Ocean Science

Discussions

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Interactive comment on "From sea ice to seals: A moored marine ecosystem observatory in the Arctic" *by* Claudine Hauri et al.

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General comments Thankyou for the opportunity to review this paper. The current state of research and new approaches described are an important contribution to improving high frequency time-series in locations that are traditionally hard to access for year-round observations. The observatory described, located in a region of dynamic change, is impressive, and although this paper presents preliminary analysis of results, the compilation of information on how the observatory was designed and factors that resulted in the final design are incredibly important for other research programs that use complex moorings arrays in harsh environments. The value of communicating "lessons learned" cannot be understated. I look forward to the following series of papers that provide in depth analysis of these high frequency observations and improved under-

standing of ecosystem dynamics in this region. Minor comments: P 2, l 42. Figure 4. Because this is such a great illustration of a time-series of change in a complex environment, I immediately went looking for the artists name, it took me a little while to find it. I wonder if you can highlight this more in the caption. Or provide a download link to a high -quality version that can be used with appropriate citation and acknowledgement. P3, l 10 Do you have continuous data for estimates of MLD at the mooring location? Even a simple summary of how this changes relative to water column depth over the seasonal cycle would be useful for those of us more familiar with Antarctic cycles than Arctic cycles and ocean dynamics. P 3, l 13- can you provide a citation for the "relatively low grazing activity"? This is an interesting point for understanding modes of carbon export compared to other polar systems. Also, any linkages to zooplankton phenology associated with both the summer and fall phytoplankton blooms. P 3, l39 this freeze-up mooring and associated data set is fantastic. I can see wide applications. P 4 l 12 Can you comment on how many times during a typical mooring deployment cycle you were able to obtain samples for sensor calibration purposes? The option of profiling winches is certainly attractive option, with the potential for "event based "sampling if real-time communications limitations can be overcome P 6 l 45 SOTS observatory is described by "Eriksen et al" (not "Erikson")

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