

3-2. Food Production and Salmon Growth (Oral-12)

## **Physical Oceanographic Conditions Over the Bering Sea Shelf, 2002-2007**

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We present an overview of the eastern Bering Sea shelf physical oceanography as depicted by hydrographic survey data collected on the U.S. BASIS cruises over the years 2002-2007. Differences between years include extent of the cold pool, water column heat and fresh water contents, strength of the vertical stratification and the magnitude of the cross-isobath density gradients. Spatial variations in interannual water mass property fluctuations provide a foundation for delineating robust physical subdomains. We examine the physical forcings that help control variability within these domains and the system as a whole. Environmental variables examined include wind mixing, Ekman transport, surface heat fluxes, ice cover and river discharge. Better understanding of how these controls interact with and modify the various shelf water masses will further the ultimate goal of helping to provide a better mechanistic understanding of the overall shelf dynamics and ecosystem.