

McStas - Mantid

ESS McStas Training 2016
May 30th - June 1st



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McStas



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Exercise: McStas-Mantid

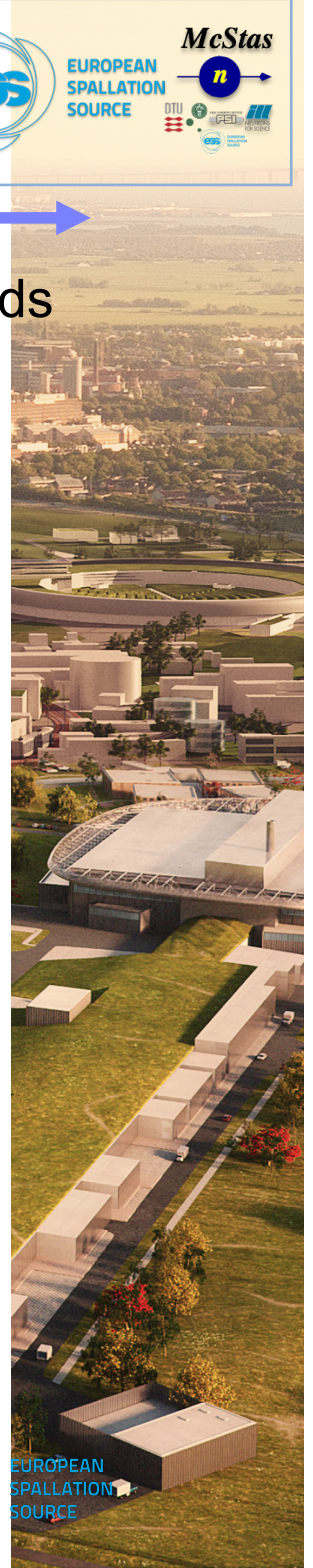
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Purpose of the exercise is to be familiar with some McStas–Mantid key words

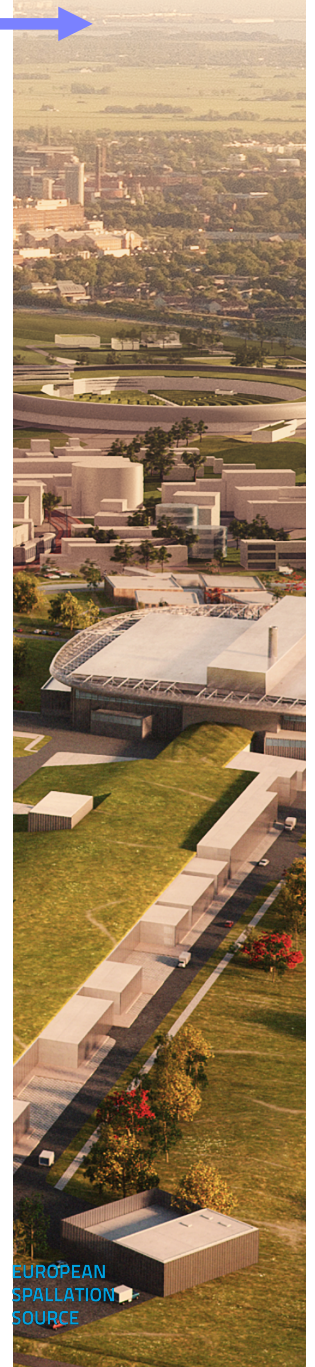
- ◆ Learn how to use **McStas-Mantid interface**
- ◆ Learn about the **Nexus file format**
- ◆ Learn about **IDF** (Mantid Instrument Definition file)
- ◆ Learn how-to use already developed (reduction) **algorithms in Mantid**
- ◆ Learn about **Python scripting** in Mantid

- ◆ McStas files:
 - ◆ templateSANS.instr
 - ◆ templatedSANS_Mantid.instr
 - ◆ templatedSasview_Mantid.instr

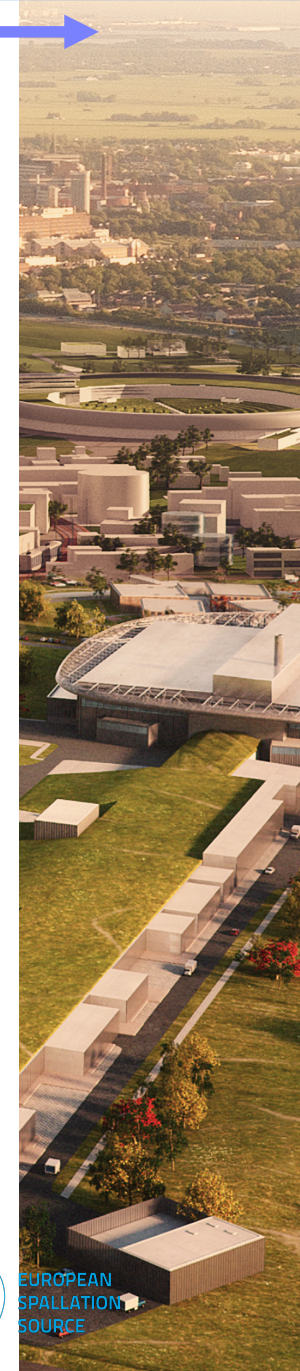
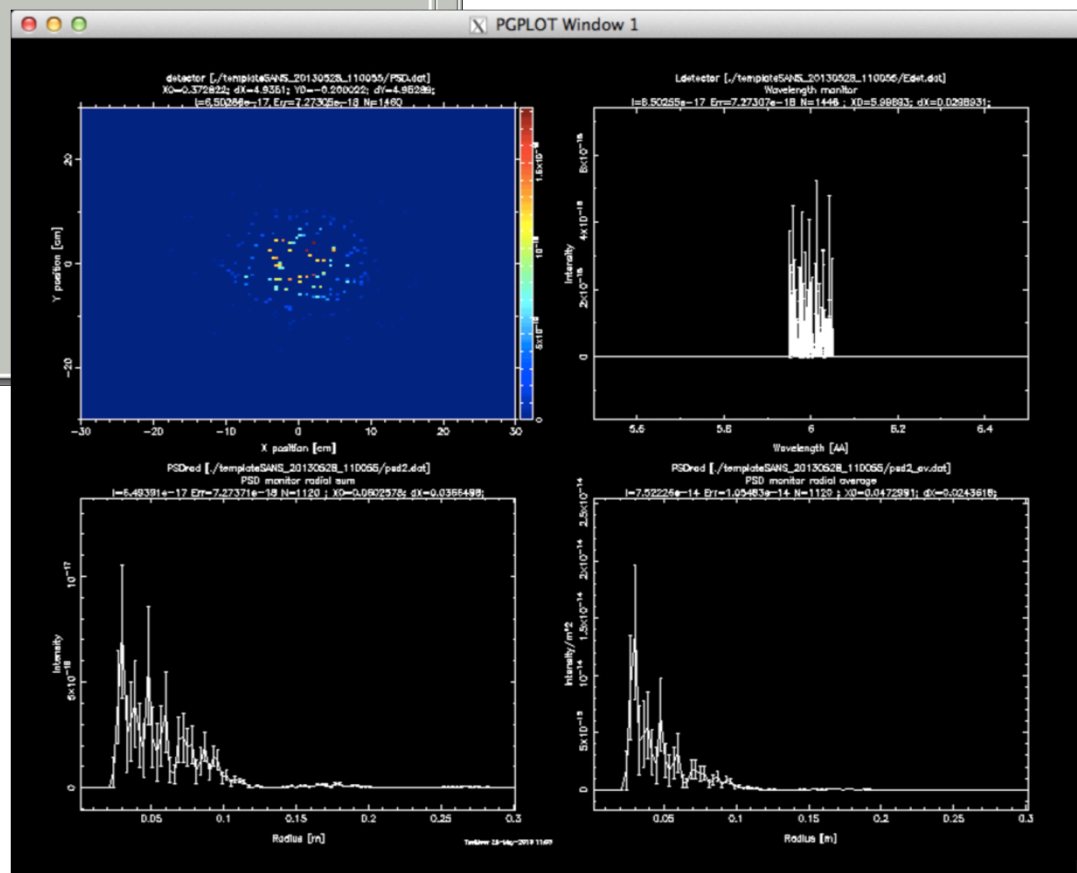
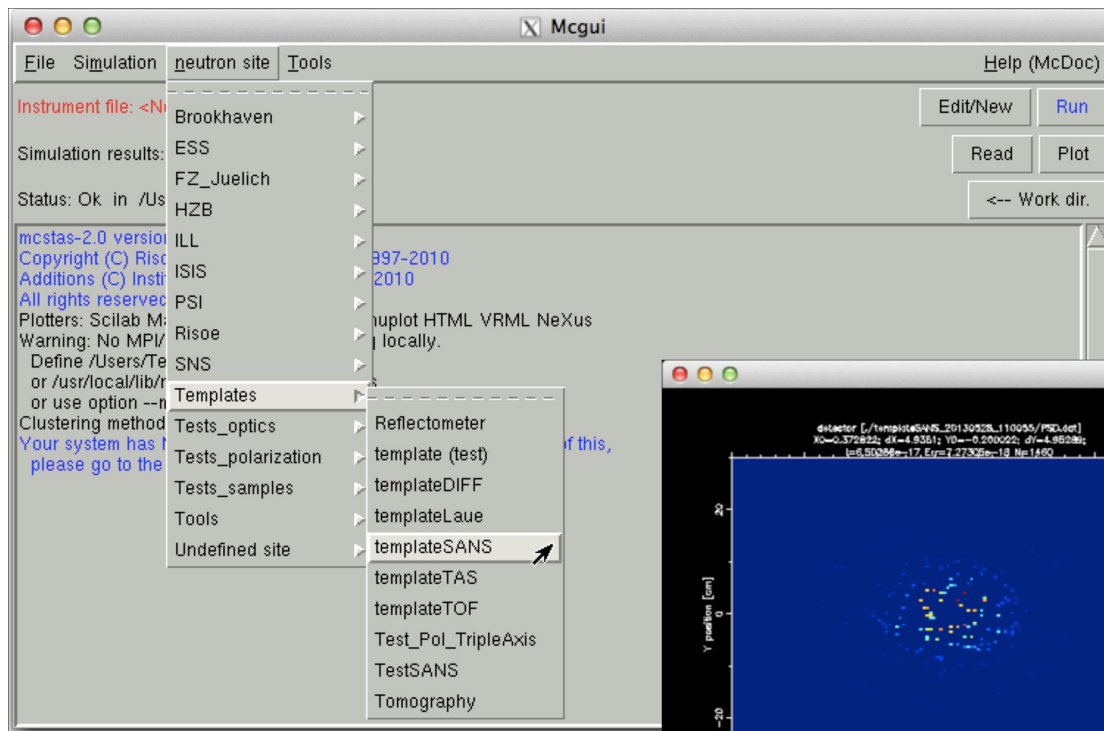


Agenda

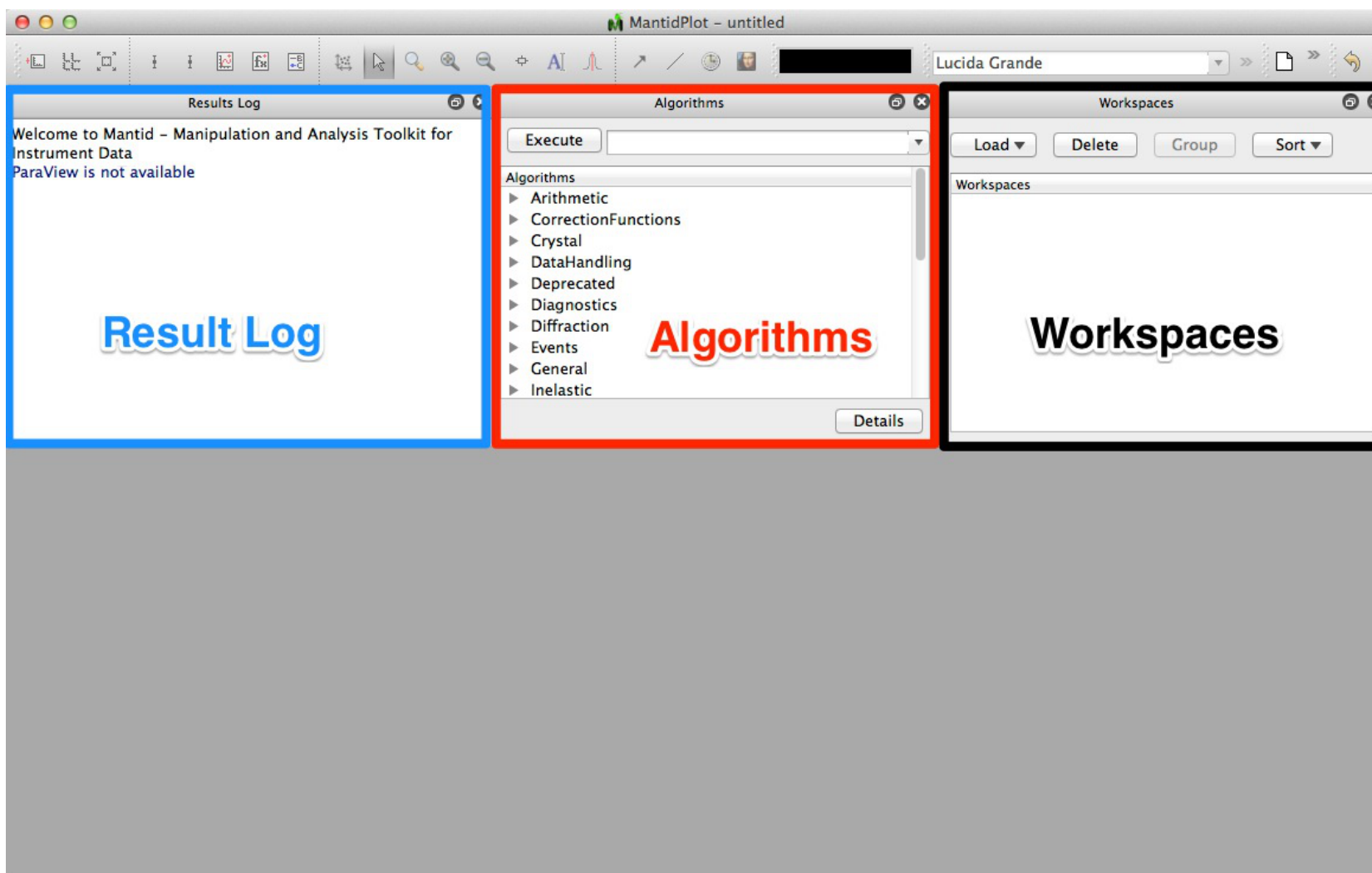
- ◆ A brief introduction to the
 - ◆ McStas GUI
 - ◆ Mantid GUI
 - ◆ View McStas data in Mantid
 - ◆ Simple data analysis in Mantid
- ◆ Exercise
 - ◆ How to use the McStas Mantid interface



McStas GUI

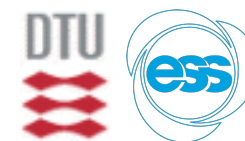
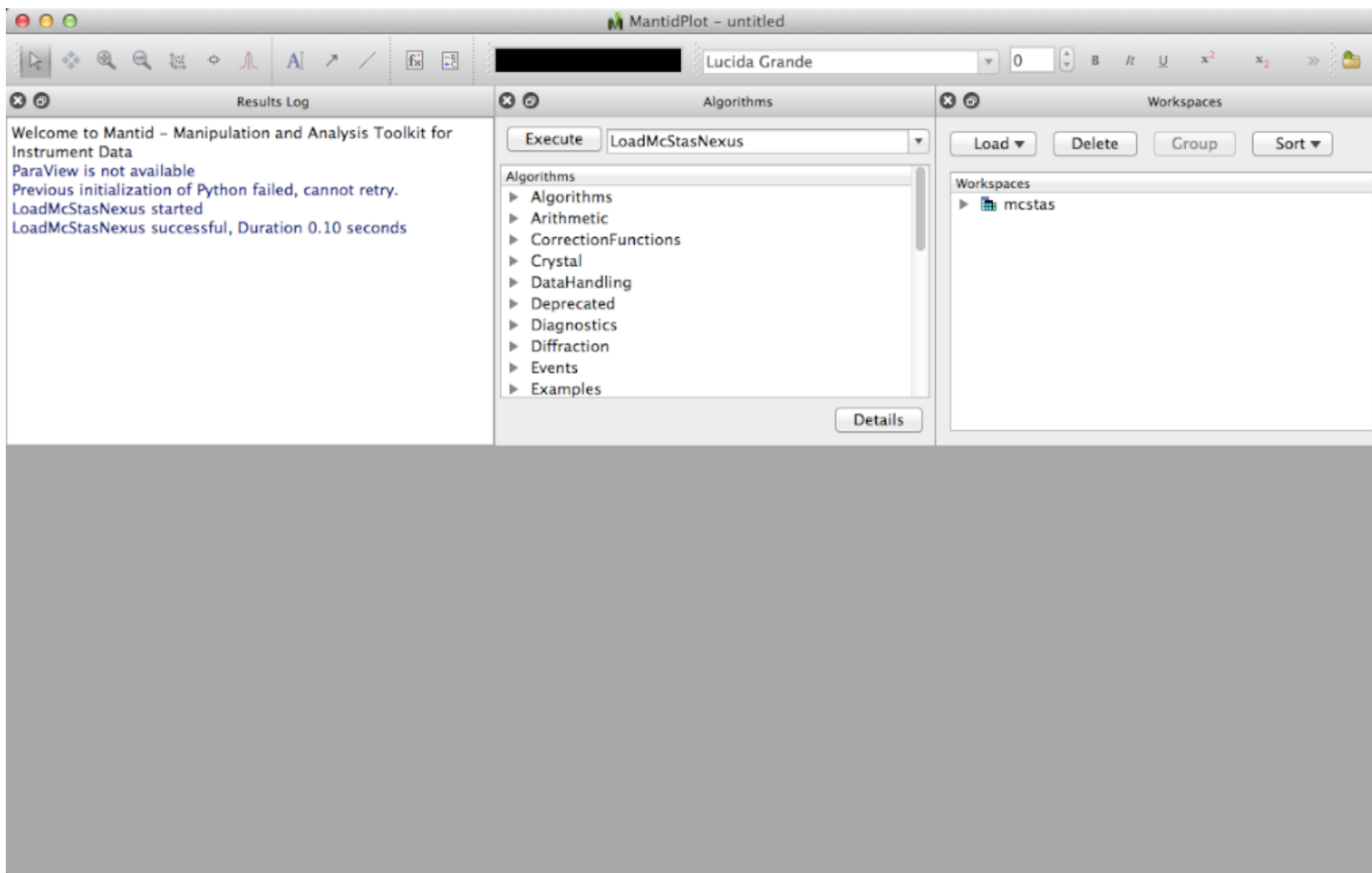


Mantid GUI



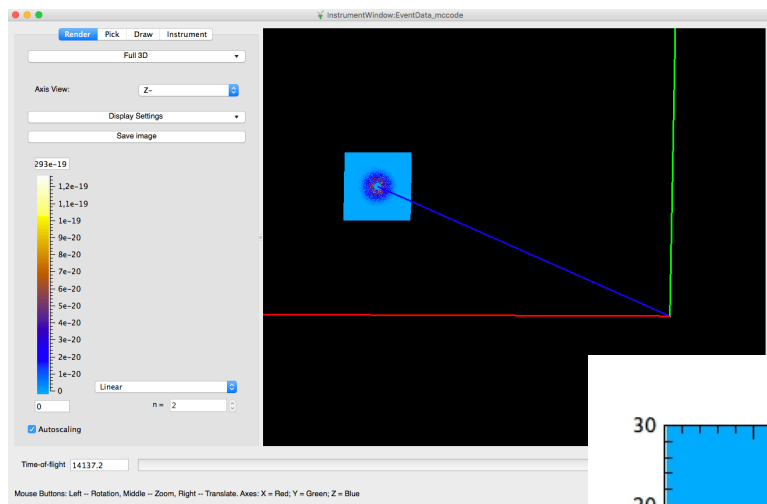
Load McStas Nexus data

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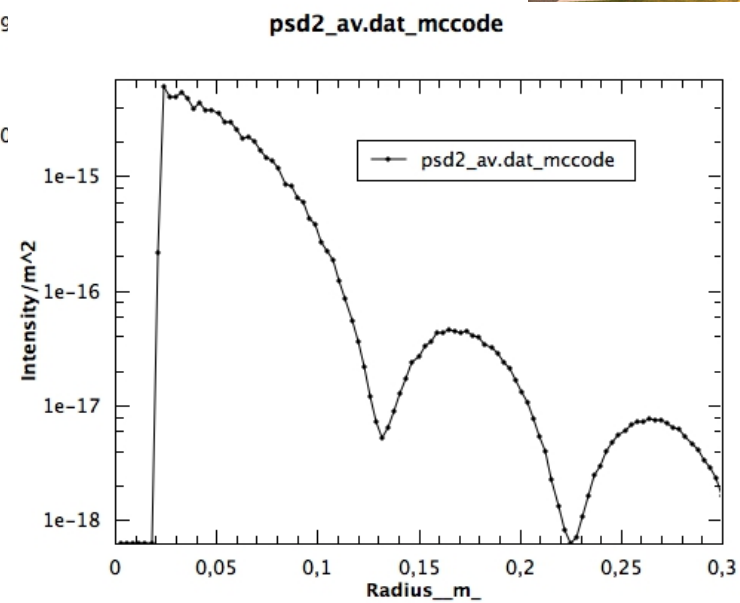
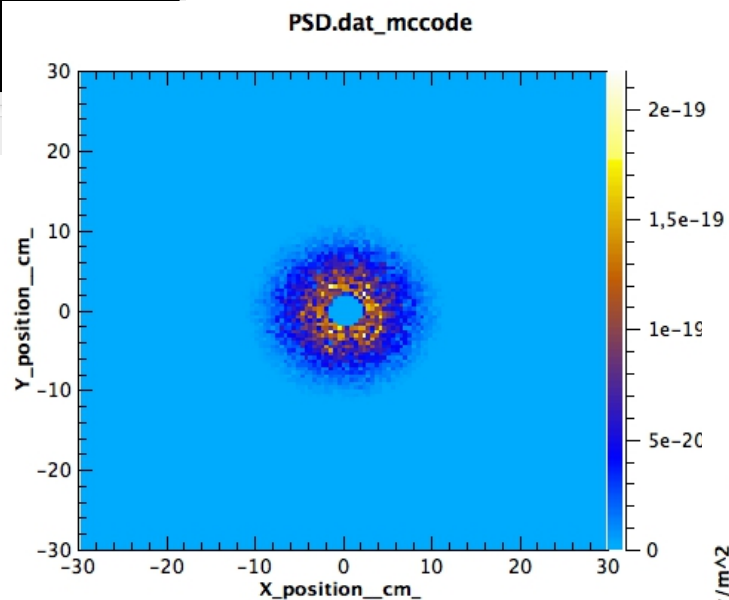


McStas data in Mantid

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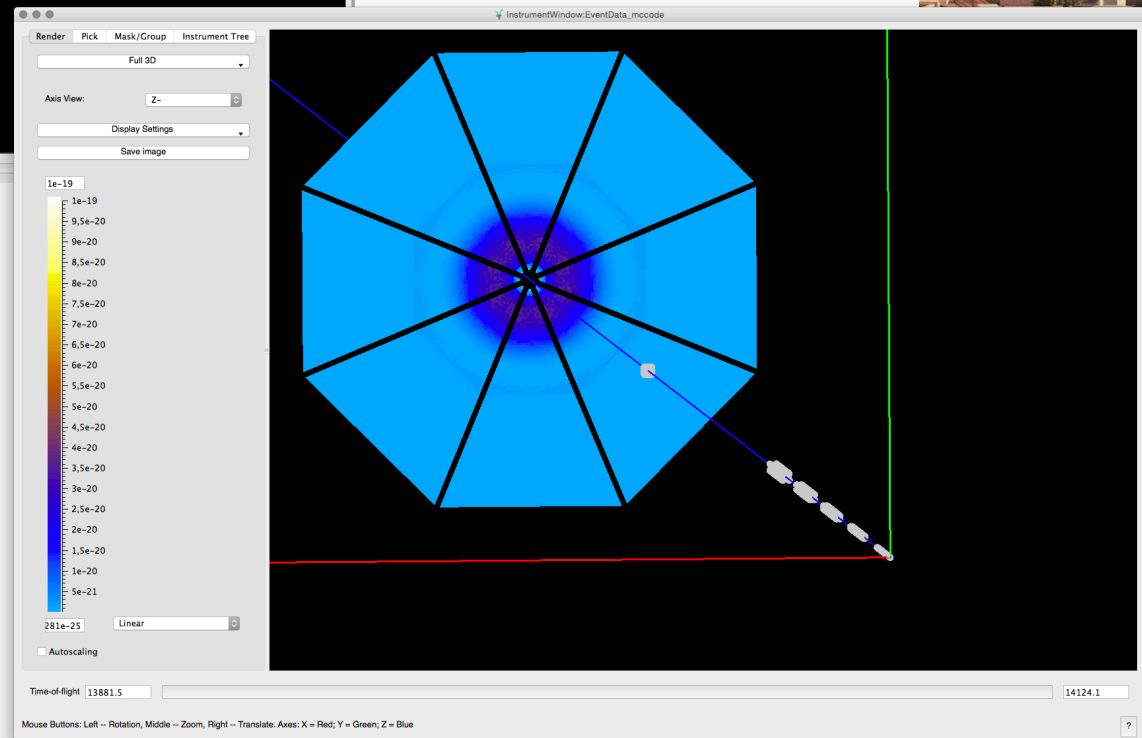
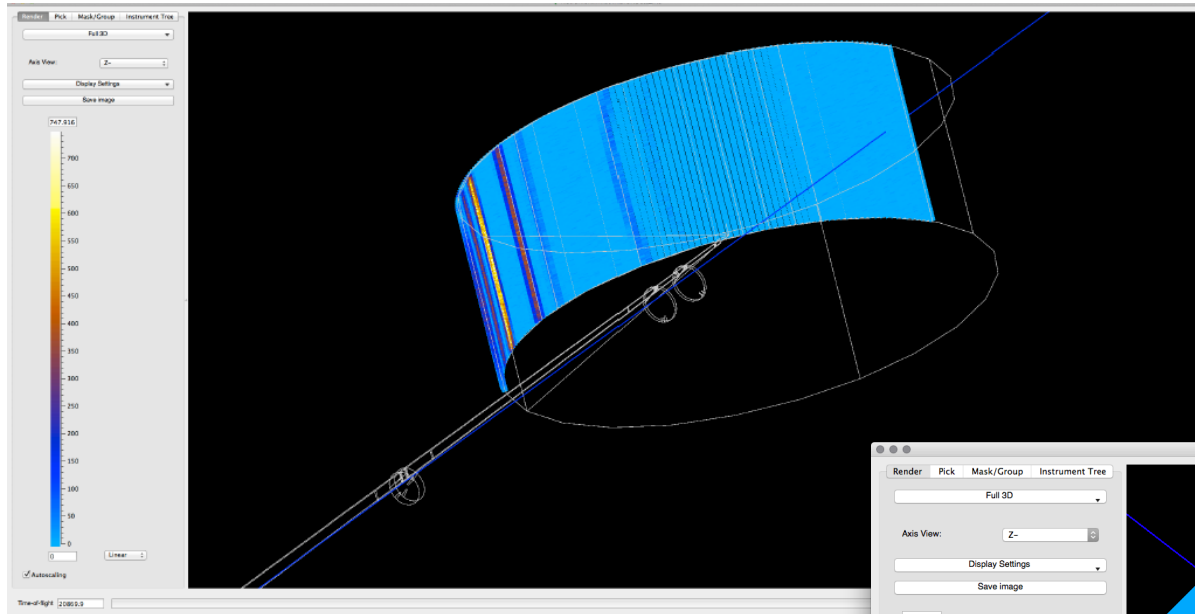


templateSANS_Mantid.instr



IN5 (ILL) and LoKI (ESS)

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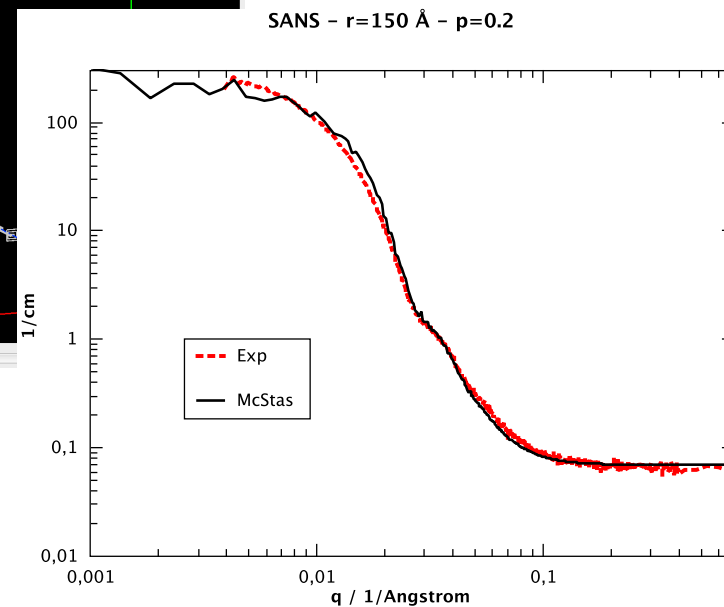
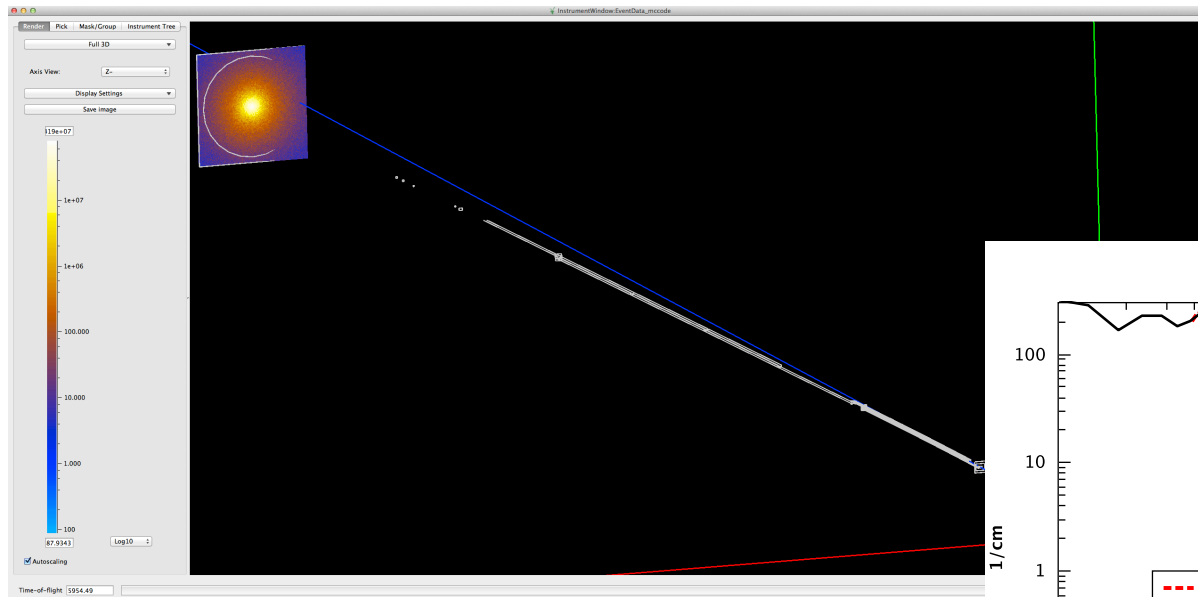


Data reduction and analysis

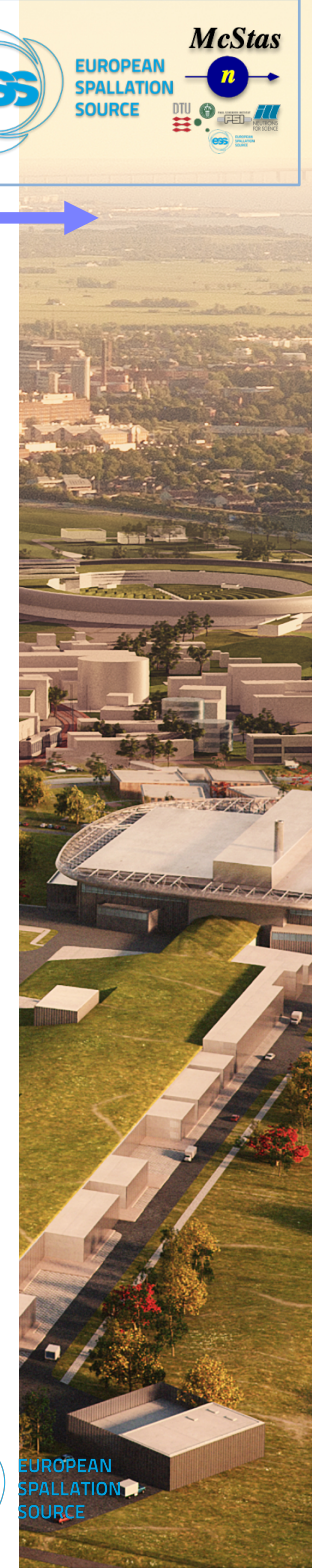
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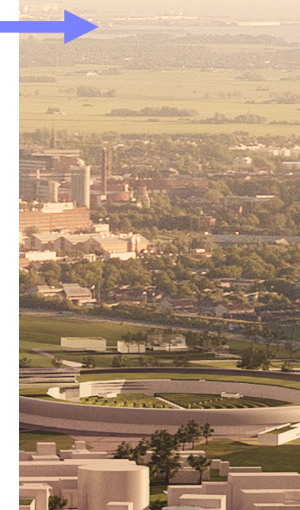
Mantid view of the McStas event data generated for the ISIS_SANS2d.instr file.



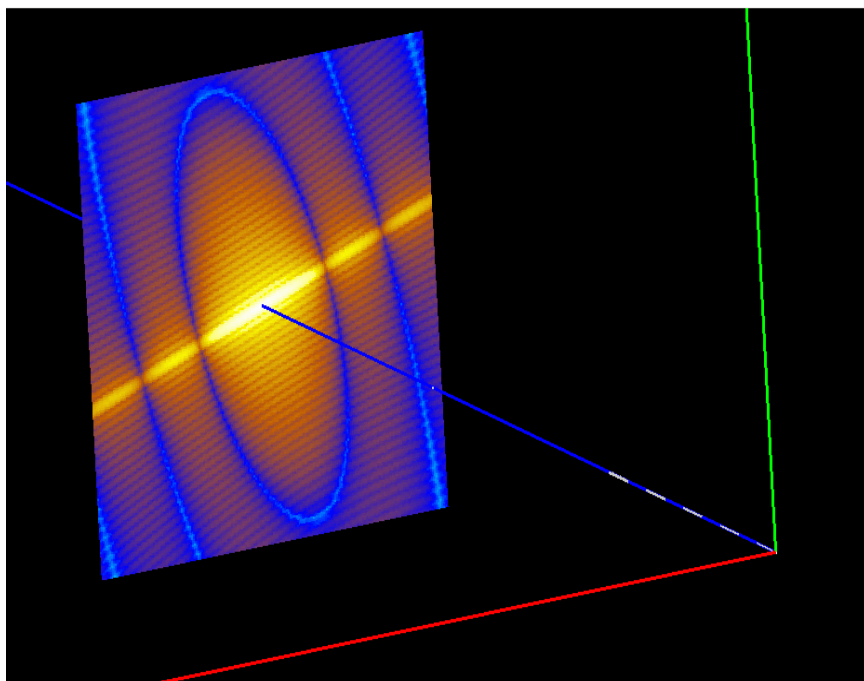
Comparison of rescaled scattering intensity $I(q)$ derived from the experimental data and a McStas simulation.



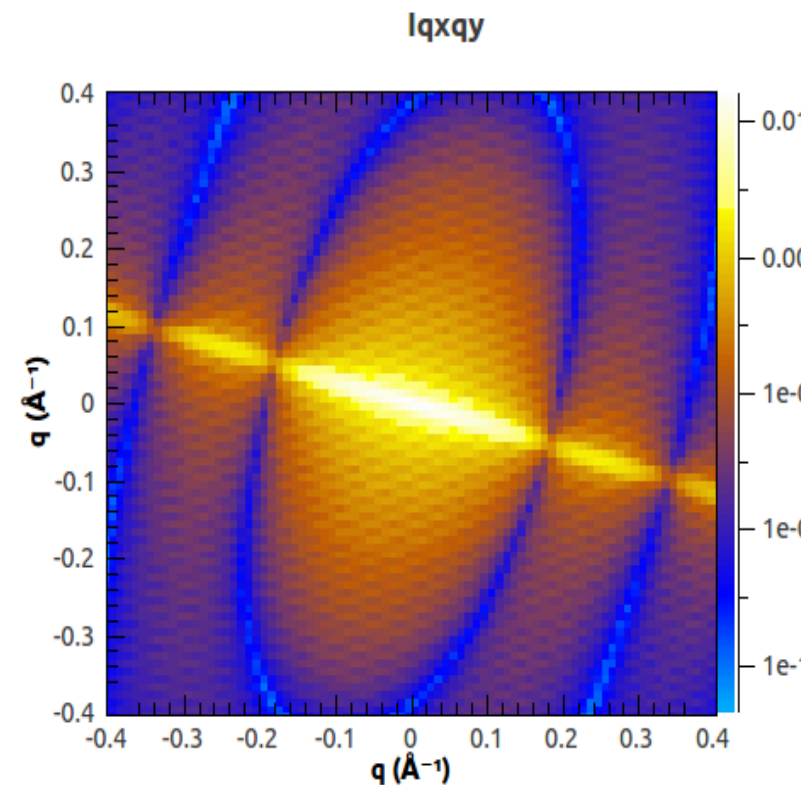
Use Mantid algorithms



2D scattering kernel in McStas: hard cylinders in a dilute solution.



$I(q_x, q_y)$ obtained from the McStas event data by using Mantid.

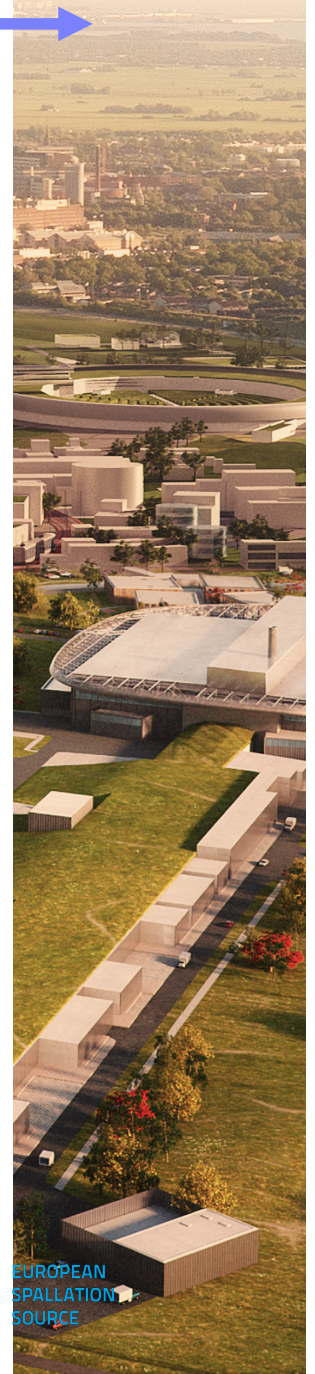


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◆ Exercise: McStas-Mantid



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