

August 2013: Applications of X-ray and neutron scattering in biology, chemistry and physics

Lise Arleth, Structural Biophysics, NBI, KU-Science:

Studying biomacromolecules in solution with Small-Angle Scattering

Program:

Monday, August 18, 2013:

9.30-12.00: Lecture – Lise Arleth:

- General introduction: When is it relevant to perform a SAXS or SANS experiment?
- SAXS and SANS on Biomolecules in solution, introduction to data acquisition and analysis.

13.00-16.00: Theoretical/Computer-based exercise (LA): Analysis of SAXS data from a water soluble protein.

Program:

Tuesday, August 19, 2013:

Lectures by Kell Mortensen. Further information will follow on Monday August 18th.

Reading material to be read in connection with lectures (attached):

- Intro and Chapters 2, 3.1 and 3.2 in “Small-angle scattering studies of biological macromolecules in solution” (Svergun and Koch)

Recommended reading guide: Prior to lecture on Monday, August 18th: “Read Introduction” and sections 2.1 and 2.2 carefully. Cursory reading of 2.3 and 2.4, 3.1 and 3.2. **After lecture:** Careful reading of 2.3 to 3.2.

Bring laptop and download software ahead of the course:

Bring your own laptop to the course and download, ahead of the course, the software “Primus” or, alternatively the entire “ATSAS” package (includes Primus) at D. Svergun’s Group homepage:

<http://www.embl-hamburg.de/biosaxs/download.html>

NB: The program is free of charge for non-commercial users (i.e. use your university e-mail address). The program is small and may easily be downloaded via a “home”-connection.

Also download the test data set that we will need using the following link:

<https://dl.dropbox.com/u/4190838/bsa.zip>