

Abstract Submitted
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Mining X-ray diffuse scattering images for evidence of protein dynamics¹ MARY FALTAOUS, JAMES CLARAGE, University of St. Thomas — For years biologists and biochemists have used images obtained from X-ray diffraction to determine the most probable tertiary structure of a protein. However the data typically analyzed represent only about 0.1% of the total photons collected in one image. This project focuses on the 99.9% of potential information that is usually discarded in experiments. Researchers usually focus on the strongest part of the X-ray signal, the so-called “Bragg Peaks.” The remaining negative space around the peaks may have evidence about the movement and dynamics of the protein in the cell. One hopes that this can aid in the complete knowledge of the form of the protein and that can, in return, clarify its function.

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