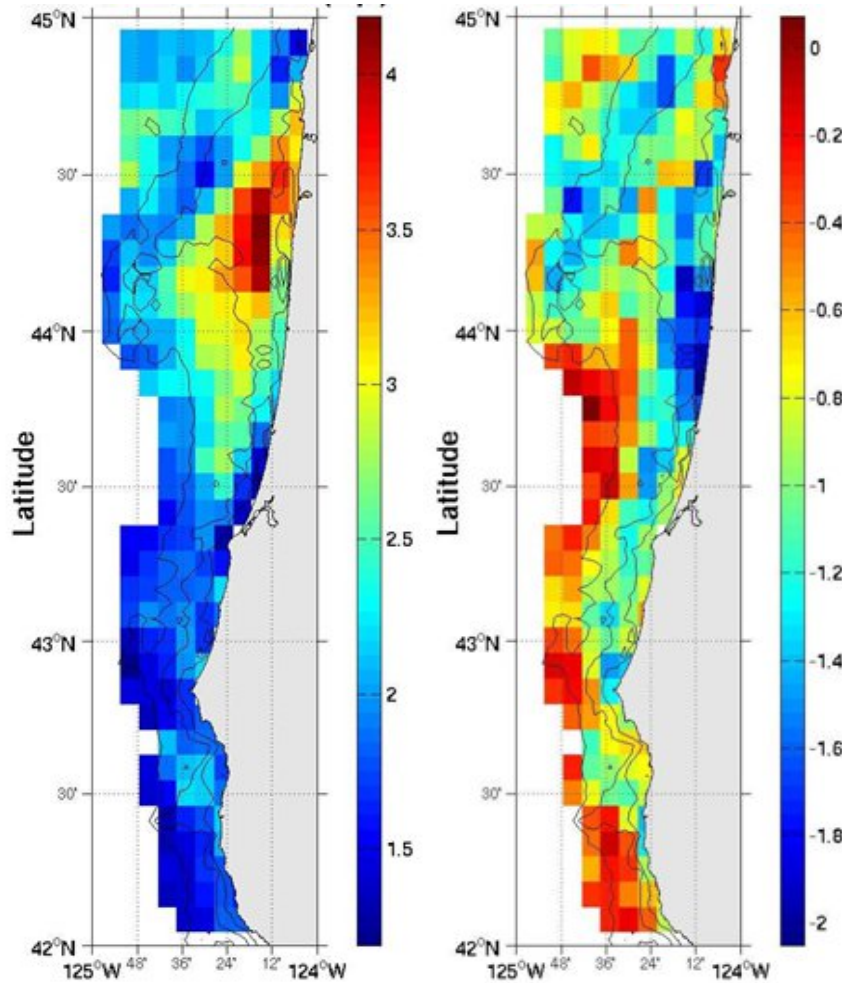
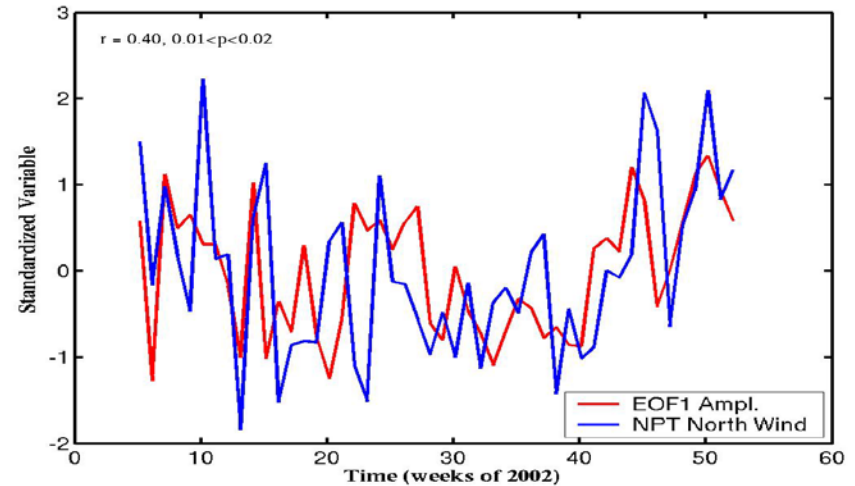




Local-scale Retention Time on the Oregon Shelf in 2002



Velocity fields from a 1 km resolution model of the circulation of the central-southern Oregon shelf region were used to assess retention time of particles throughout 2002. Particles randomly located in depth and space on the shelf were tracked to assess local (ca. 10 km) retention times seasonally and spatially. Mean retention time is plotted (far left), as well as the spatial (middle) and temporal (right) pattern of EOF1 of retention; also shown at right is the northward wind anomaly, which is significantly related to retention.



Mean retention was longest (4+days) on inner Heceta Bank. Passive particle tracking estimates of retention times are informative because regions and times of longer retention have higher probability of experiencing phytoplankton blooms (upper waters) and hypoxia (near bottom).