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Phasing of Isomorphous Replacement Data Based on a Subset of Strongest Reflections. Yanina Vekhter, Laboratory for the Structure of Matter, Naval Research Laboratory, Washington, DC 20375.

A phasing procedure applied to improve the phases from SIR, SAD and MAD experiments is presented. With isomorphous replacement data at 3Å resolution about a third of reflections in a dataset of ~3000-4000 phases have a figure of merit (FOM) less than 0.3. These reflections have a little impact on FOM-weighted electron density maps. We have found that when just ~100-150 strongest reflections with low FOM are assigned correct or low-error phases the output phases and maps after density modification are significantly improved. The applications of our test results will be discussed.