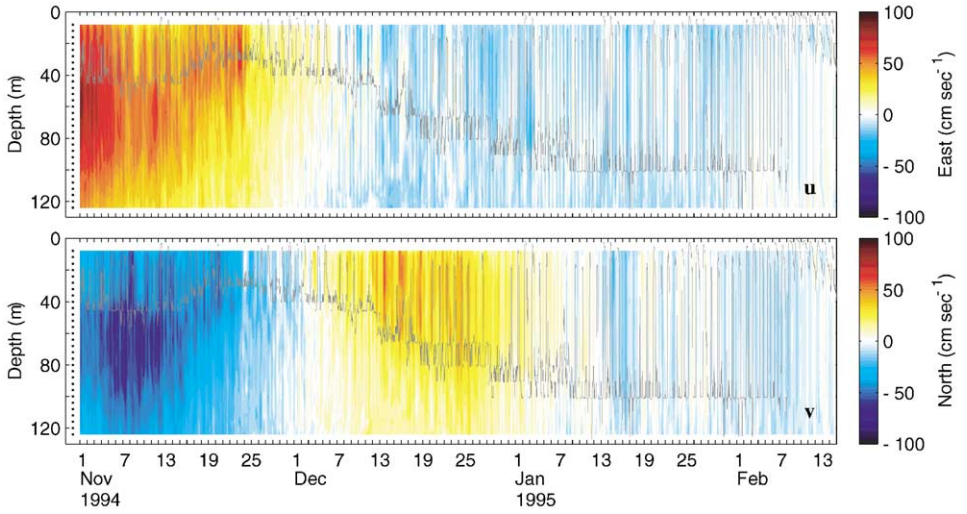


Fig. 16. Contour plots of hour-averaged east ($u$) and north ($v$) components of velocity at SIO-S during the NE Monsoon. The mixed-layer depths are shown in gray, and the depths of the ADCP bins are marked by dots next to the $y$-axis.

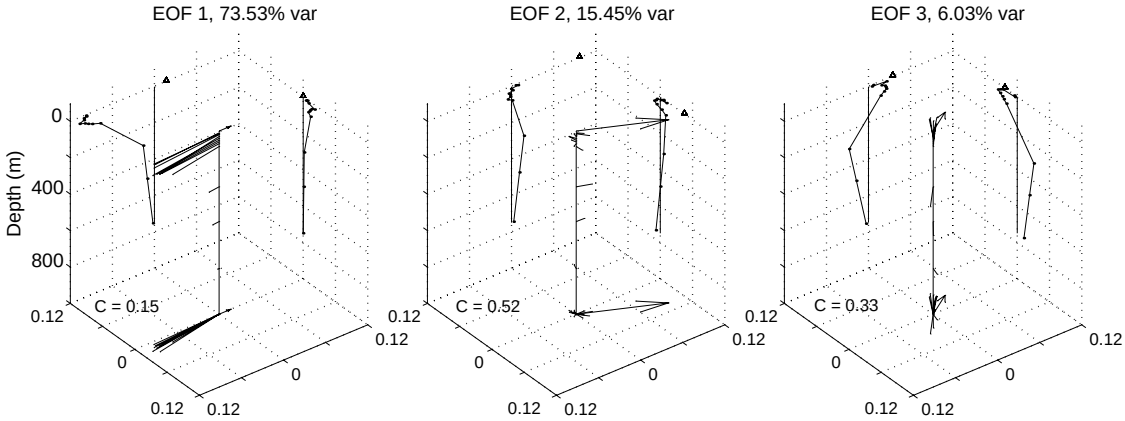


Fig. 17. The first three EOFs of the velocity structure and variance-scaled wind stress during the NE Monsoon. The correlation ($C$) of the EOF time-series with the wind stress as well as the percent variance associated with each mode is indicated. As in Fig. 10, the stick vectors indicate the three-dimensional structure of the velocity EOF, the arrow is the contribution from the variance-scaled wind stress, and the vectors are projected onto the $x$-, $y$-, and $z$-axis planes (triangle for the wind, $z$-projection at 1000 m depth).

moderate correlation with the wind. Progressive vector diagrams and transport vectors for the NE Monsoon (Fig. 18) show the large, nearly circular displacement of water in the upper 80 m, with net transport in the upper 80 m to the northeast. While the water at the shallowest depths (5, 10 m) was displaced westward as anticipated from the predicted Ekman transport, the progressive vector diagrams and direction of the transport of the flow relative to 80 m indicated that the mesoscale flow contributed shear to the upper ocean.

Satellite altimetry provides a broader horizontal context in which to understand these observations. A snapshot of combined TOPEX/Poseidon and