



Figure 5: Micromagnetic structures of maximally truncated octahedra, cuboctahedra and cubes. Left column (a, d, g) shows the largest SD solutions at d_{\max} , obtained by interpolating from solutions for smaller grains starting at 30 nm. On interpolating to a grain 2 nm larger, the structures relax to an EAV (b, e) or a distorted EAV (h) which are stable up to 120 nm. From 120 nm interpolation is carried out into smaller grains. Eventually the vortex aligns with a hard direction (c, f, i), stable down to d_{\min} after which the solution becomes SD again down to 30 nm. Top row (a, b, c) shows the structures for the maximally truncated octahedra; center row (d, e, f) for the cuboctahedra and bottom row (g, h, i) for the cubes. Colour represents the MCA energy normalised by $|K_1|$.