



**Figure 4.** Winter (Dec.–Feb.) ocean heat budget terms from CCSM2 and observations. Panels (a)–(c) show the three terms in the ocean heat budget equation (Eq. 6) with the sea ice edge (85% concentration contour) from CCSM2. For comparison from observations, panel (d) shows the net atmosphere–ocean heat flux (excluding the ice–ocean flux) from the COADS dataset and panel (e) shows the change in heat content the PHC dataset, both with sea ice edge satellite derived ice edge. The sign convention was chosen so that panels (a)–(c) sum to zero.