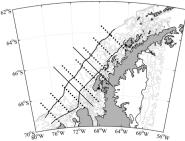
Thanks to many: Hugh Ducklow, Debbie Steinberg, Scott Doney, Sharon Stammerjohn, Doug Martinson, Carlos Moffat, William Fraser, Megan Cimino, Ben van Mooy, James Connors, Josh Kohut, Matt Oliver, Hank Statscewich, Ari Friendlaender, Doug Novacek, NSF, British Antarctic Survey, NOAA NMFS, Argentinian Jubany Team



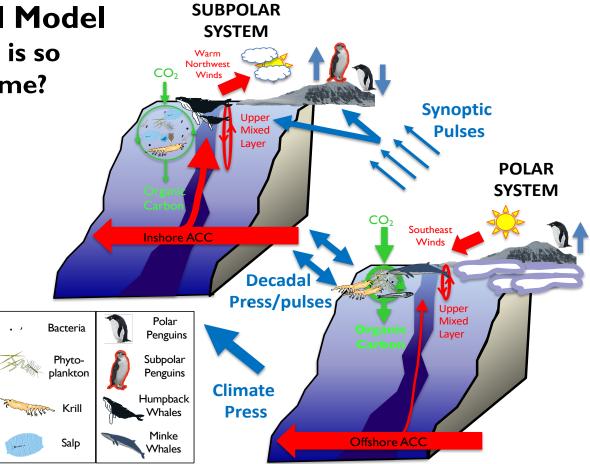




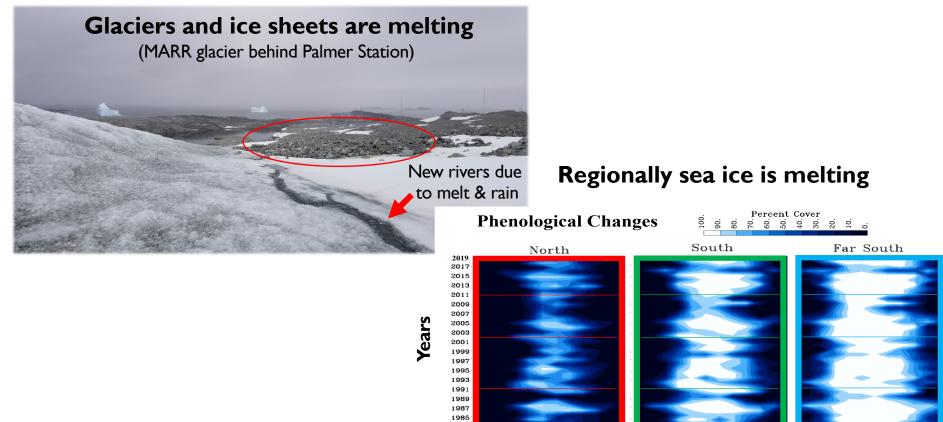
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Our Conceptual Model Why SOCCUM is so important to me?



The West Antarctic Peninsula (WAP) is a model system for polar marine ecosystems undergoing change



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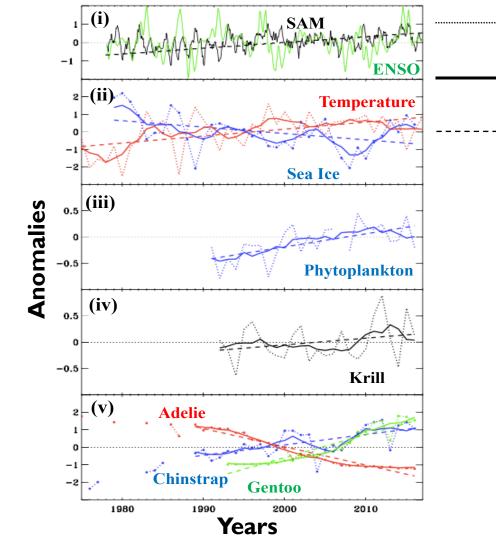
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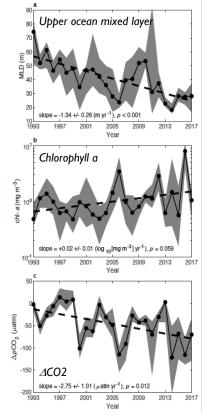


Annual standardized anomalies Smoothed multi-year standardized anomalies

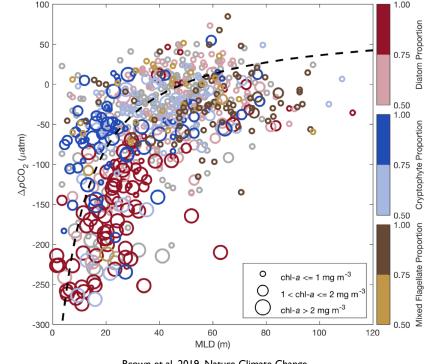
Long term trends

West Antarctic Peninsula shows changes in physics,Ice change openingchemistry and biology

the ocean to sun and atmosphere

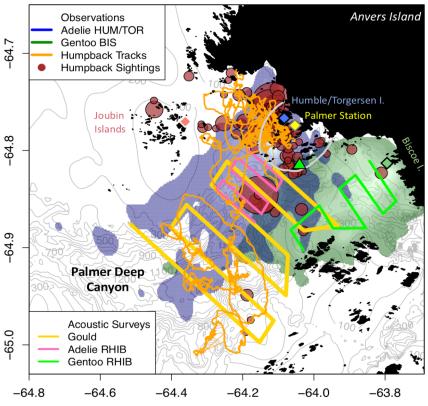


Efficiency of the system is a function of the diversity and biomass



Brown et al. 2019. Nature Climate Change DOI: 10.1038/s41558-019-0552-3

Food competition for available resources among higher trophic levels



High Frequency Extreme Weather?

