



PMEL Ocean Climate Stations

Anchoring *Process Studies* in the North Pacific



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1. NOAA PMEL, Seattle WA; 2. UW JISAO, Seattle WA

What new **technologies** or **approaches** can be applied to improve our monitoring and ultimately prediction of ocean extremes and their impacts?

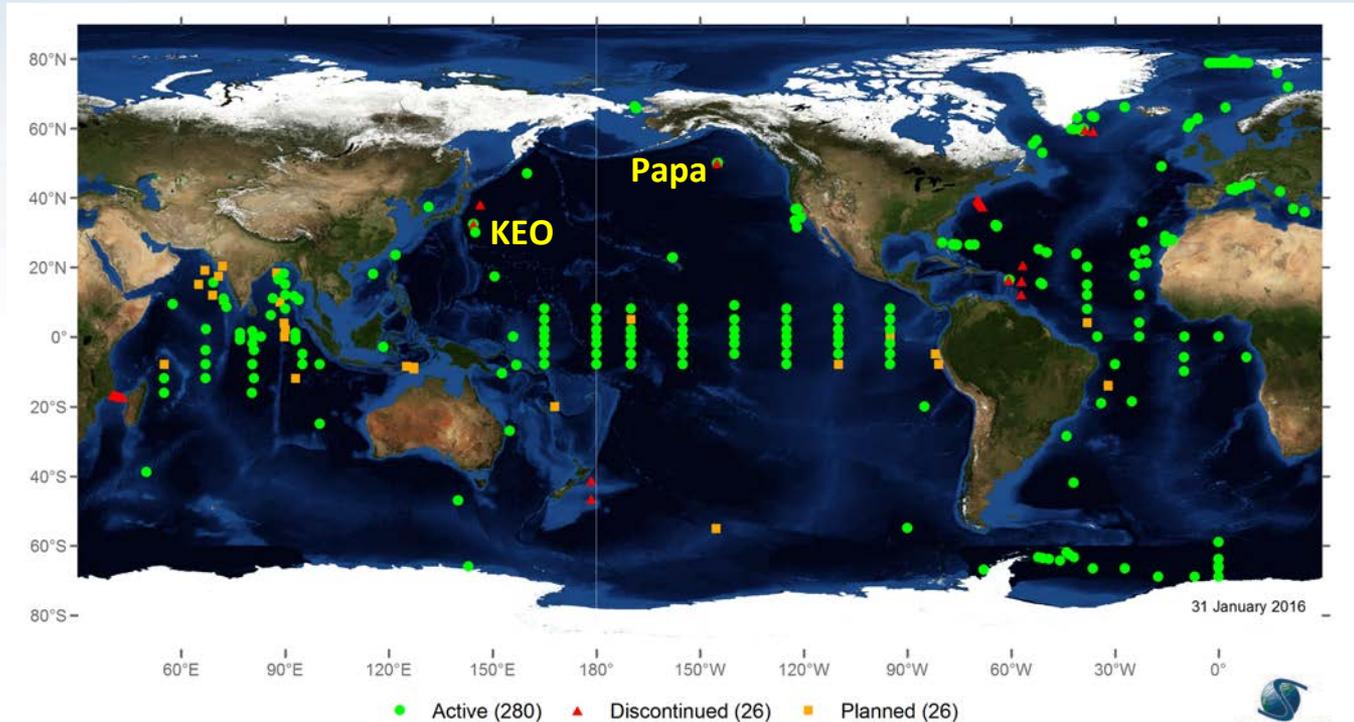


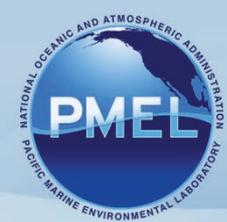
No Shiptime Required !

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www.pmel.noaa.gov/OCS

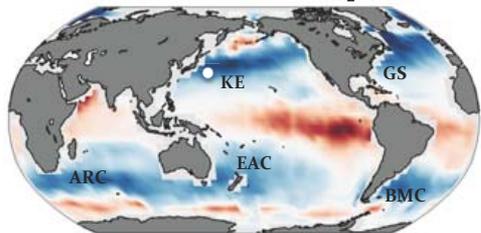




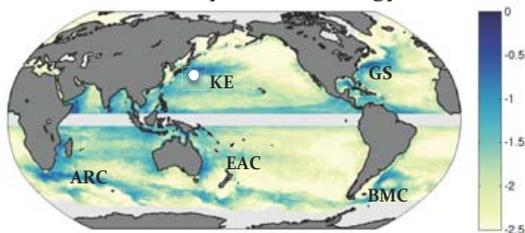
Kuroshio Extension Observatory (KEO)

NOAA Surface Mooring & JAMSTEC Sediment Trap

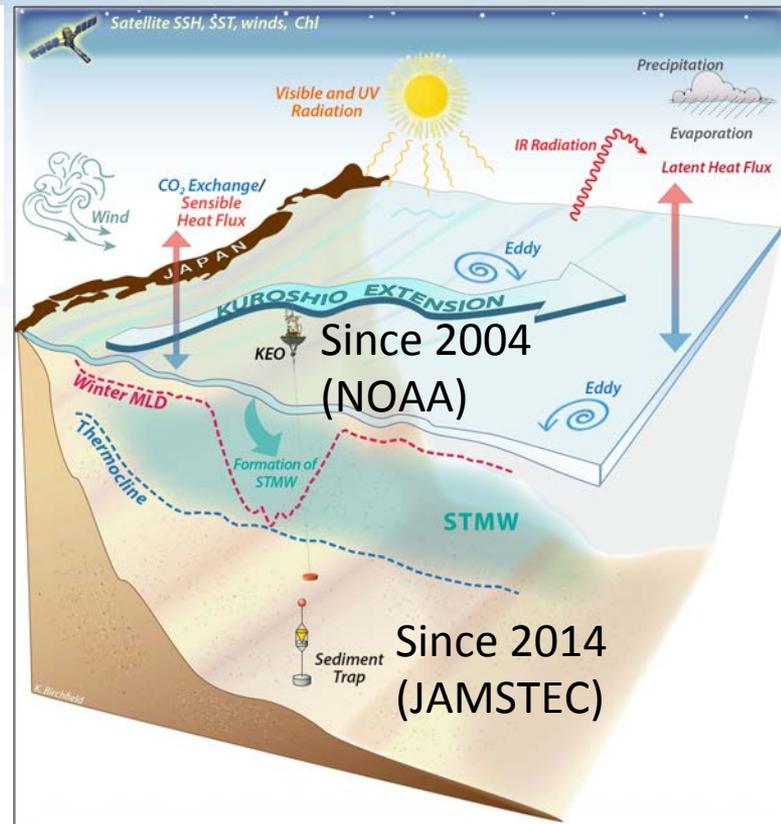
Mean Annual Sea-Air CO₂ Flux mol C m⁻² yr⁻¹



Surface Eddy Kinetic Energy log₁₀ m² s⁻²



See Poster: “Net community production at the Kuroshio Extension Observatory” by Fassbender, Sabine, Cronin, and Sutton

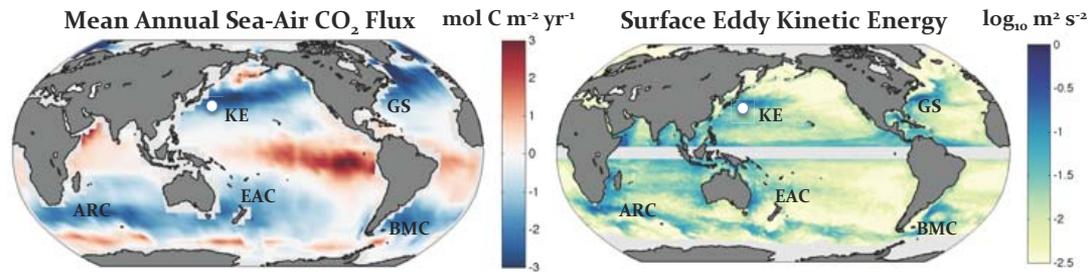




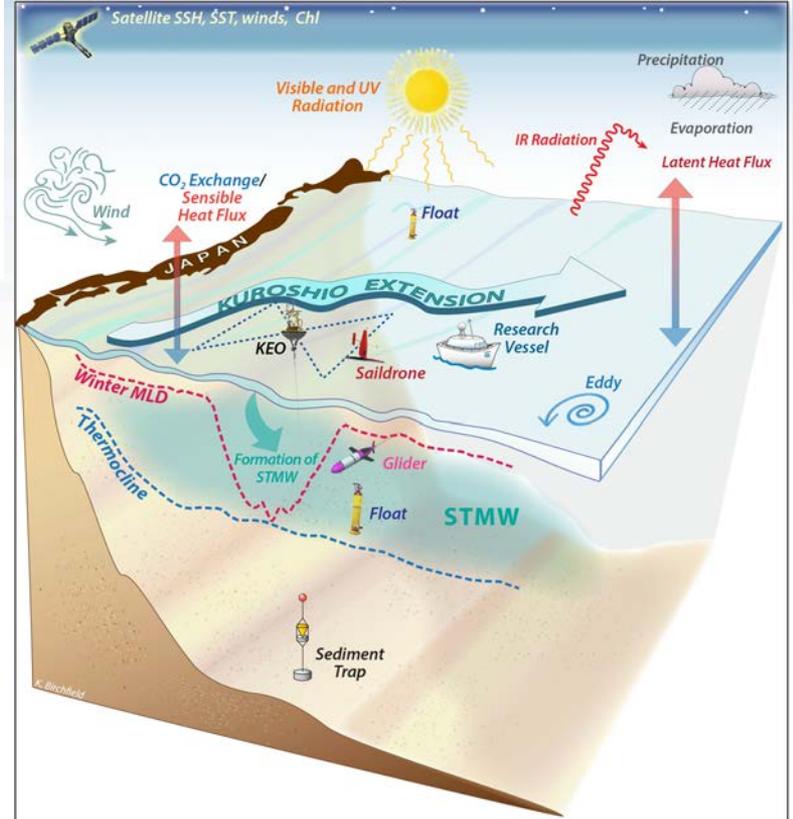
Carbon Hot Spot

A highly-leveraged field study, proposed to NSF,

in collaboration with Japanese scientists, and with Japanese shiptime



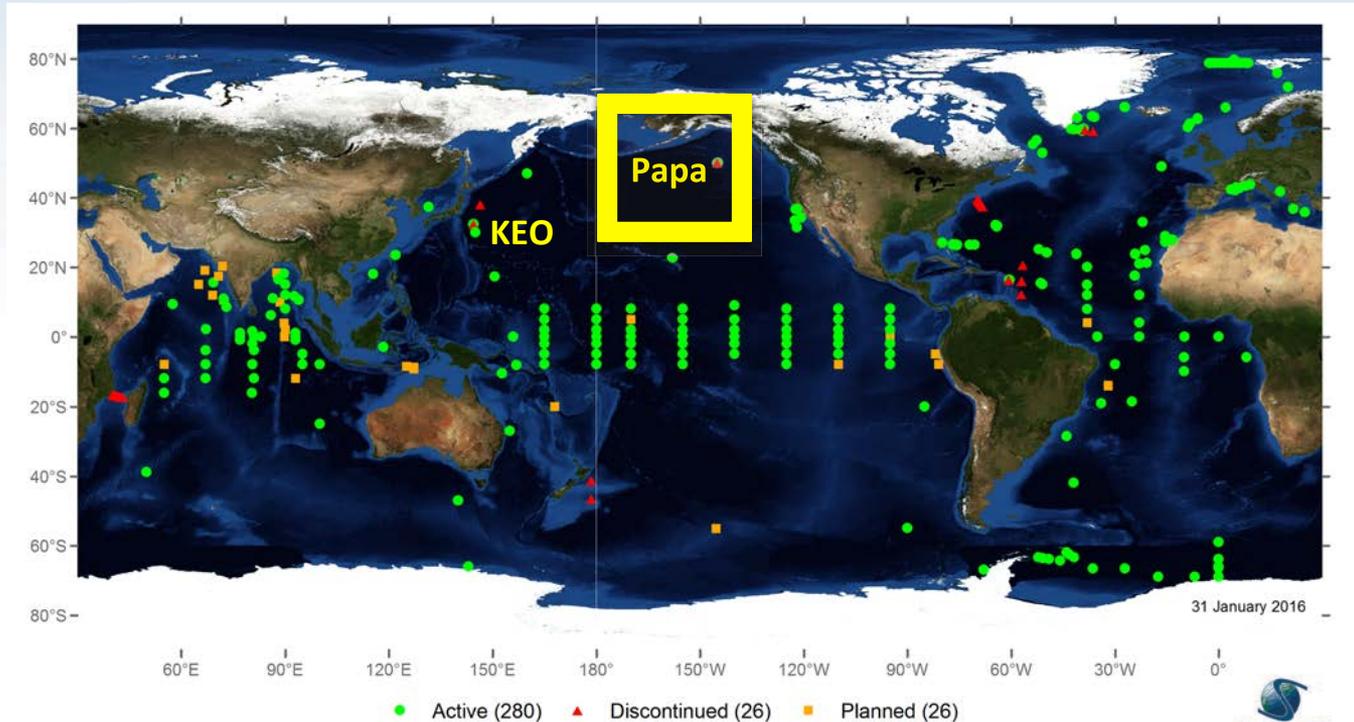
Carbon Hot Spot will help show how ocean carbon uptake, carbon cycling, and sequestering of carbon by mode water formation are influenced by mesoscale and sub-mesoscale processes.



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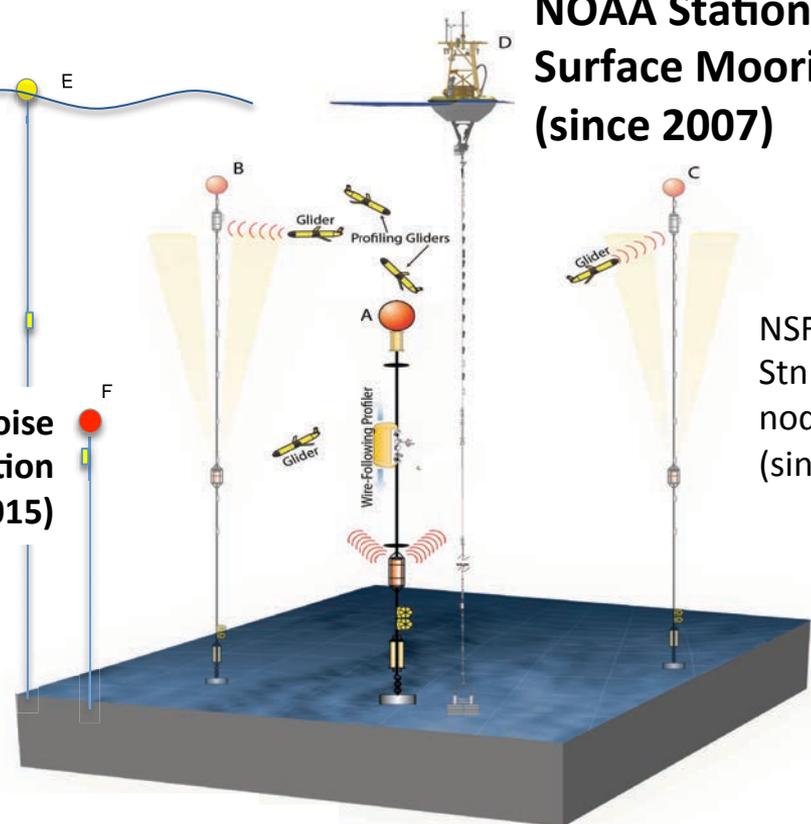


NOAA Station P Surface Mooring (since 2007)

NSF-funded UW
 APL Waverider
 (since 2010)

NOAA Noise
 Reference Station
 (since 2015)

NSF-OOI
 Stn P global
 node array
 (since 2013)

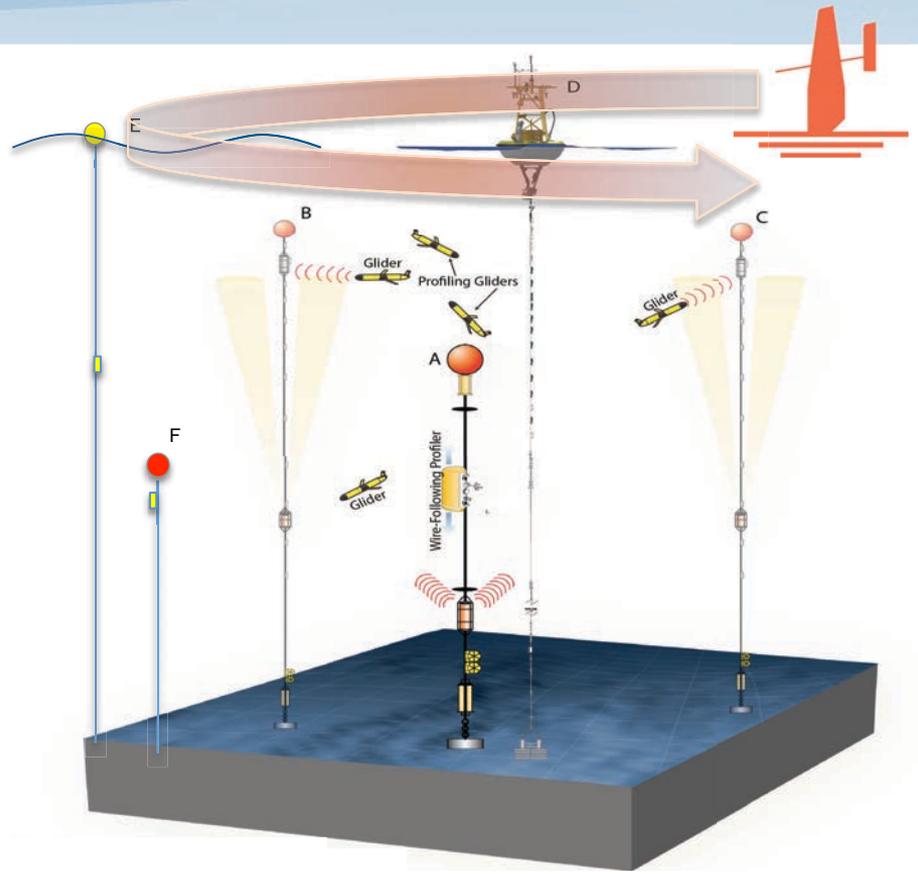




NASA EXPORTS
Export Processes in the Ocean from Remote Sensing

EXPORTS Goal: To predict the export and fate of ocean Net Primary Production (NPP) from satellite and other observations.

Call by NASA Ocean Biology and Biogeochemistry Program for proposals in support of EXPORTS field campaign at Station P, due April 2017.





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Saildrone can bring new capabilities to the observing system. Its ability to do adaptive sampling makes it ideal for process studies.

Building process studies around OceanSITES leverages research to help improve our understanding of and ultimately prediction of ocean extremes and their impacts.



No Shiptime Required !