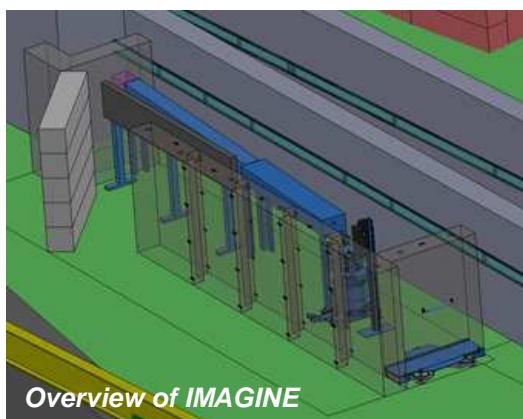


IMAGINE

Imaging station with cold neutrons at the Laboratoire Léon Brillouin

Laboratoire Léon Brillouin, UMR 12, CEA-CNRS, Gif Sur Yvette, France
 Contact: Frederic.Ott@cea.fr



Technical characteristics

- Cold neutron spectrum ranging from 3Å to 20Å
- Flight path from 3-9 m
- Whole experimental area on tanzboden
 - Flexibility for the sample environments
- Source size from 6 to 25mm in diameter
- Spatial resolution: ~50µm
 - sCMOS camera coupled to Li scintillator
 - Fuji image plate
- Fields of view
 - 500x200mm² or 100x100mm² or 26x26mm²
- Samples up to 200 kg
- Possibility to perform tomography
 - Data processing with Octopus or TomoJ
 - Use of a GPU calculator

Scientific interests

- Agro-Food
- Cultural Heritage
- Geology
- Metallurgy
- Material science

Upgrades

- Velocity selector (winter 2014)
- Double crystal monochromator (spring 2015)
- Microchannel plate detector (summer 2015)

Sample environments

Humidity chamber



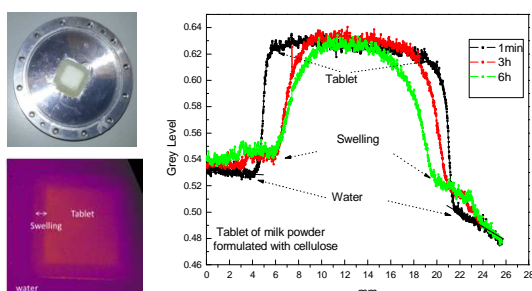
Furnace + electrical measurements



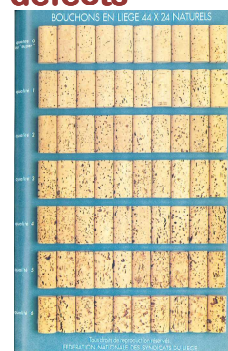
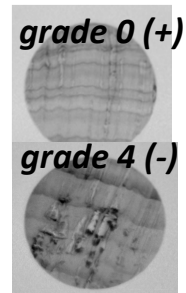
Coupled MRI + neutron imaging



Milk powders dissolution in water: impact of agglomeration and formulation



Quality grading of cork stoppers: amount of defects inside the material



Call for proposals to obtain beam time on IMAGINE: October 1st and April 1st
<http://www-llb.cea.fr/>

F. Ott
 C. Loupiac
 S. Desert
 A. Helary
 F. Gibert
 F. Cousin
 V. Klosek
 J. Teixeira