

# The Institut Laue-Langevin - European neutron source



**58 MW thermal power – highest constant flux neutron source globally and leader of neutron science and technology for 40 years**

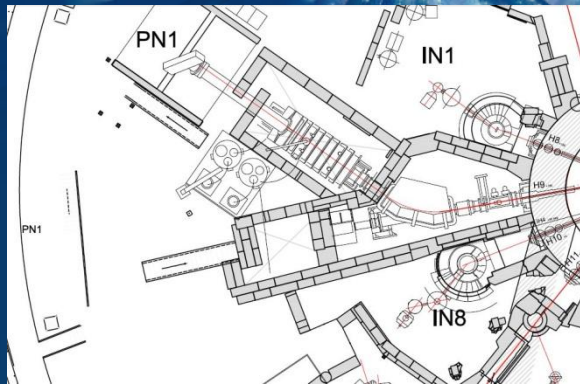
**42 instruments**

**More than 750 experiments per year**



# IMAGING OPTIONS FOR THE ILL

Alex Evans, Institut Laue-Langevin, Grenoble, France



NEUTROGRAPH at ILL Grenoble flux of  $3 \times 10^9$  n/cm<sup>2</sup>s and a collimation of L/D=140. Fast radiography, ms time resolution, sub minute tomo

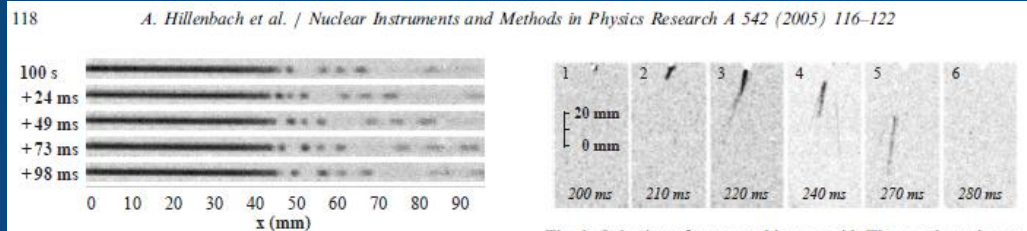


Fig. 2. Boiling of pentane inside a steel tube. 10 ms exposure time.

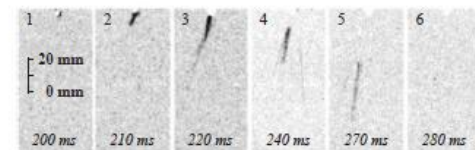
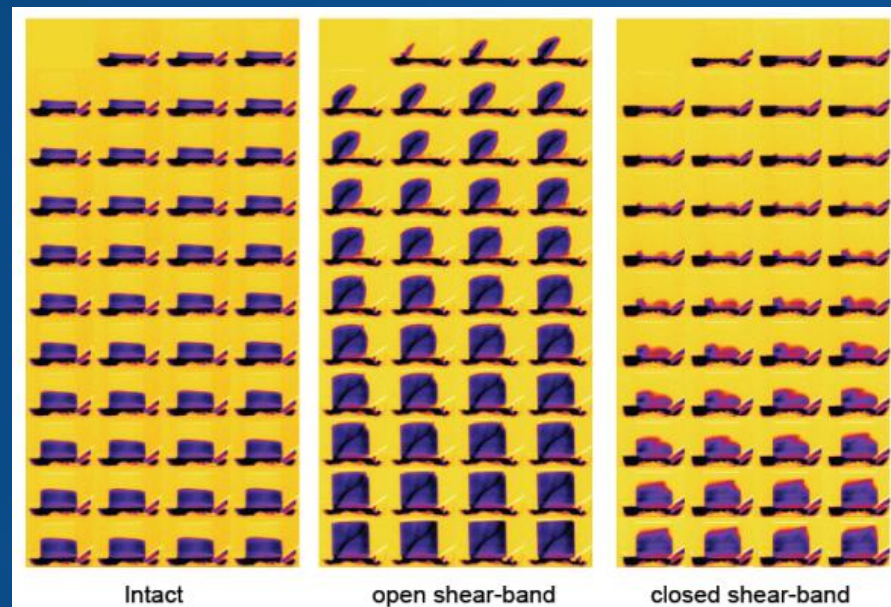


Fig. 3. Injection of water and boron acid. The nozzle at the top (not visible) injects a short pulse.



Electrically driven four-piston BMW engine - Universität Heidelberg, PSI and TU München



Water uptake in shear banded rock –S. Hall, ESS/LUND

# IMAGEN

- Cold neutron imaging station on dedicated guide
- High flux  $2 \times 10^9 \text{ n cm}^{-2} \text{ s}^{-1}$
- White and tune-able mono
- Parallel and focused beam
- Long collimation length available
- Space for grating interferometer/polarisers
- Combined techniques, spatial resolved PGNAA, diffraction, SANS??
- Blank canvas – need support and feedback!
- Partners welcome!

