



Figure 2: The two dimensional square bond lattice below its percolation or connectivity threshold  $p_c = 1/2$  in (A), and above in (B). Below  $p_c$ , there is no bulk transport, and above  $p_c$  the effective conductivity takes off with power law behavior, as shown in (C). In (D) the effective resistivity diverges as  $p$  approaches  $p_c$  from the right, with a vertical asymptote at  $p = p_c$ . In (E) we display the vertical resistivity formation factor data from both the Antarctic (red squares) and Arctic (black diamonds), along with the prediction from percolation theory. The theory, as well as the data, exhibit divergent behavior as  $\phi$  approaches  $\phi_c \approx 0.05$  from the right, with a vertical asymptote at  $\phi = \phi_c$ .