Reflectometry day for Neutron Scattering Course
August the 23rd, 2013.

Theoretical Session

9.15-9.30. Scattering length and contrast matching, Marité Cárdenas. KIKU
9.45-10.45. Reflectometry Concepts, Hanna Wacklin. ESS.
11.00-12.00 Examples from Reflectometry in Soft Matter, Tommy Nylander. LU.

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Practical Session

13.15-14.30. Future Instrument Scientists. How the reflectometer works
15.00-16.30. Future Users. Hands on Fitting and understanding Reflectivity curves.
16.30 -17.00 Discussion.

Reading Material:

First two chapters by Penfold in the book "Neutron reflectometry : a probe for materials surfaces : proceedings of a technical meeting / organized by the International Atomic Energy Agency and held in Vienna, 16-20 August 2004. — Vienna : The
Agency, 2006."

A review in Soft Matter:
T Nylander, RA Campbell, P Vandoolaeghe, M Cárdenas, P Linse, A Rennie. Neutron reflectometry to investigate the delivery of lipids and DNA to interfaces, *Biointerphases* 2009, **3**, FB64.

Future Instrument Scientists:
Let's look how the reflectometer works. A simple virtual instrument in McStats. How can we make sure our instrument is aligned? How do we set the optimal q-range to study a specific interface?

Future Users:
Let's find out how much structural information we can actually get with neutron reflection. For this we will fit some data, basically two exercises from http://rkt.chem.ox.ac.uk/teaching.html
Exercise 1 and 5.