

FIG. 2: (Color online) Dispersion dependences for locsitons in a triangular lattice of atoms (a) in the near-ring approximation; (b) for  $\mathbf{E}_{\rm in} \parallel \Gamma \mathrm{K}$ ; (c) for  $\mathbf{E}_{\rm in} \parallel \Gamma \mathrm{M}$ . Isolines of equal  $D_2(\mathbf{q})$  are spaced at 0.25 (i. e., they correspond to the ticks on the color bars); solid isolines and red shading correspond to positive  $D_2(\mathbf{q})$ , dashed isolines and blue shading correspond to negative ones, while the thicker solid isoline marks the zero level. The hexagons in plots (b,c) show the boundaries of the first Brillouin zone.