



FIGURE 7.16. Hypothetical sediment transport by symmetrical and asymmetrical oscillatory wave currents and combined wave and unidirectional currents. (A) Variation over a wave period, T , of the horizontal component of the wave orbital velocity in the direction of wave motion, $+u$, and in the opposite direction, $-u$, for the case of a symmetrical, sinusoidal Airy wave. The threshold of sediment transport, u_c , is indicated, and the shaded areas represent periods when sediment transport occurs. (B) As for (A), but with a steady unidirectional current, u_u , added to the wave motion. (C) Orbital velocity variation and sediment transport for an asymmetrical Stokes wave. (D) As for (C), but with a steady unidirectional current, u_u , added to the wave motion.