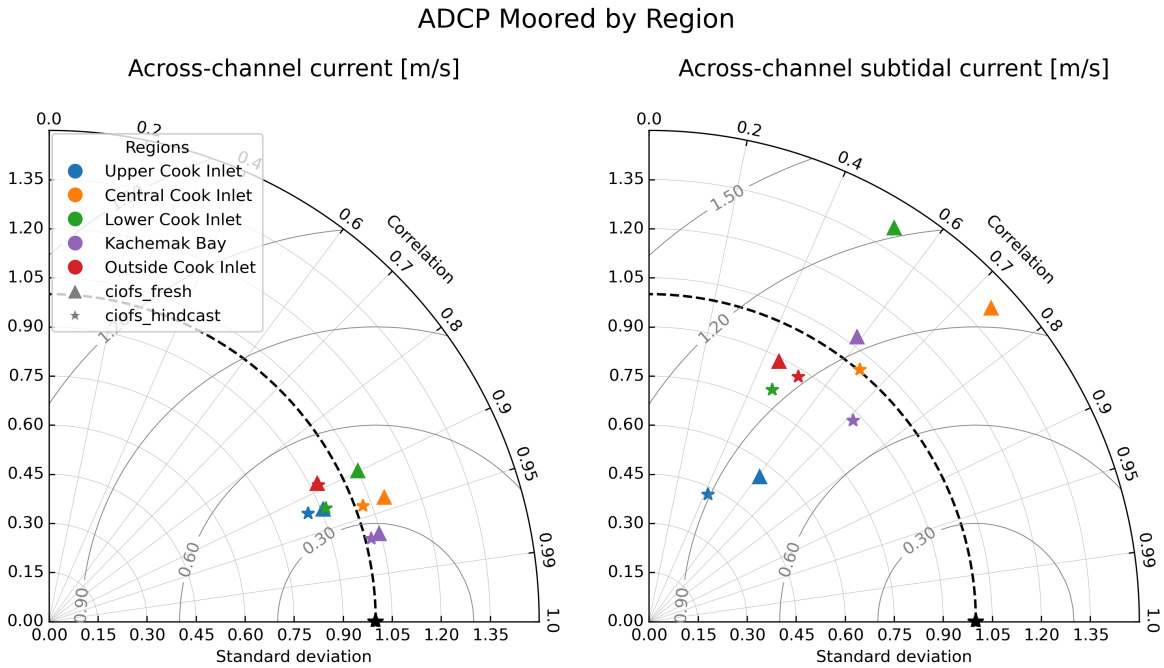


Fig. 4 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for the across-channel component of velocity with tides (left) and subtidal (right), grouped by region of Cook Inlet, for moored ADCP datasets.

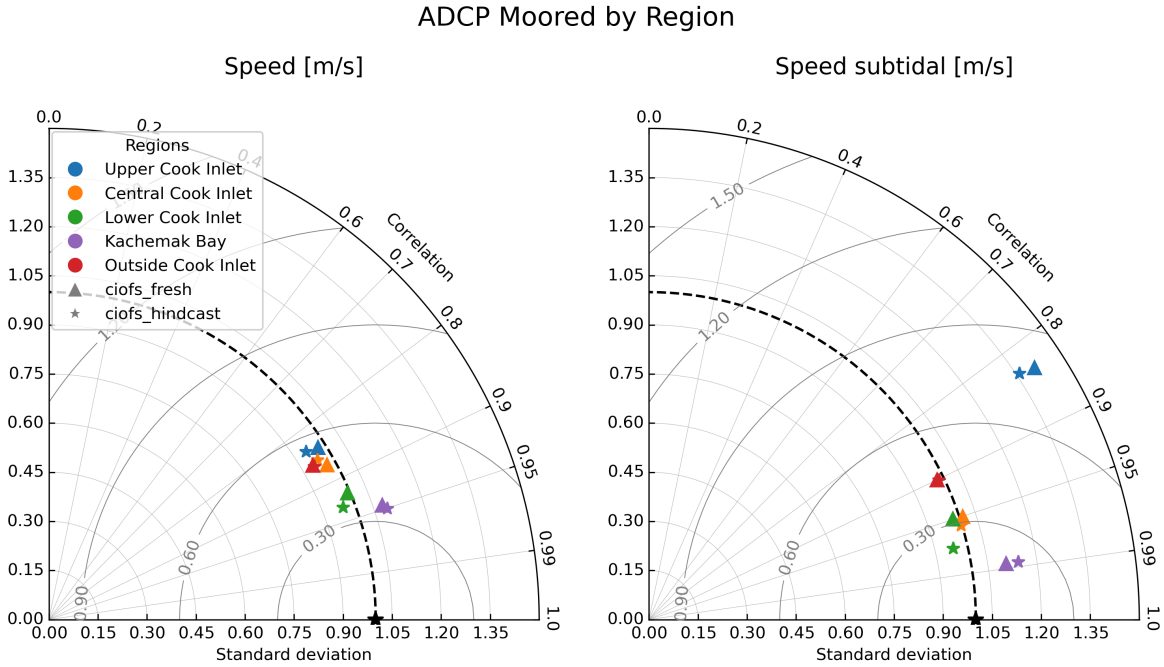


Fig. 5 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for the magnitude of velocity with tides (left) and subtidal (right), grouped by region of Cook Inlet, for moored ADCP datasets.

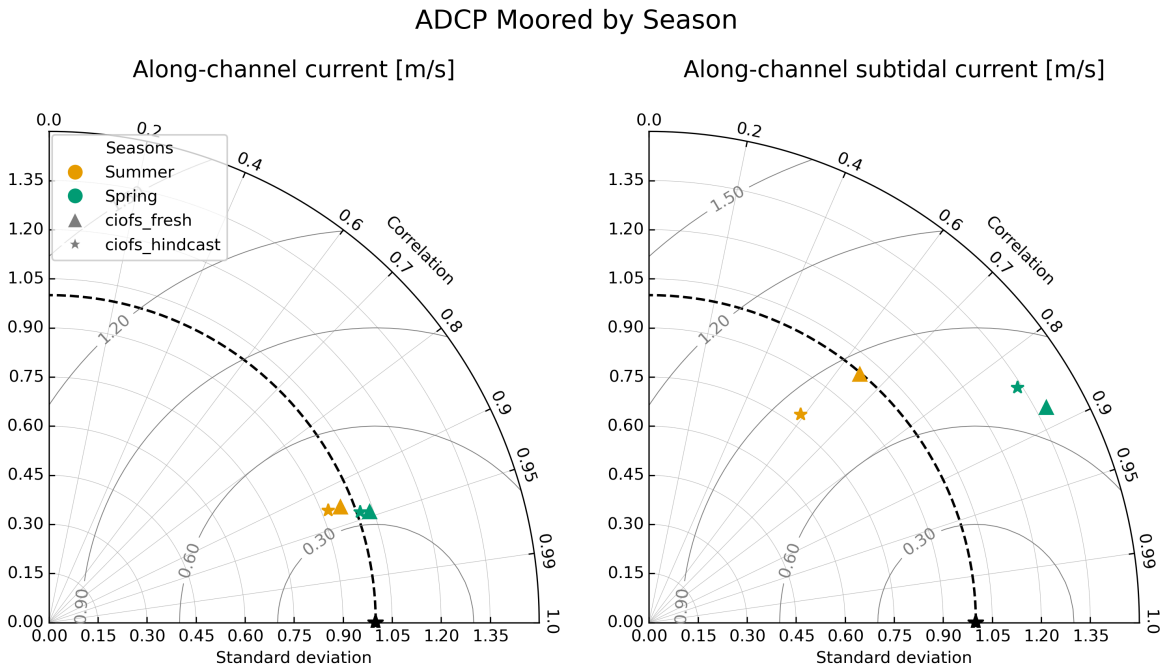


Fig. 6 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for the along-channel component of velocity with tides (left) and subtidal (right), grouped by season, for moored ADCP datasets.

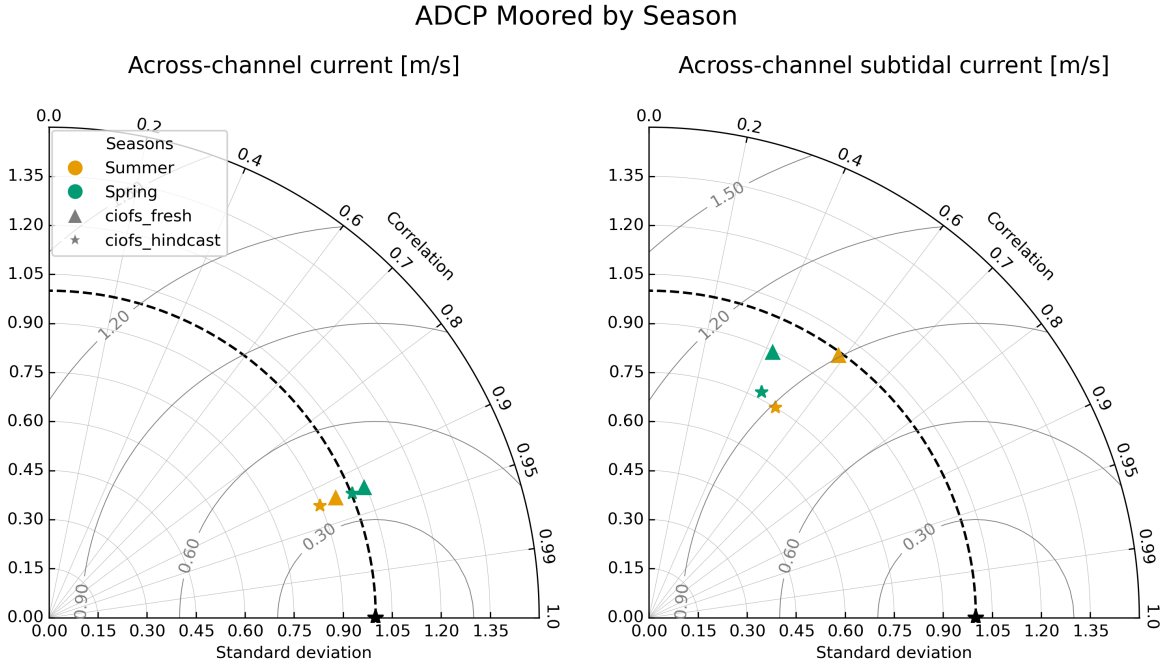


Fig. 7 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for the across-channel component of velocity with tides (left) and subtidal (right), grouped by season, for moored ADCP datasets.

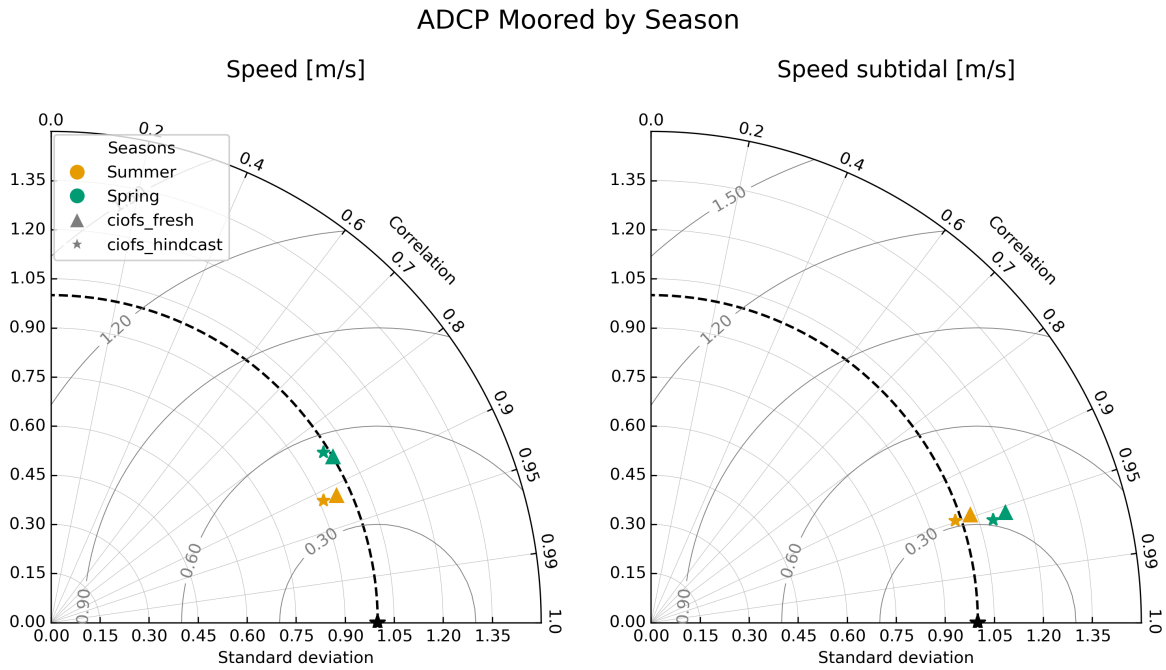
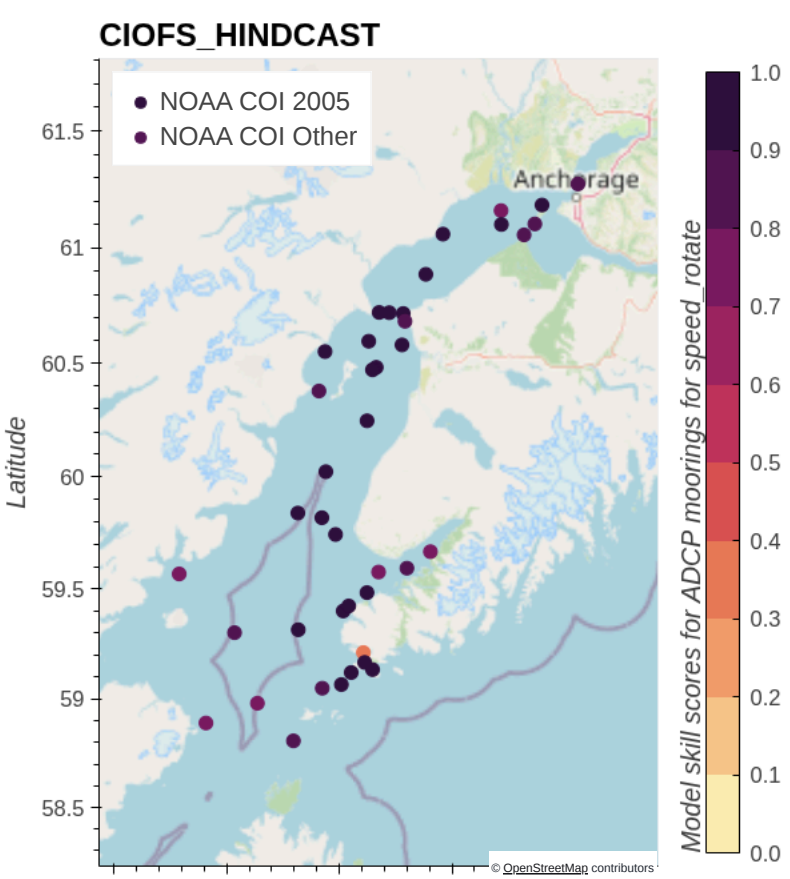


Fig. 8 Taylor Diagram summarizing skill of CIOFS Hindcast (stars) and CIOFS Fresh (triangles) for the magnitude of velocity with tides (left) and subtidal (right), grouped by season, for moored ADCP datasets.

Tidal

Horizontal Speed



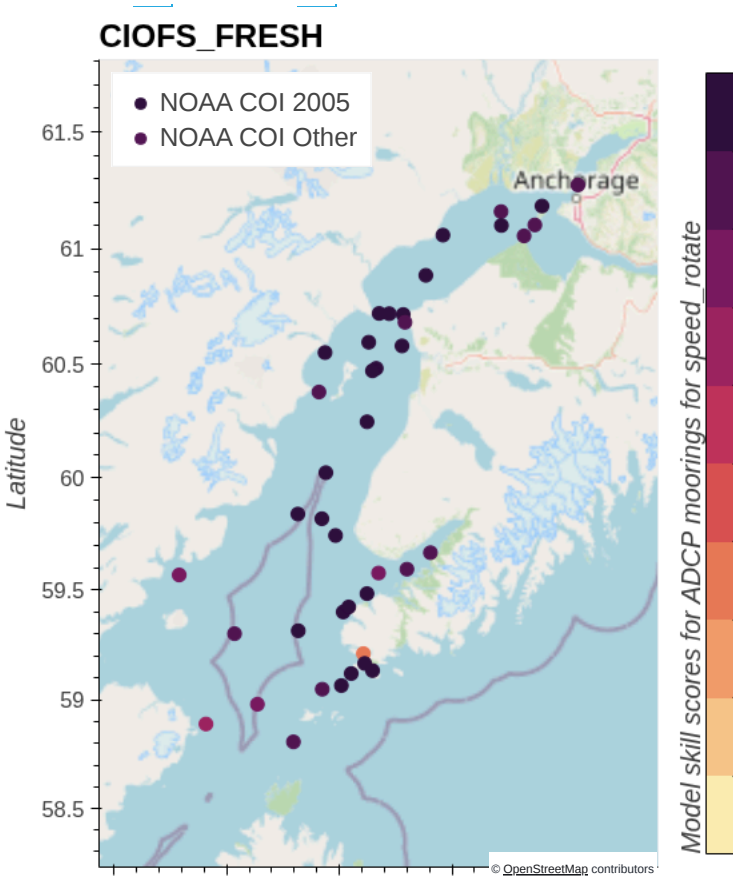


Fig. 9 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for horizontal speed, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

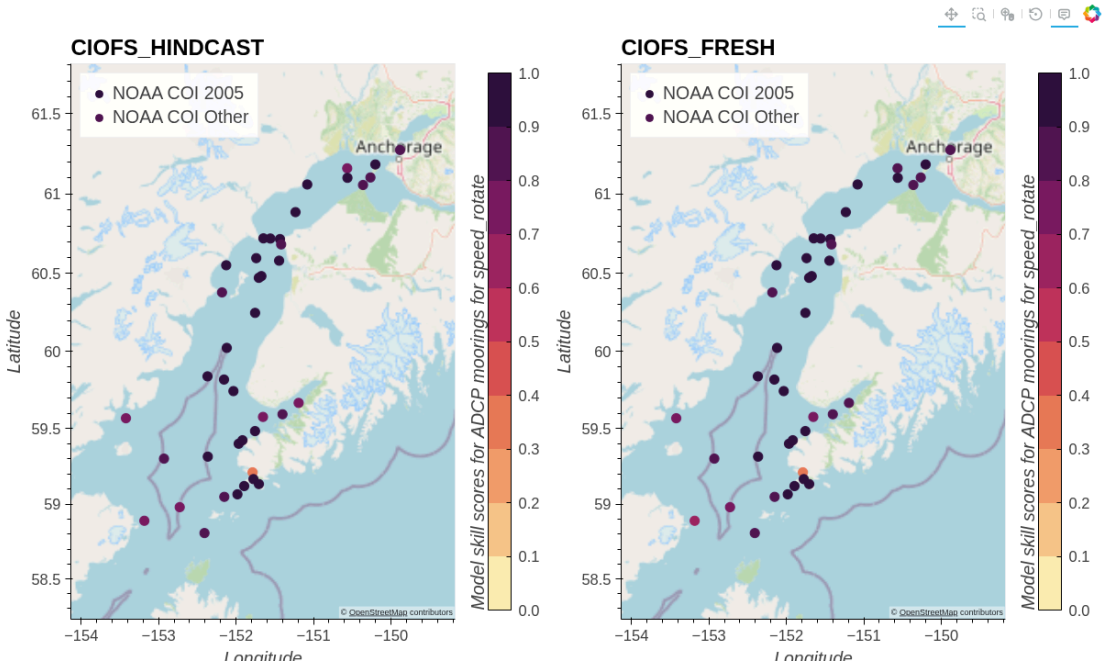
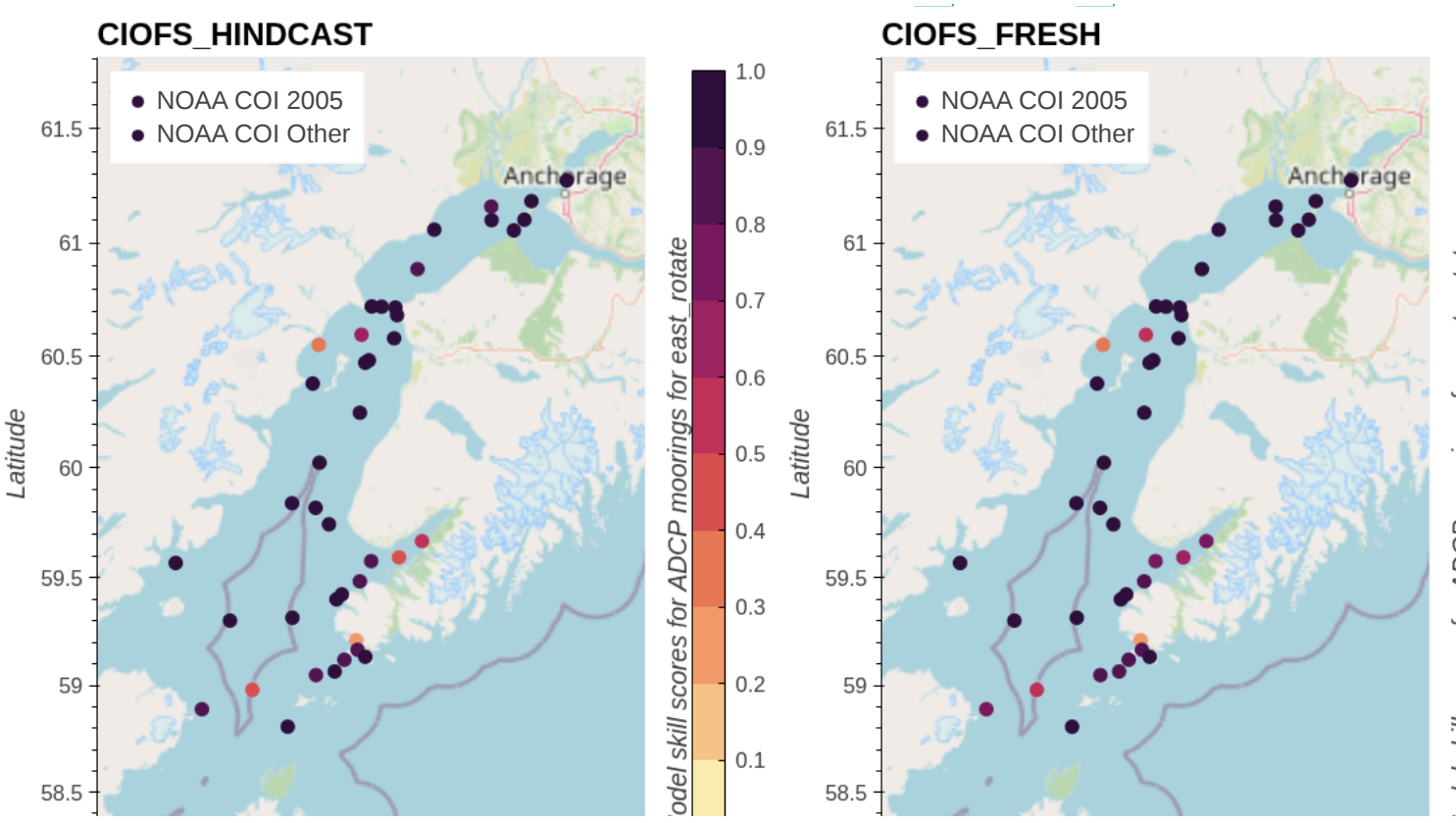


Fig. 10 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for horizontal speed, by project. (PNG screenshot, available for PDF and for saving image.)

Along-Channel Velocity



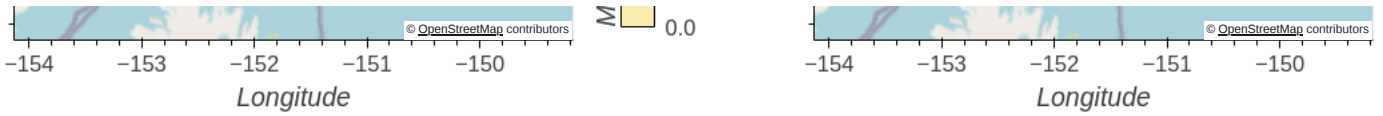


Fig. 11 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for along-channel velocity, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

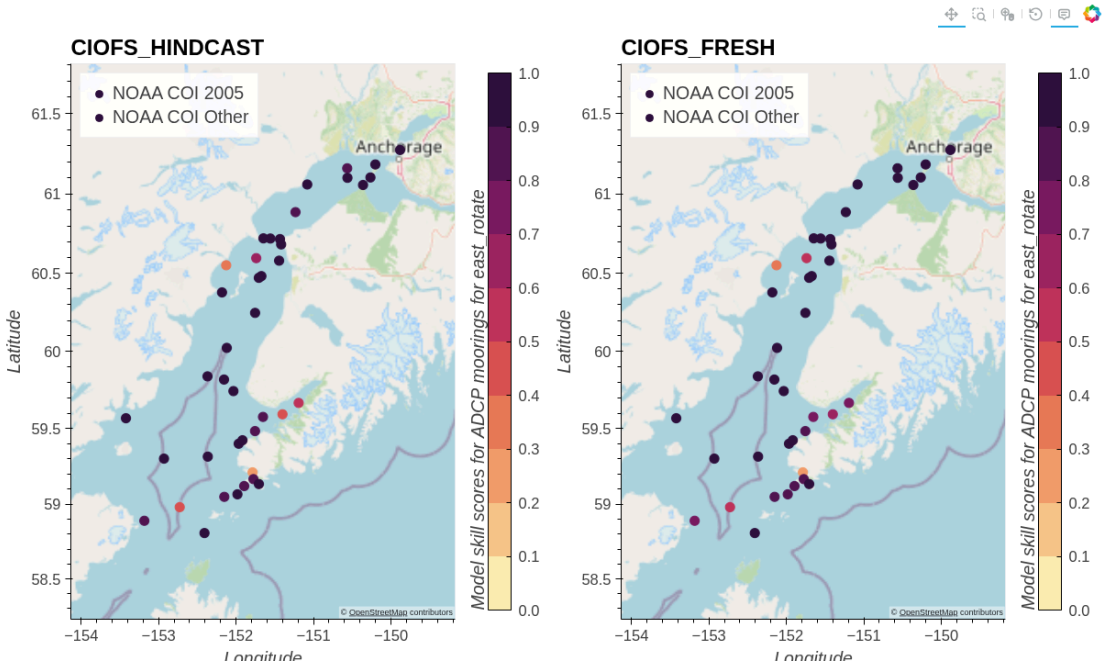
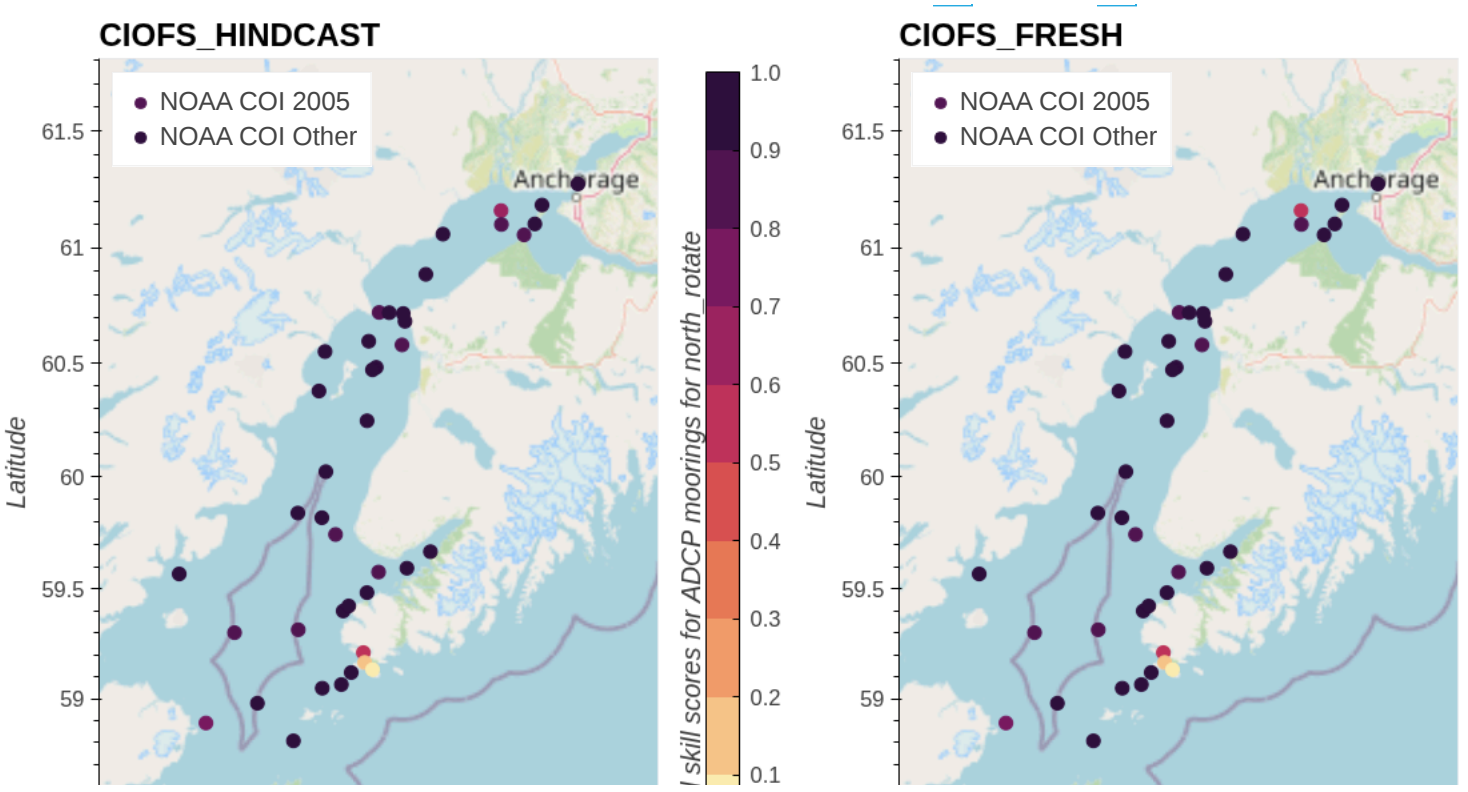


Fig. 12 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for along-channel velocity, by project. (PNG screenshot, available for PDF and for saving image.)

Across-Channel Velocity



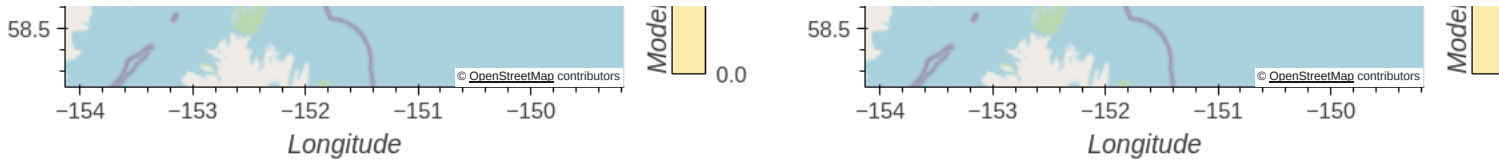


Fig. 13 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for across-channel velocity, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

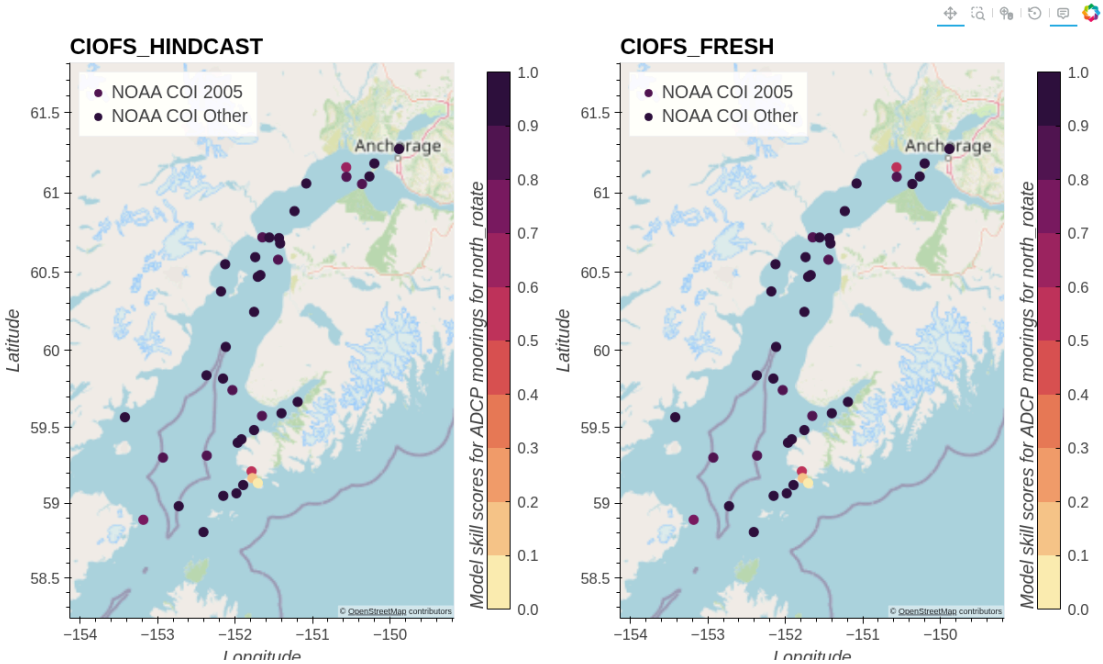
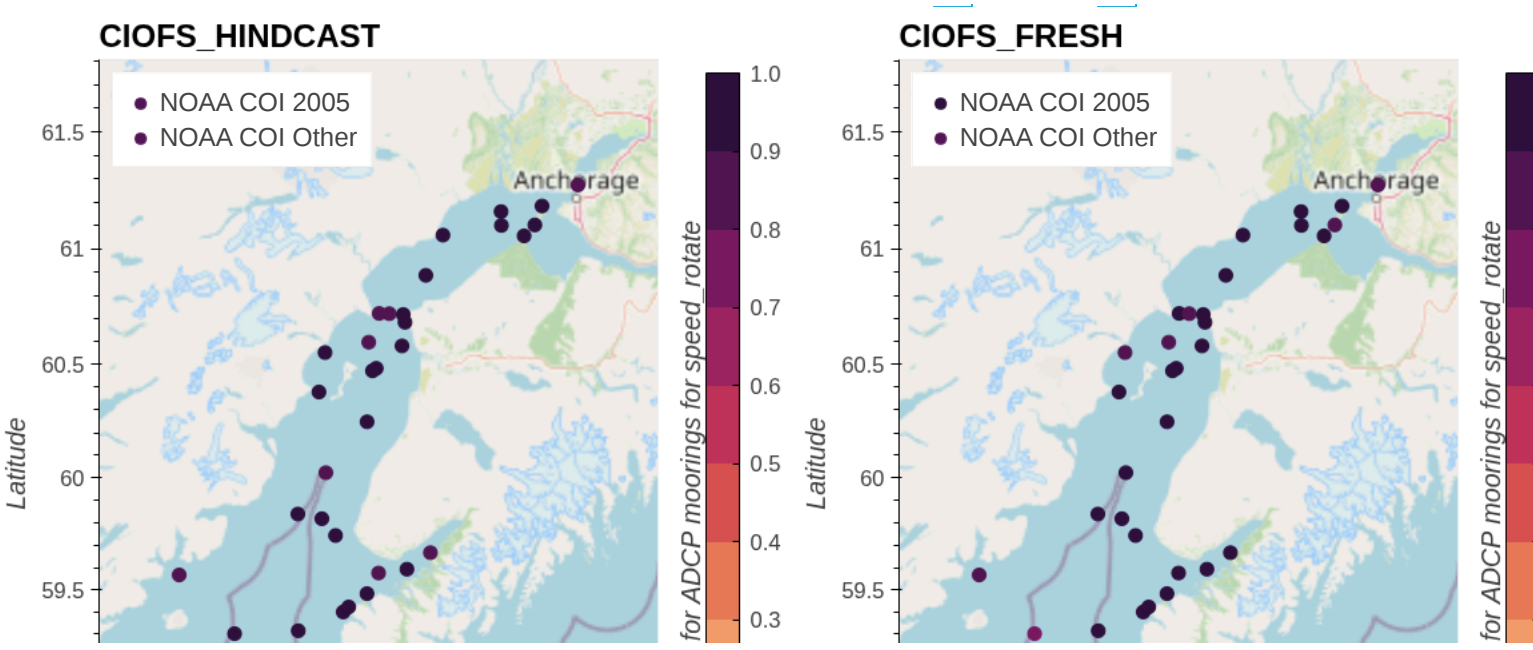


Fig. 14 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for across-channel velocity, by project. (PNG screenshot, available for PDF and for saving image.)

Subtidal

Horizontal Speed



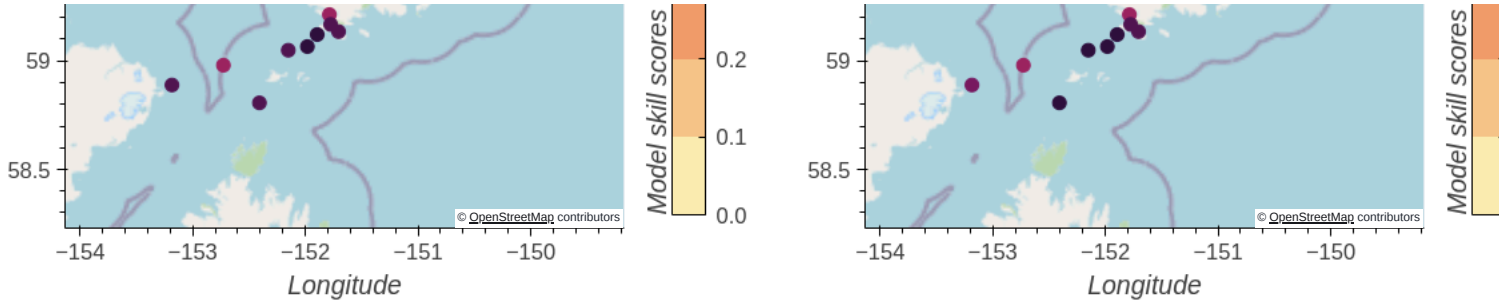


Fig. 15 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for subtidal horizontal speed, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

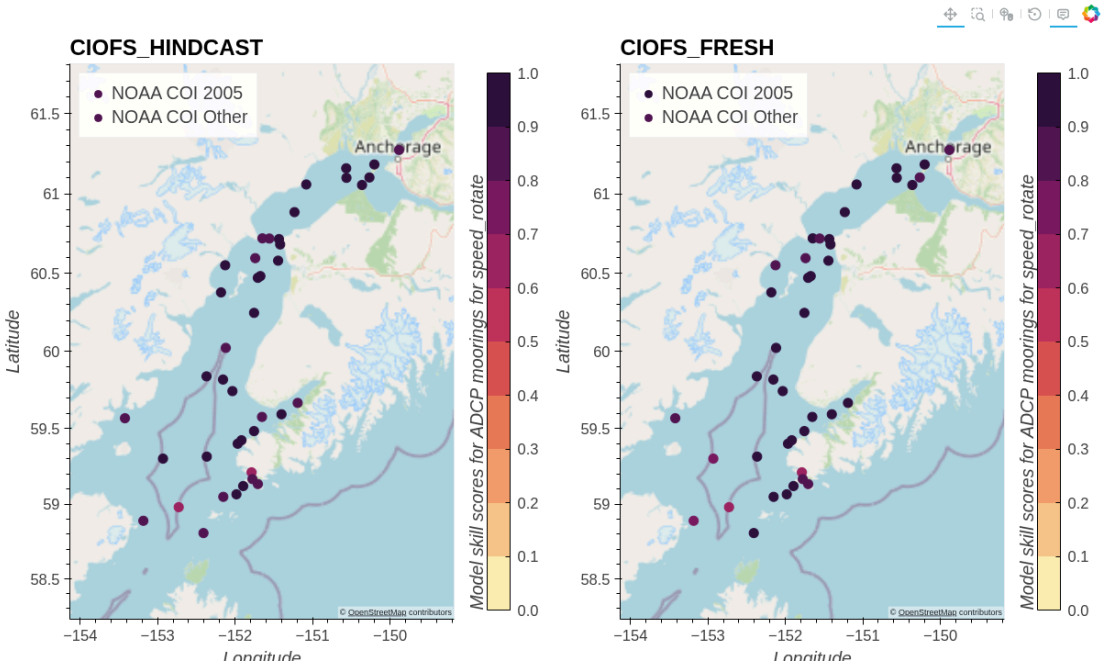
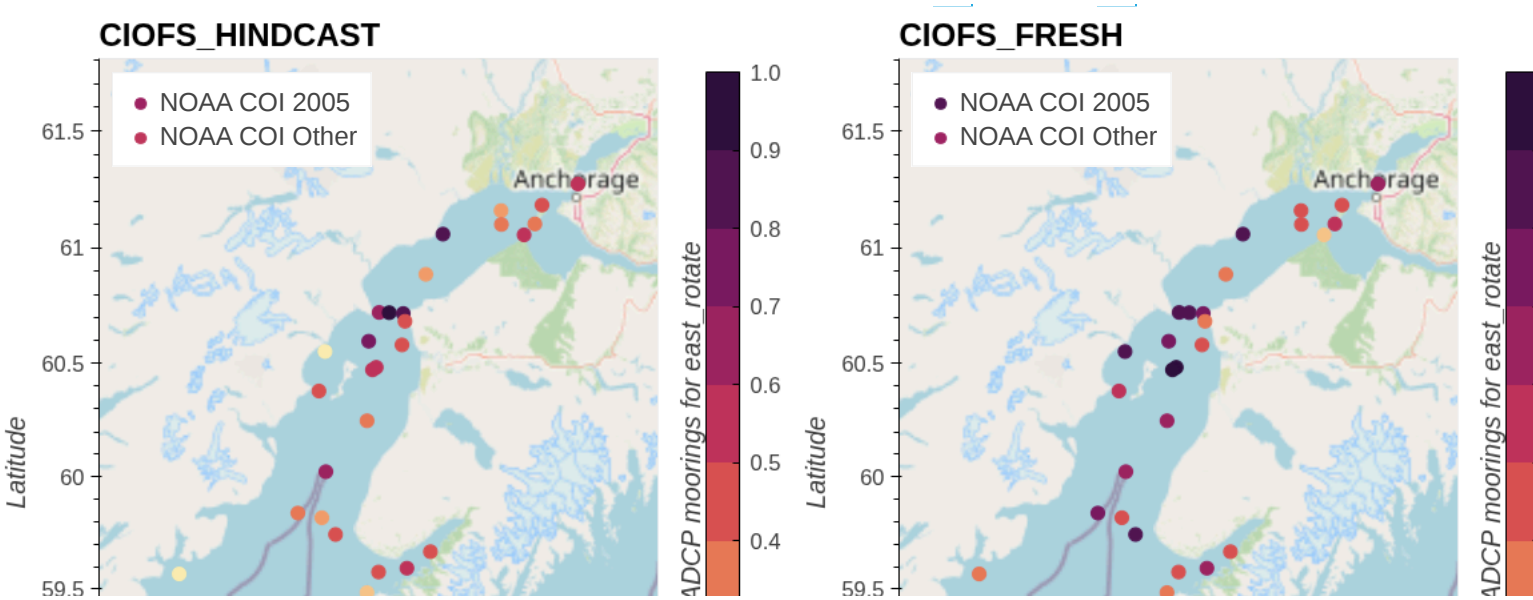


Fig. 16 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for subtidal horizontal speed, by project. (PNG screenshot, available for PDF and for saving image.)

Along-Channel Velocity



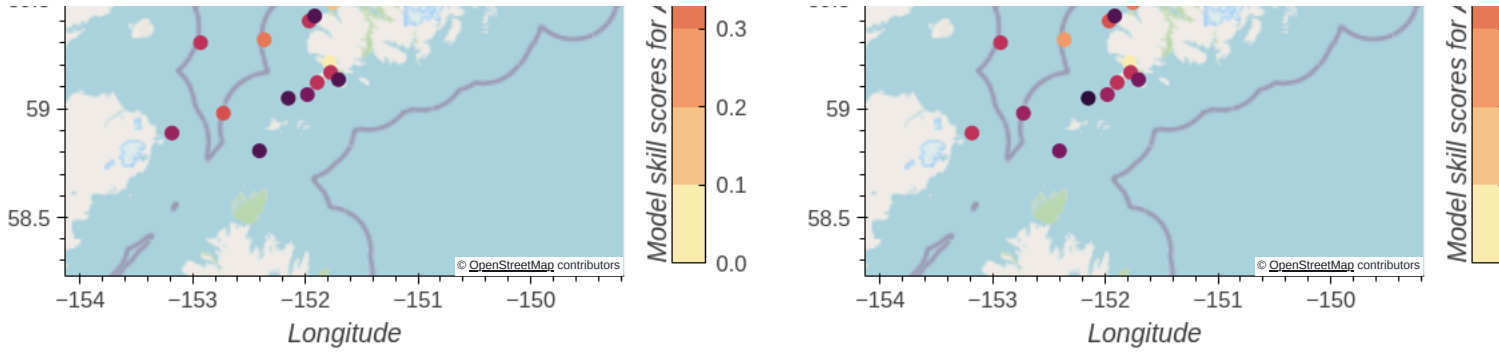


Fig. 17 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for subtidal along-channel velocity, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

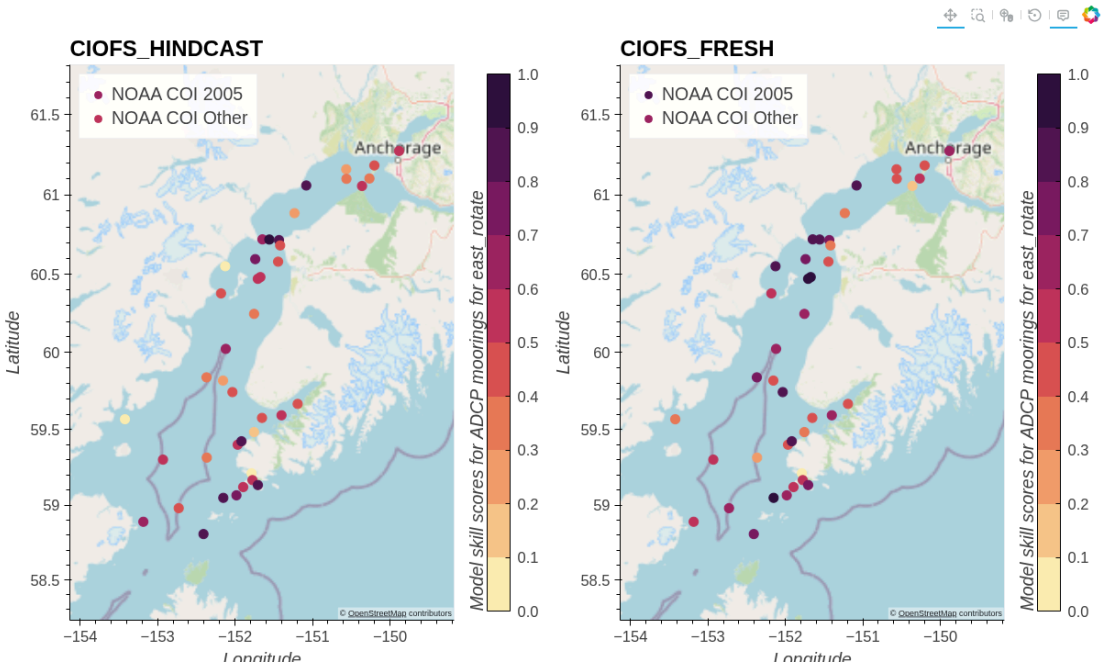
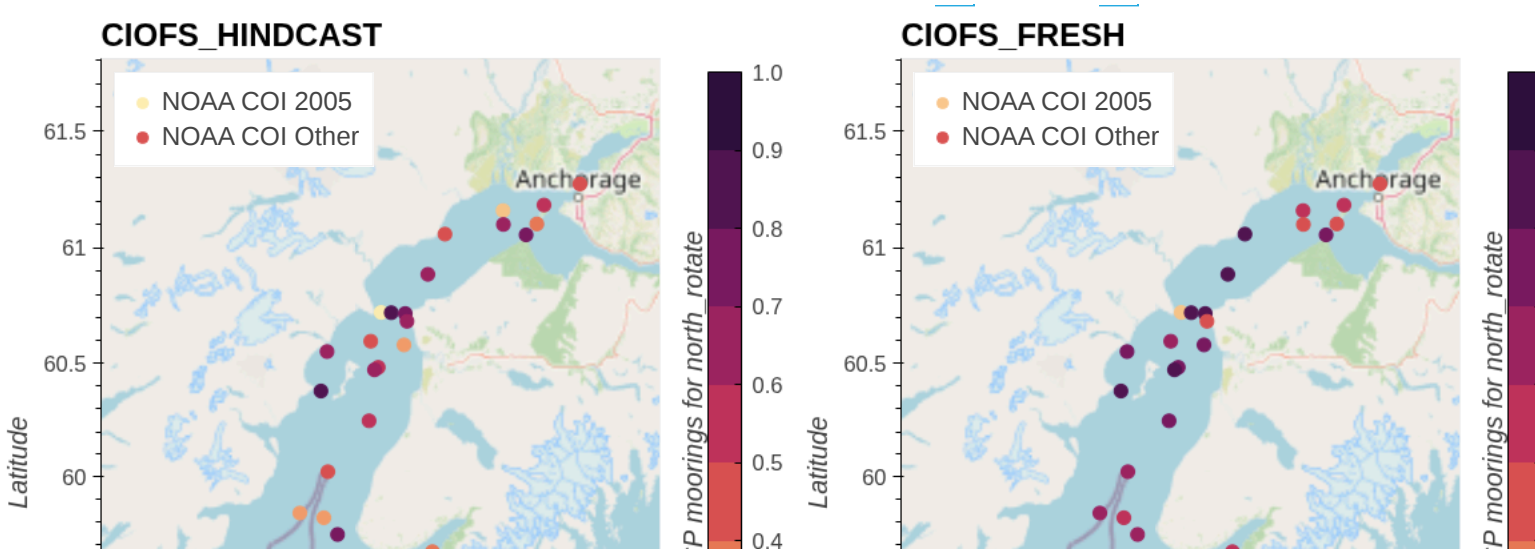


Fig. 18 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for subtidal along-channel velocity, by project. (PNG screenshot, available for PDF and for saving image.)

Across-Channel Velocity



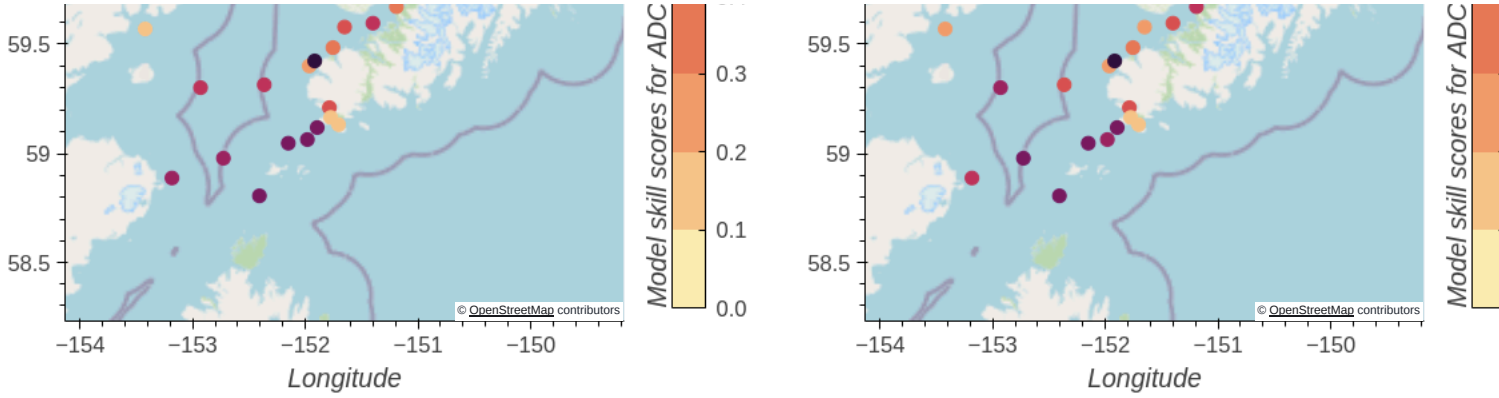


Fig. 19 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for subtidal across-channel velocity, by project. Click on a legend entry to toggle the transparency. (HTML plot, won't show up correctly in PDF.)

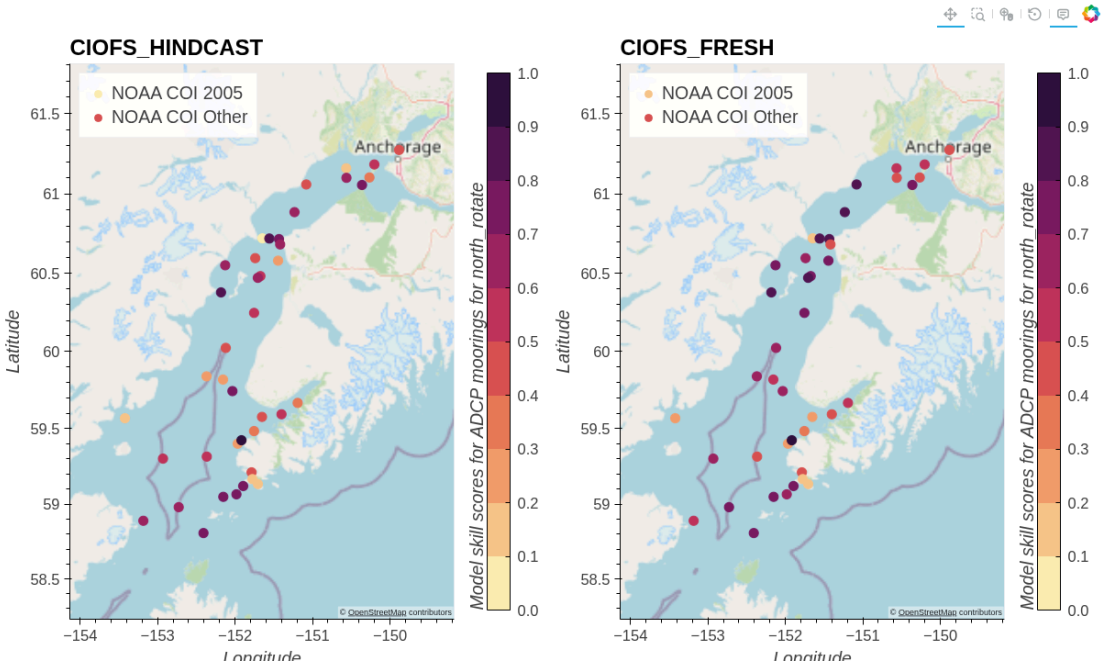


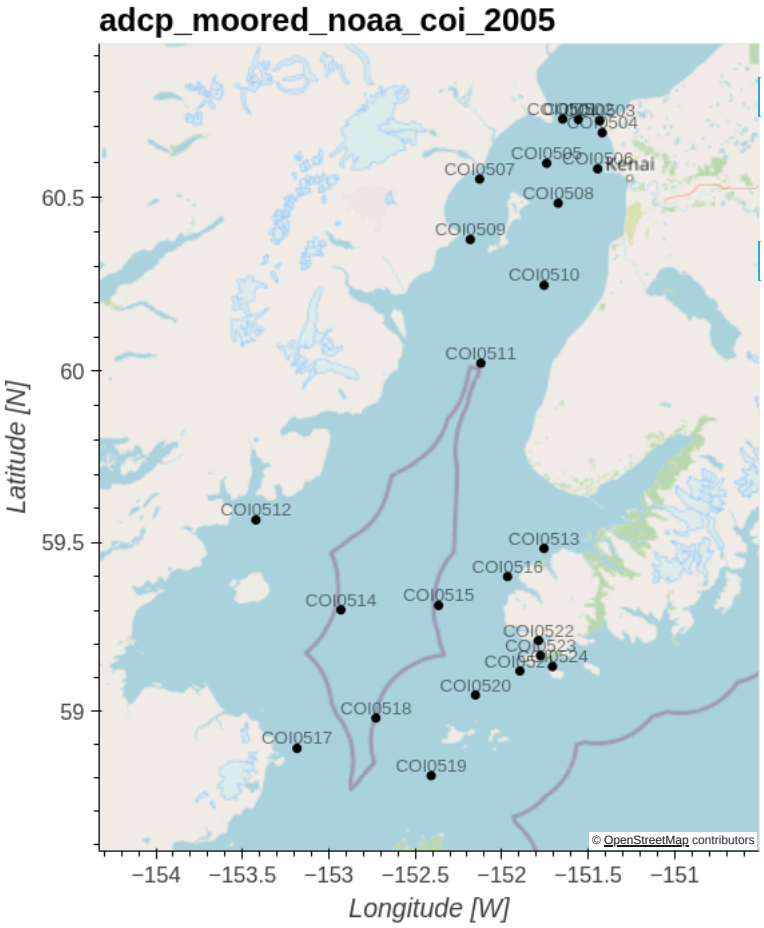
Fig. 20 Skill scores for CIOFS Hindcast (left) and CIOFS Freshwater (right) with ADCP moorings for subtidal across-channel velocity, by project. (PNG screenshot, available for PDF and for saving image.)

Moored ADCP (NOAA): ADCP survey Cook Inlet 2005

- adcp_moored_noaa_coi_2005

See the original full dataset description page in the original report for more information or the new catalog page.

Note that the map shows all datasets from the catalog; it is not limited to the current report time periods.

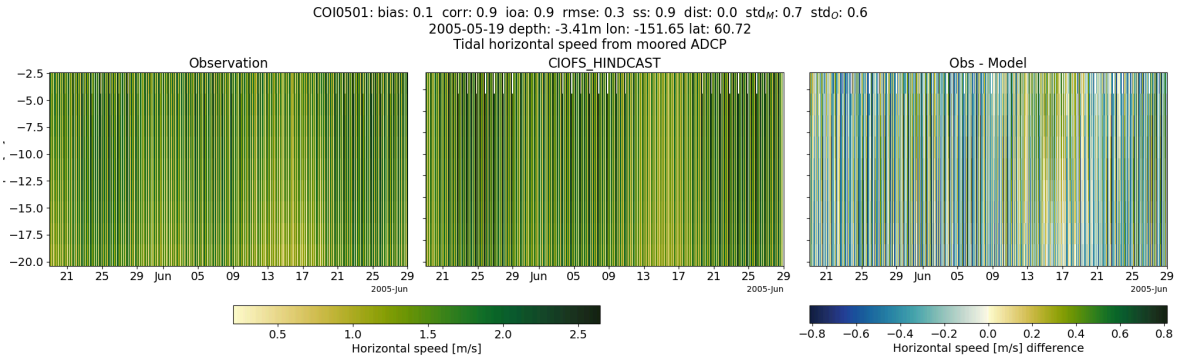


COI0501

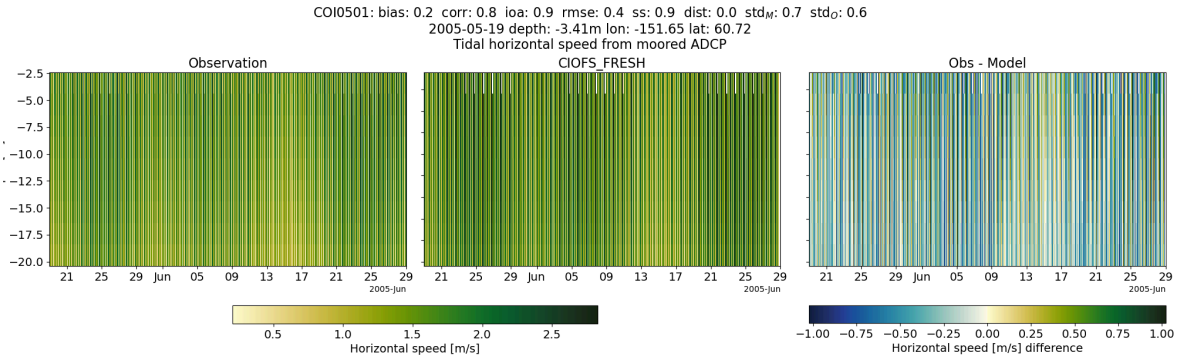
Tidal

Horizontal speed

CIOFS_HINDCAST

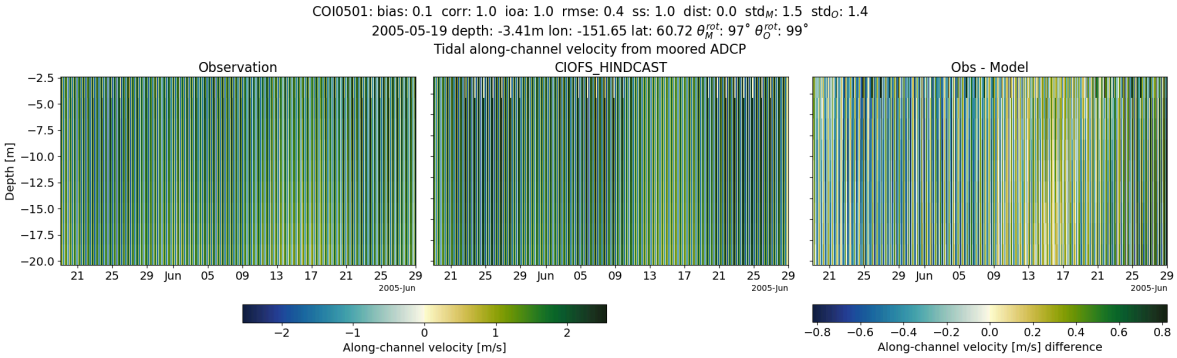


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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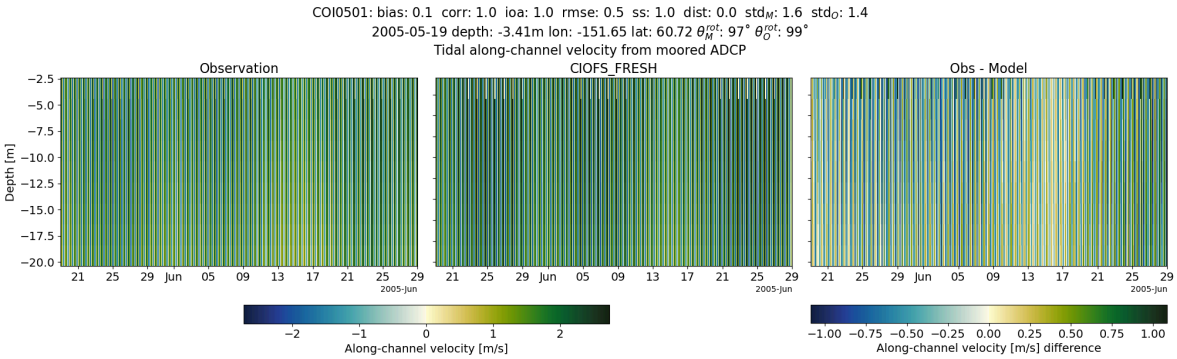
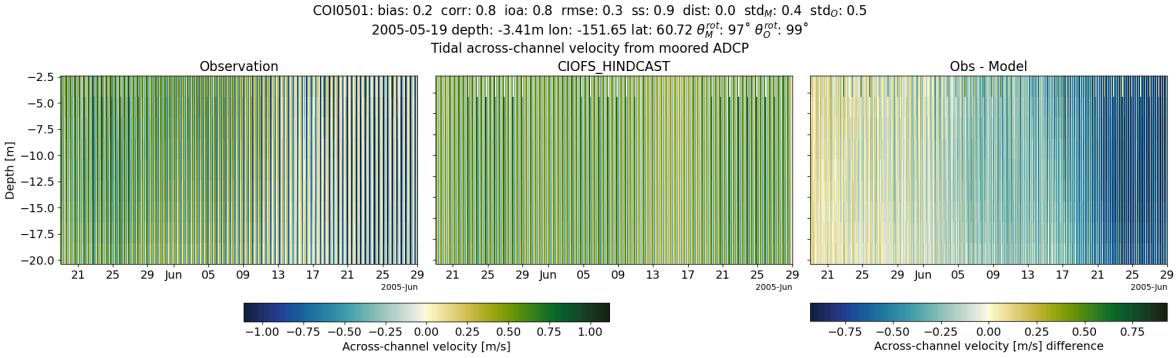


Across-channel velocity

CIOFS_HINDCAST



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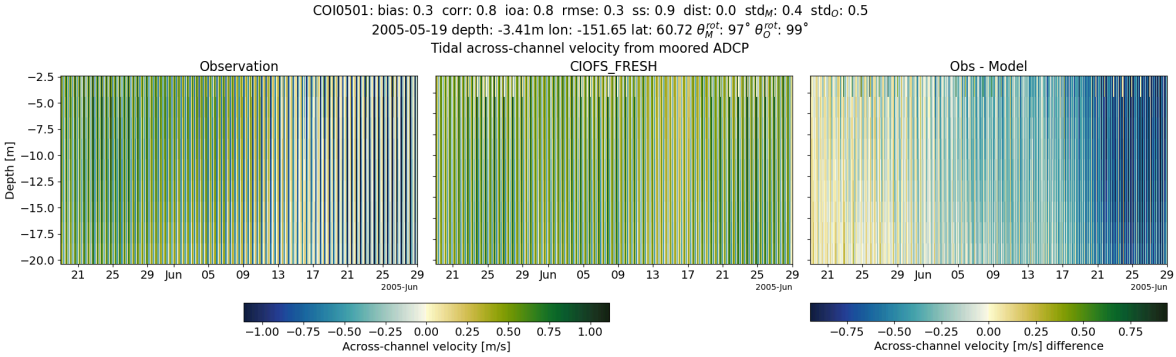
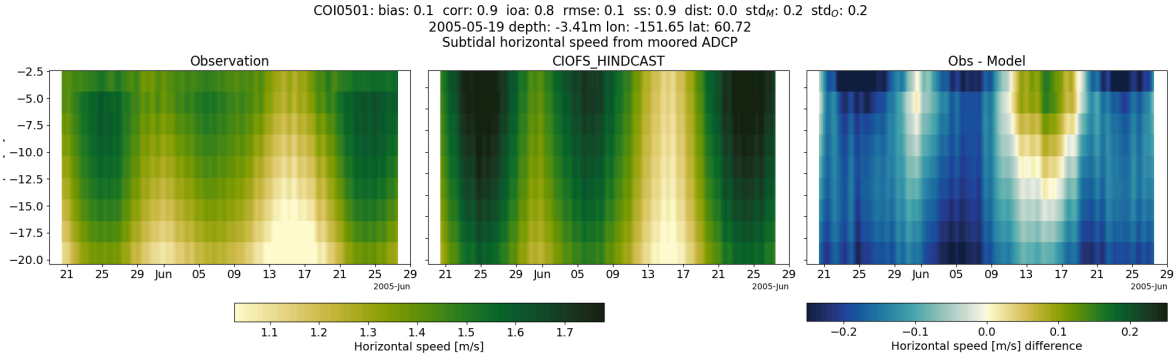


Subtidal

Horizontal speed

CIOFS_HINDCAST



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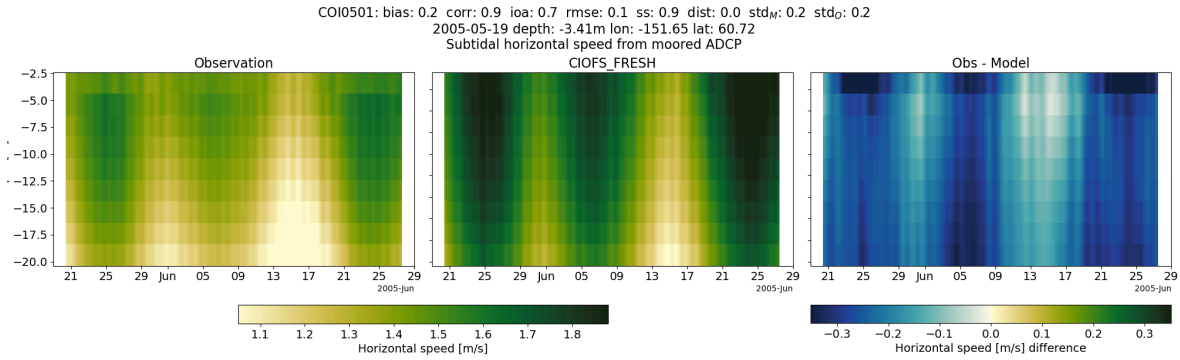
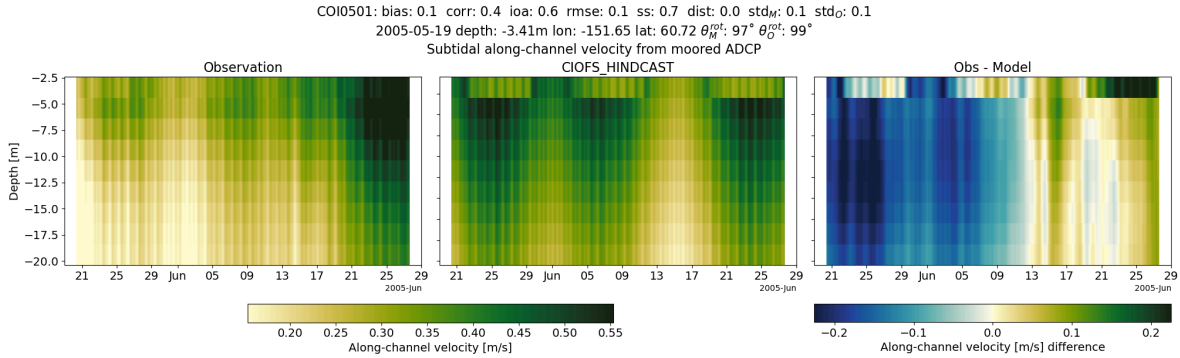


Along-channel velocity

CIOFS_HINDCAST



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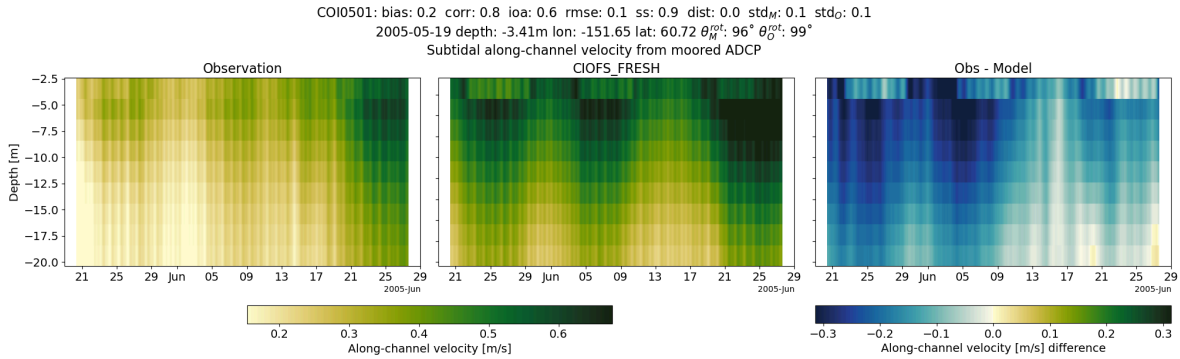
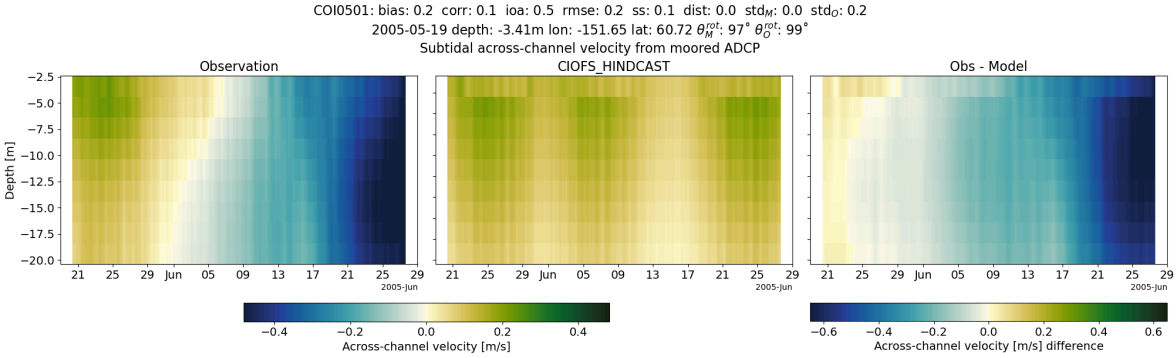


Across-channel velocity

CIOFS_HINDCAST



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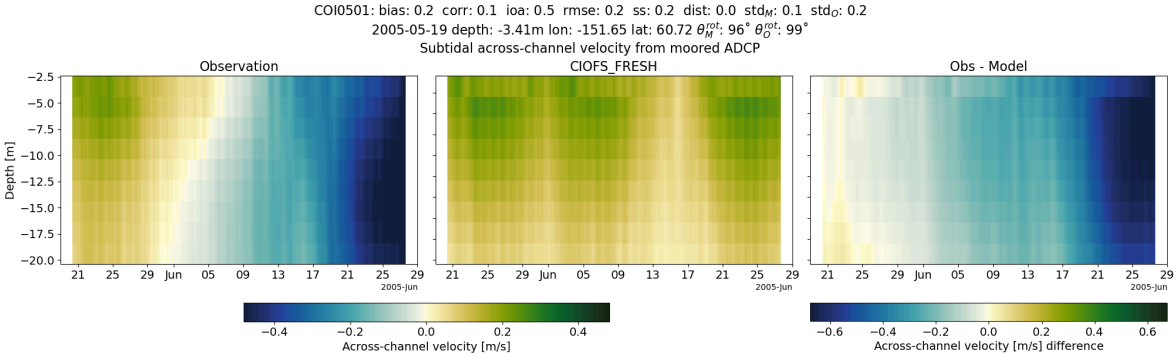
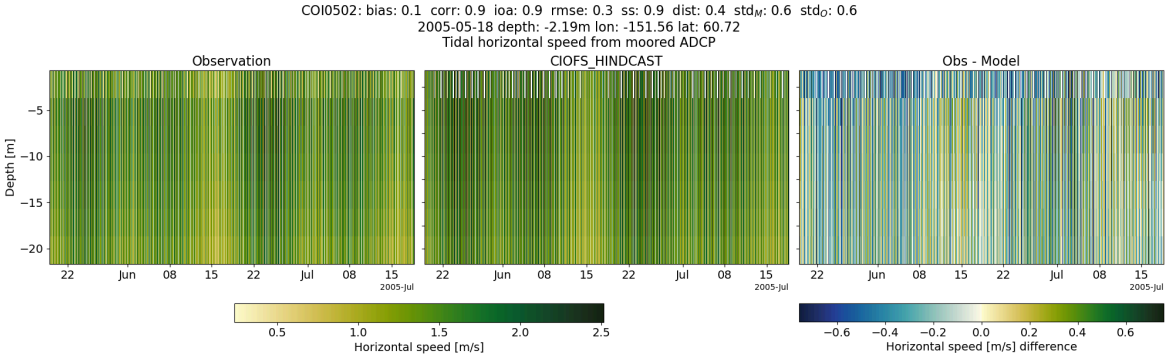


COI0502

Tidal

Horizontal speed

CIOFS_HINDCAST



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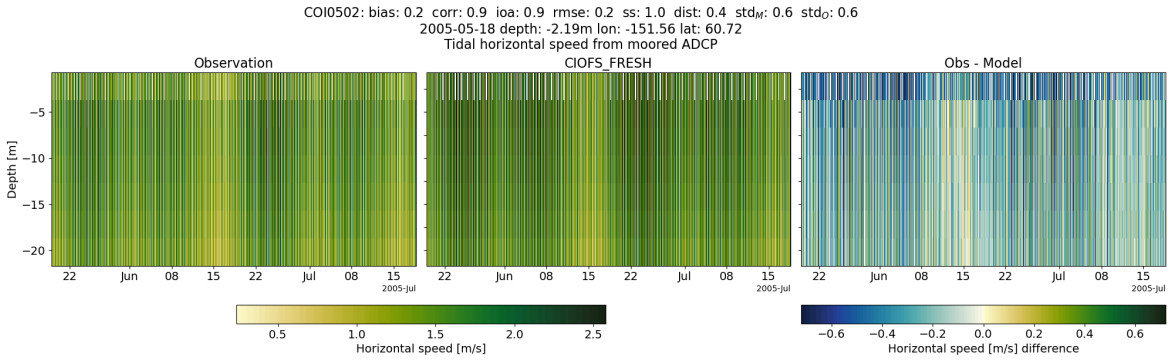
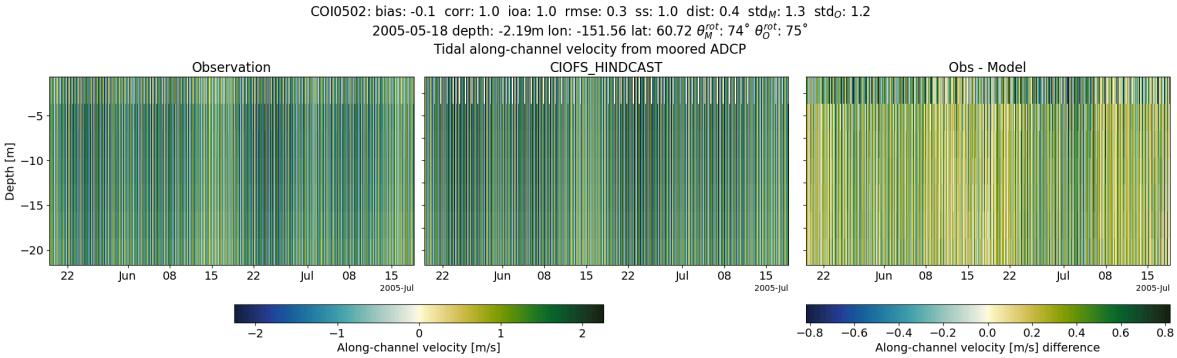


Along-channel velocity

CIOFS_HINDCAST



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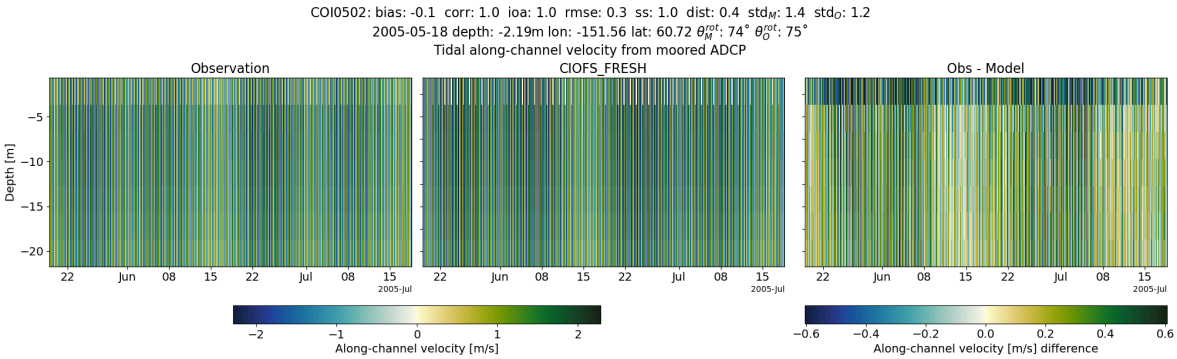
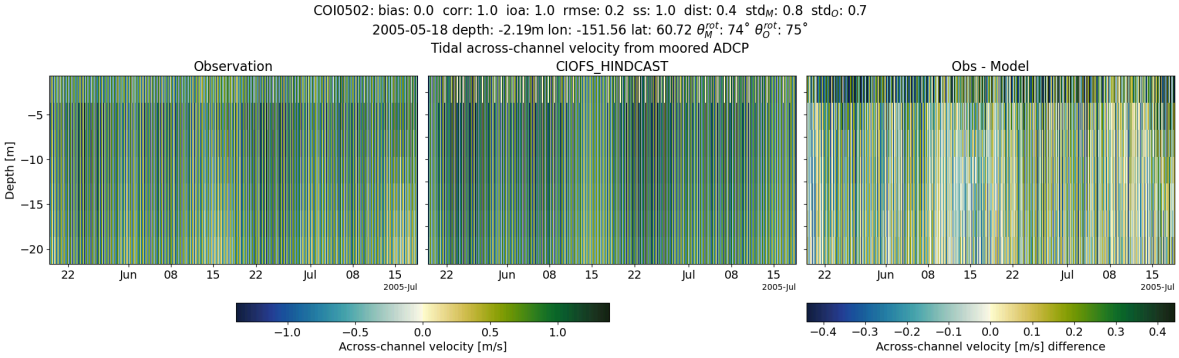
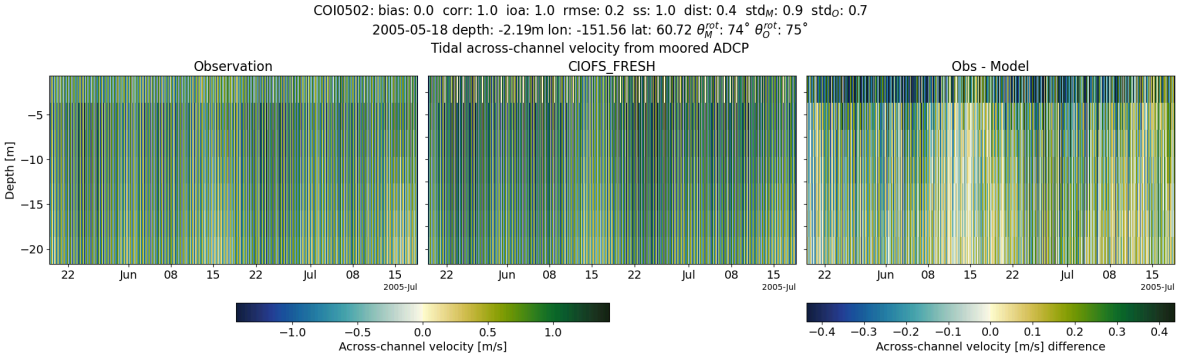


Across-channel velocity

CIOFS_HINDCAST



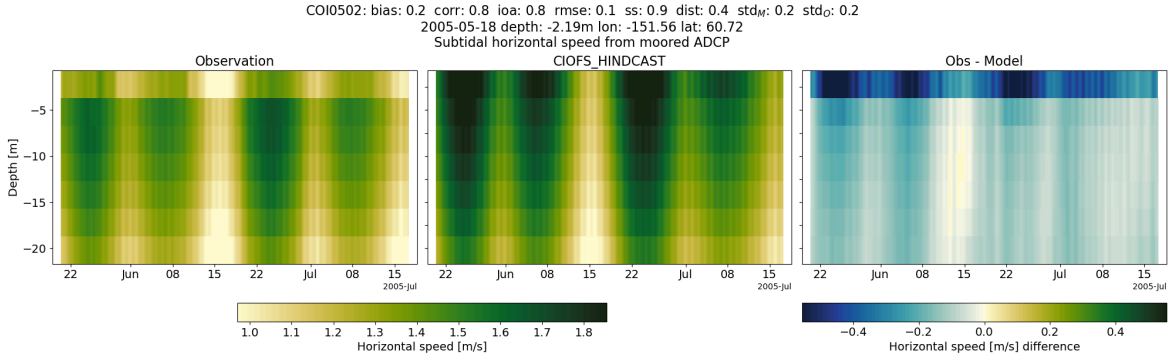
CIOFS_FRESH



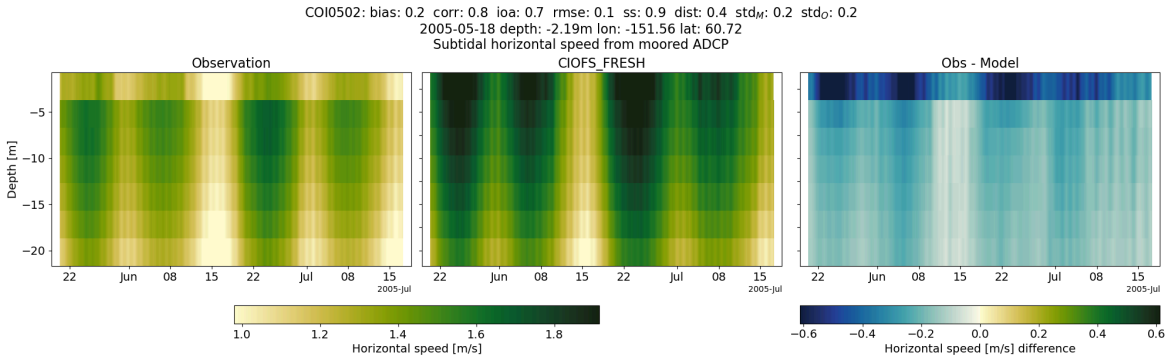
Subtidal

Horizontal speed

CIOFS_HINDCAST

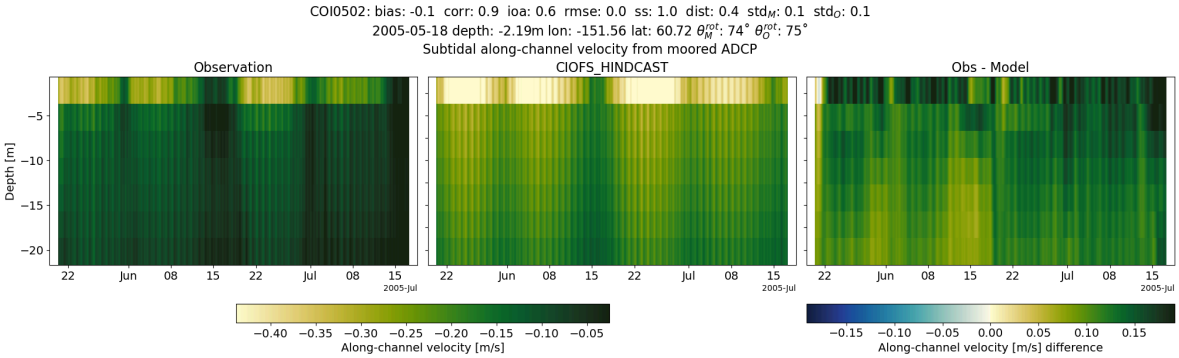


CIOFS_FRESH

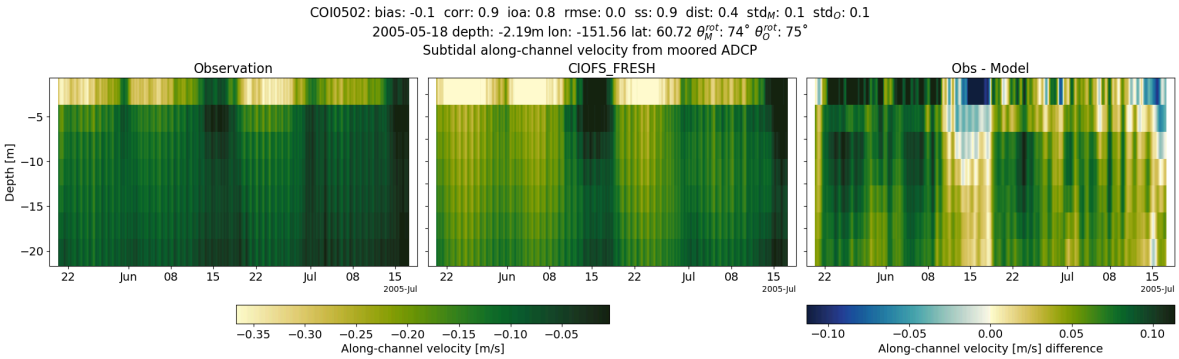


Along-channel velocity

CIOFS_HINDCAST

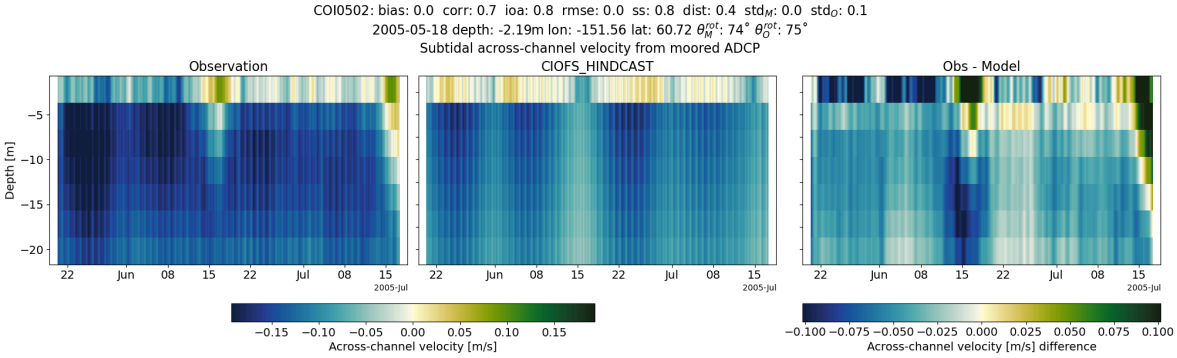


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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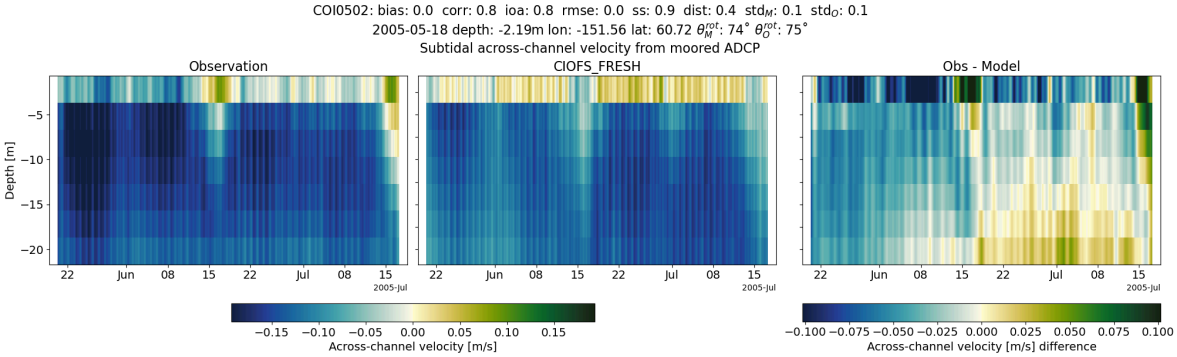
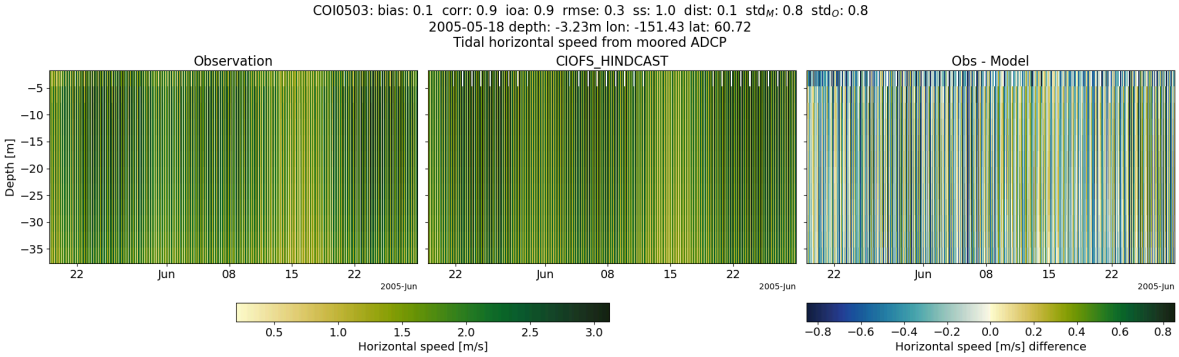


COI0503

Tidal

Horizontal speed

CIOFS_HINDCAST



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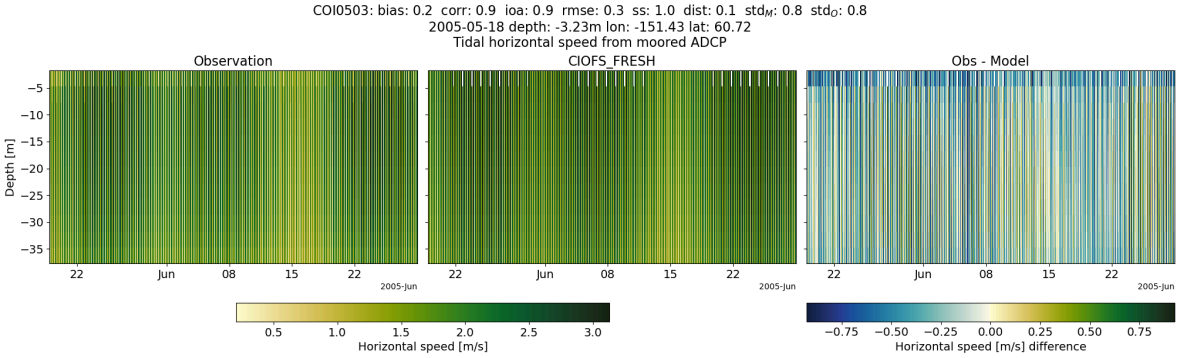
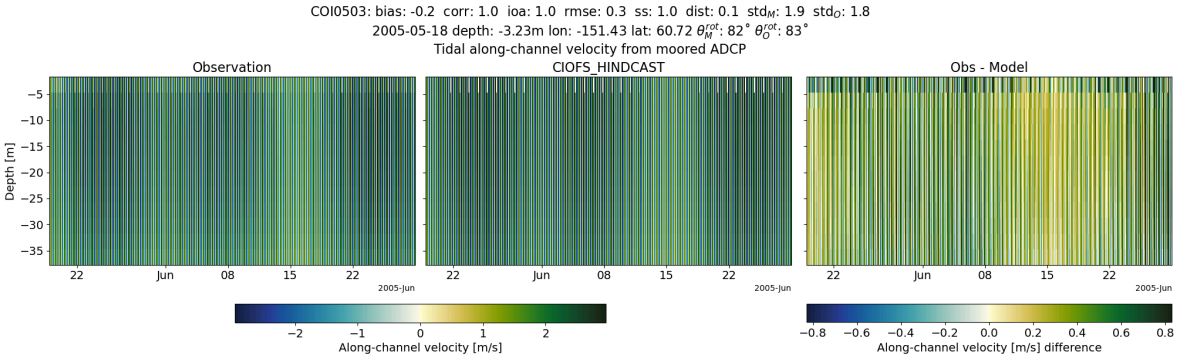


Along-channel velocity

CIOFS_HINDCAST



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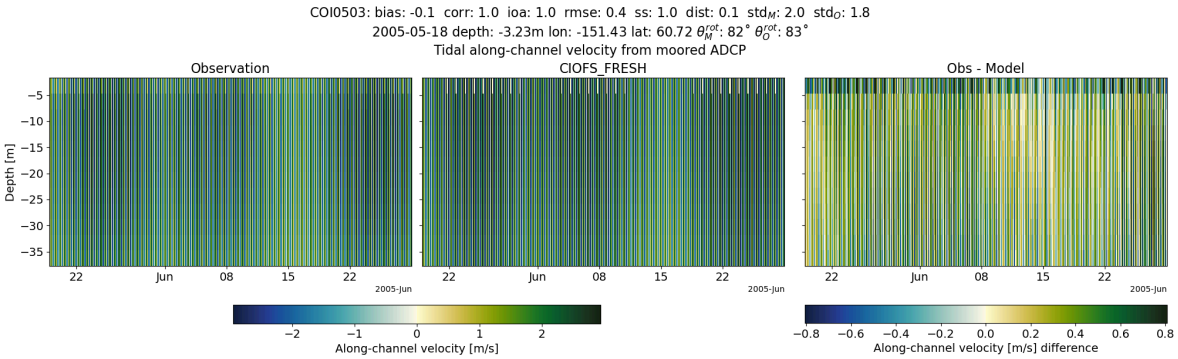
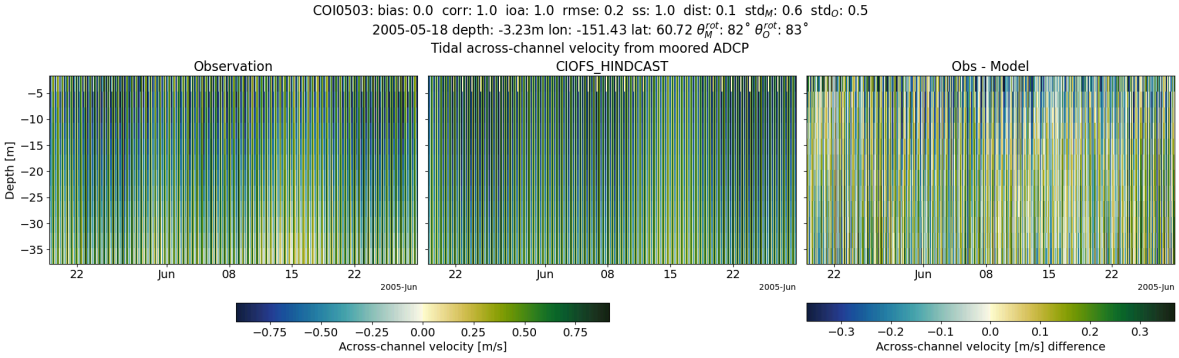


Across-channel velocity

CIOFS_HINDCAST



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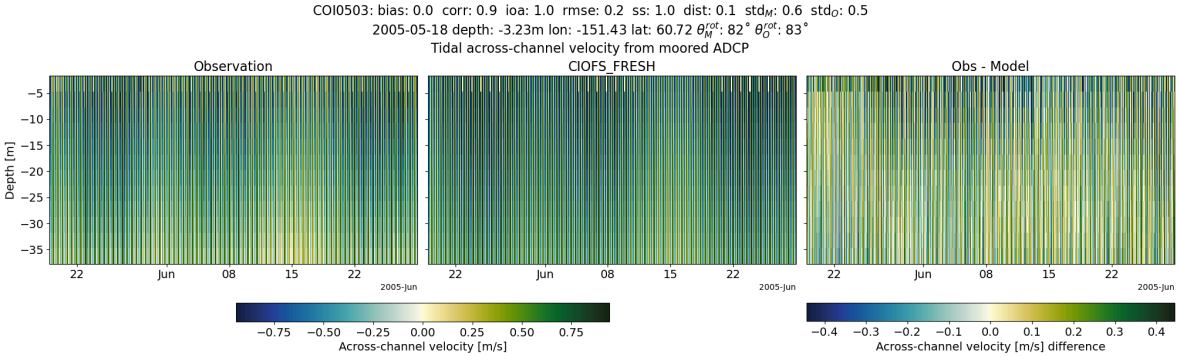
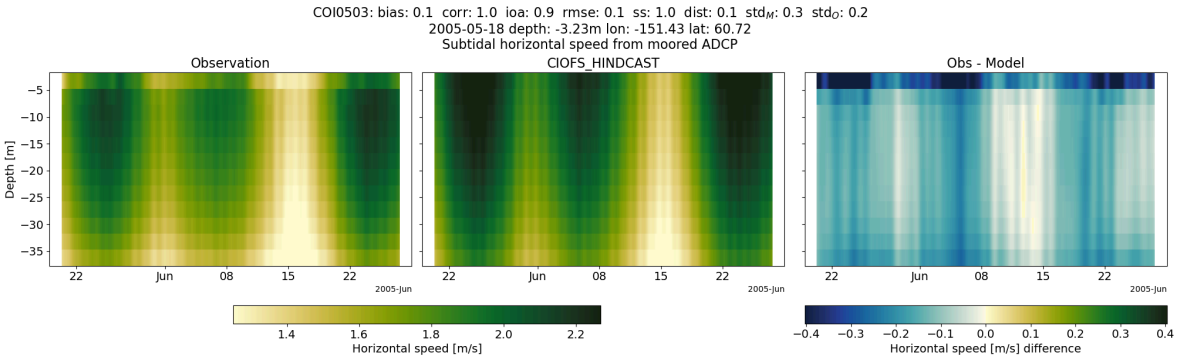


Subtidal

Horizontal speed

CIOFS_HINDCAST



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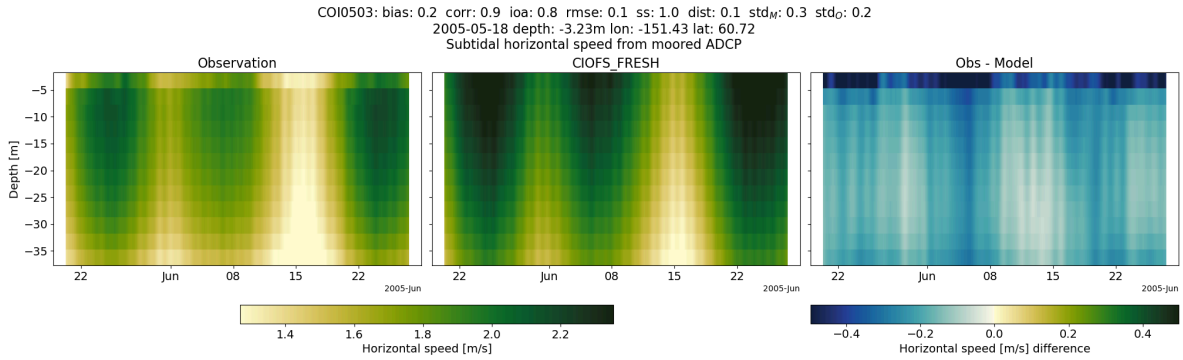
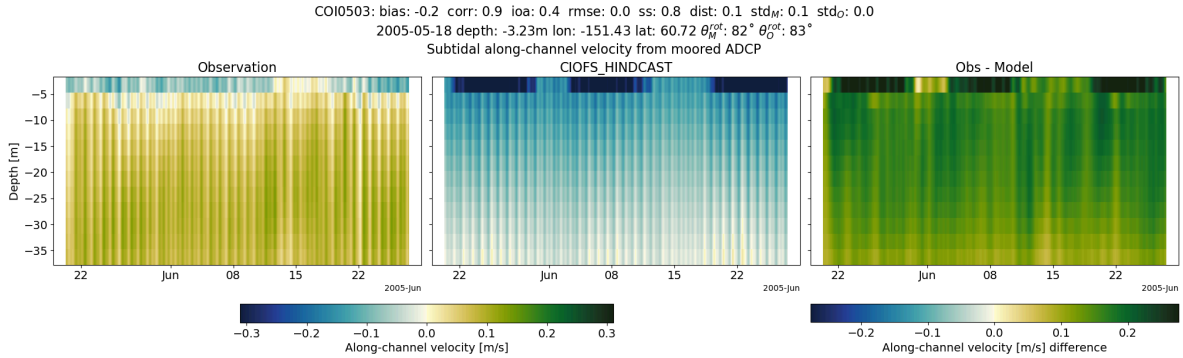


Along-channel velocity

CIOFS_HINDCAST



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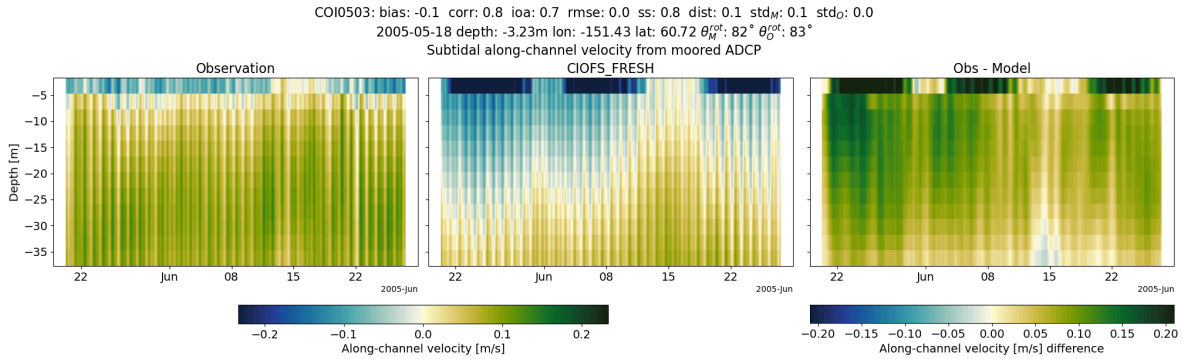
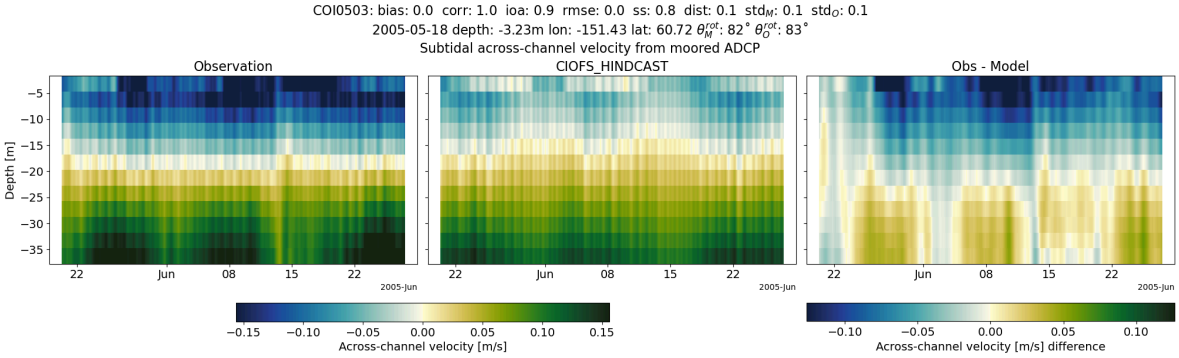


Across-channel velocity

CIOFS_HINDCAST



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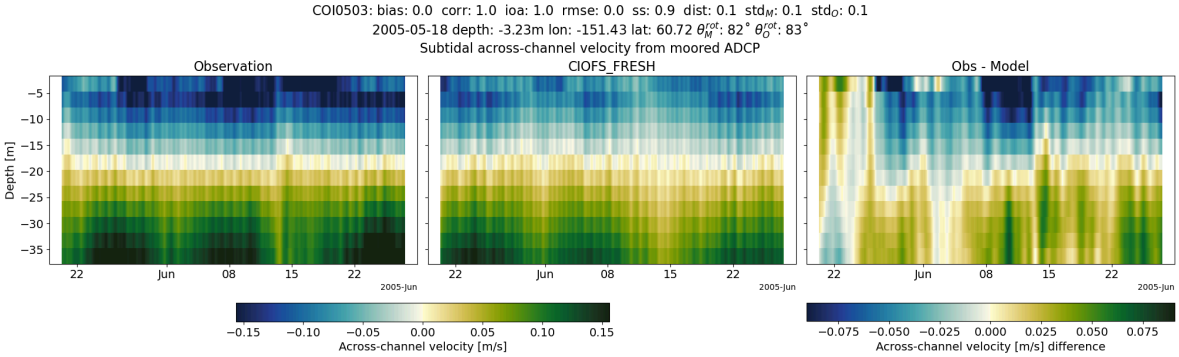
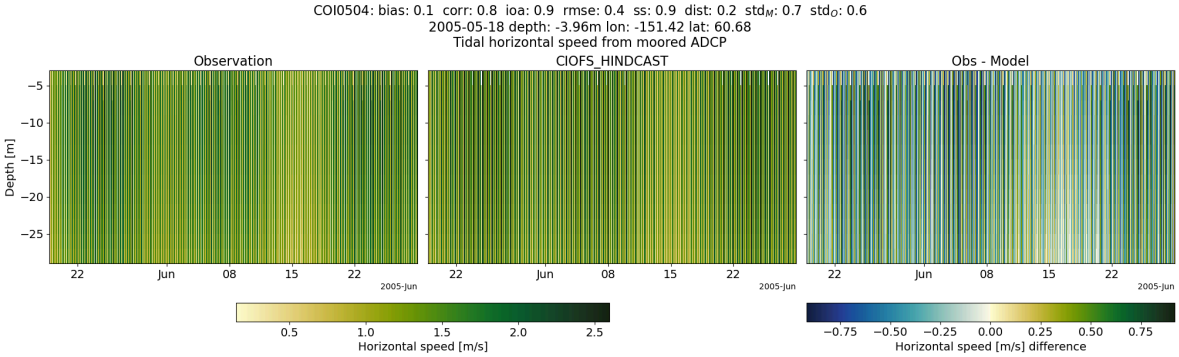


COI0504

Tidal

Horizontal speed

CIOFS_HINDCAST



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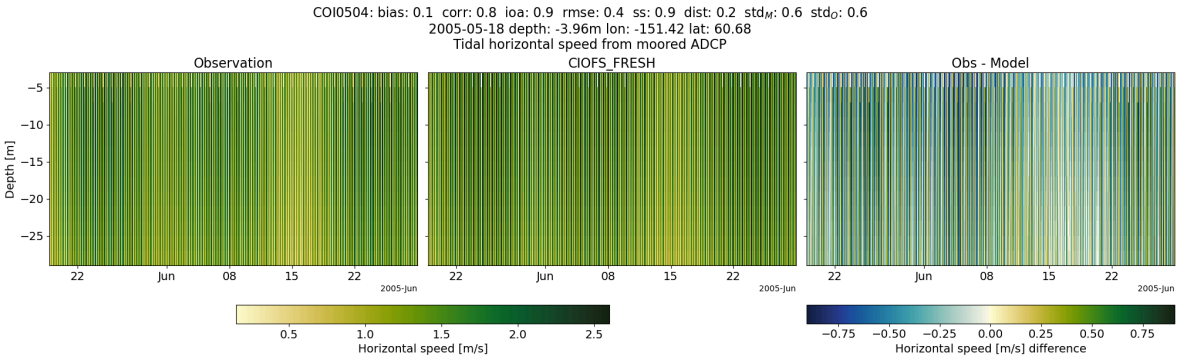
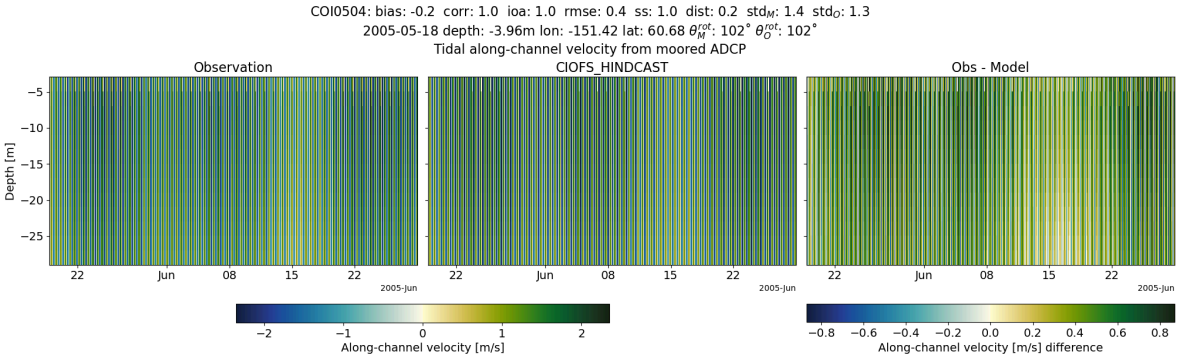


Along-channel velocity

CIOFS_HINDCAST



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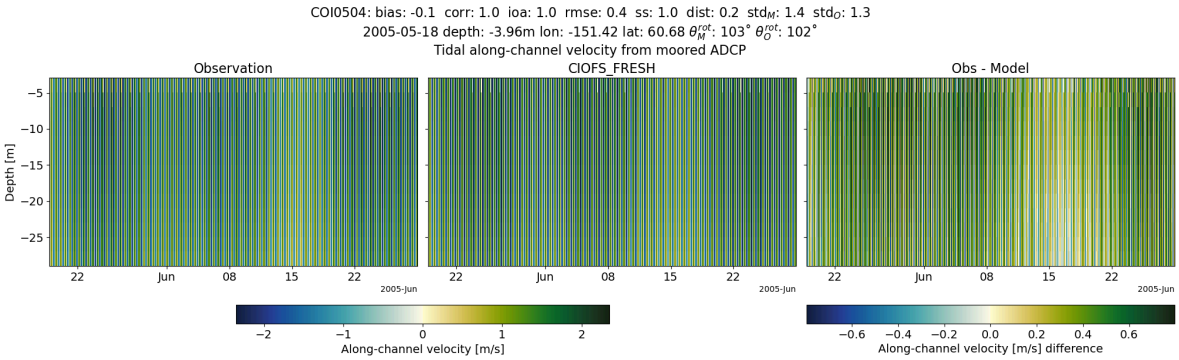
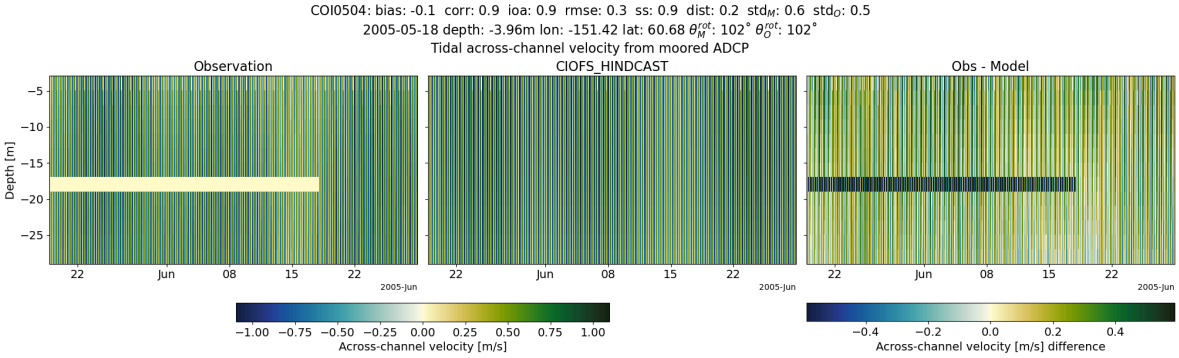


Across-channel velocity

CIOFS_HINDCAST



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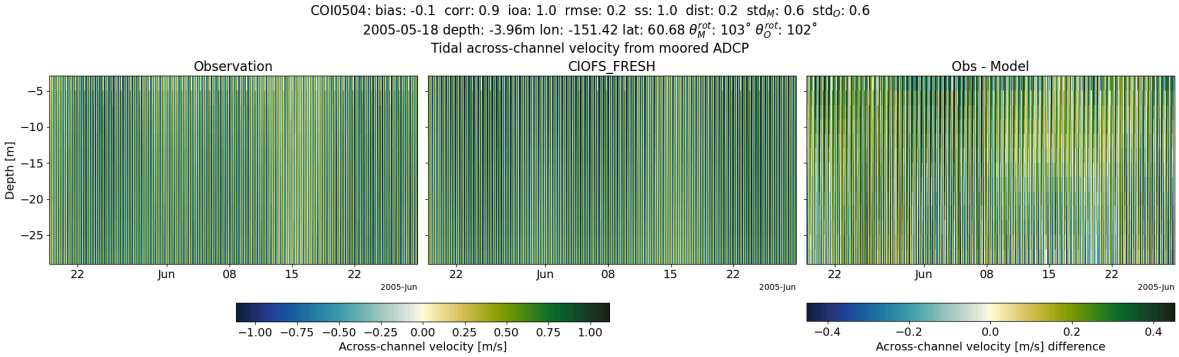
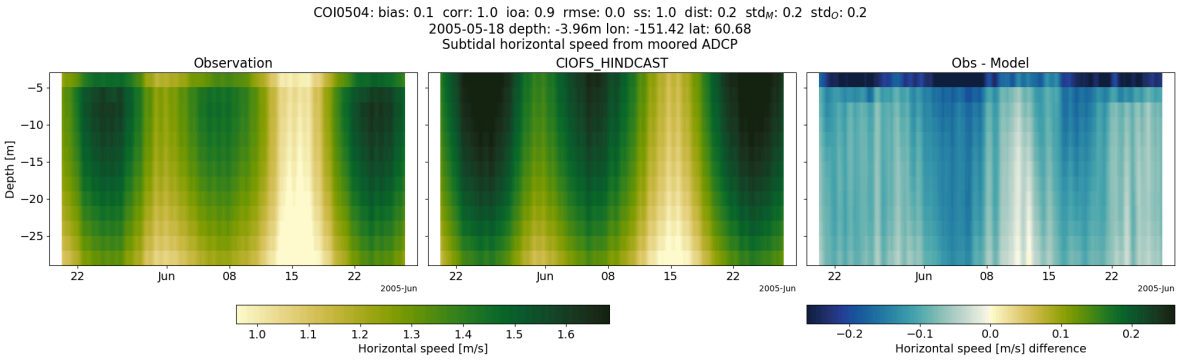


Subtidal

Horizontal speed

CIOFS_HINDCAST



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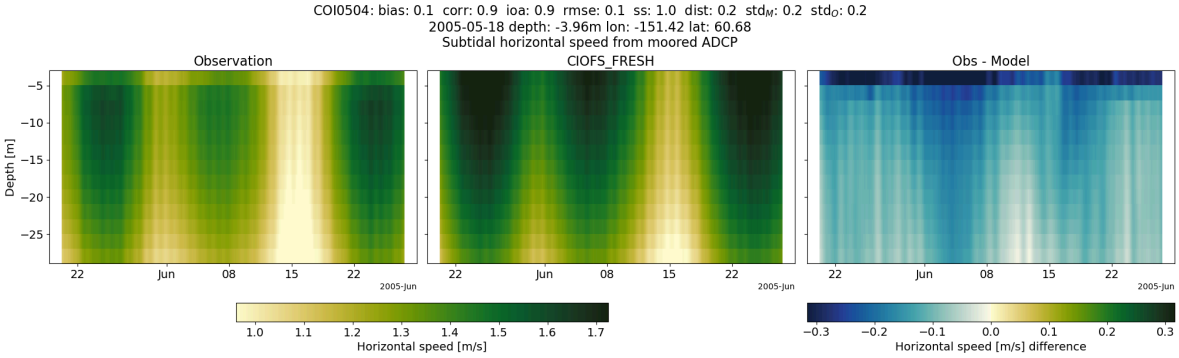
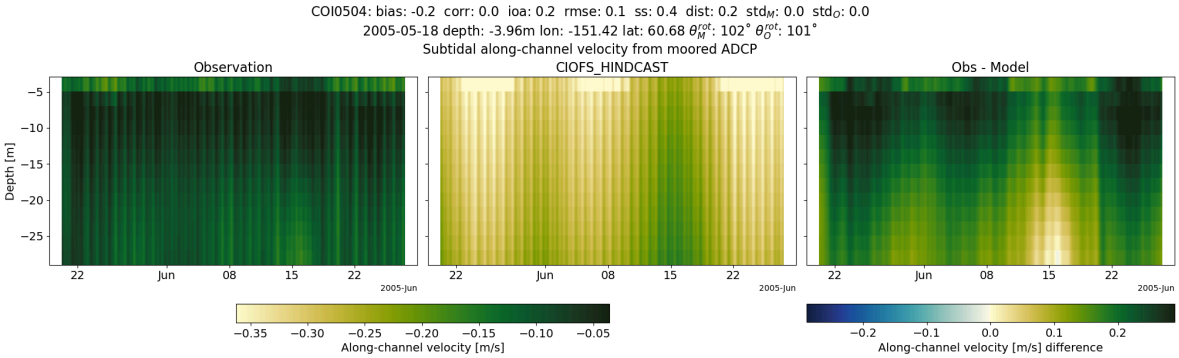
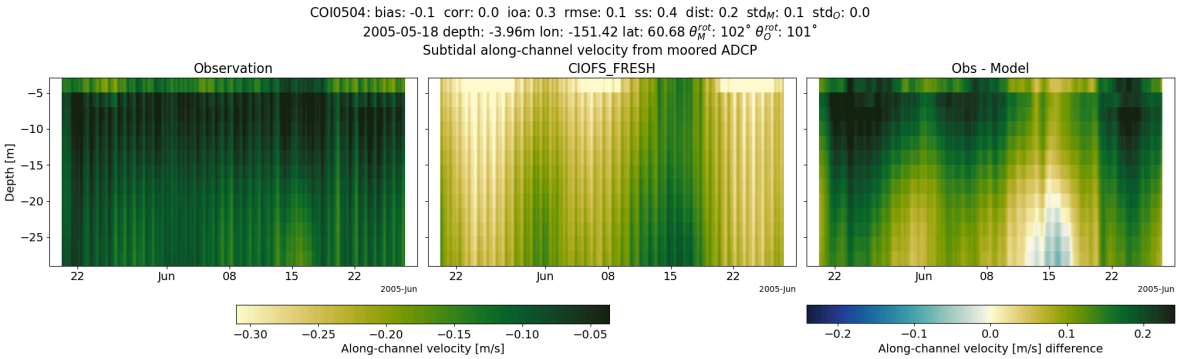


Along-channel velocity

CIOFS_HINDCAST

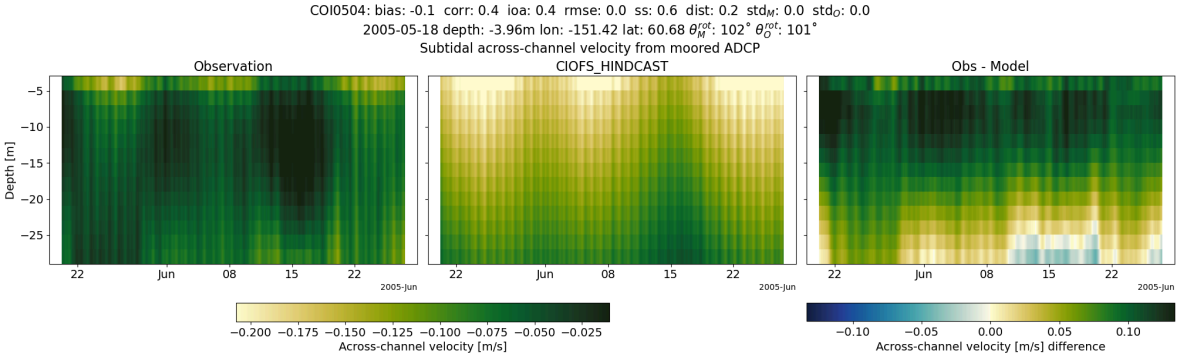


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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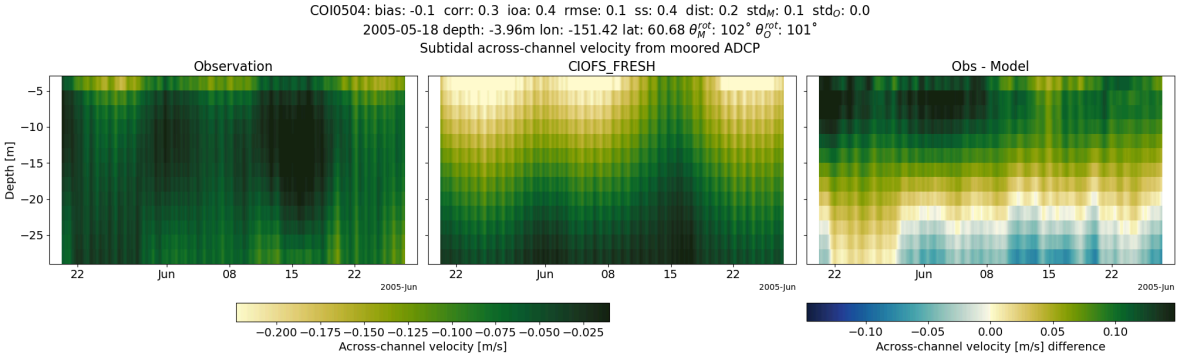
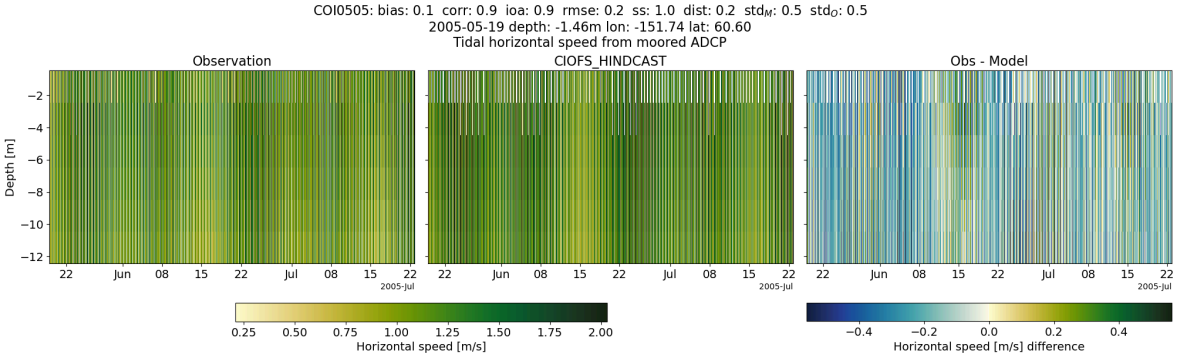


COI0505

Tidal

Horizontal speed

CIOFS_HINDCAST



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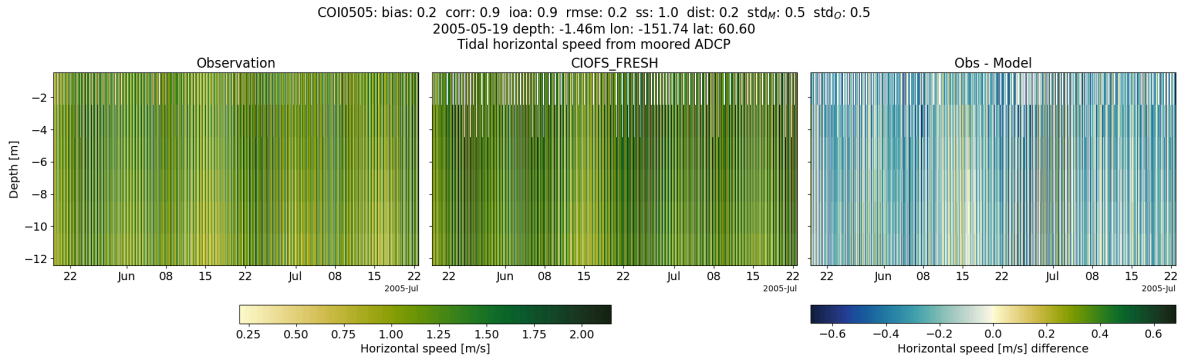
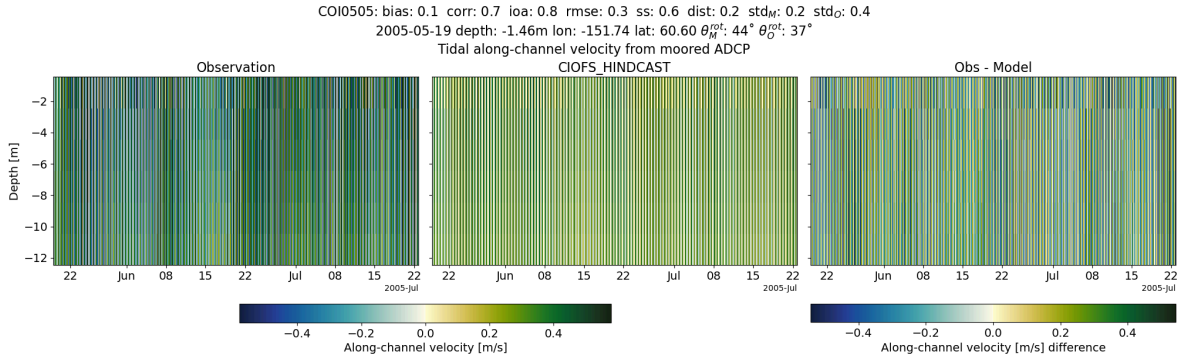
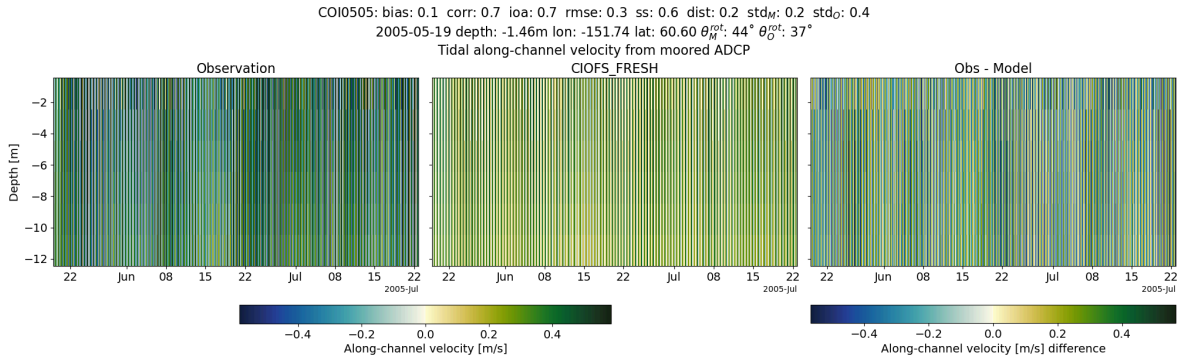


Along-channel velocity

CIOFS_HINDCAST

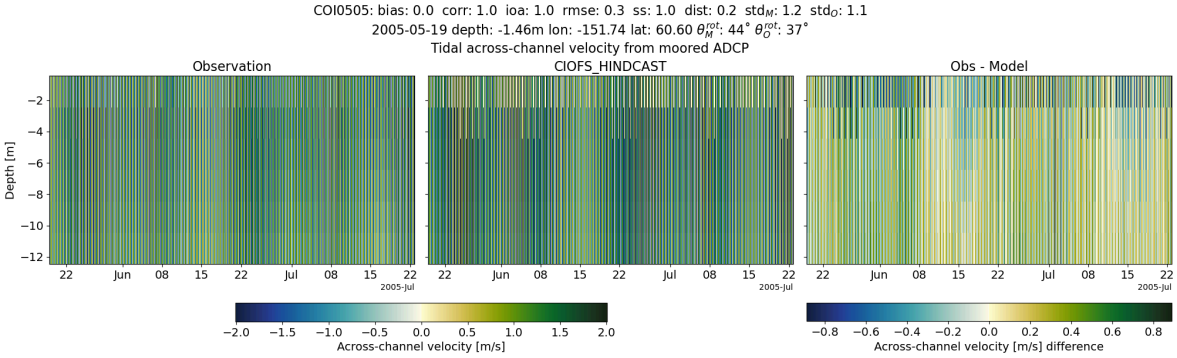


CIOFS_FRESH

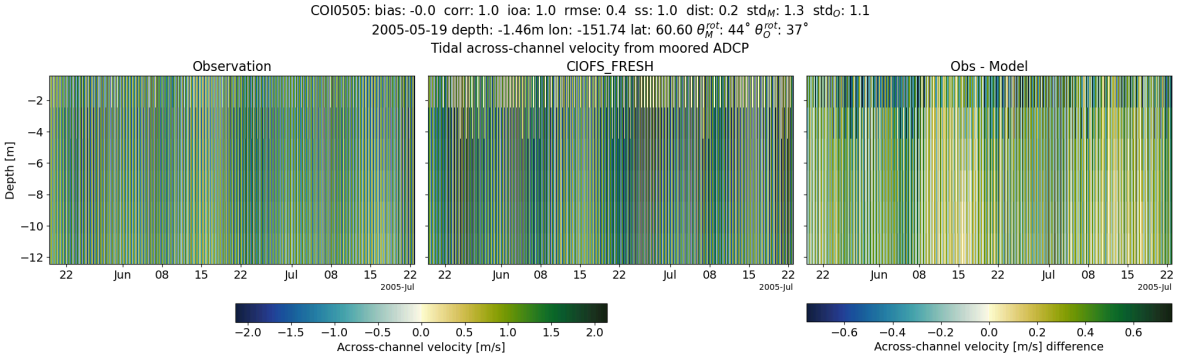


Across-channel velocity

CIOFS_HINDCAST



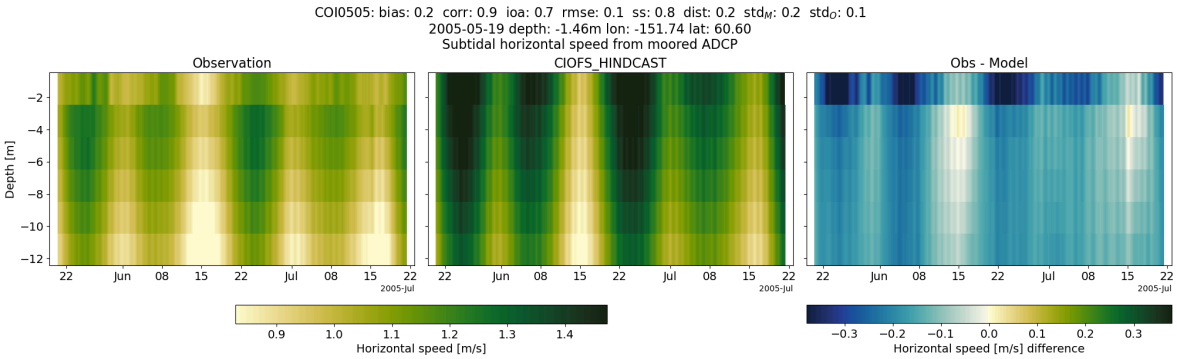
CIOFS_FRESH



Subtidal

Horizontal speed

CIOFS_HINDCAST



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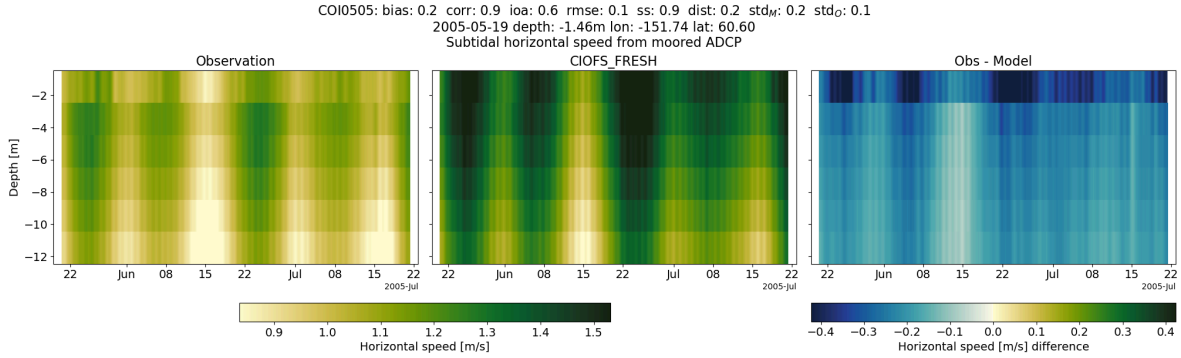
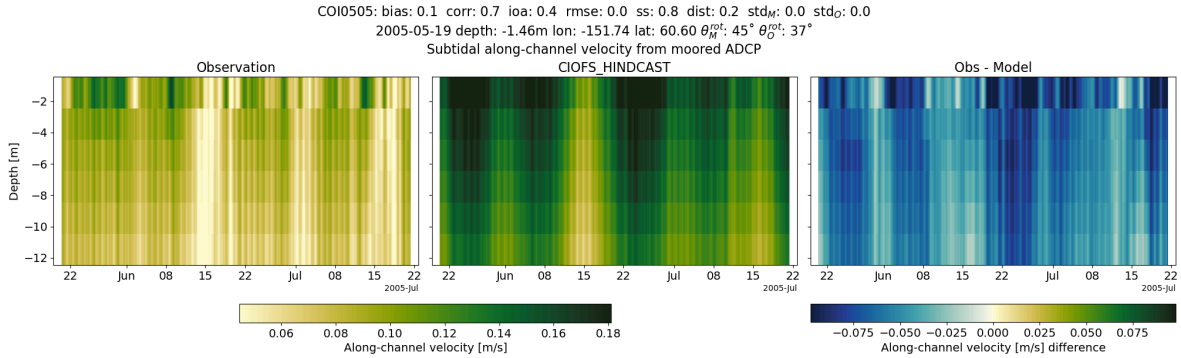
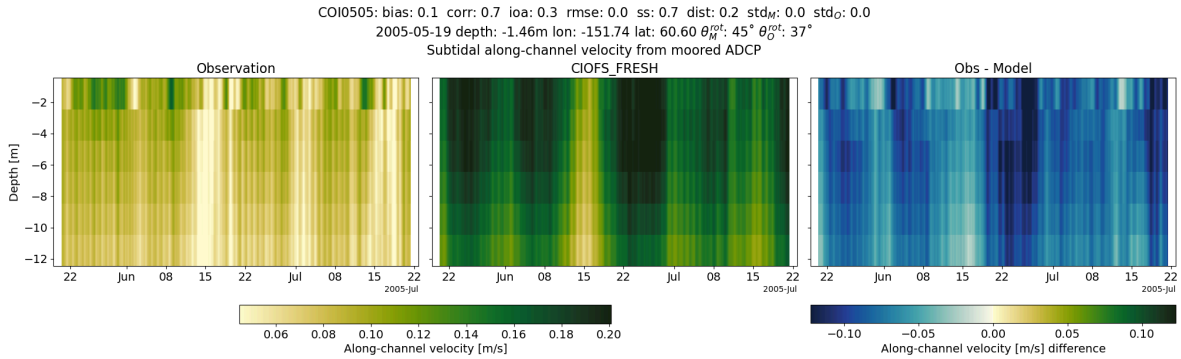


Along-channel velocity

CIOFS_HINDCAST

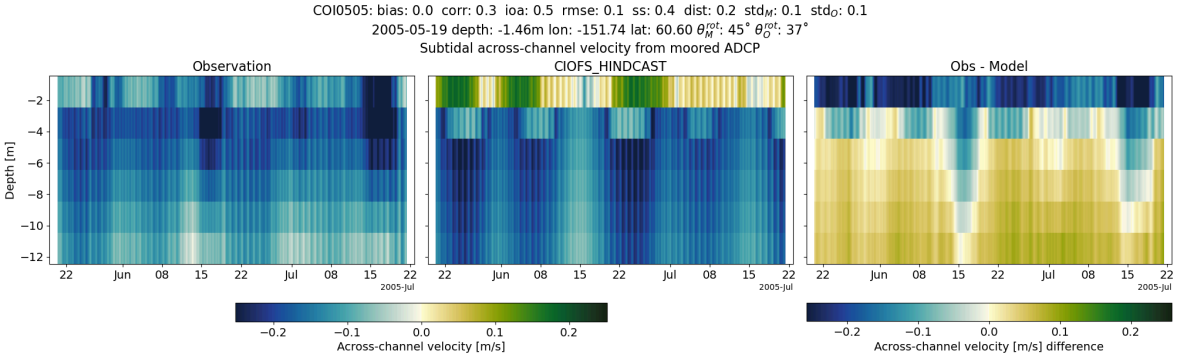


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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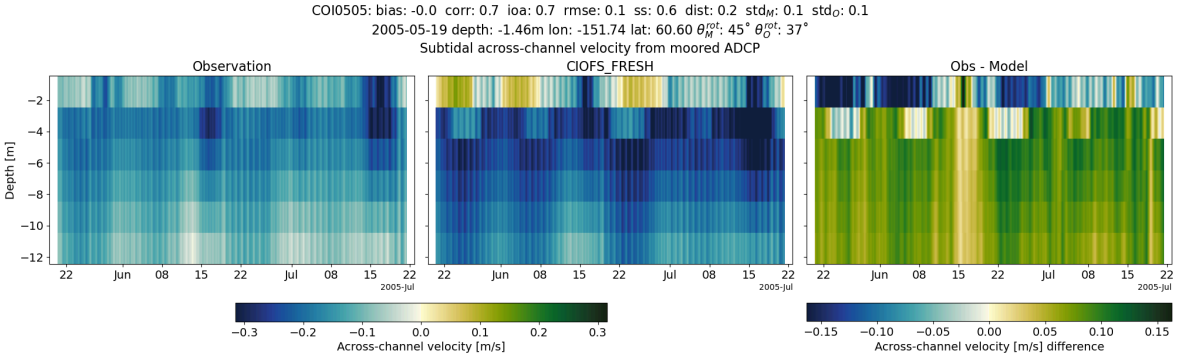
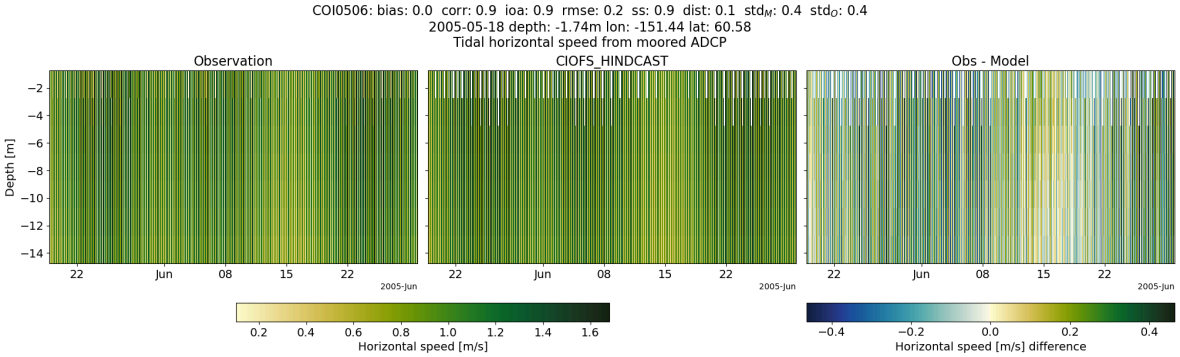


COI0506

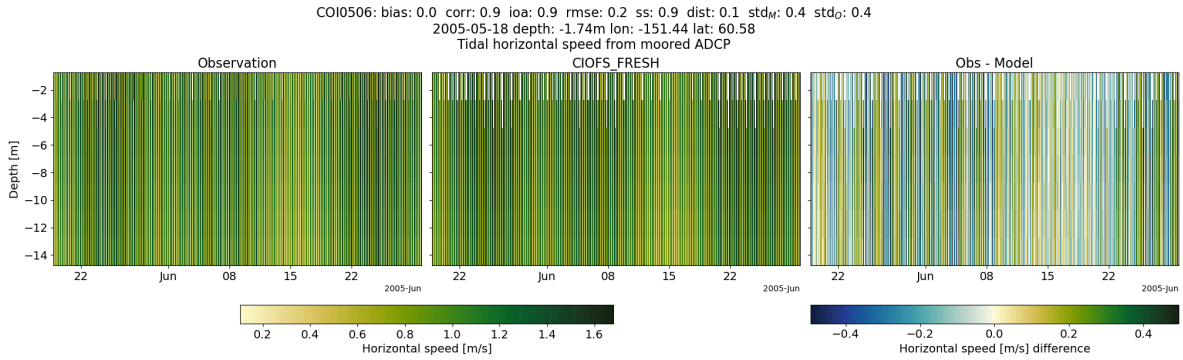
Tidal

Horizontal speed

CIOFS_HINDCAST

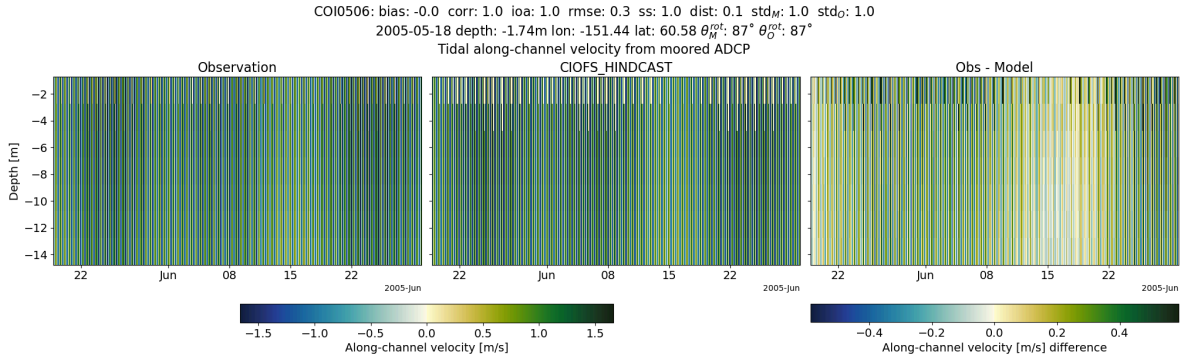


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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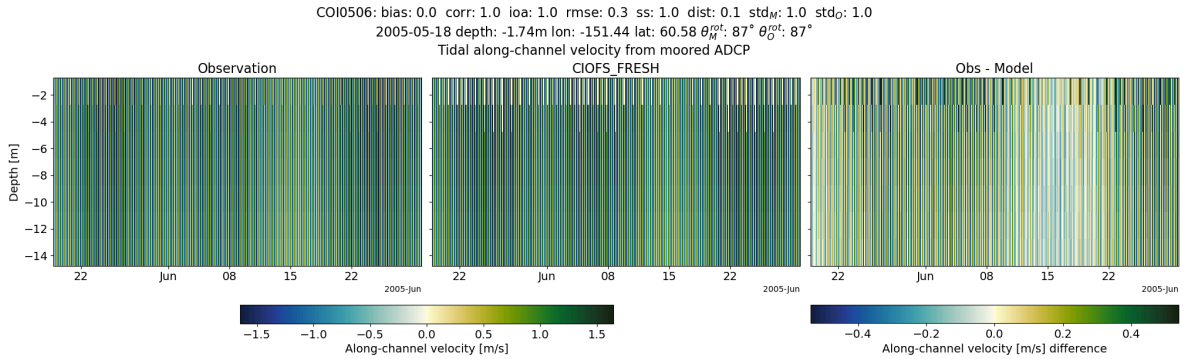
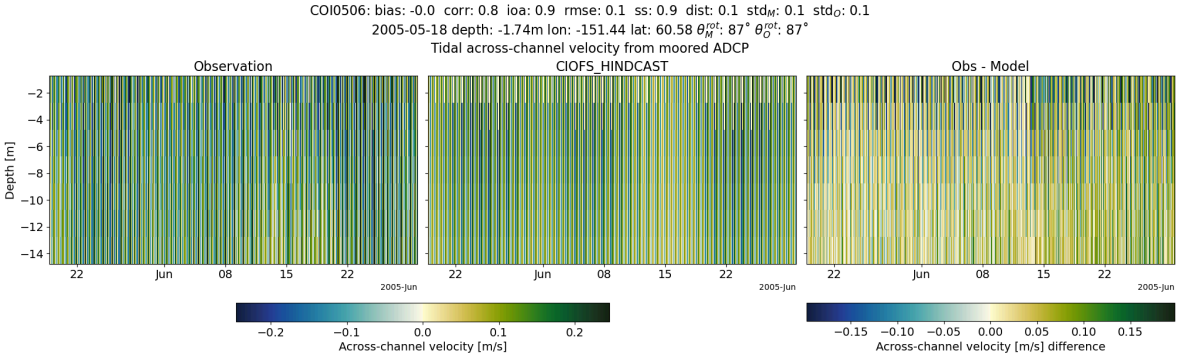


Across-channel velocity

CIOFS_HINDCAST



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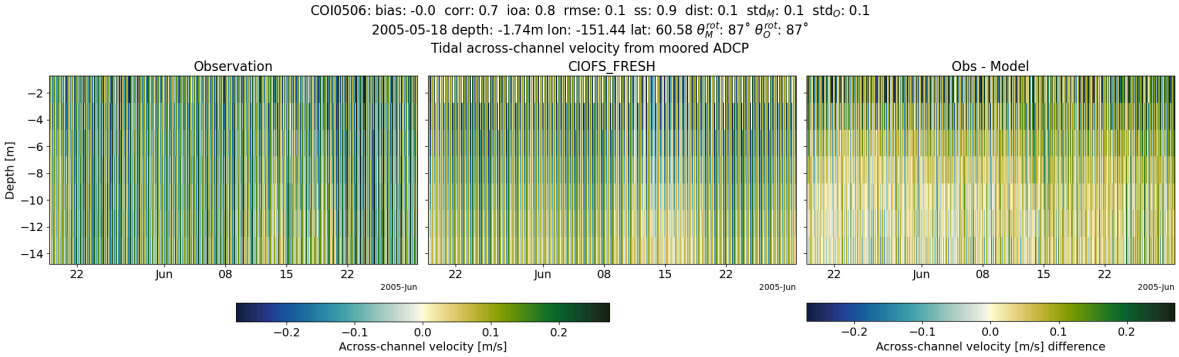
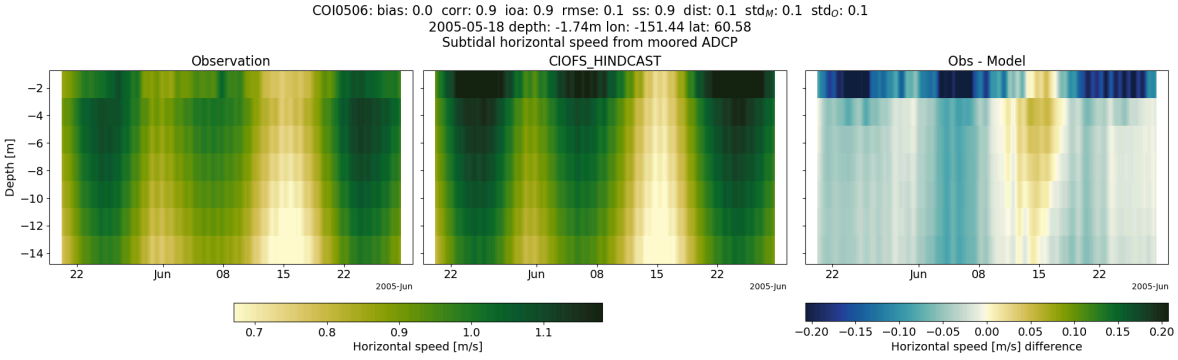


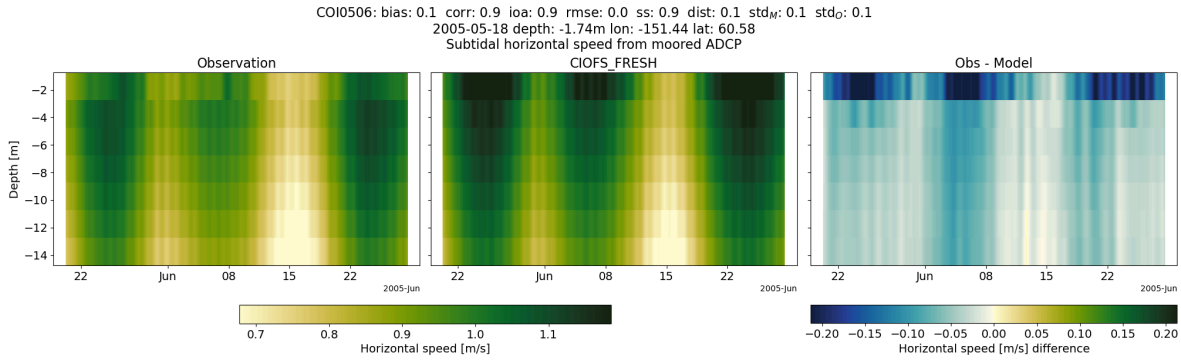
Subtidal

Horizontal speed

CIOFS_HINDCAST

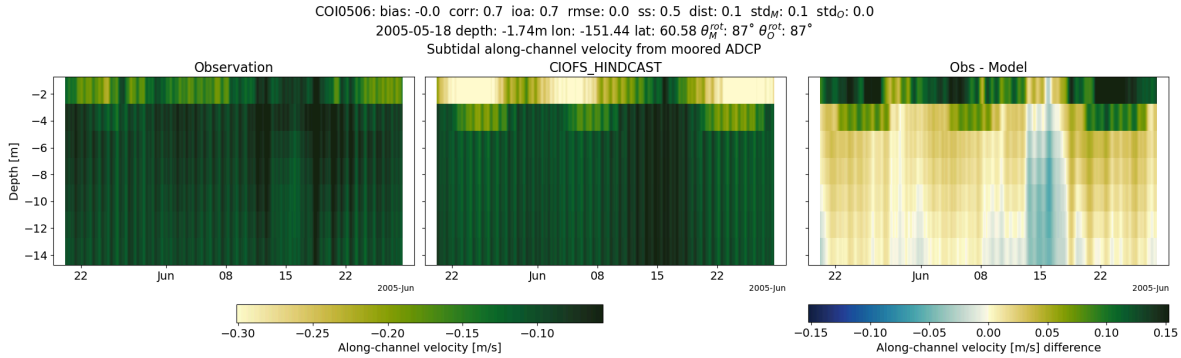


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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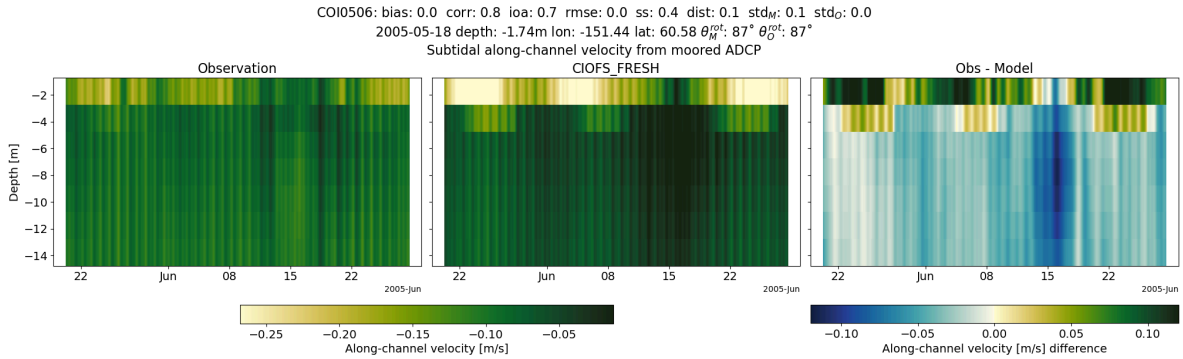
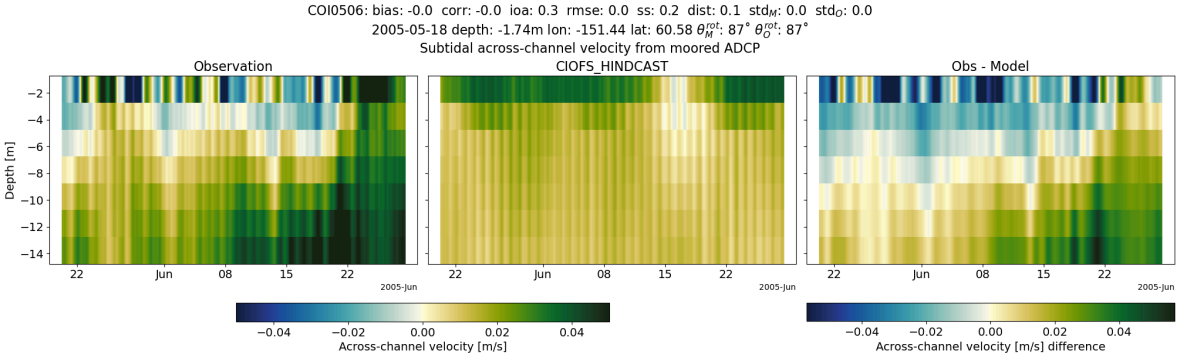


Across-channel velocity

CIOFS_HINDCAST



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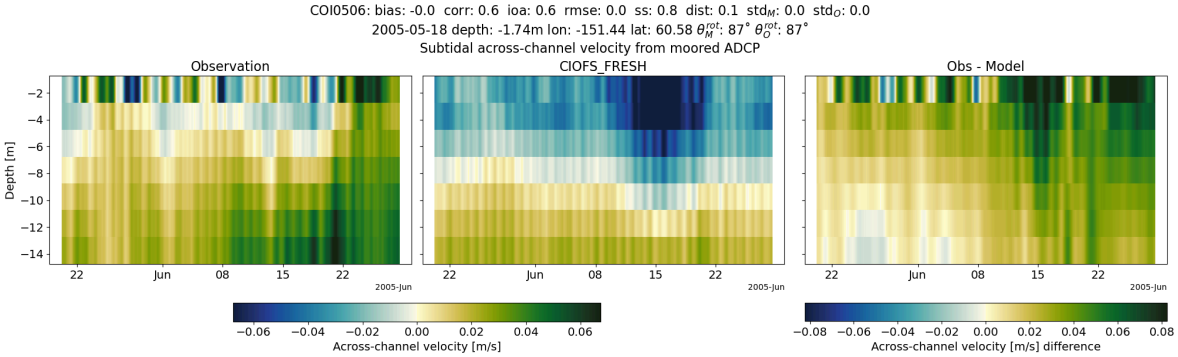
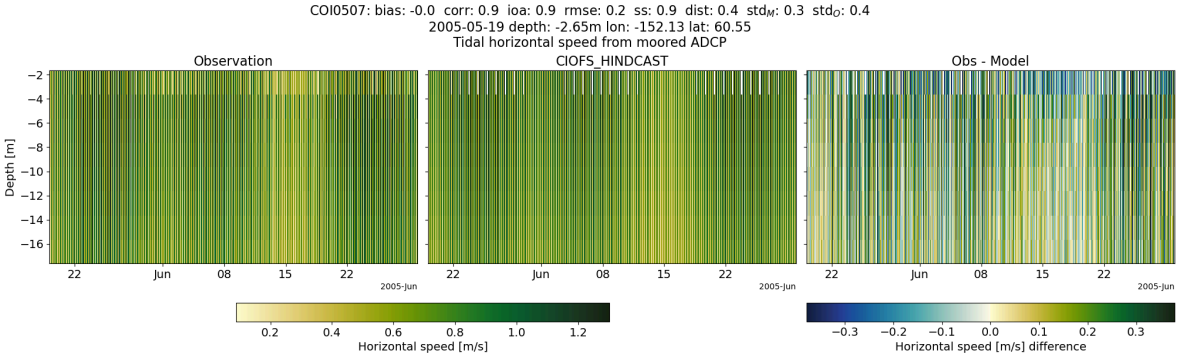


COI0507

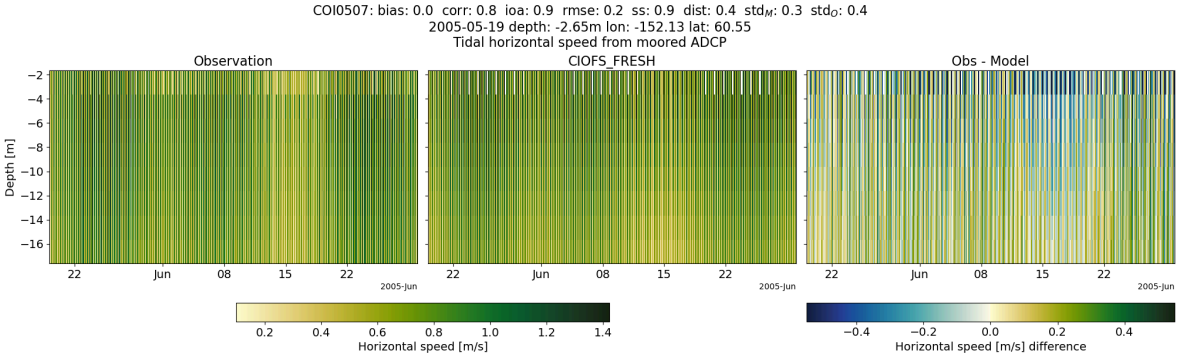
Tidal

Horizontal speed

CIOFS_HINDCAST

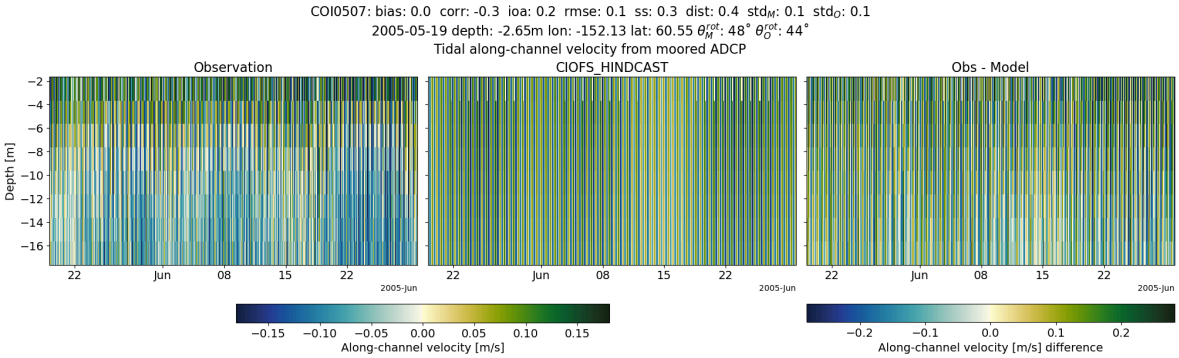


CIOFS_FRESH

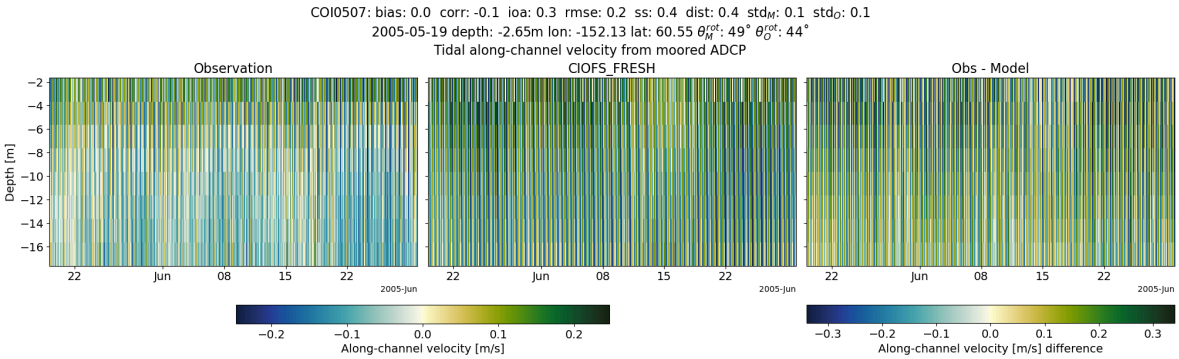


Along-channel velocity

CIOFS_HINDCAST

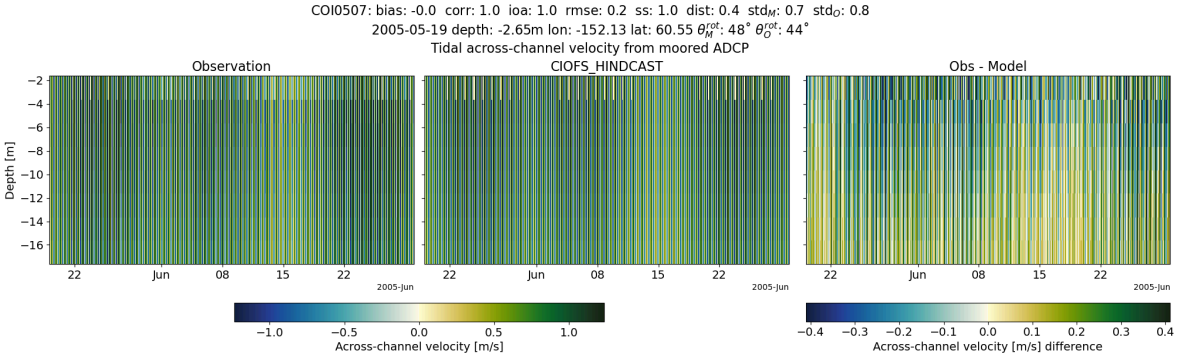


CIOFS_FRESH

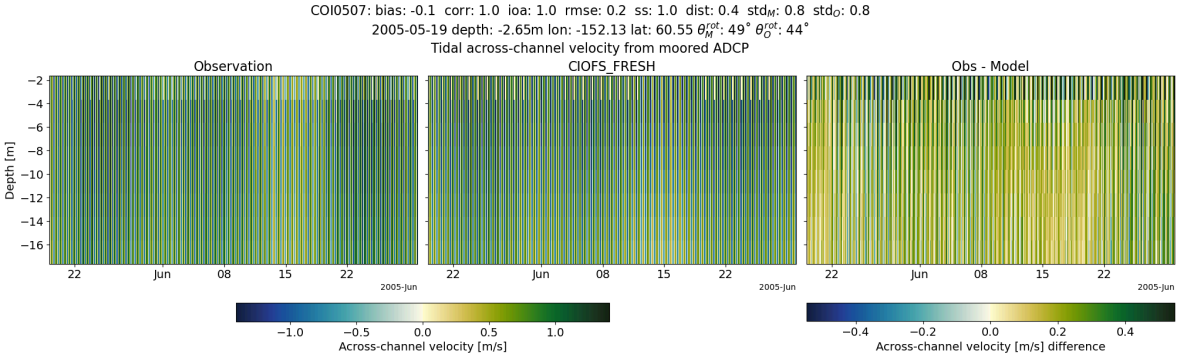


Across-channel velocity

CIOFS_HINDCAST



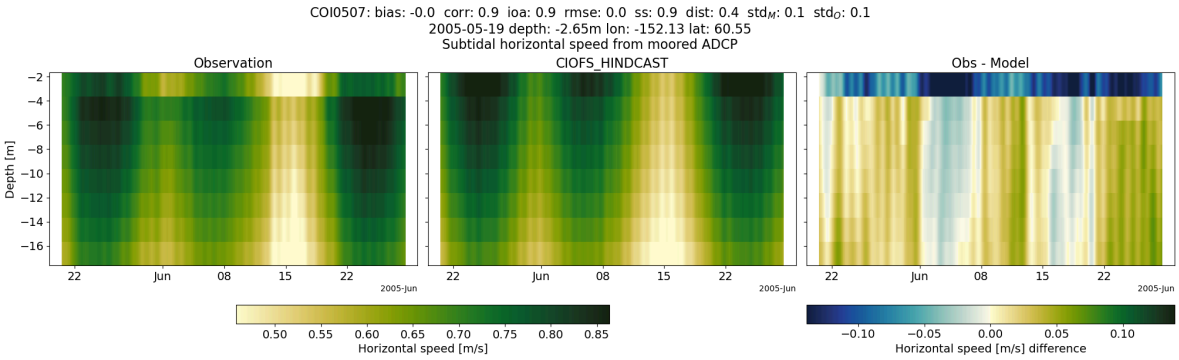
CIOFS_FRESH



Subtidal

Horizontal speed

CIOFS_HINDCAST



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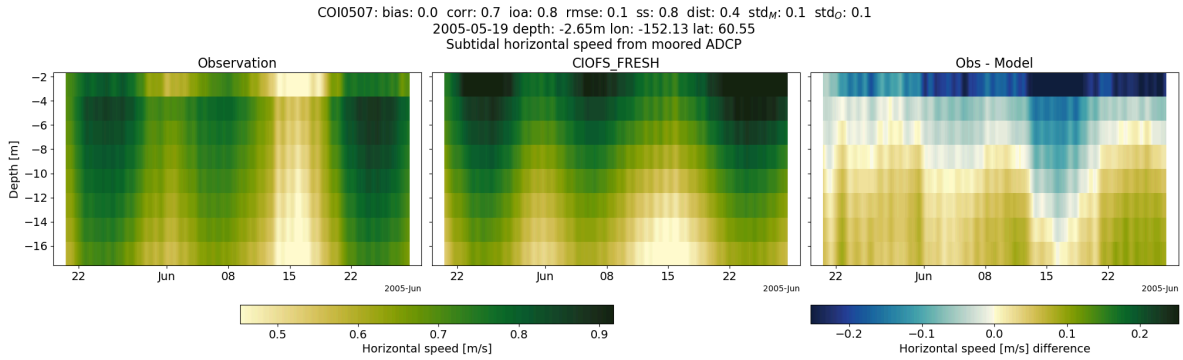
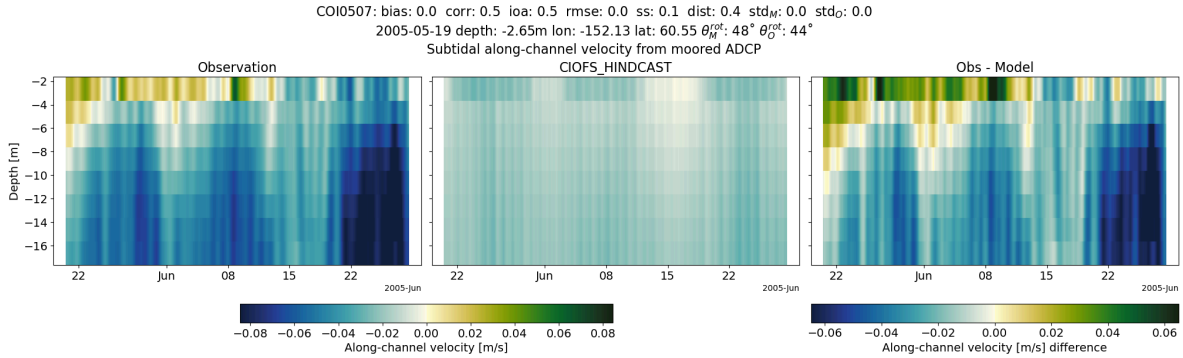
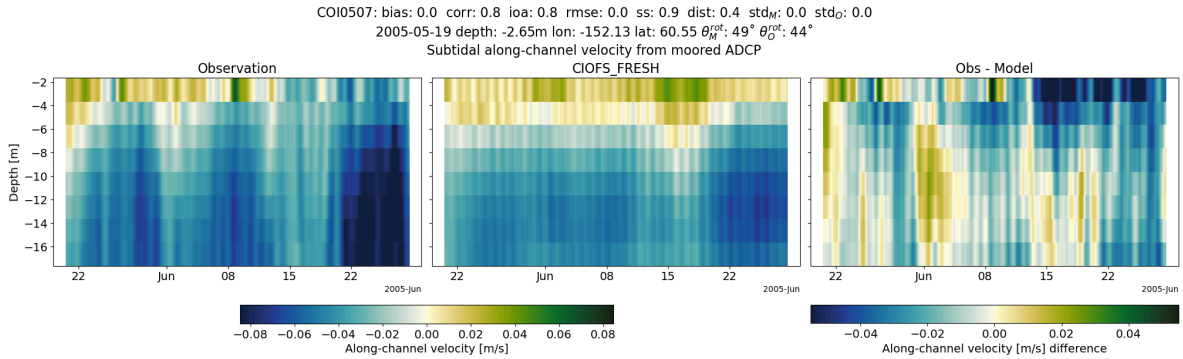


Along-channel velocity

CIOFS_HINDCAST

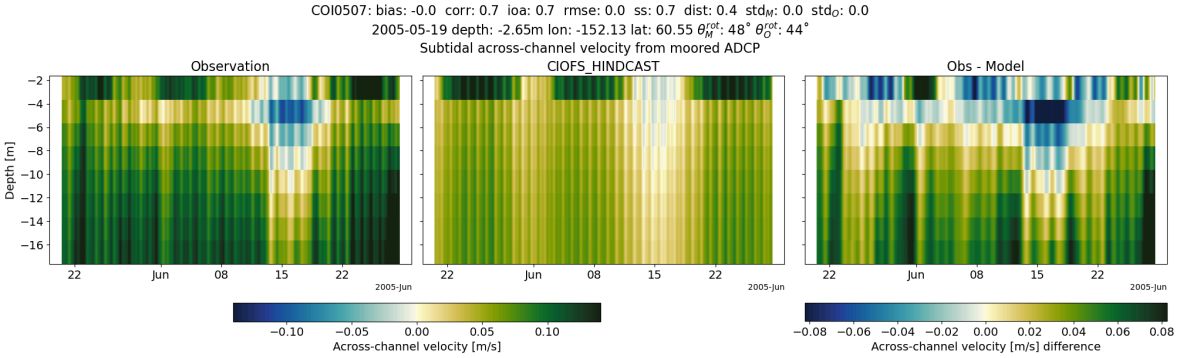


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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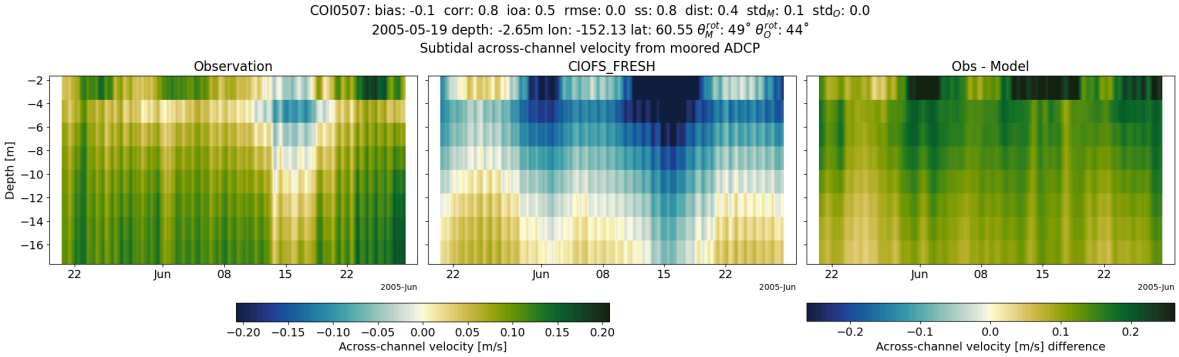
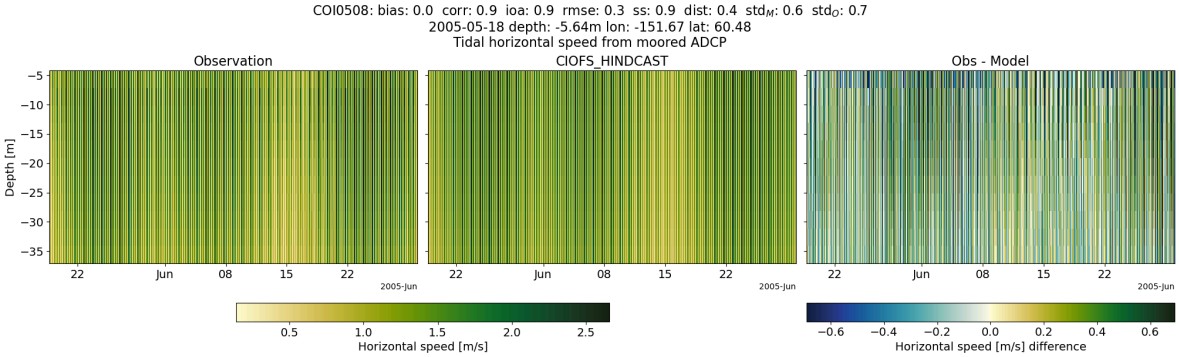


COI0508

Tidal

Horizontal speed

CIOFS_HINDCAST



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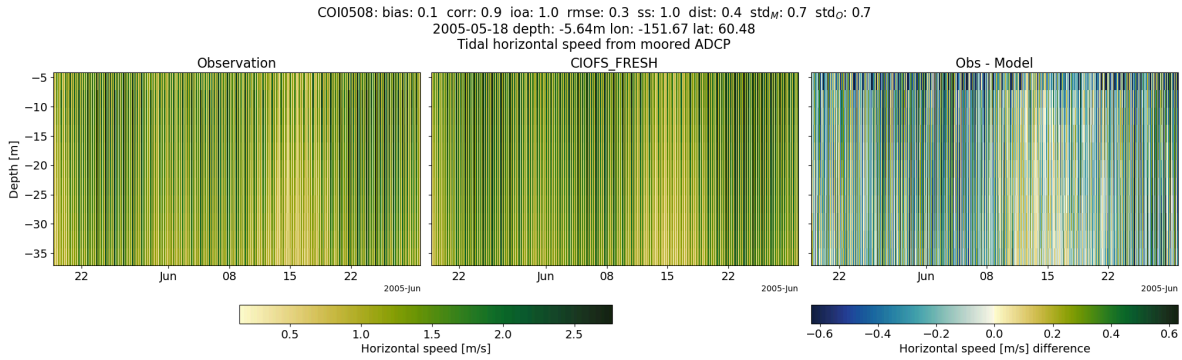
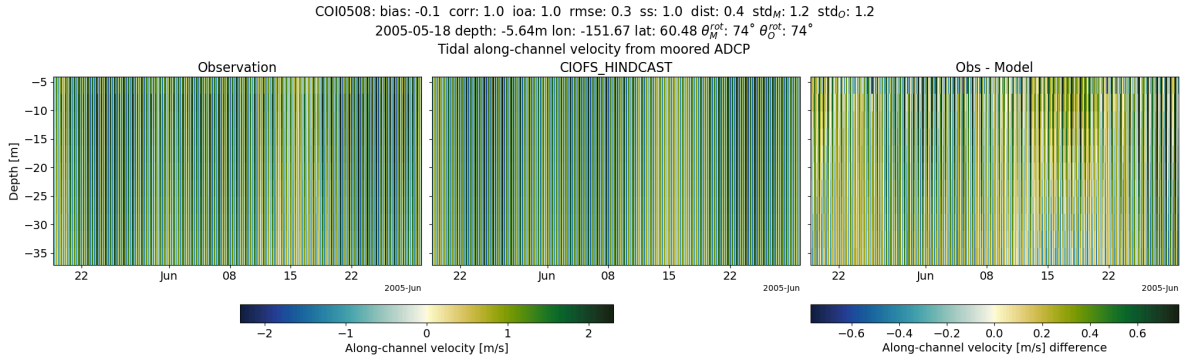


Along-channel velocity

CIOFS_HINDCAST



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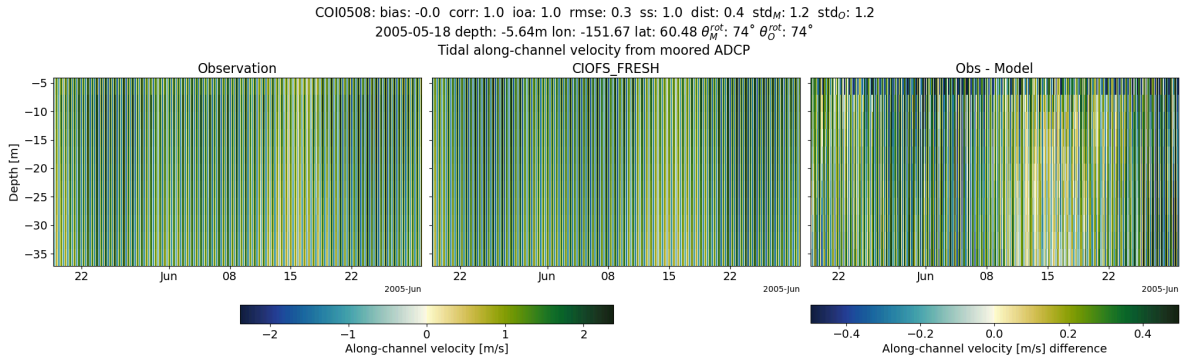
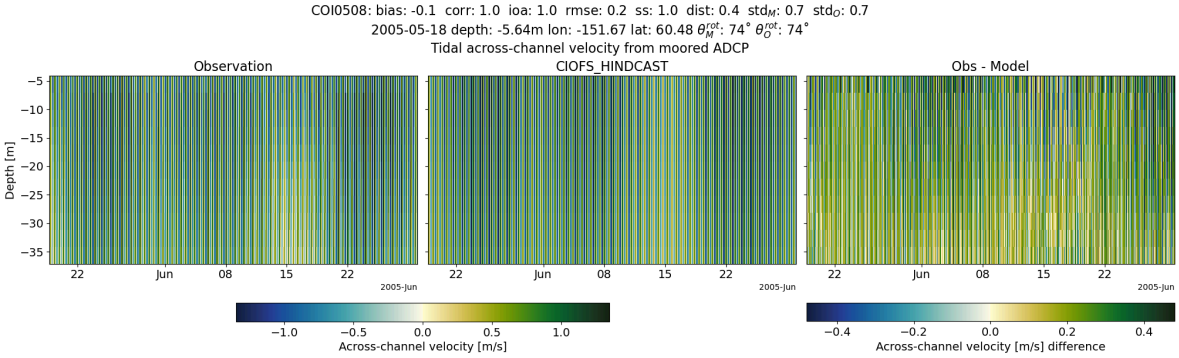


Across-channel velocity

CIOFS_HINDCAST



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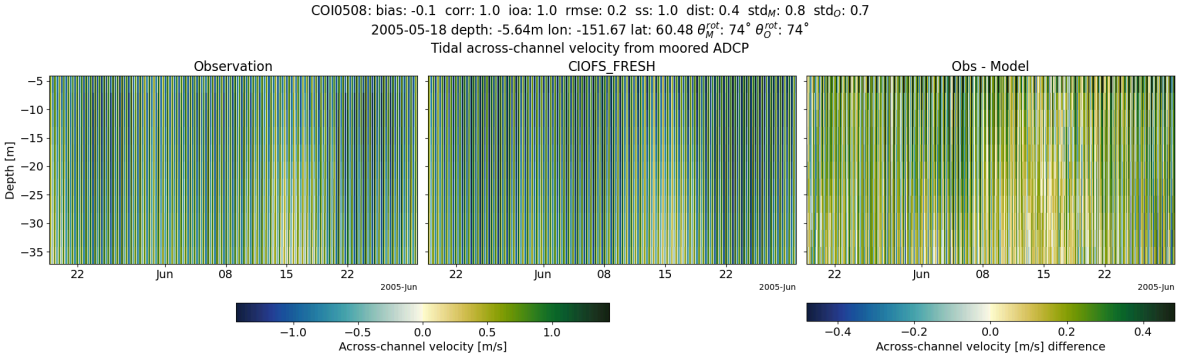
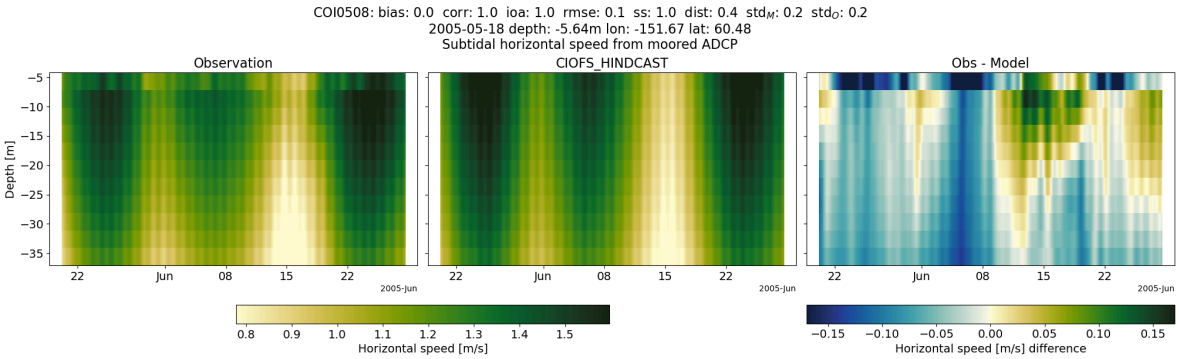


Subtidal

Horizontal speed

CIOFS_HINDCAST



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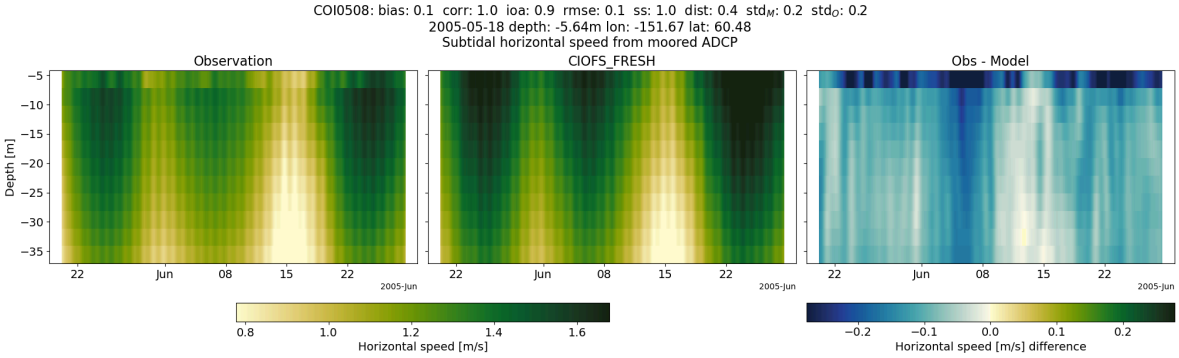
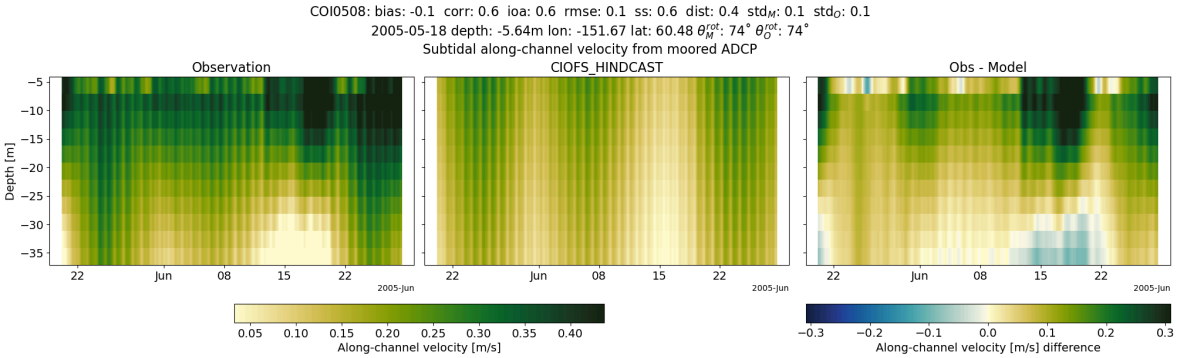


Along-channel velocity

CIOFS_HINDCAST



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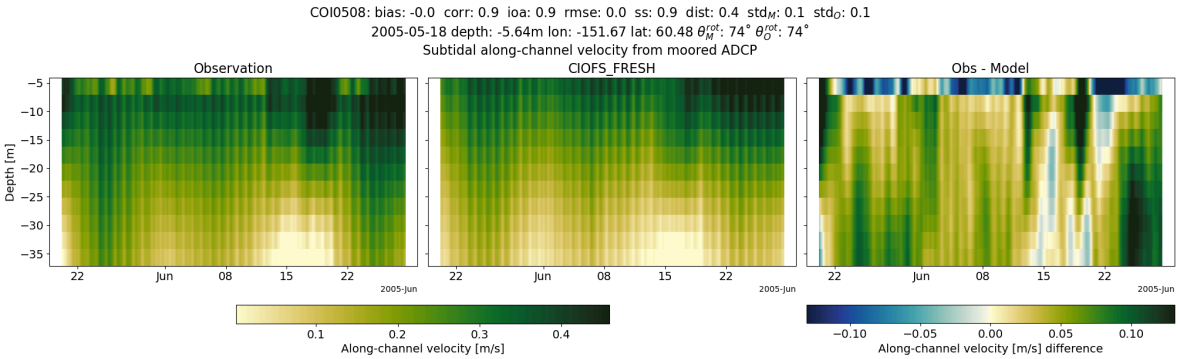
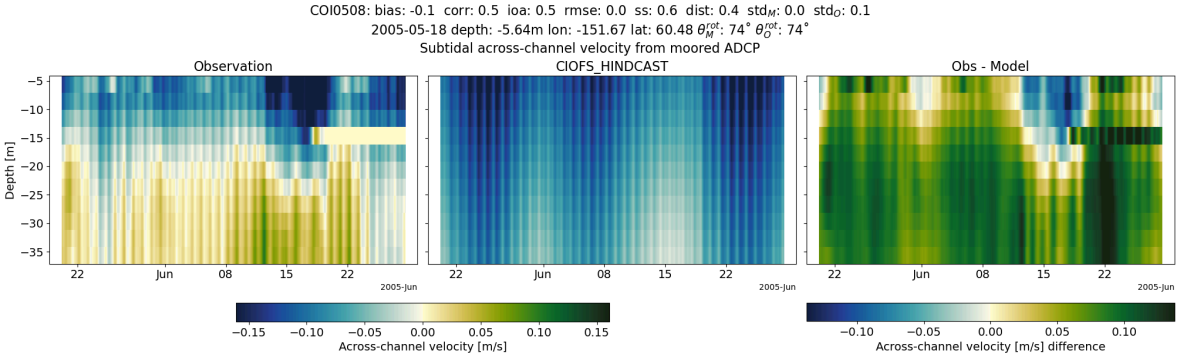


Across-channel velocity

CIOFS_HINDCAST



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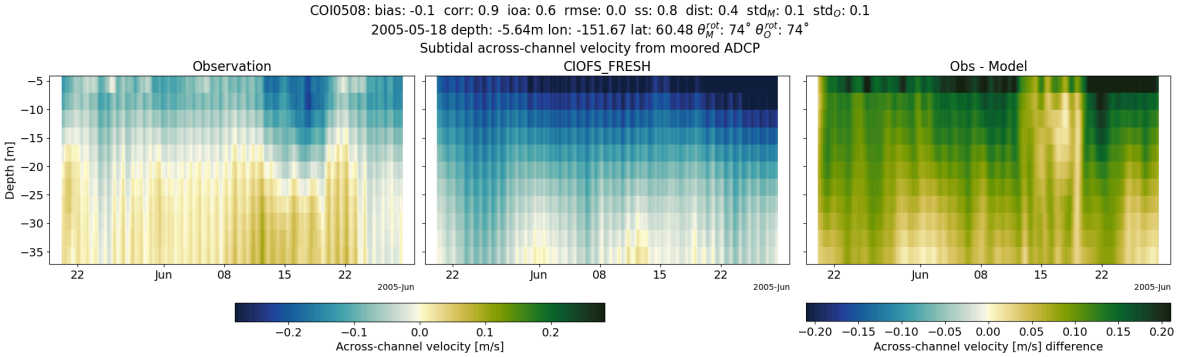
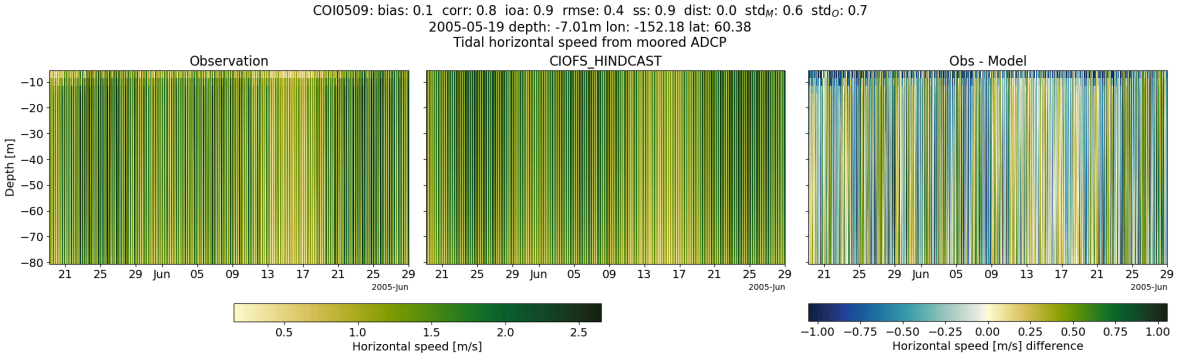


COI0509

Tidal

Horizontal speed

CIOFS_HINDCAST



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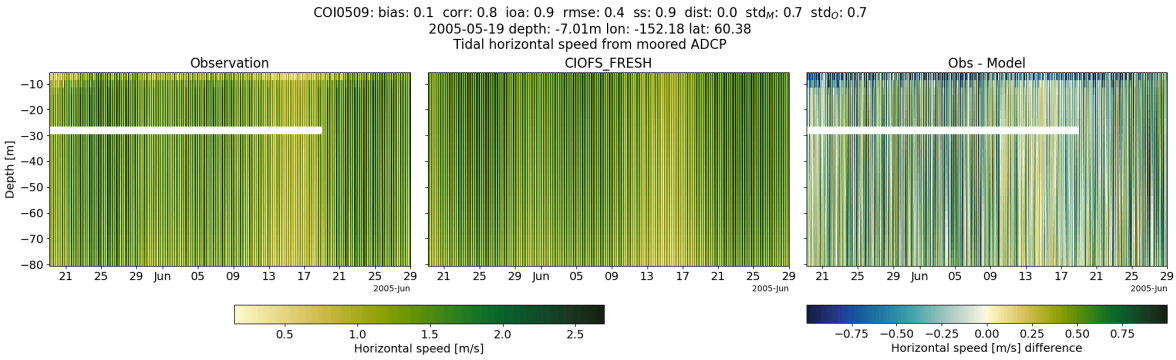
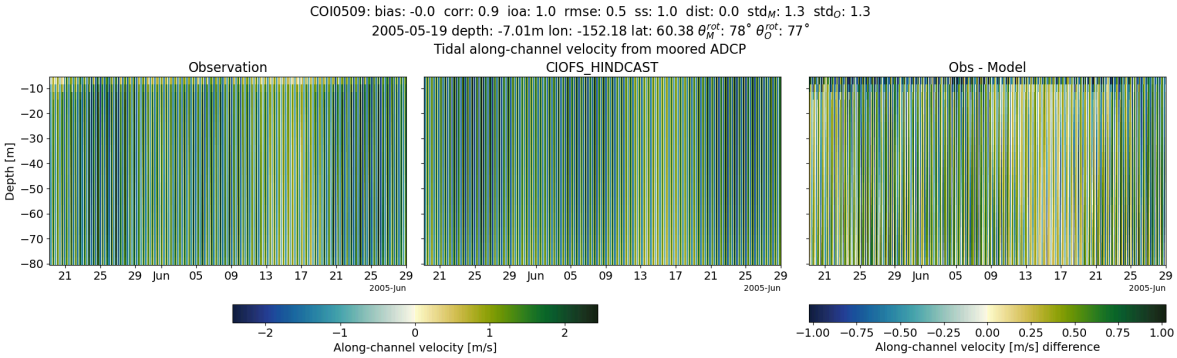


Along-channel velocity

CIOFS_HINDCAST



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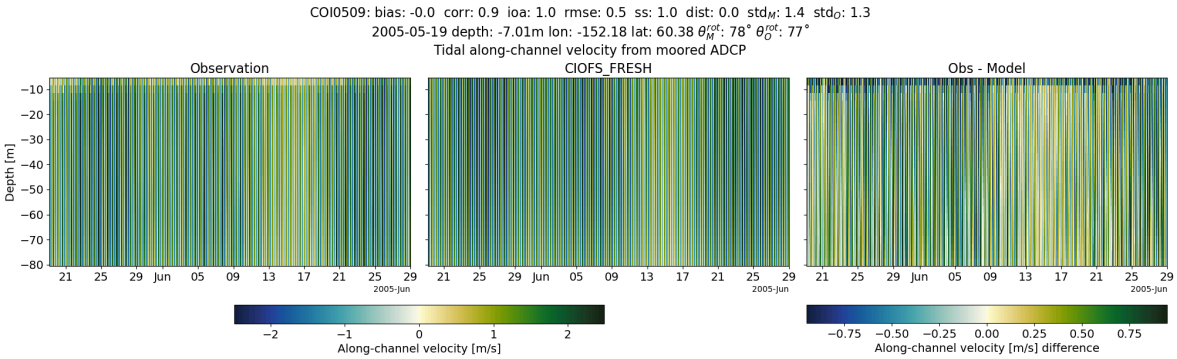
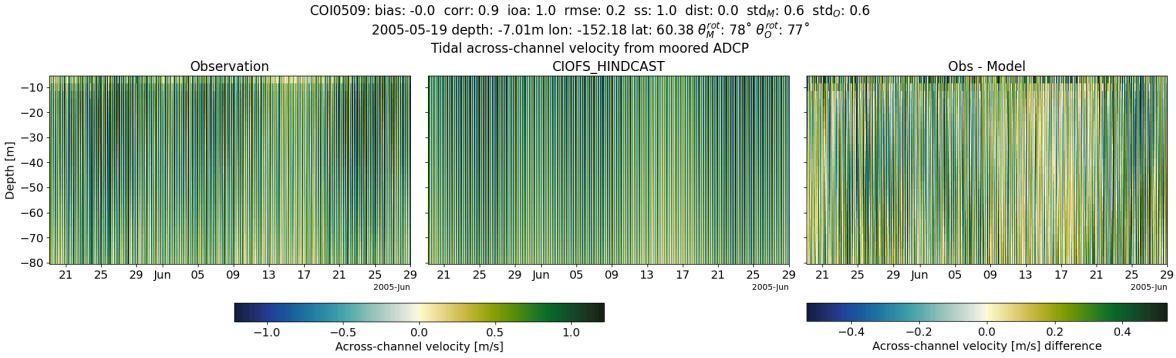


Across-channel velocity

CIOFS_HINDCAST



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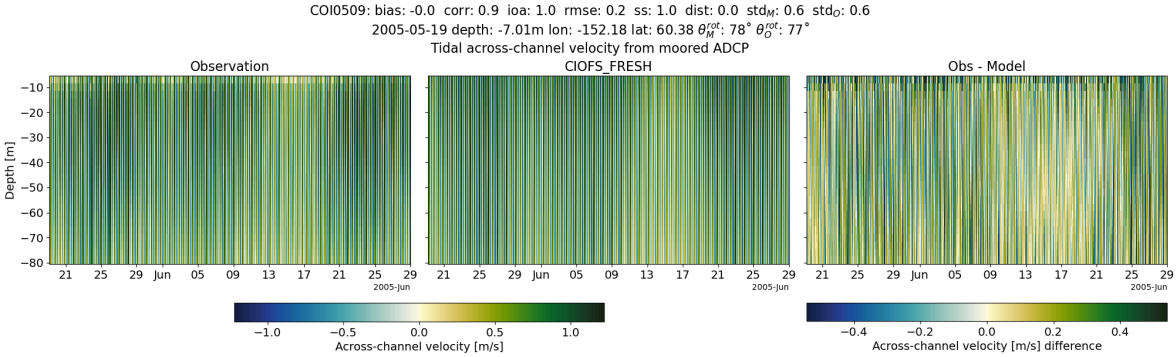
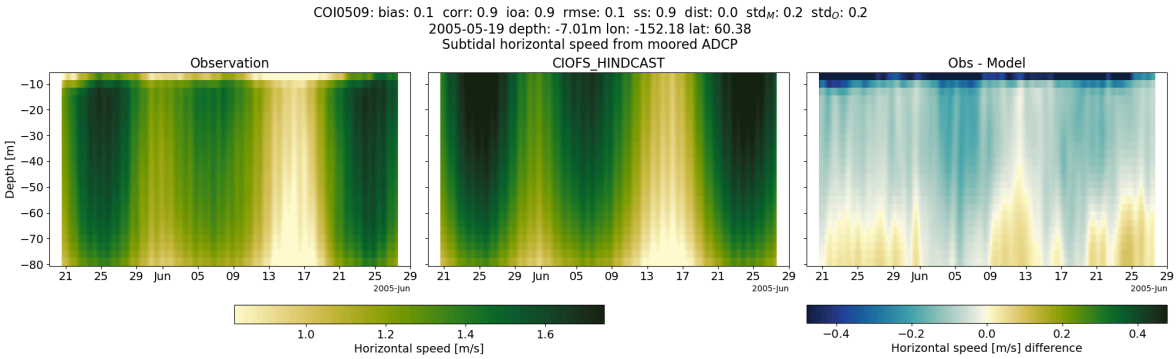


Subtidal

Horizontal speed

CIOFS_HINDCAST



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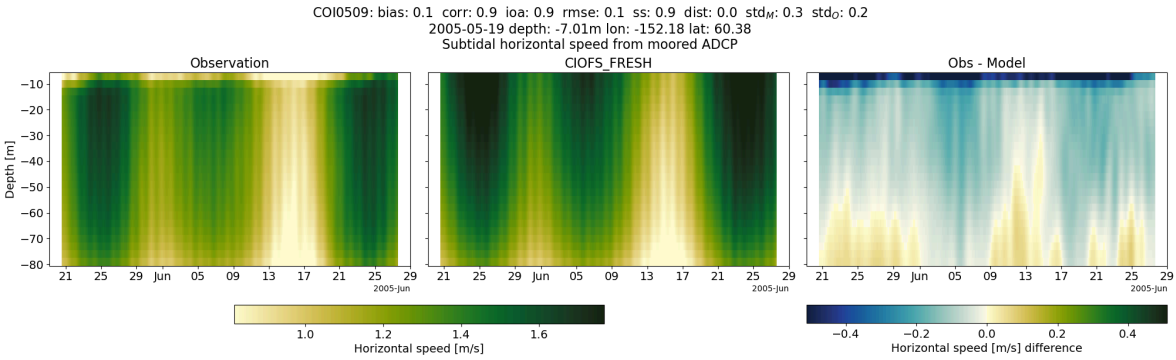
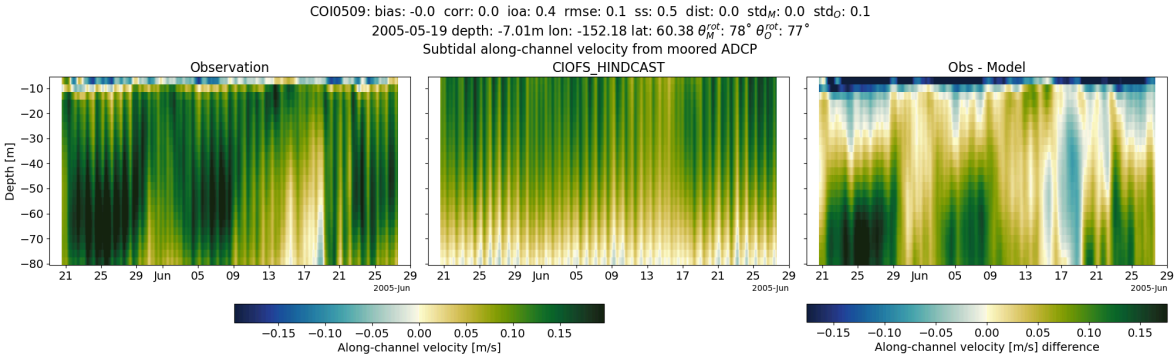


Along-channel velocity

CIOFS_HINDCAST



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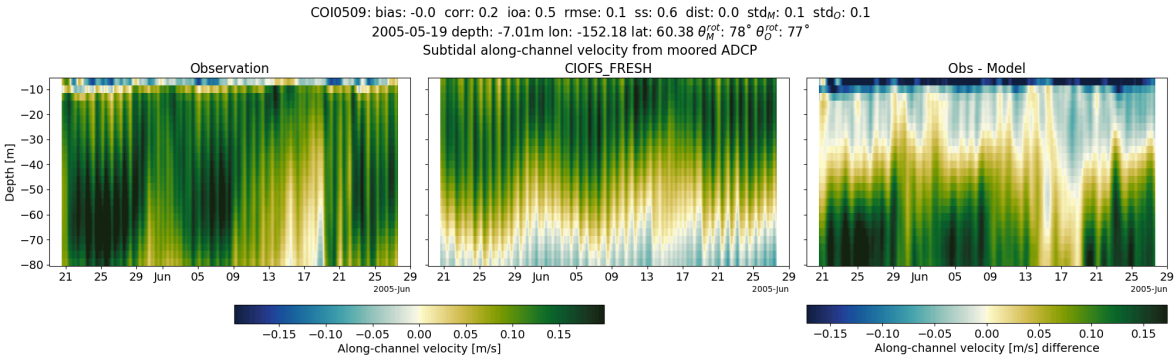
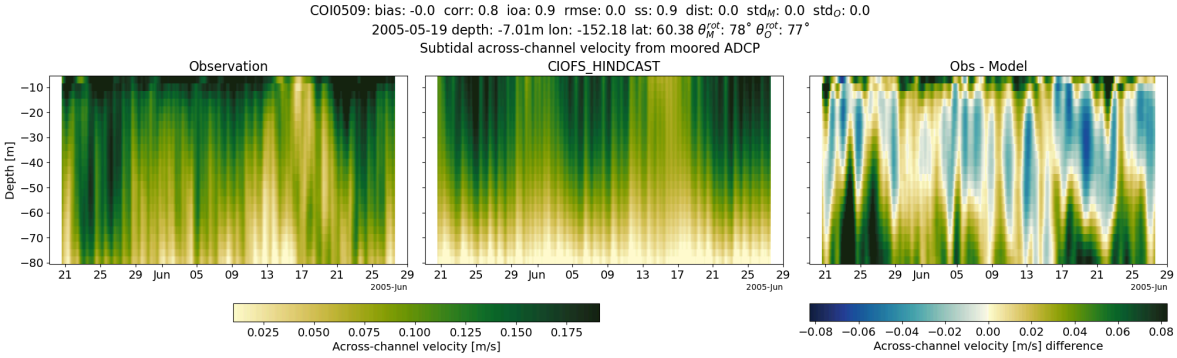
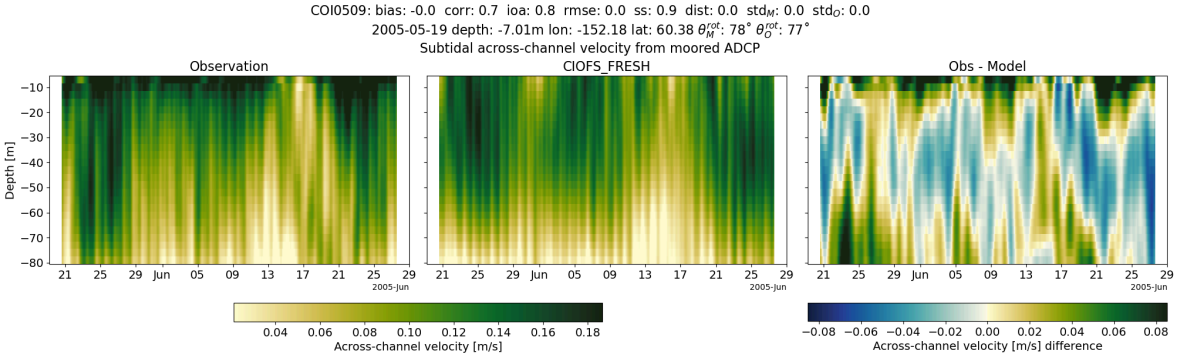


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

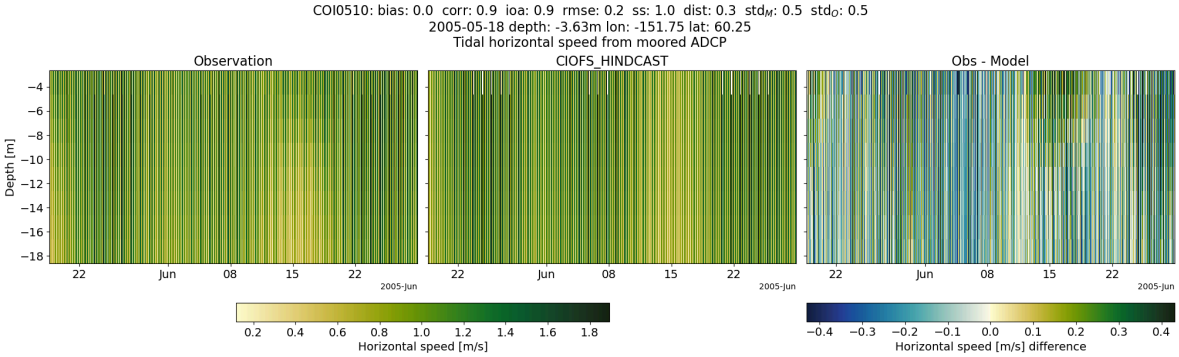


COI0510

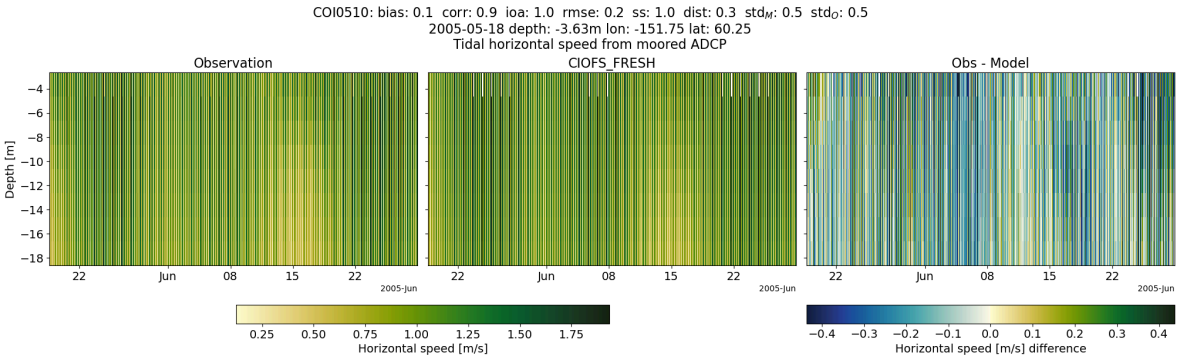
Tidal

Horizontal speed

CIOFS_HINDCAST

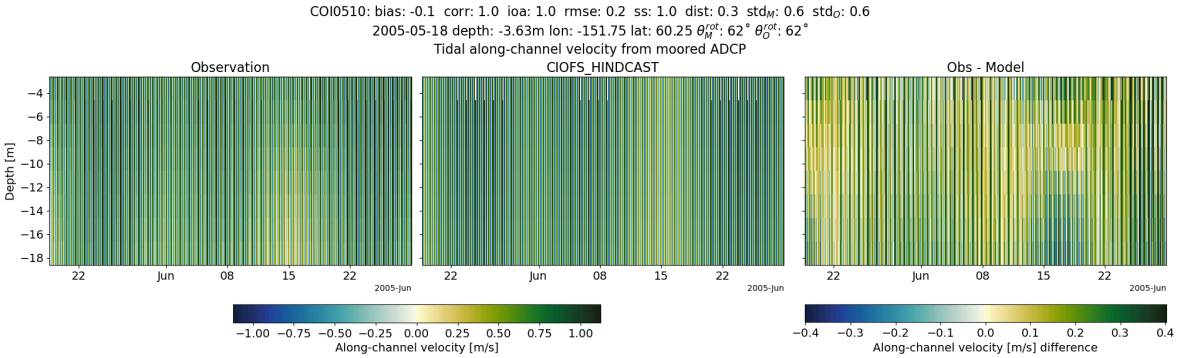


CIOFS_FRESH

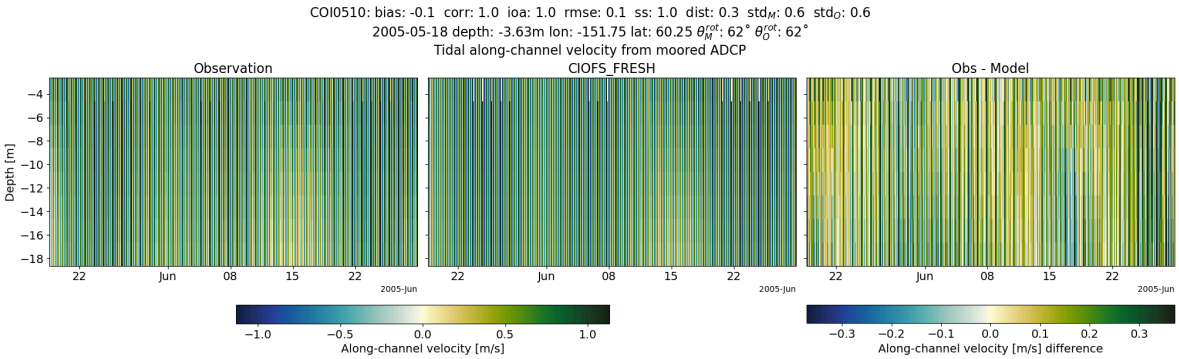


Along-channel velocity

CIOFS_HINDCAST

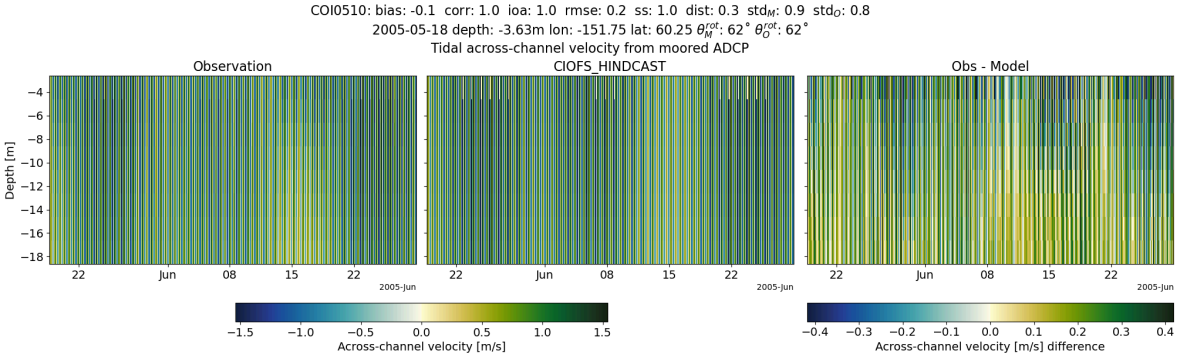


CIOFS_FRESH

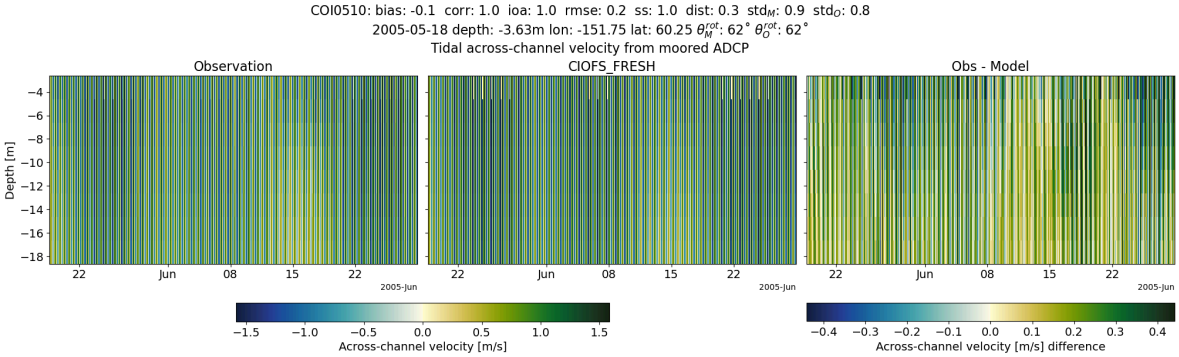


Across-channel velocity

CIOFS_HINDCAST



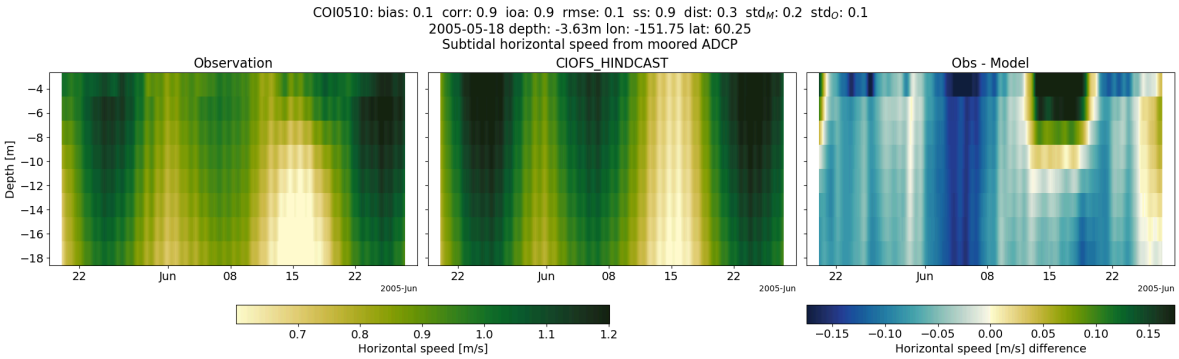
CIOFS_FRESH



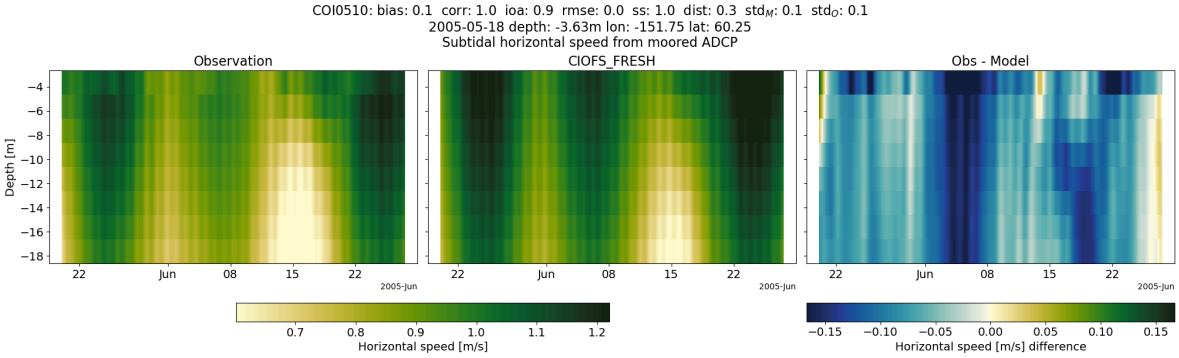
Subtidal

Horizontal speed

CIOFS_HINDCAST

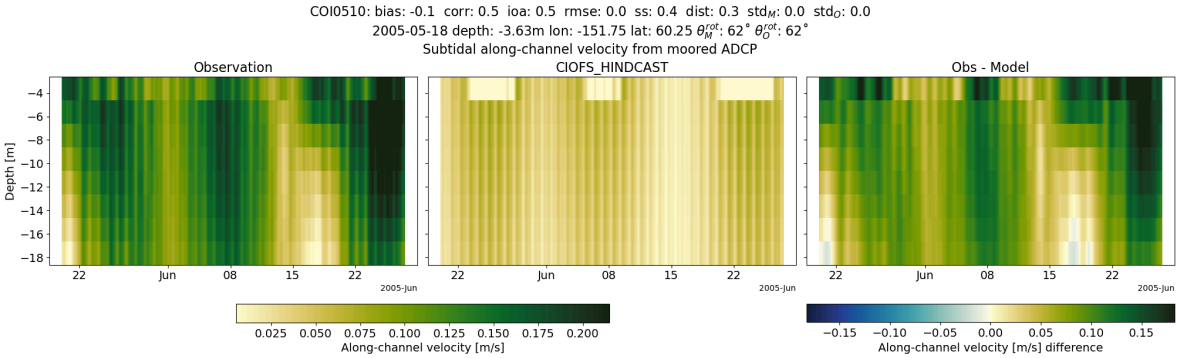


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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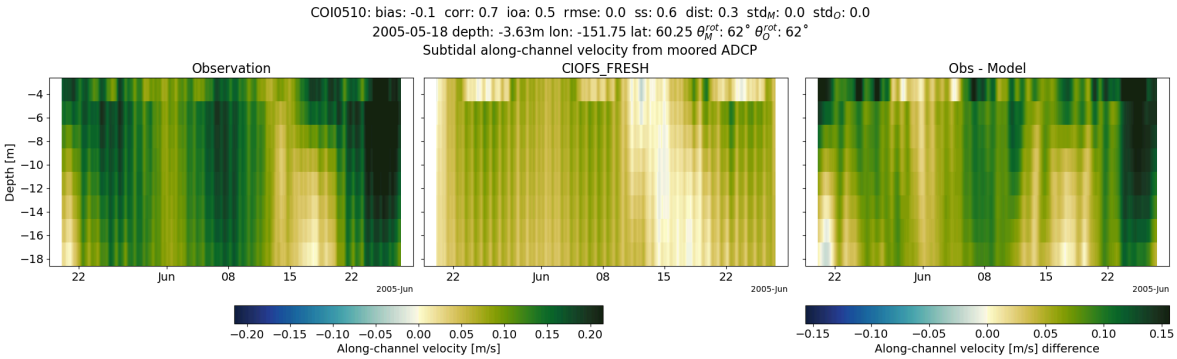
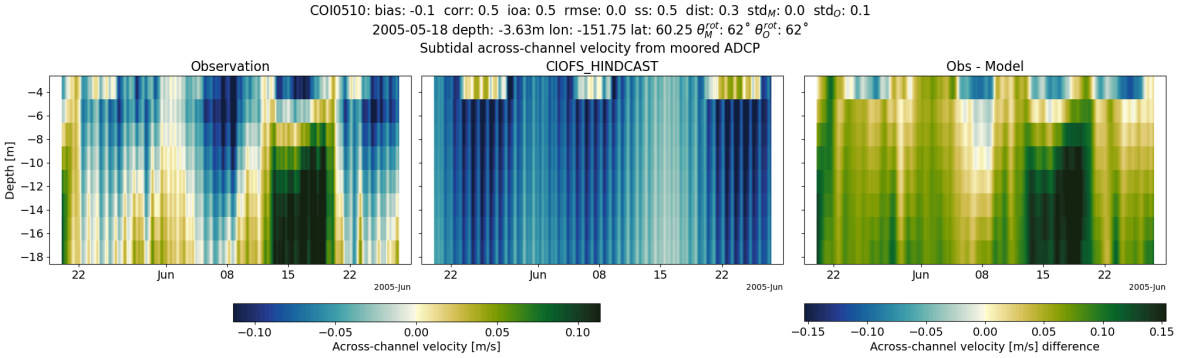


Across-channel velocity

CIOFS_HINDCAST



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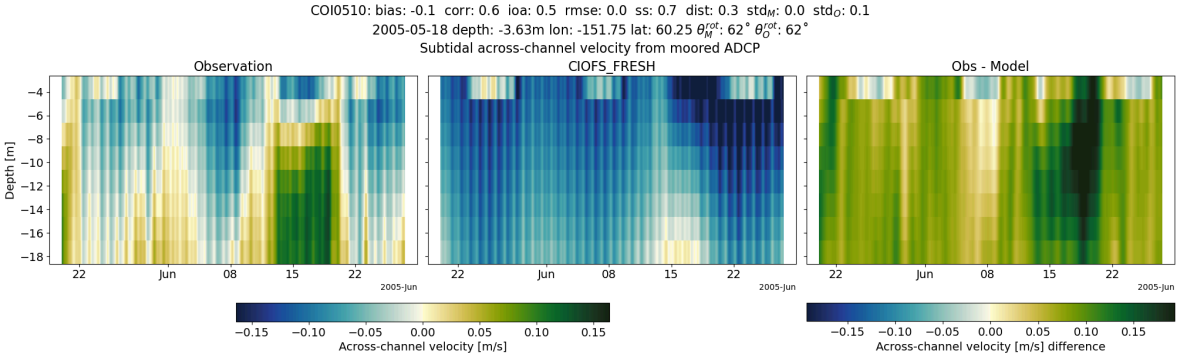
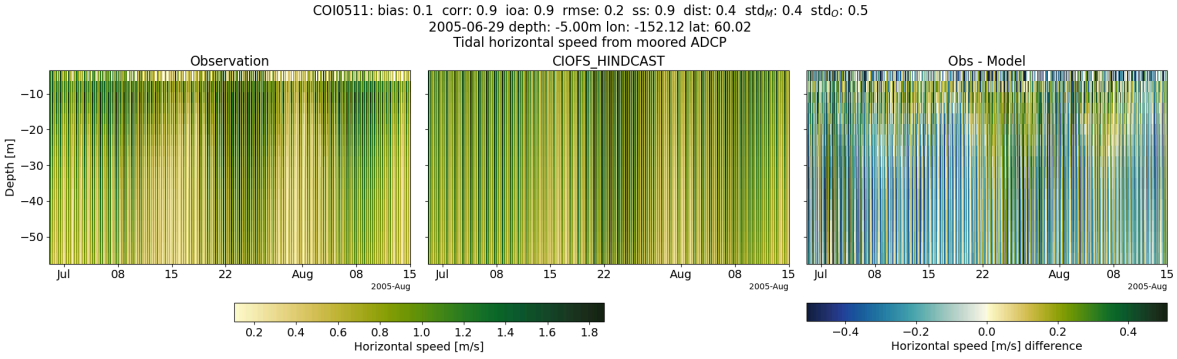


COI0511

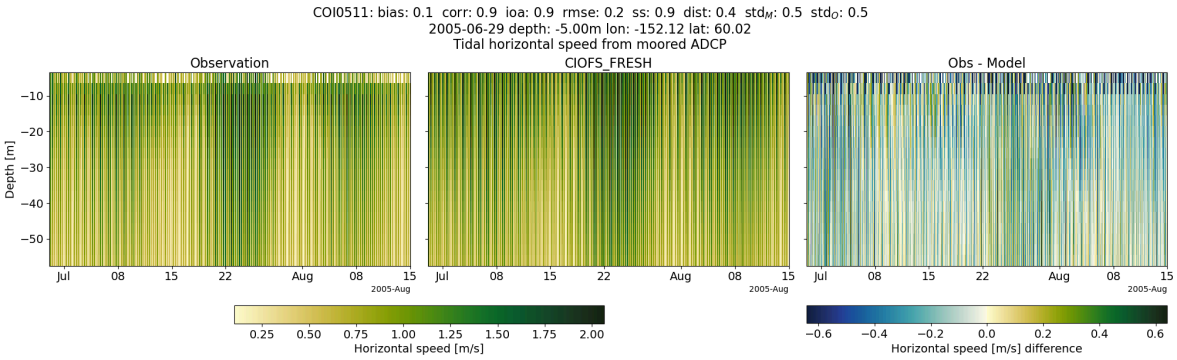
Tidal

Horizontal speed

CIOFS_HINDCAST

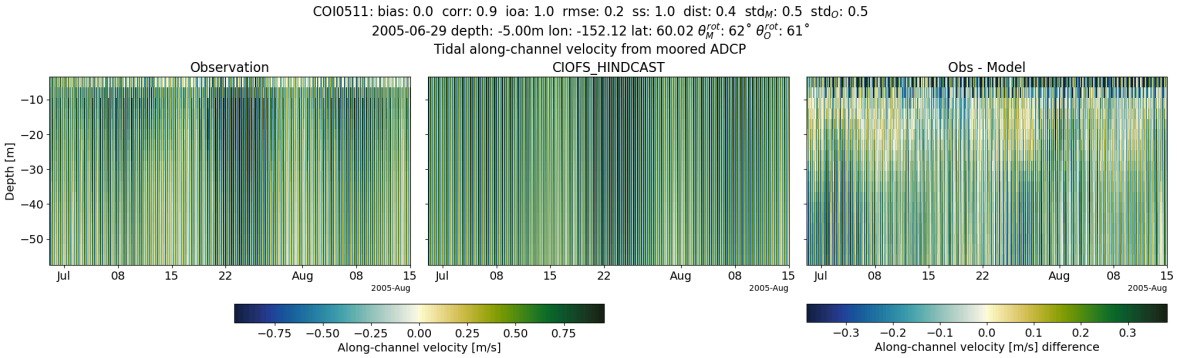


CIOFS_FRESH

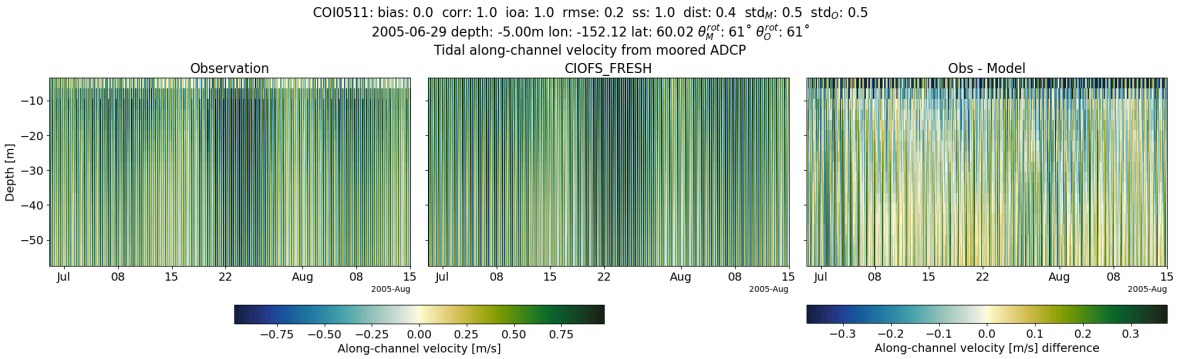


Along-channel velocity

CIOFS_HINDCAST

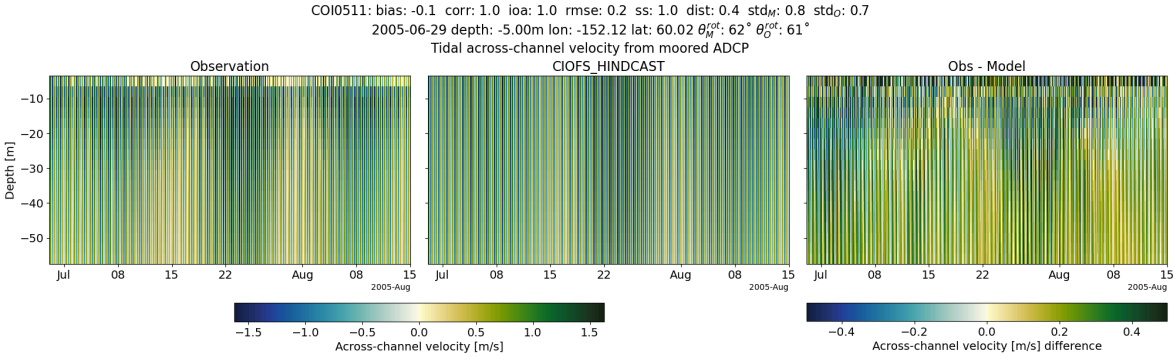


CIOFS_FRESH

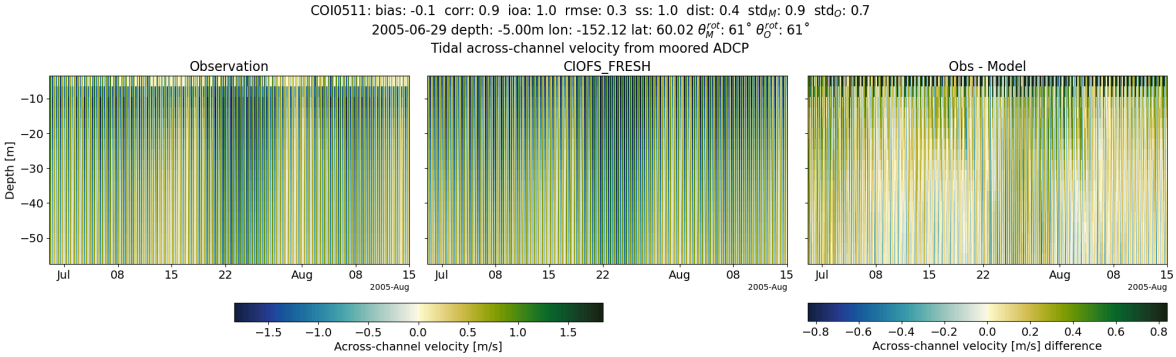


Across-channel velocity

CIOFS_HINDCAST



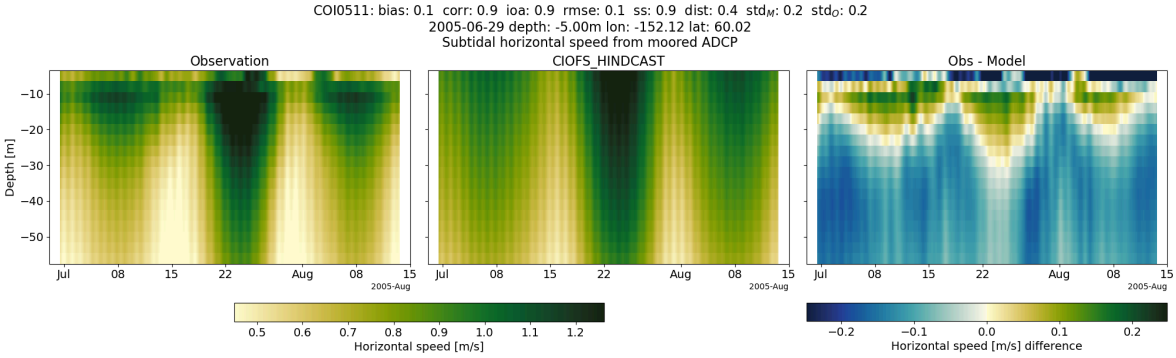
CIOFS_FRESH



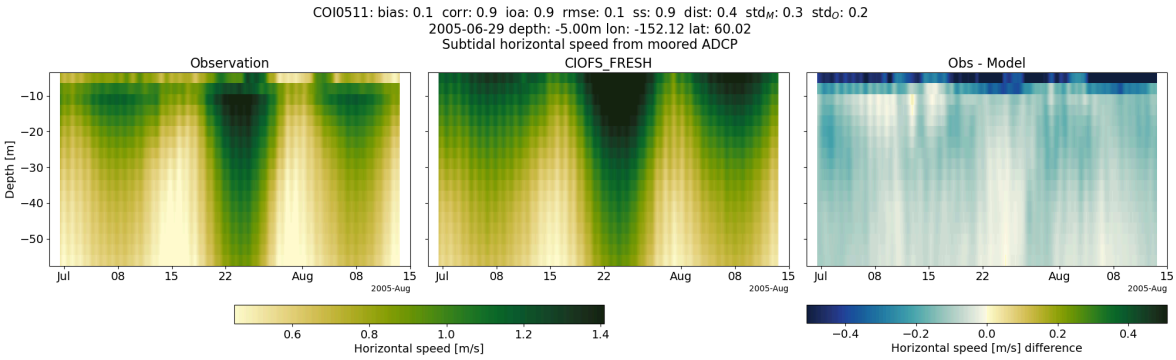
Subtidal

Horizontal speed

CIOFS_HINDCAST

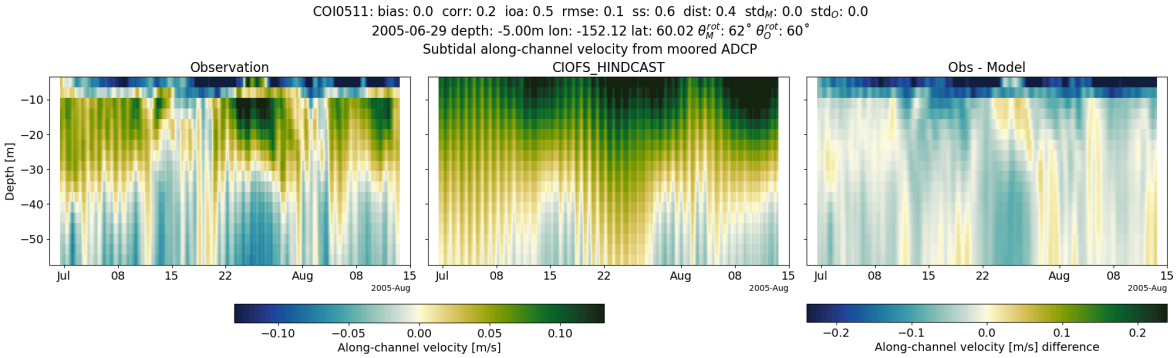


CIOFS_FRESH

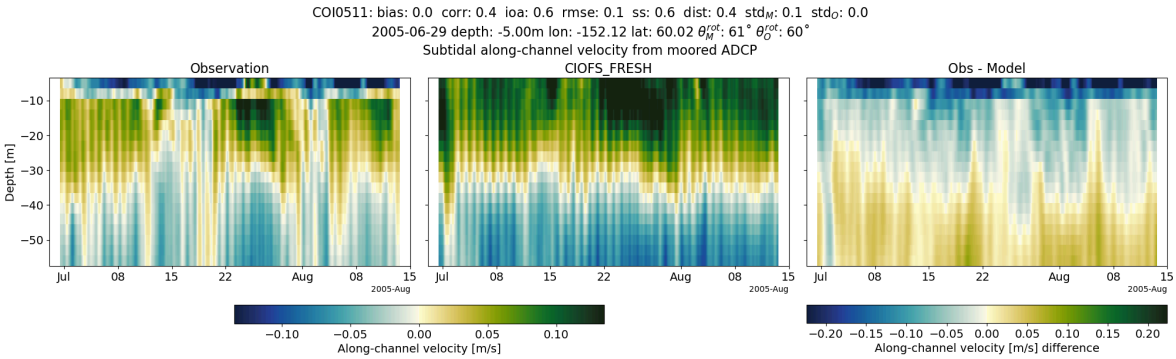


Along-channel velocity

CIOFS_HINDCAST

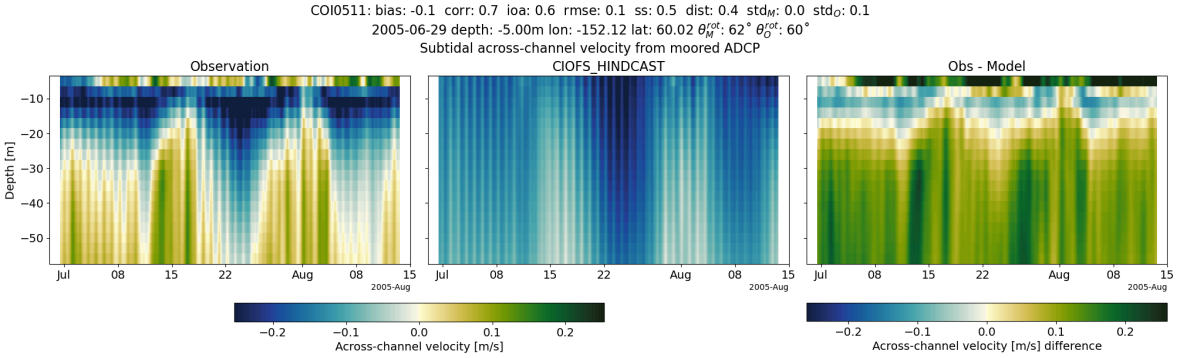


CIOFS_FRESH

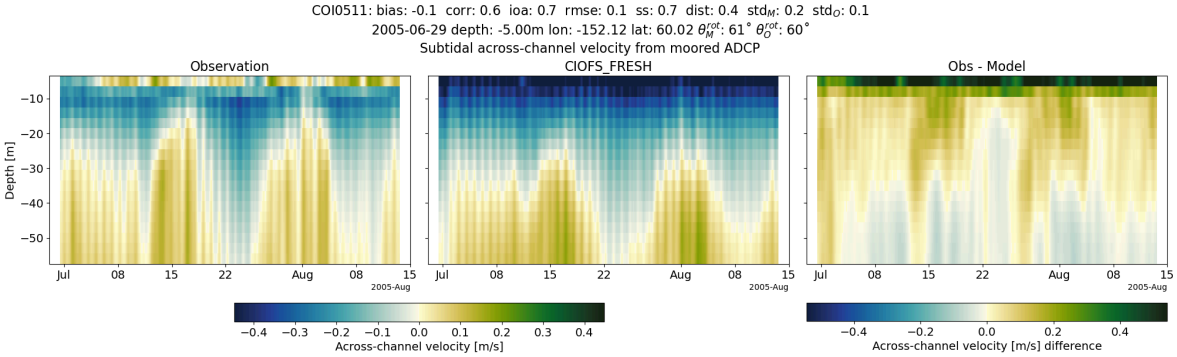


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

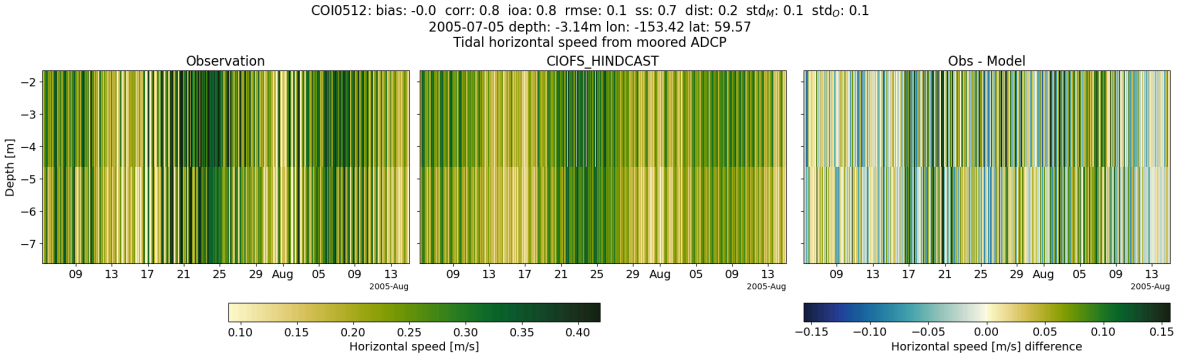


COI0512

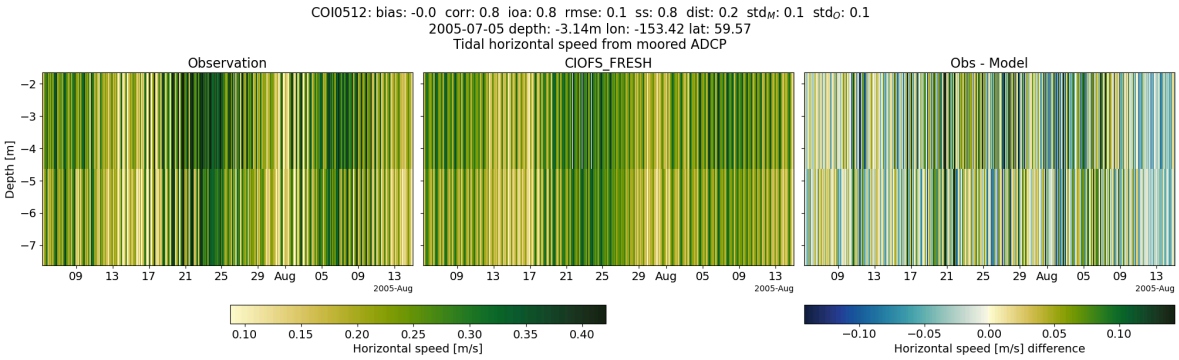
Tidal

Horizontal speed

CIOFS_HINDCAST

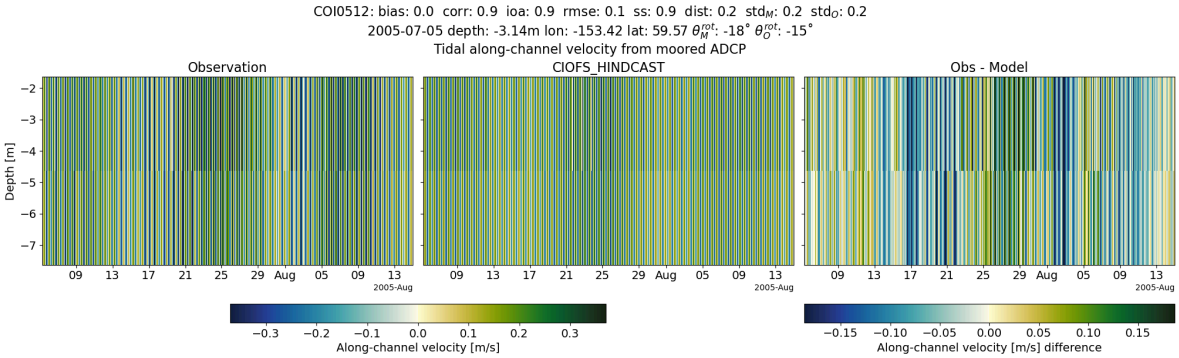


CIOFS_FRESH

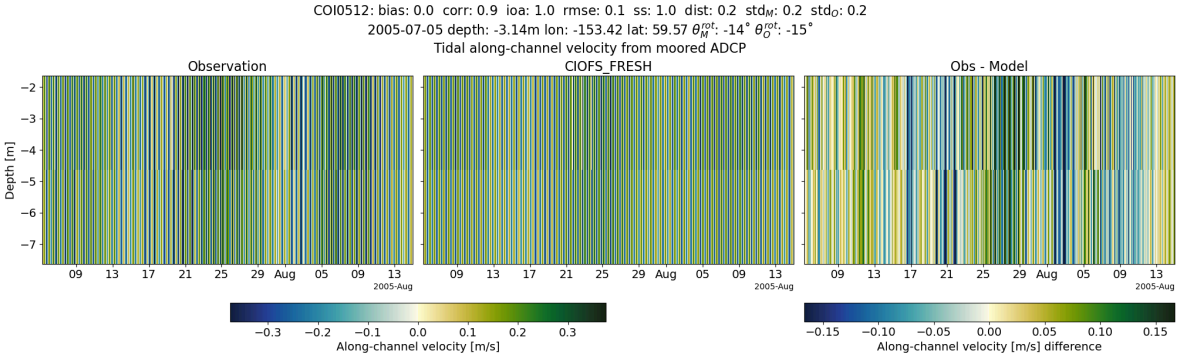


Along-channel velocity

CIOFS_HINDCAST

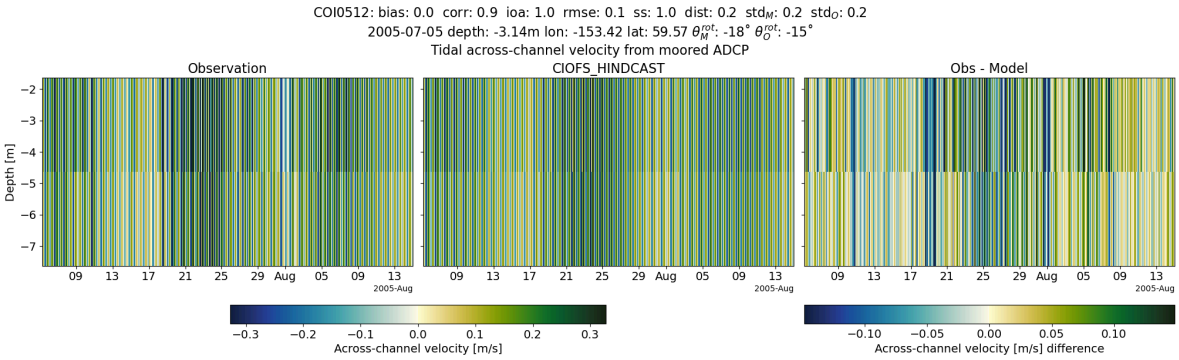


CIOFS_FRESH

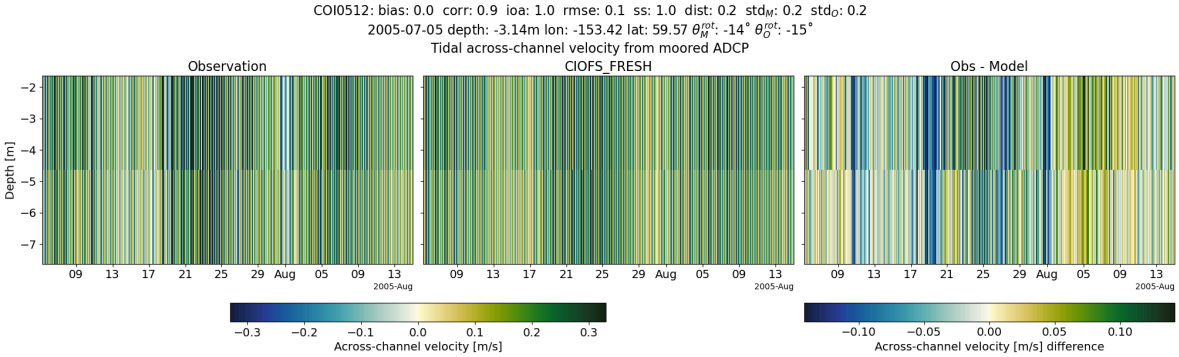


Across-channel velocity

CIOFS_HINDCAST



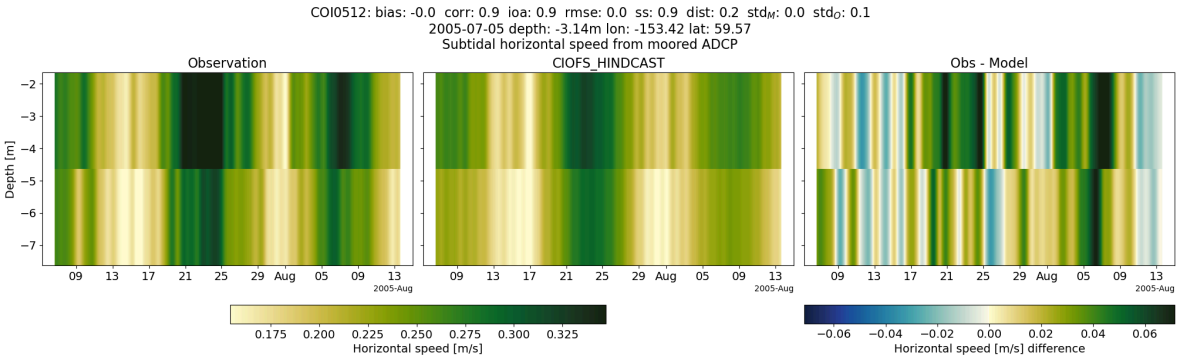
CIOFS_FRESH



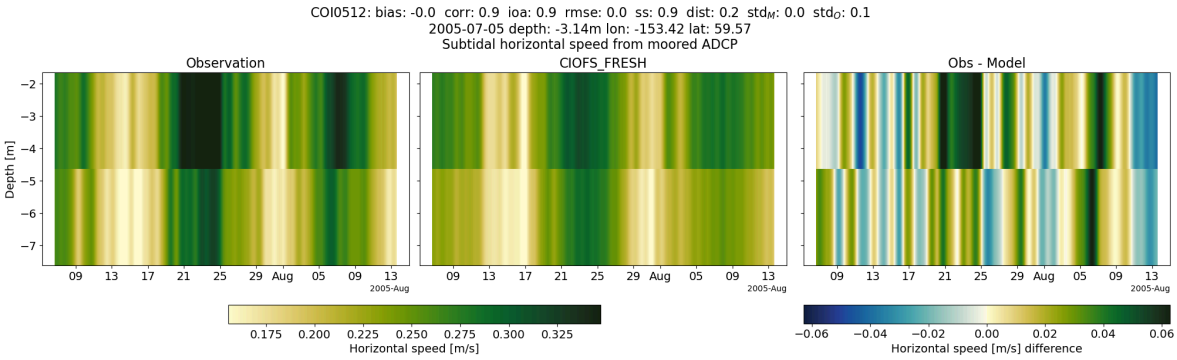
Subtidal

Horizontal speed

CIOFS_HINDCAST

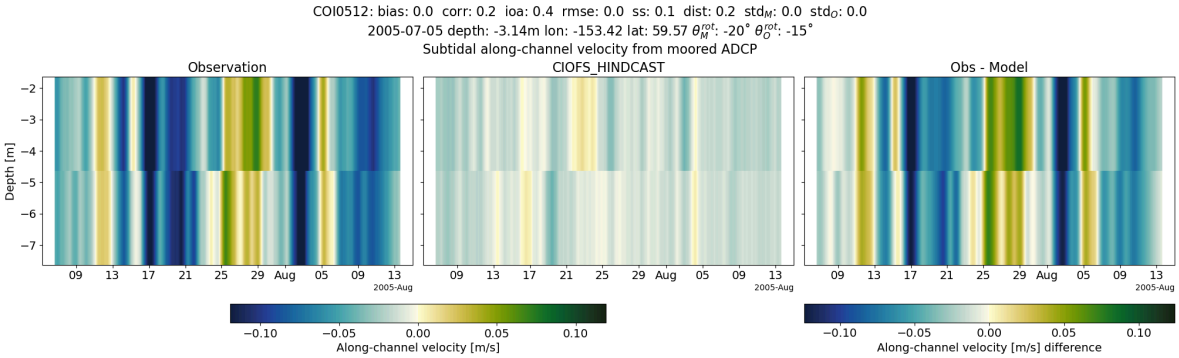


CIOFS_FRESH

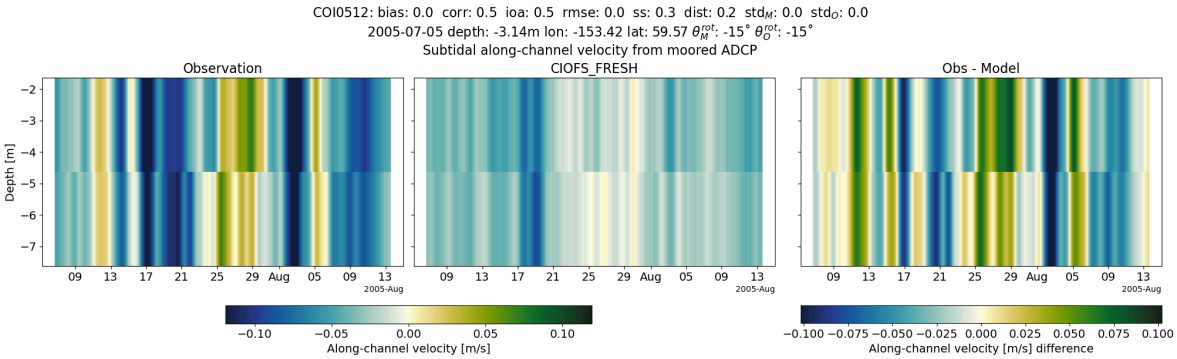


Along-channel velocity

CIOFS_HINDCAST

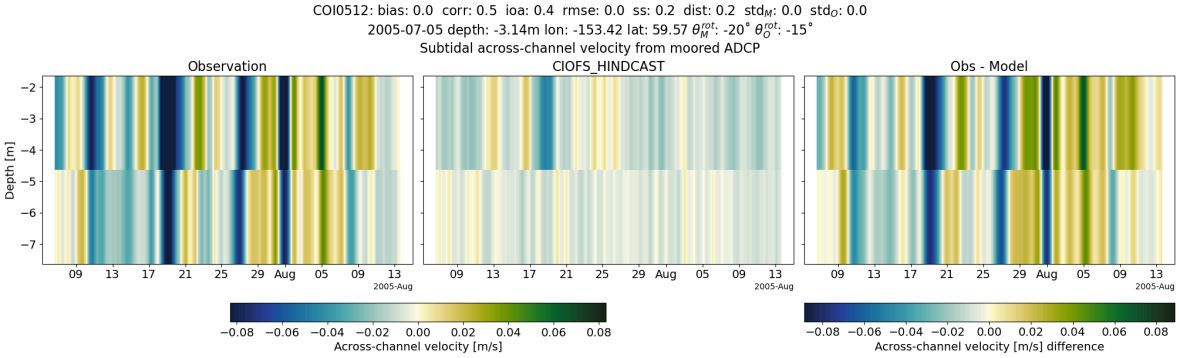


CIOFS_FRESH

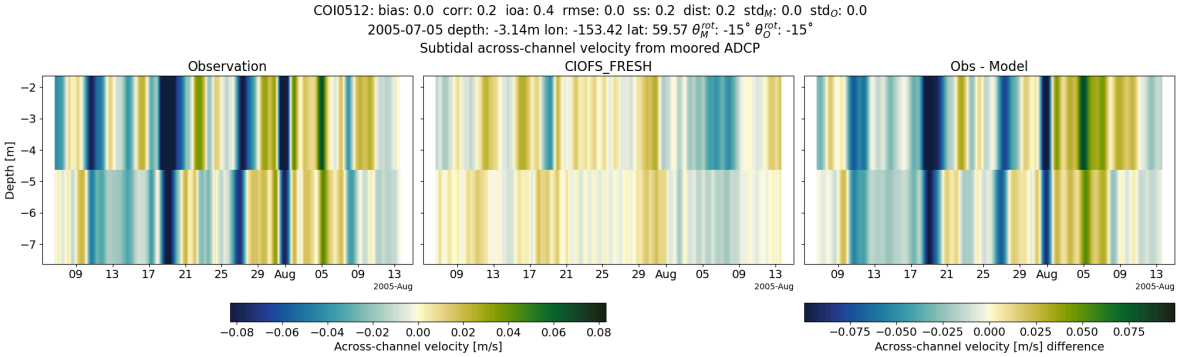


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

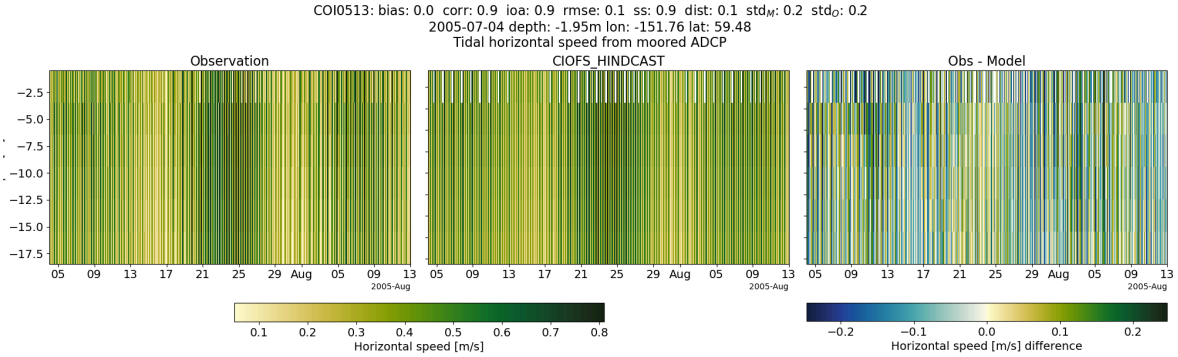


COI0513

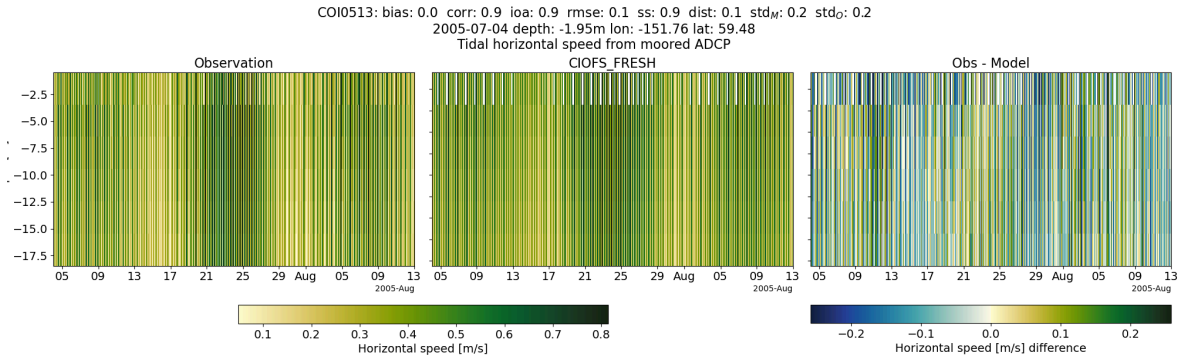
Tidal

Horizontal speed

CIOFS_HINDCAST

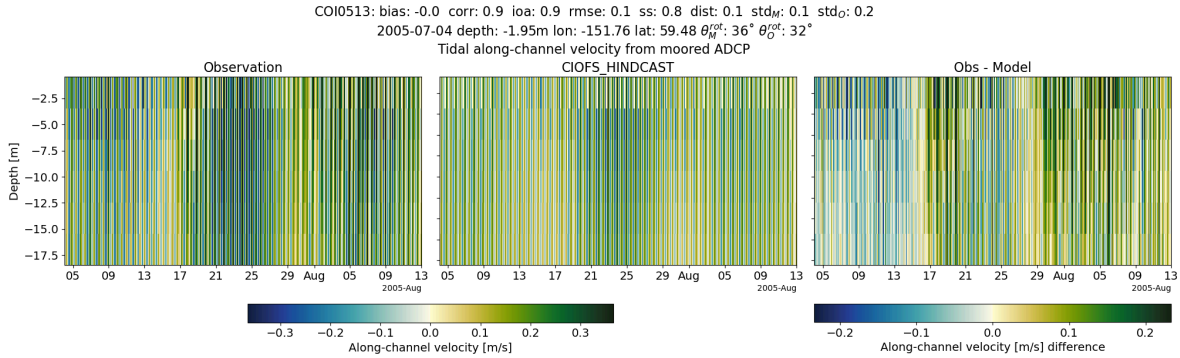


CIOFS_FRESH

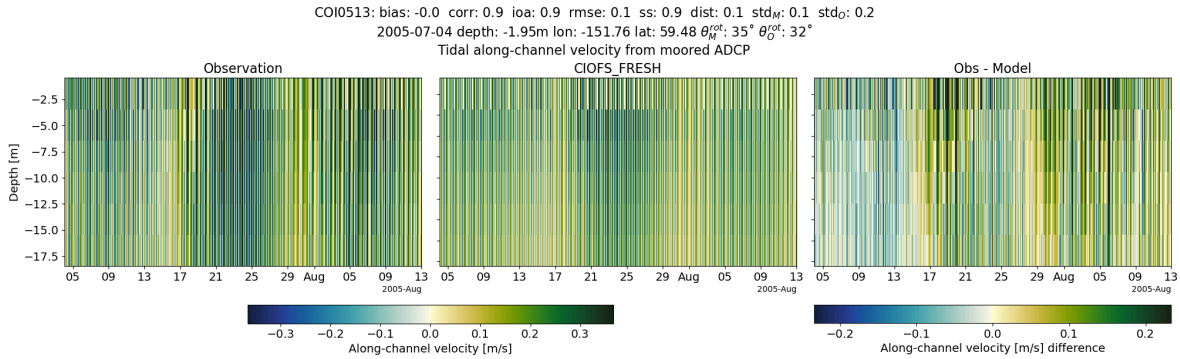


Along-channel velocity

CIOFS_HINDCAST

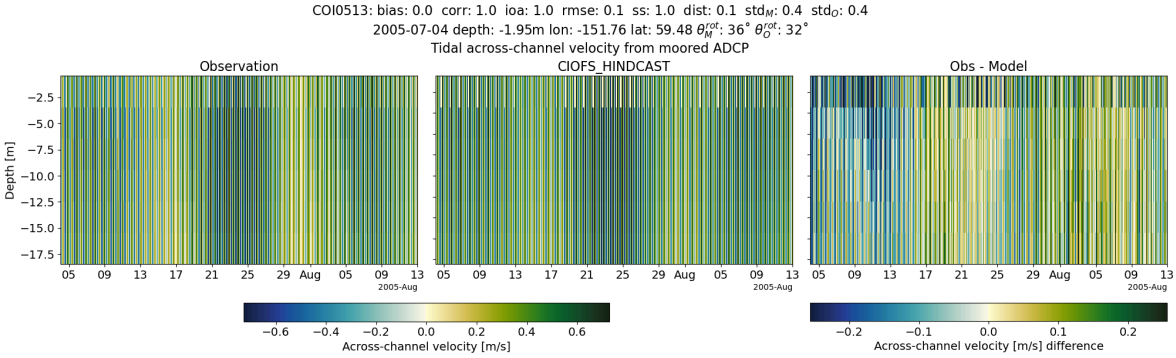


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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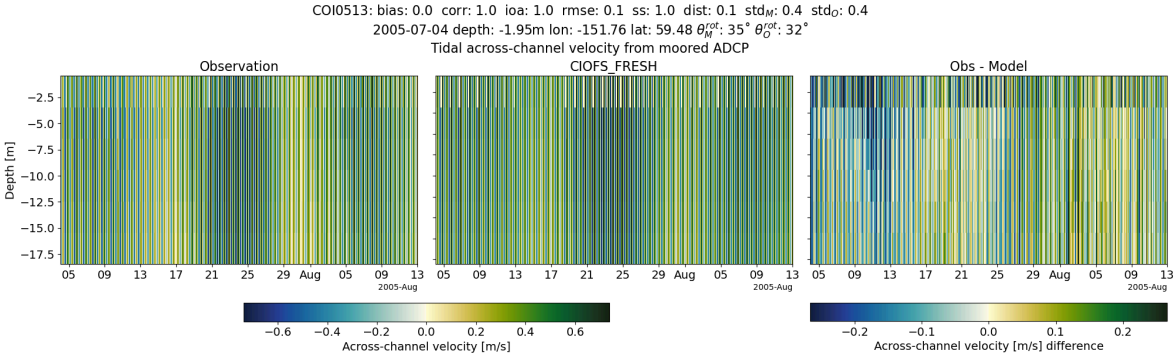
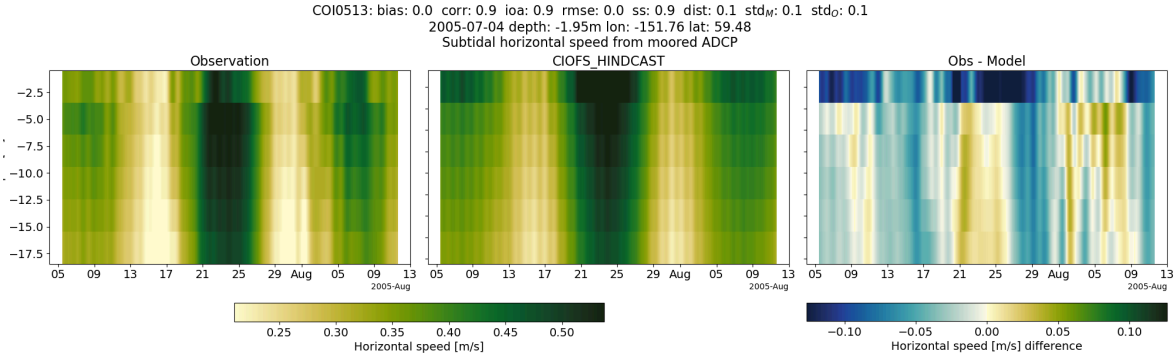


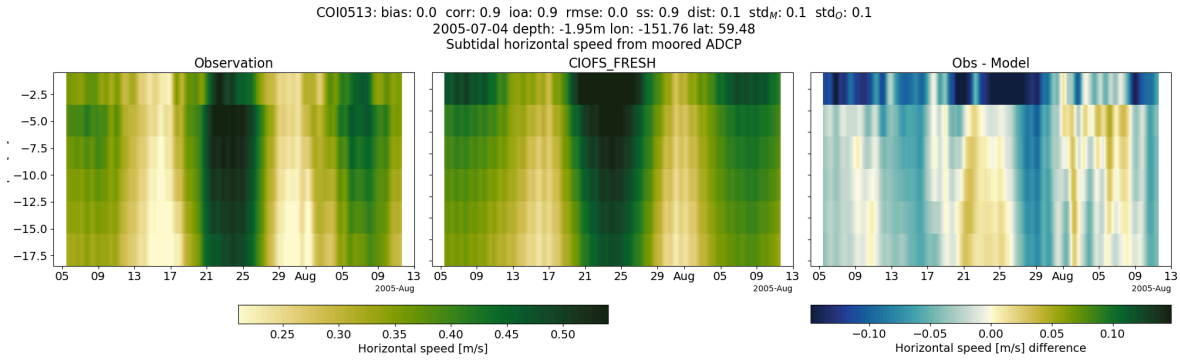
Subtidal

Horizontal speed

CIOFS_HINDCAST

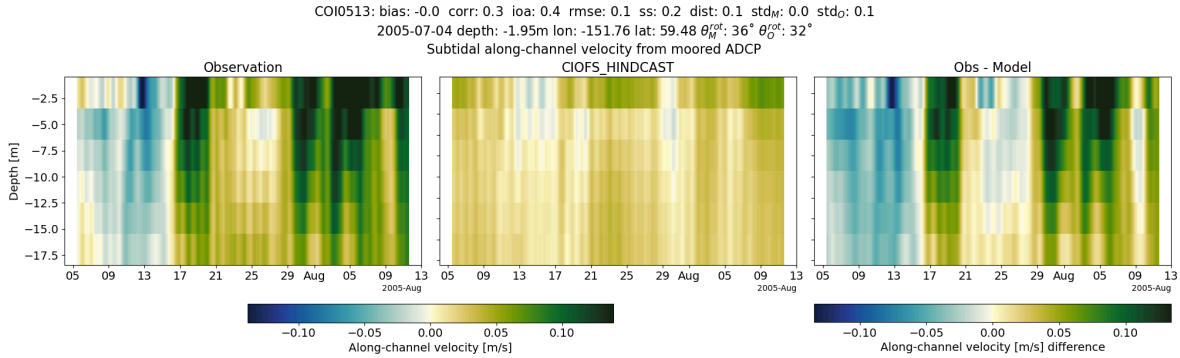


CIOFS_FRESH

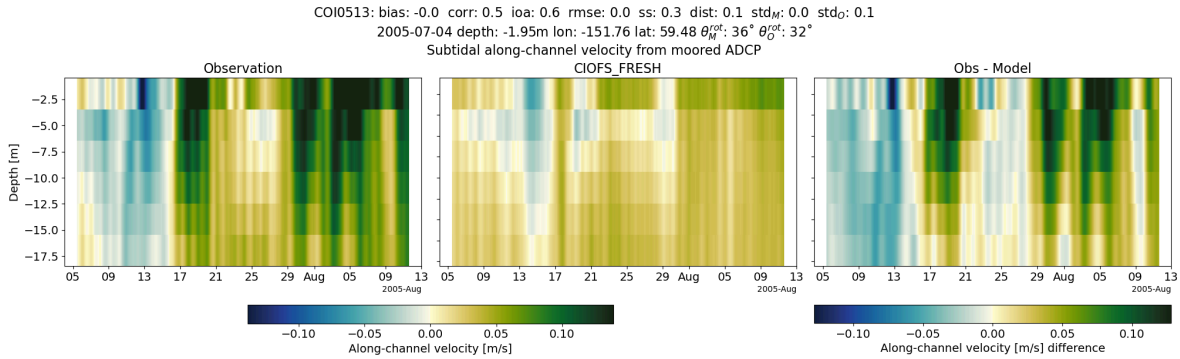


Along-channel velocity

CIOFS_HINDCAST

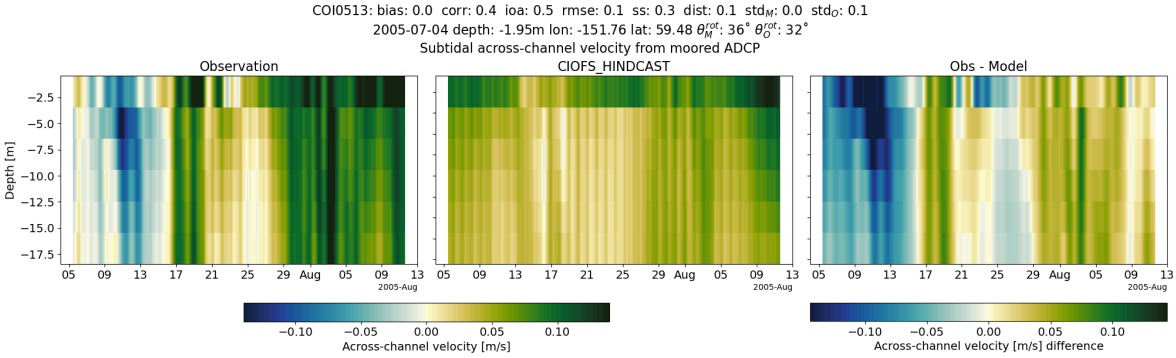


CIOFS_FRESH

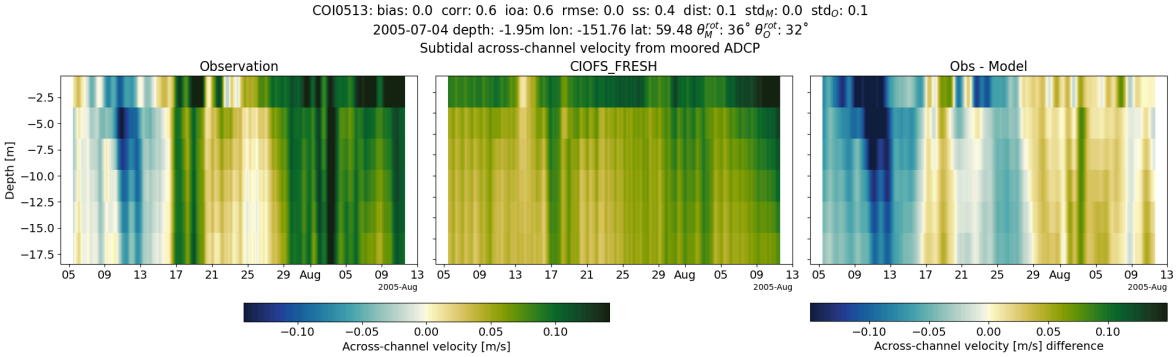


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

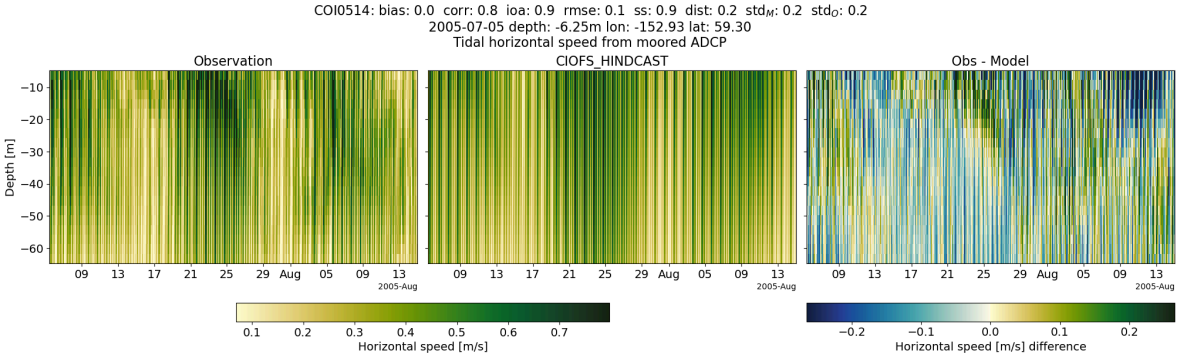


COI0514

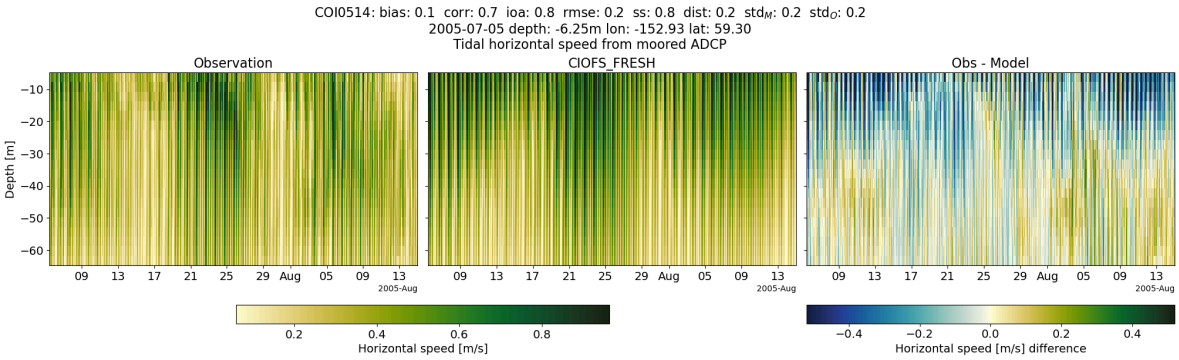
Tidal

Horizontal speed

CIOFS_HINDCAST

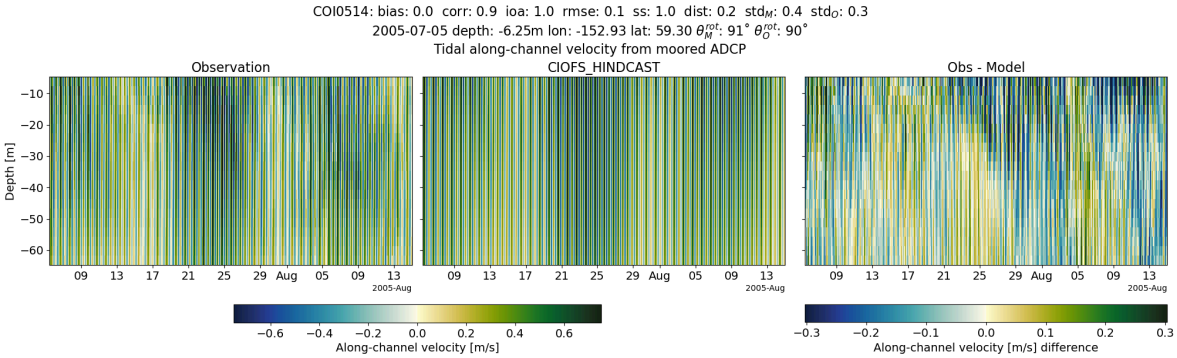


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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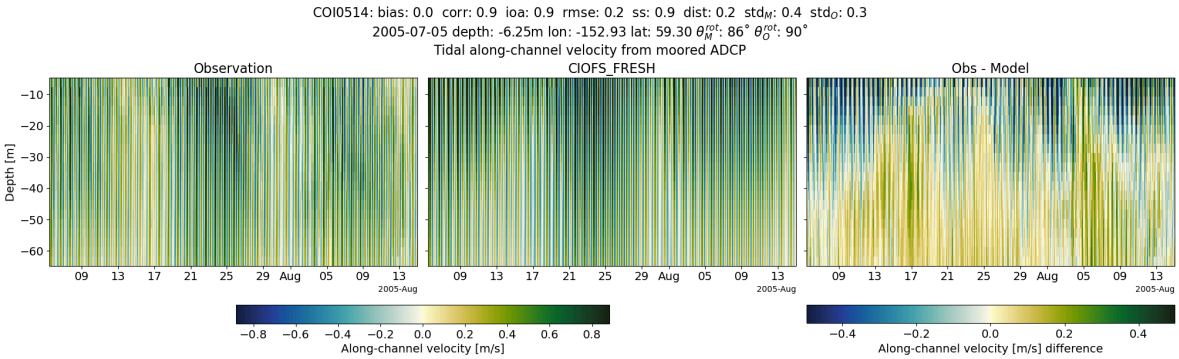
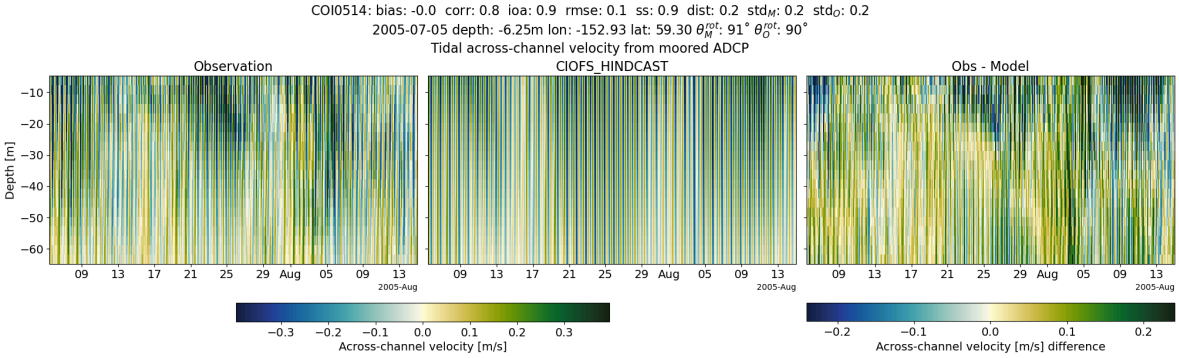
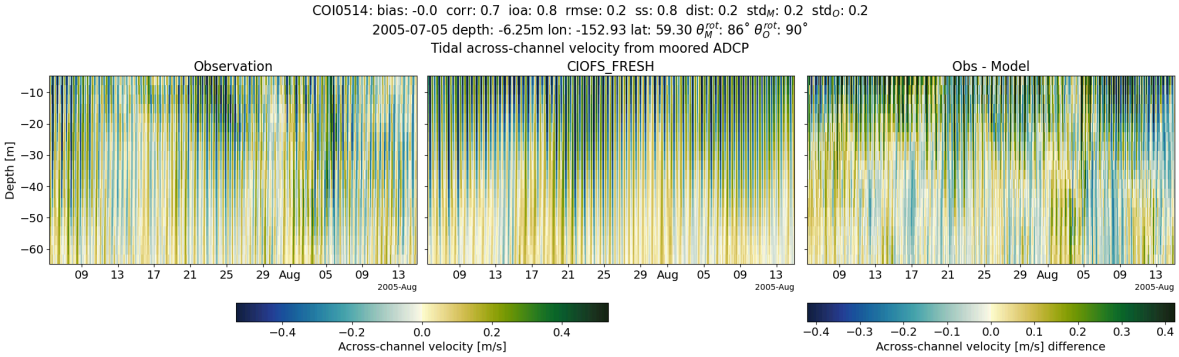


Across-channel velocity

CIOFS_HINDCAST



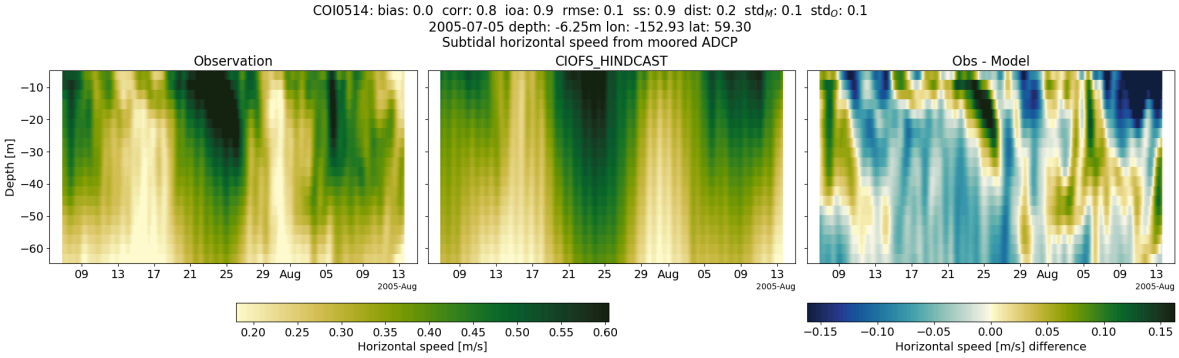
CIOFS_FRESH



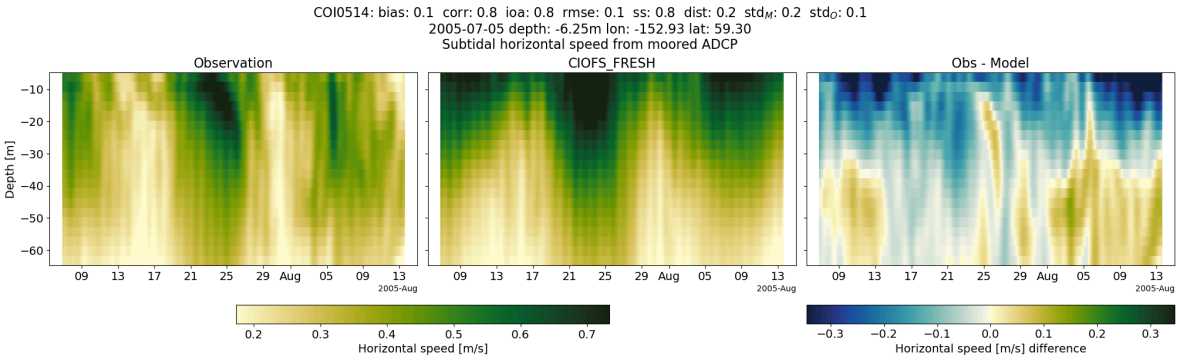
Subtidal

Horizontal speed

CIOFS_HINDCAST

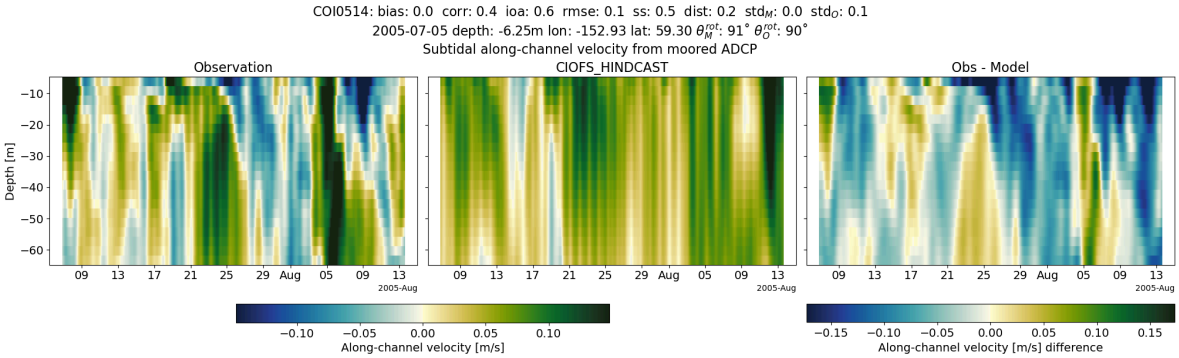


CIOFS_FRESH

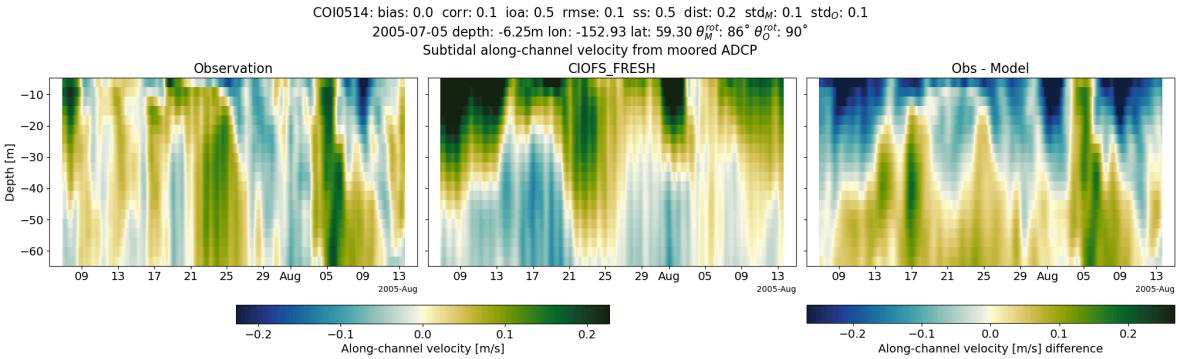


Along-channel velocity

CIOFS_HINDCAST

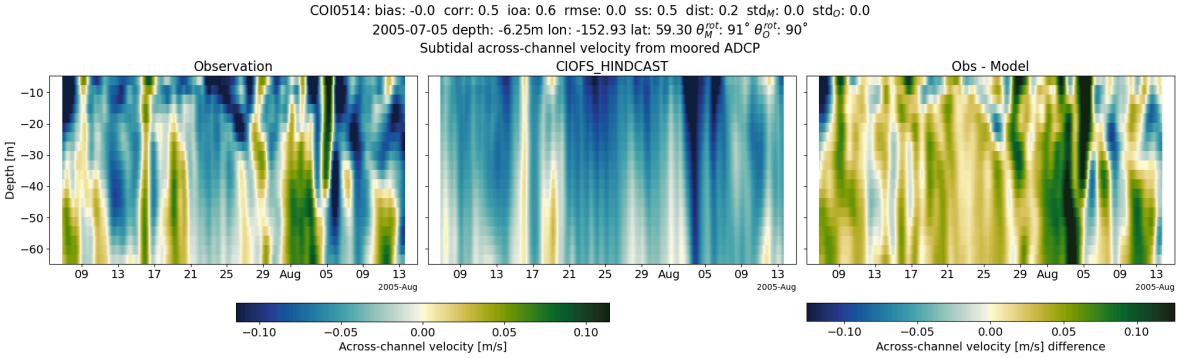


CIOFS_FRESH

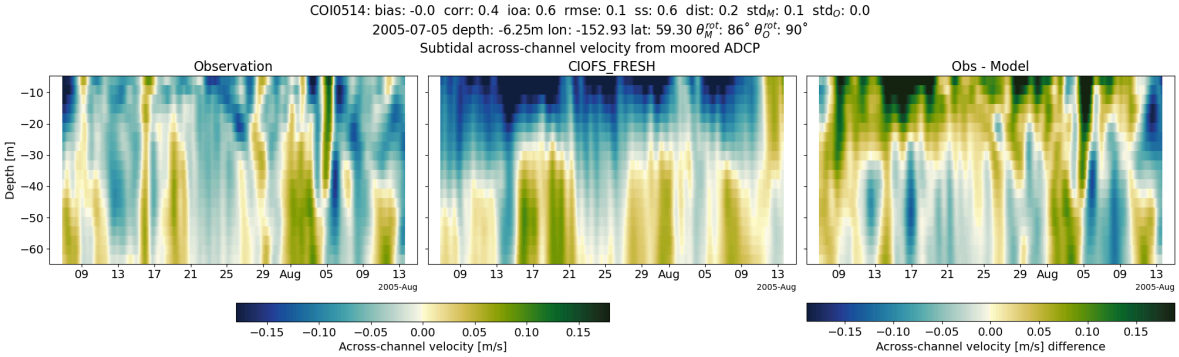


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

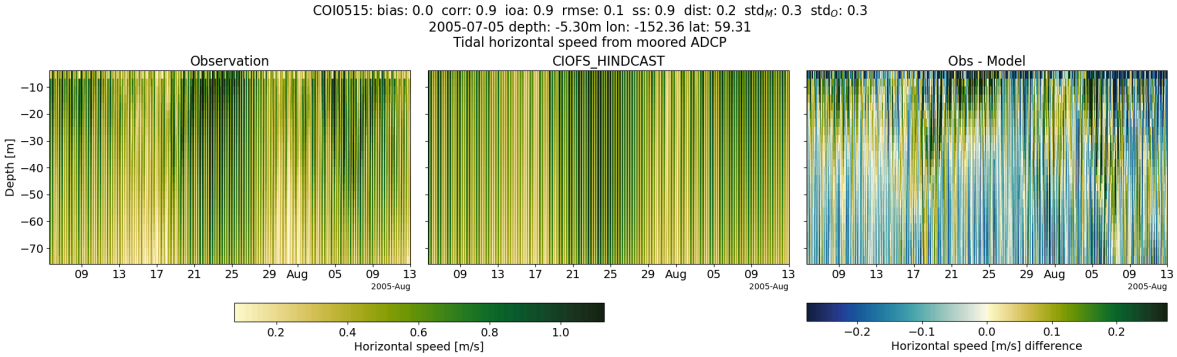


COI0515

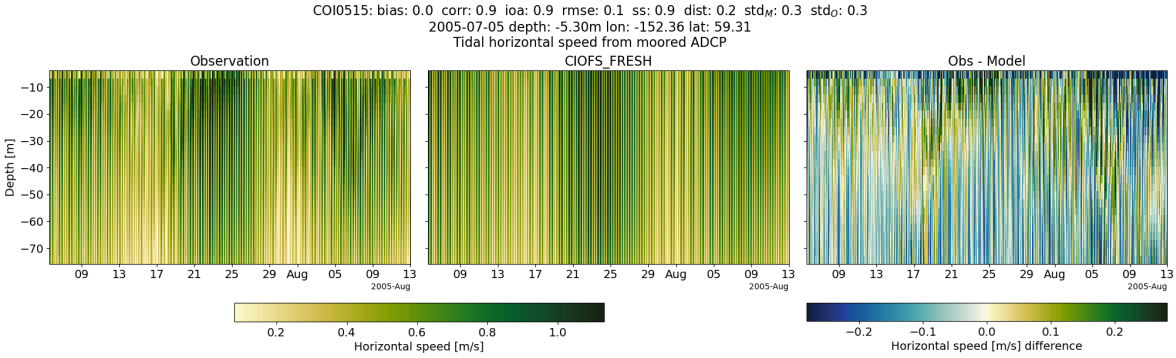
Tidal

Horizontal speed

CIOFS_HINDCAST

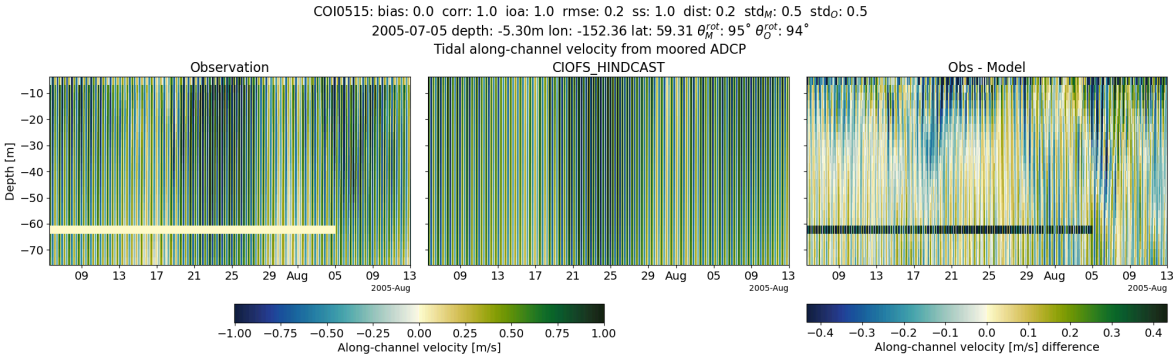


CIOFS_FRESH

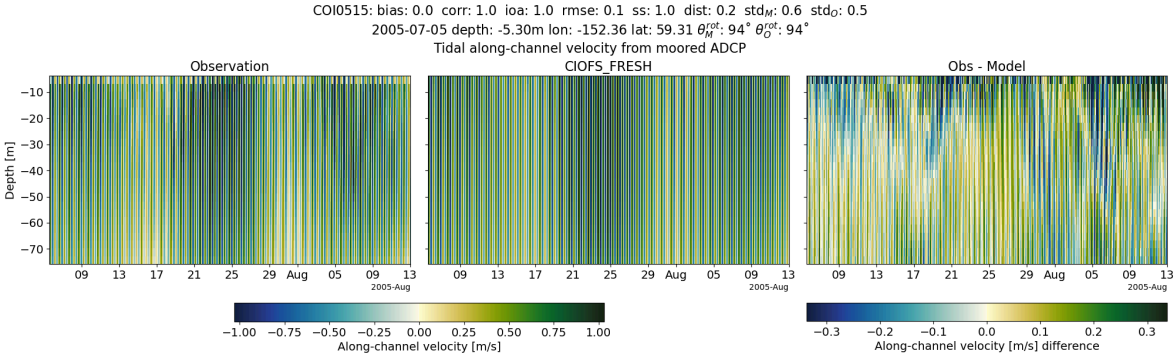


Along-channel velocity

CIOFS_HINDCAST

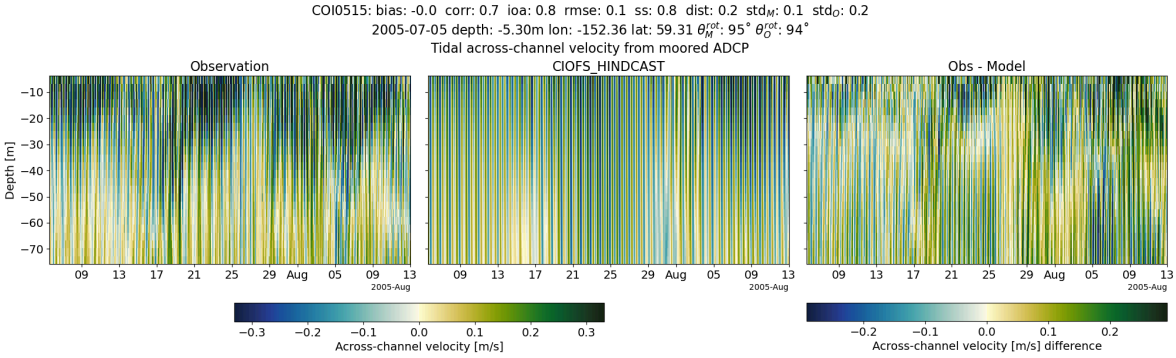


CIOFS_FRESH

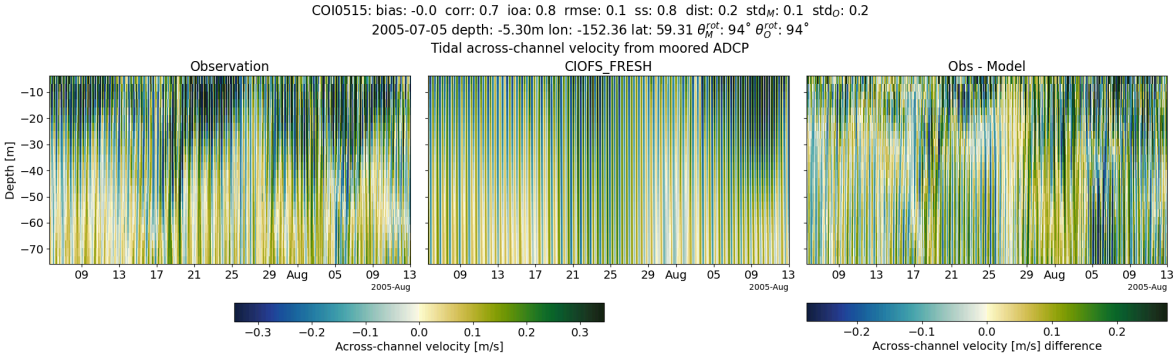


Across-channel velocity

CIOFS_HINDCAST



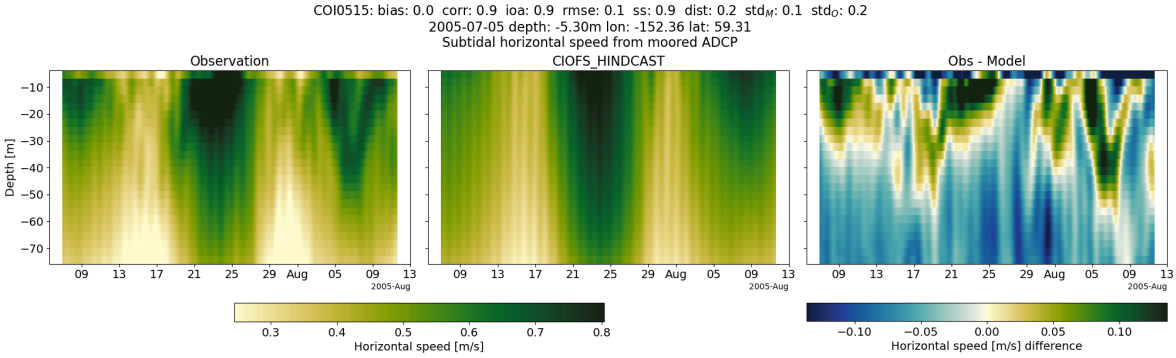
CIOFS_FRESH



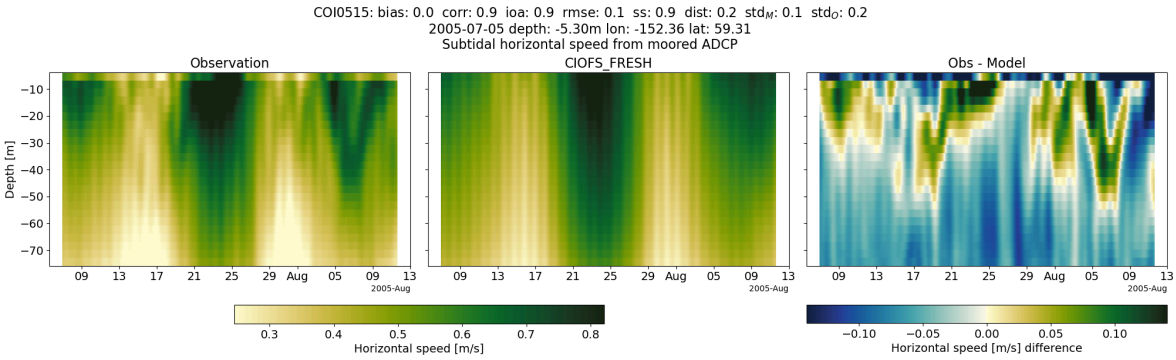
Subtidal

Horizontal speed

CIOFS_HINDCAST

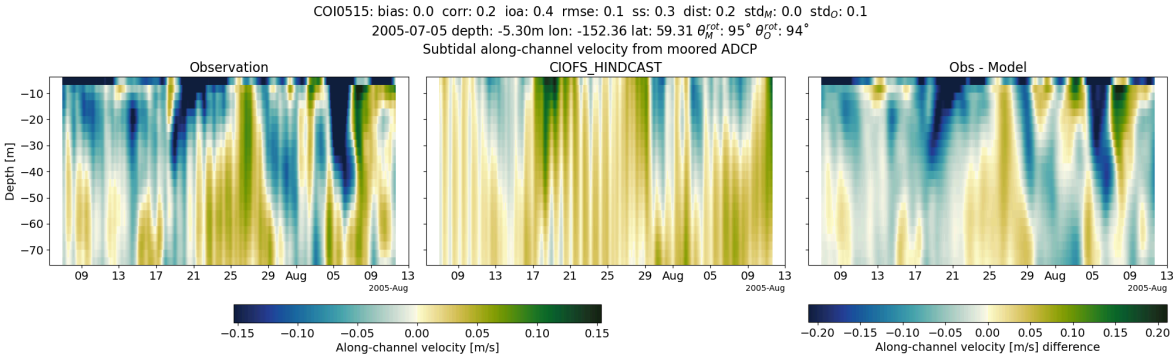


CIOFS_FRESH

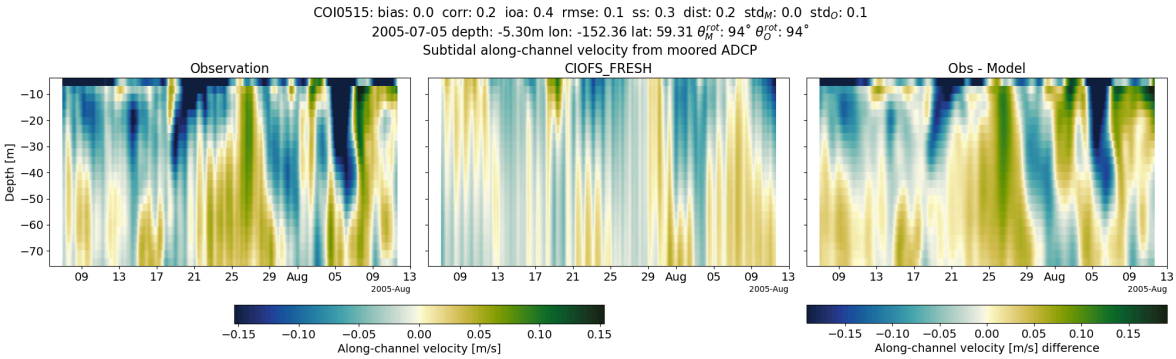


Along-channel velocity

CIOFS_HINDCAST

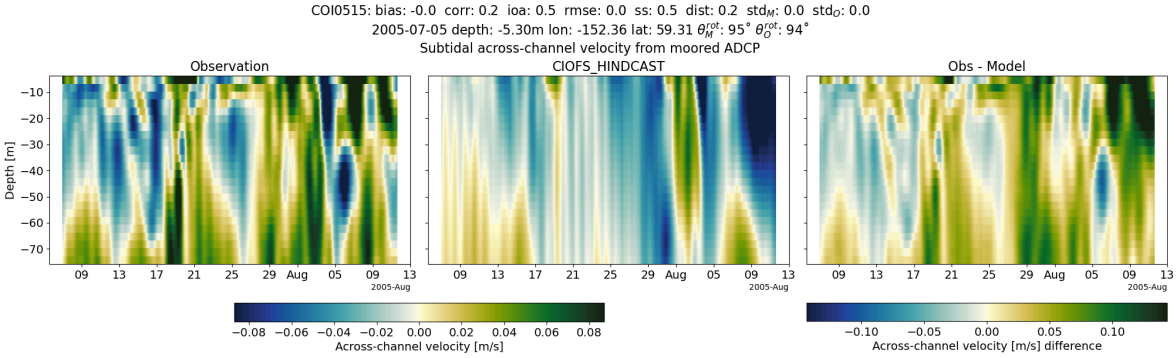


CIOFS_FRESH

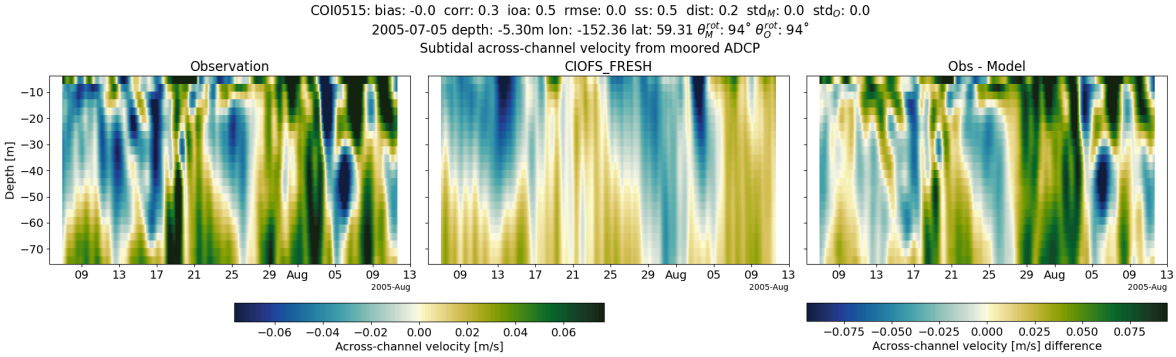


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

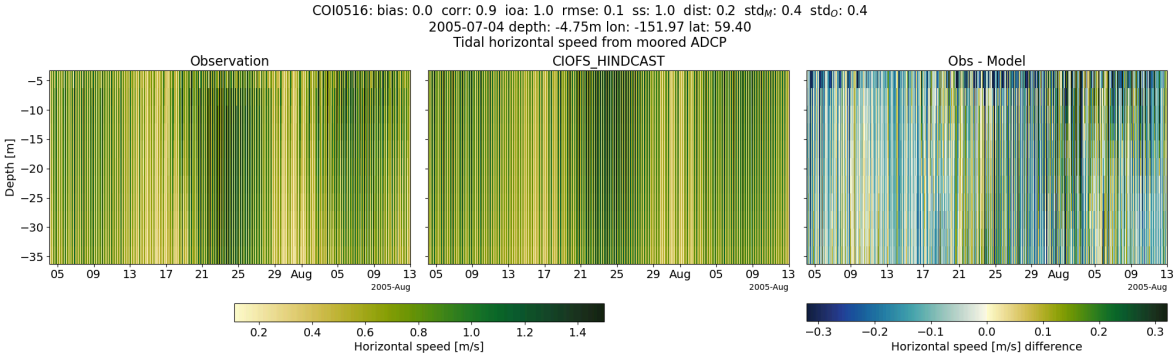


COI0516

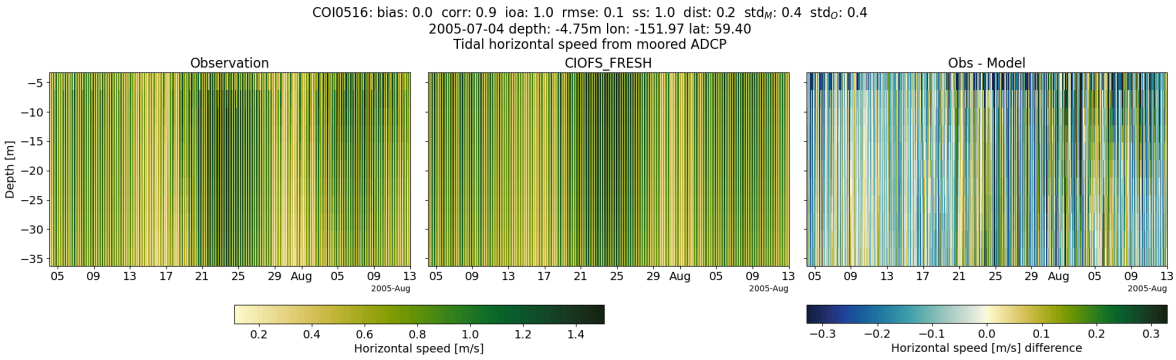
Tidal

Horizontal speed

CIOFS_HINDCAST

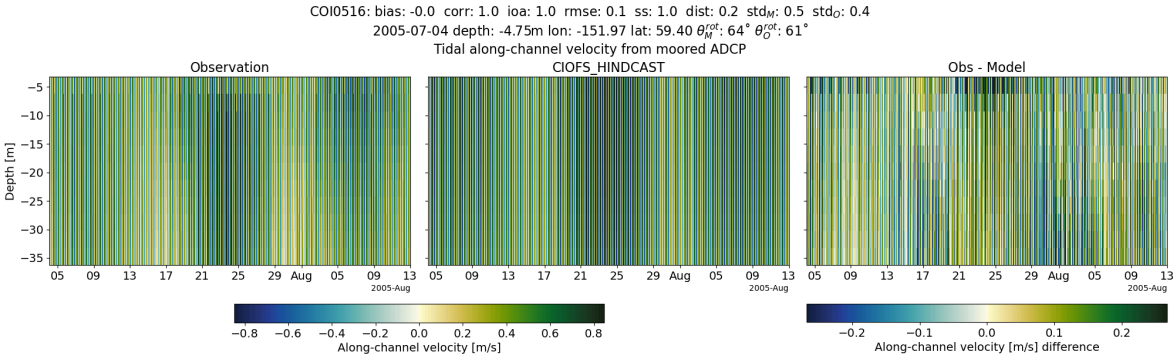


CIOFS_FRESH

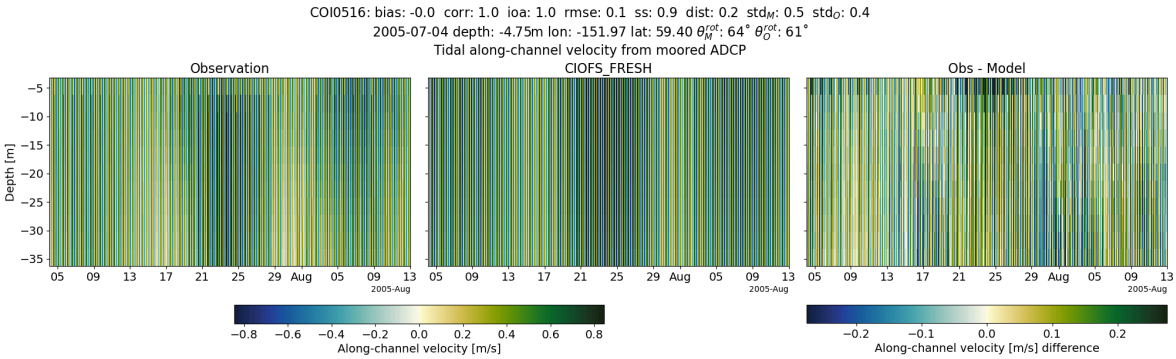


Along-channel velocity

CIOFS_HINDCAST

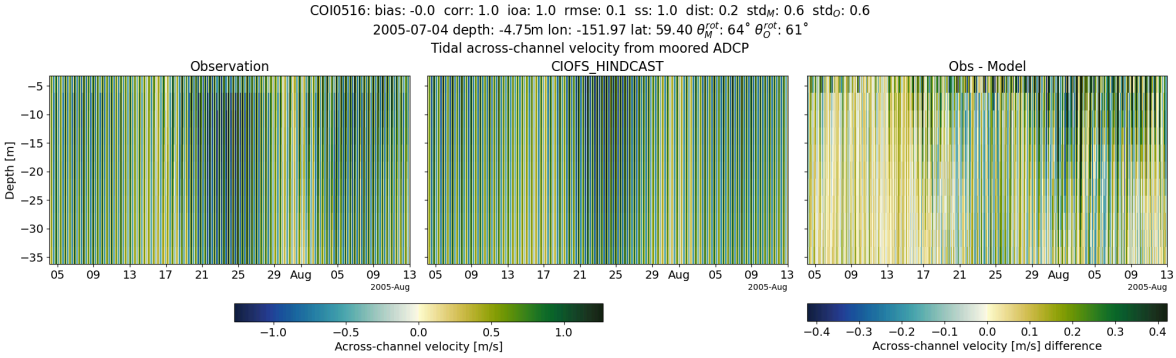


CIOFS_FRESH

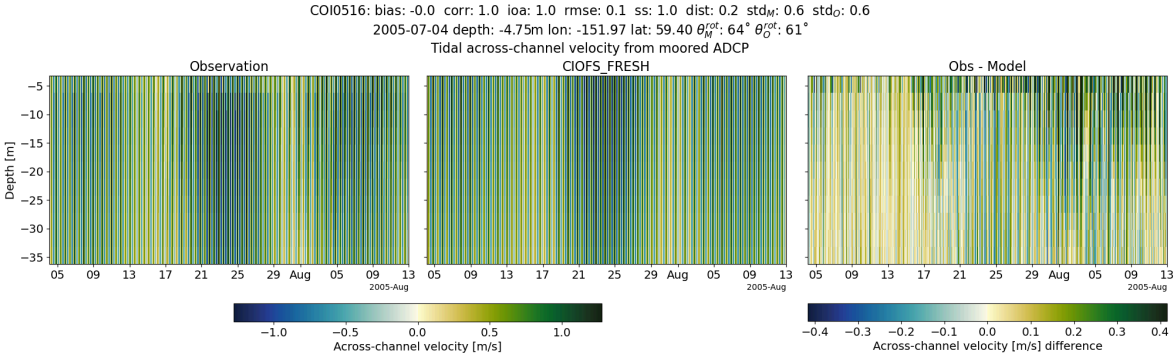


Across-channel velocity

CIOFS_HINDCAST



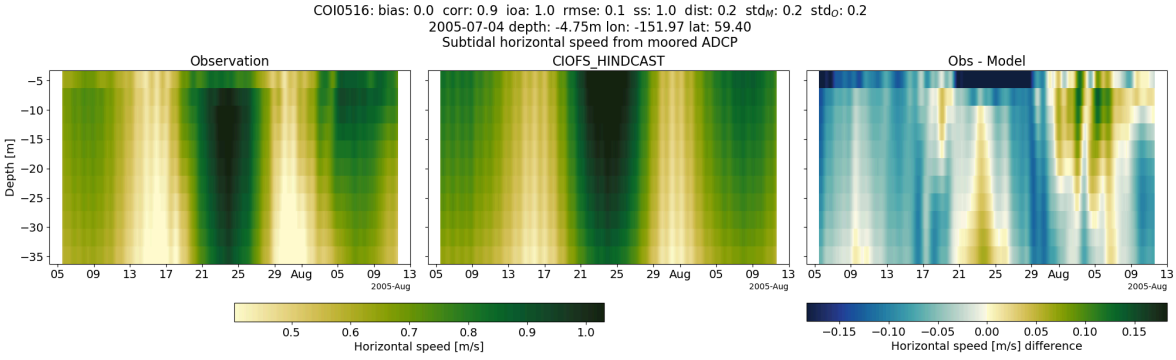
CIOFS_FRESH



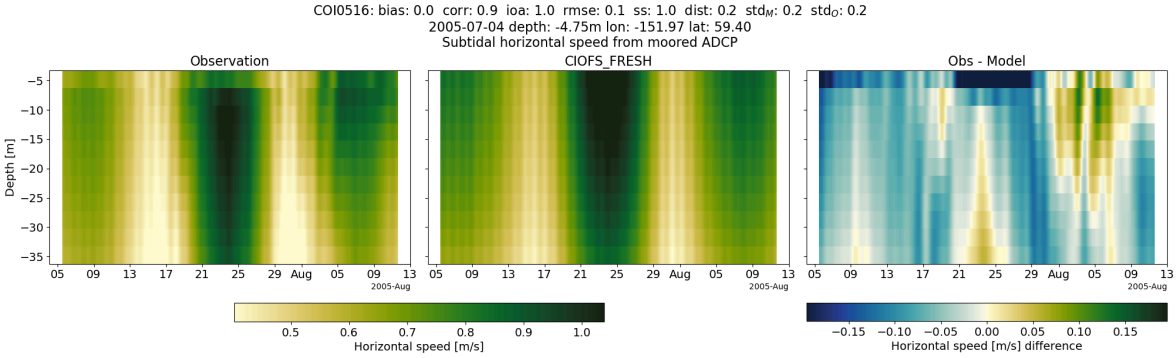
Subtidal

Horizontal speed

CIOFS_HINDCAST

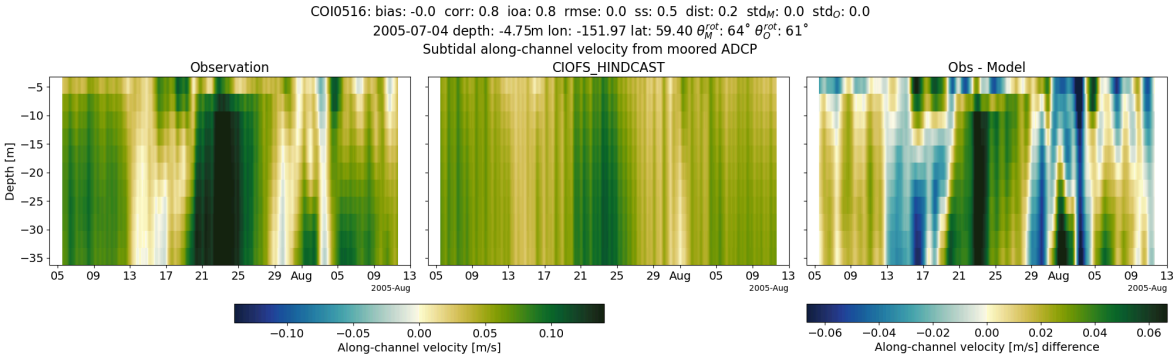


CIOFS_FRESH

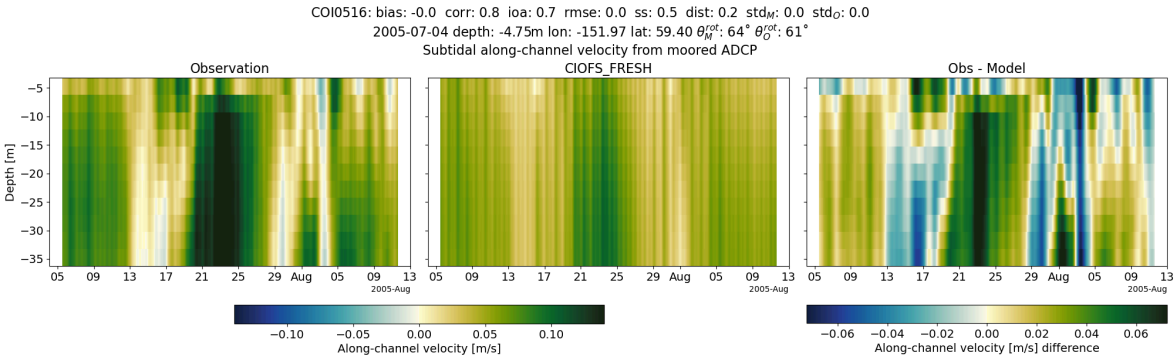


Along-channel velocity

CIOFS_HINDCAST

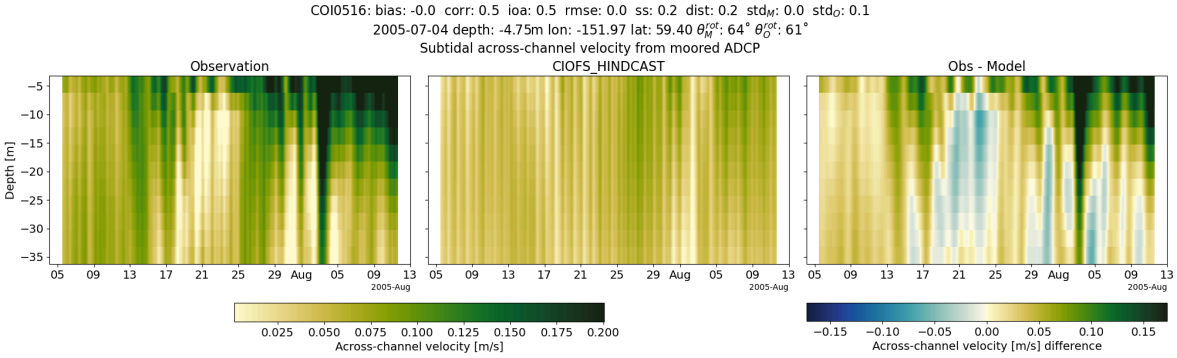


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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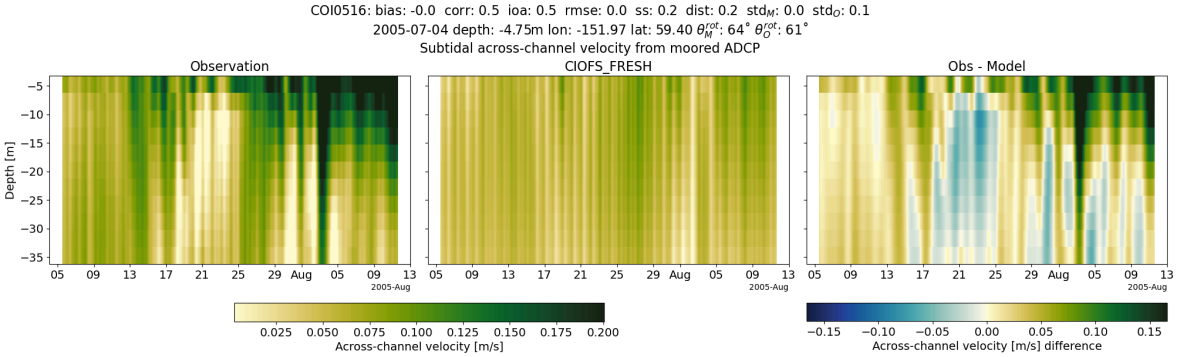
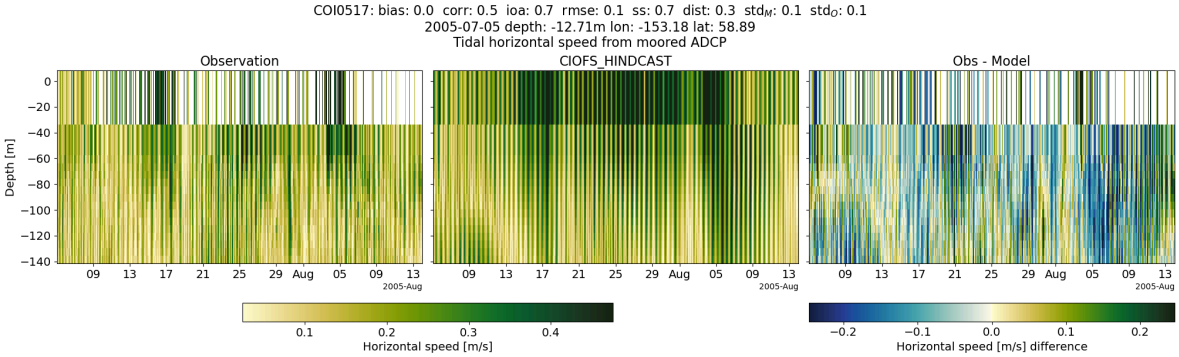


COI0517

Tidal

Horizontal speed

CIOFS_HINDCAST



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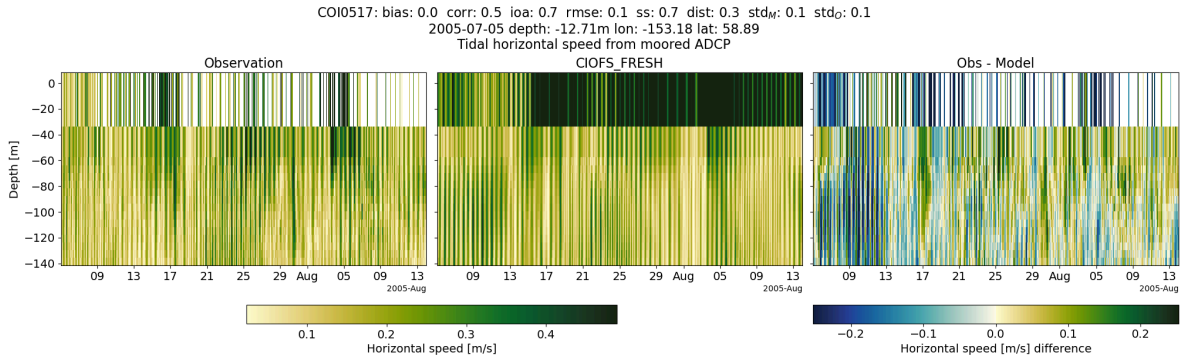
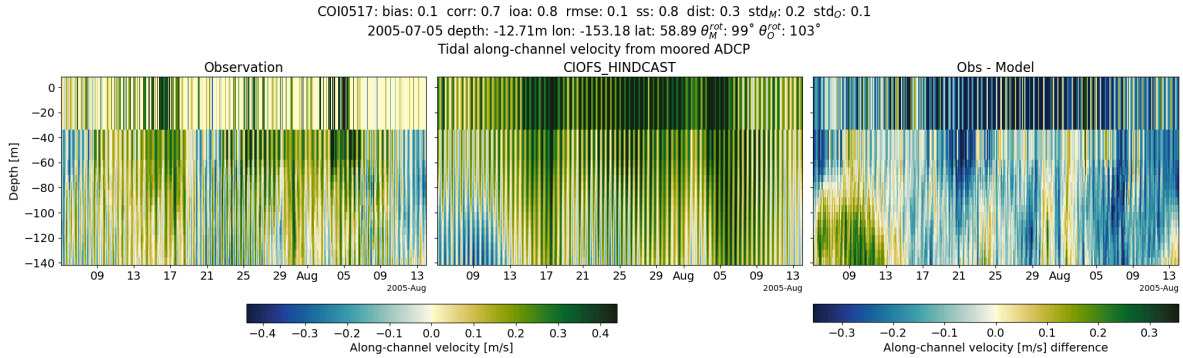


Along-channel velocity

CIOFS_HINDCAST



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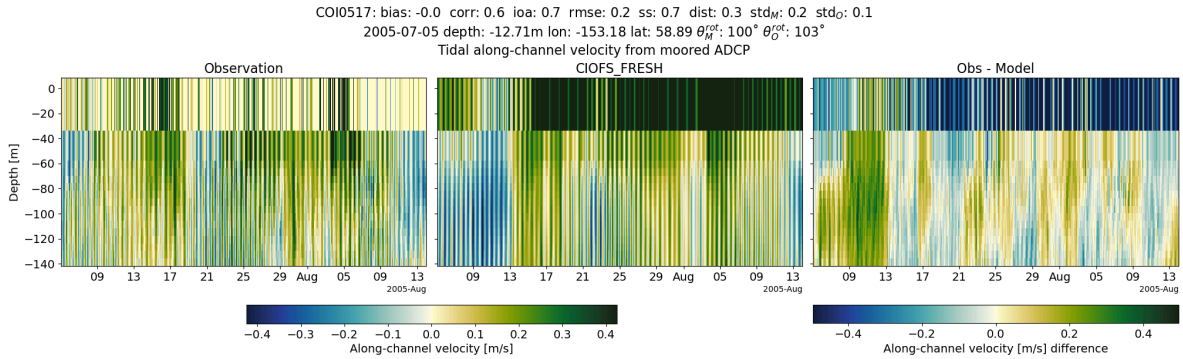
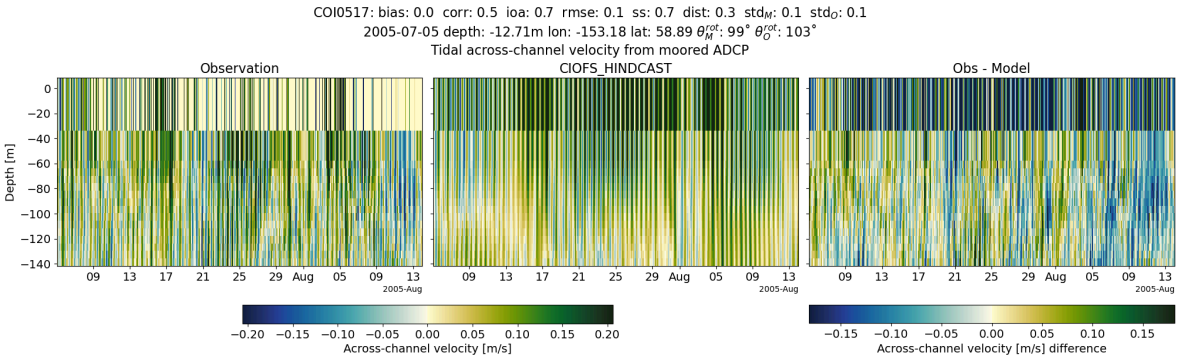


Across-channel velocity

CIOFS_HINDCAST



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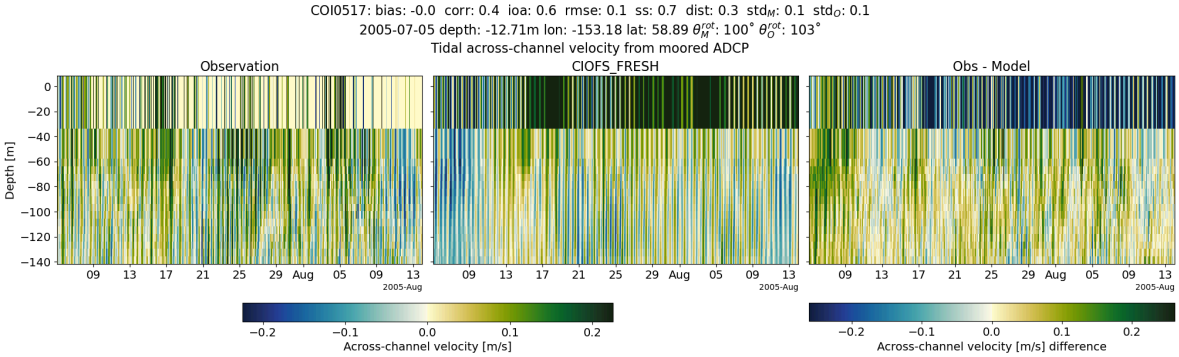
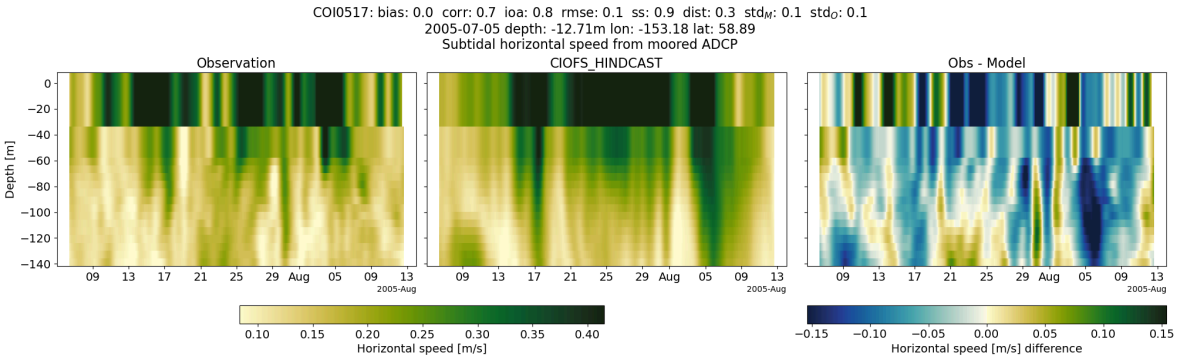


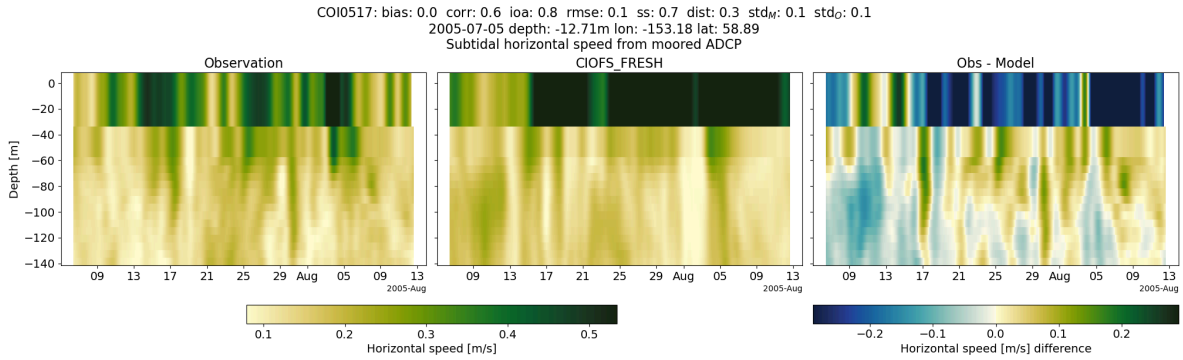
Subtidal

Horizontal speed

CIOFS_HINDCAST

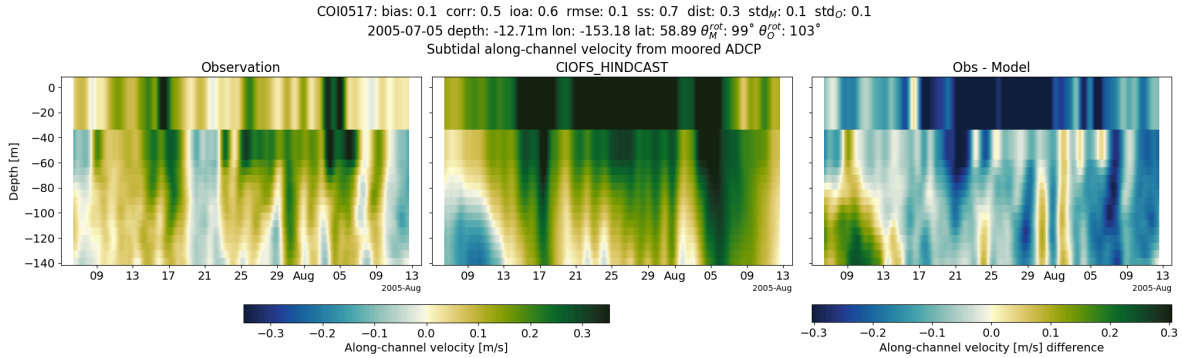


CIOFS_FRESH

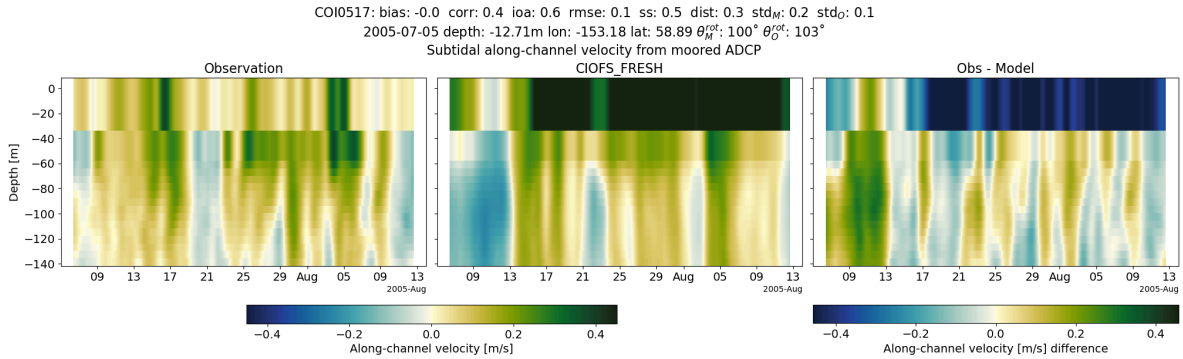


Along-channel velocity

CIOFS_HINDCAST

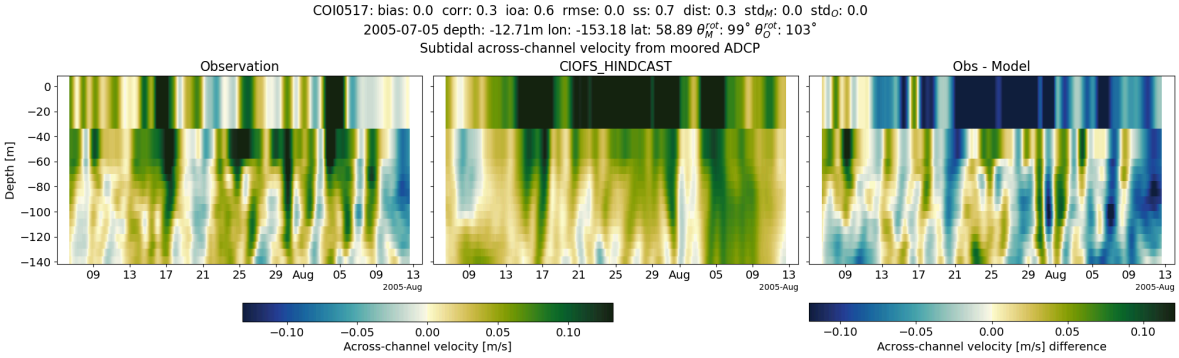


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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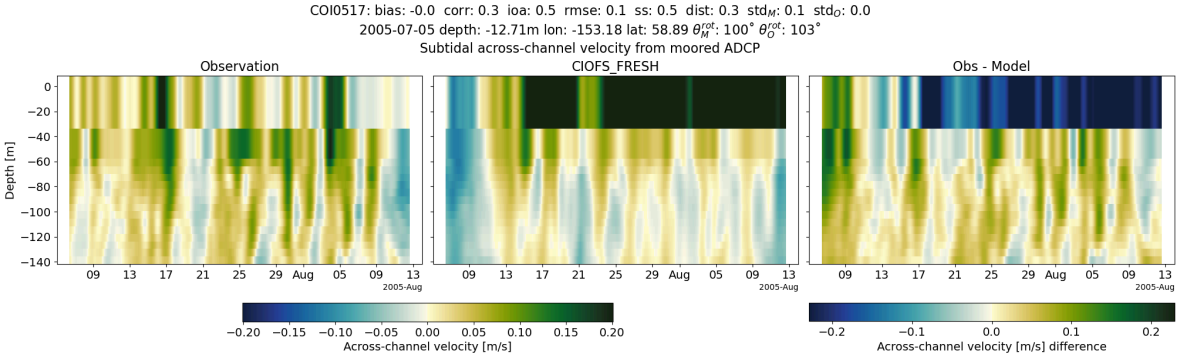
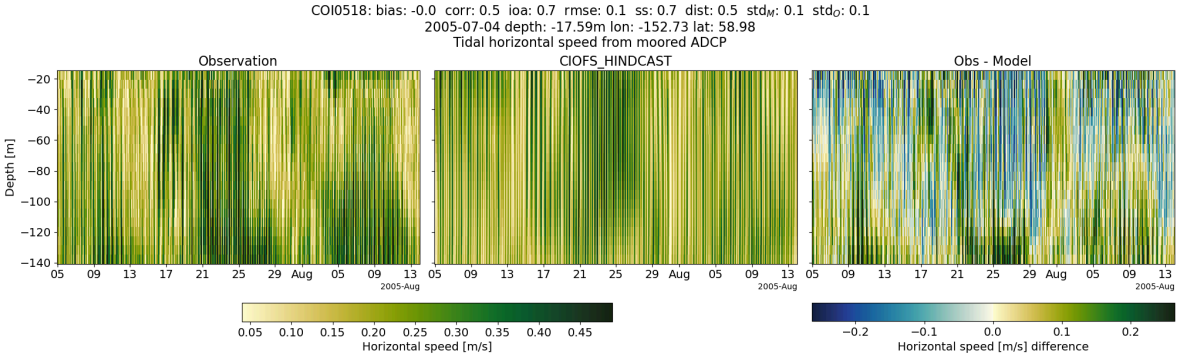


COI0518

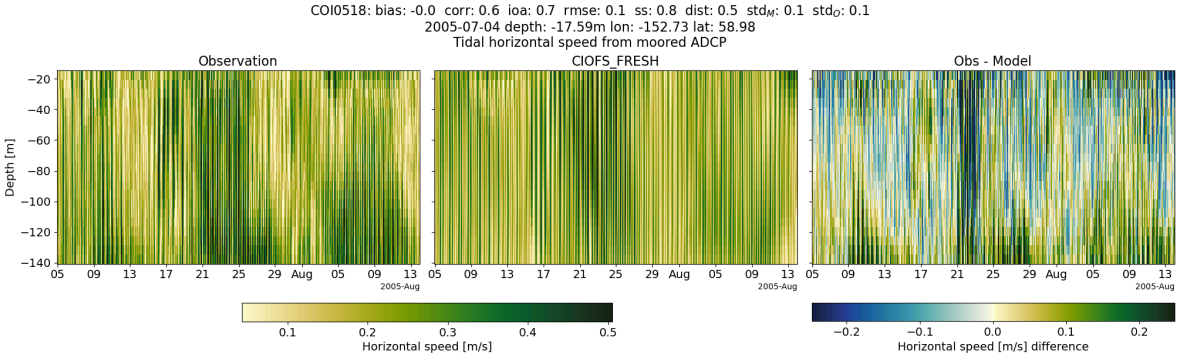
Tidal

Horizontal speed

CIOFS_HINDCAST

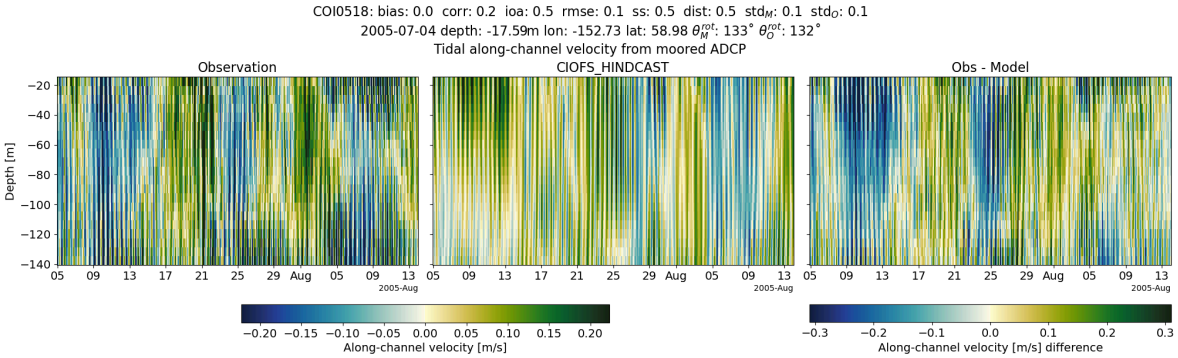


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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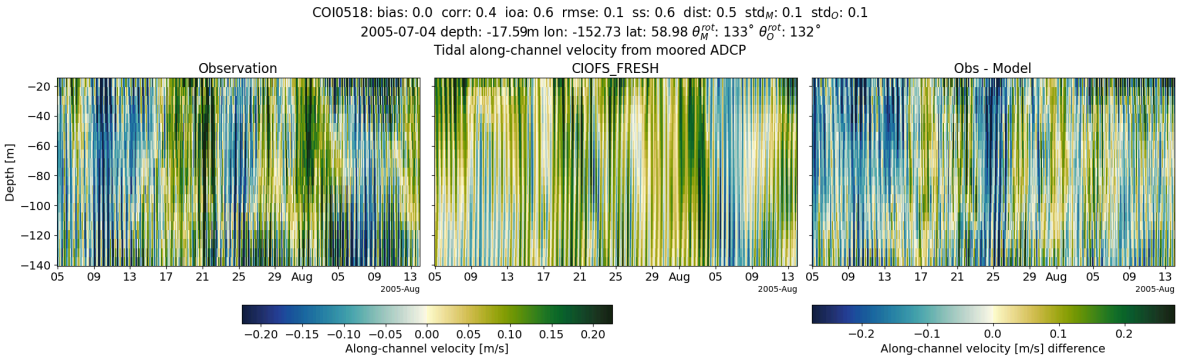
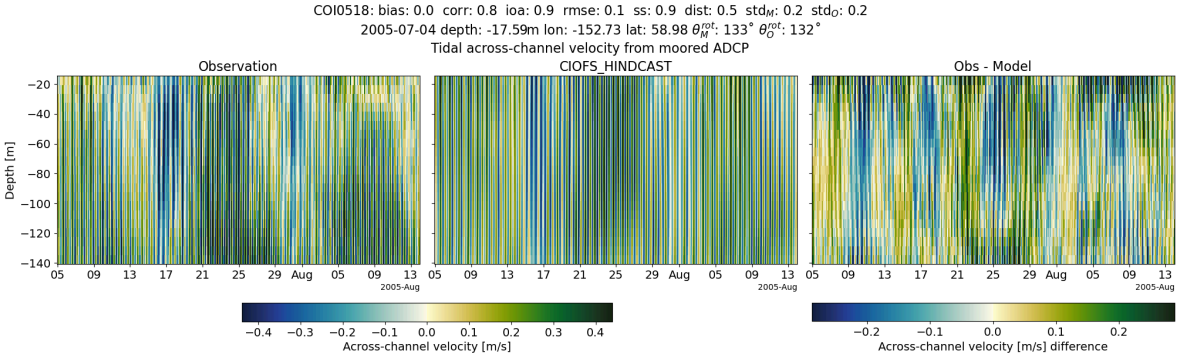


Across-channel velocity

CIOFS_HINDCAST



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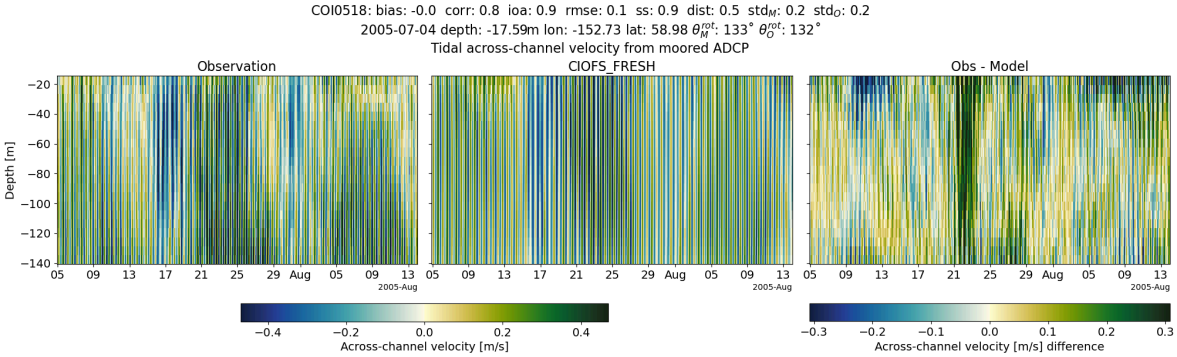
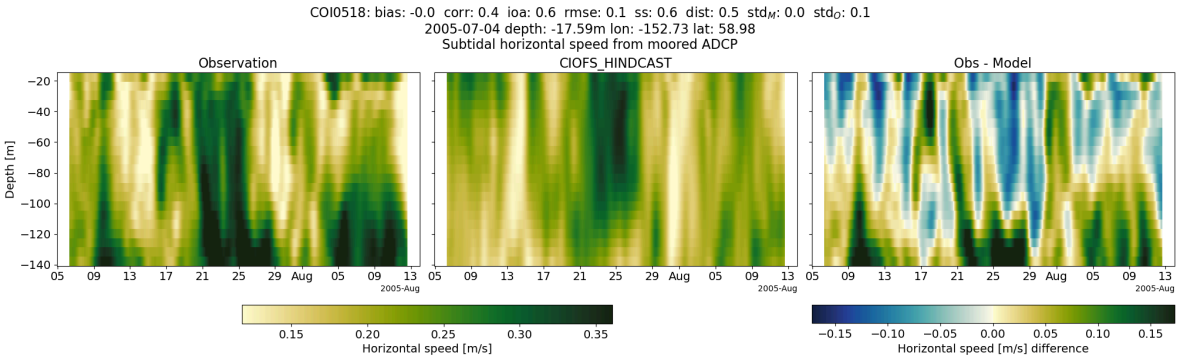


Subtidal

Horizontal speed

CIOFS_HINDCAST



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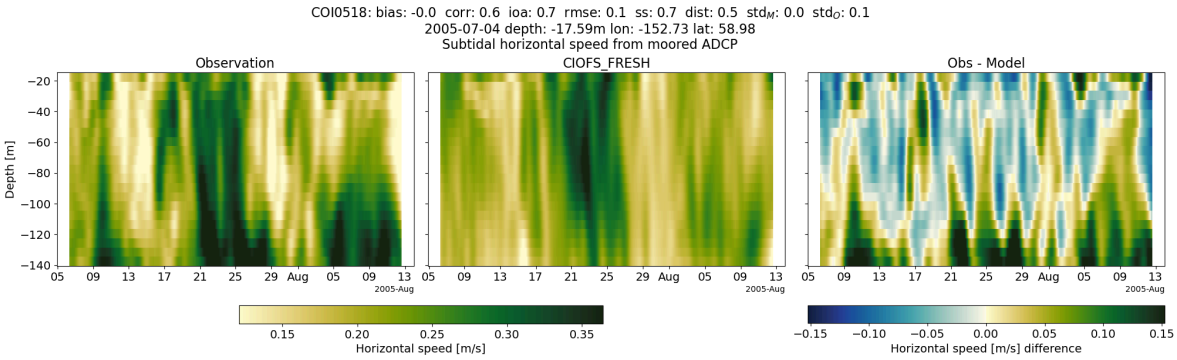
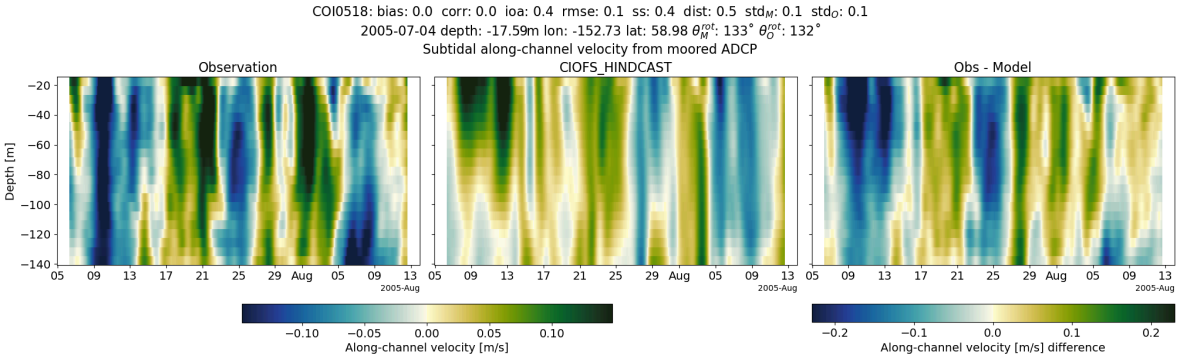
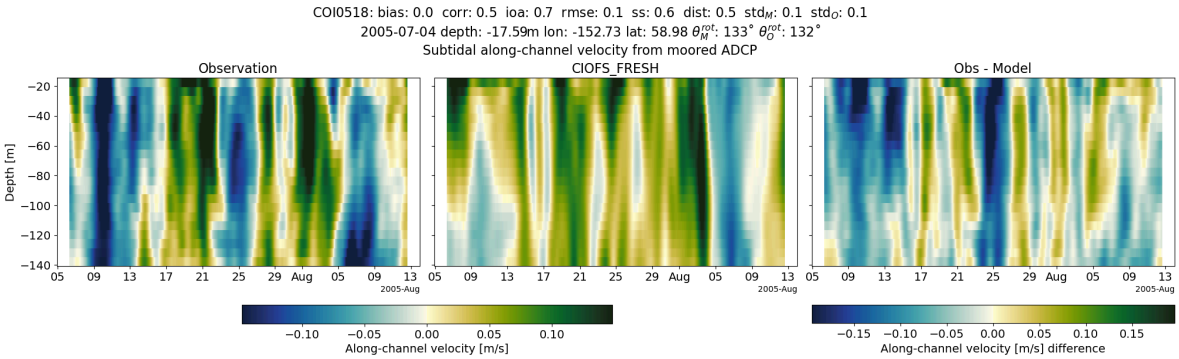


Along-channel velocity

CIOFS_HINDCAST

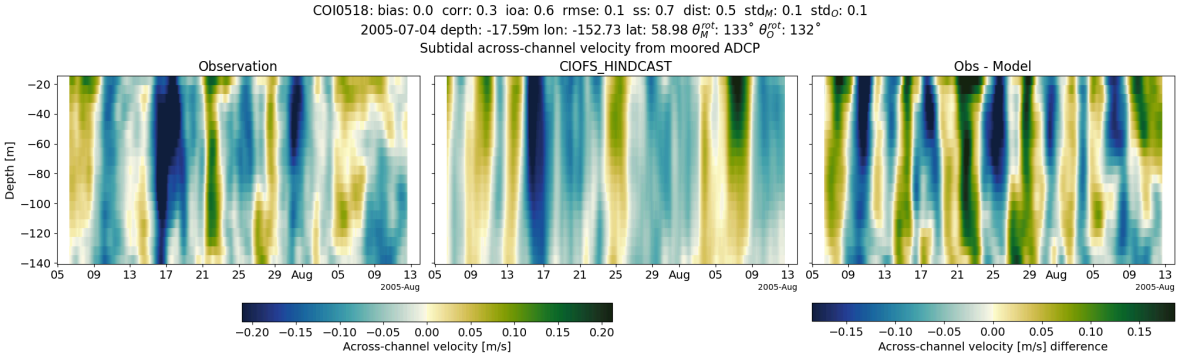


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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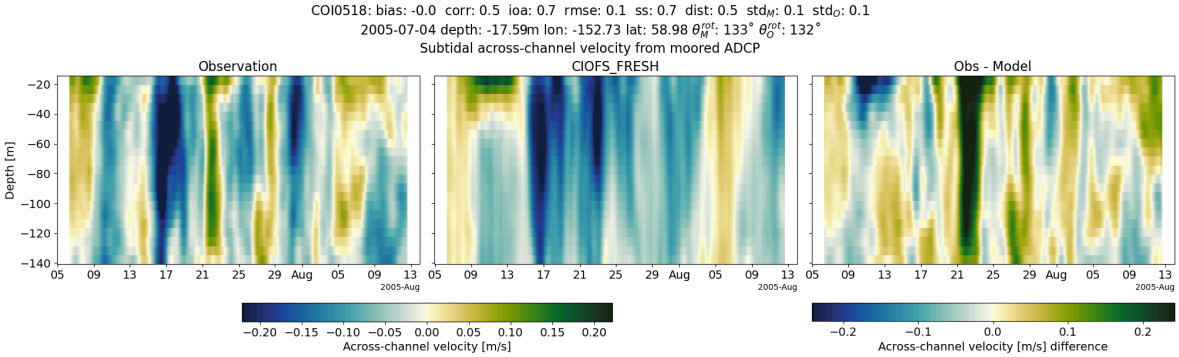
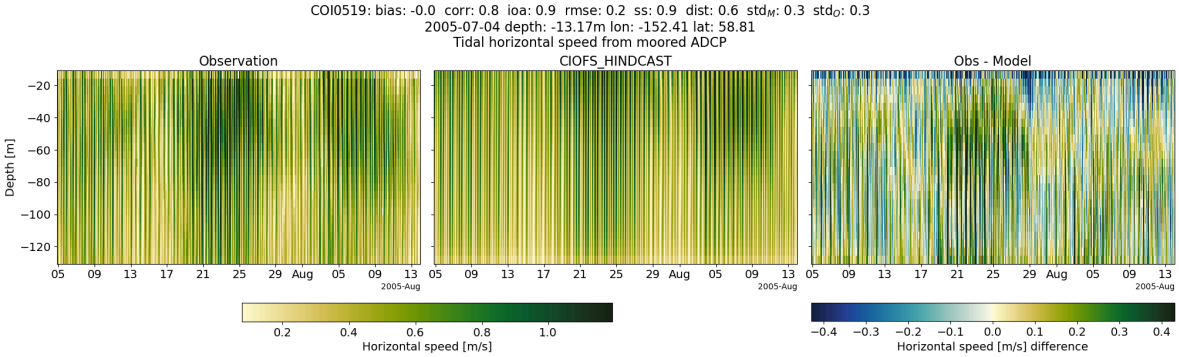


COI0519

Tidal

Horizontal speed

CIOFS_HINDCAST



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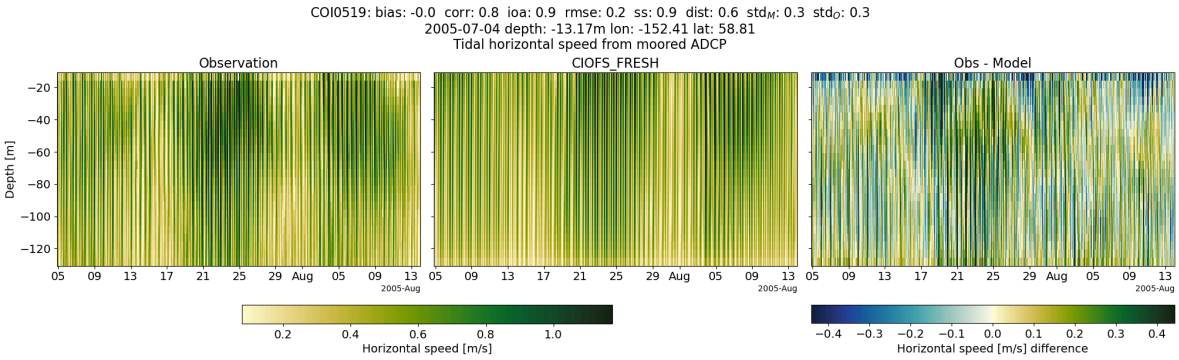
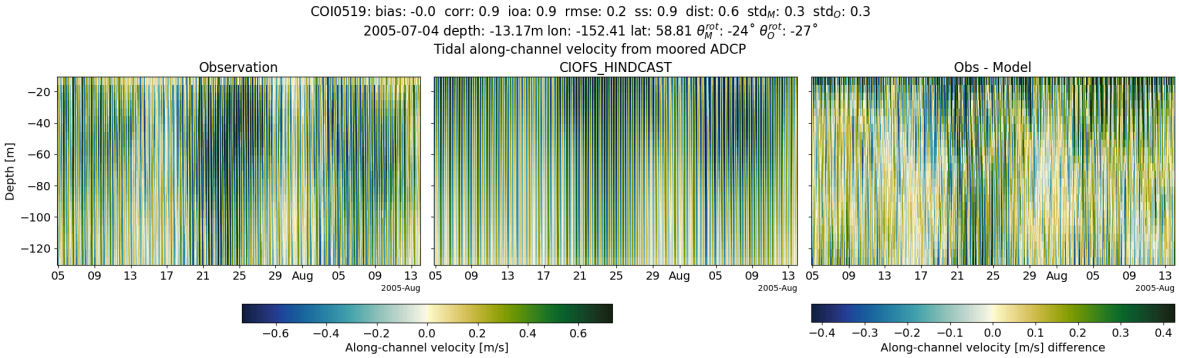
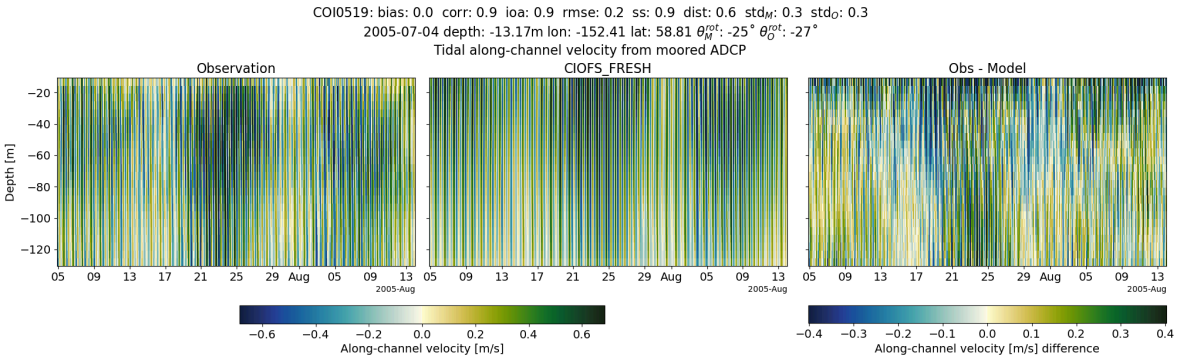


Along-channel velocity

CIOFS_HINDCAST

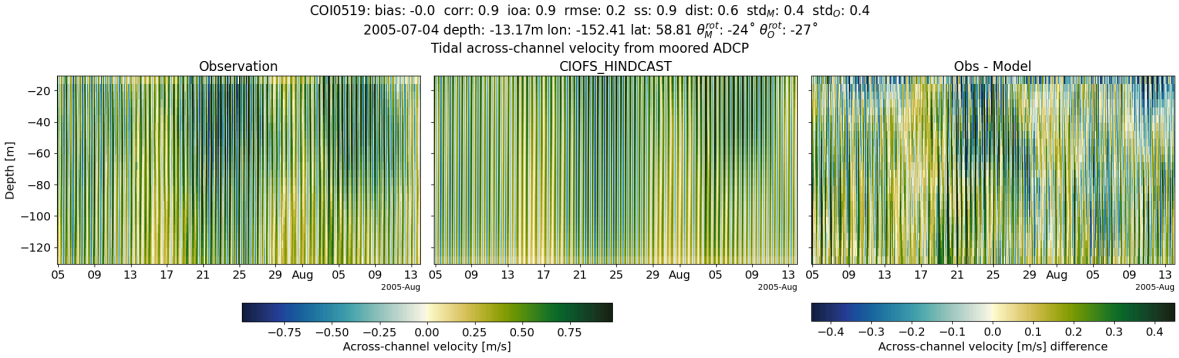


CIOFS_FRESH

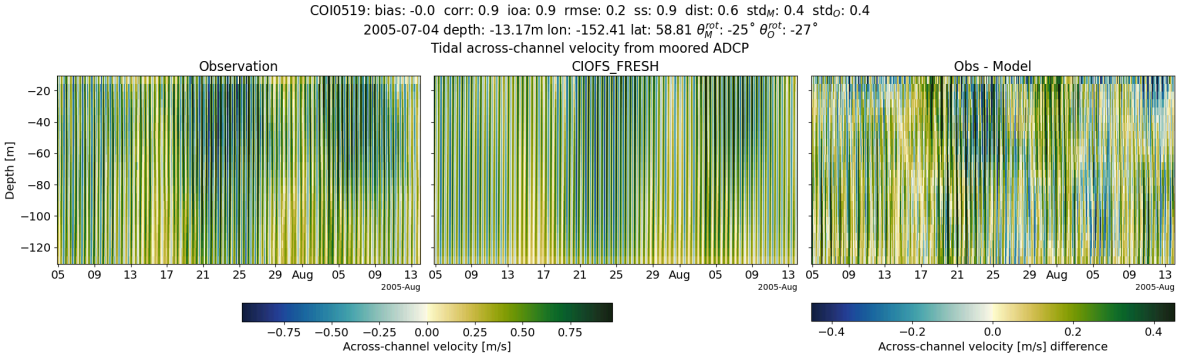


Across-channel velocity

CIOFS_HINDCAST



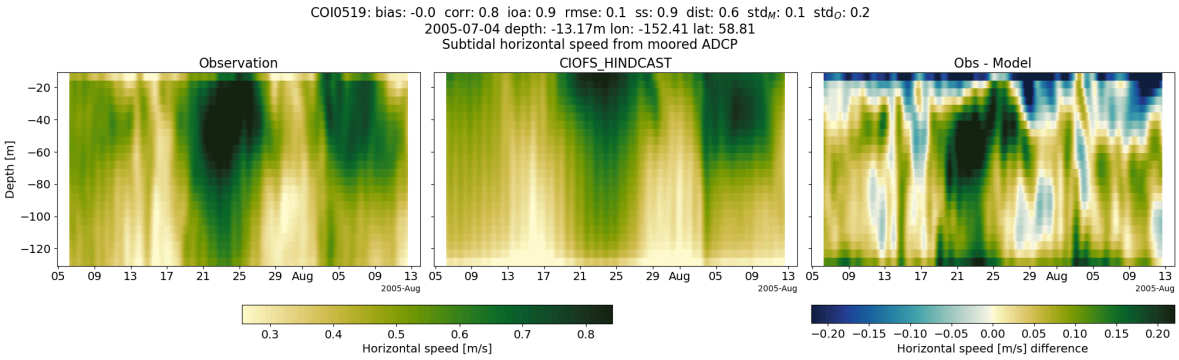
CIOFS_FRESH



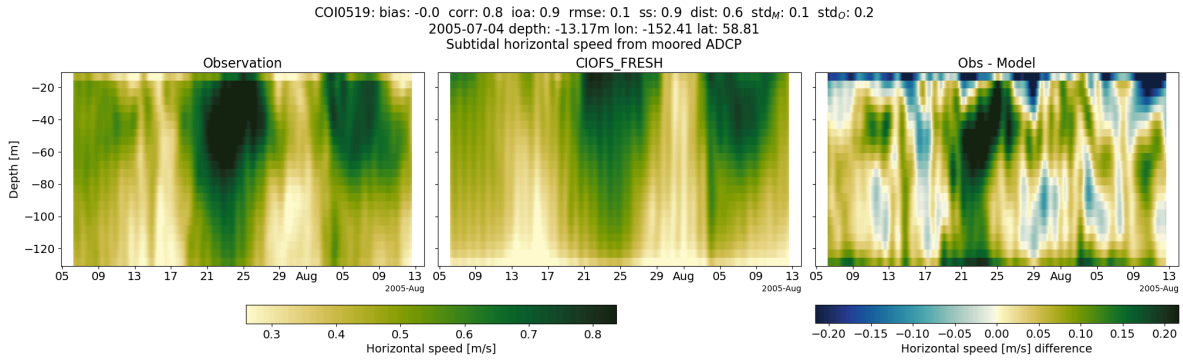
Subtidal

Horizontal speed

CIOFS_HINDCAST

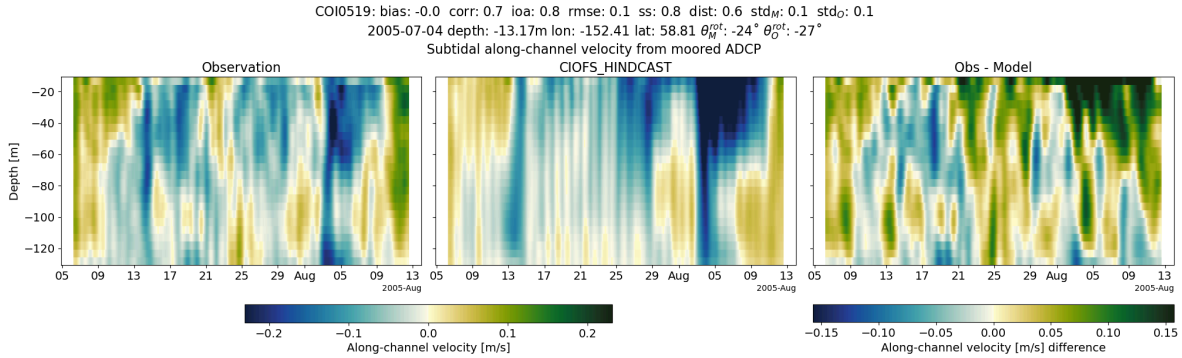


CIOFS_FRESH

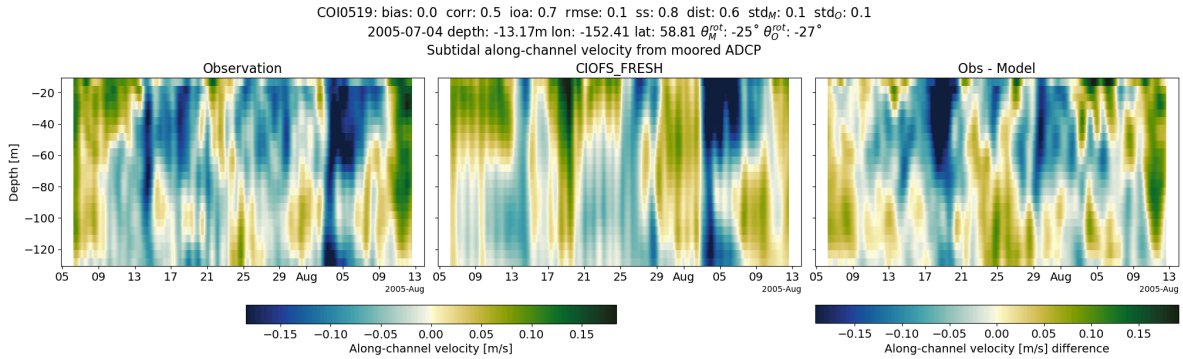


Along-channel velocity

CIOFS_HINDCAST

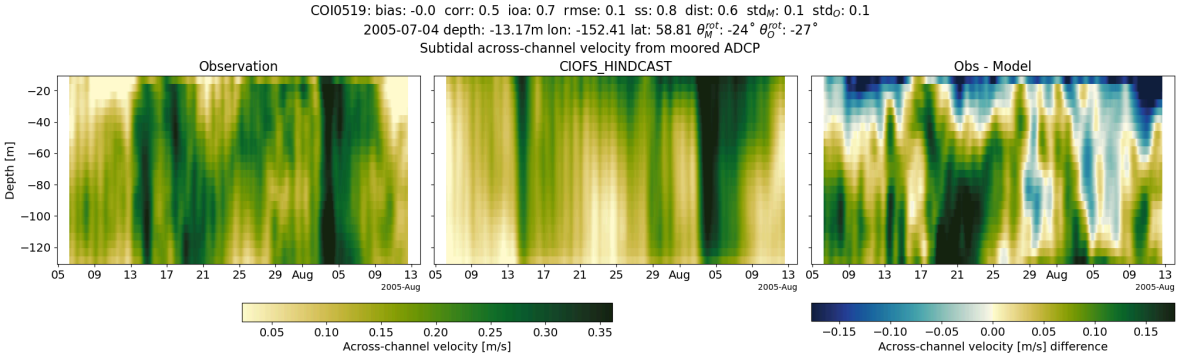


CIOFS_FRESH

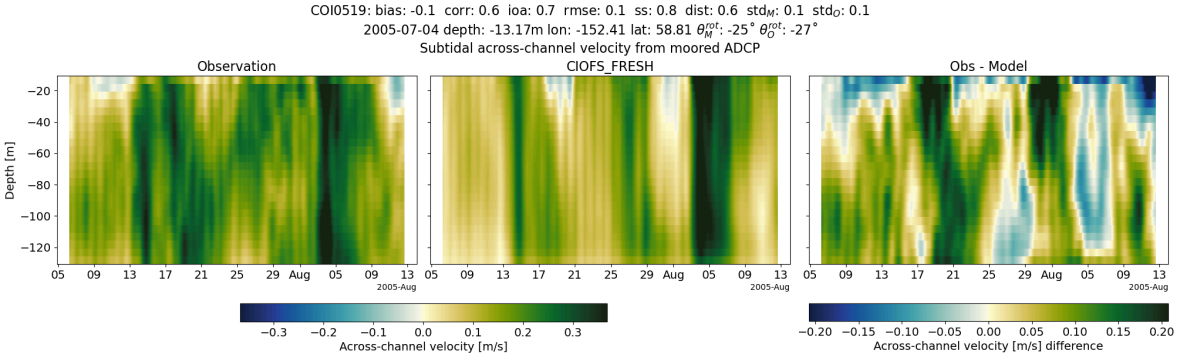


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

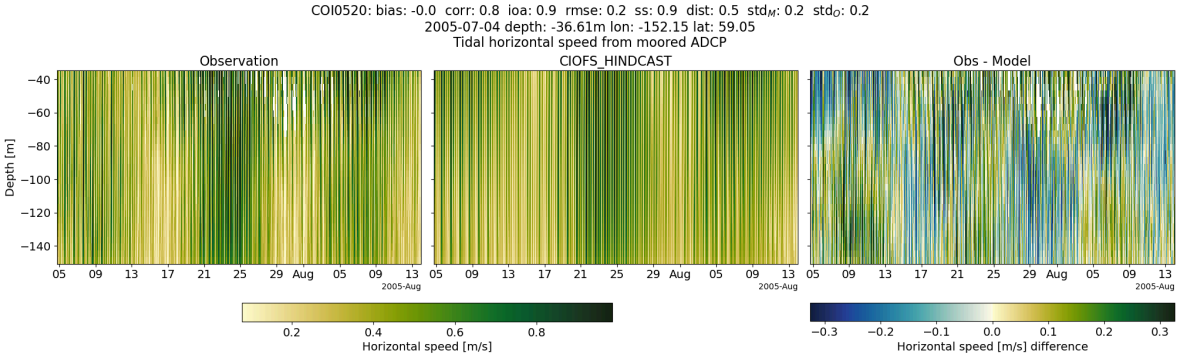


COI0520

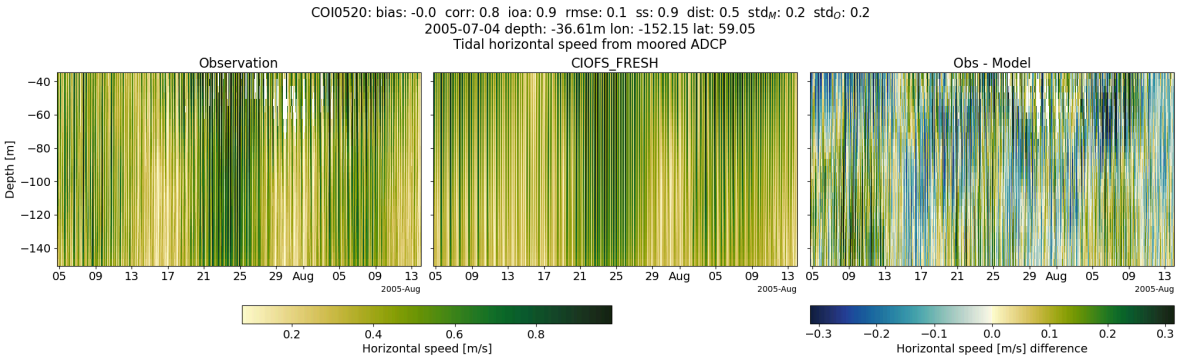
Tidal

Horizontal speed

CIOFS_HINDCAST

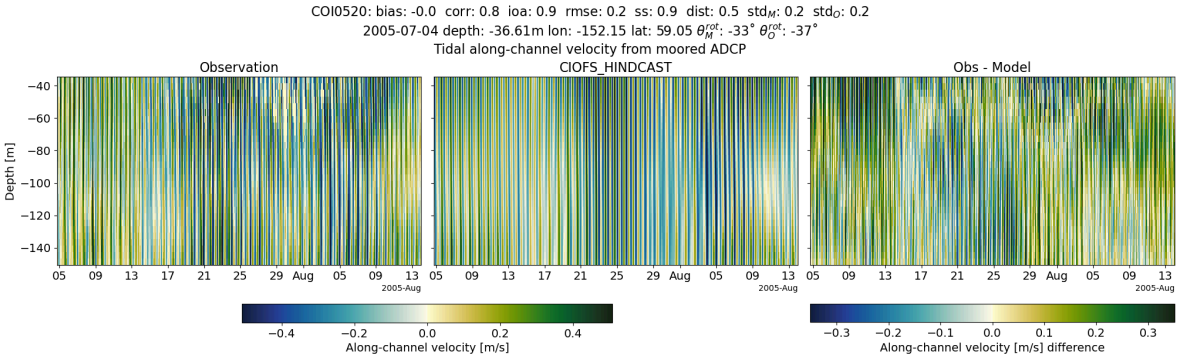


CIOFS_FRESH

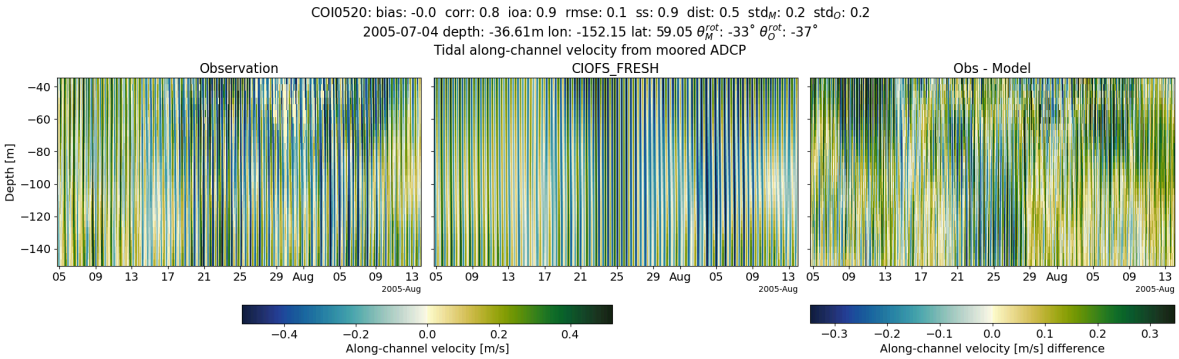


Along-channel velocity

CIOFS_HINDCAST

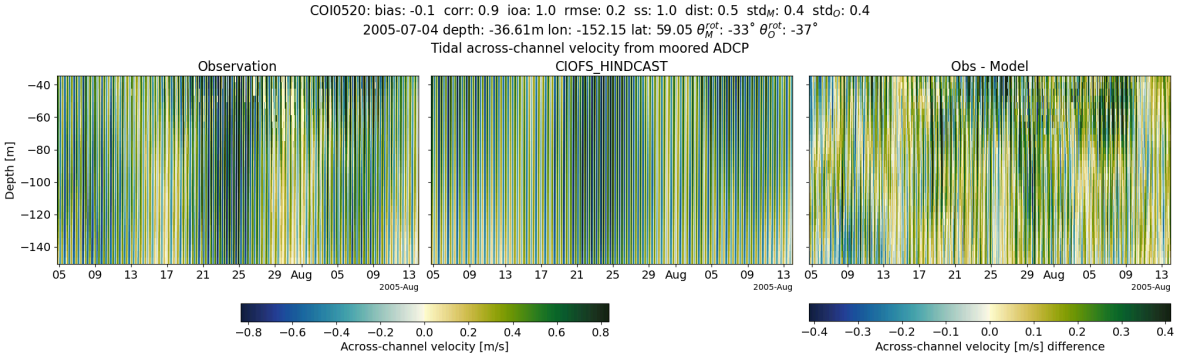


CIOFS_FRESH

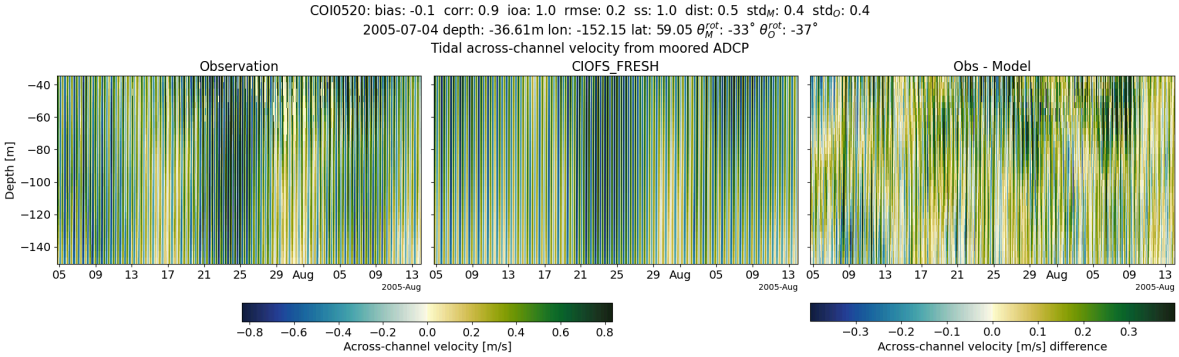


Across-channel velocity

CIOFS_HINDCAST



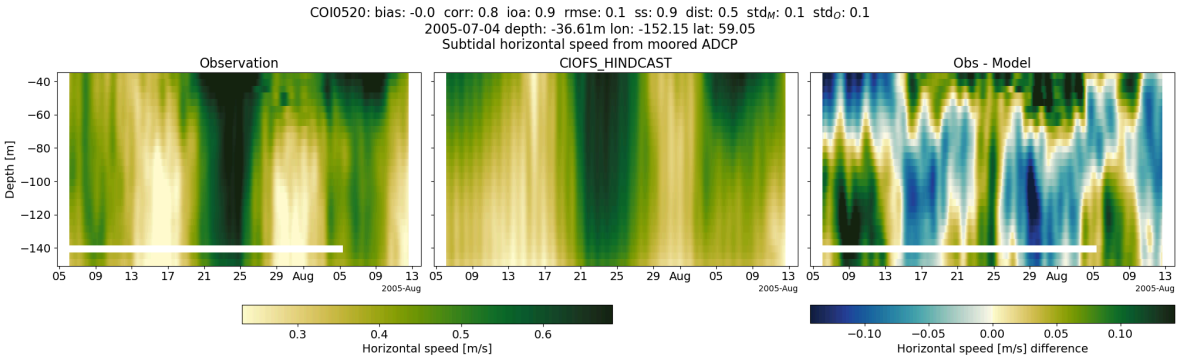
CIOFS_FRESH



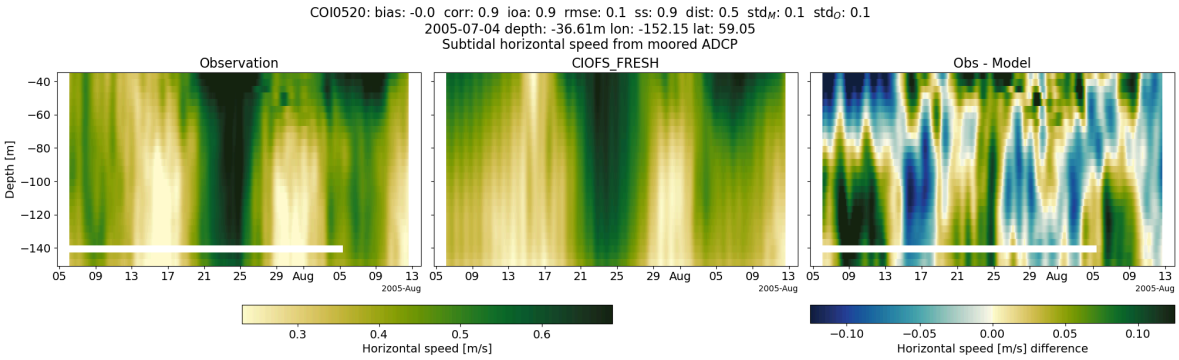
Subtidal

Horizontal speed

CIOFS_HINDCAST

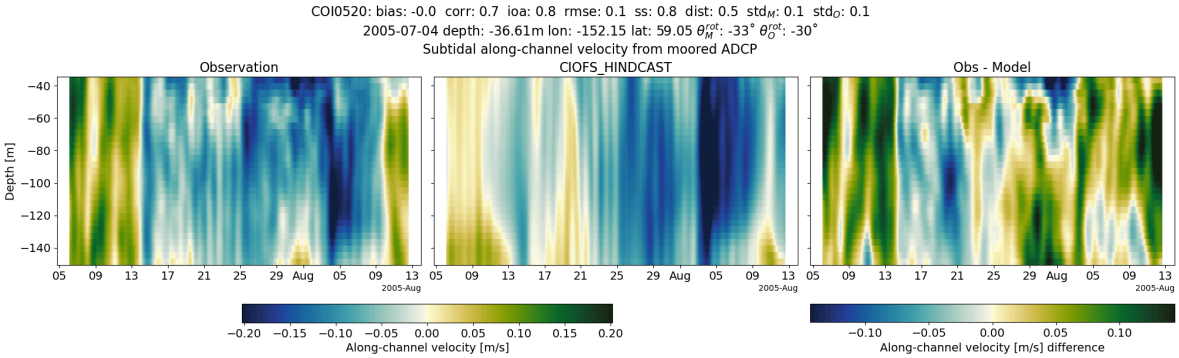


CIOFS_FRESH

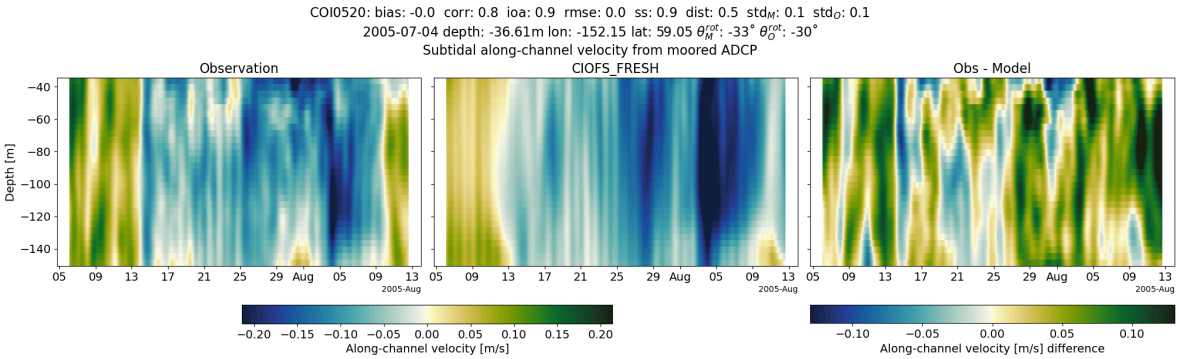


Along-channel velocity

CIOFS_HINDCAST

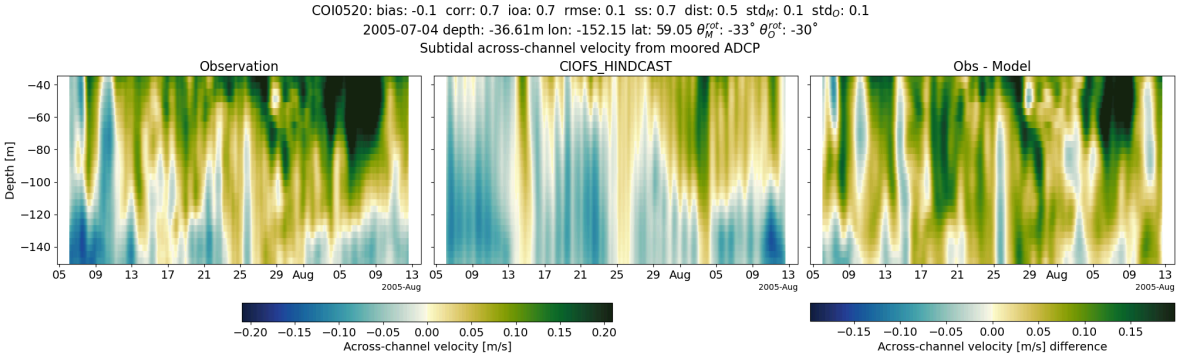


CIOFS_FRESH

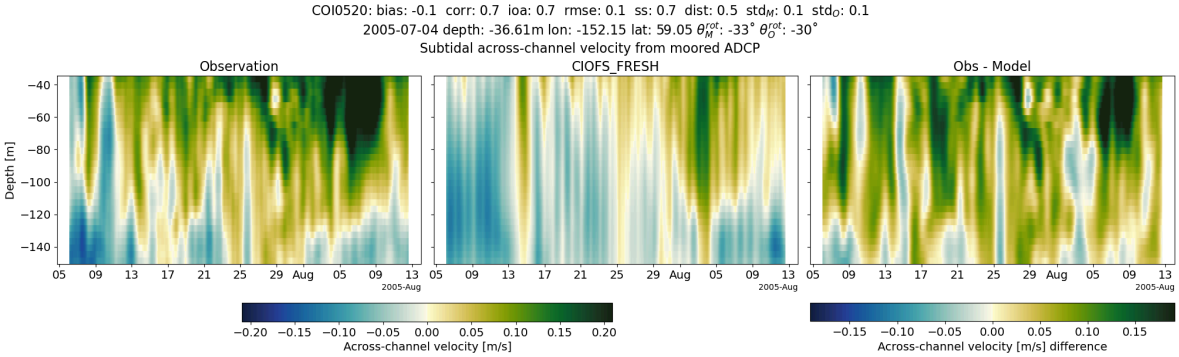


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

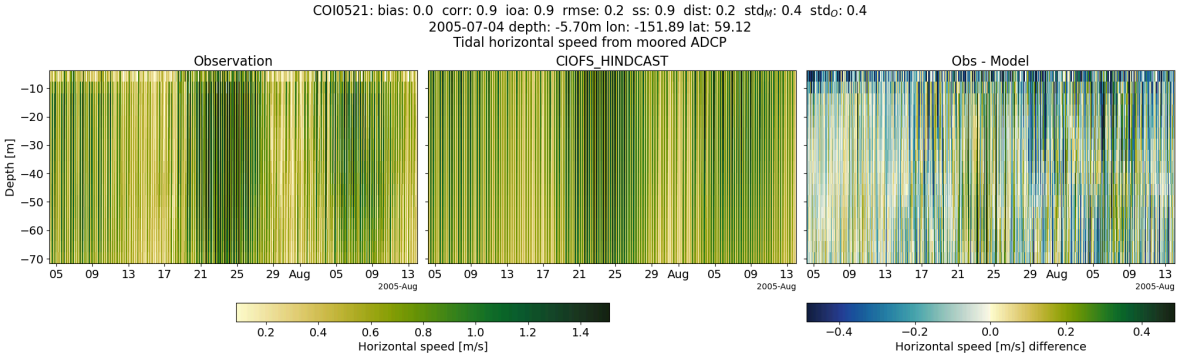


COI0521

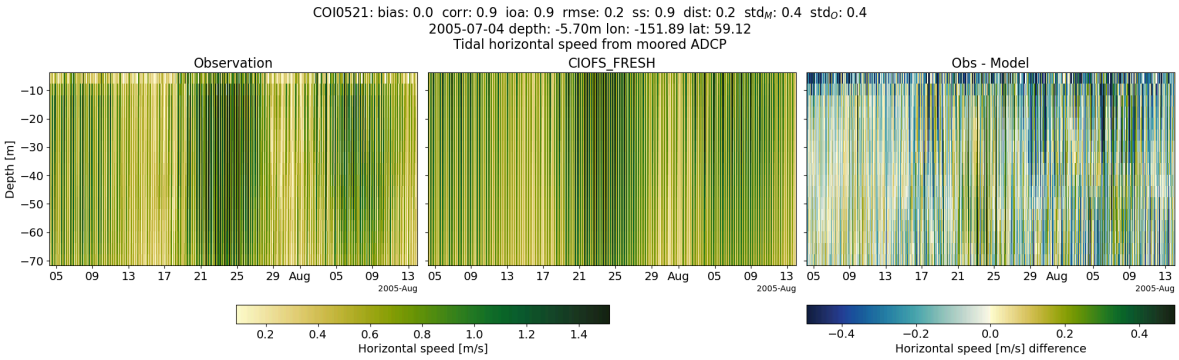
Tidal

Horizontal speed

CIOFS_HINDCAST

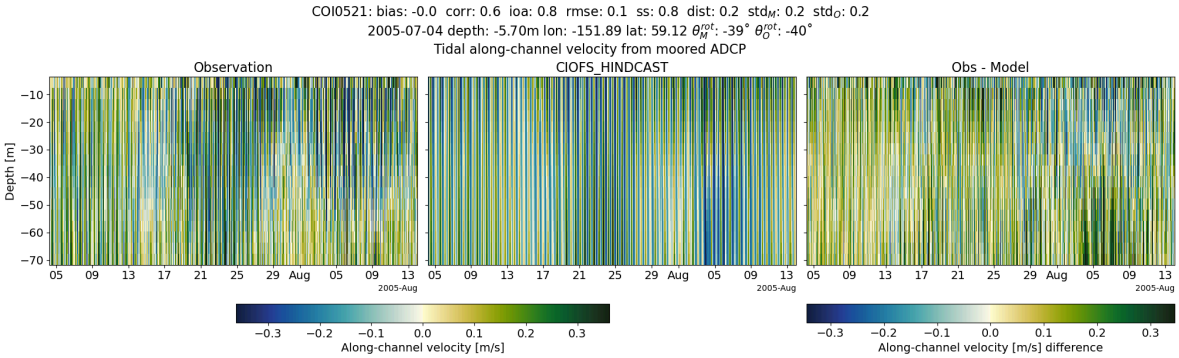


CIOFS_FRESH

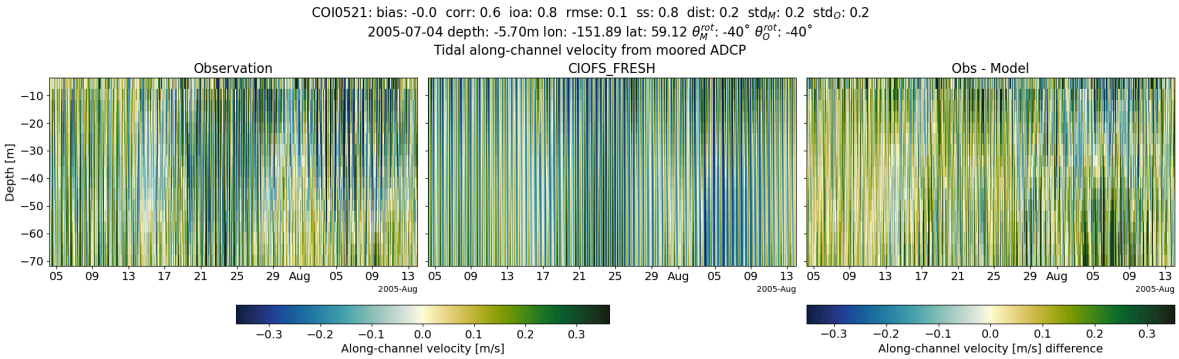


Along-channel velocity

CIOFS_HINDCAST

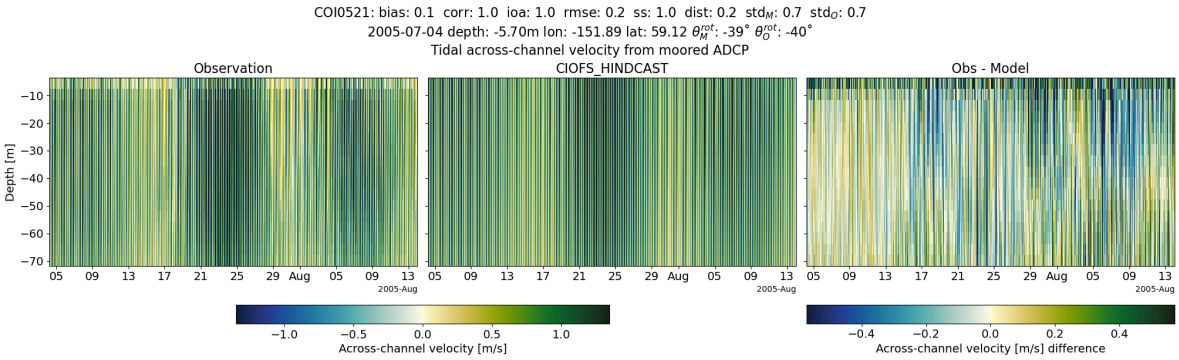


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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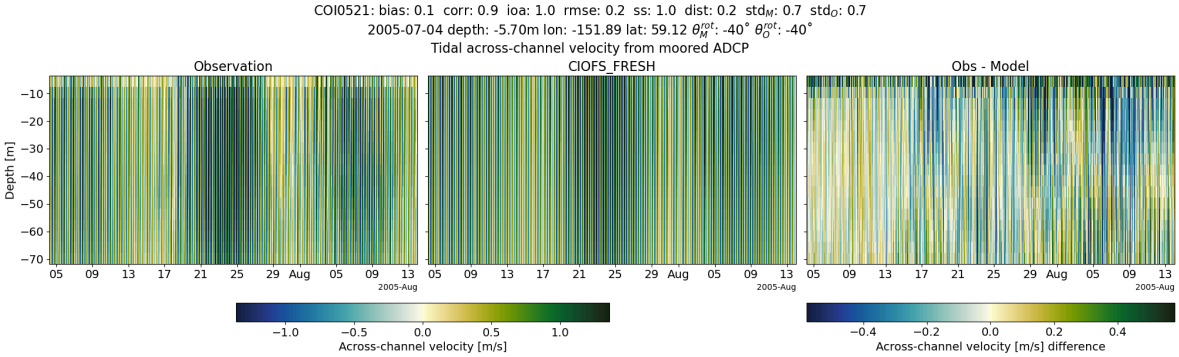
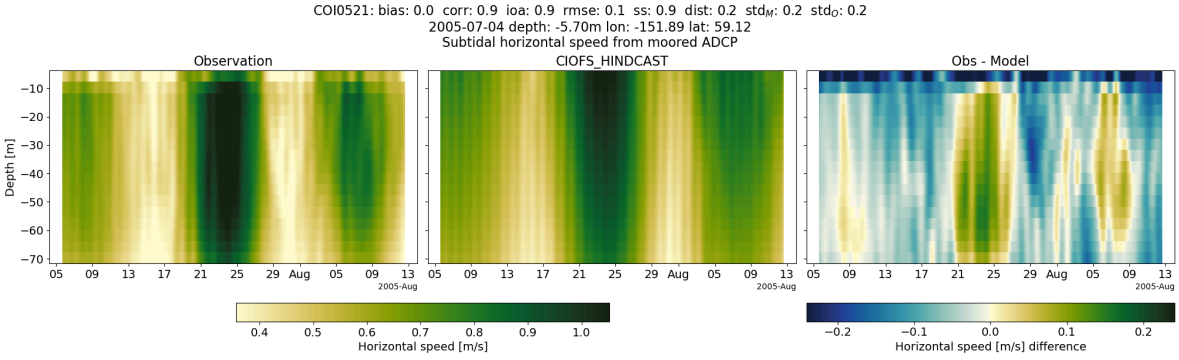


Subtidal

Horizontal speed

CIOFS_HINDCAST



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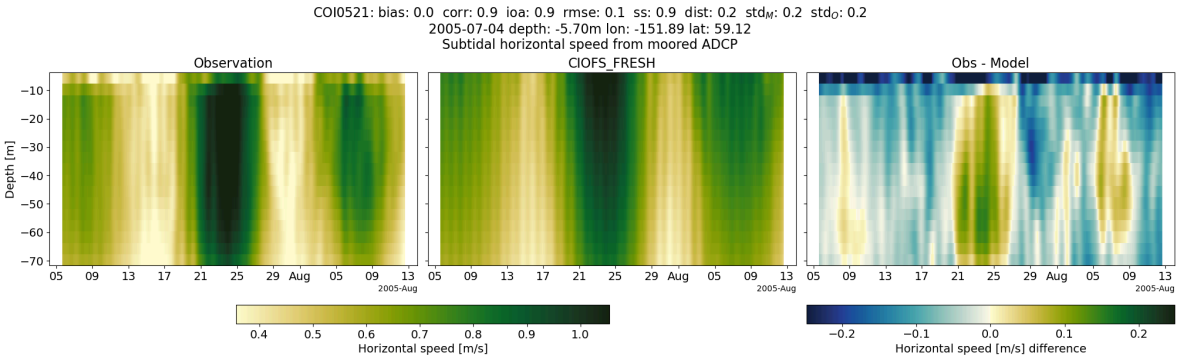
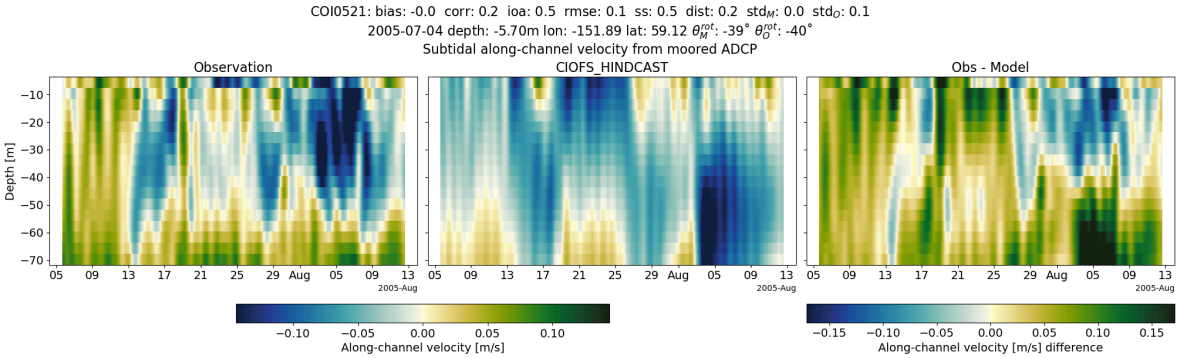
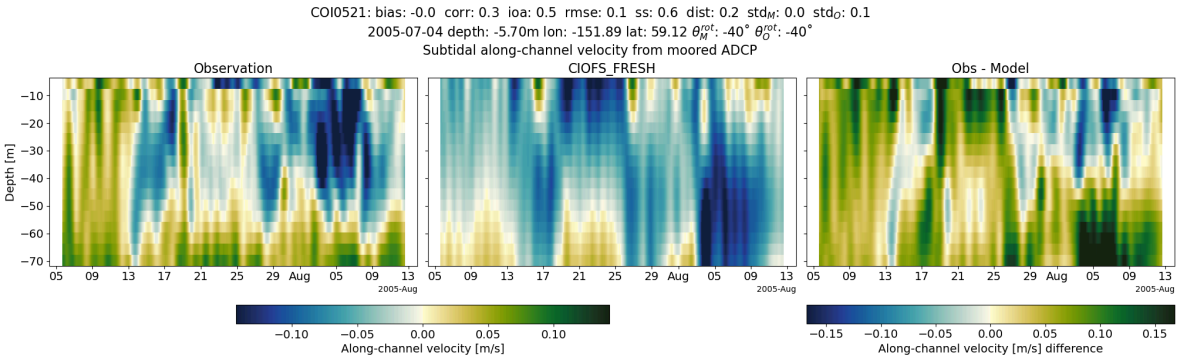


Along-channel velocity

CIOFS_HINDCAST

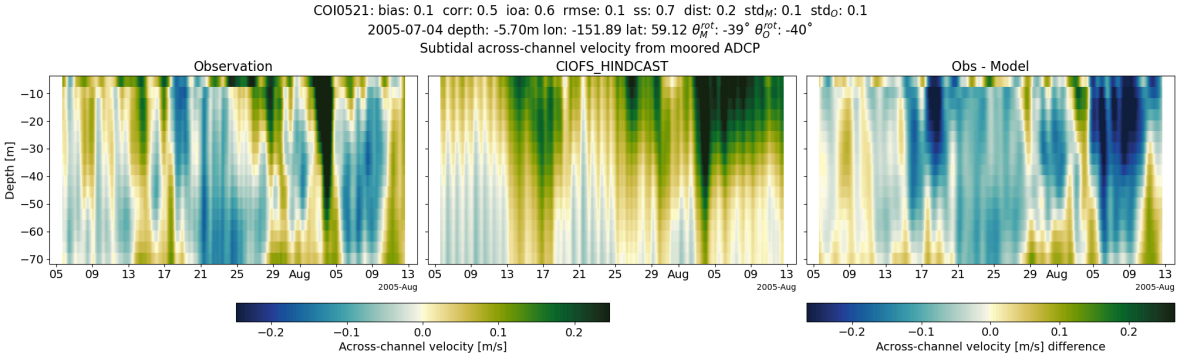


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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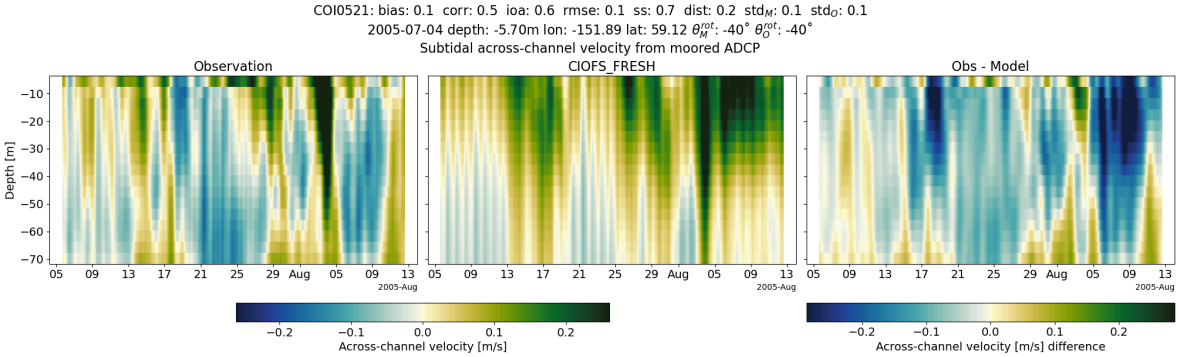
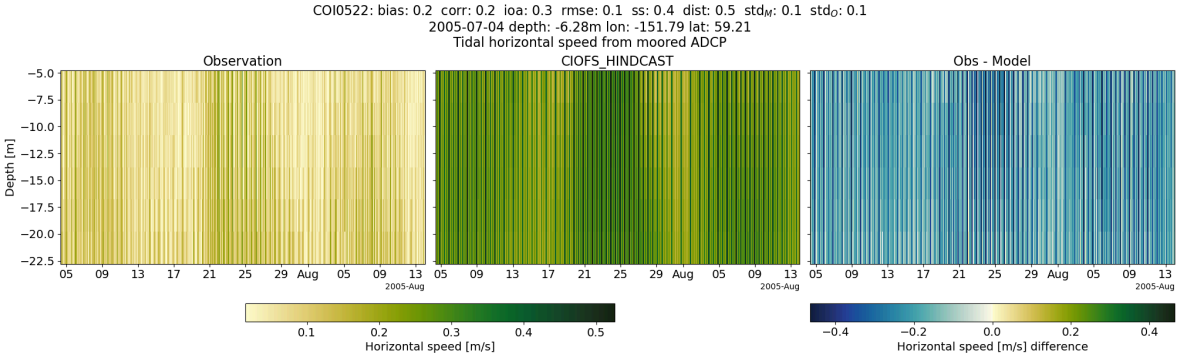


COI0522

Tidal

Horizontal speed

CIOFS_HINDCAST



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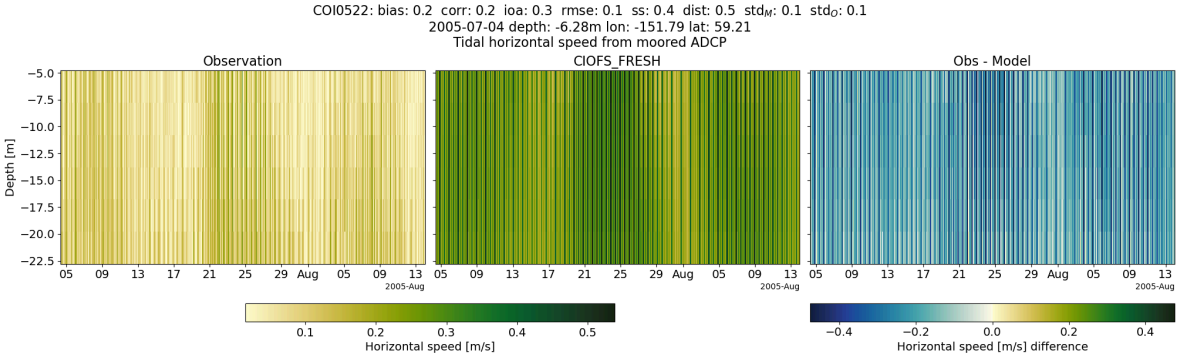
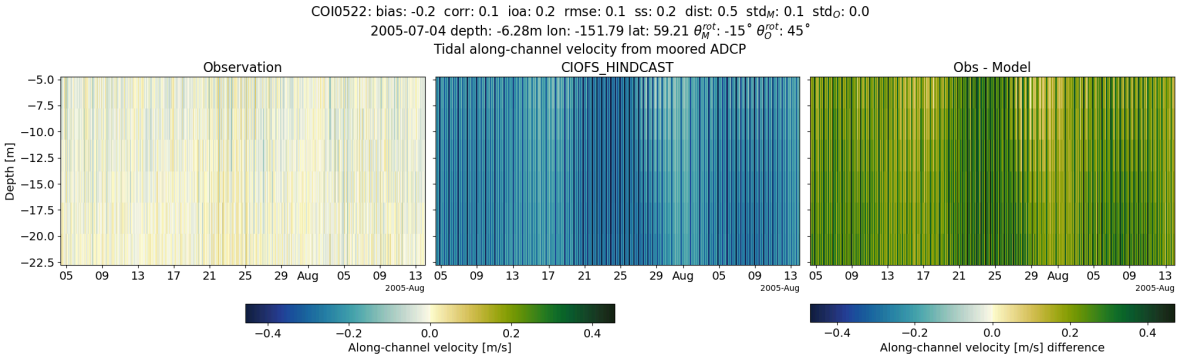
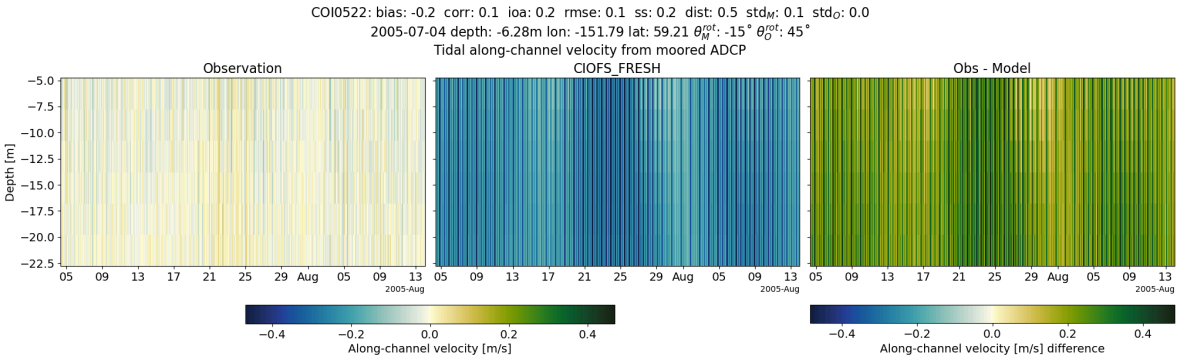


Along-channel velocity

CIOFS_HINDCAST

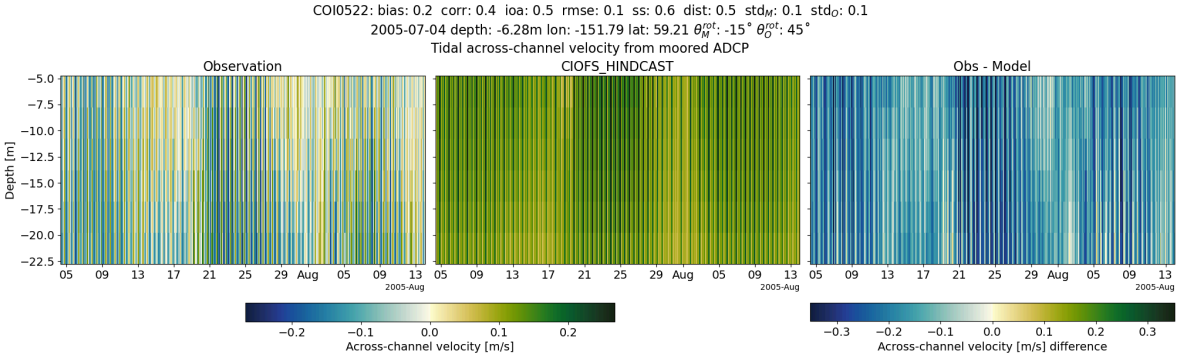


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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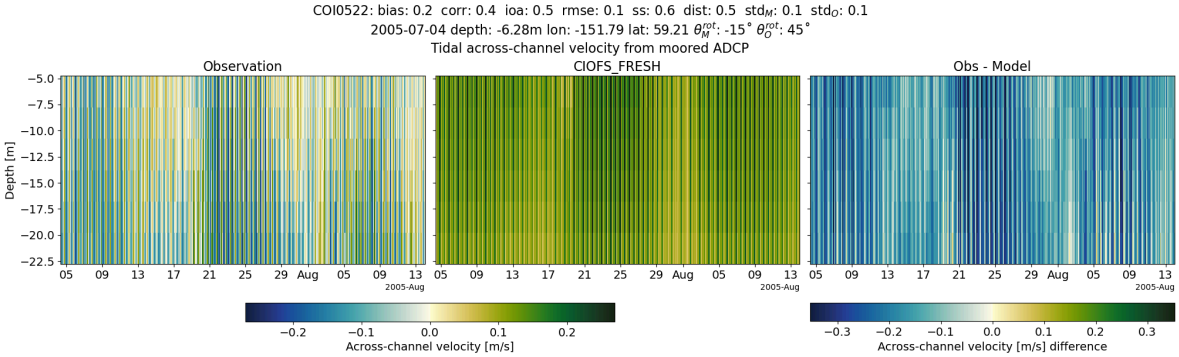
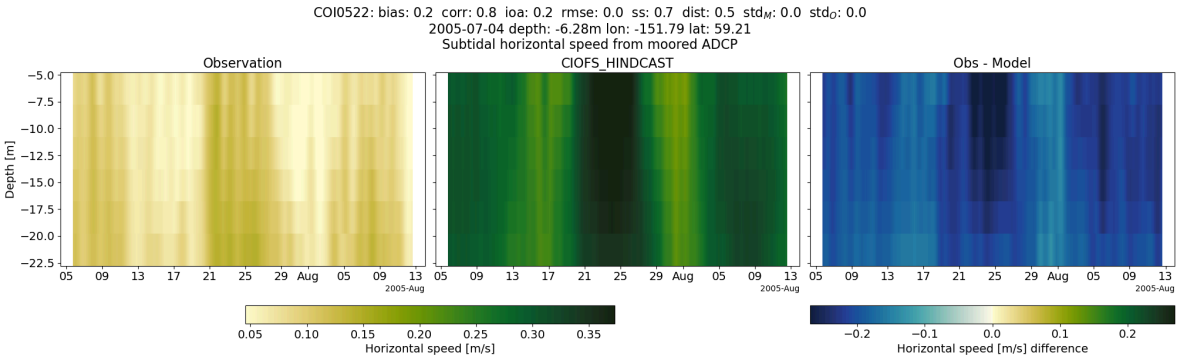


Subtidal

Horizontal speed

CIOFS_HINDCAST



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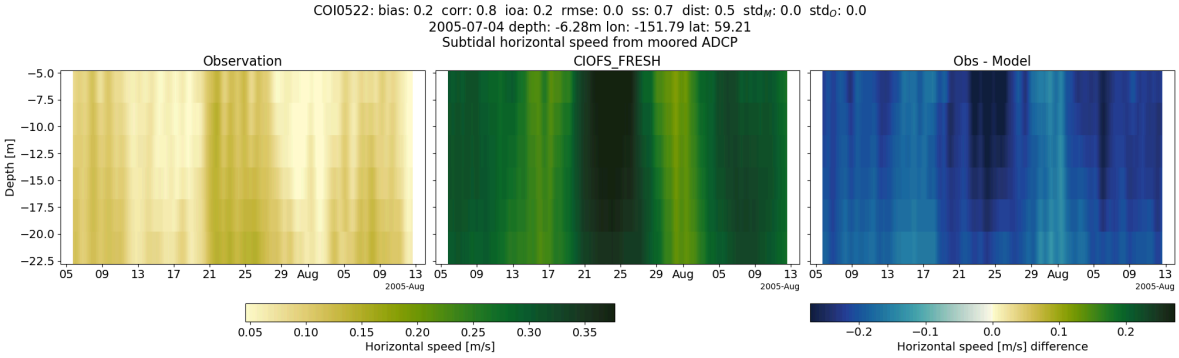
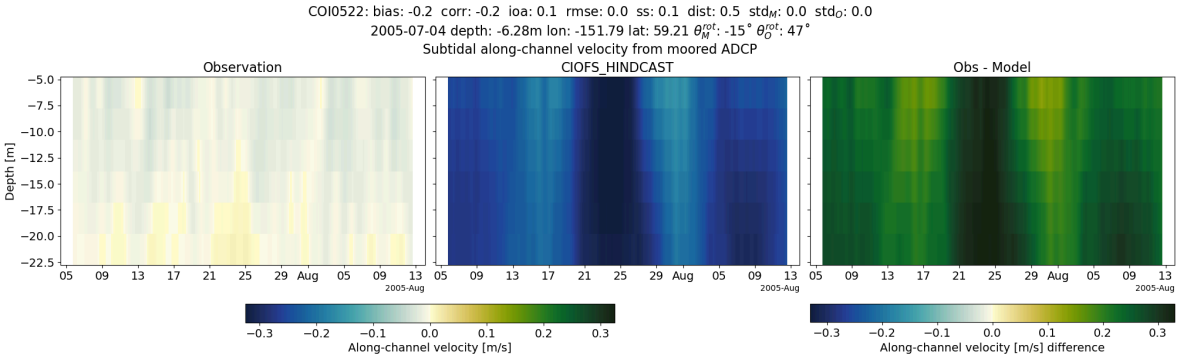


Along-channel velocity

CIOFS_HINDCAST



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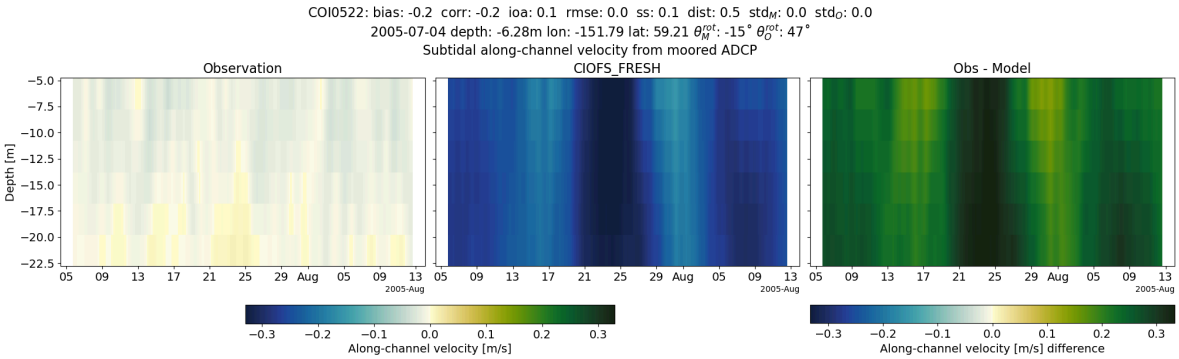
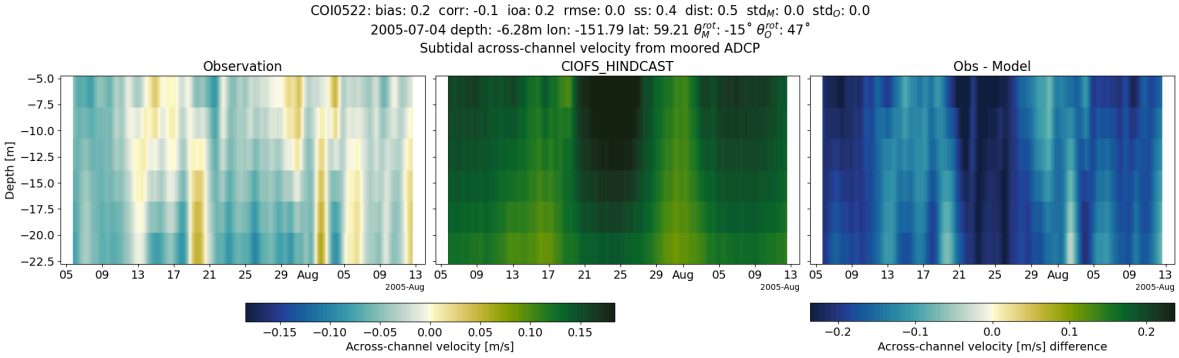


Across-channel velocity

CIOFS_HINDCAST



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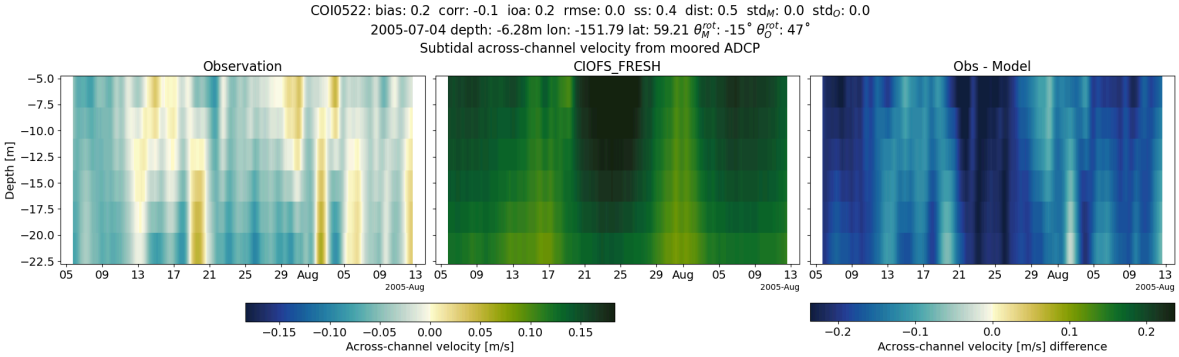
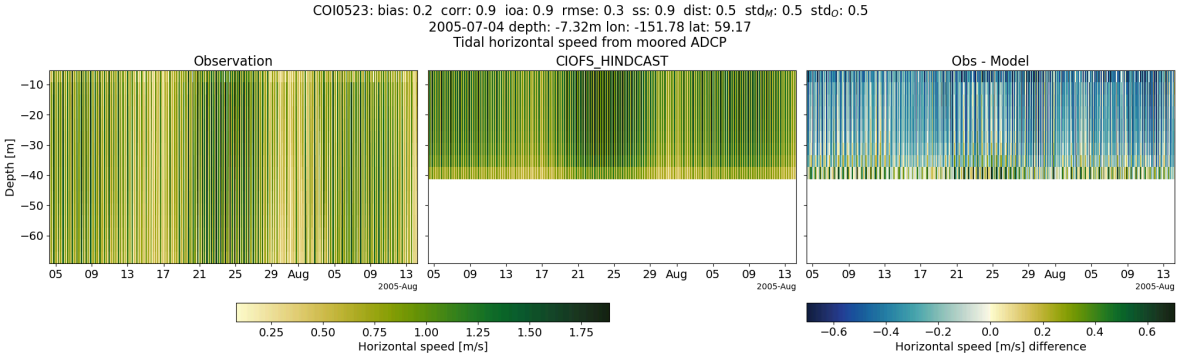


COI0523

Tidal

Horizontal speed

CIOFS_HINDCAST



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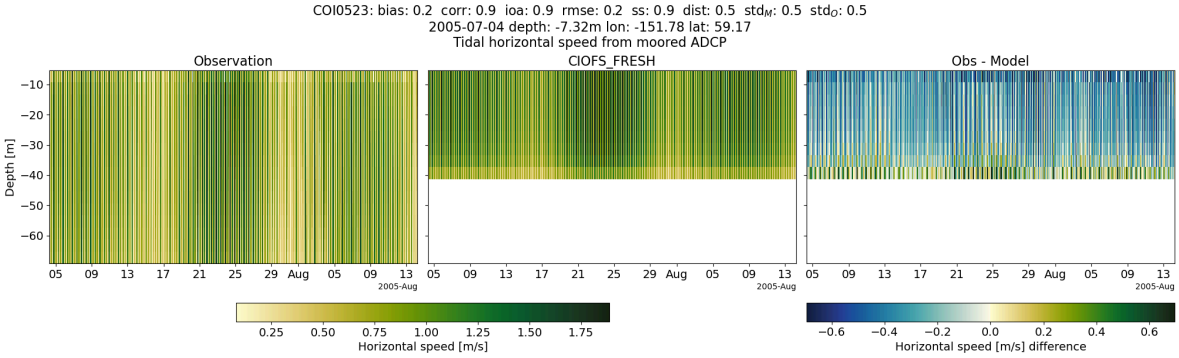
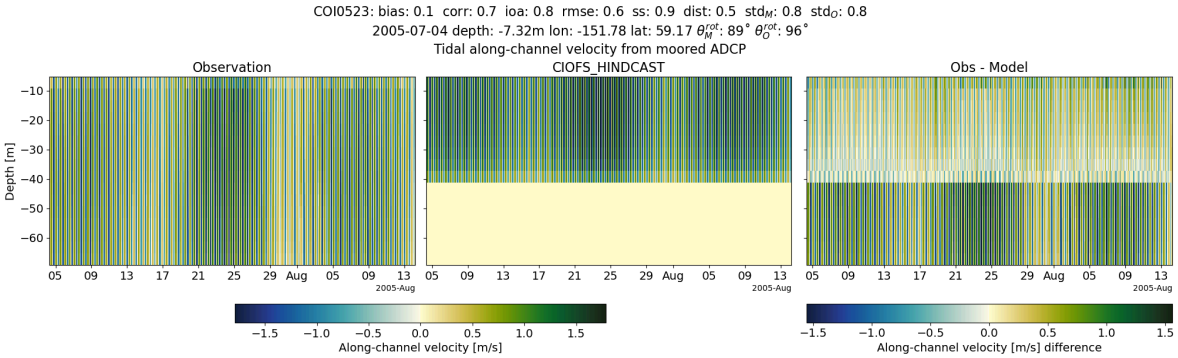


Along-channel velocity

CIOFS_HINDCAST



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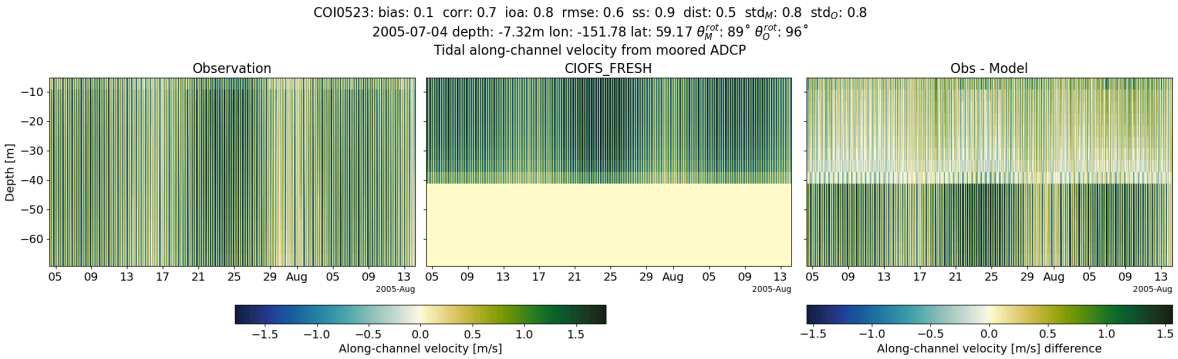
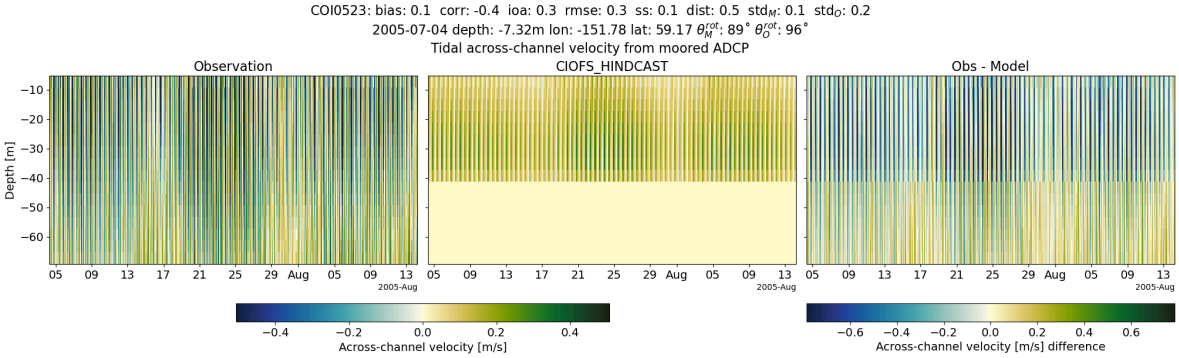


Across-channel velocity

CIOFS_HINDCAST



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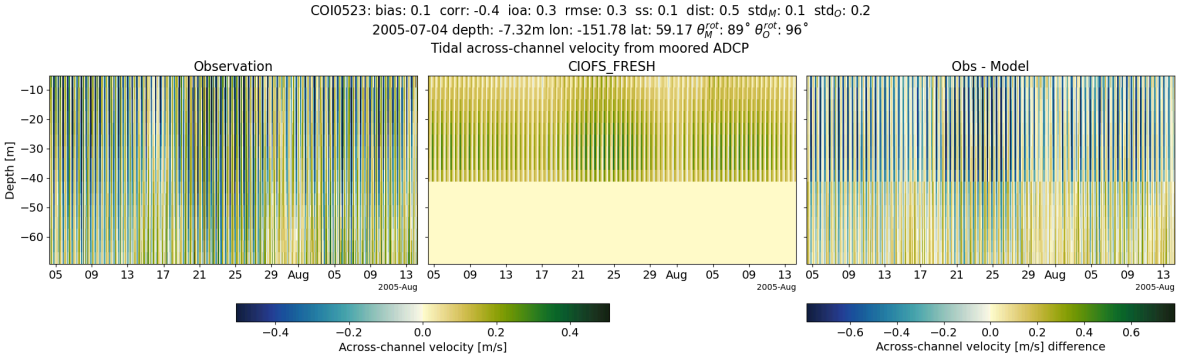
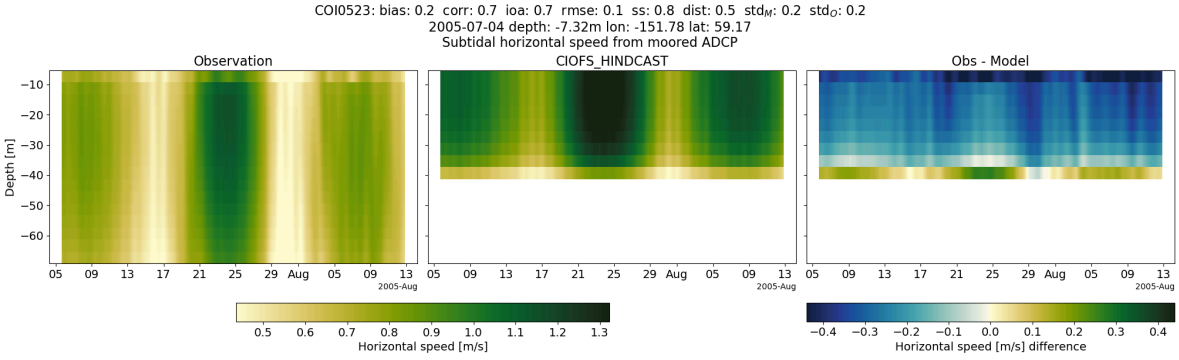


Subtidal

Horizontal speed

CIOFS_HINDCAST



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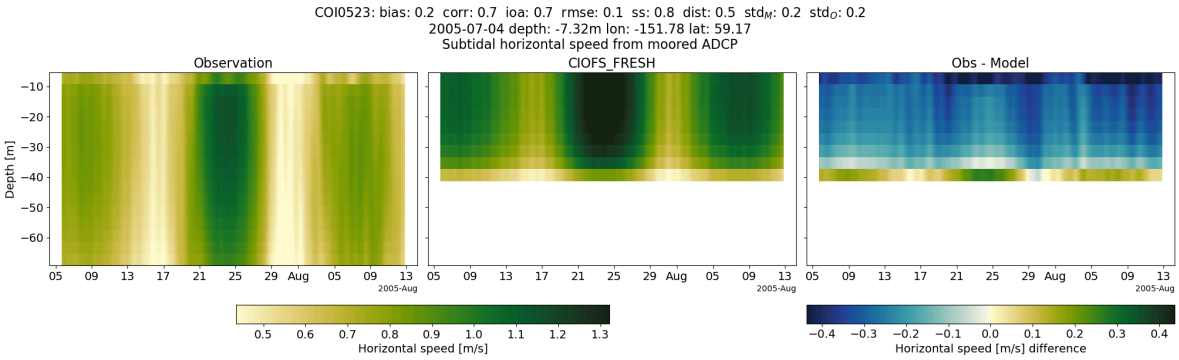
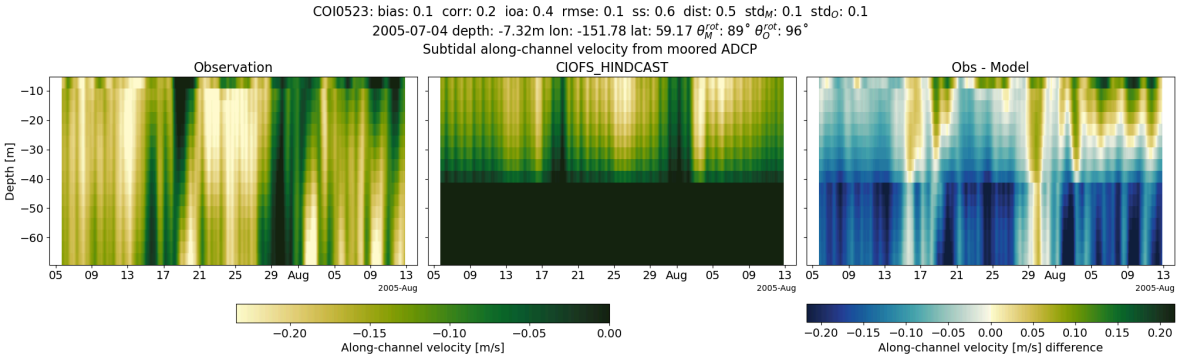


Along-channel velocity

CIOFS_HINDCAST



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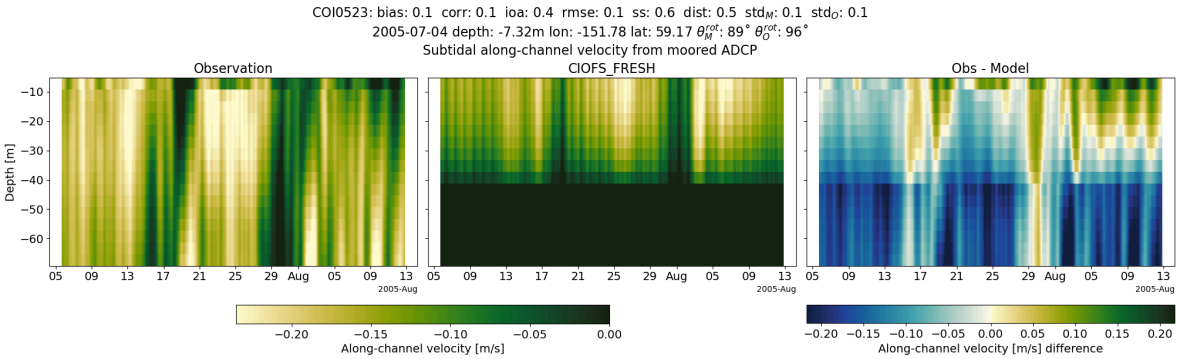
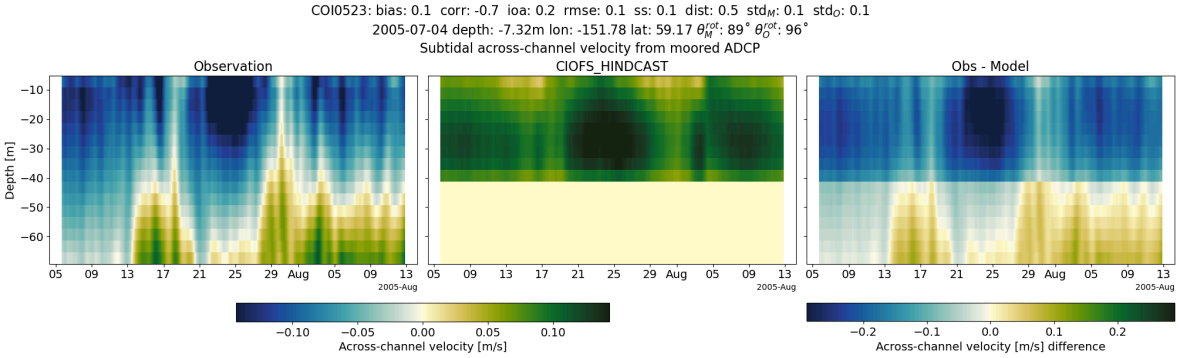


Across-channel velocity

CIOFS_HINDCAST



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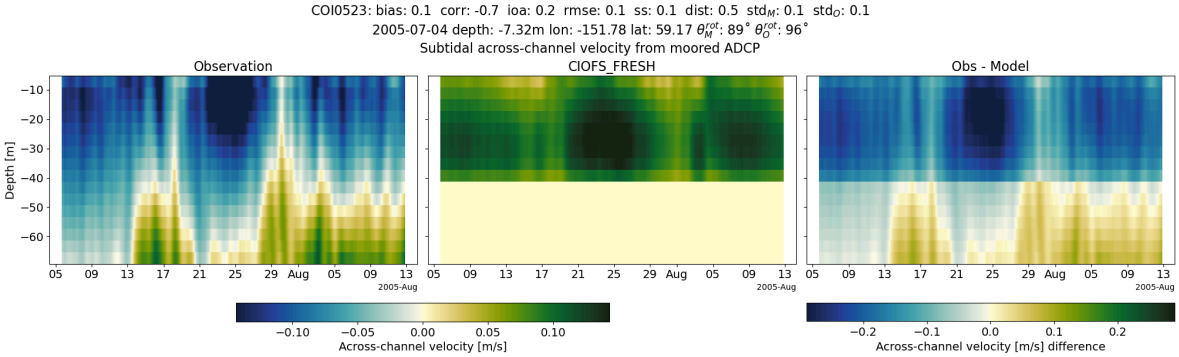
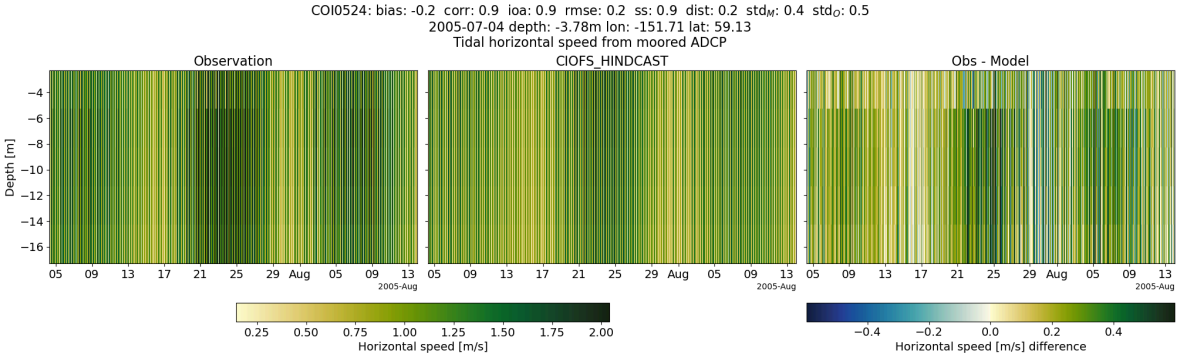


COI0524

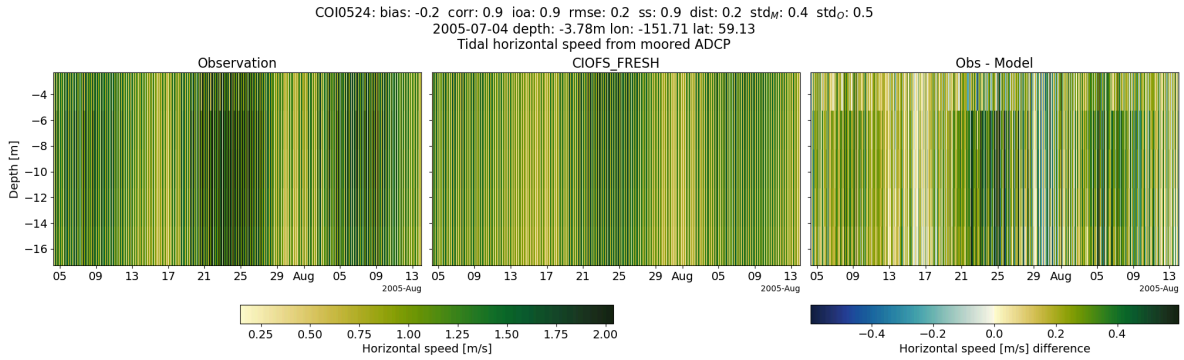
Tidal

Horizontal speed

CIOFS_HINDCAST

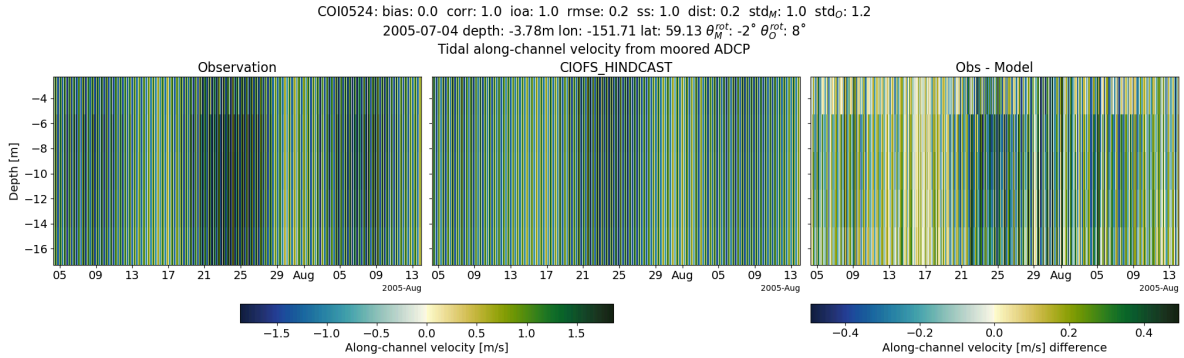


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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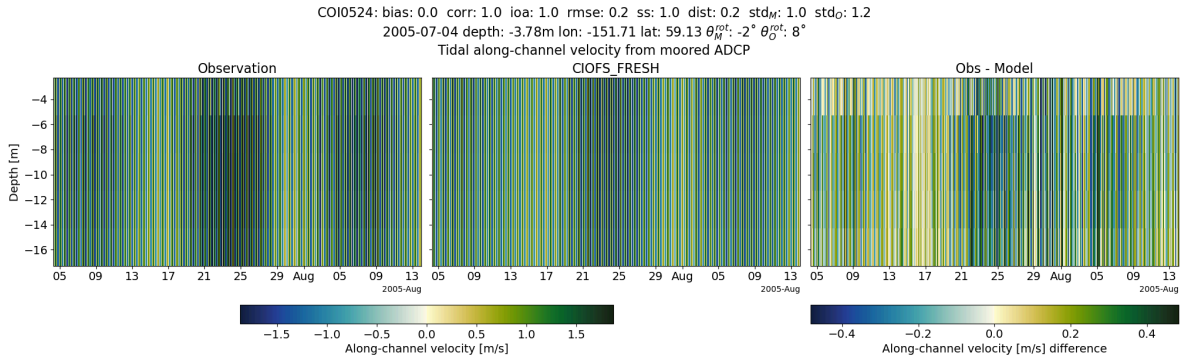
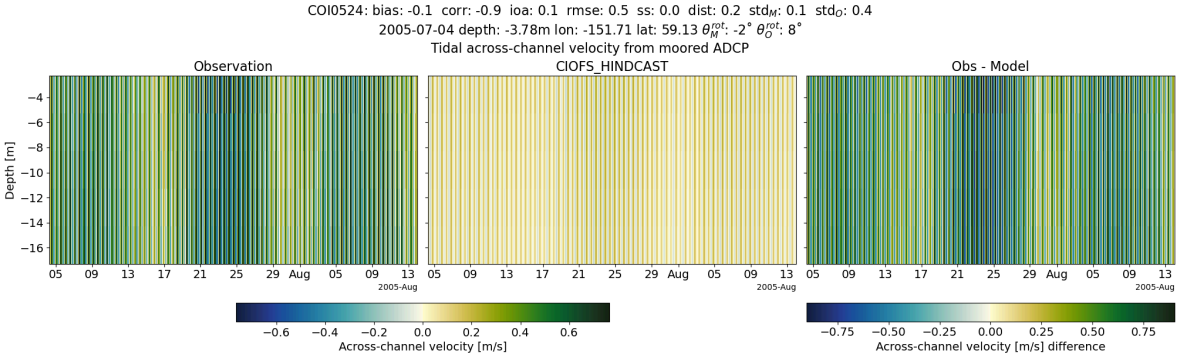


Across-channel velocity

CIOFS_HINDCAST



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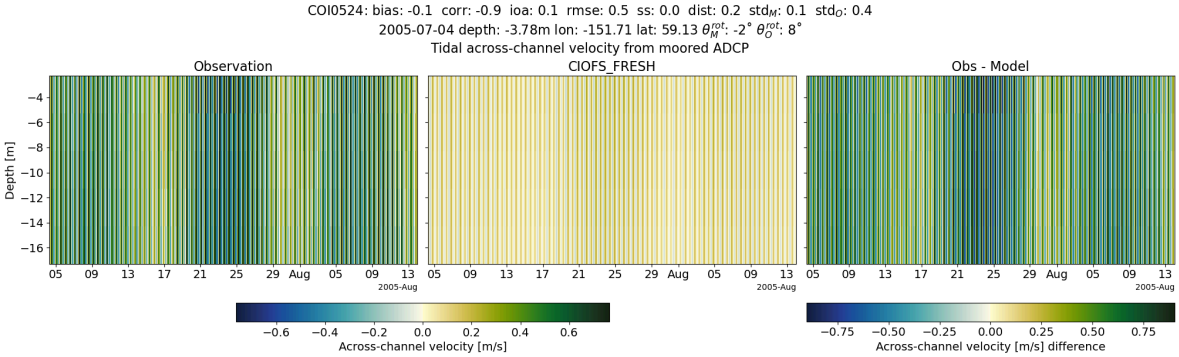
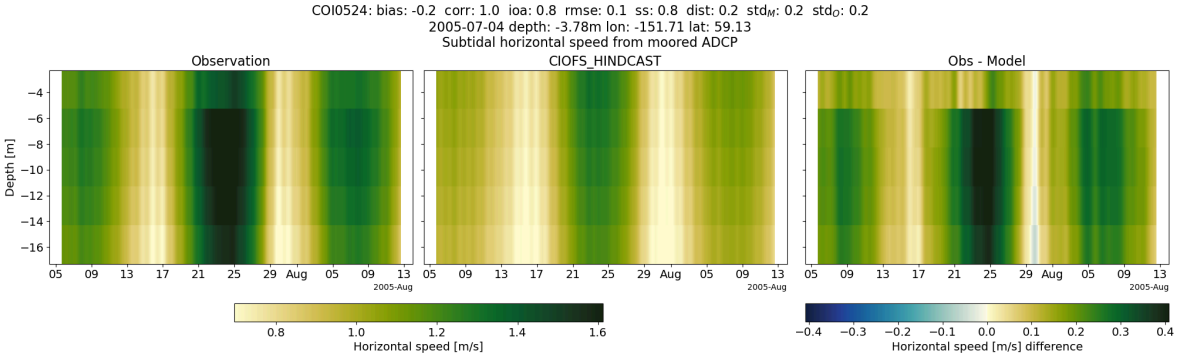


Subtidal

Horizontal speed

CIOFS_HINDCAST



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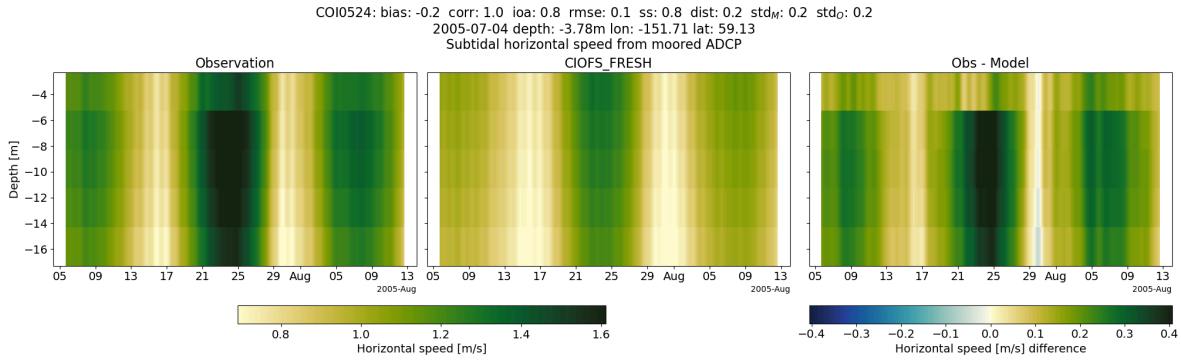
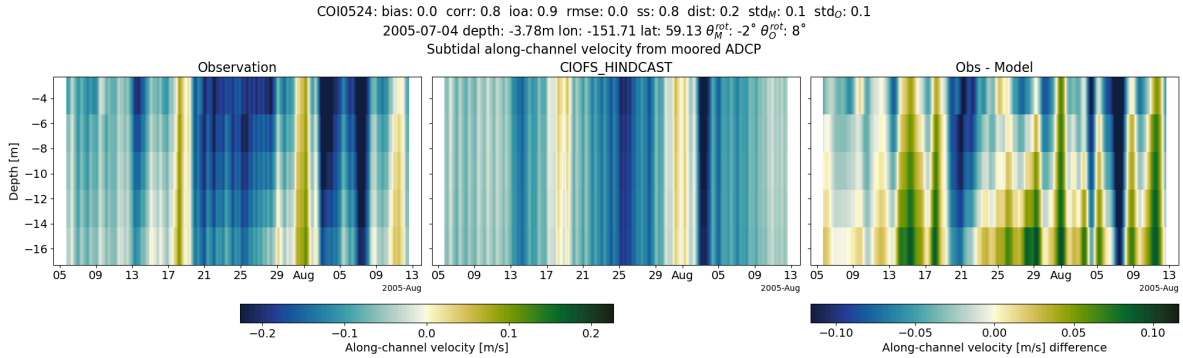


Along-channel velocity

CIOFS_HINDCAST



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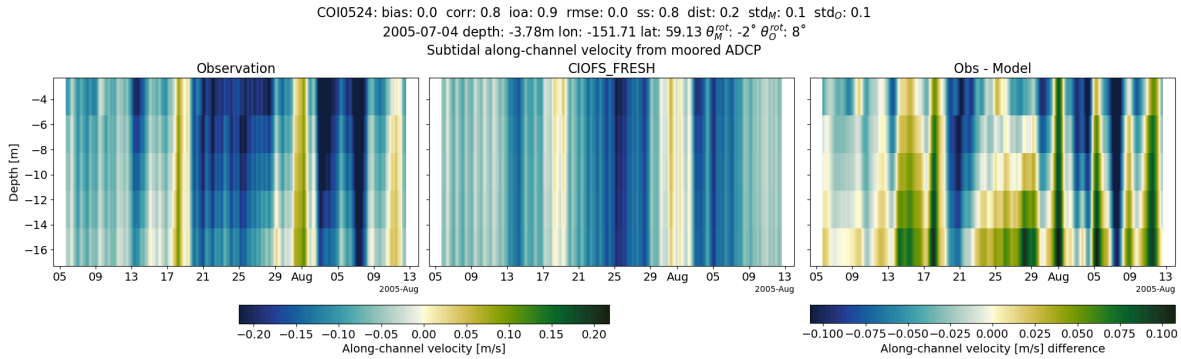
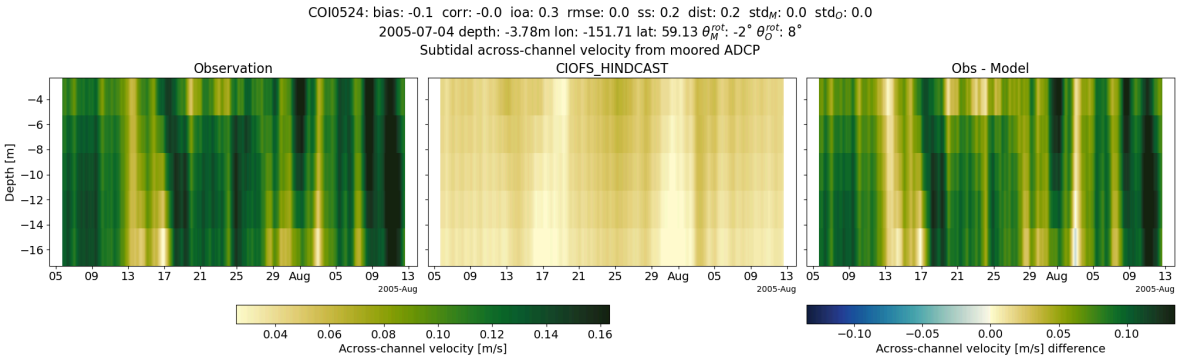


Across-channel velocity

CIOFS_HINDCAST



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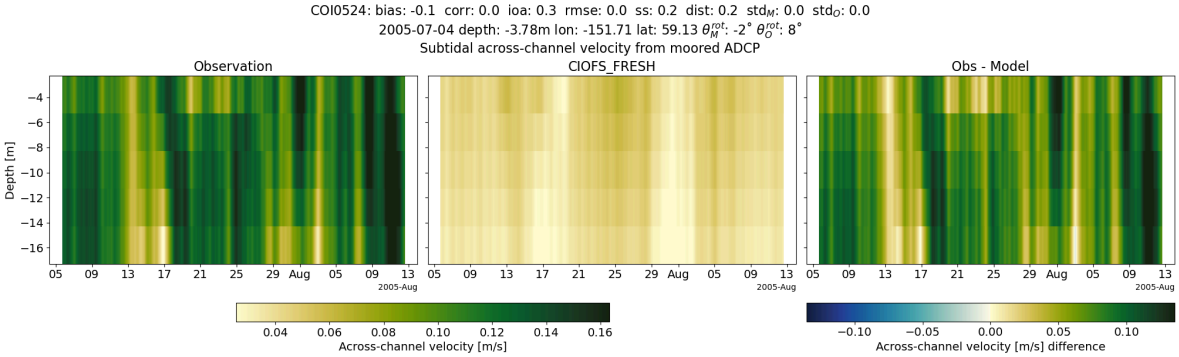
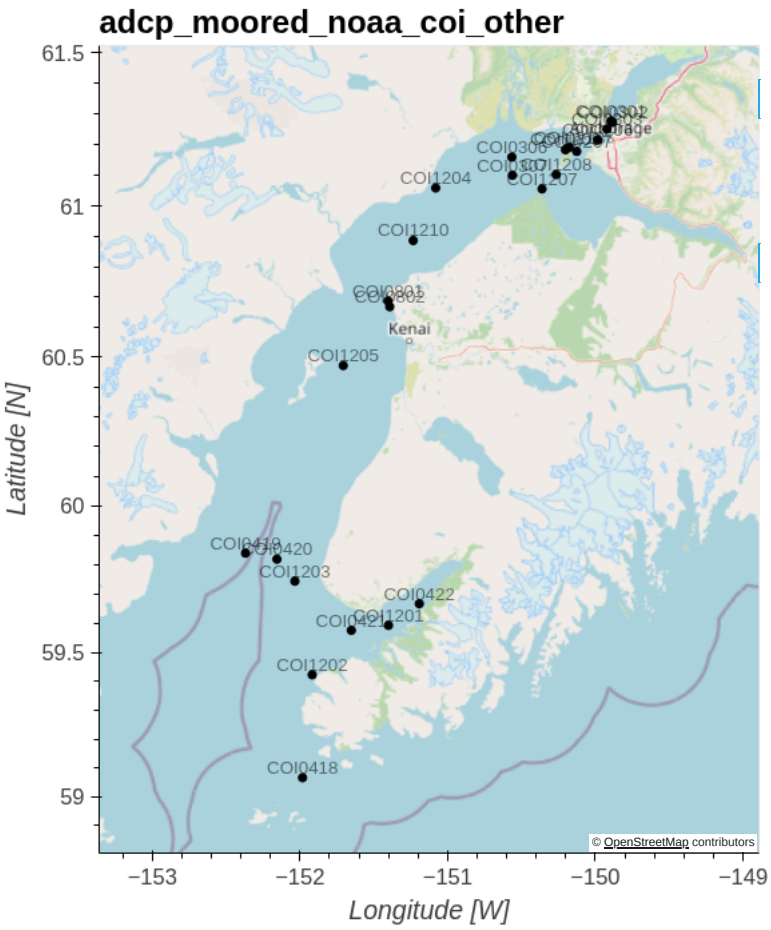


Moored ADCP (NOAA): ADCP survey Cook Inlet, multiple years

- adcp_moored_noaa_coi_other

See the original full dataset description page in the original report for more information or the new catalog page.

Note that the map shows all datasets from the catalog; it is not limited to the current report time periods.

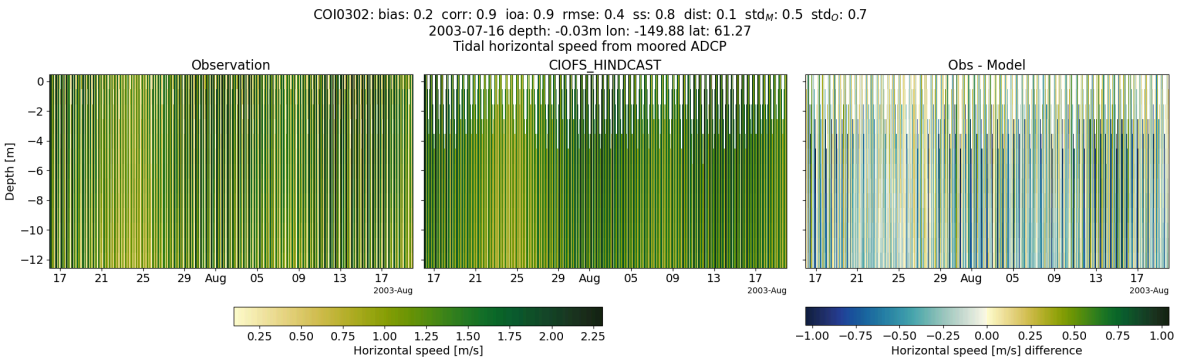


COI0302

Tidal

Horizontal speed

CIOFS_HINDCAST



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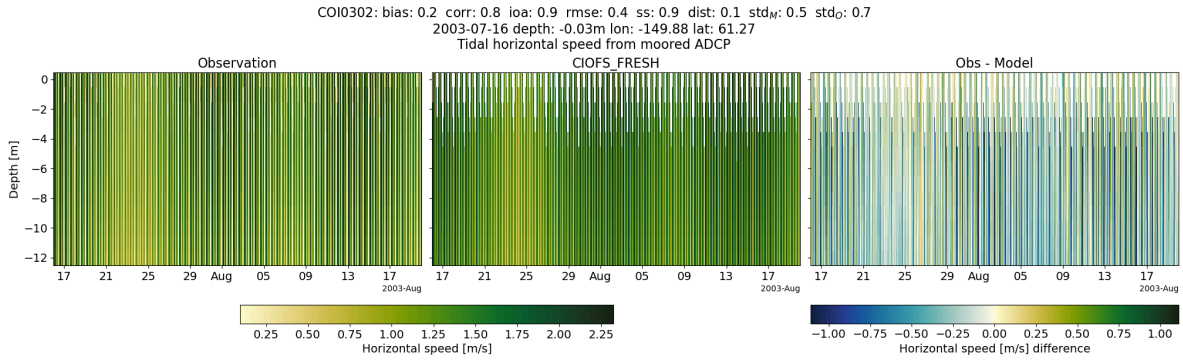
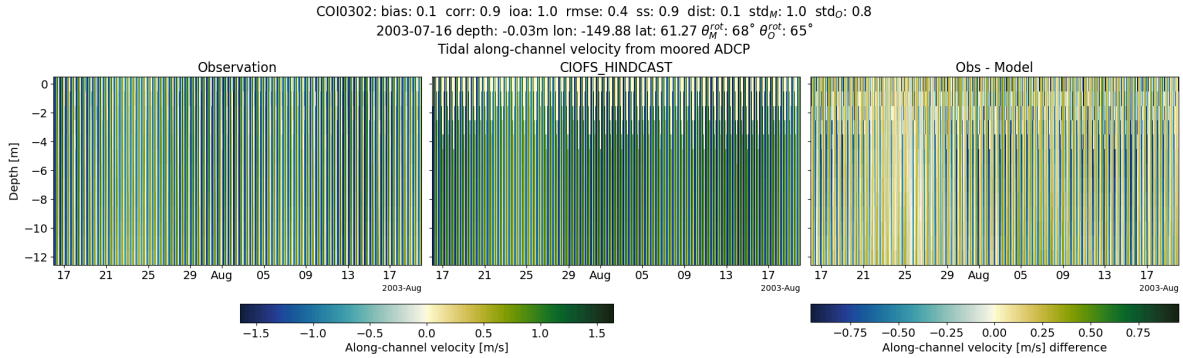


Along-channel velocity

CIOFS_HINDCAST



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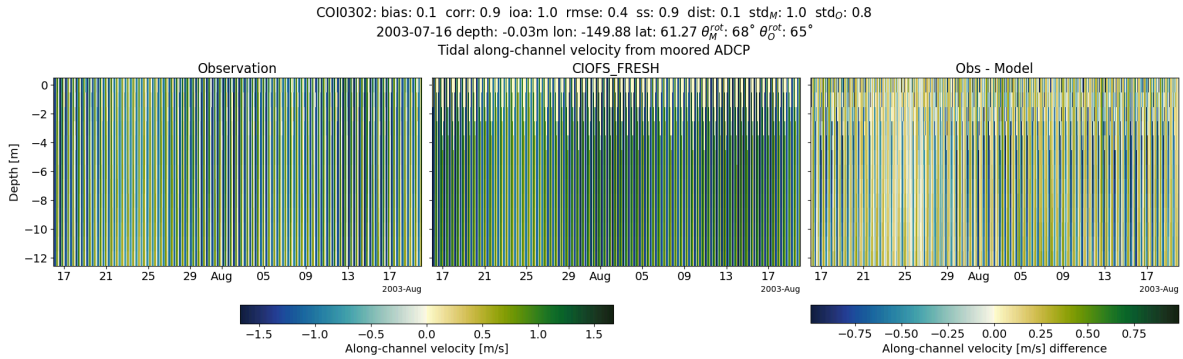
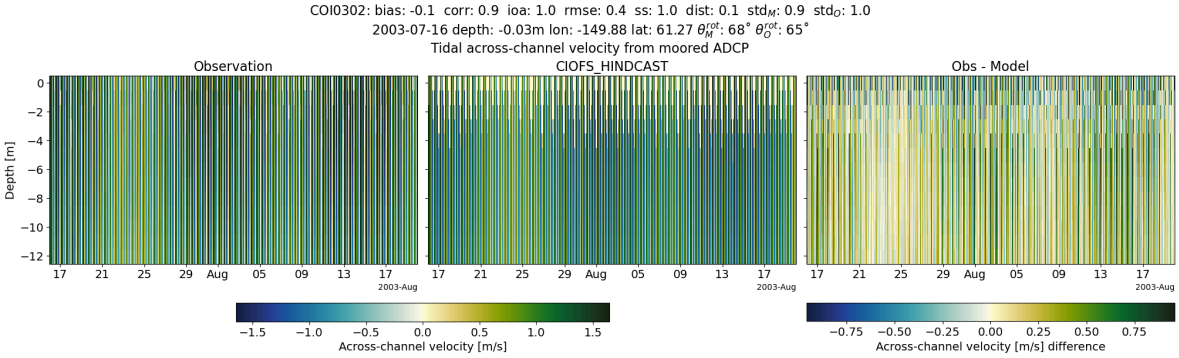


Across-channel velocity

CIOFS_HINDCAST



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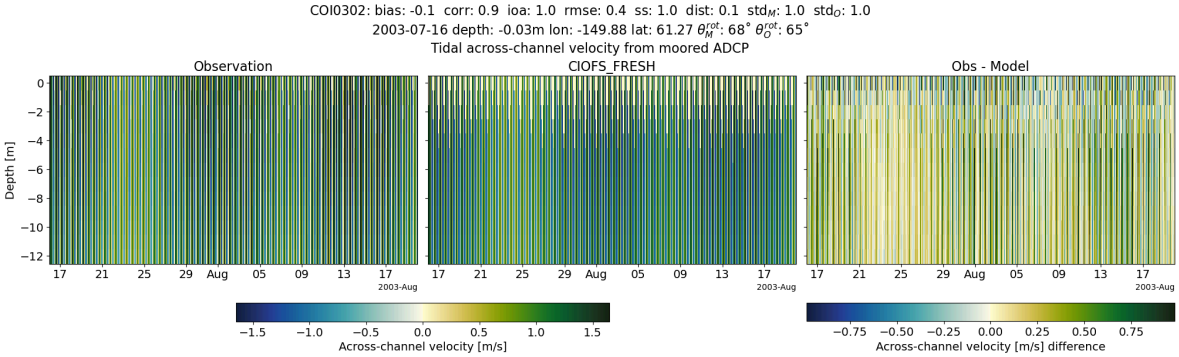
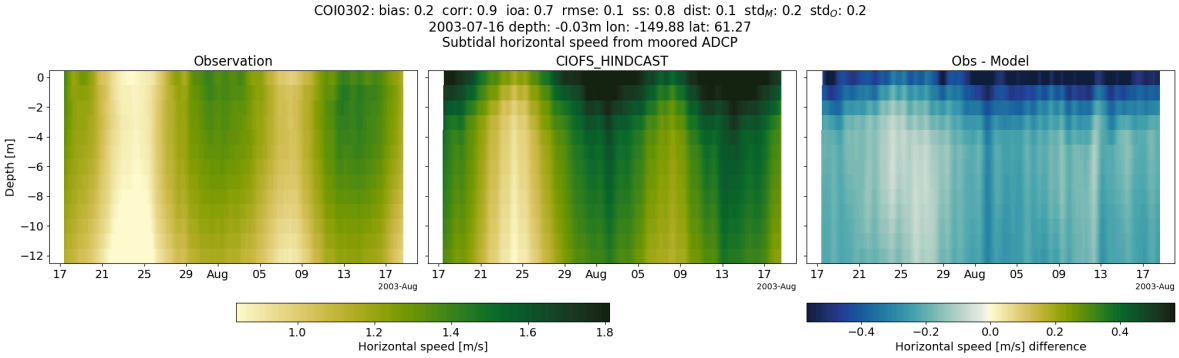


Subtidal

Horizontal speed

CIOFS_HINDCAST



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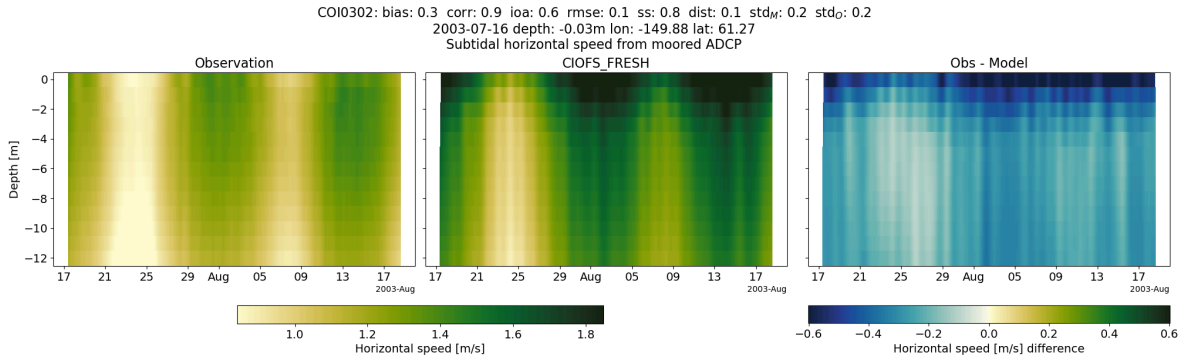
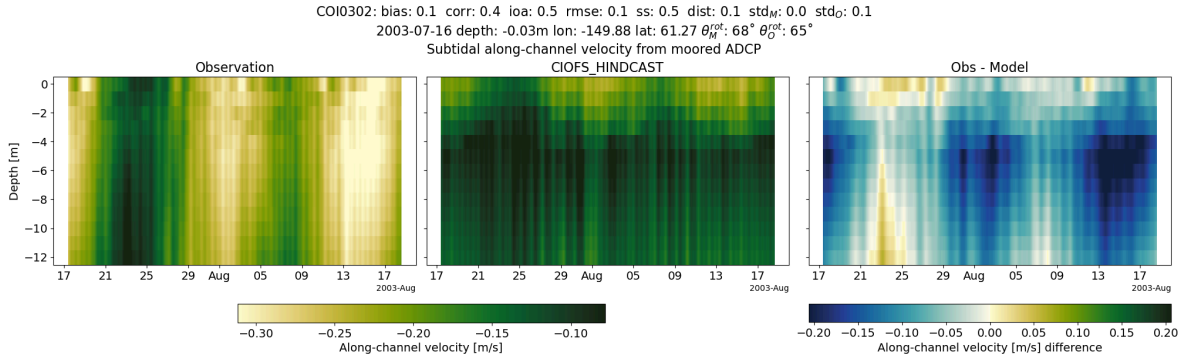
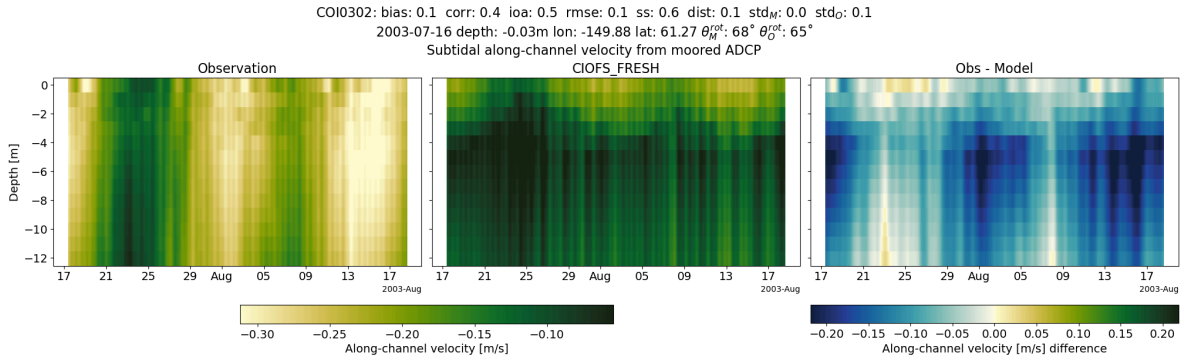


Along-channel velocity

CIOFS_HINDCAST

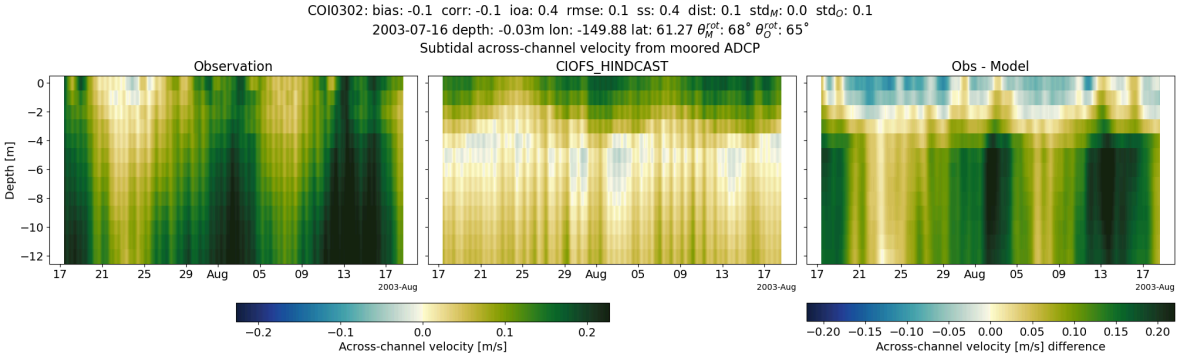


CIOFS_FRESH

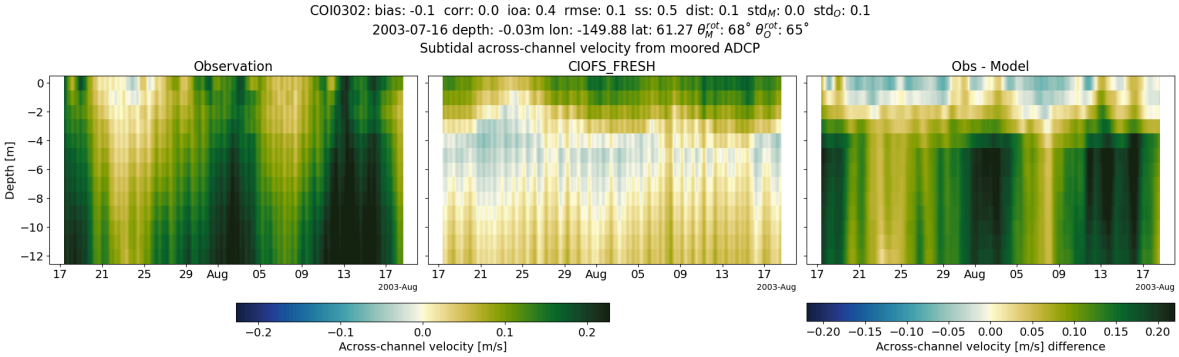


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

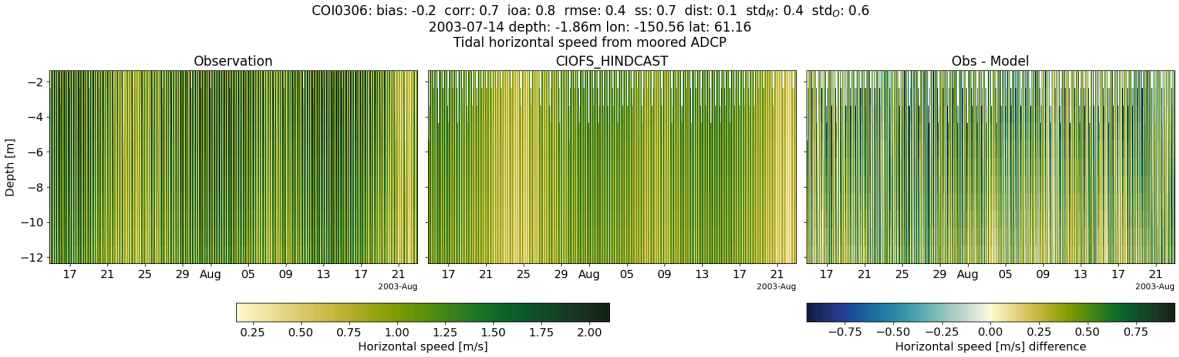


COI0306

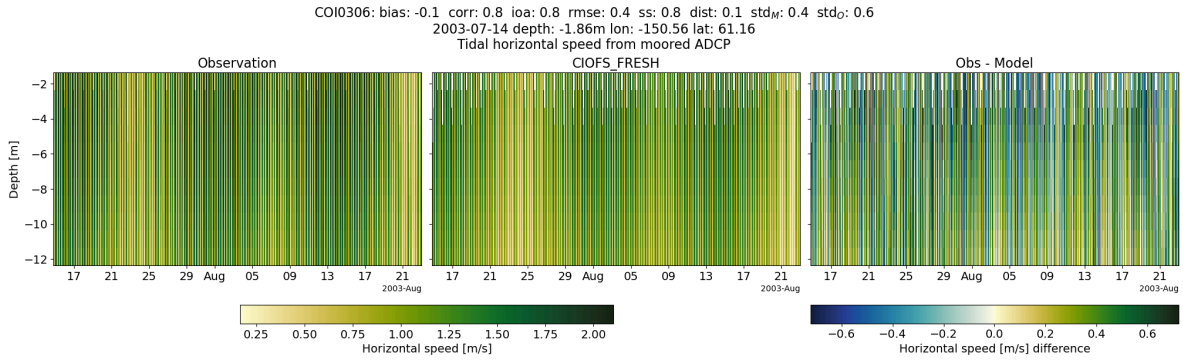
Tidal

Horizontal speed

CIOFS_HINDCAST

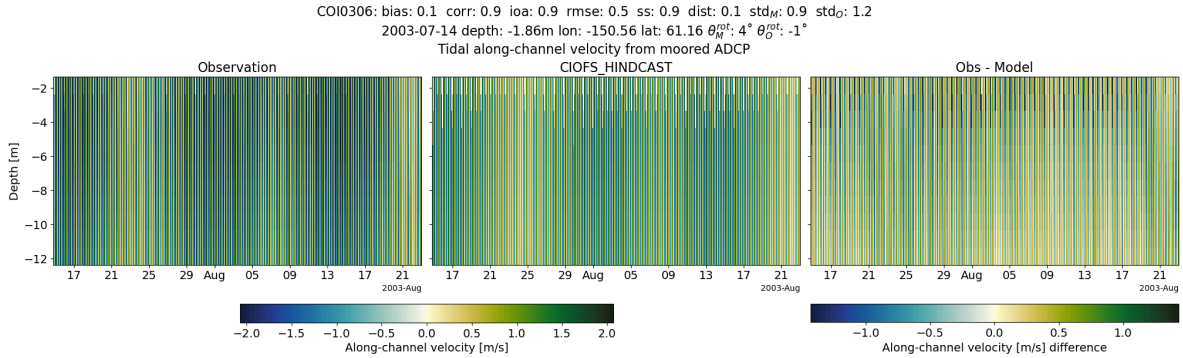


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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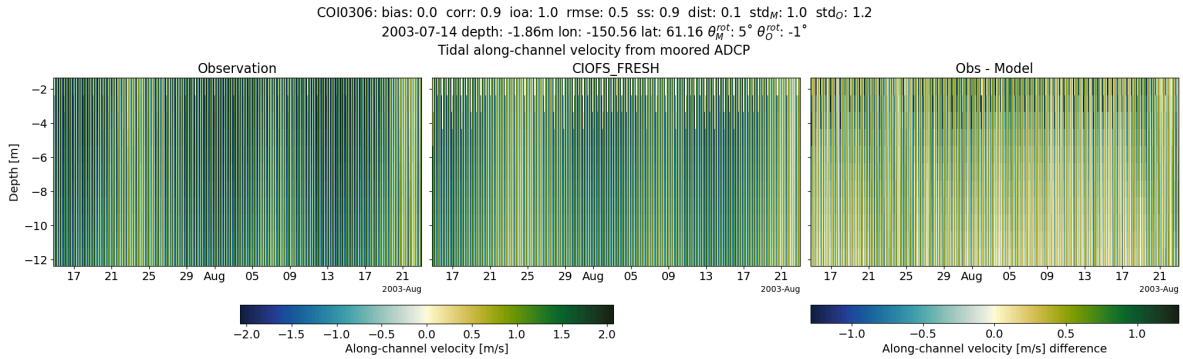
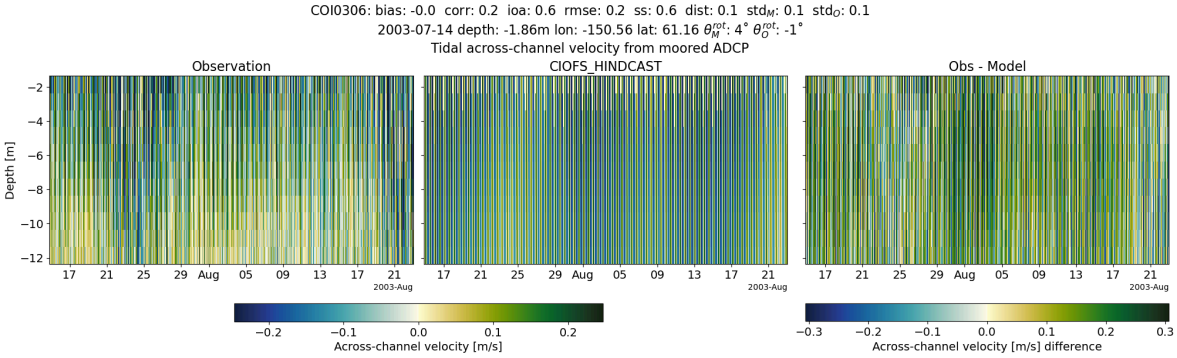


Across-channel velocity

CIOFS_HINDCAST



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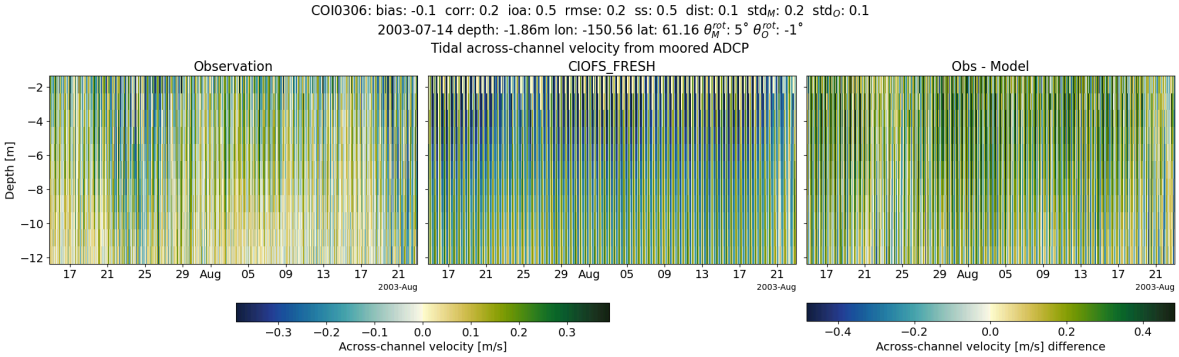
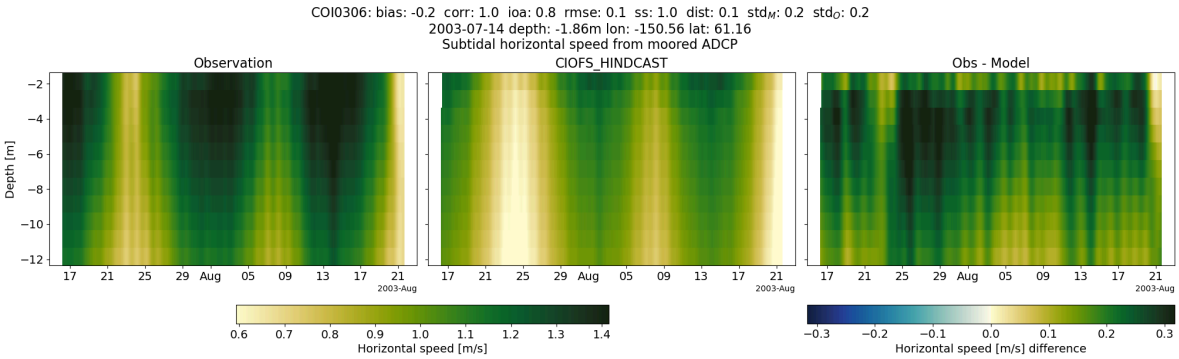


Subtidal

Horizontal speed

CIOFS_HINDCAST



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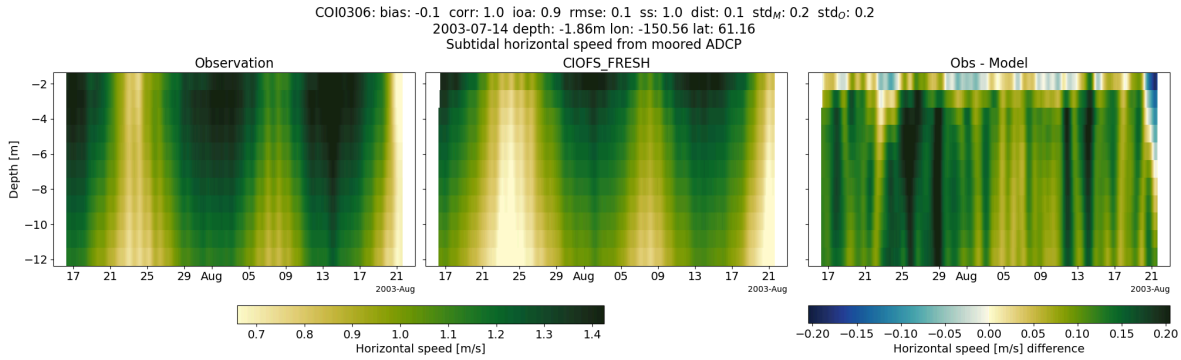
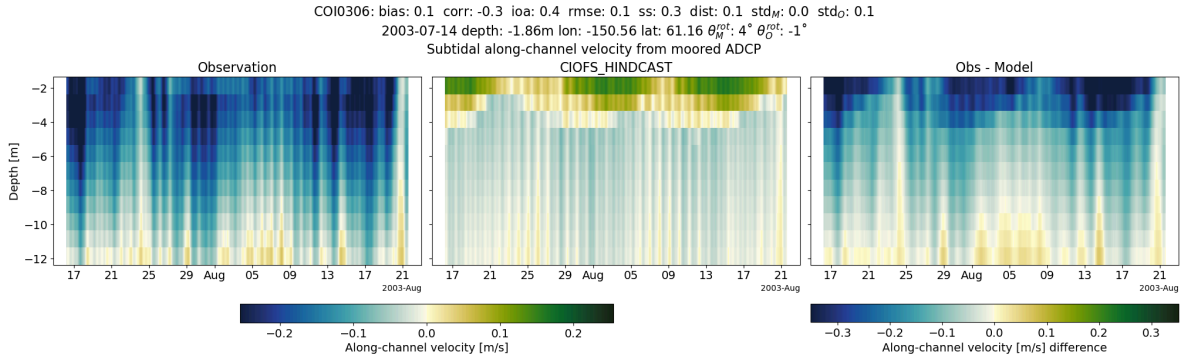


Along-channel velocity

CIOFS_HINDCAST



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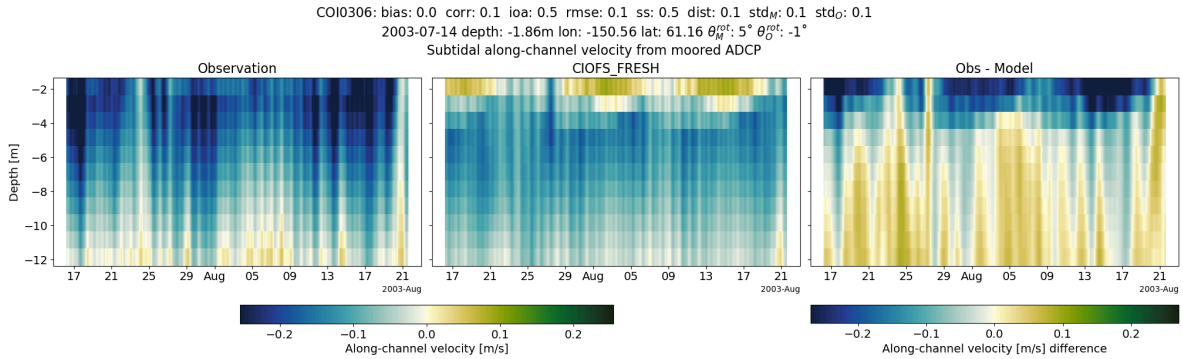
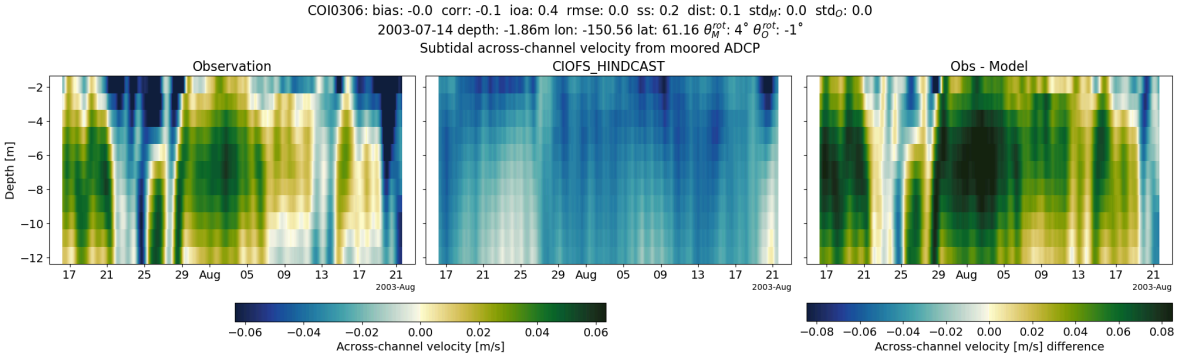


Across-channel velocity

CIOFS_HINDCAST



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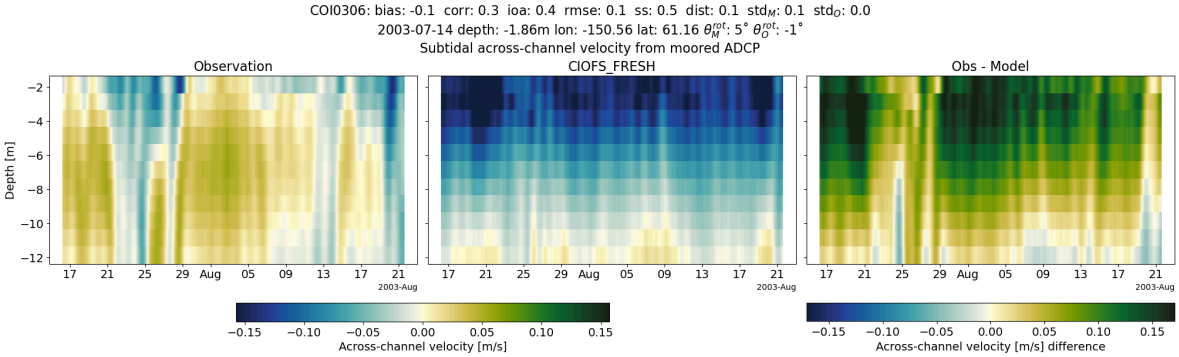
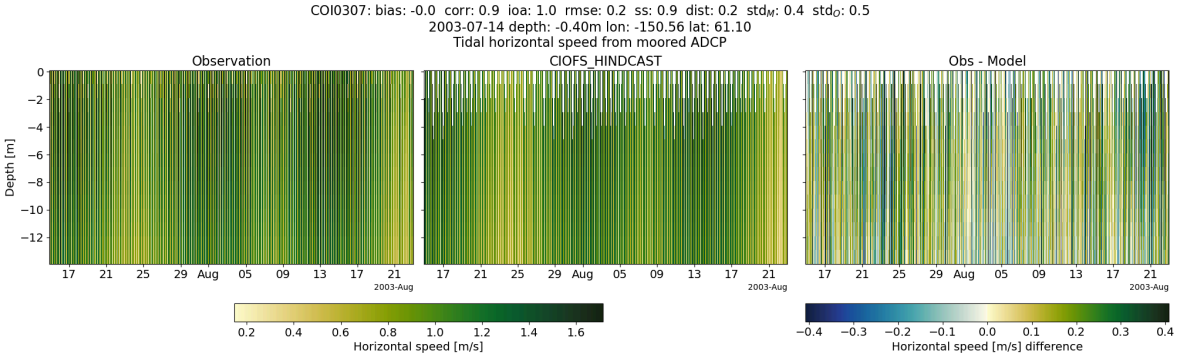


COI0307

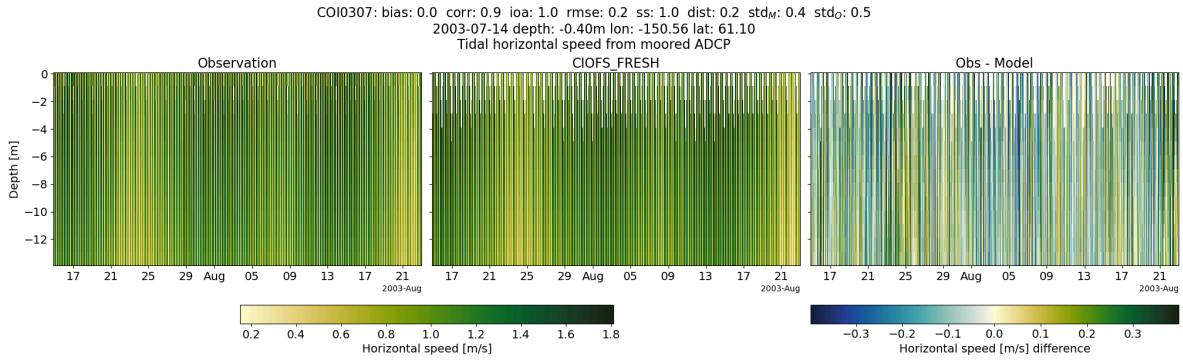
Tidal

Horizontal speed

CIOFS_HINDCAST

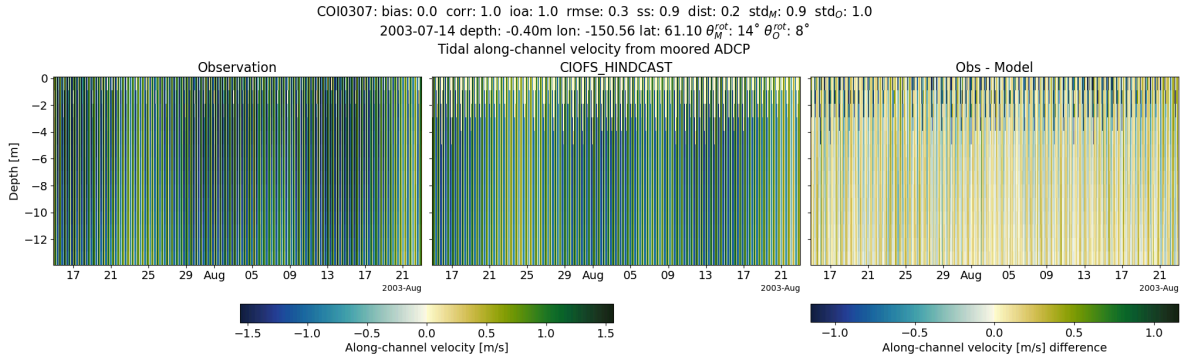


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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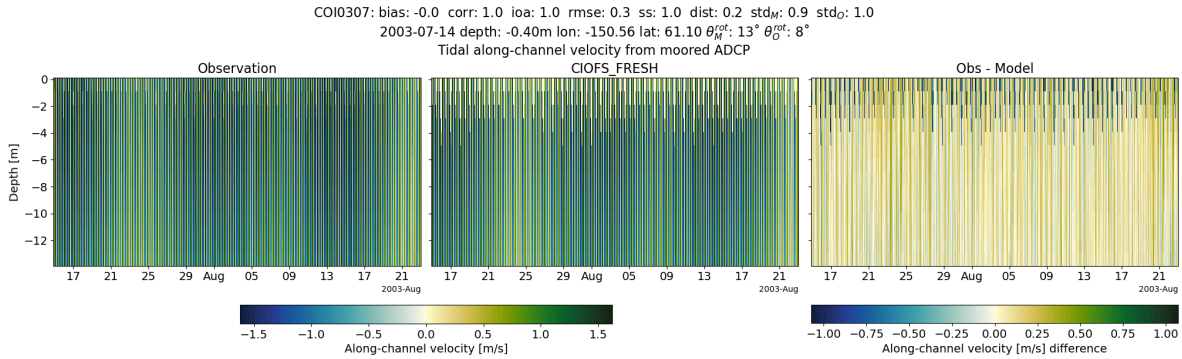
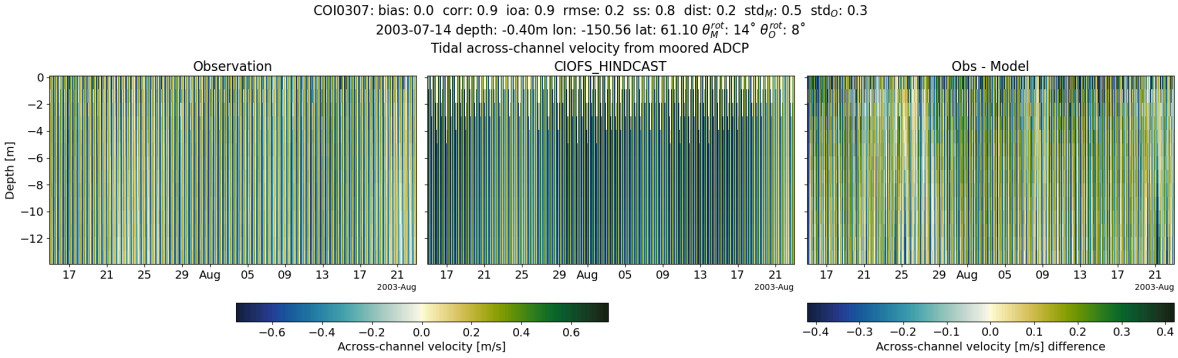


Across-channel velocity

CIOFS_HINDCAST



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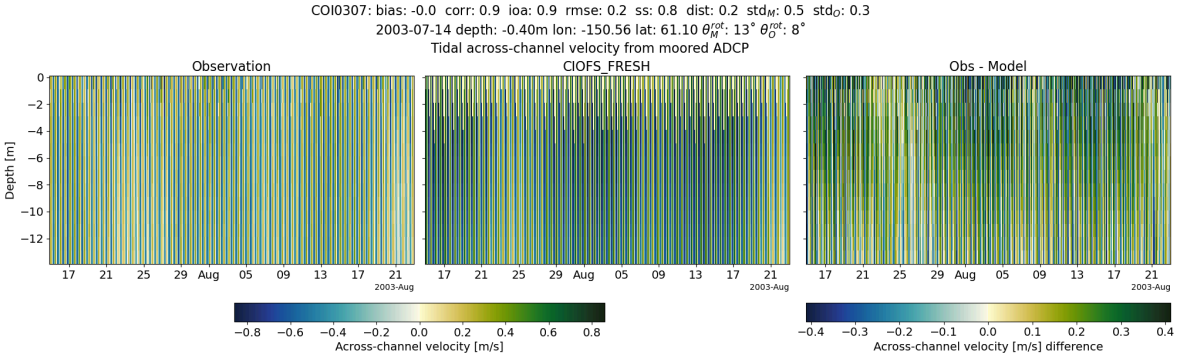
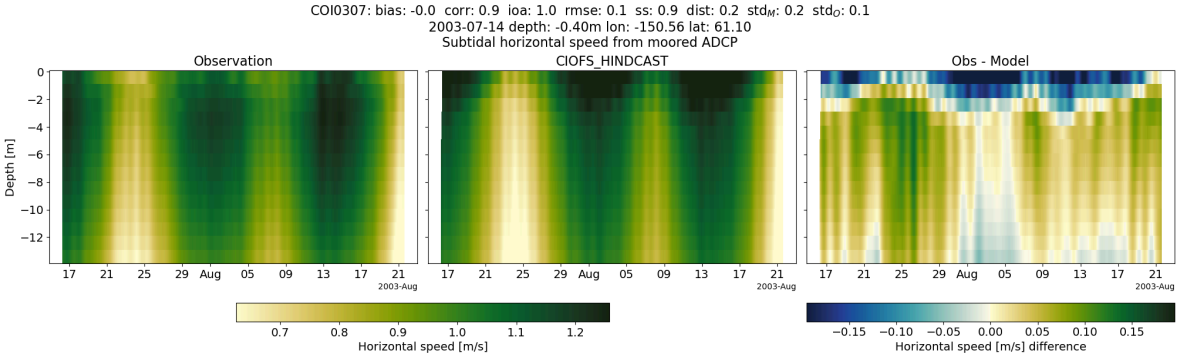


Subtidal

Horizontal speed

CIOFS_HINDCAST



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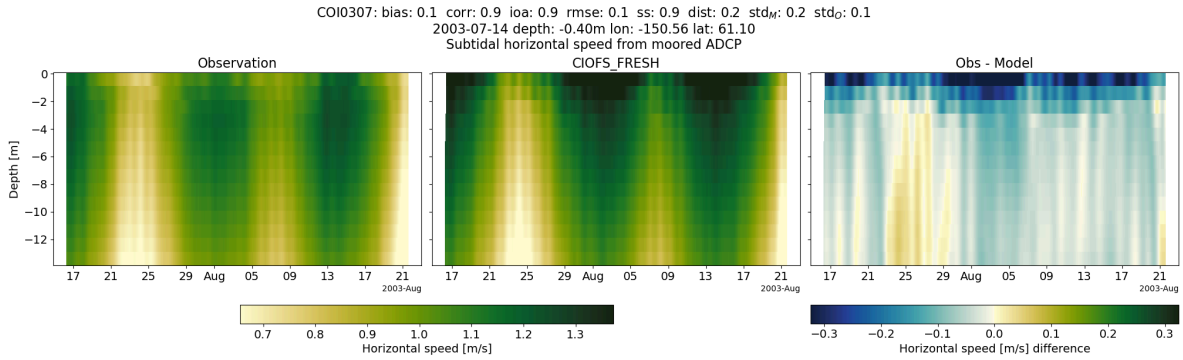
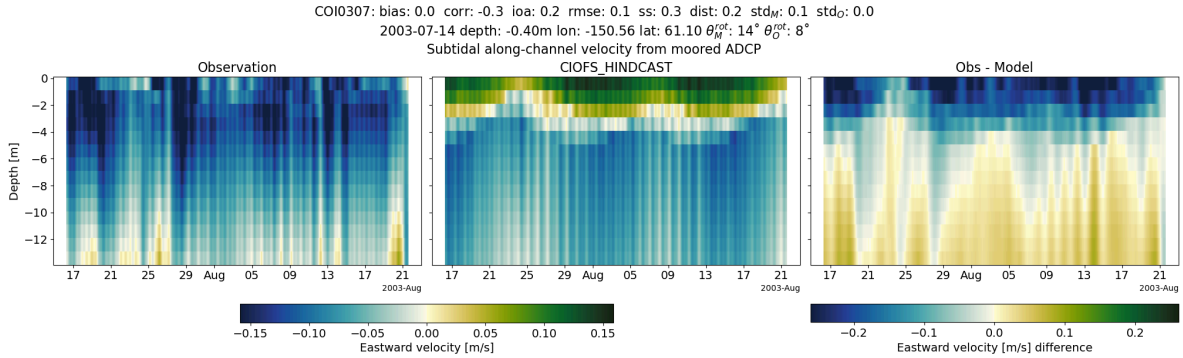


Along-channel velocity

CIOFS_HINDCAST



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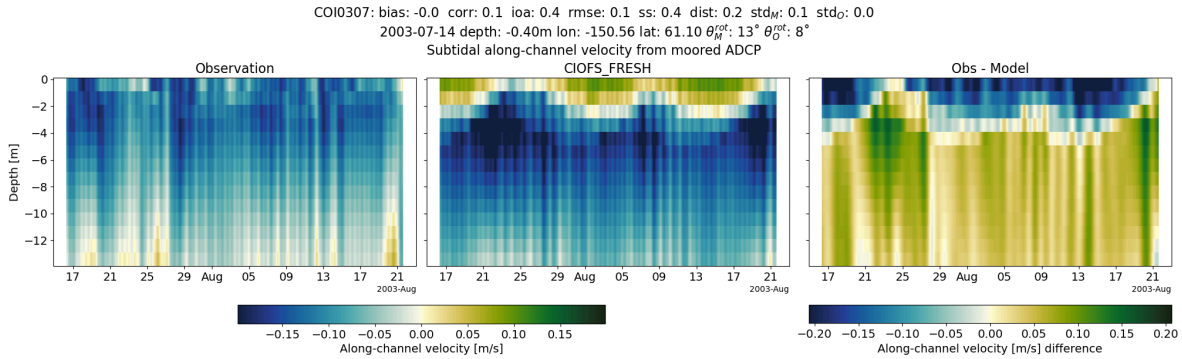
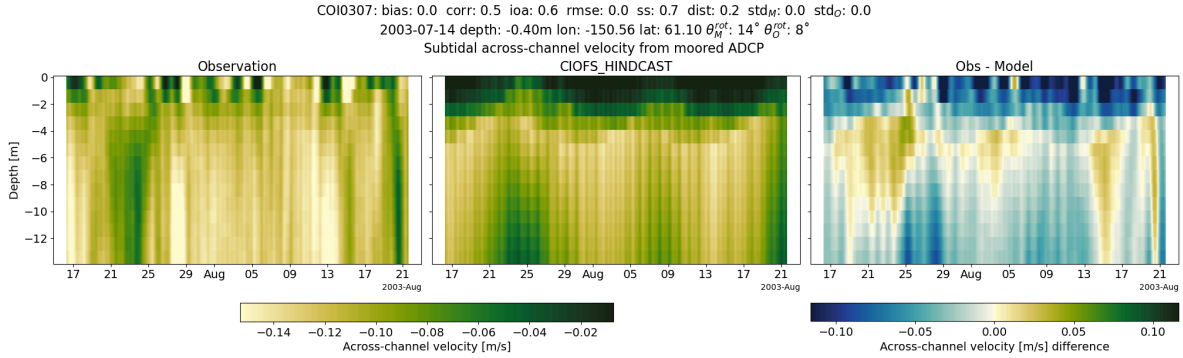
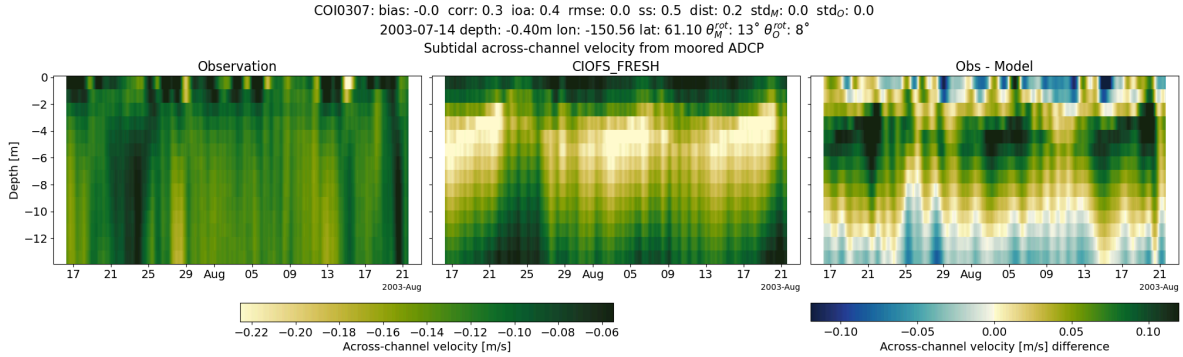


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

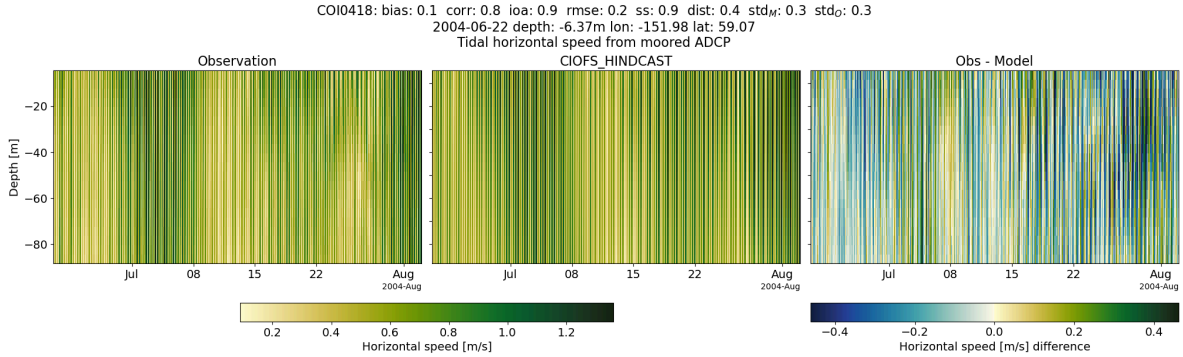


COI0418

Tidal

Horizontal speed

CIOFS_HINDCAST



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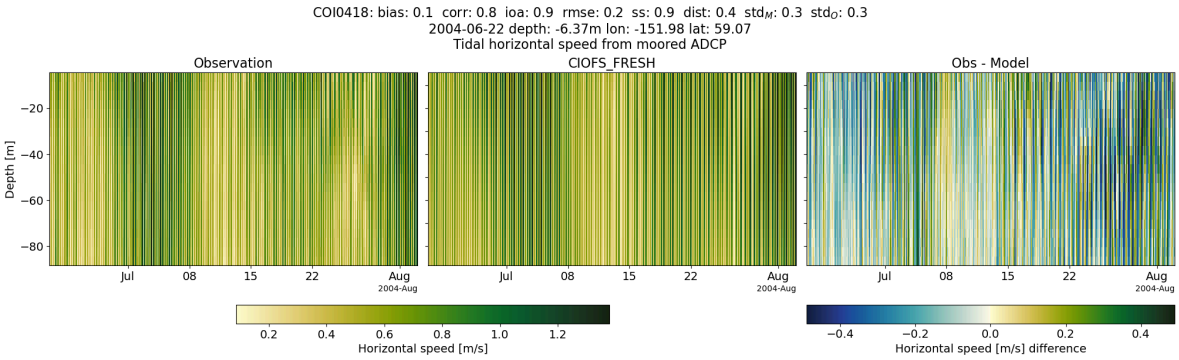
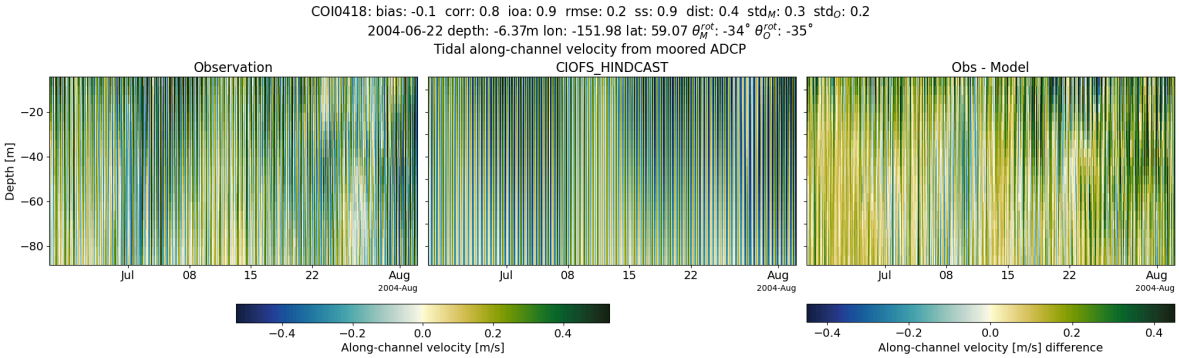


Along-channel velocity

CIOFS_HINDCAST



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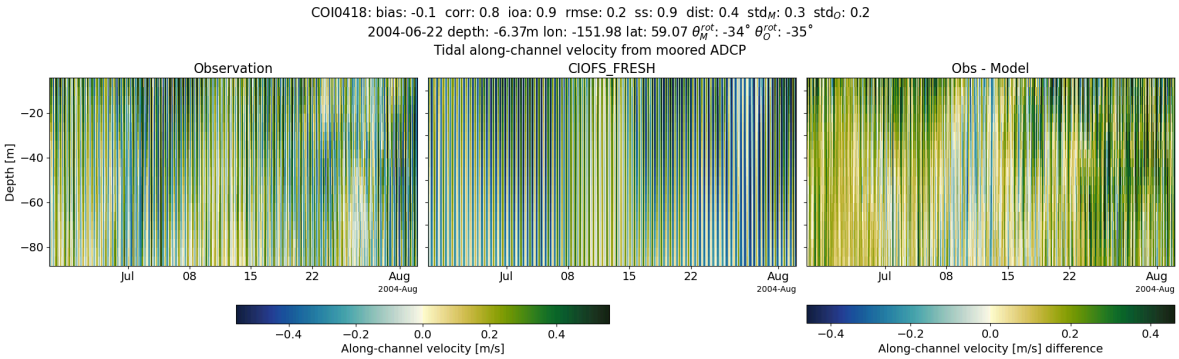
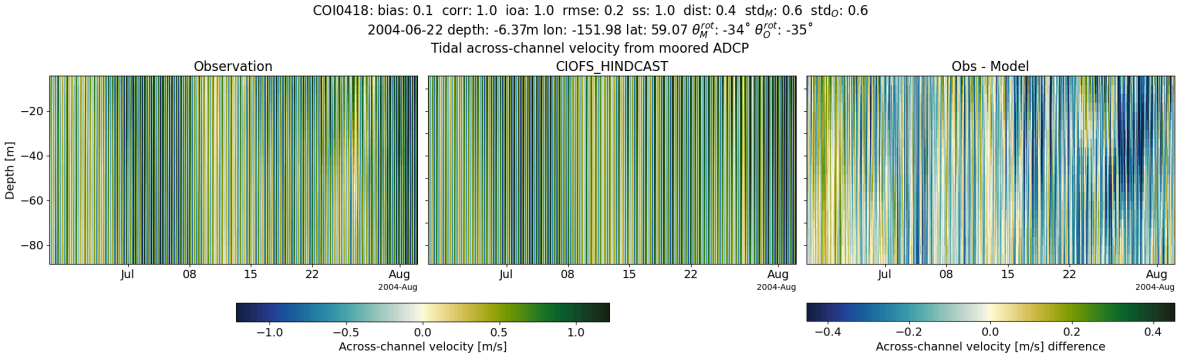
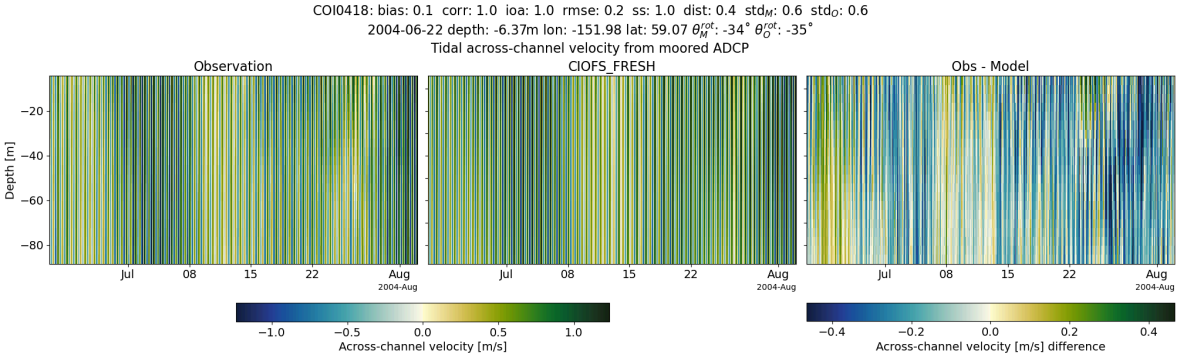


Across-channel velocity

CIOFS_HINDCAST



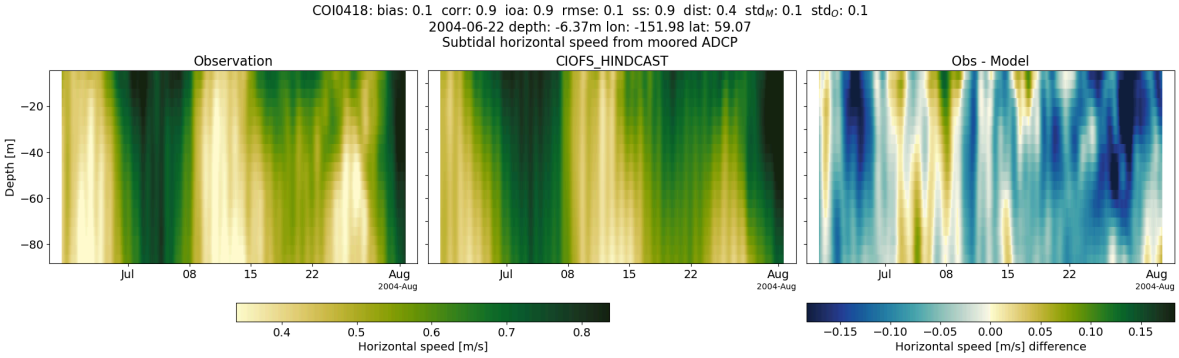
CIOFS_FRESH



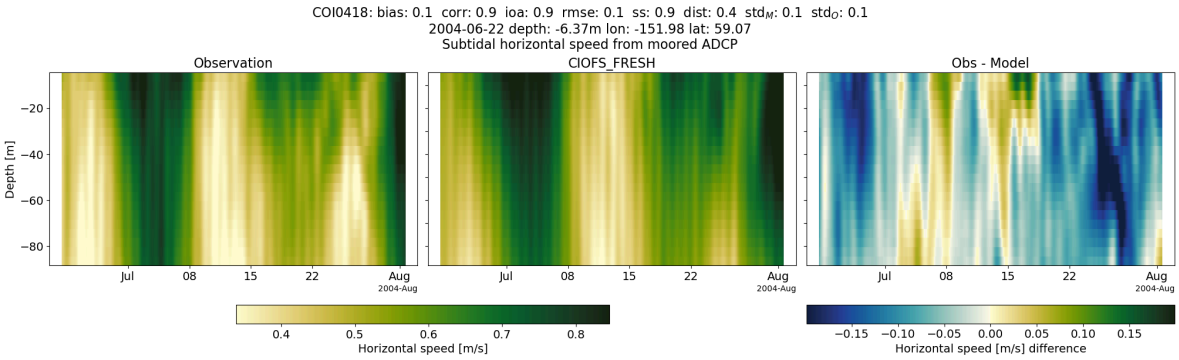
Subtidal

Horizontal speed

CIOFS_HINDCAST

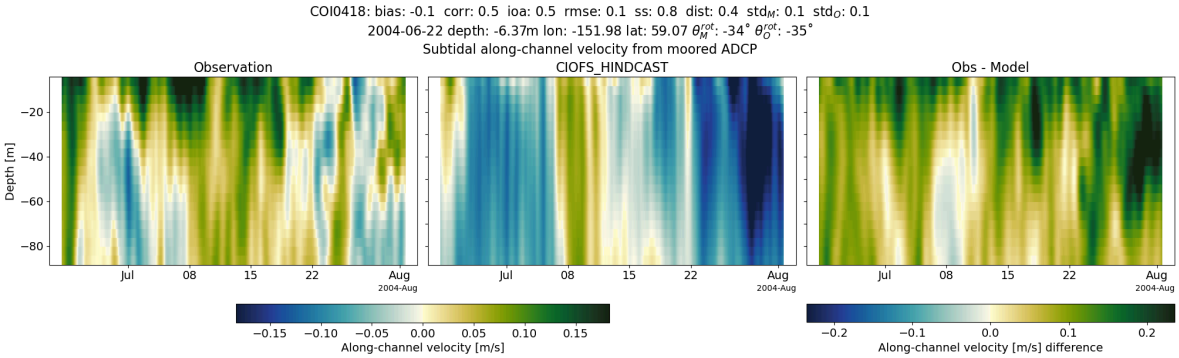


CIOFS_FRESH

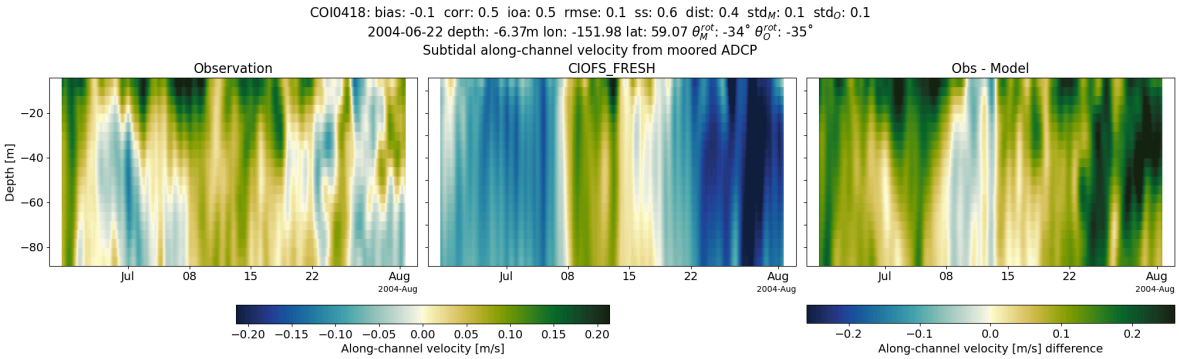


Along-channel velocity

CIOFS_HINDCAST

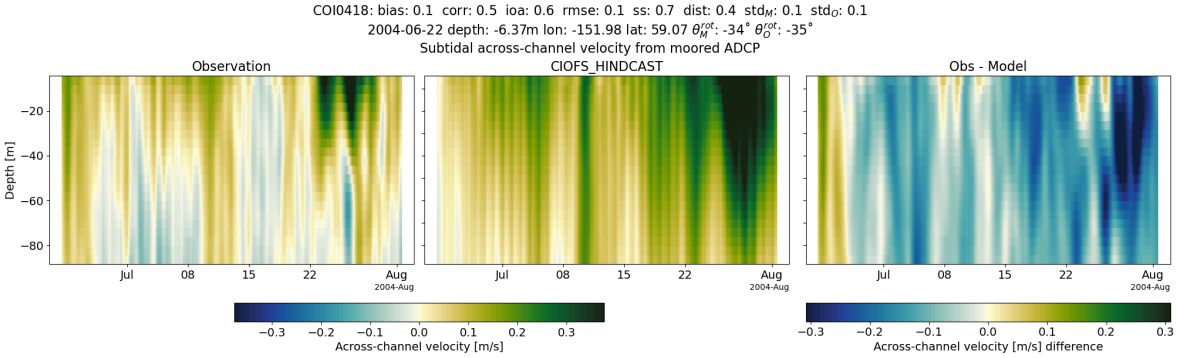


CIOFS_FRESH

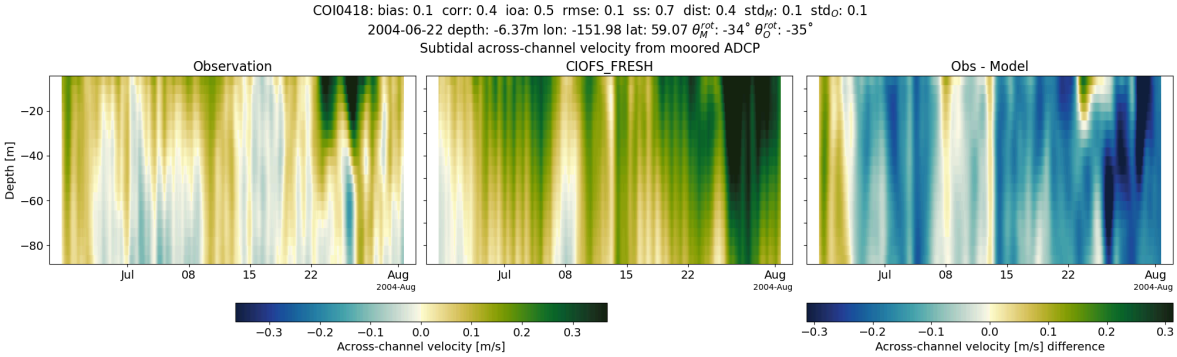


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

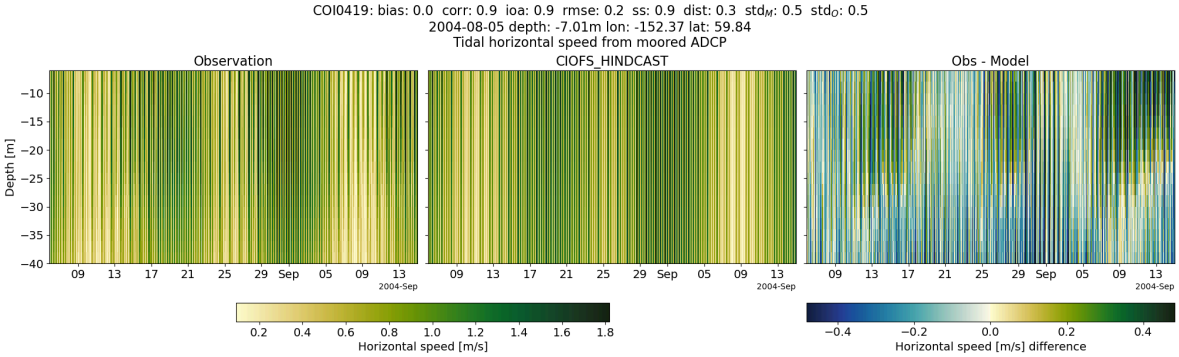


COI0419

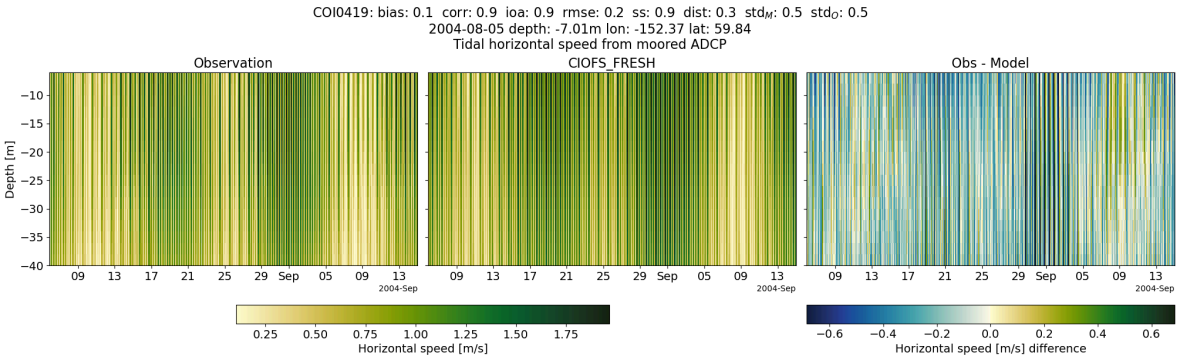
Tidal

Horizontal speed

CIOFS_HINDCAST

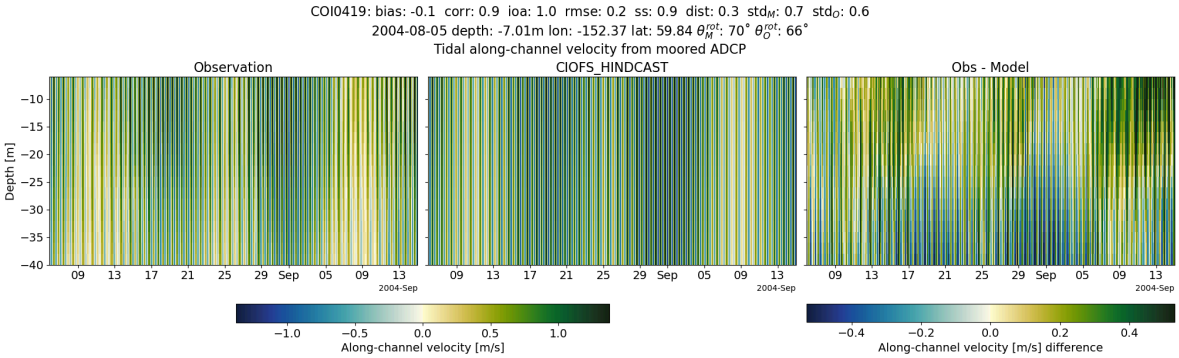


CIOFS_FRESH

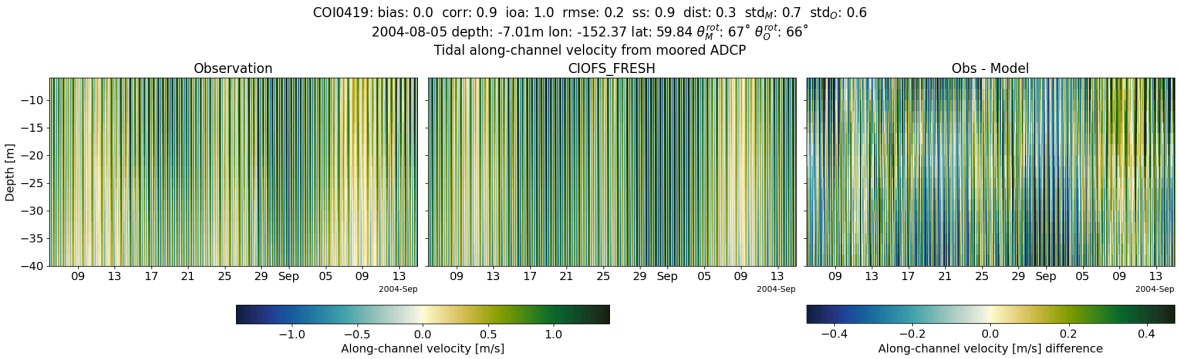


Along-channel velocity

CIOFS_HINDCAST

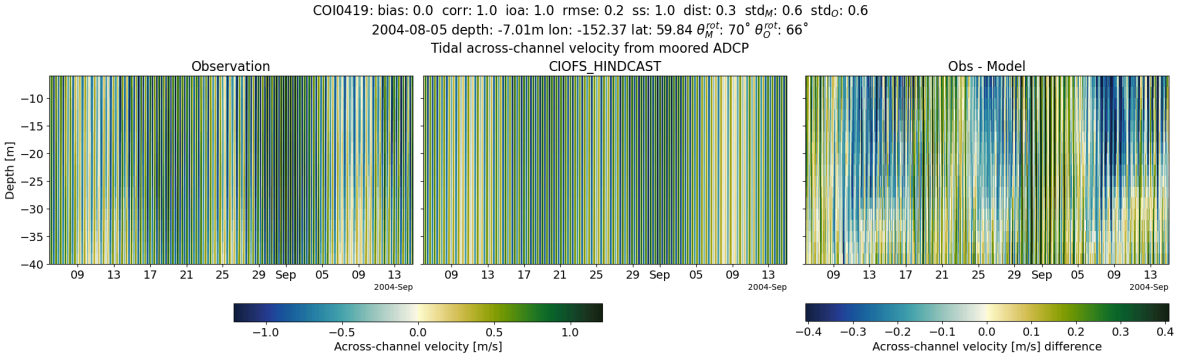


CIOFS_FRESH

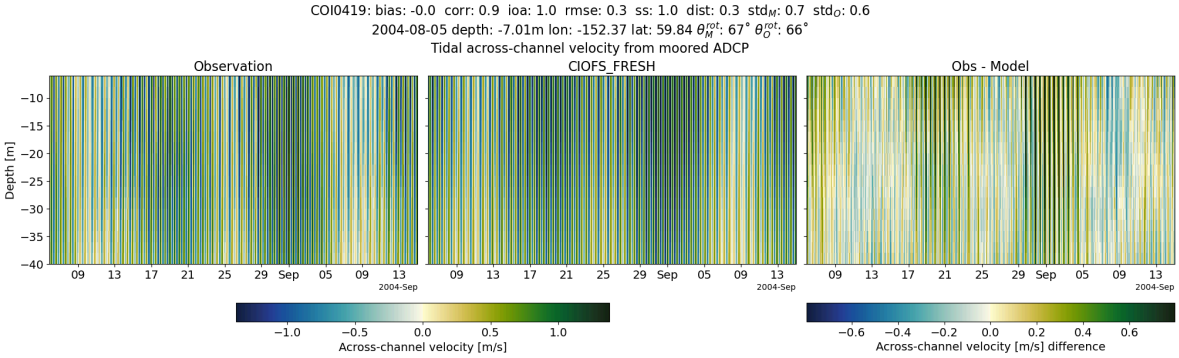


Across-channel velocity

CIOFS_HINDCAST



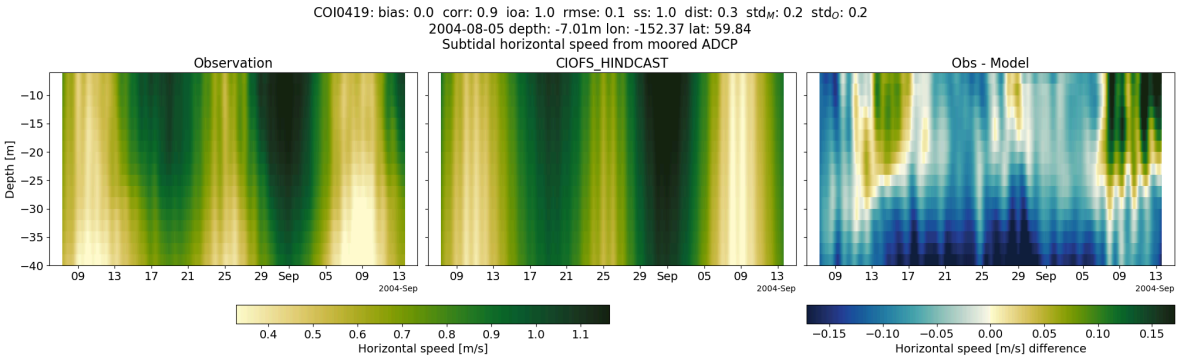
CIOFS_FRESH



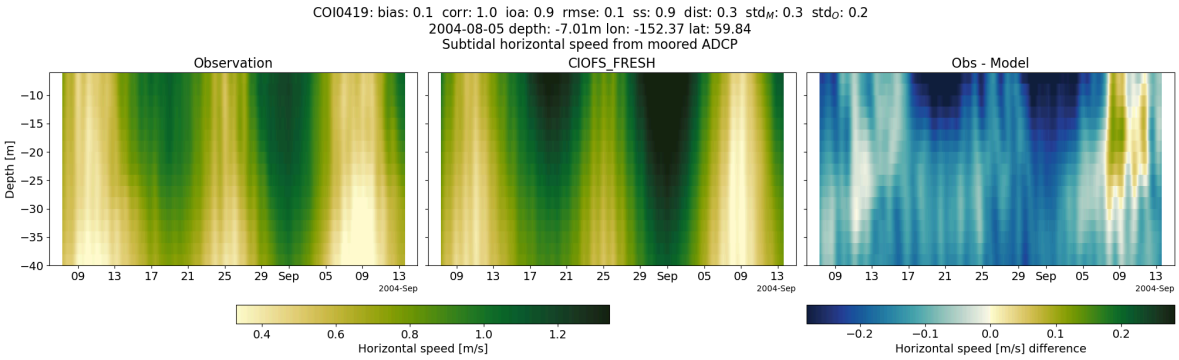
Subtidal

Horizontal speed

CIOFS_HINDCAST

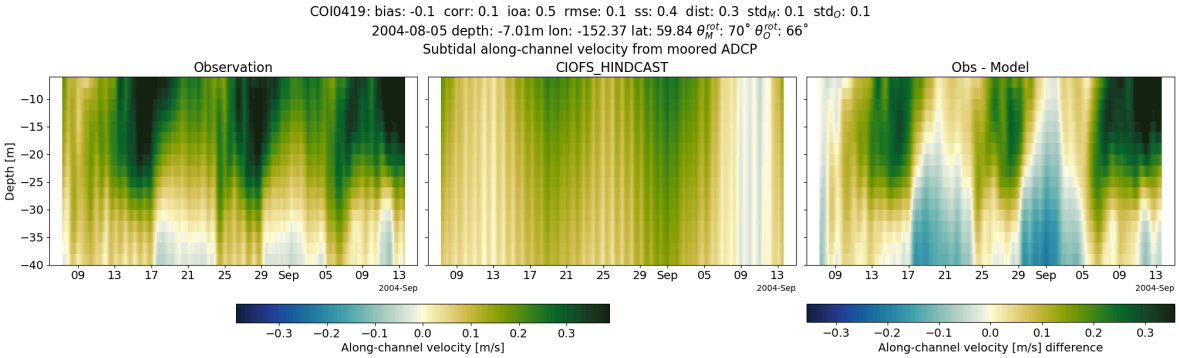


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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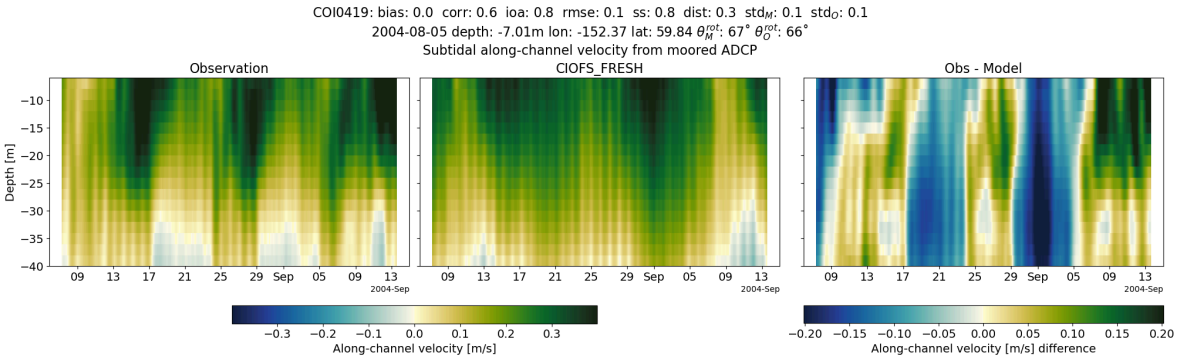
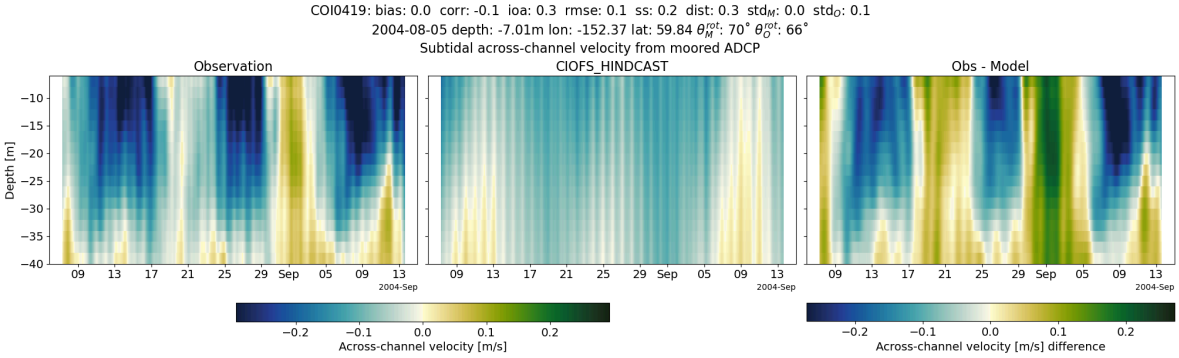
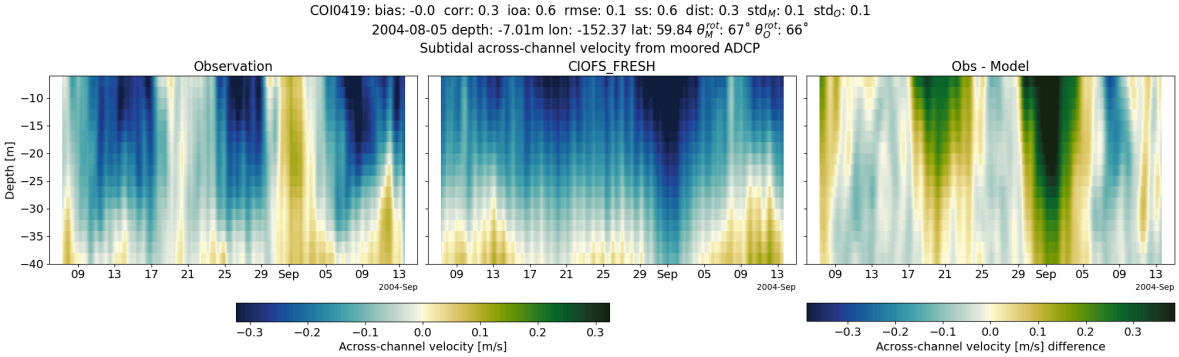


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

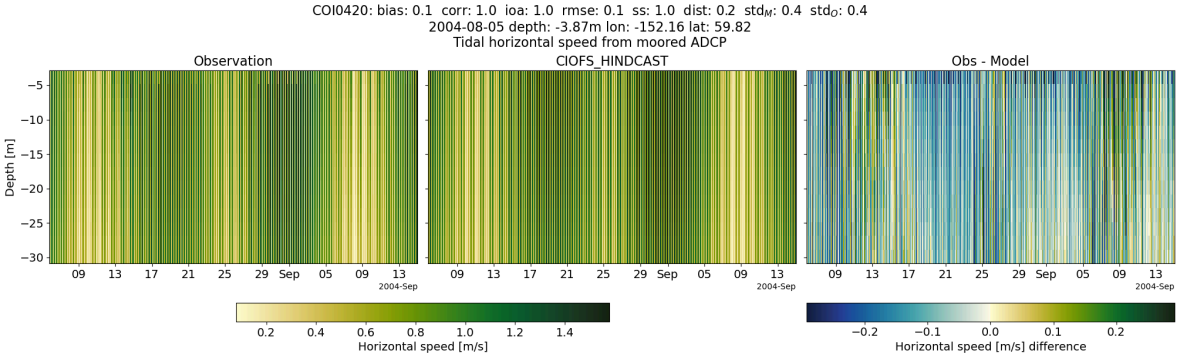


COI0420

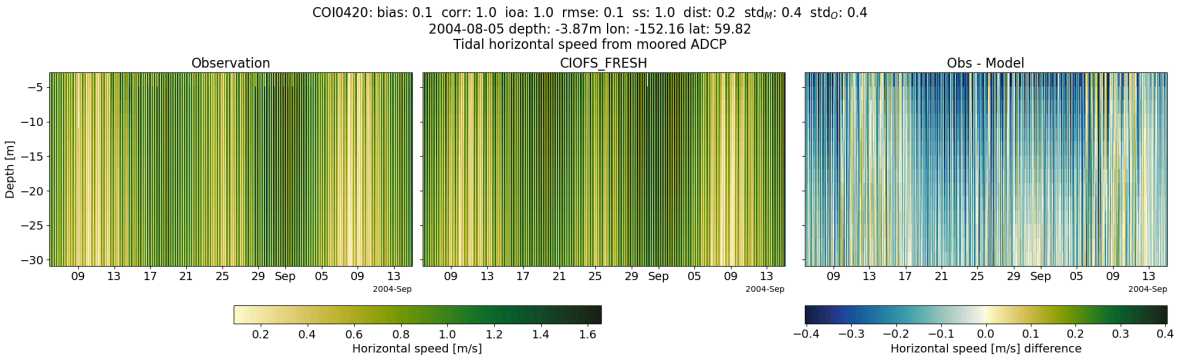
Tidal

Horizontal speed

CIOFS_HINDCAST

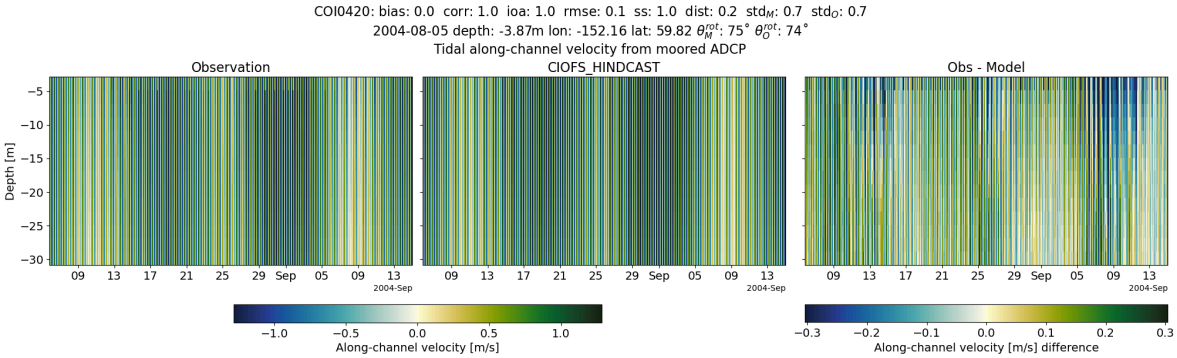


CIOFS_FRESH

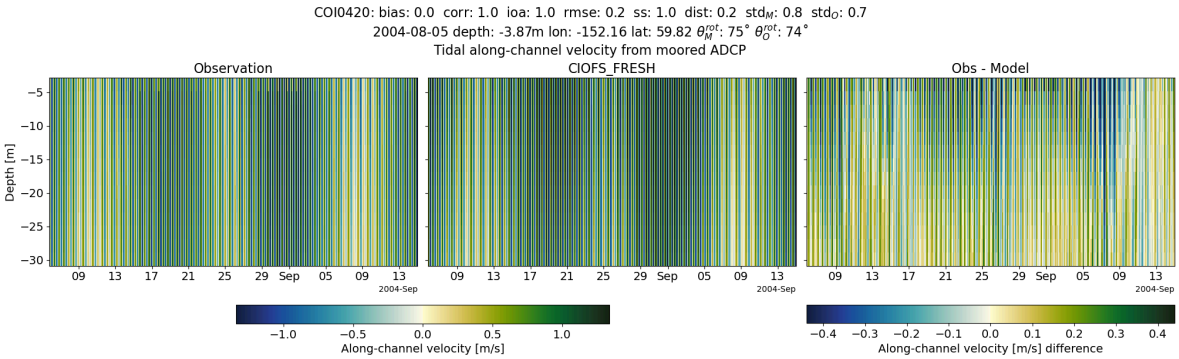


Along-channel velocity

CIOFS_HINDCAST

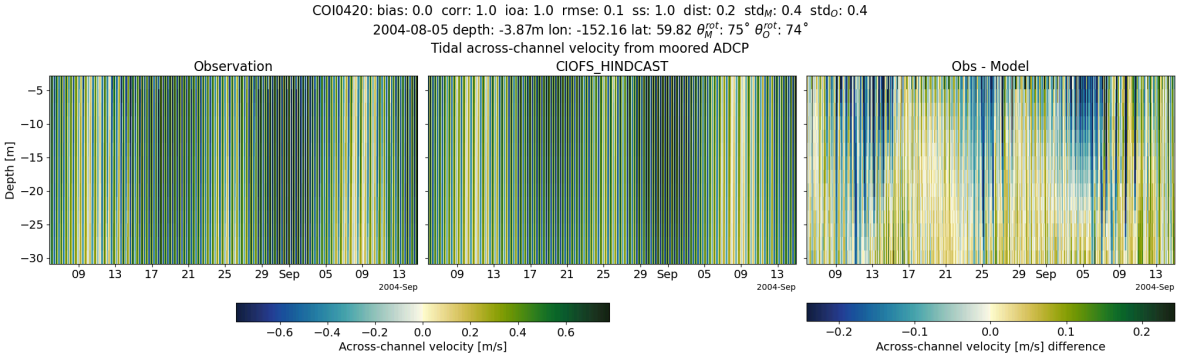


CIOFS_FRESH

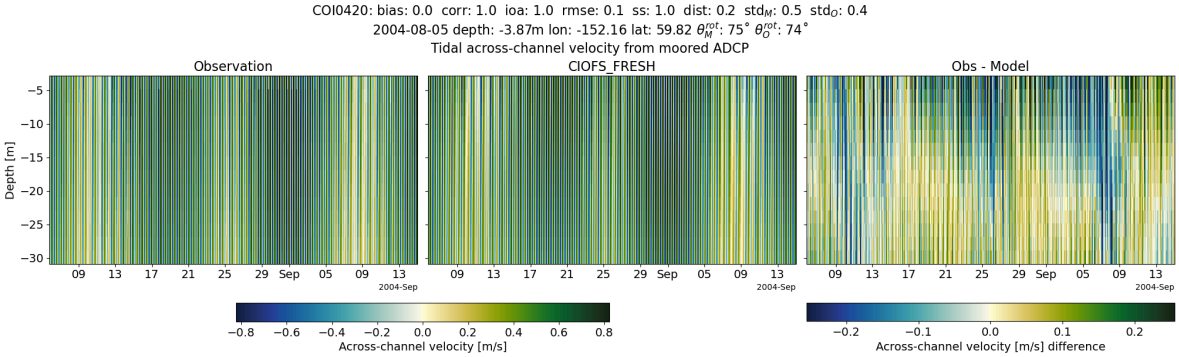


Across-channel velocity

CIOFS_HINDCAST



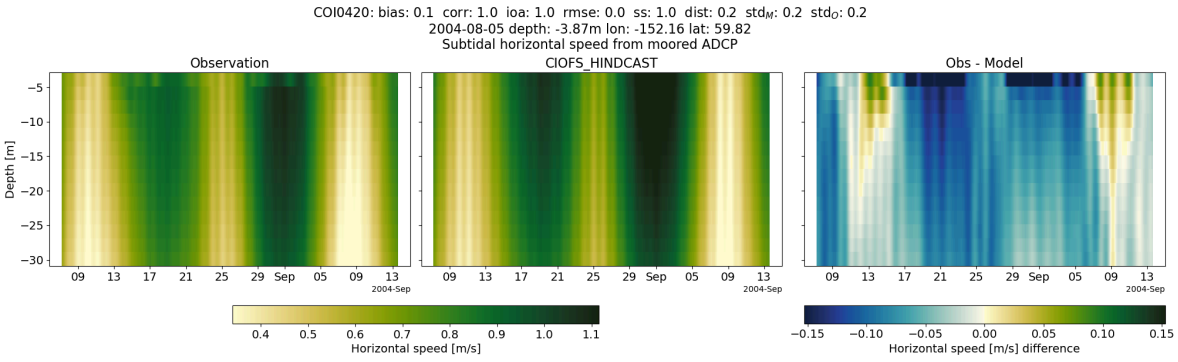
CIOFS_FRESH



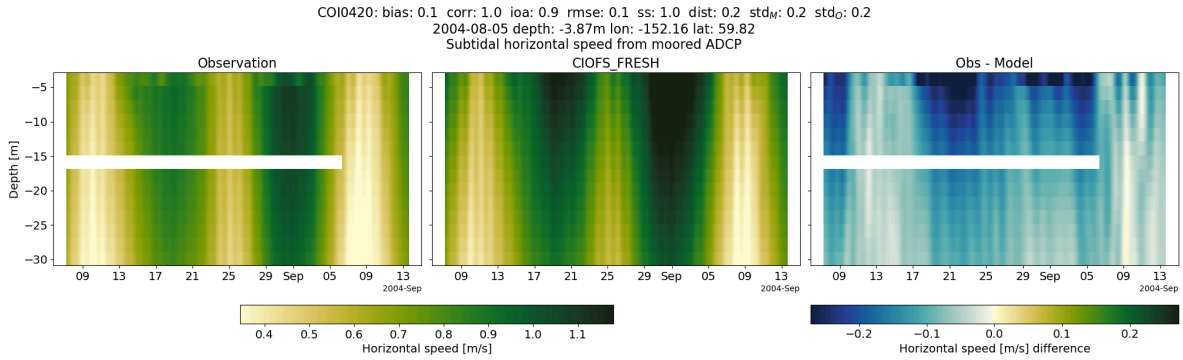
Subtidal

Horizontal speed

CIOFS_HINDCAST

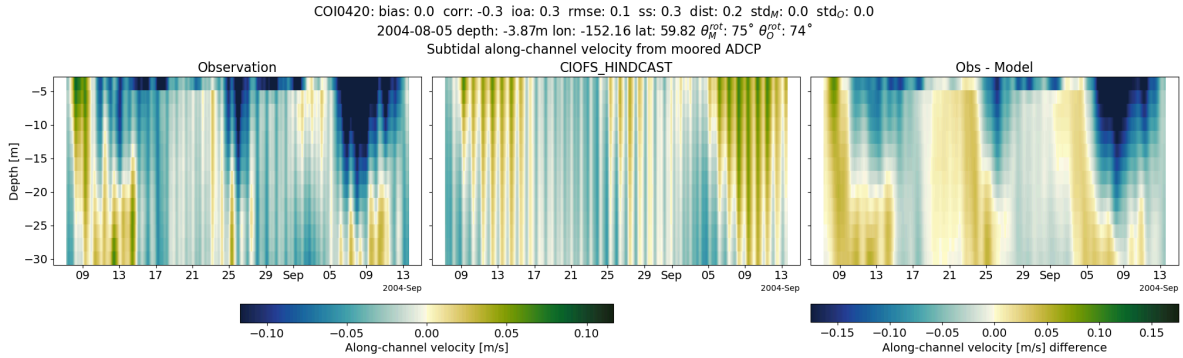


CIOFS_FRESH

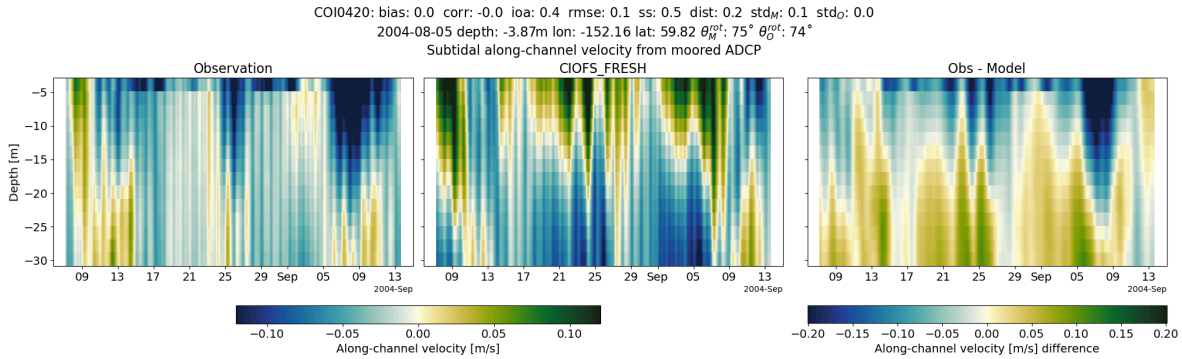


Along-channel velocity

CIOFS_HINDCAST

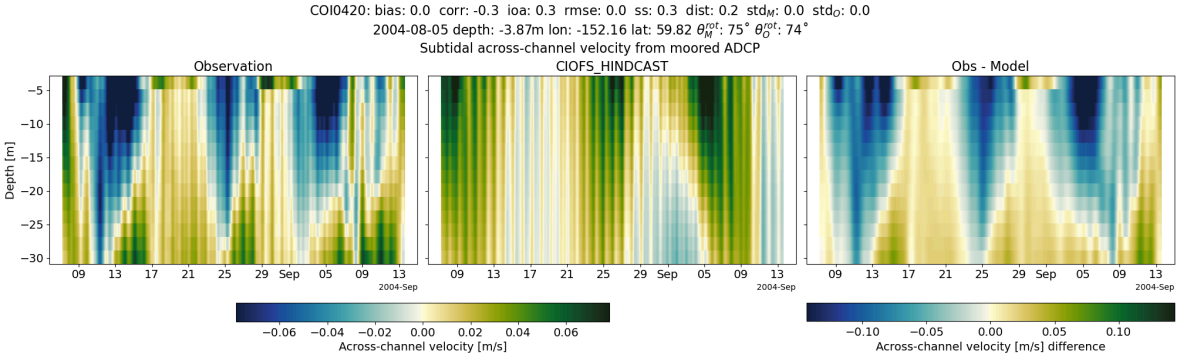


CIOFS_FRESH

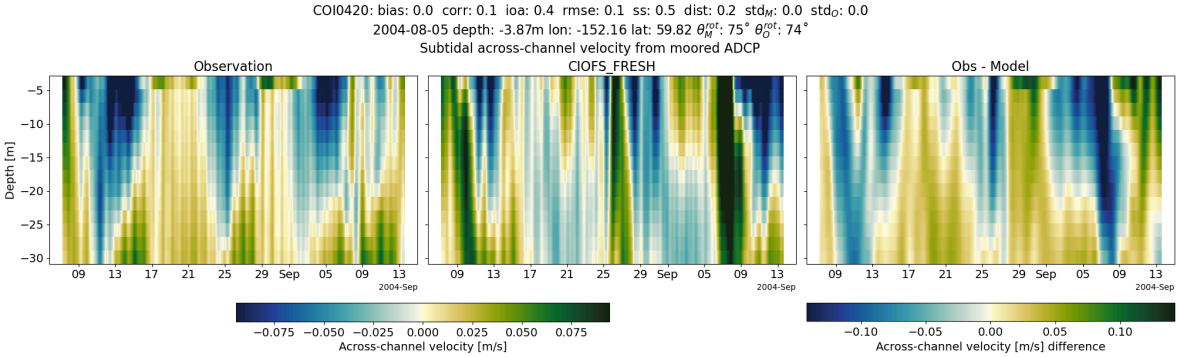


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

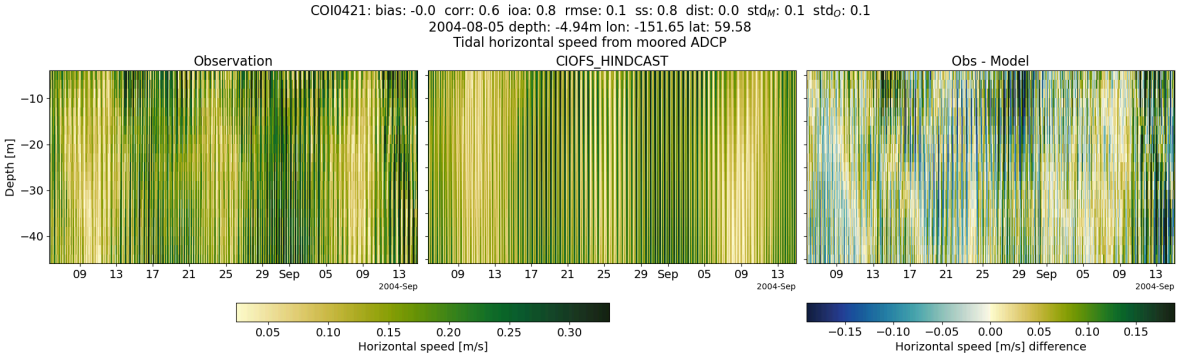


COI0421

Tidal

Horizontal speed

CIOFS_HINDCAST



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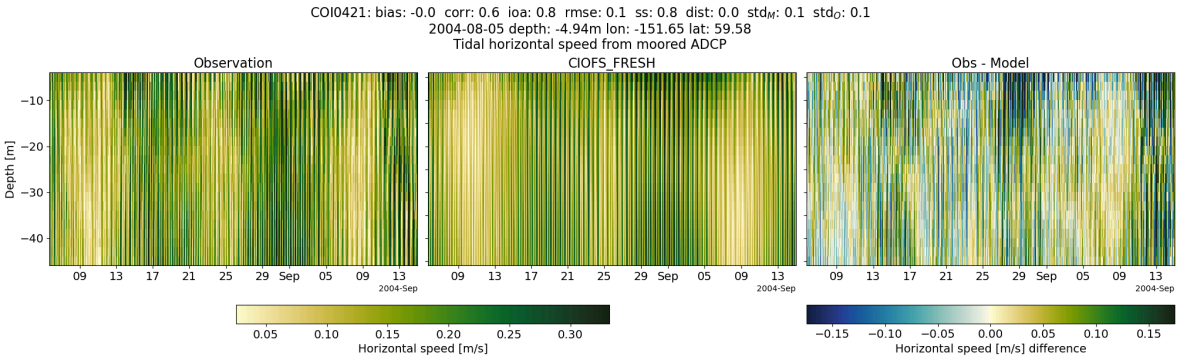
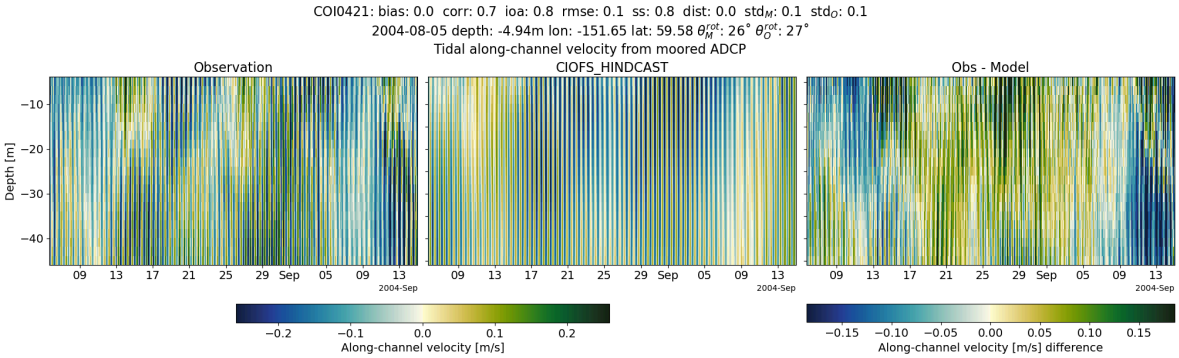


Along-channel velocity

CIOFS_HINDCAST



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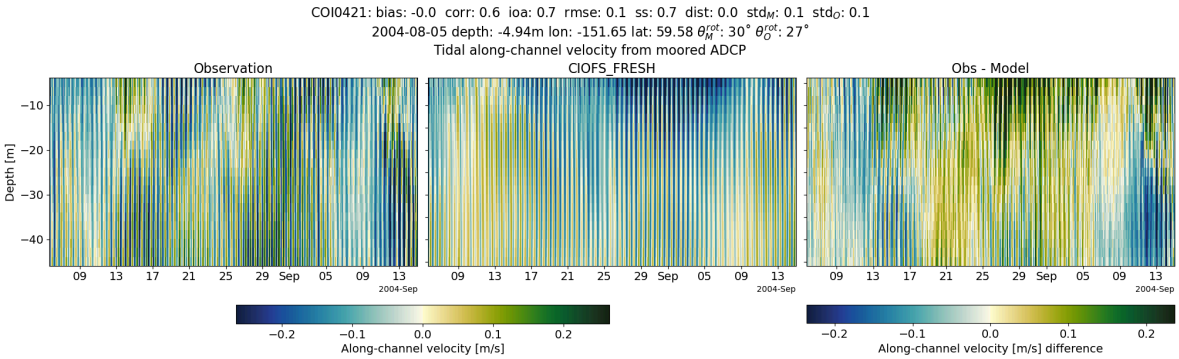
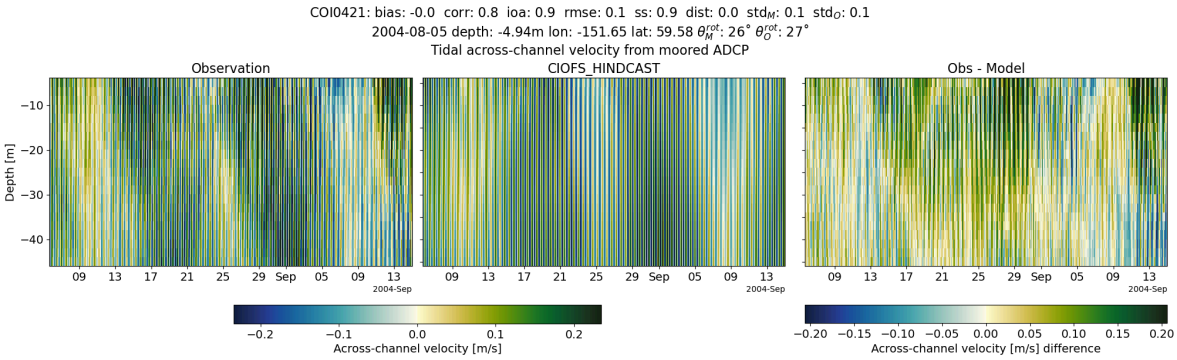


Across-channel velocity

CIOFS_HINDCAST



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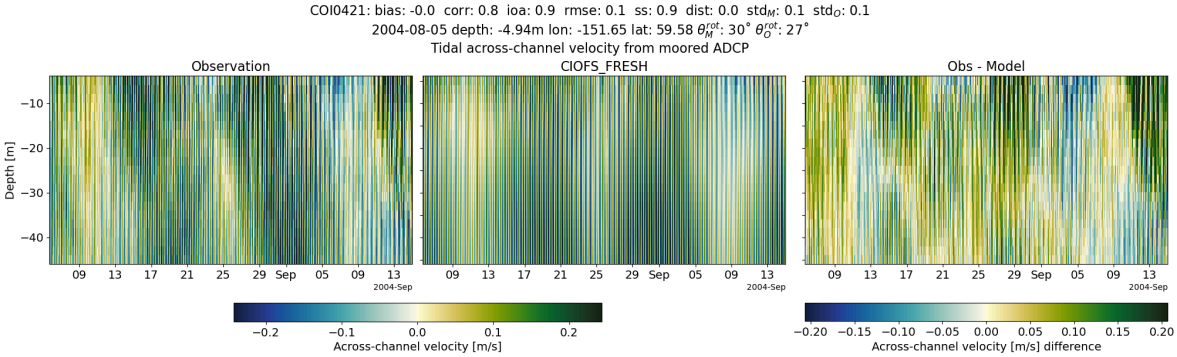
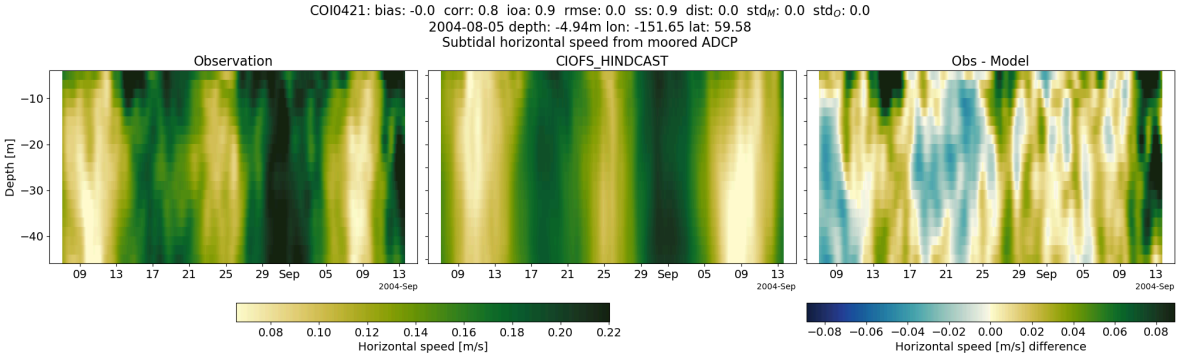


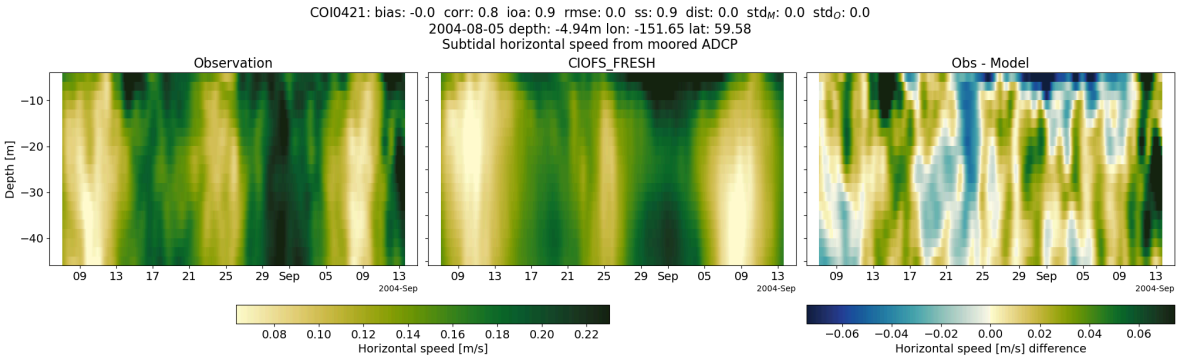
Subtidal

Horizontal speed

CIOFS_HINDCAST

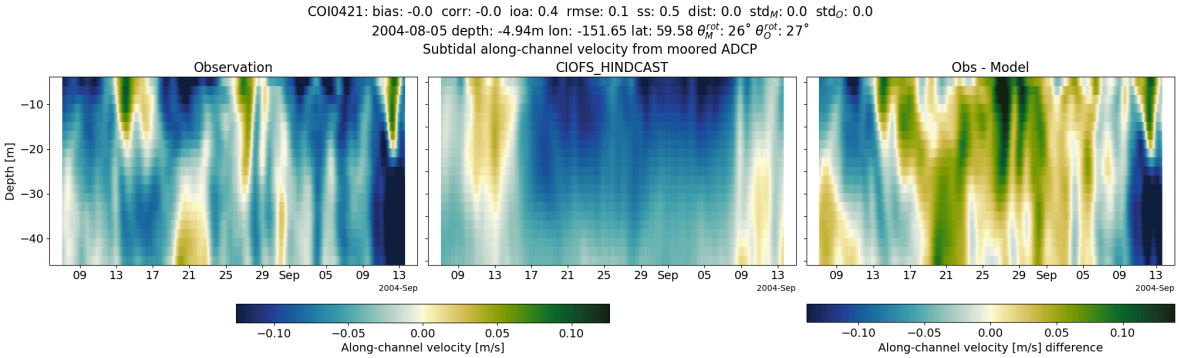


CIOFS_FRESH

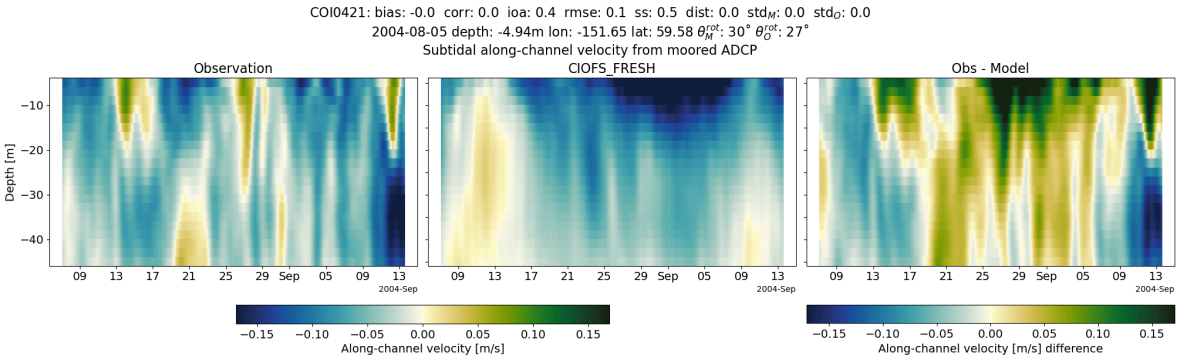


Along-channel velocity

CIOFS_HINDCAST

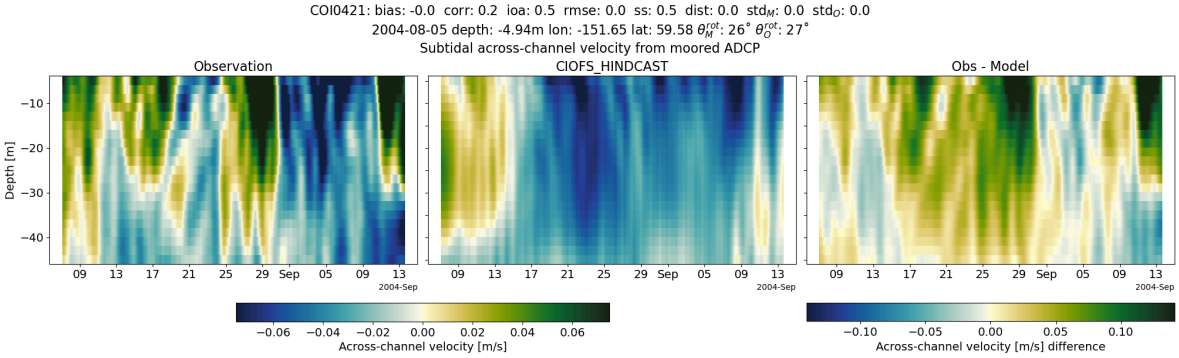


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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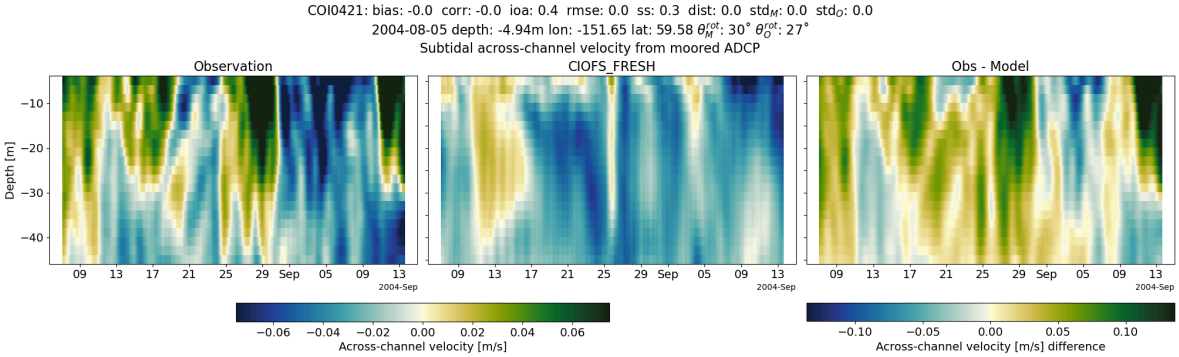
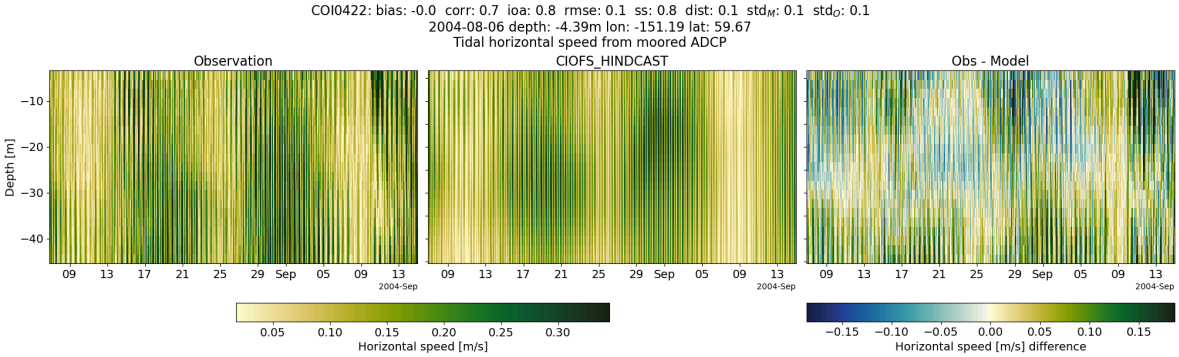


COI0422

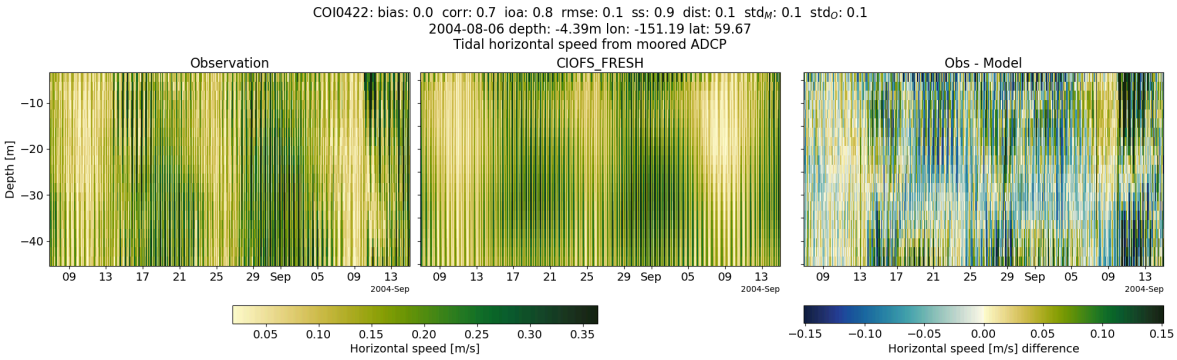
Tidal

Horizontal speed

CIOFS_HINDCAST

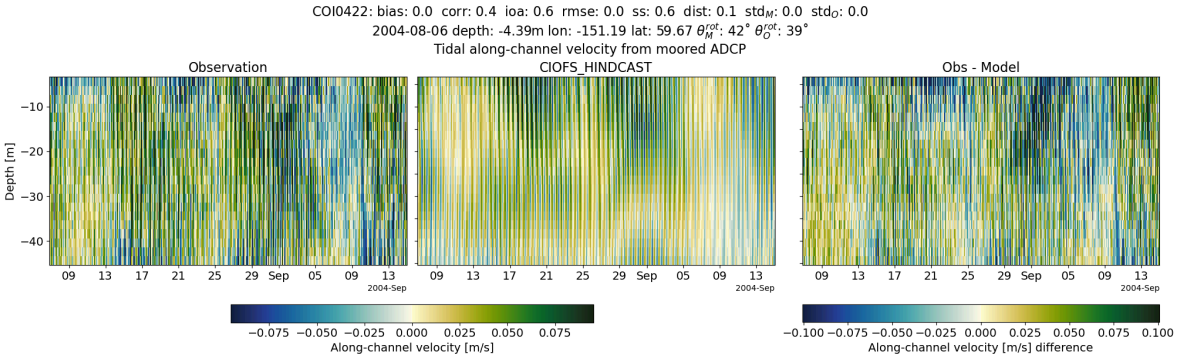


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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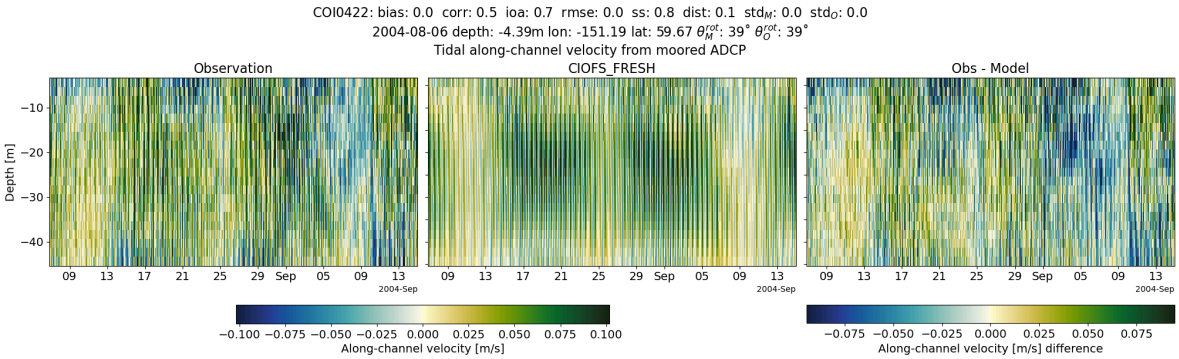
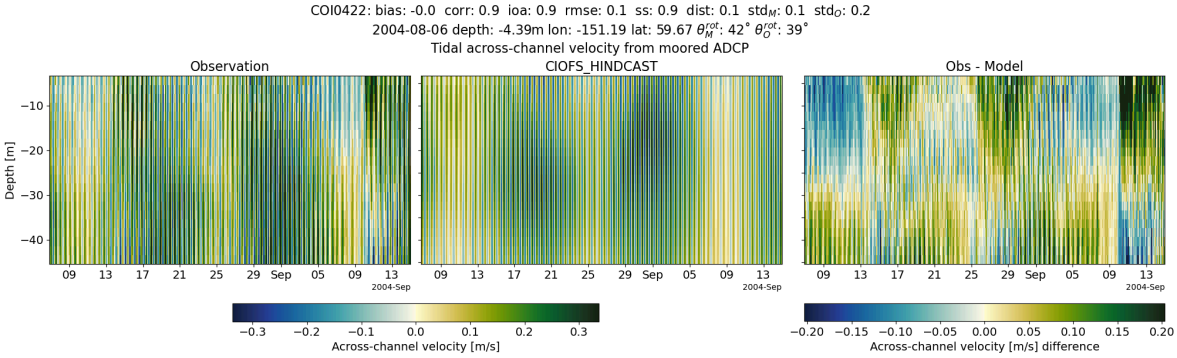


Across-channel velocity

CIOFS_HINDCAST



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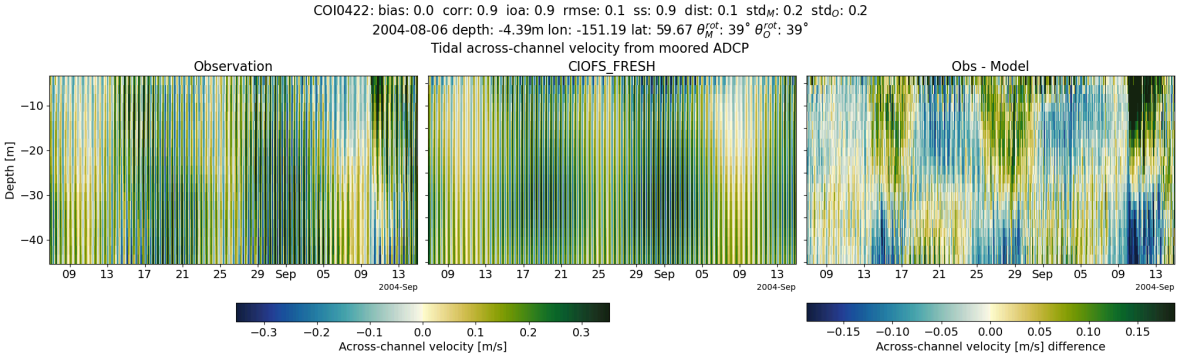
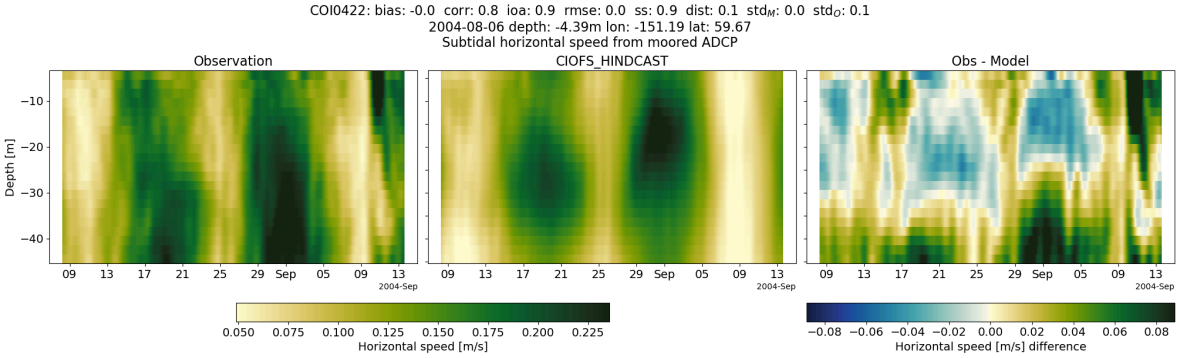


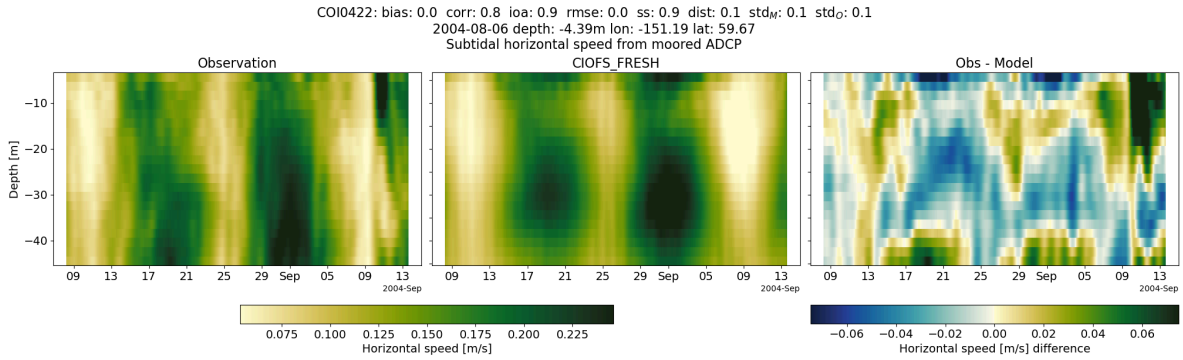
Subtidal

Horizontal speed

CIOFS_HINDCAST

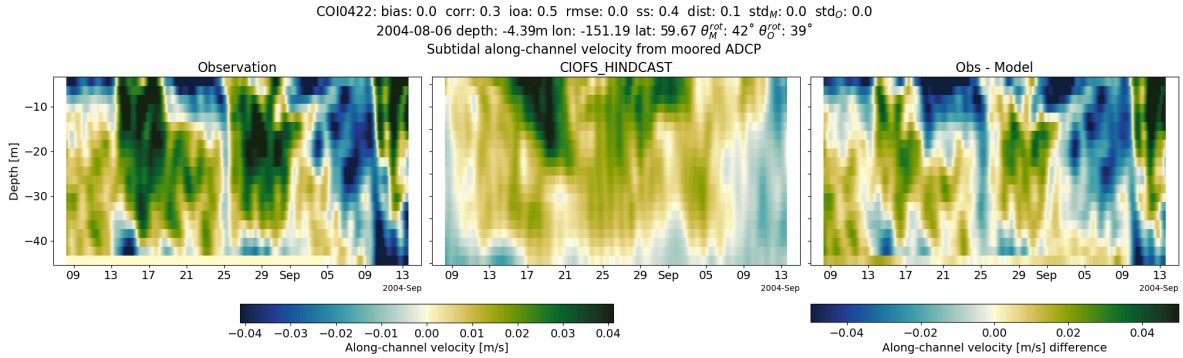


CIOFS_FRESH

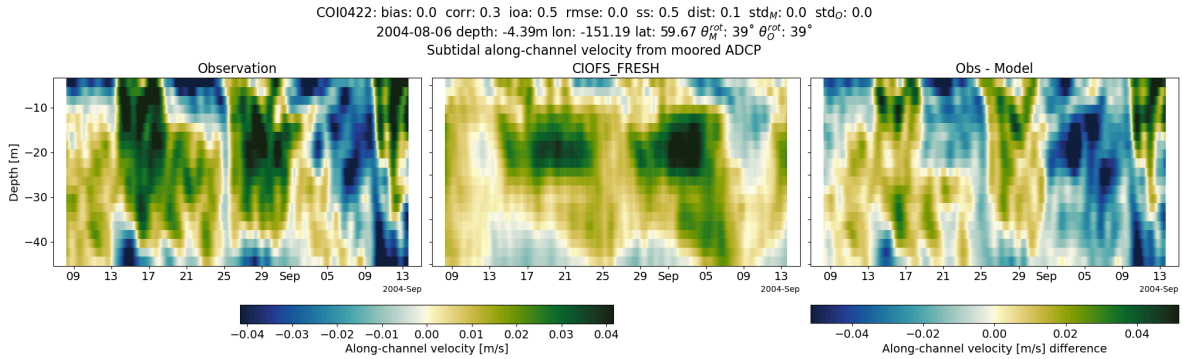


Along-channel velocity

CIOFS_HINDCAST

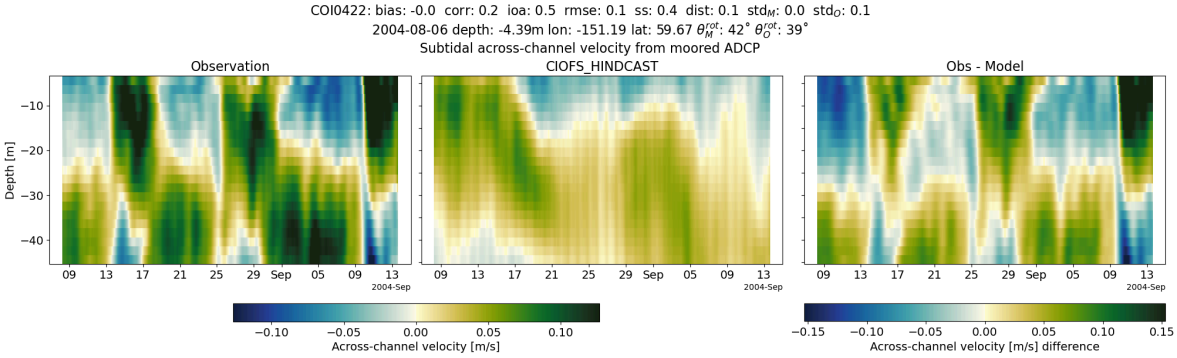


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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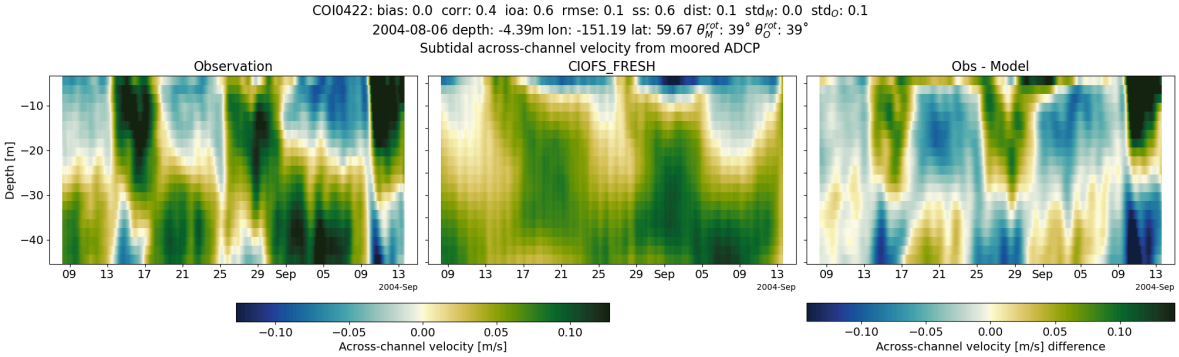
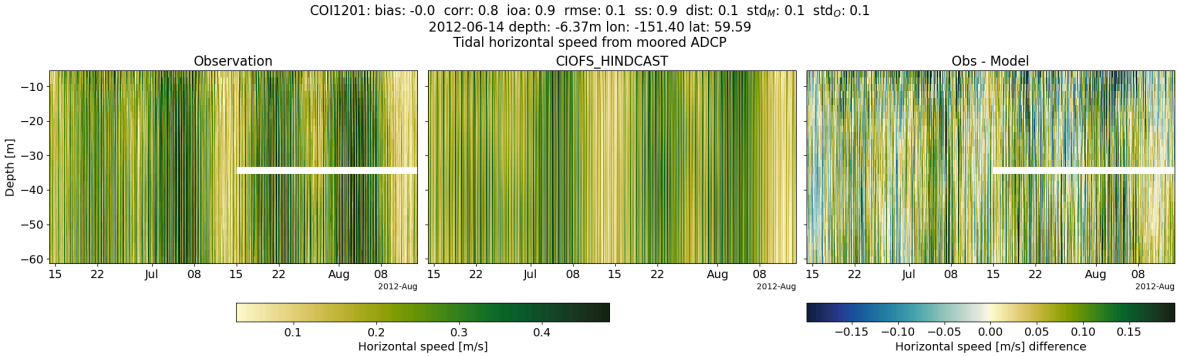


COI1201

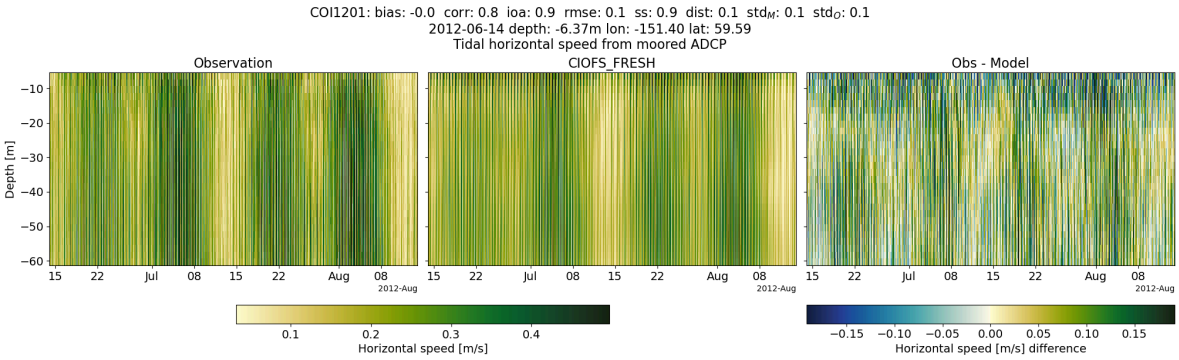
Tidal

Horizontal speed

CIOFS_HINDCAST

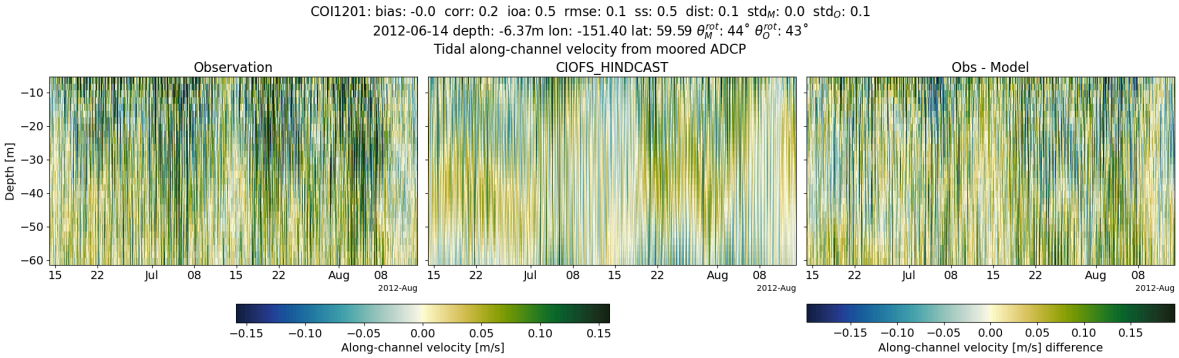


CIOFS_FRESH

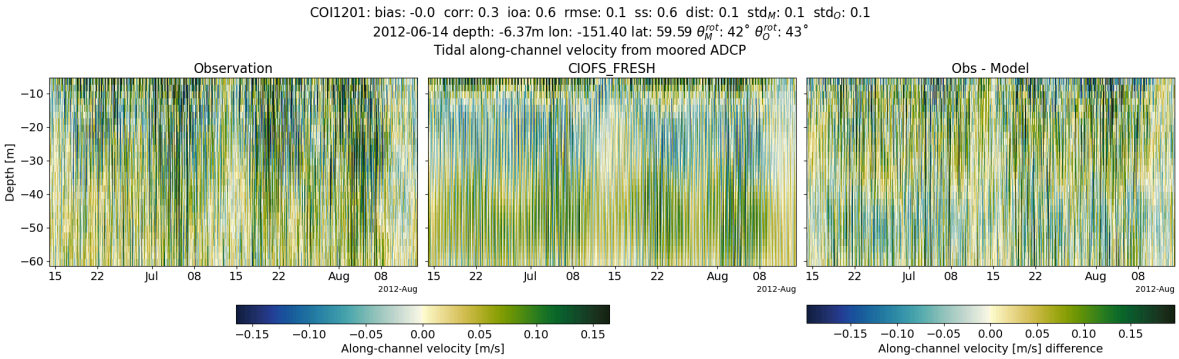


Along-channel velocity

CIOFS_HINDCAST

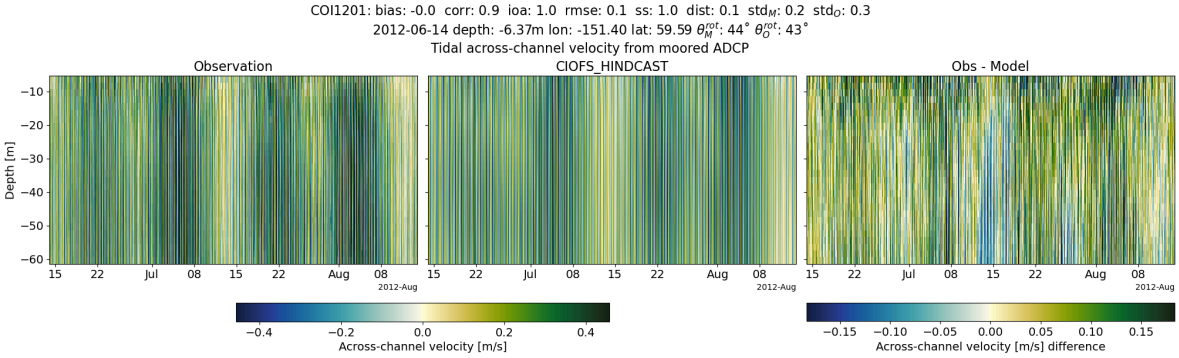


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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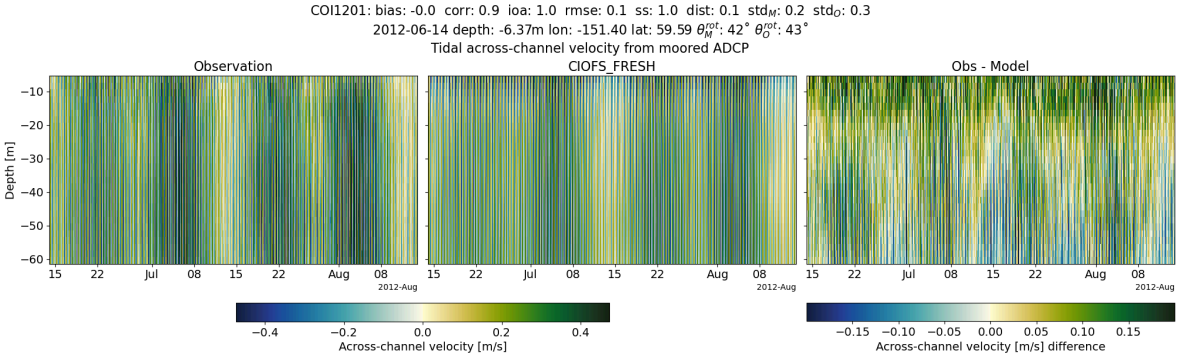
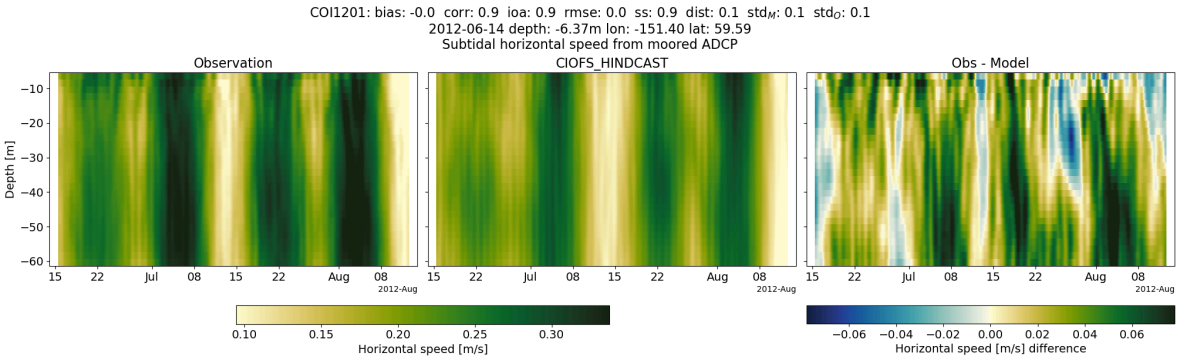


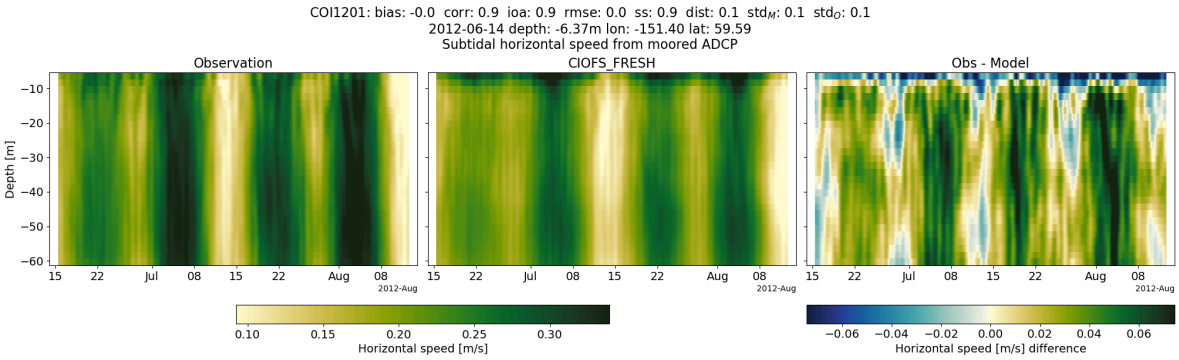
Subtidal

Horizontal speed

CIOFS_HINDCAST

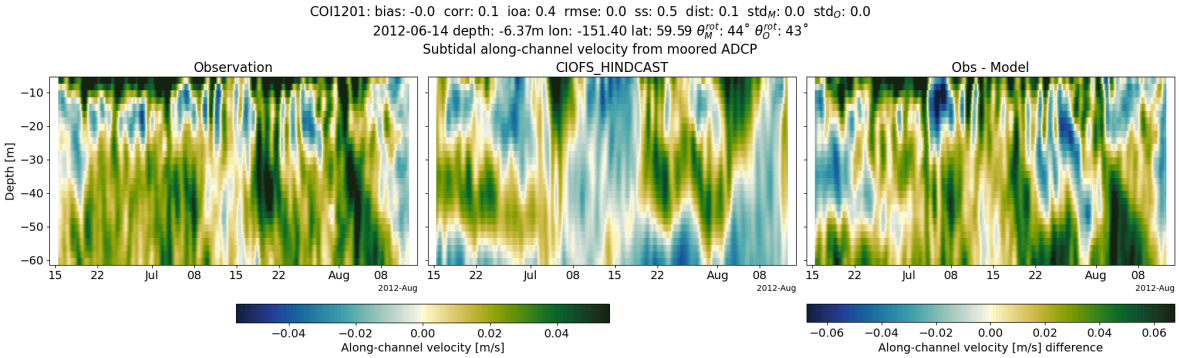


CIOFS_FRESH

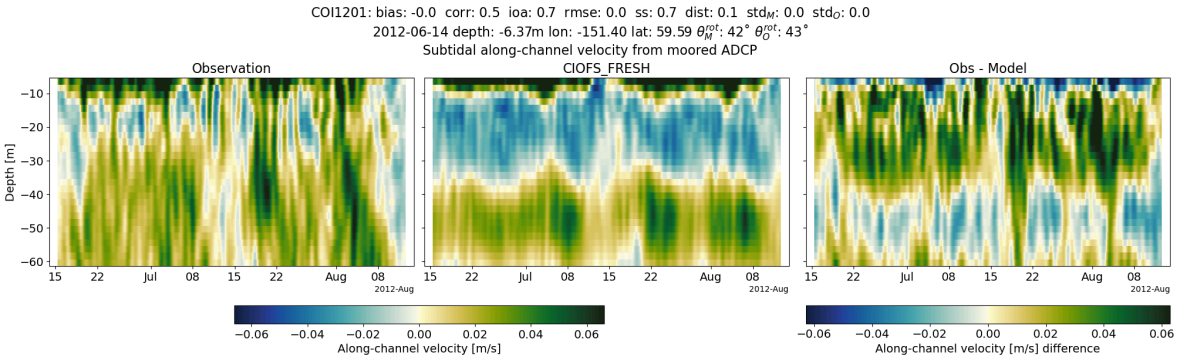


Along-channel velocity

CIOFS_HINDCAST

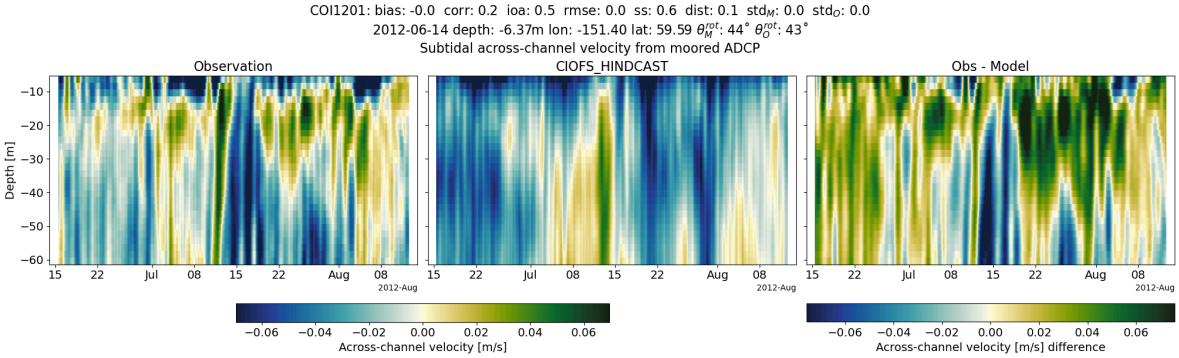


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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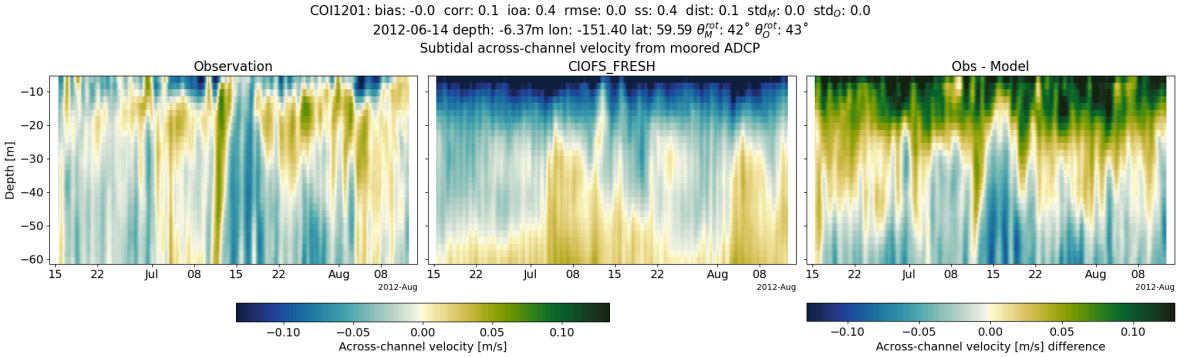
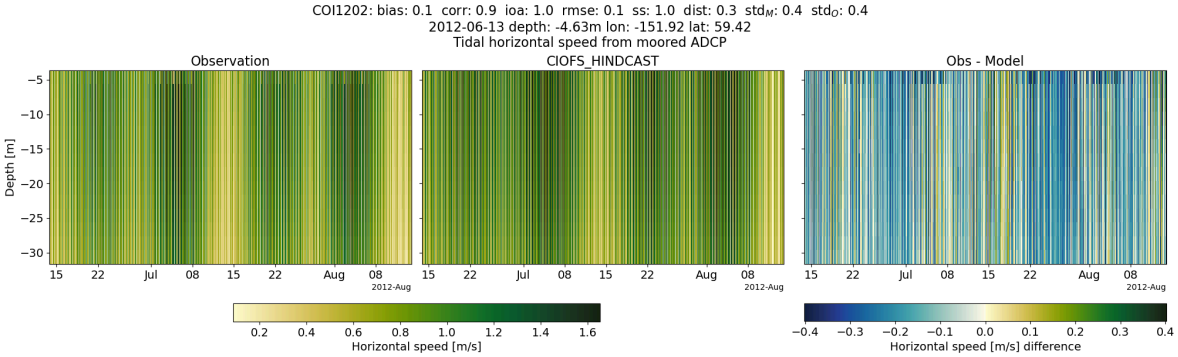


COI1202

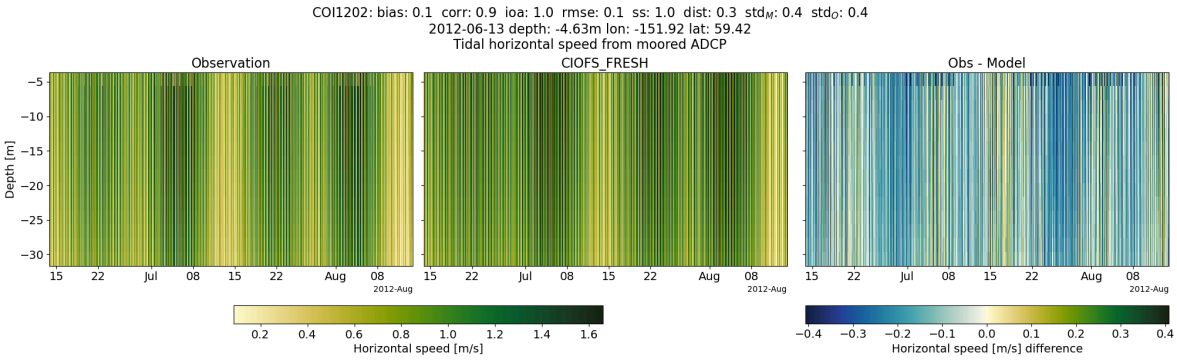
Tidal

Horizontal speed

CIOFS_HINDCAST

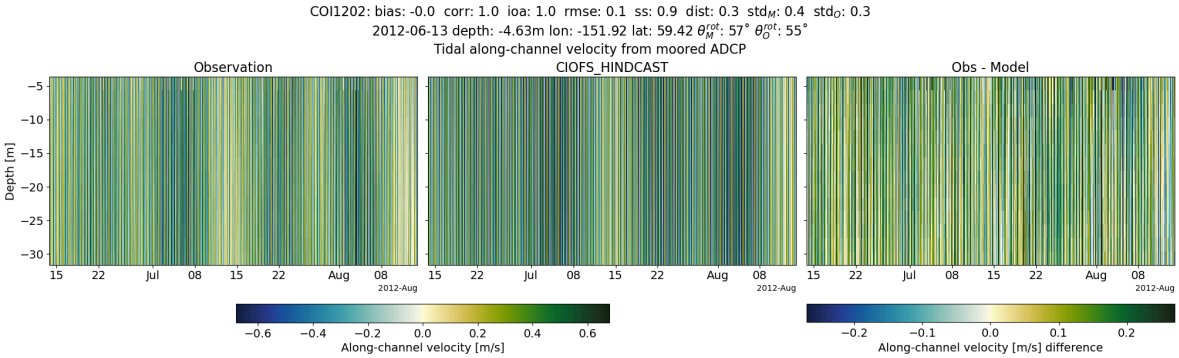


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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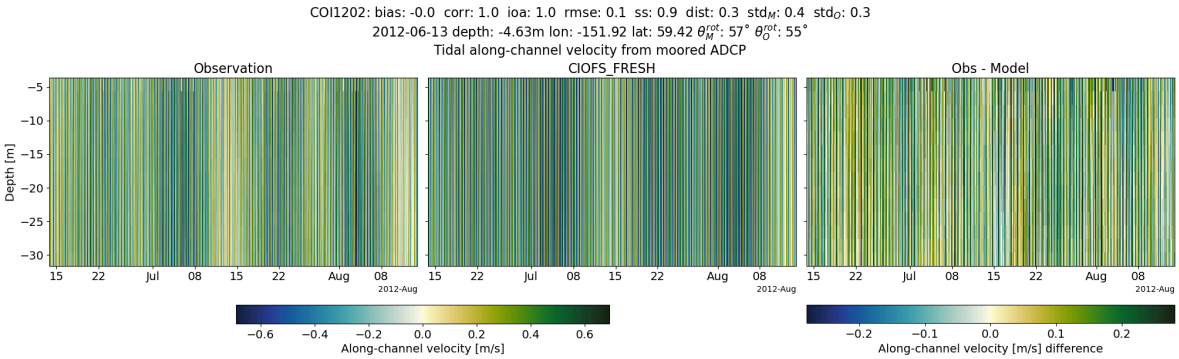
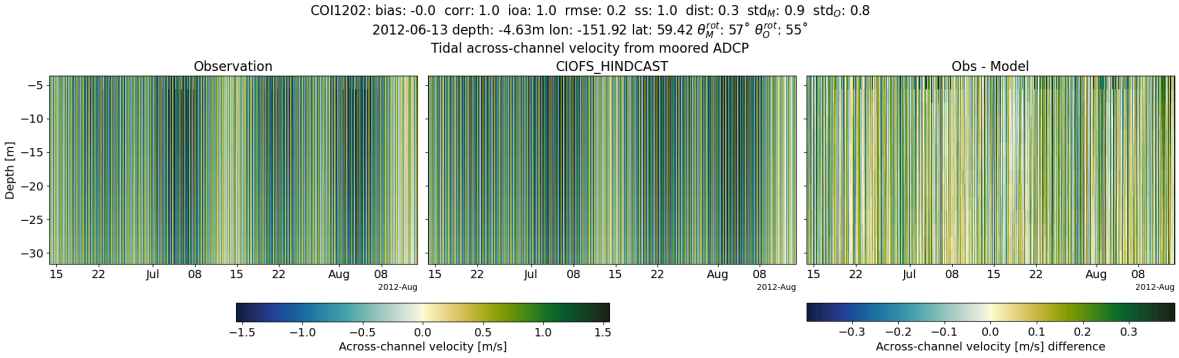


Across-channel velocity

CIOFS_HINDCAST



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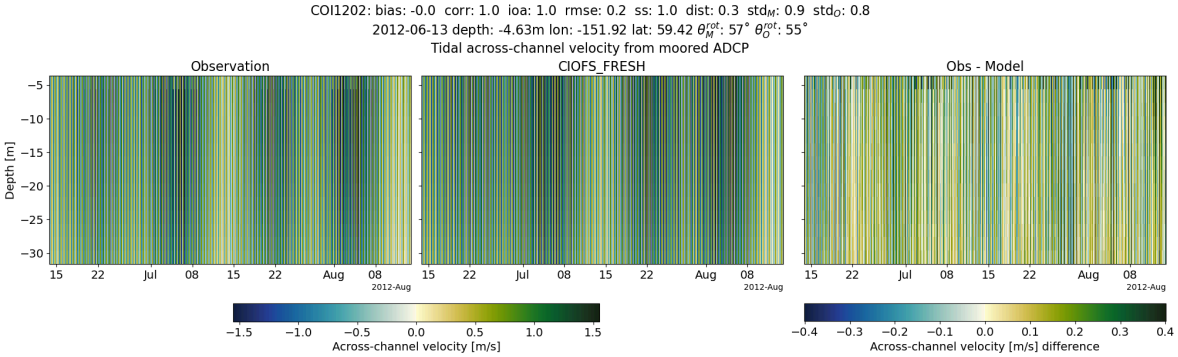
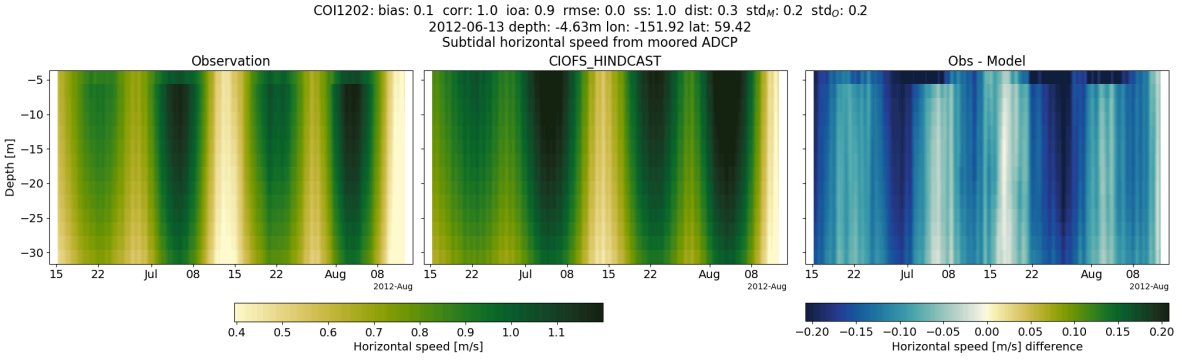


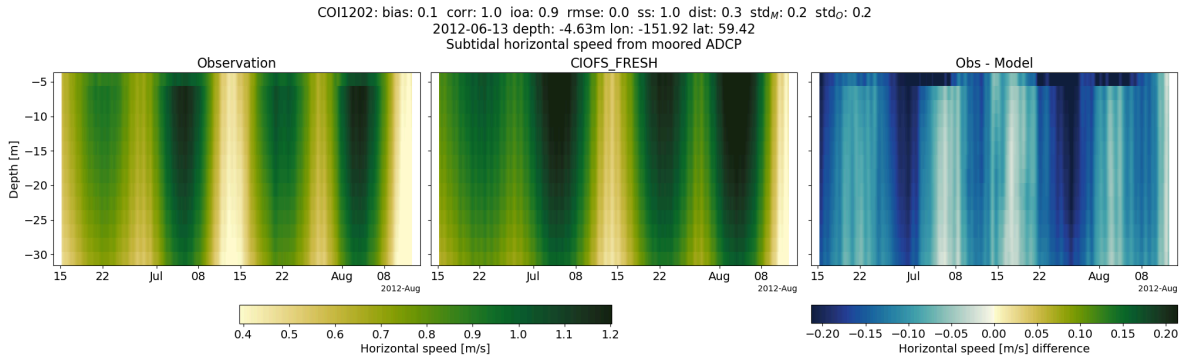
Subtidal

Horizontal speed

CIOFS_HINDCAST

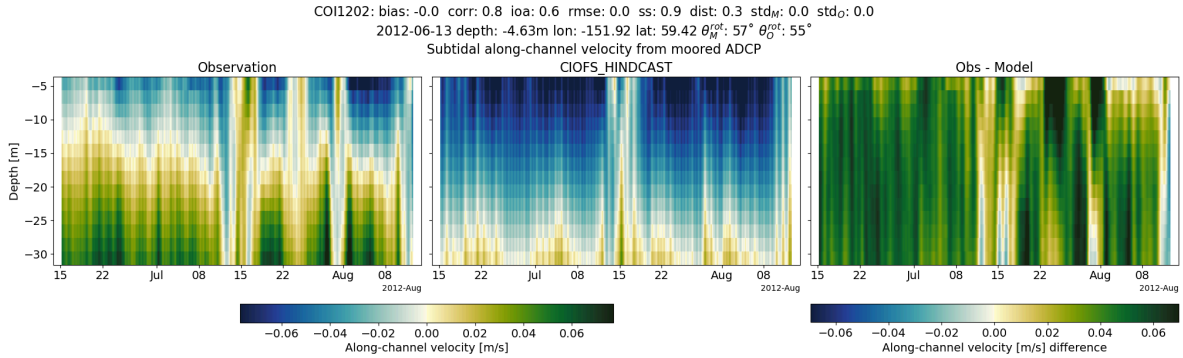


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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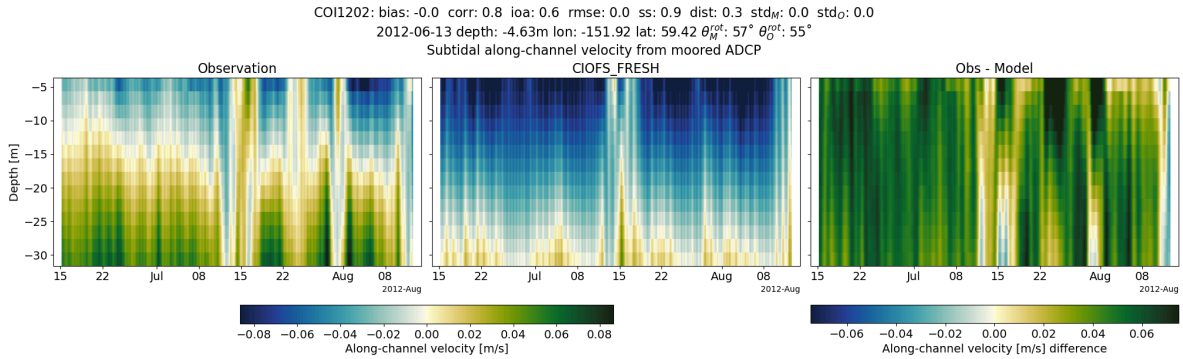
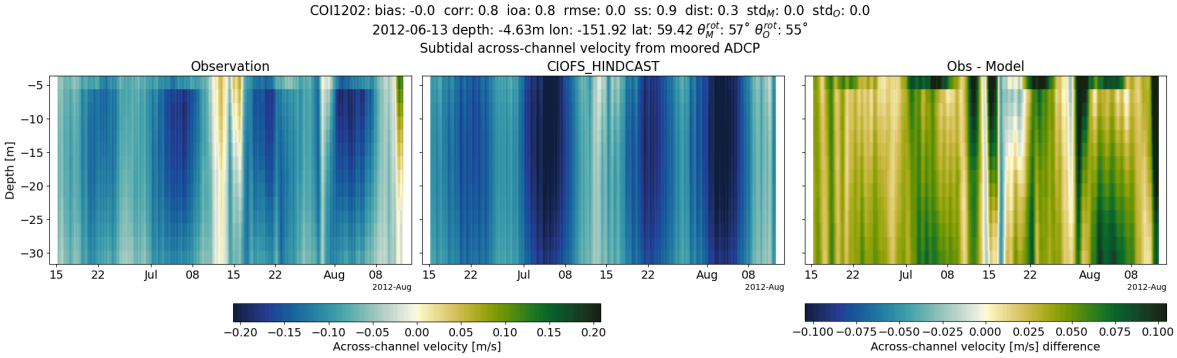
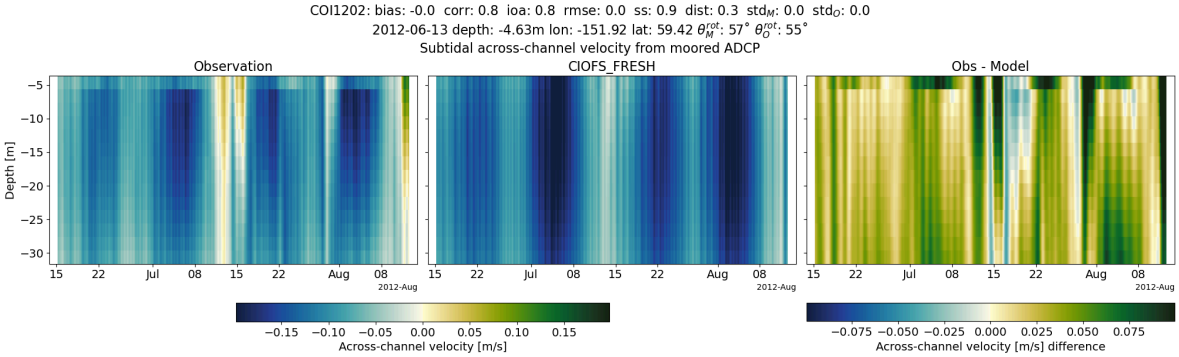


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

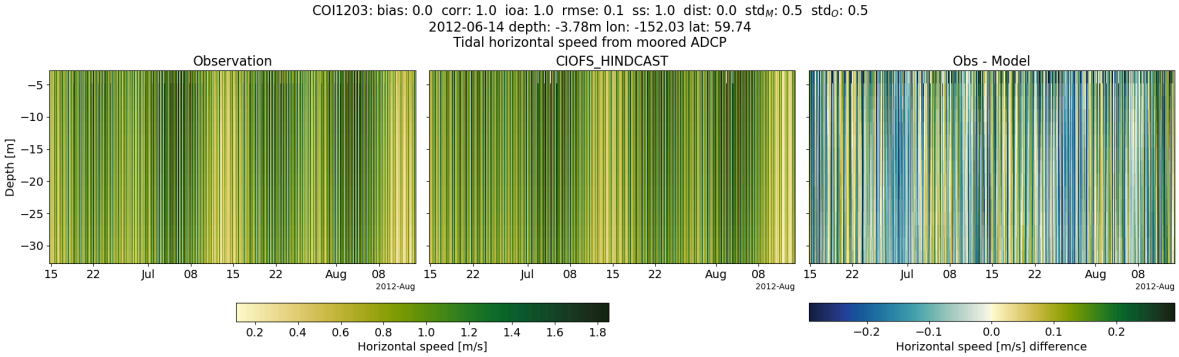


COI1203

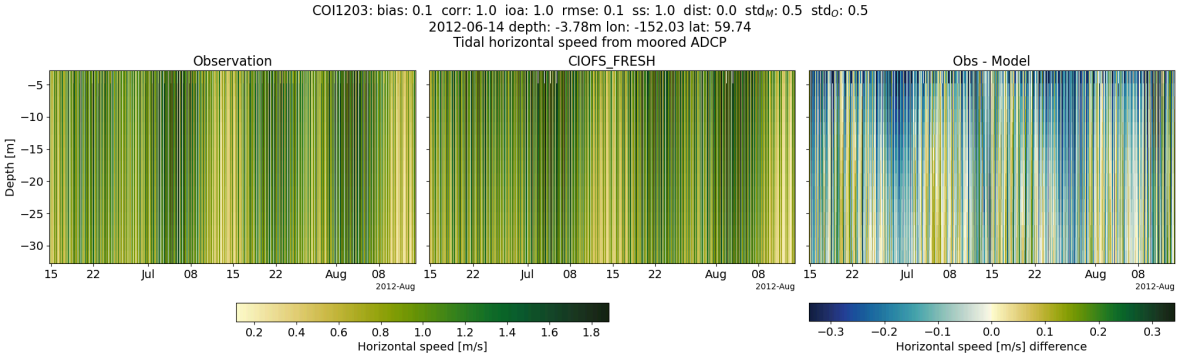
Tidal

Horizontal speed

CIOFS_HINDCAST

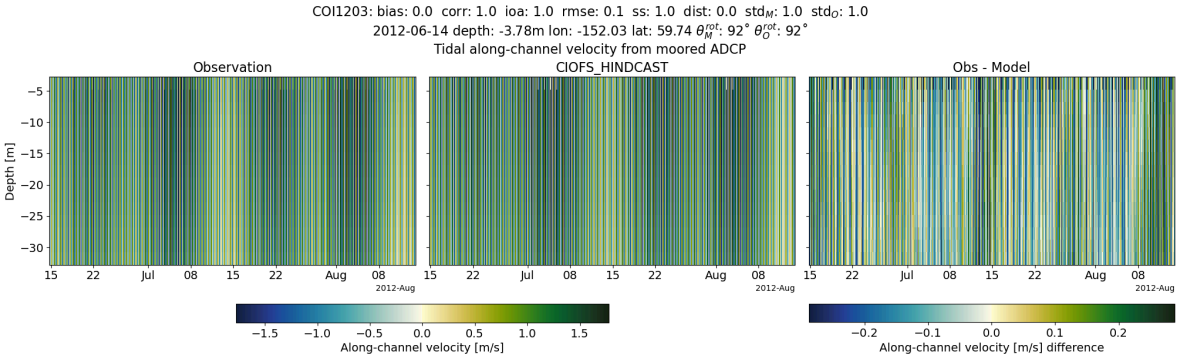


CIOFS_FRESH

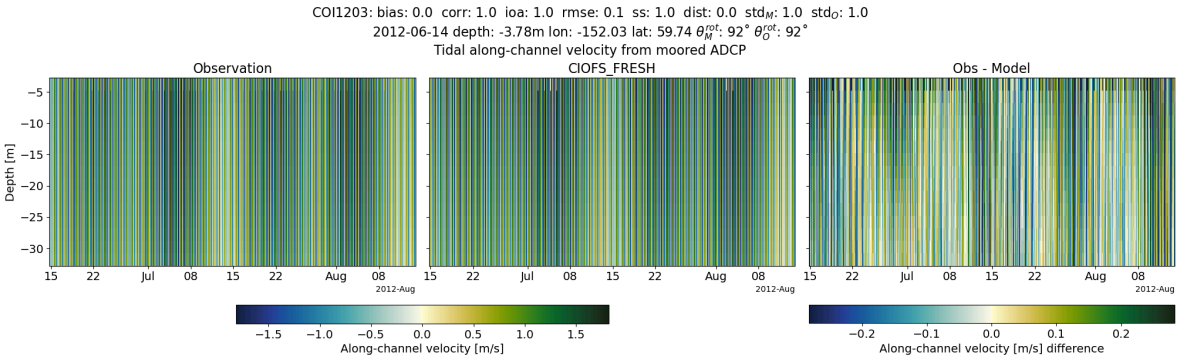


Along-channel velocity

CIOFS_HINDCAST

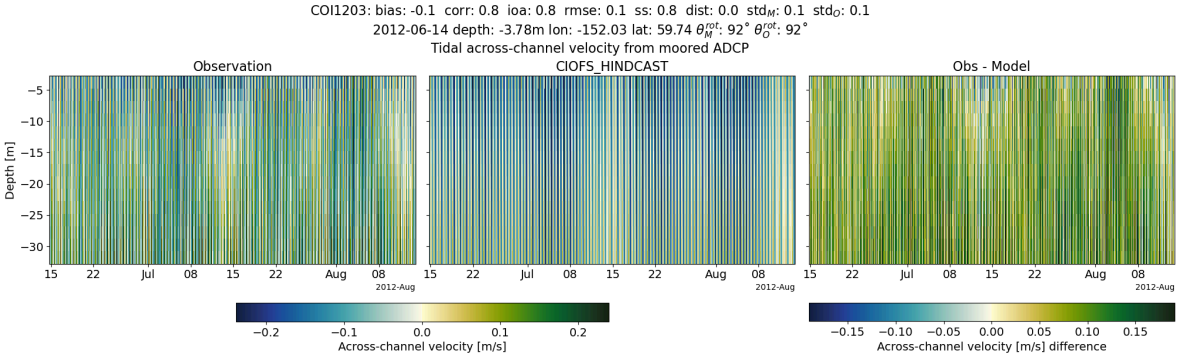


CIOFS_FRESH



Across-channel velocity

CIOFS_HINDCAST



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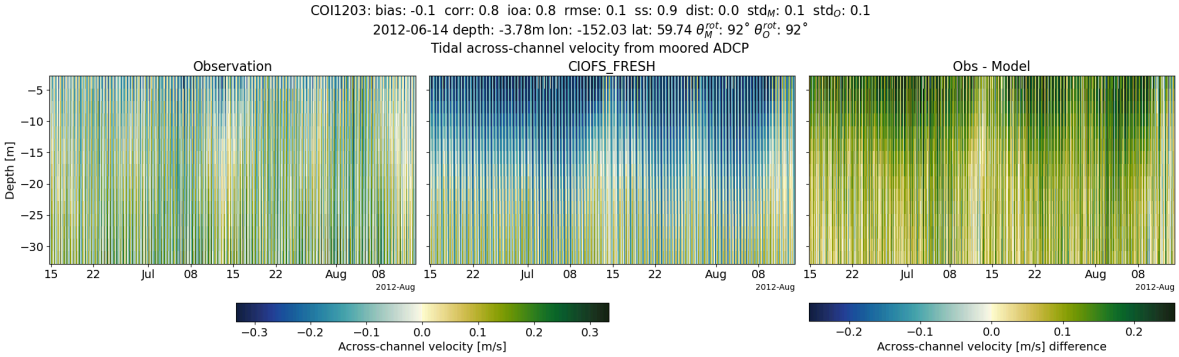
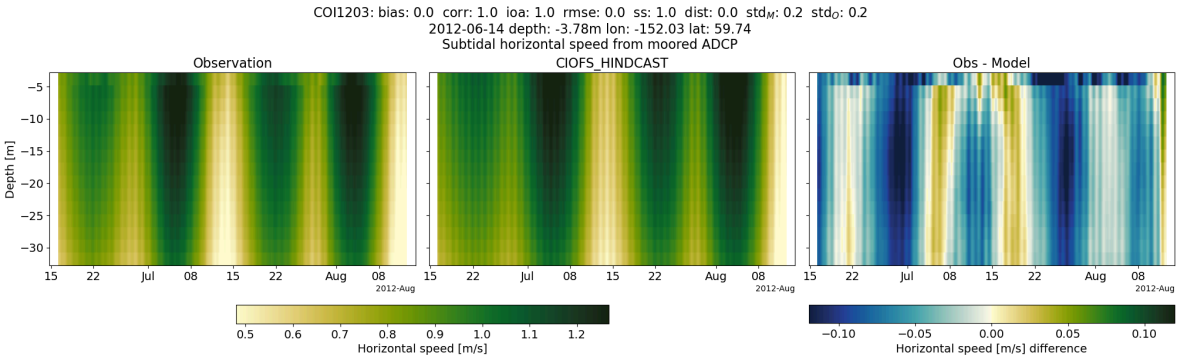


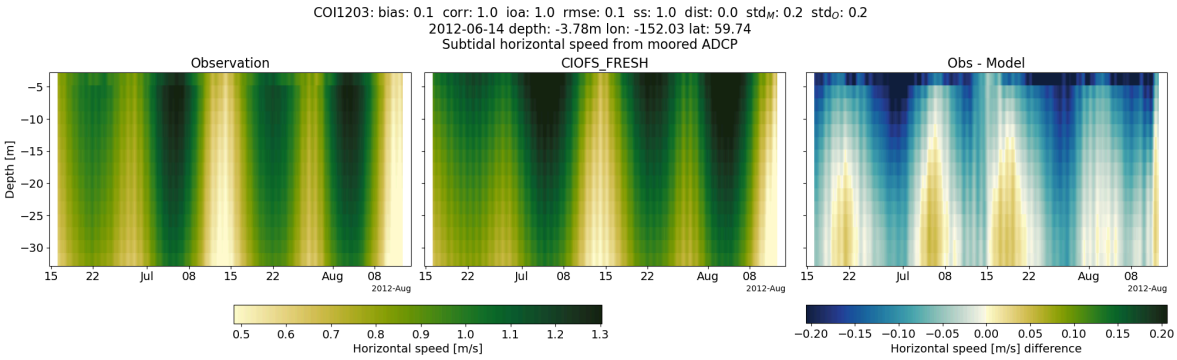
Subtidal

Horizontal speed

CIOFS_HINDCAST

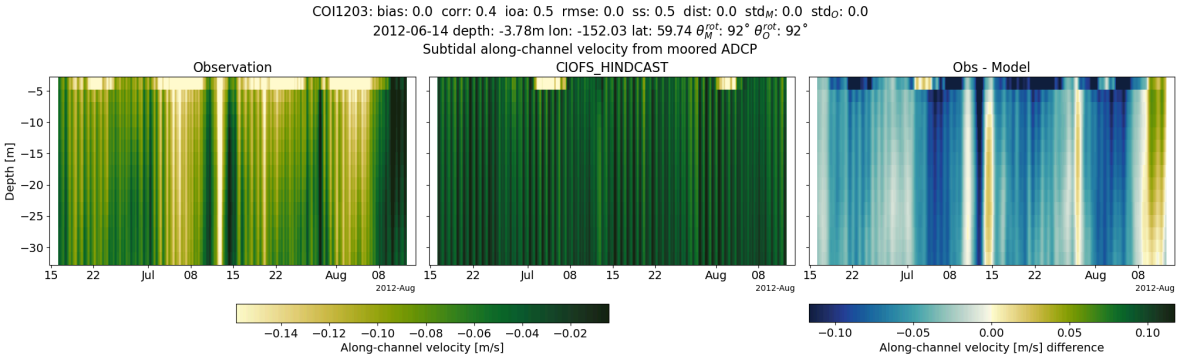


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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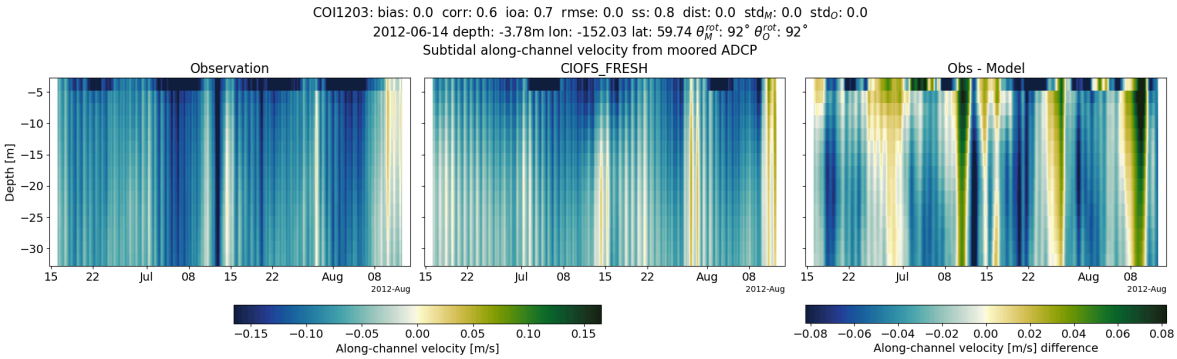
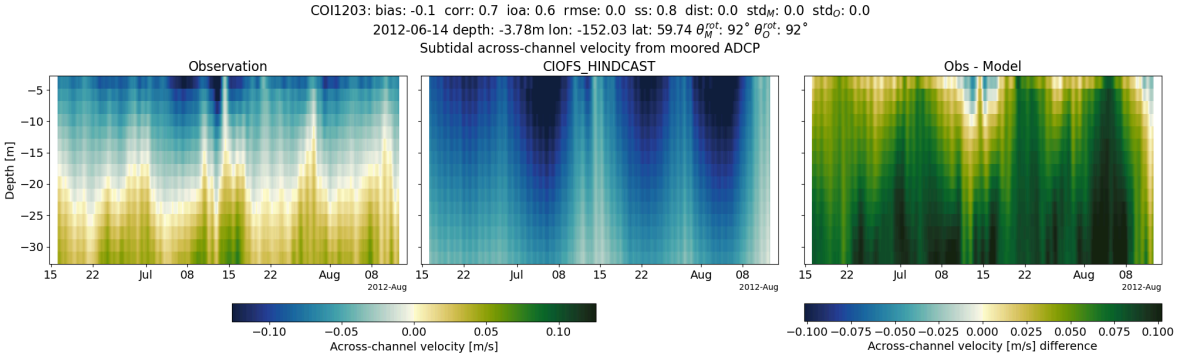


Across-channel velocity

CIOFS_HINDCAST



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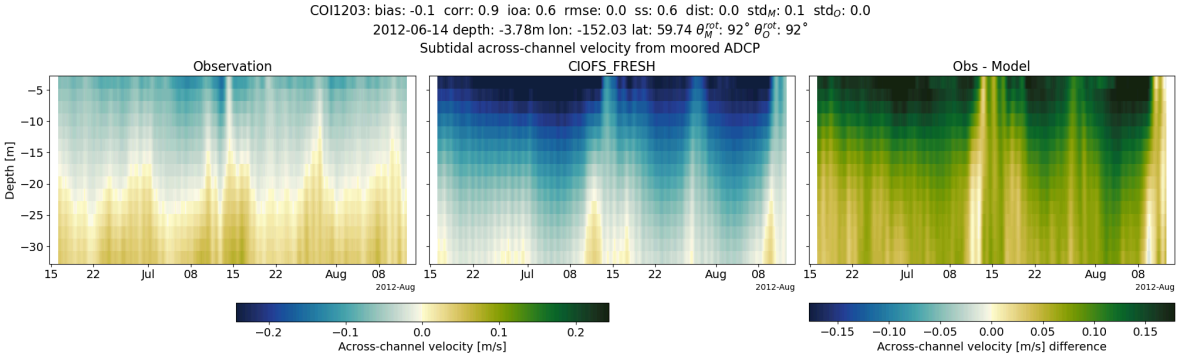
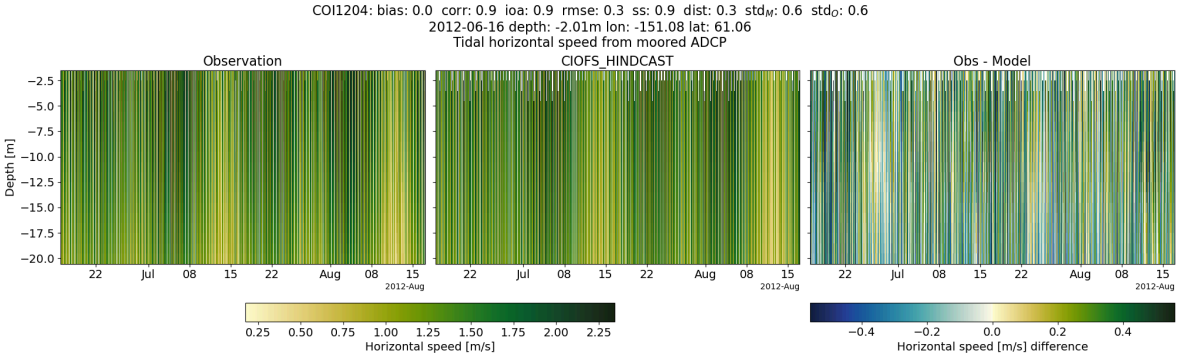


COI1204

Tidal

Horizontal speed

CIOFS_HINDCAST



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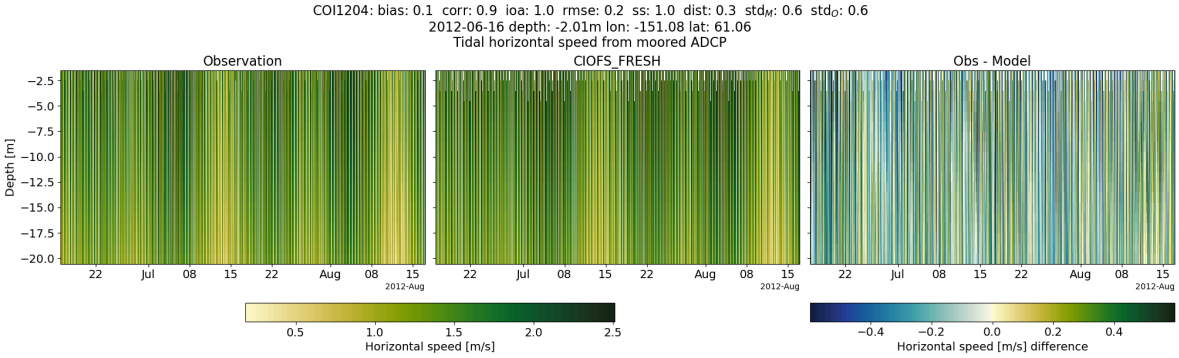
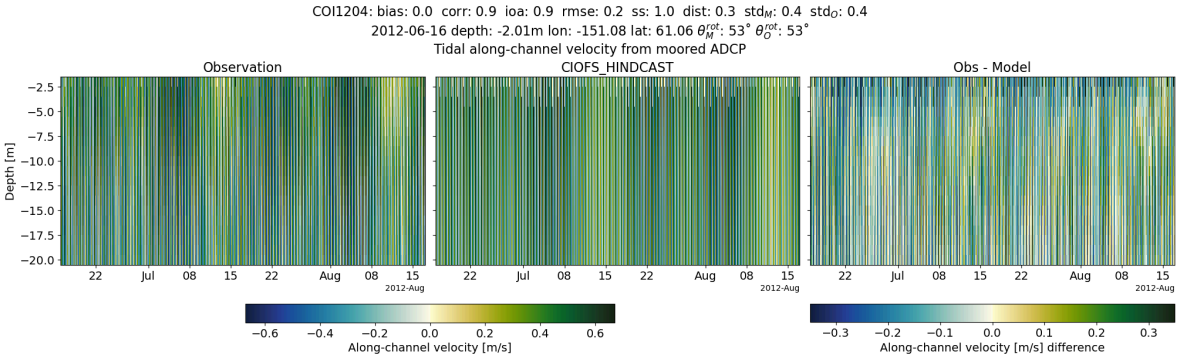


Along-channel velocity

CIOFS_HINDCAST



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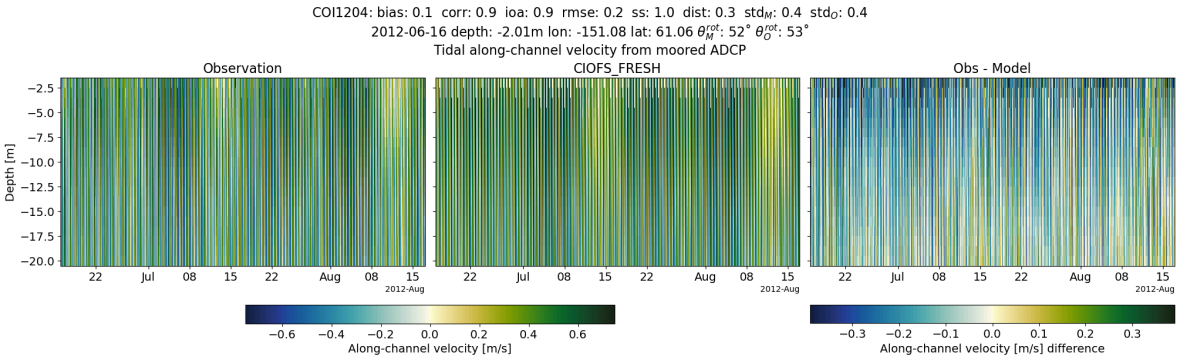
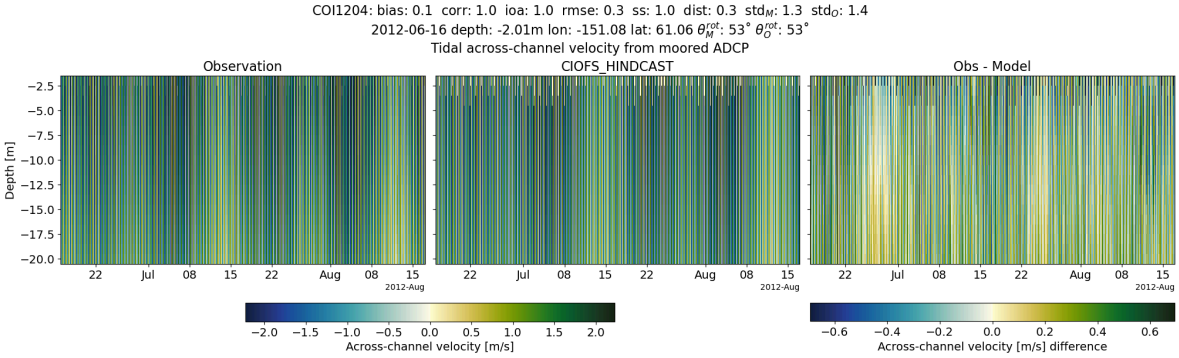


Across-channel velocity

CIOFS_HINDCAST



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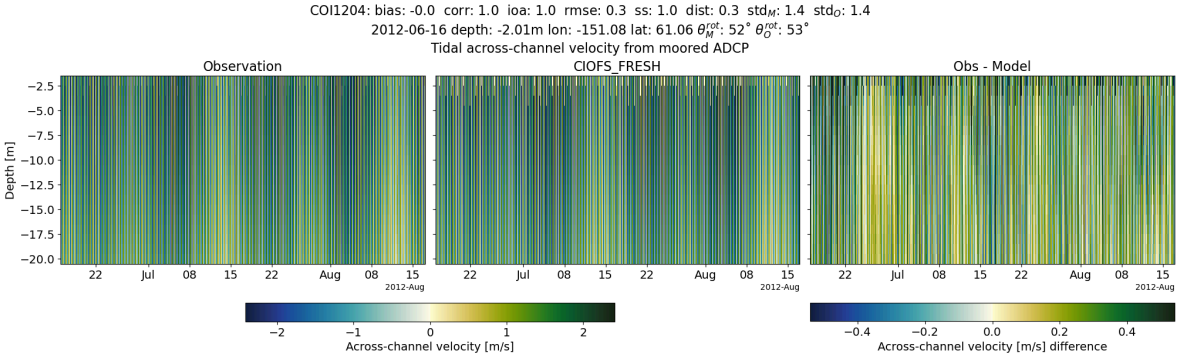
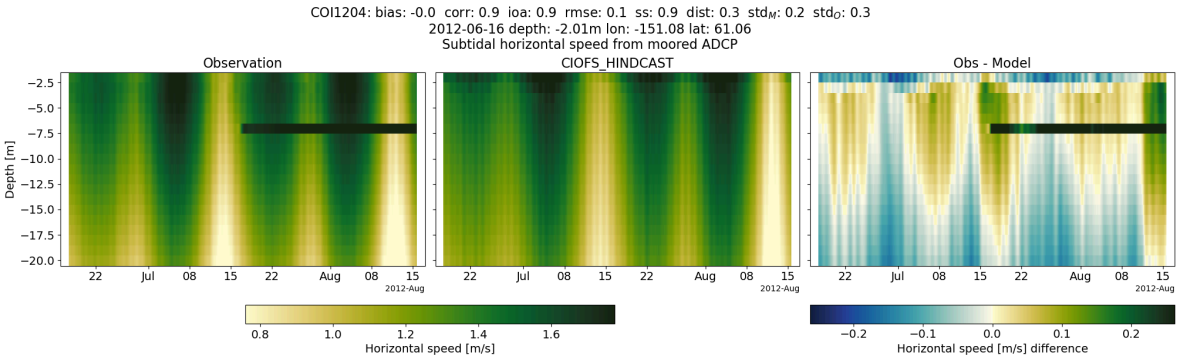


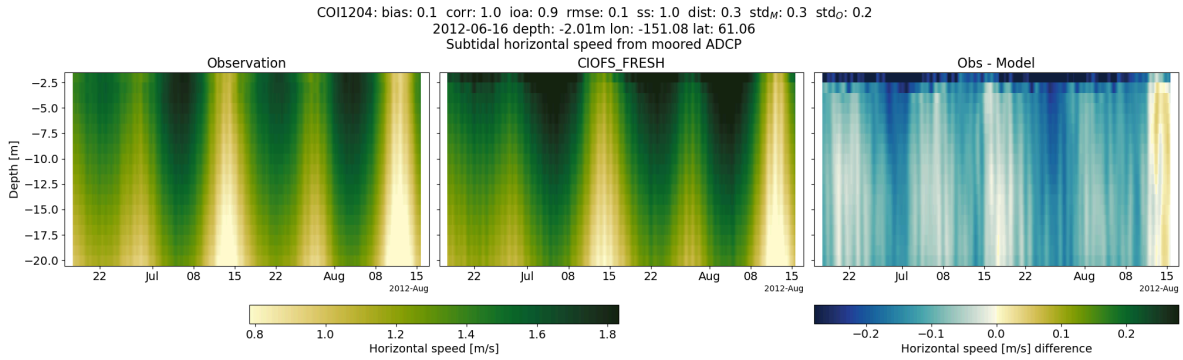
Subtidal

Horizontal speed

CIOFS_HINDCAST

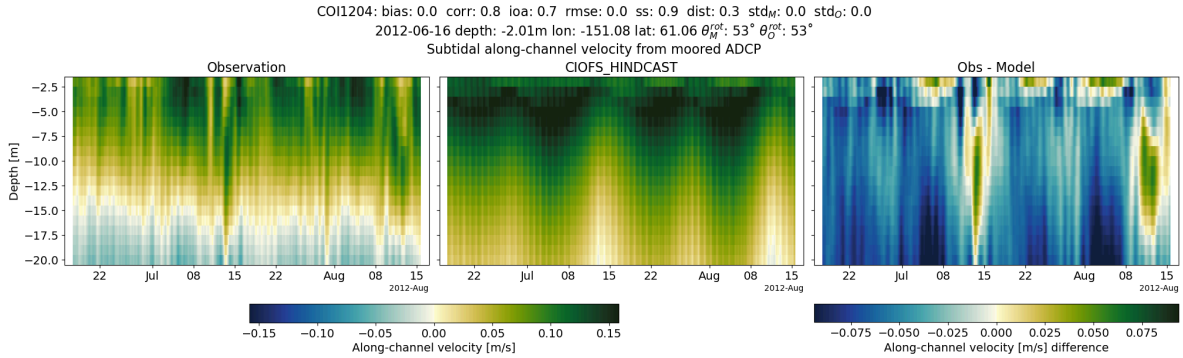


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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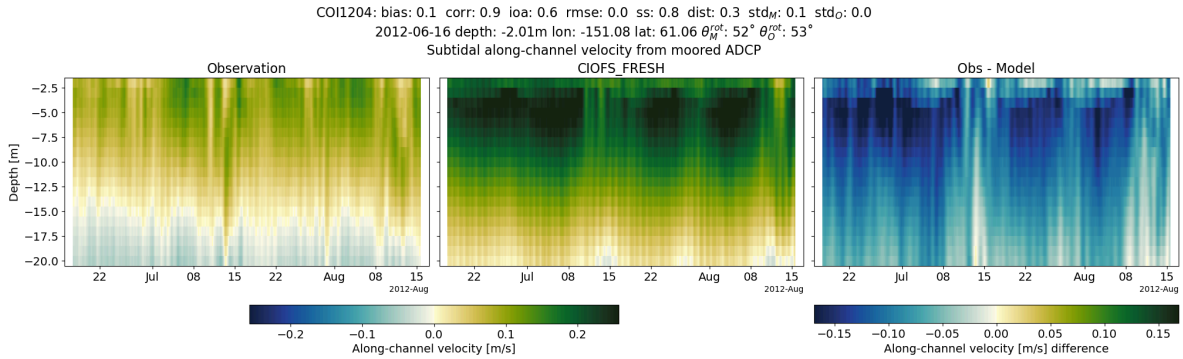
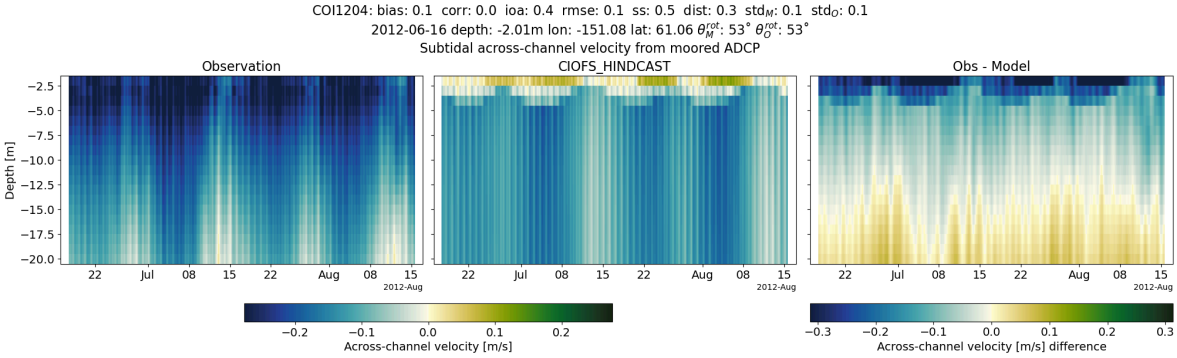


Across-channel velocity

CIOFS_HINDCAST



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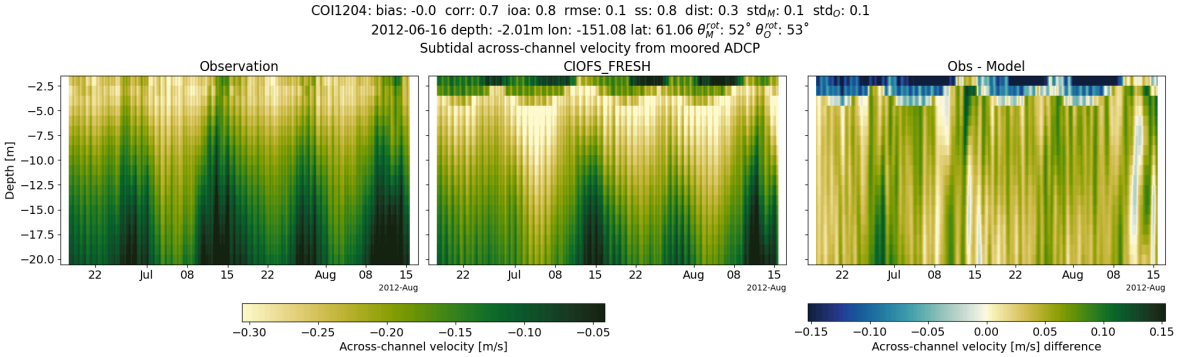
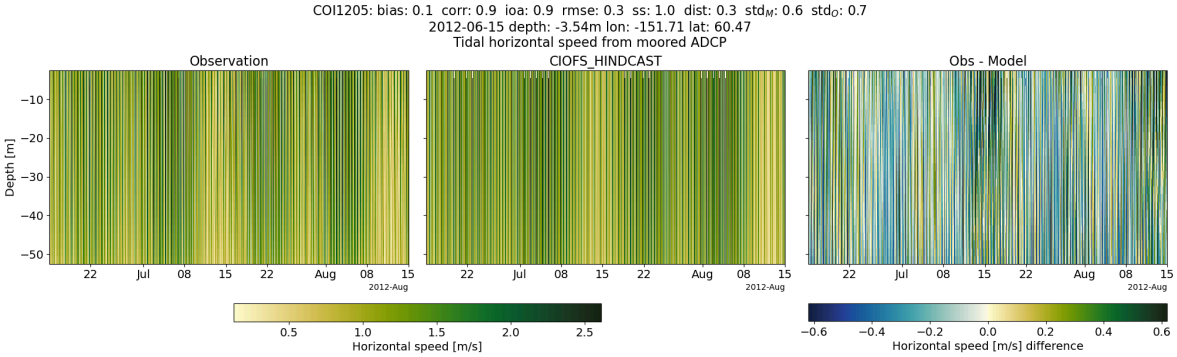


COI1205

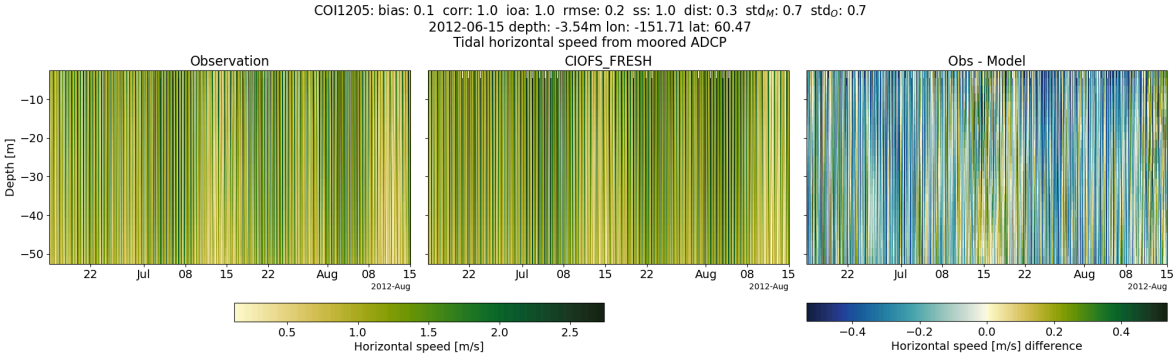
Tidal

Horizontal speed

CIOFS_HINDCAST

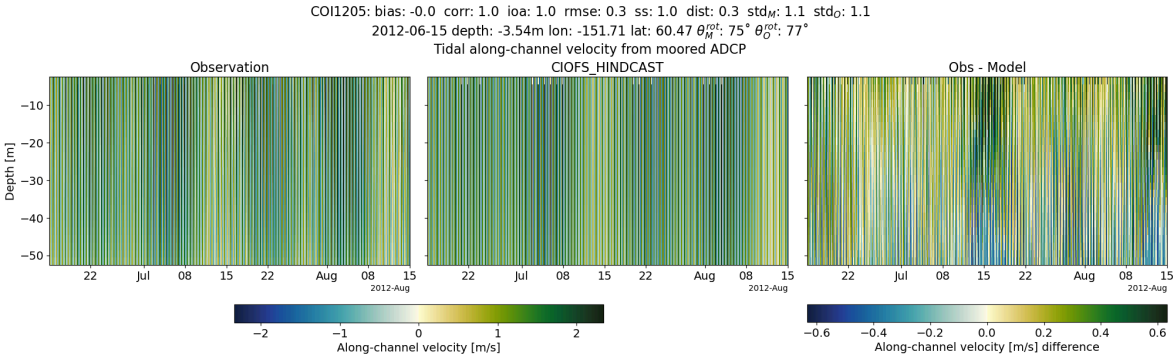


CIOFS_FRESH



Along-channel velocity

CIOFS_HINDCAST



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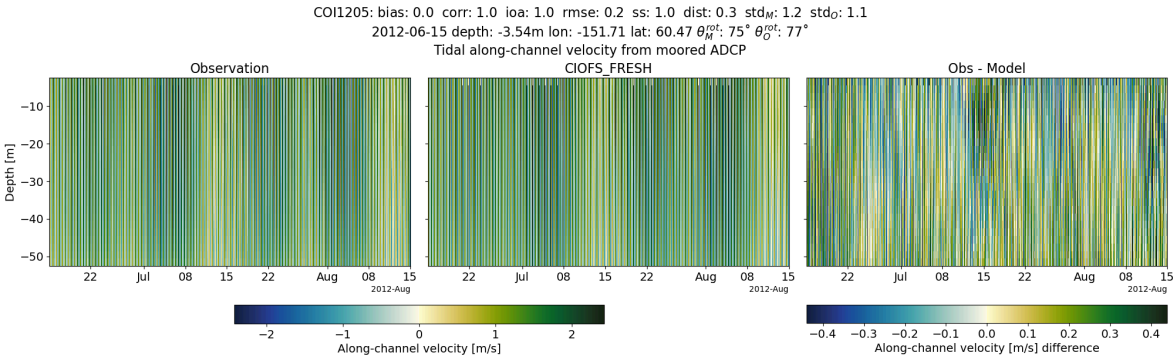
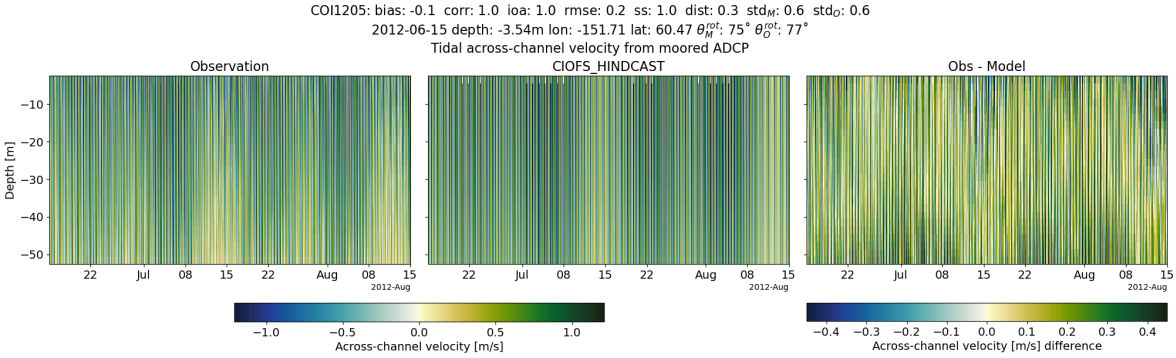


Across-channel velocity

CIOFS_HINDCAST



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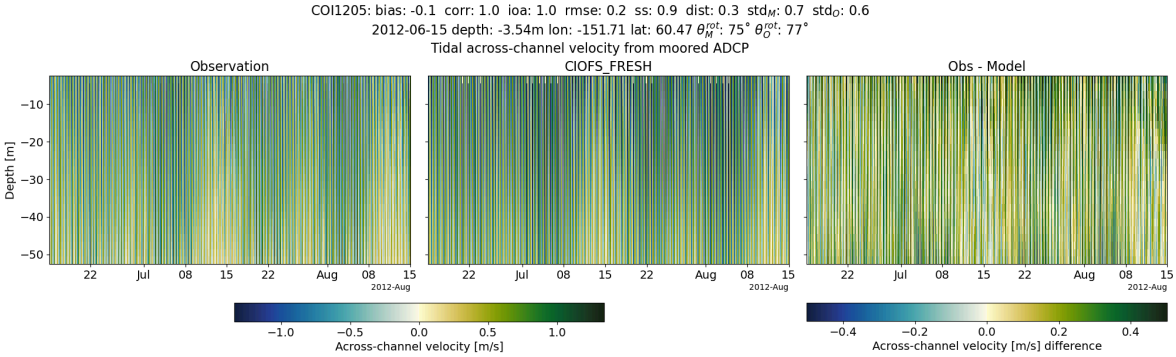
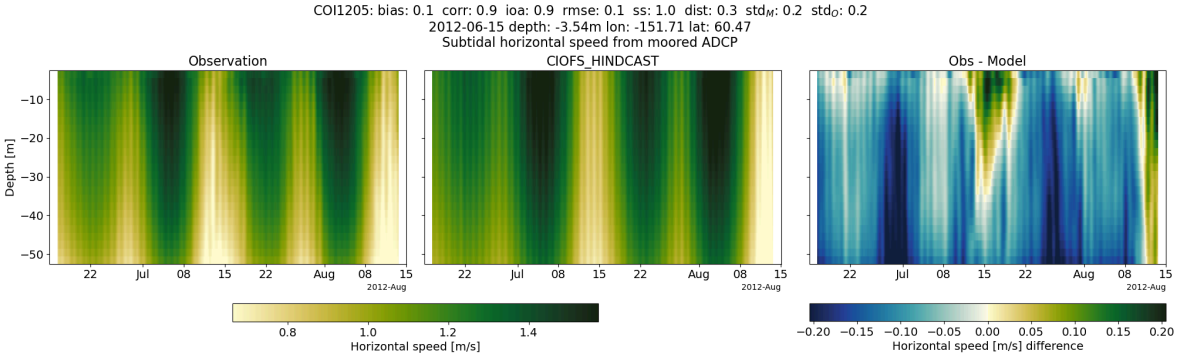


Subtidal

Horizontal speed

CIOFS_HINDCAST



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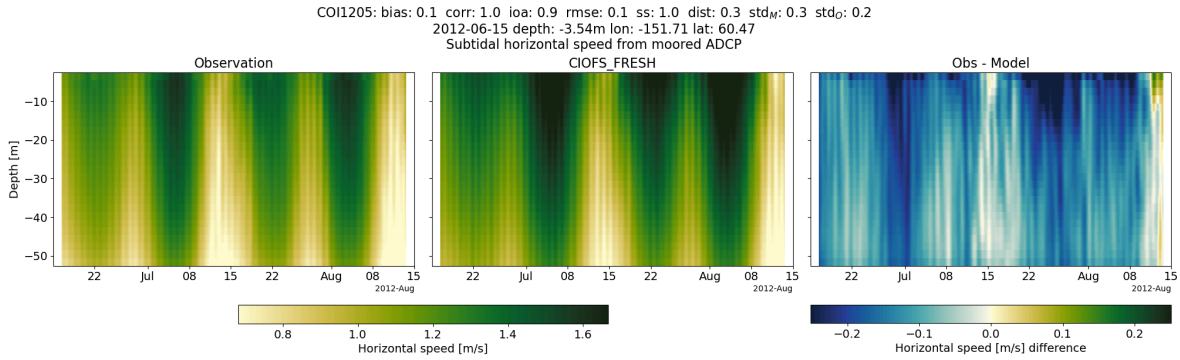
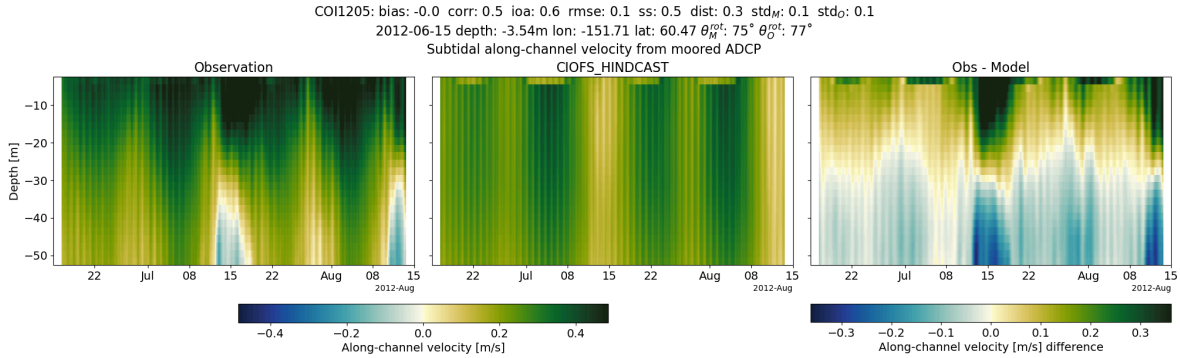
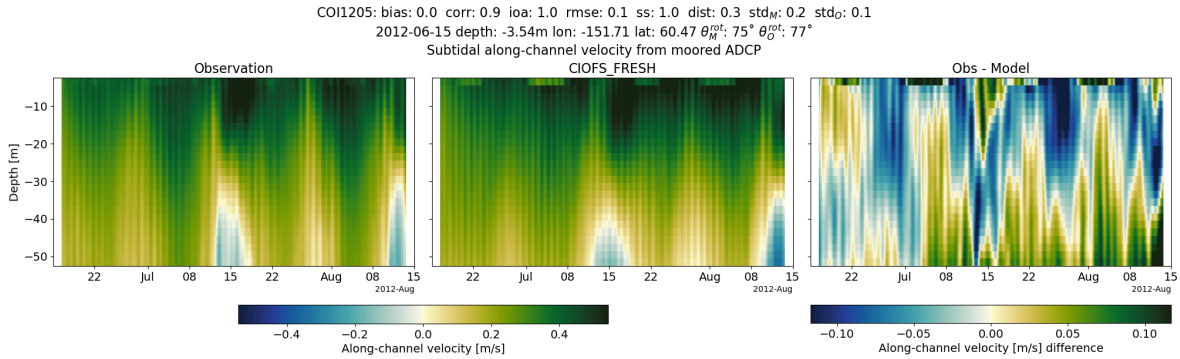


Along-channel velocity

CIOFS_HINDCAST

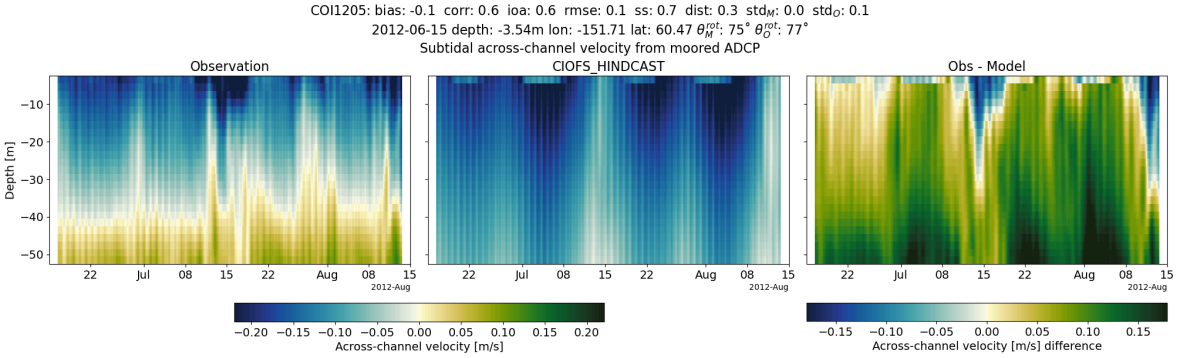


CIOFS_FRESH

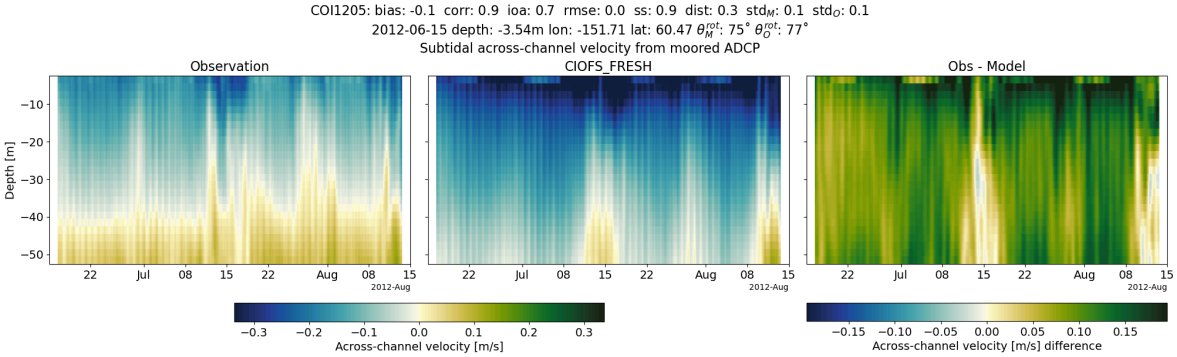


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

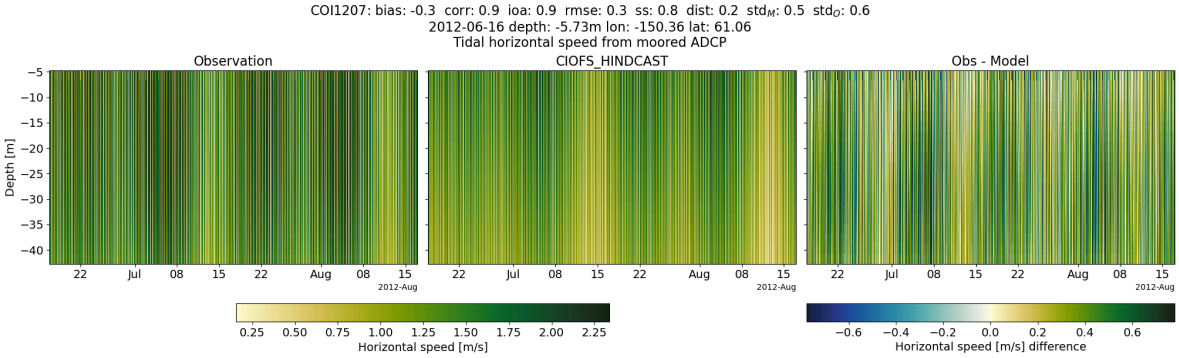


COI1207

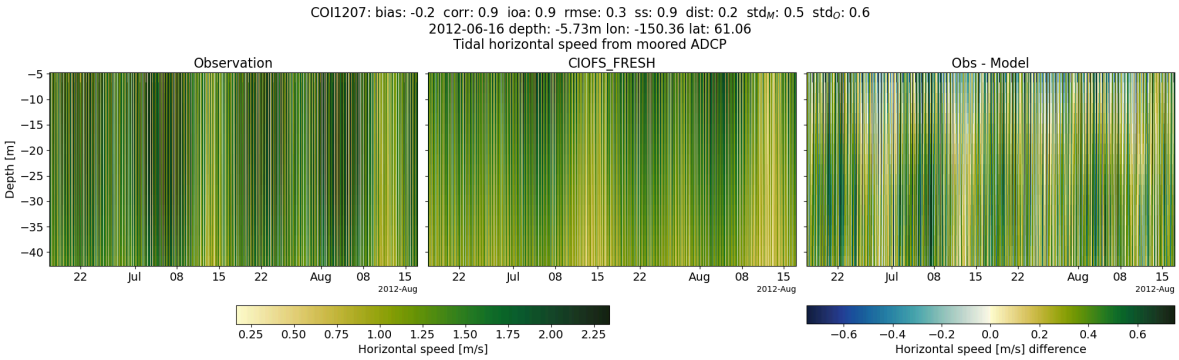
Tidal

Horizontal speed

CIOFS_HINDCAST

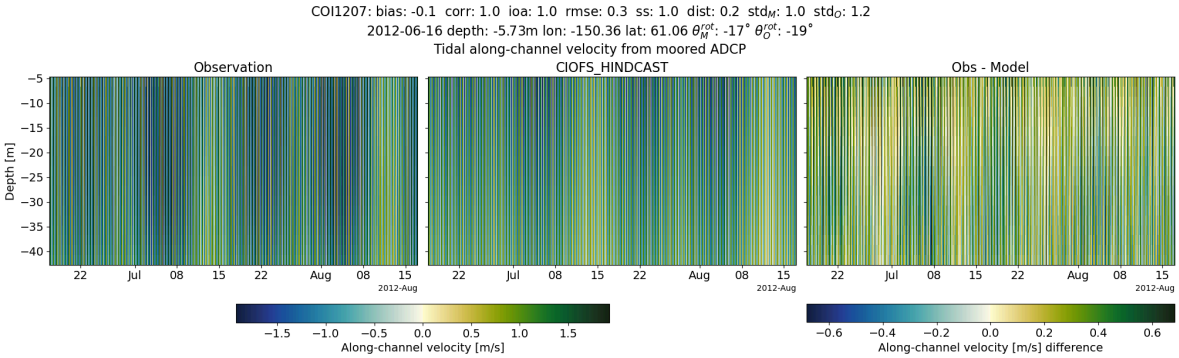


CIOFS_FRESH

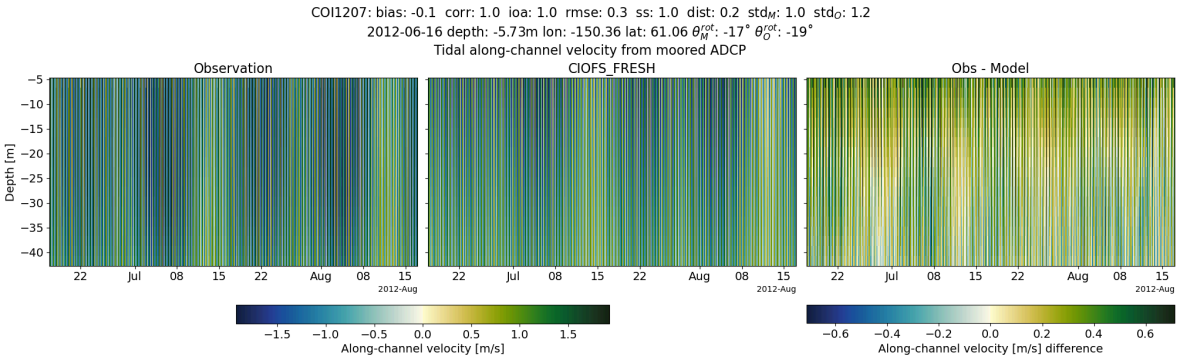


Along-channel velocity

CIOFS_HINDCAST

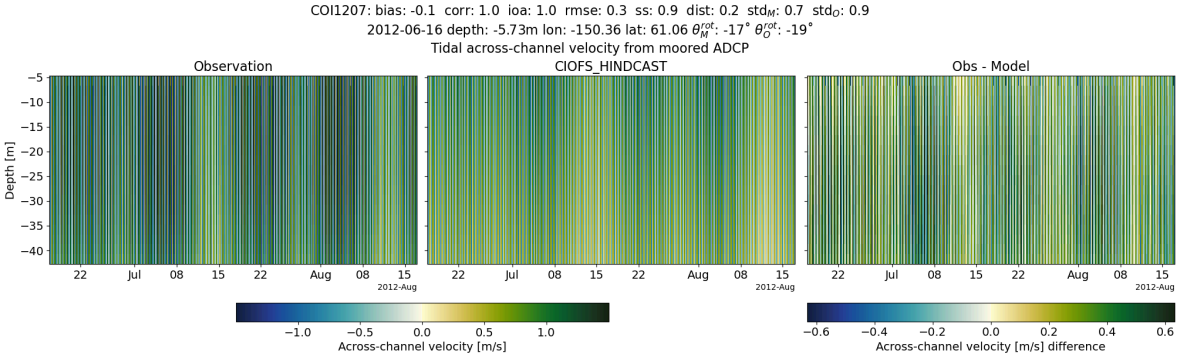


CIOFS_FRESH

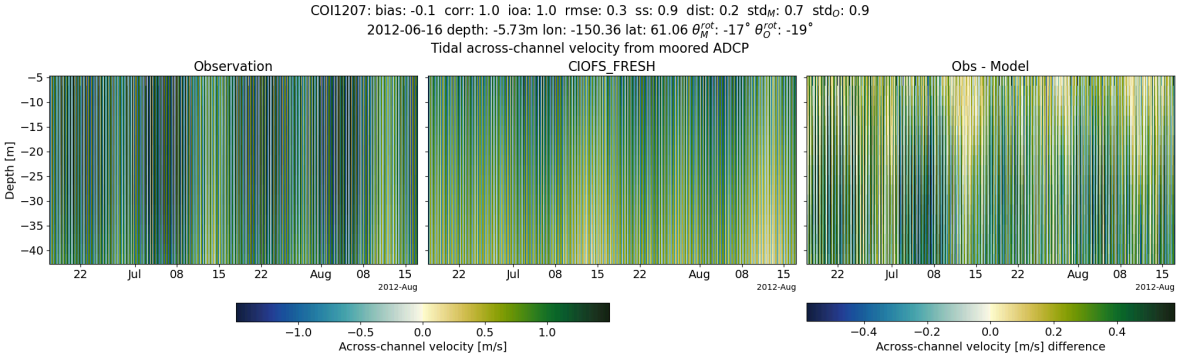


Across-channel velocity

CIOFS_HINDCAST



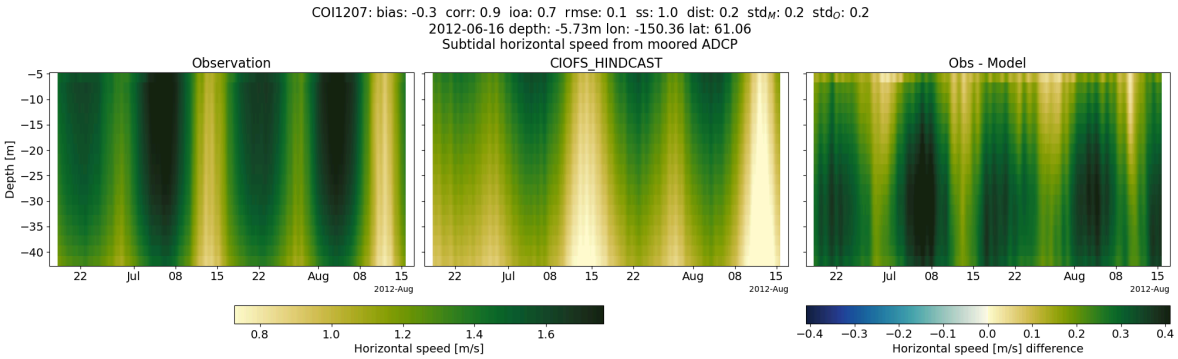
CIOFS_FRESH



Subtidal

Horizontal speed

CIOFS_HINDCAST



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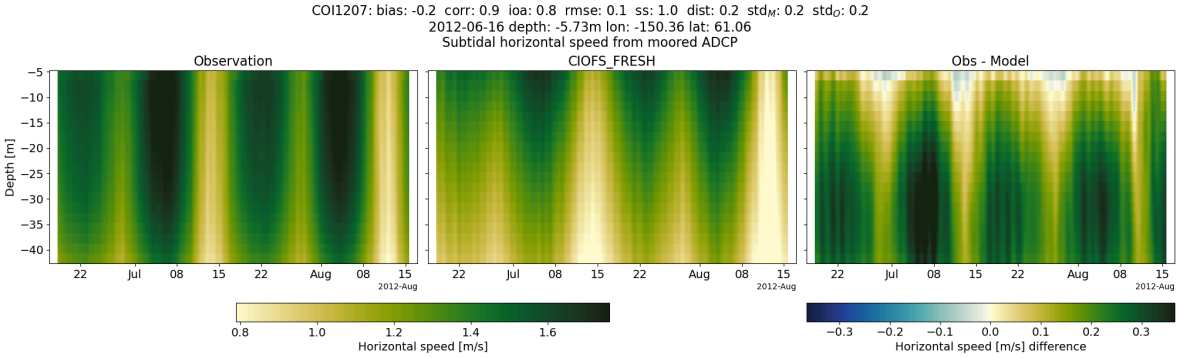
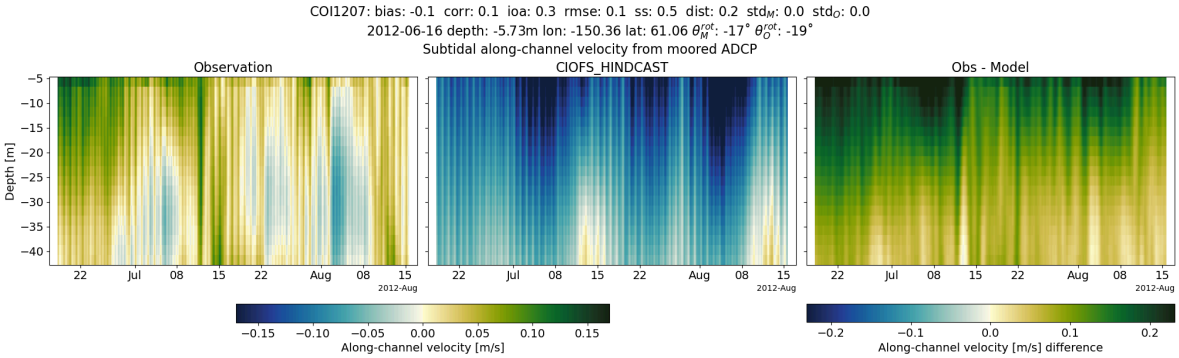
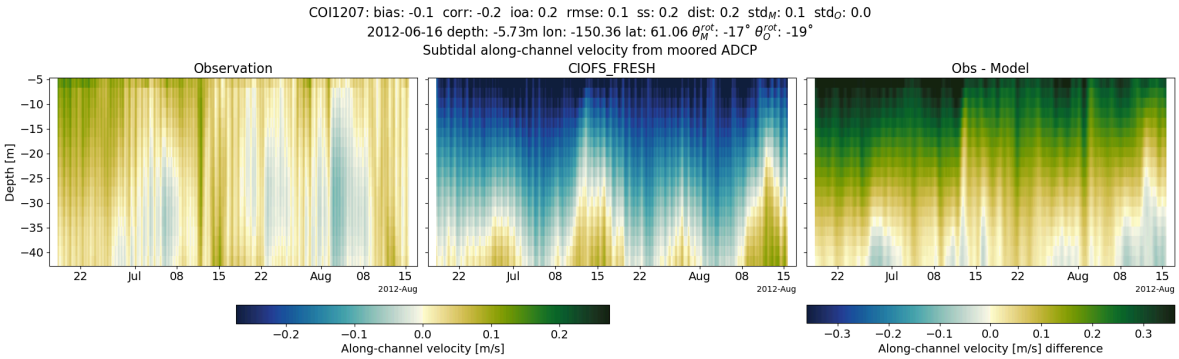


Along-channel velocity

CIOFS_HINDCAST

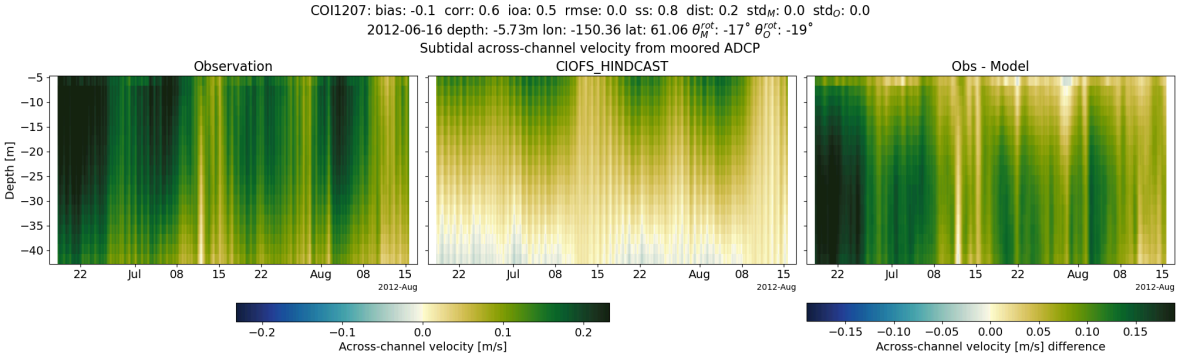


CIOFS_FRESH

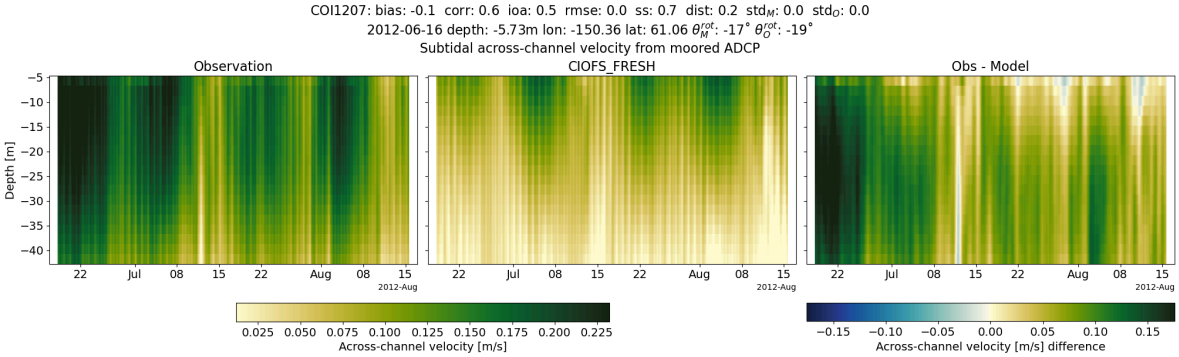


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

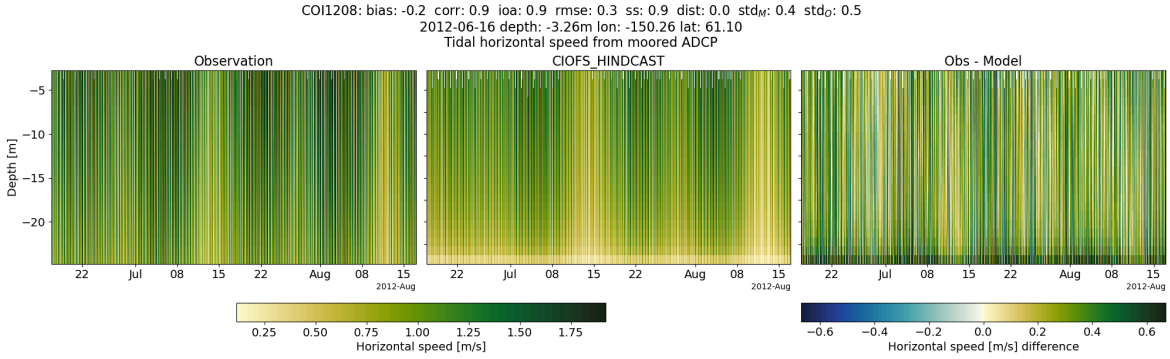


COI1208

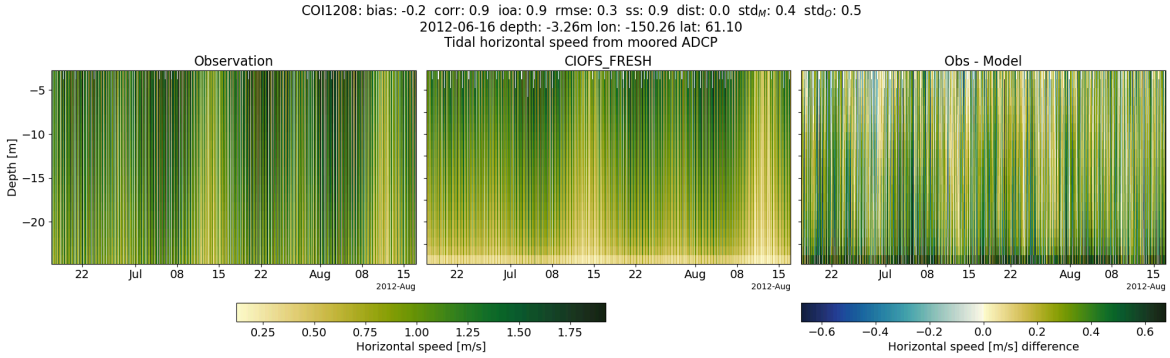
Tidal

Horizontal speed

CIOFS_HINDCAST

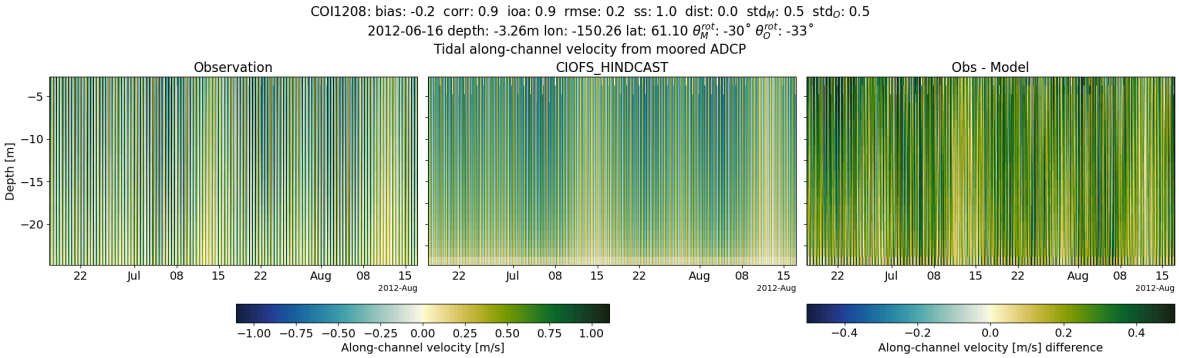


CIOFS_FRESH

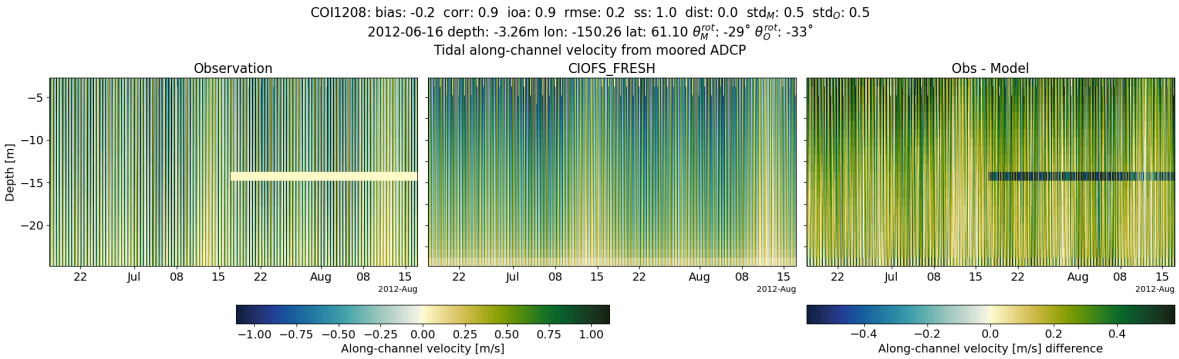


Along-channel velocity

CIOFS_HINDCAST

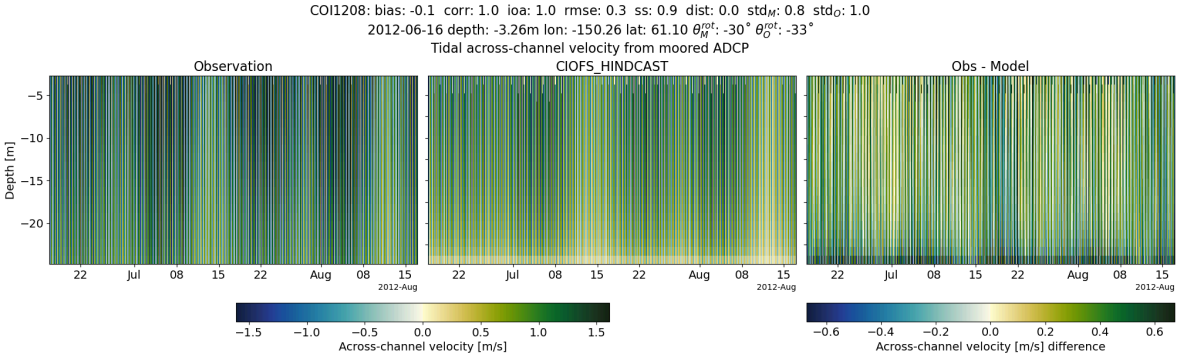


CIOFS_FRESH

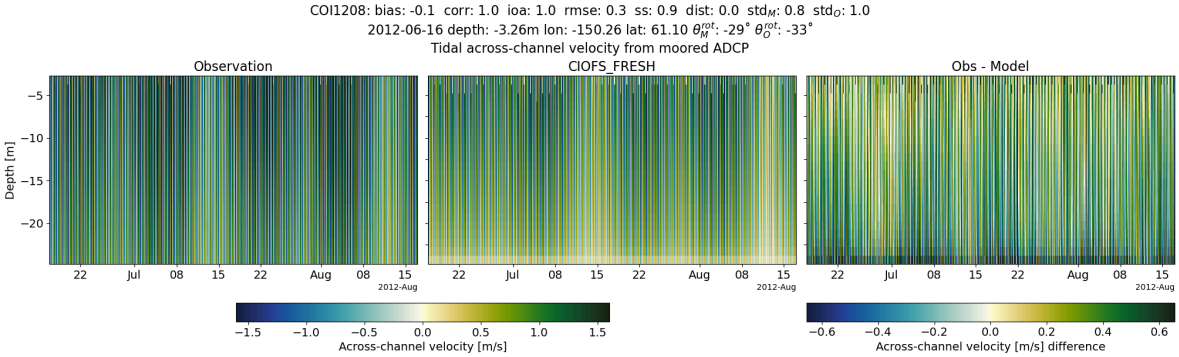


Across-channel velocity

CIOFS_HINDCAST



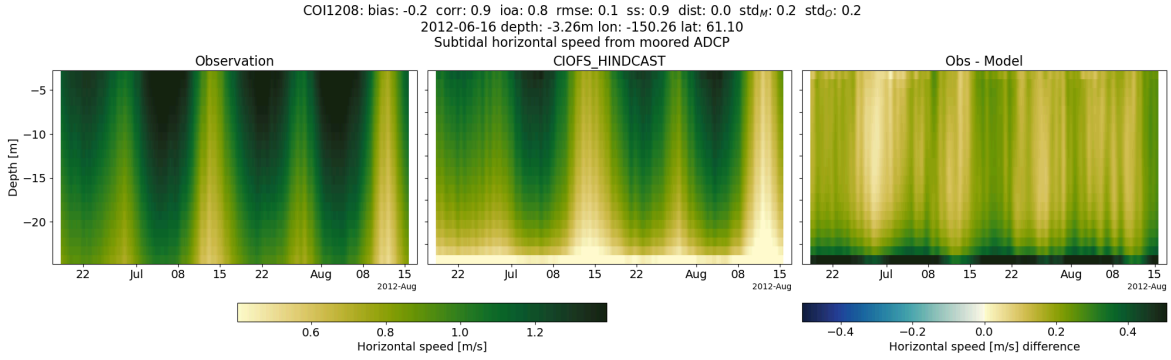
CIOFS_FRESH



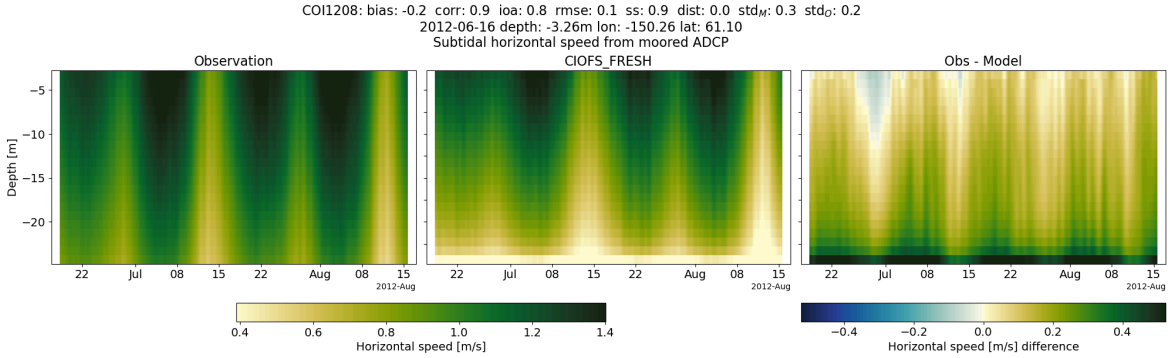
Subtidal

Horizontal speed

CIOFS_HINDCAST

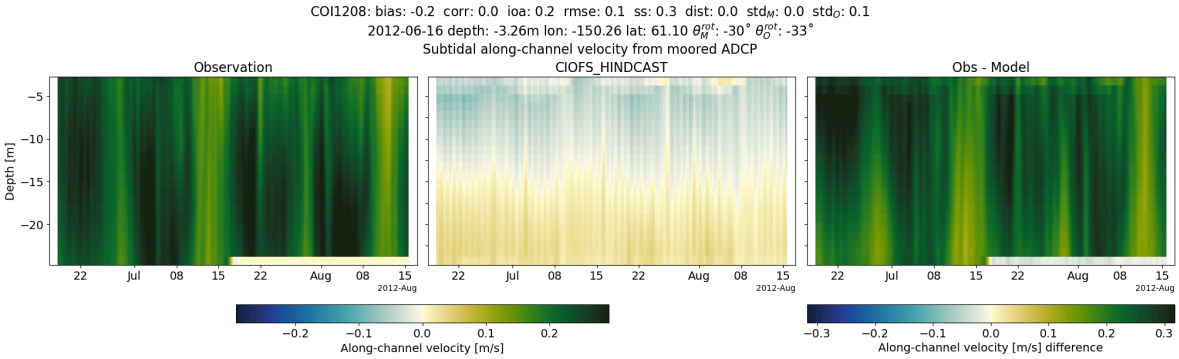


CIOFS_FRESH

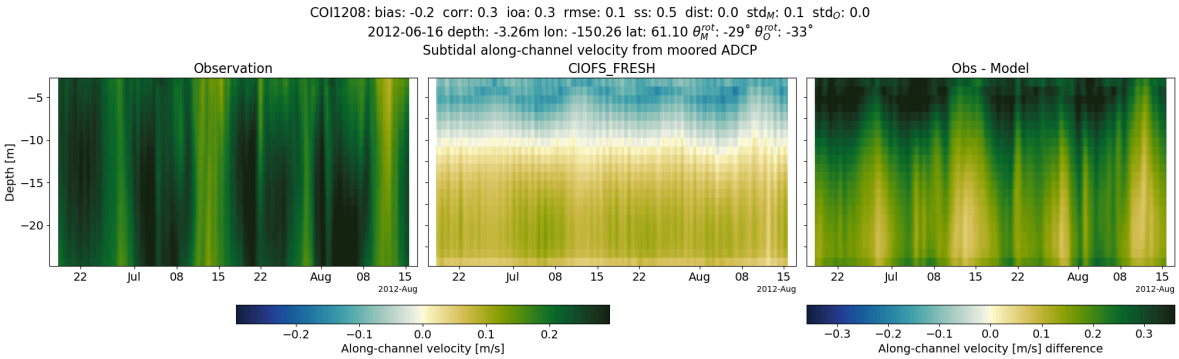


Along-channel velocity

CIOFS_HINDCAST

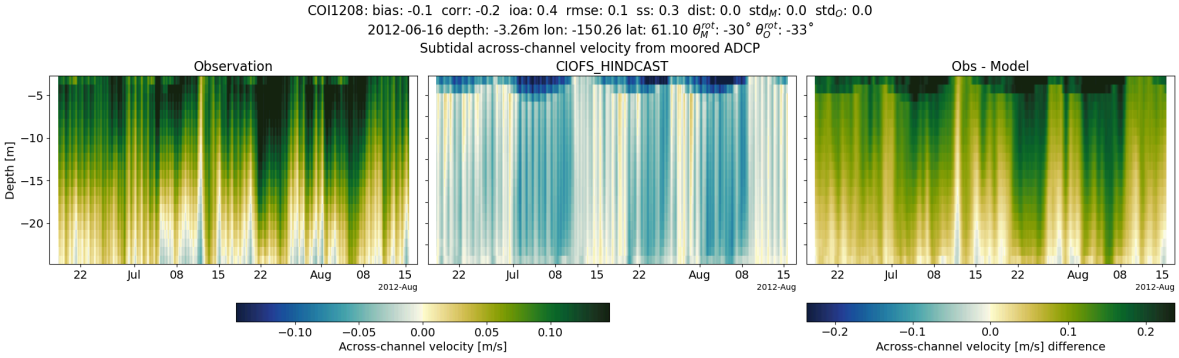


CIOFS_FRESH

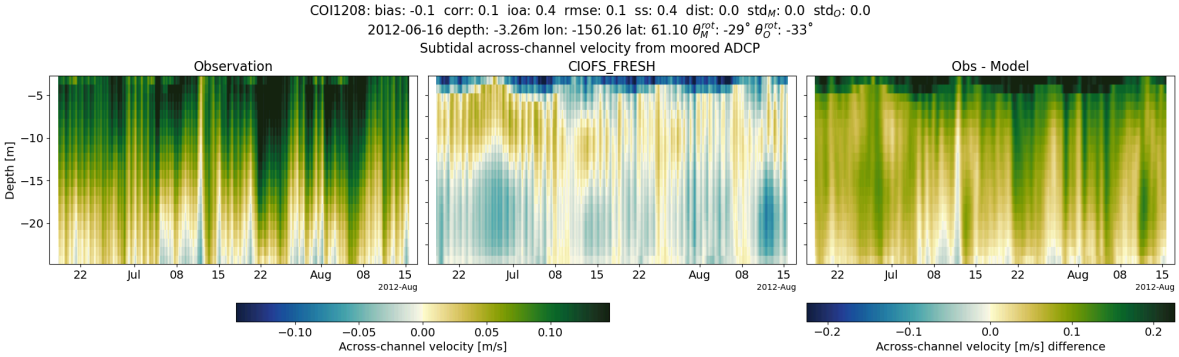


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

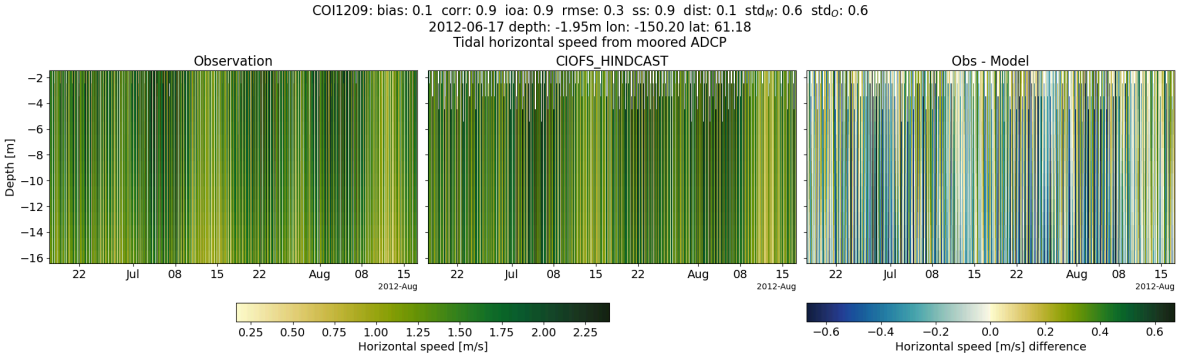


COI1209

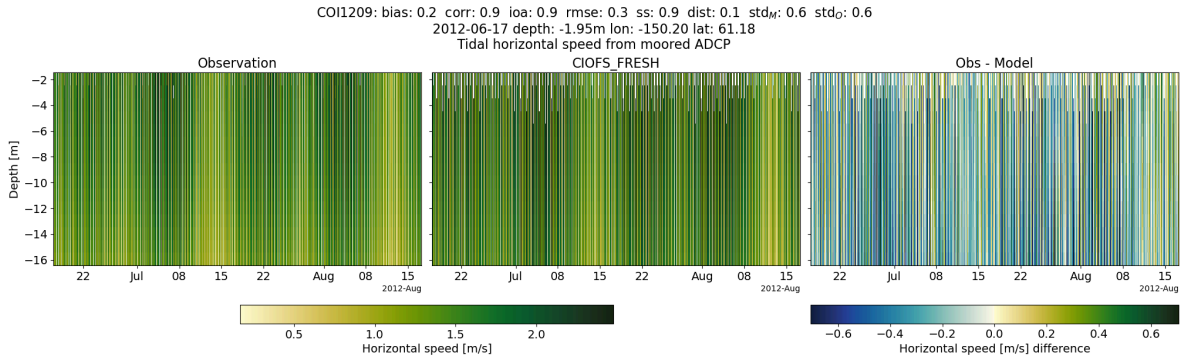
Tidal

Horizontal speed

CIOFS_HINDCAST

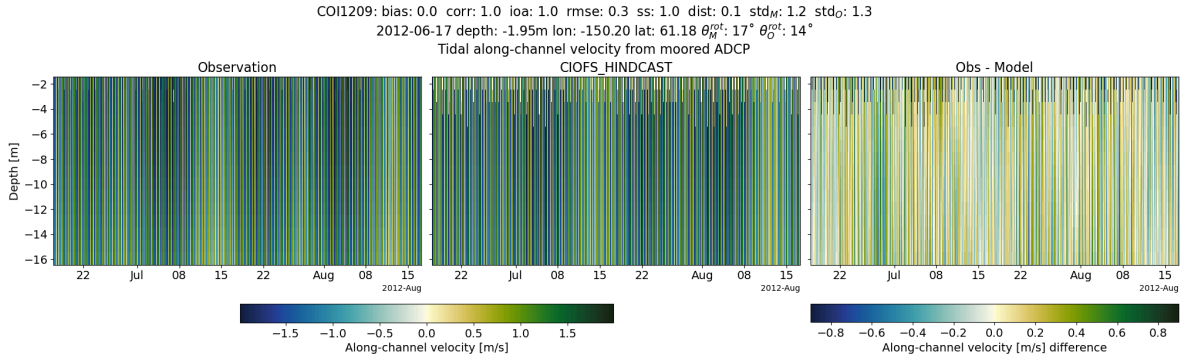


CIOFS_FRESH

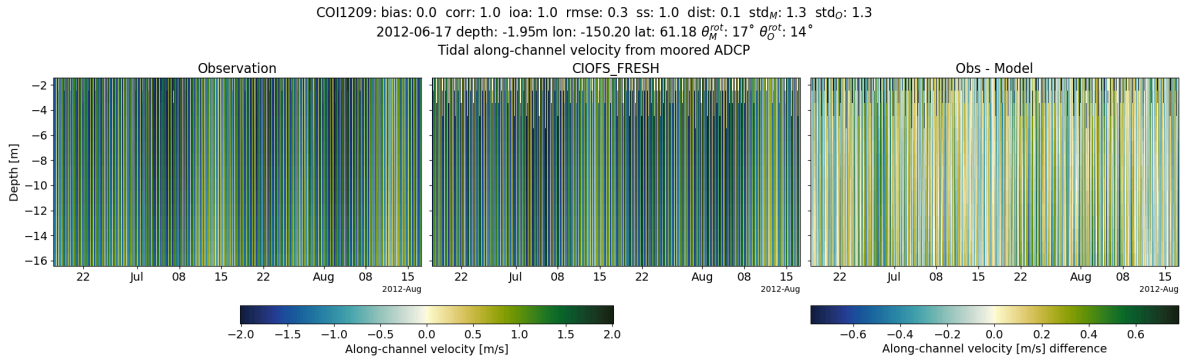


Along-channel velocity

CIOFS_HINDCAST

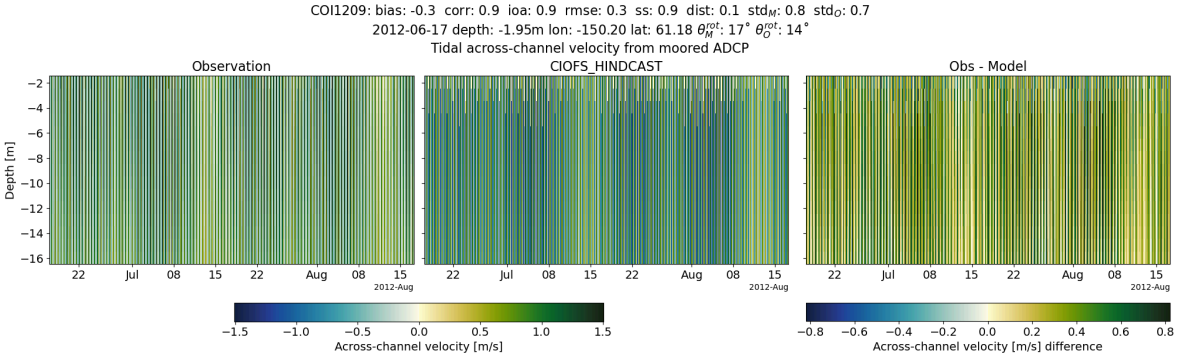


CIOFS_FRESH

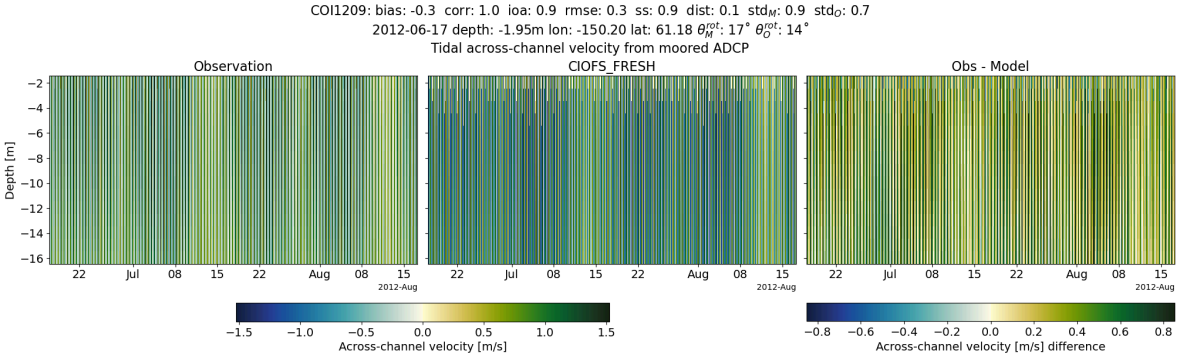


Across-channel velocity

CIOFS_HINDCAST



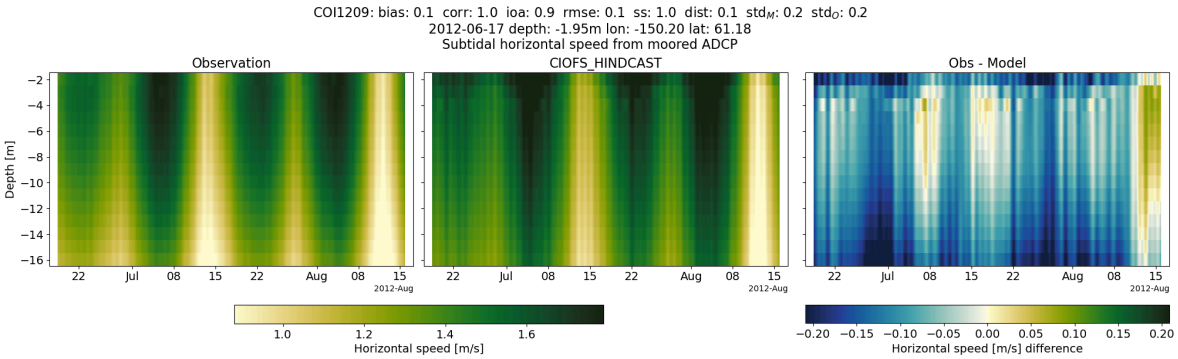
CIOFS_FRESH



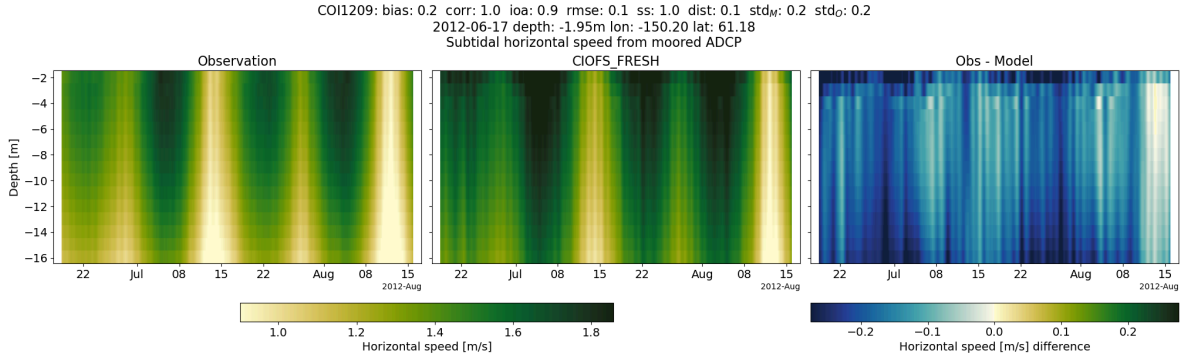
Subtidal

Horizontal speed

CIOFS_HINDCAST

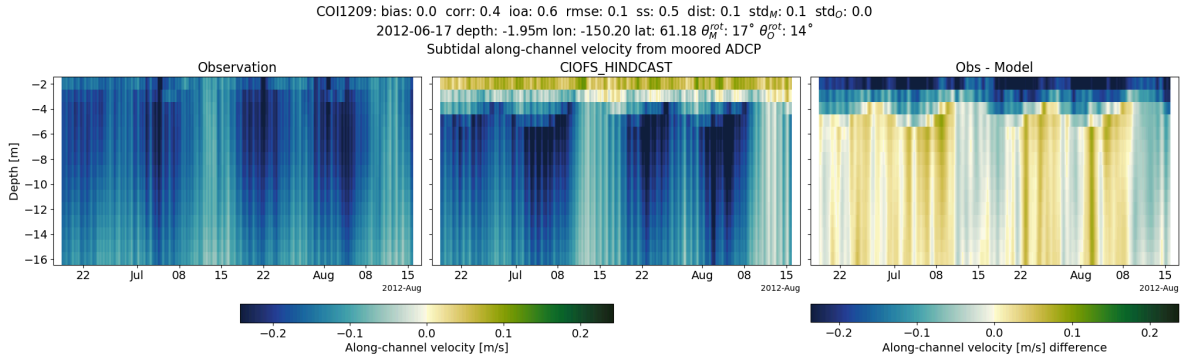


CIOFS_FRESH

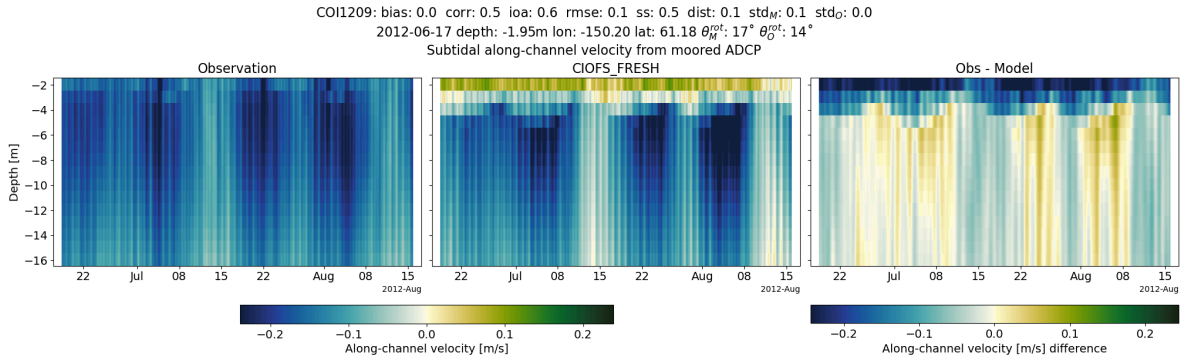


Along-channel velocity

CIOFS_HINDCAST

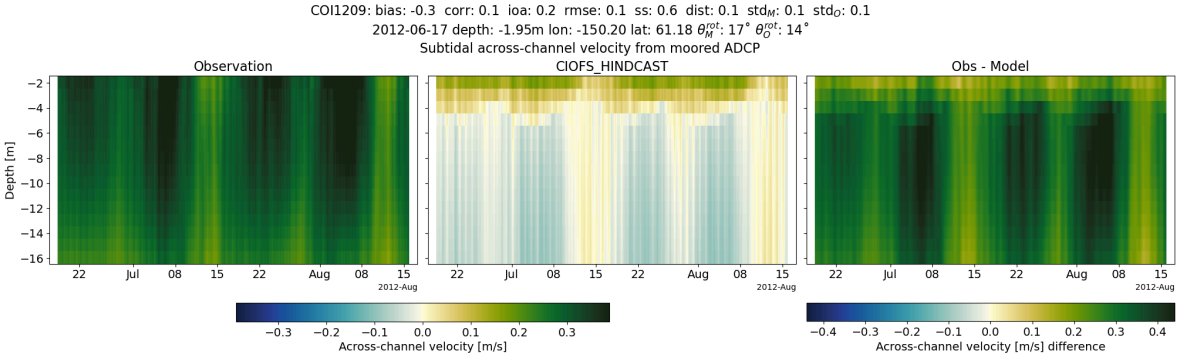


CIOFS_FRESH

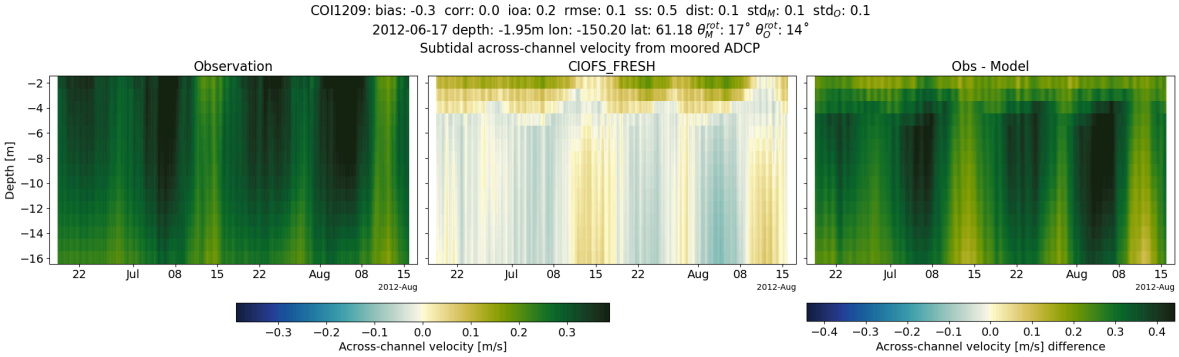


Across-channel velocity

CIOFS_HINDCAST



CIOFS_FRESH

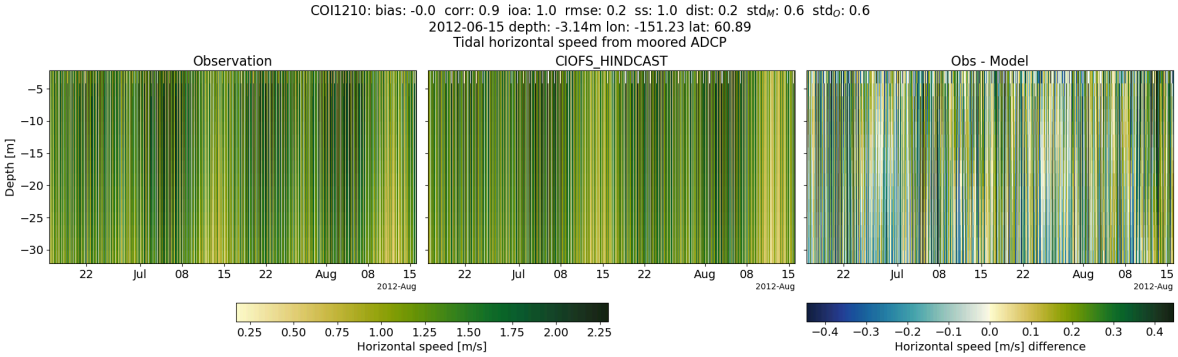


COI1210

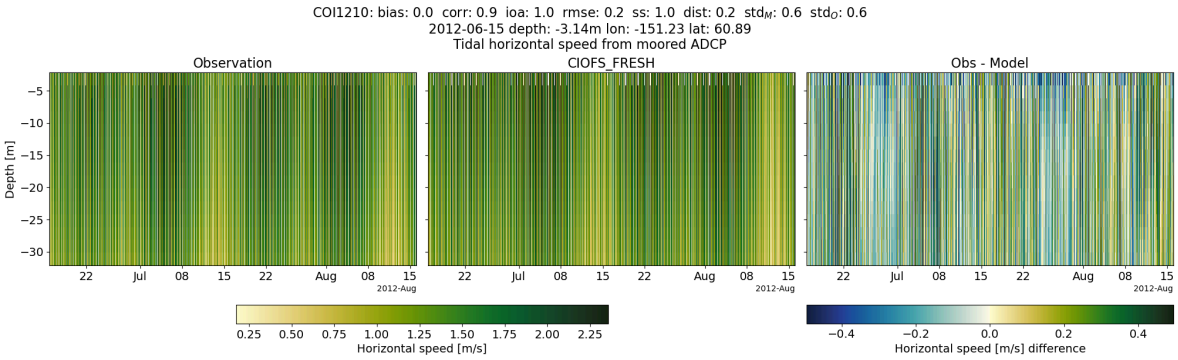
Tidal

Horizontal speed

CIOFS_HINDCAST

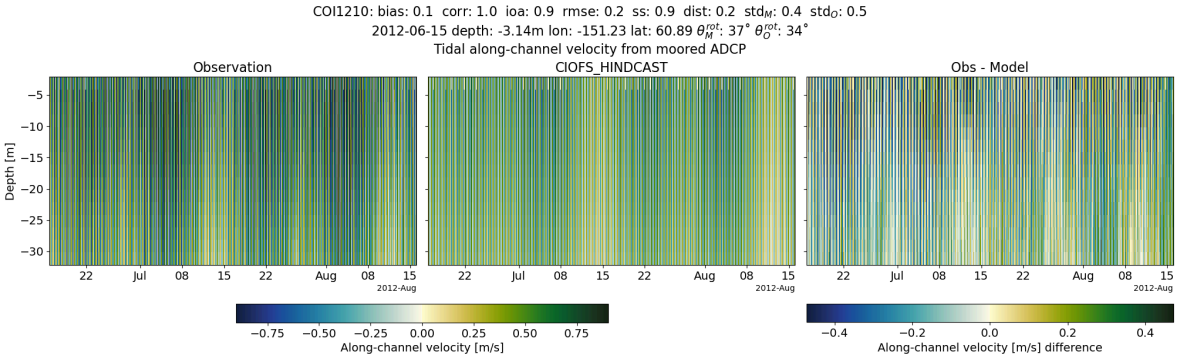


CIOFS_FRESH

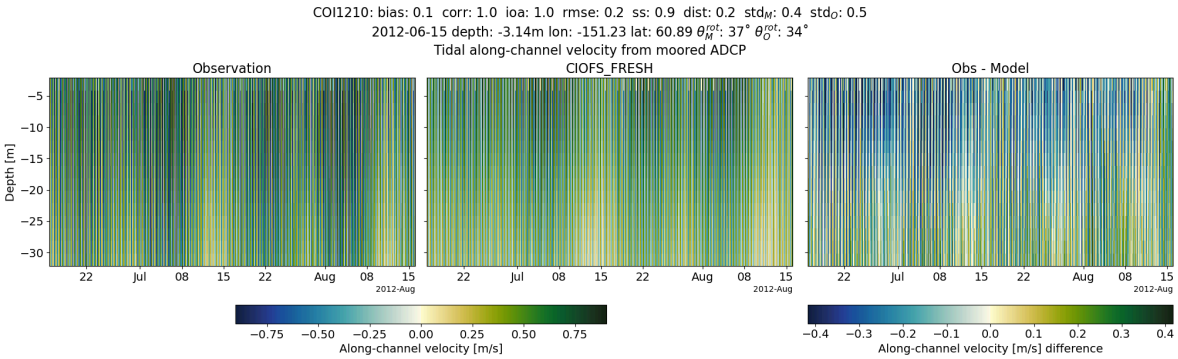


Along-channel velocity

CIOFS_HINDCAST

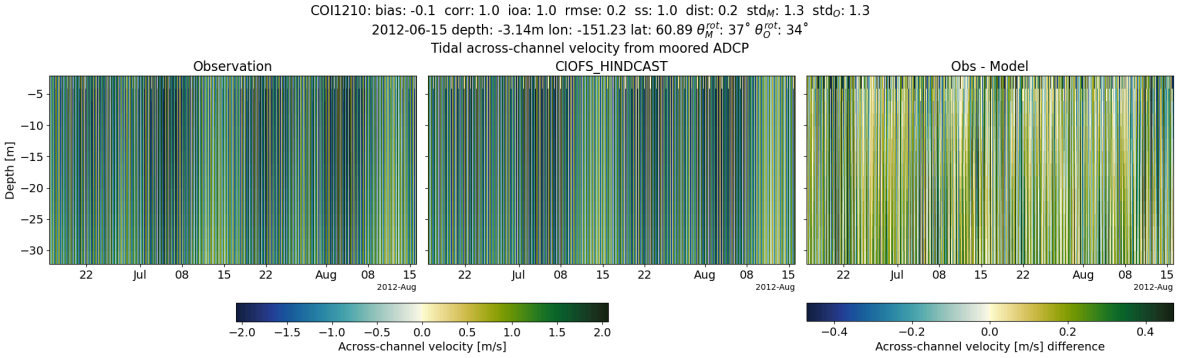


CIOFS_FRESH

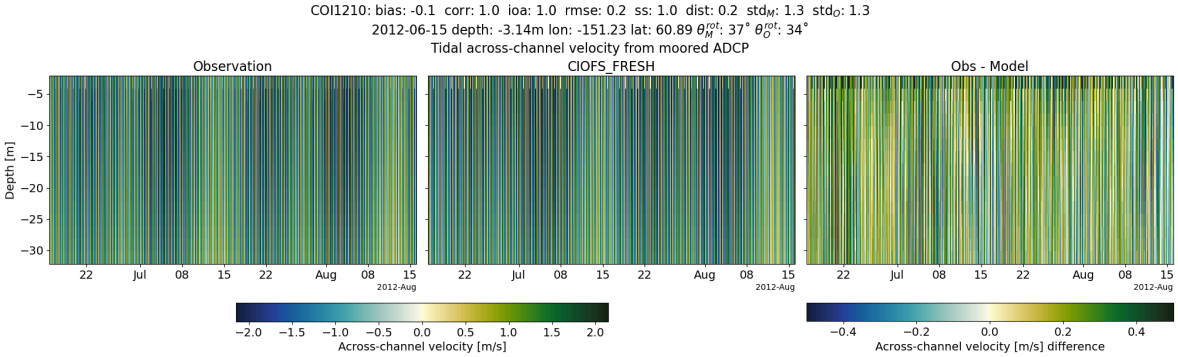


Across-channel velocity

CIOFS_HINDCAST



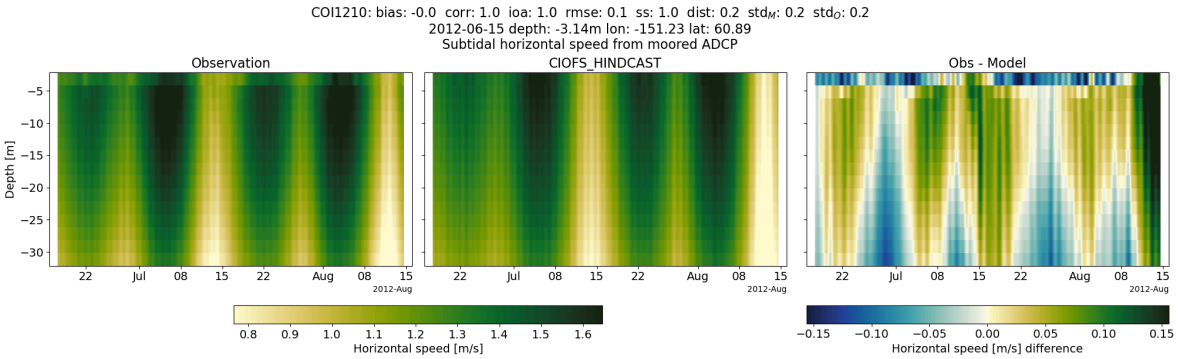
CIOFS_FRESH



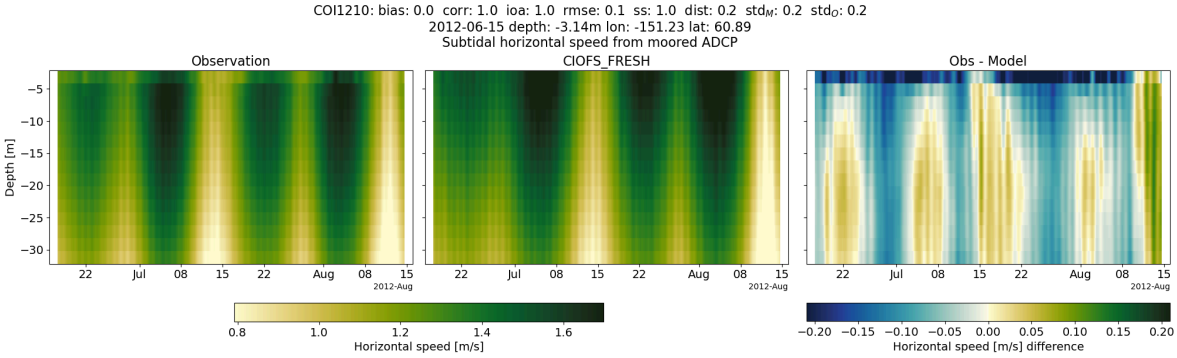
Subtidal

Horizontal speed

CIOFS_HINDCAST

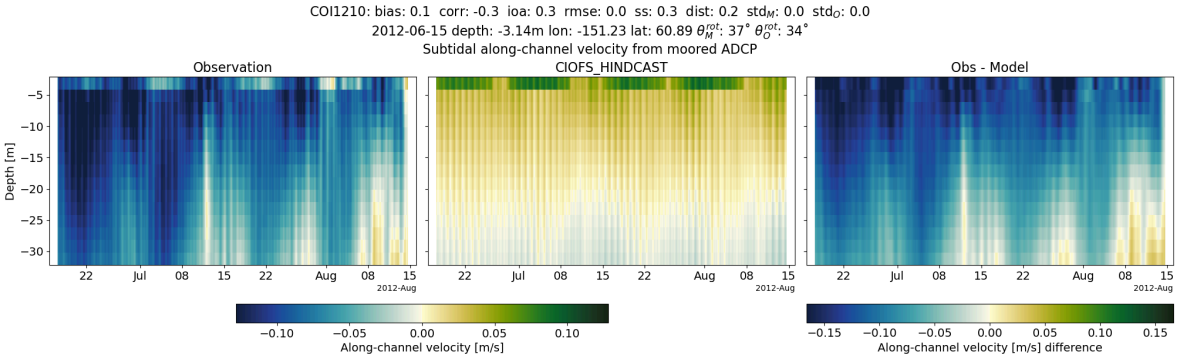


CIOFS_FRESH

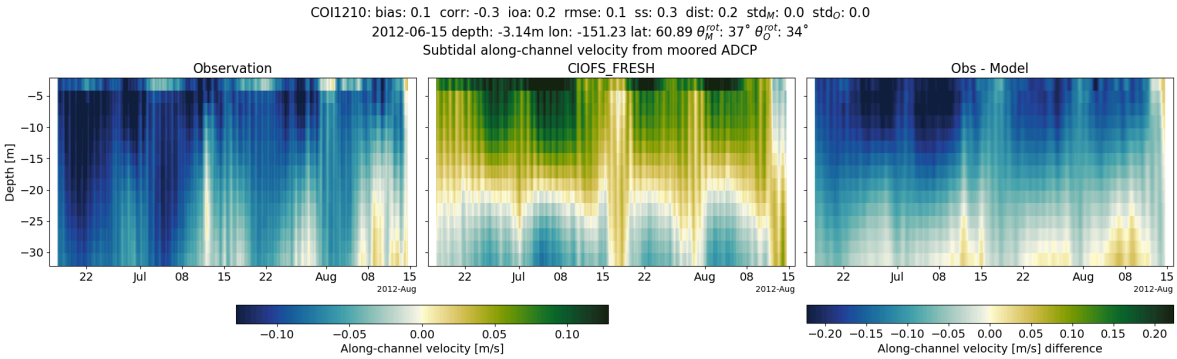


Along-channel velocity

CIOFS_HINDCAST

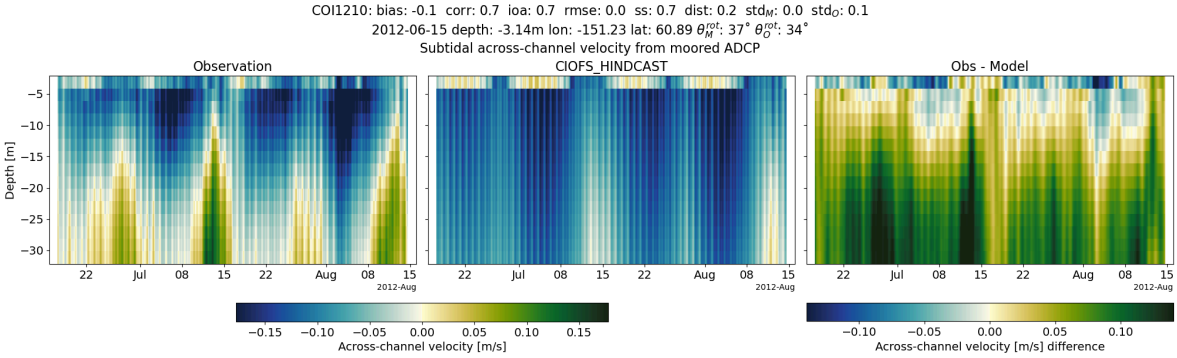


CIOFS_FRESH

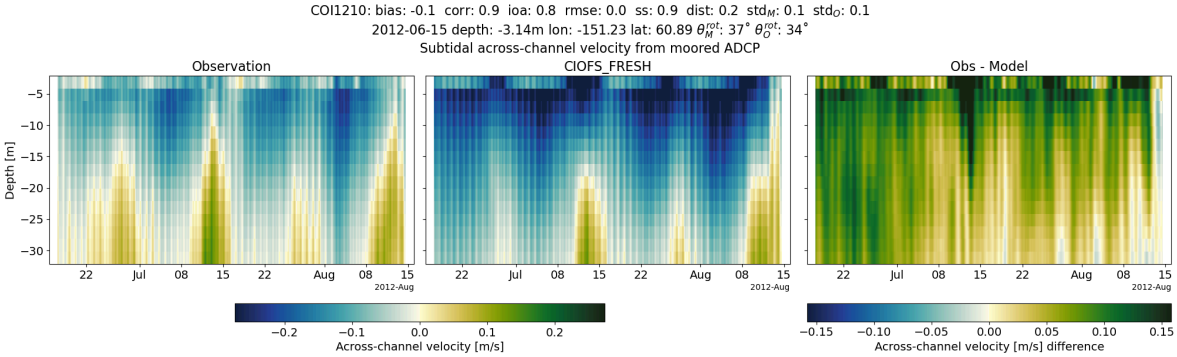


Across-channel velocity

CIOFS_HINDCAST


COI1210: bias: -0.1 corr: 0.7 ioa: 0.7 rmse: 0.0 ss: 0.7 dist: 0.2 std$_M$: 0.0 std$_O$: 0.1
2012-06-15 depth: -3.14m lon: -151.23 lat: 60.89 θ_M^{rot}: 37° θ_O^{rot}: 34°
Subtidal across-channel velocity from moored ADCP
Observation
CIOFS_HINDCAST
Obs - Model
Depth [m]
−5
−10
−15
−20
−25
−30
22
Jul
08
15
22
Aug
08
15
2012-Aug
−0.15
−0.10
−0.05
0.00
0.05
0.10
0.15
Across-channel velocity [m/s]
−0.10
−0.05
0.00
0.05
0.10
Across-channel velocity [m/s] difference

CIOFS_FRESH


COI1210: bias: -0.1 corr: 0.9 ioa: 0.8 rmse: 0.0 ss: 0.9 dist: 0.2 std$_M$: 0.1 std$_O$: 0.1
2012-06-15 depth: -3.14m lon: -151.23 lat: 60.89 θ_M^{rot}: 37° θ_O^{rot}: 34°
Subtidal across-channel velocity from moored ADCP
Observation
CIOFS_FRESH
Obs - Model
Depth [m]
−5
−10
−15
−20
−25
−30
22
Jul
08
15
22
Aug
08
15
2012-Aug
−0.2
−0.1
0.0
0.1
0.2
Across-channel velocity [m/s]
−0.15
−0.10
−0.05
0.00
0.05
0.10
0.15
Across-channel velocity [m/s] difference