Clusters   Chain-like fragments

Figure S1
TEM micrographs of Δ*mamJ* mutant magnetosome clusters (left) and chain-like arrangements (right). Scale bar 50 nm.

I

Distribution of all cells   Distribution of all magnetite chains

II

Distribution of all cells   Distribution of all magnetite chains

III

Distribution of all cells   Distribution of all magnetite chains
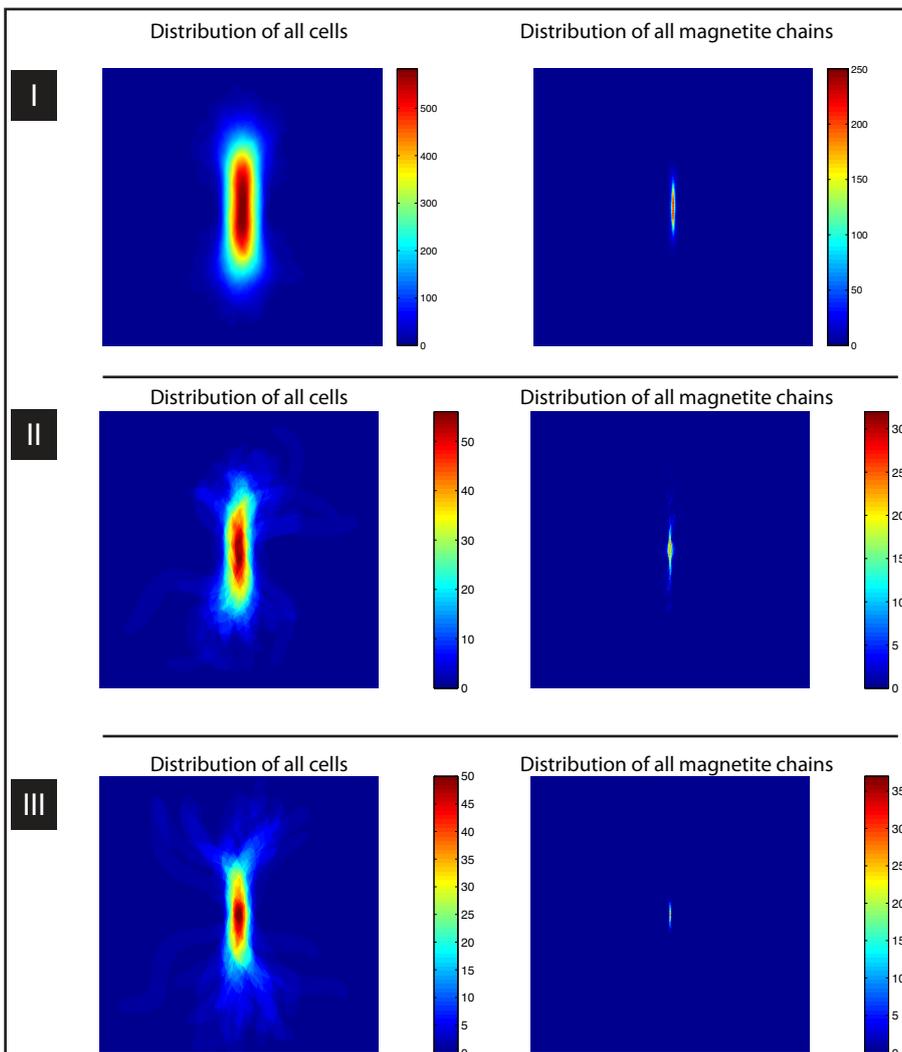
Figure S2
CHAP heat map representation to visualize MC and cell envelope distribution. Red indicates areas with high and blue with low abundance of aligned cell bodies (left) or magnetite particles (MCs, right). (I) Representation of all cells and MCs analyzed in Fig. 1 and 2. (II) Heat maps of Δ*mamJ*, Δ*mamK* and WT cells of Fig. 3 IV and (III) Δ*mamK* cells of Fig. 3 V only.
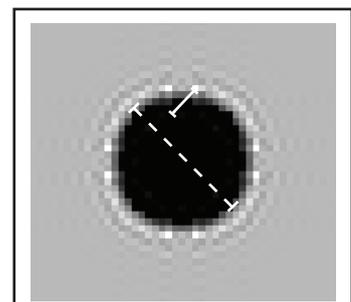
Figure S3
Model of a magnetosome crystal with the contrast transfer (ctf) function applied to it. The dashed line indicates the 20 pixel (33.44 nm) diameter. The Matlab based model used the original acquisition parameters for CHAP analysis TEM micrographs. The straight line indicates the Thon rings of the ctf.