

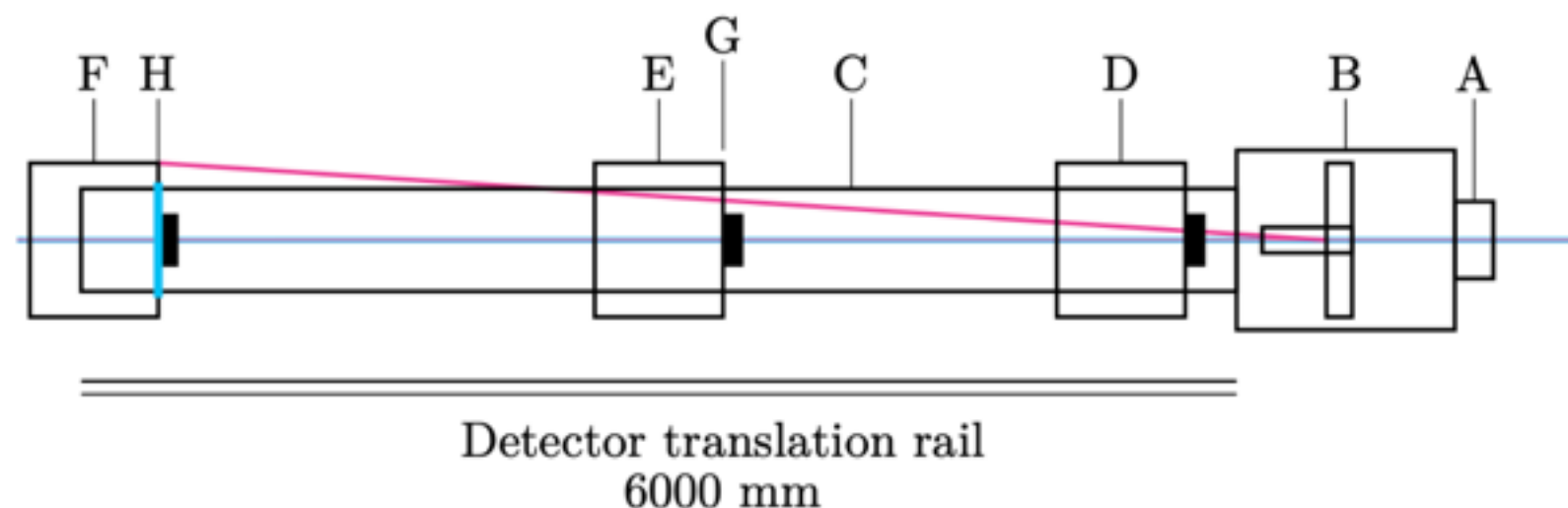
SAS — Measures Information

Introduction

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

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

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).



SAXS — Measures Information

Introduction

A — Collimators, B — Sample chamber (two sample positions (GISAXS, SAXS)), C — 6 m vacuum flight tube, D — WAXS detector (with beamstop), E — SAXS detector (with beamstop), F — USAXS detector (with beamstop), G — PSL (primary scattering line), H — Q-vector (scattering direction marker)

