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Practical Application of Absorption Anisotropy Correction at Long Wavelengths. K. Rajashankar, I. Kourinov, NE-CAT, Cornell Univ., Advanced Photon Source, Bldg. 436E, Argonne National Labs, Argonne, IL 60439.

Structure determination using weak anomalous scatterers like Sulfur usually requires data collected at longer wavelengths, typically higher than 1.5Å. Such experiments provide rather weak anomalous signal, hence very accurate data is essential to derive phase information. However, at longer wavelengths the anisotropic absorption effects introduce errors in the measurements. Correction for absorption anisotropy may be applied through empirical approach as proposed by Robert Blessing (*Acta Cryst.* A51, 1995, 33-38) and implemented in several data scaling software packages. However, there are no studies indicating the practical use of these procedures. We have carried out an extensive study on the use of absorption correction at longer wavelengths. It can be concluded that significant improvement in data quality can be achieved via application of empirical absorption corrections. In cases with high anisotropy in absorption, structure solution could be achieved only after application of the absorption corrections. In this presentation we will provide details of this study.