Supplementary Figure Legends

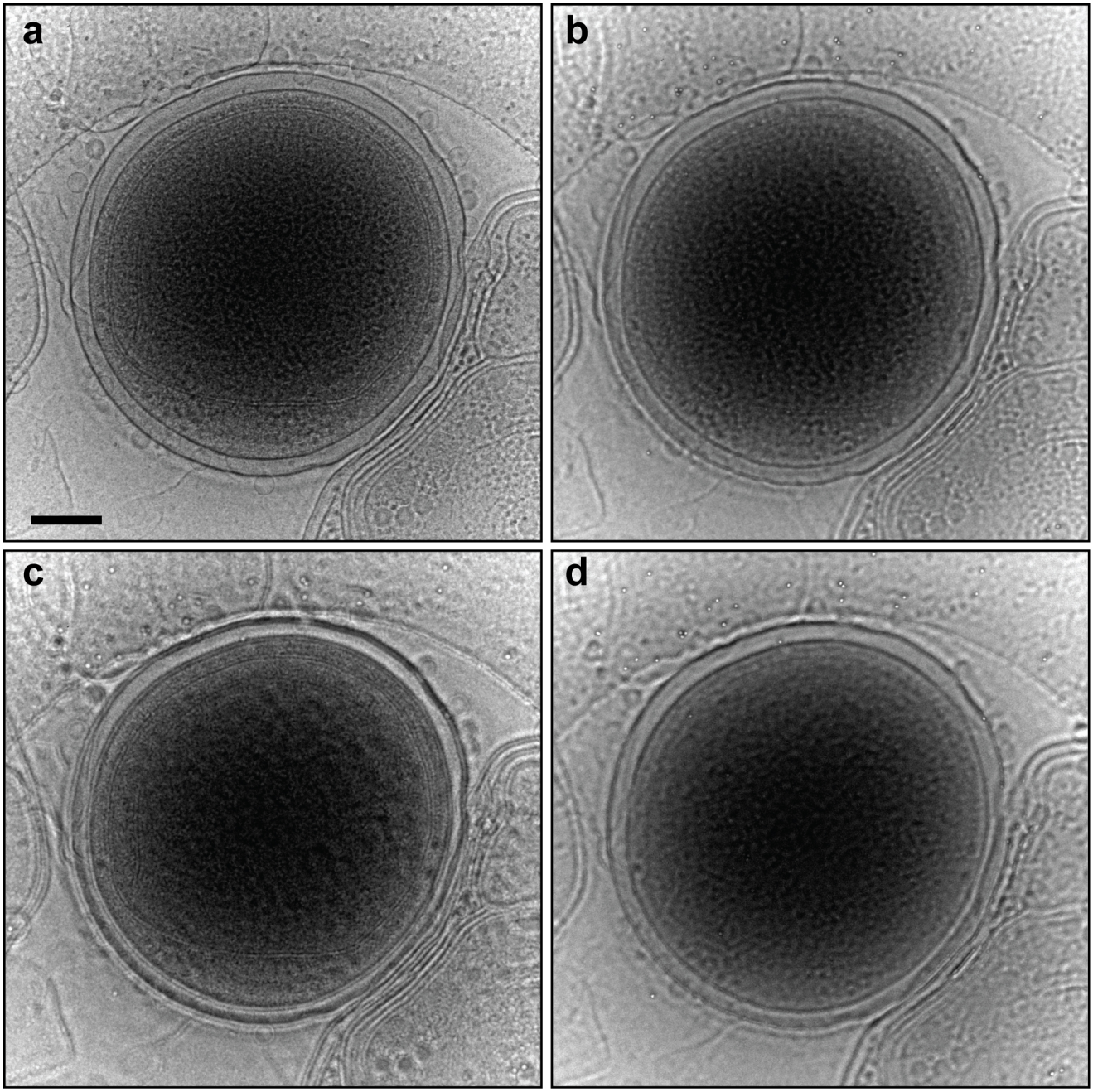
Supplementary Figure 1. ZPC cryoEM images of a Syn5-infected WH8109 cell

taken from good and charging phase plates. All four images are taken under the same conditions at 25,000x magnification and 1.3 $e^-/Å^2$ exposure. **(a)** Image from a good phase plate. **(b–d)** Images from phase plates suffering from various amounts of charging. Scale bar: 200 nm.

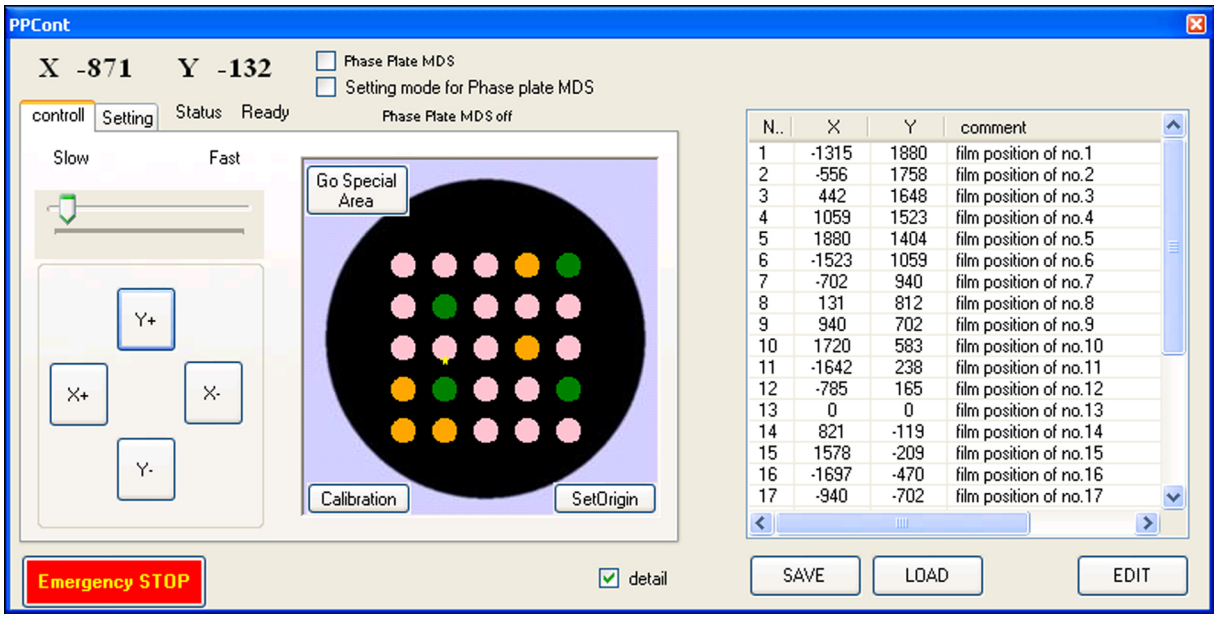
Supplementary Figure 2. Screenshot of PPCont program for phase plate mapping and evaluation. The good phase plates are reported in green, the possibly usable ones in orange, and the charging or otherwise unusable ones in pink.

Supplementary Figure 3. Diagram of low-dose setup for ZPC cryoET and the relative positions of the phase plate, Photo mode, and Focus mode in Search view.

Supplementary Figure 4. Flowchart of symmetry axis search procedure. A symmetry axis search algorithm is used to determine if individual phage progeny particles have icosahedral symmetry and to align the particles to their icosahedral symmetry axes if symmetry is identified (Step 45).



ZPC cryoEM images of a Syn5-infected WH8109 cell taken from good and charging phase plates. All four images are taken under the same conditions at 25,000x magnification and 1.3 e-/Å2 exposure. (a) Image from a good phase plate. (b–d) Images from phase plates suffering from various amounts of charging. Scale bar: 200 nm.



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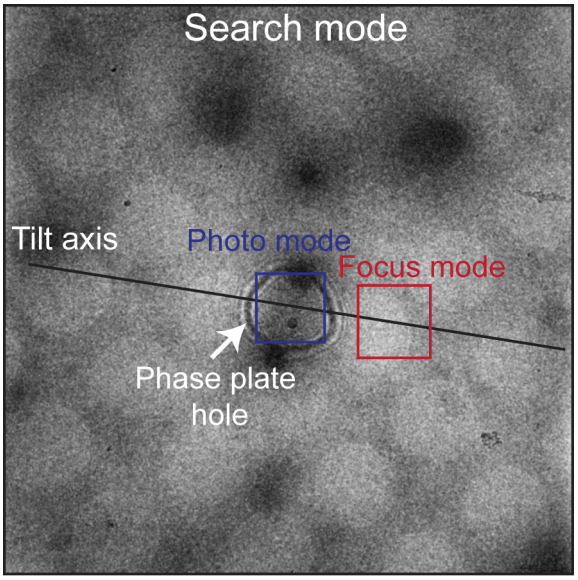
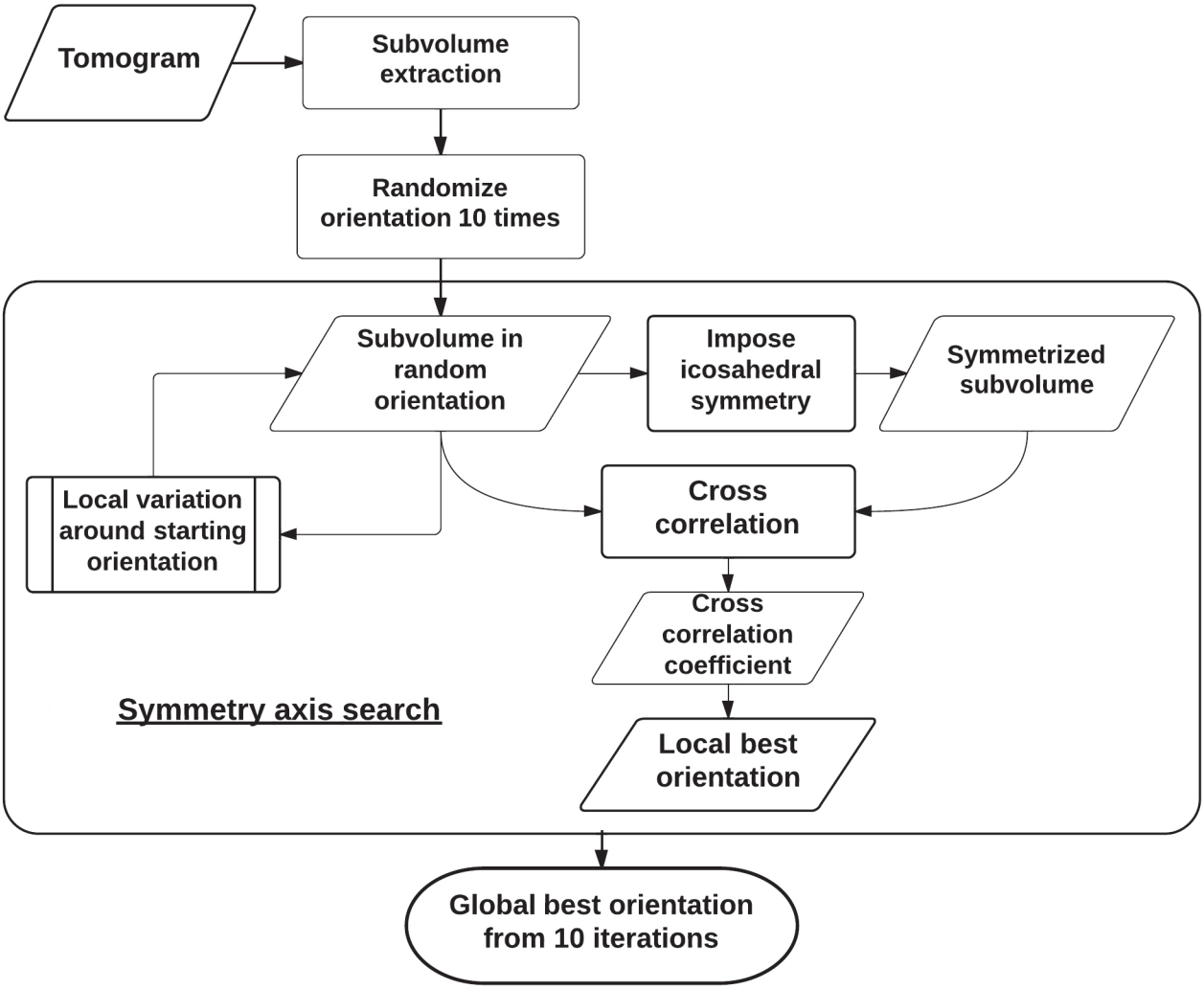


Diagram of low-dose setup for ZPC cryoET and the relative positions of the phase plate, Photo mode, and Focus mode in Search view.



Flowchart of symmetry axis search procedure. A symmetry axis search algorithm is used to determine if individual phage progeny particles have icosahedral symmetry and to align the particles to their icosahedral symmetry axes if symmetry is identified (Step 45).