



Figure 4.6b. Summer (June through August) near-surface mean flow and low-frequency current ellipses observed in Massachusetts Bay during various experiments conducted between 1988 and 2004. The observed summer mean flow (blue arrows) and the variability (shown as an ellipse centered around the tip of the mean flow arrow) are shown for near surface currents (measured 2-8 m below sea surface). Typically, the daily averaged current originates at the station symbol (colored squares) and flows toward any location within the ellipse. In general, the daily fluctuations are larger than the mean. These data were obtained from the Massachusetts Bays Circulation Experiment (summer 1990) (Geyer and others, 1992), USGS-MWRA long-term observations (summer 1990-2002 at LT-A and summer 1998-2002 at LT-B; Butman and others, 2004a), Gulf of Maine Observing System (GoMOOS) (summer 2001-2005), and Stellwagen Bank (summer 1994, USGS data archives). The 40-m isobath is shown as a gray line.