Effects of Typhoon Kai-Tak in the South China Sea in July 2000: (top) wind vector (white arrows) superimposed on a color image of upwelling velocity on July 6, 2000; (middle) sea surface temperature on July 9, 2000; and (bottom) chlorophyll concentration on July 12–15, 2000. Wind-driven ocean mixing and upwelling induce marked cooling and biological productivity, which have dramatic effects on the annual primary carbon productivity. (Wind data from the SeaWinds instrument on the QuikScat satellite; temperature data from the TMI instrument on the TRMM satellite; and chlorophyll data from the SeaWiFS instrument on the OrbView-2 satellite.)