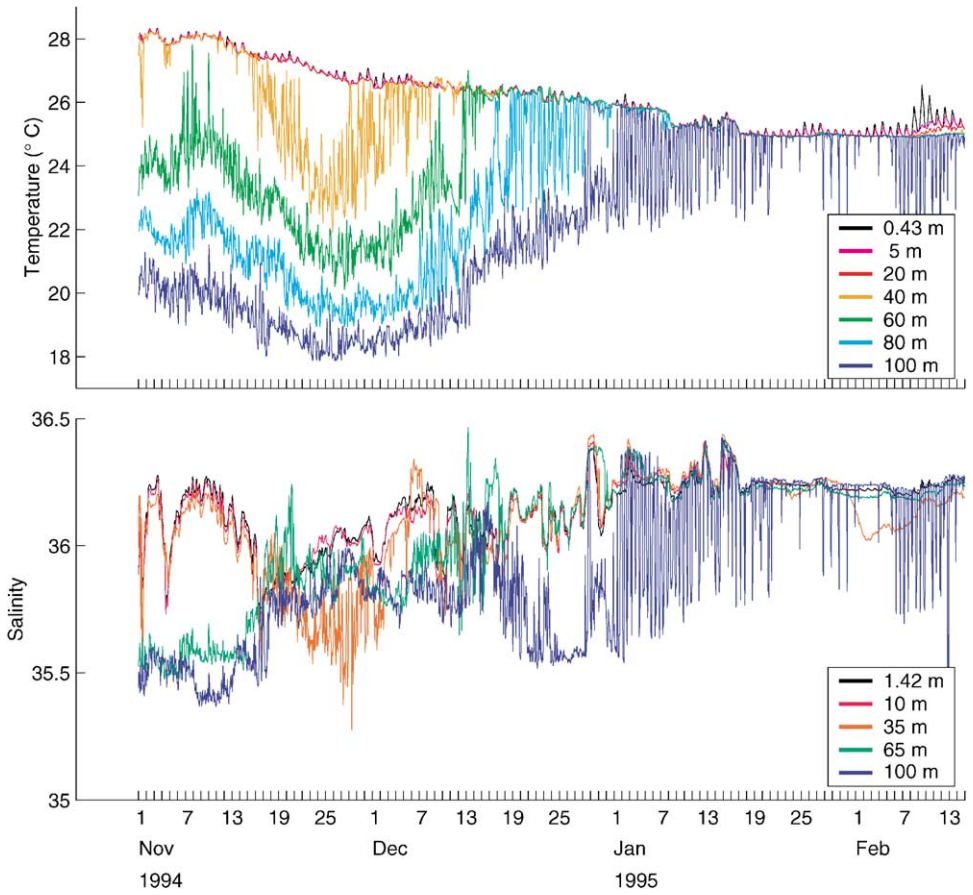


Fig. 15. Temperature (upper) and salinity (lower) time-series from the indicated depths at WHOI during the NE Monsoon.

cooling of the water below the mixed layer, the upper 100 m became more uniform in salinity and somewhat fresher than the surface water of the early part of the NE Monsoon. Toward the middle of the NE Monsoon (by mid-December), the two-layered structure was re-established. Subsequently, as the mixed layer deepened, the saltier, surface layer was seen at greater depth.

### 6.3. Velocity

The first 2 months of the NE Monsoon's velocity record are dominated by strong currents and slow turning of mesoscale flow. Contours of the velocity in the upper 120 m (Fig. 16) show that this velocity is quite uniform in depth, not changing much at the boundary of the mixed layer. The banding of the semi-diurnal tide is also evident in the record. The overall current is diminished in the latter half of the NE Monsoon.

The largest signal in the velocity variability is not associated with the locally wind-driven flow, as seen in an EOF decomposition of the NE Monsoon velocity (Fig. 17). The largest mode, representing 73.6% of the variability, has a small representation from the variance-scaled wind, and a surface-intensified structure similar to the one seen in the first mode of the entire velocity record (Fig. 10). The time-series associated with this EOF is very similar to the broad and slowly rotating velocity vector during the NE Monsoon seen in the full velocity record (Fig. 7). The second mode, representing 15.5% of the variability, has a larger contribution from the wind stress, but only a