

10 Minutes pitch to SAS

The very, very basic of SAS

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SAS – Measures Information

Introduction

Small-angle scattering (X-rays, neutrons) measures **how a structures distribute relative distances**, this information is passed through the instrument and detected.

$$\langle I(q) \rangle_{\Omega,t} - \text{Detector} - \text{Sample} | \text{Scattering} - \text{Instrument}$$

The measurement contains averaged **information**, not a picture (**phase is lost**). Strong structural correlations appear clearly in $I(q)$; uncorrelated regions contribute diffuse. What we see is determined jointly by **structure + instrument** (beamstop, limited q-range, noise, resolution).

