

Phasing finite crystals

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The high intensities and coherence of X-ray FEL pulses allows the measurement of coherent diffraction patterns from macromolecular nanocrystals. These patterns contain far more data than can be recorded if limited just to measurements of counts in Bragg peaks. We have been investigating how diffraction phases may be retrieved from such data via iterative algorithms, without the use of a priori information and without restrictions on resolution. We present our progress in this endeavour and plans for future experiments.