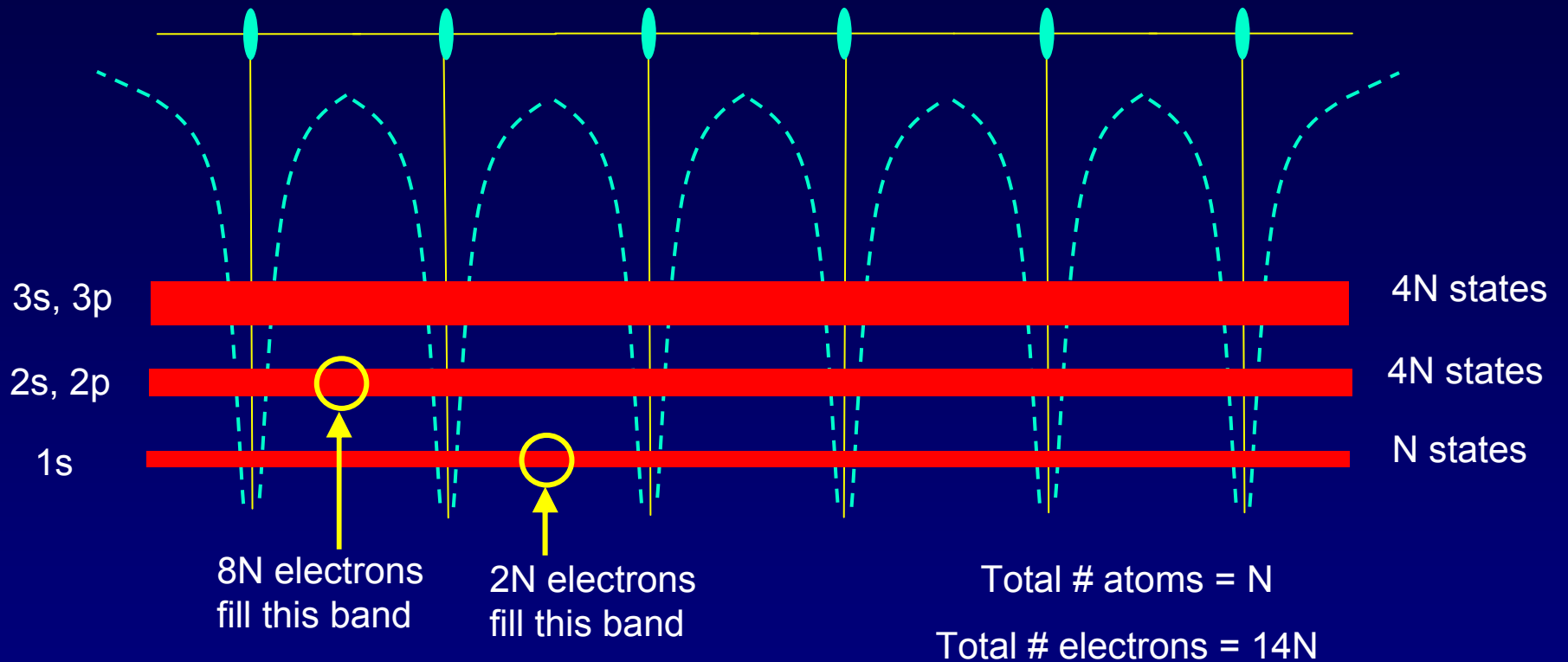
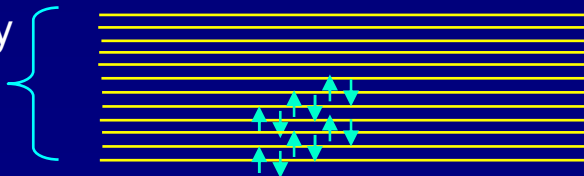


Semiconductors

Silicon: $Z = 14$ ($1s^2 2s^2 2p^6 3s^2 3p^2$)



The 3s/3p band is only half filled (4N states and 4N electrons)



Why isn't Silicon a metallic conductor, like sodium?