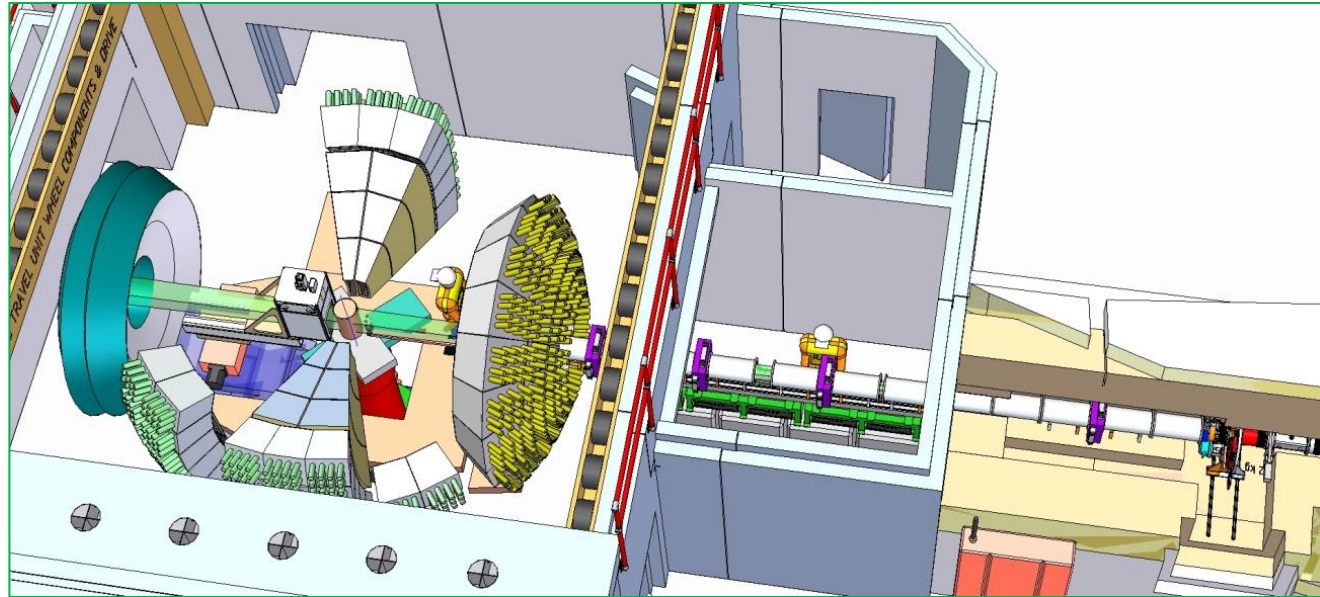
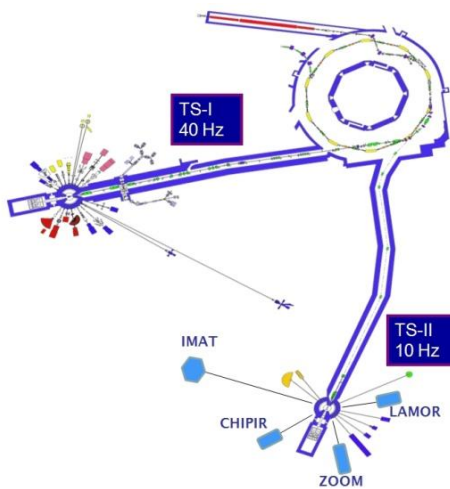




# ENERGY-SELECTIVE NEUTRON IMAGING ON IMAT

## ISIS Facility



Winfried Kockelmann, et al.  
STFC-Rutherford Appleton  
Laboratory, ISIS Facility  
Chilton, UK

**IMAT: Imaging and Materials Science & ISIS**

*New imaging facility*

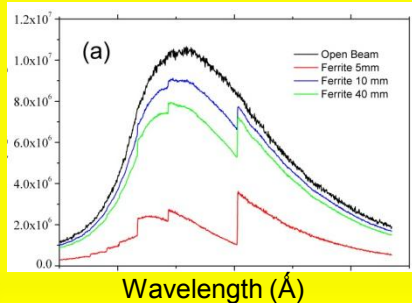
*Start of user-operation: 2015*

# New IMAT Facility: Methods

Real-space  
+ TOF Imaging

“Standard”  
Radiography/  
Tomography

Energy-selective  
Imaging



“Tomography  
guided”  
diffraction



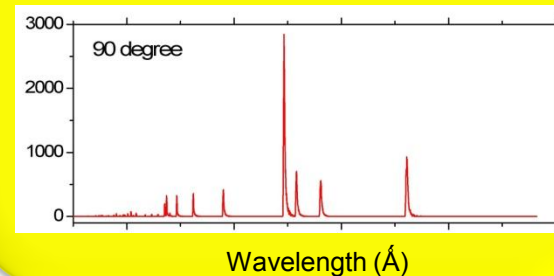
Interprete  
images

Diffraction

Composition  
analysis

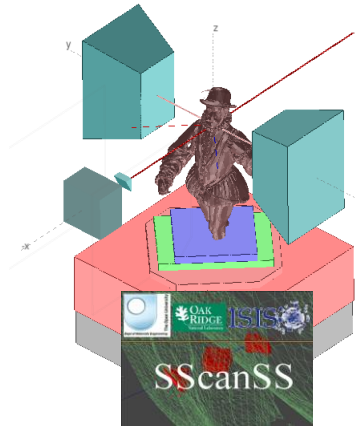
Strain & Stress

Texture





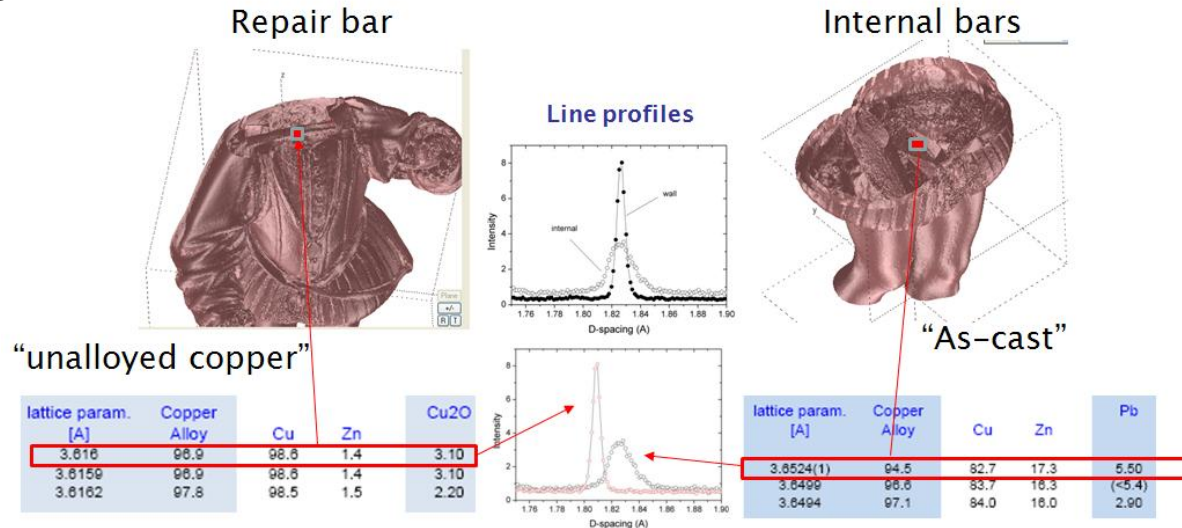
# Tomography-Driven Diffraction



Tomography analysis on NEUTRA @ PSI



Diffraction analysis on ENGIN-X @ ISIS

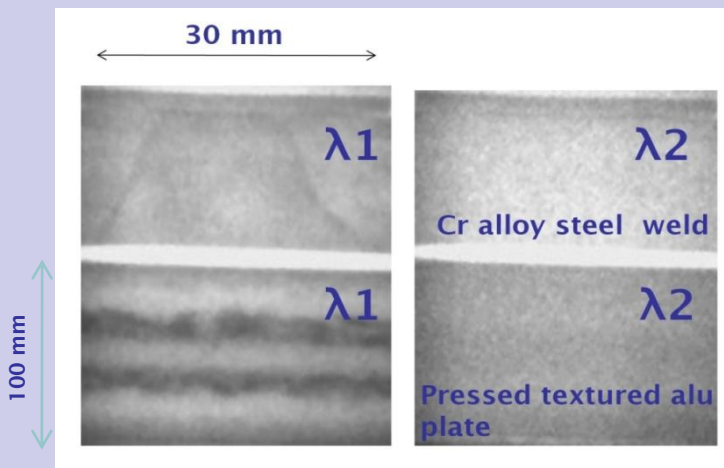




# Energy-selective Imaging

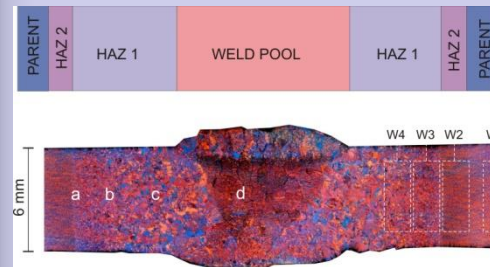
## Proof-of-principle experiments

Local texture variations with CCD camera prototype on ROTAX @ ISIS

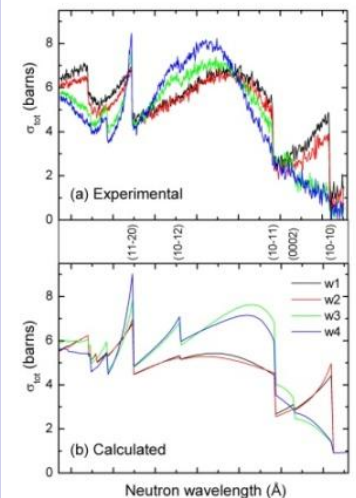
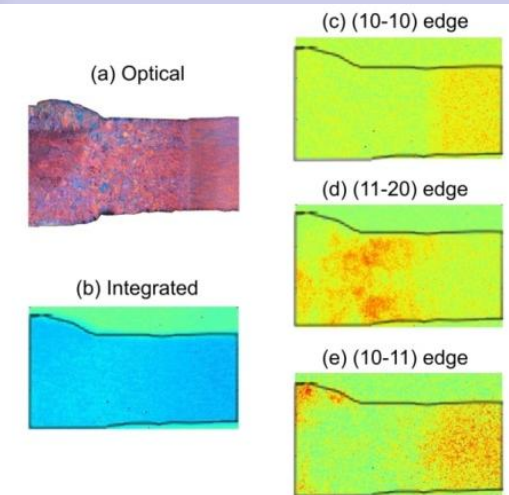


F. Aliotta, CNR Messina, unpublished.

TOF imaging: Bragg edge transmission analysis with Berkeley MCP detector on ENGIN-X @ ISIS (A.Tremsin)



Mapping of strain and texture with unprecedented spatial resolution.



J.R. Santisteban, A. Tremsin et al., J. Nucl Materials, 2011