

**W0344**

**Direct Measurements of Structure-Factor Phases on Several Protein Structures.** Andrew Stewart, Qun Shen, Cornell High Energy Synchrotron Source (CHESS), Cornell Univ., Wilson Laboratory, Ithaca, NY 14853, USA.

We report direct experimental measurements of triplet phases on several typical protein crystals using a reference-beam diffraction technique. Reference beam diffraction is based on a simple modification of the standard oscillating-crystal diffraction technique and allows the excitation of a reference Bragg reflection through the data collection. This allows a large number of triplet-phase interference profiles to be measured simultaneously on an area detector. Recent advances include the automation of the data collection procedure, and studies of more typical protein structures such as thrombin and thaumatin. We will present the measured interference profiles and discuss future prospects.

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