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# Micro-Computed Tomography (MCT) Beamline

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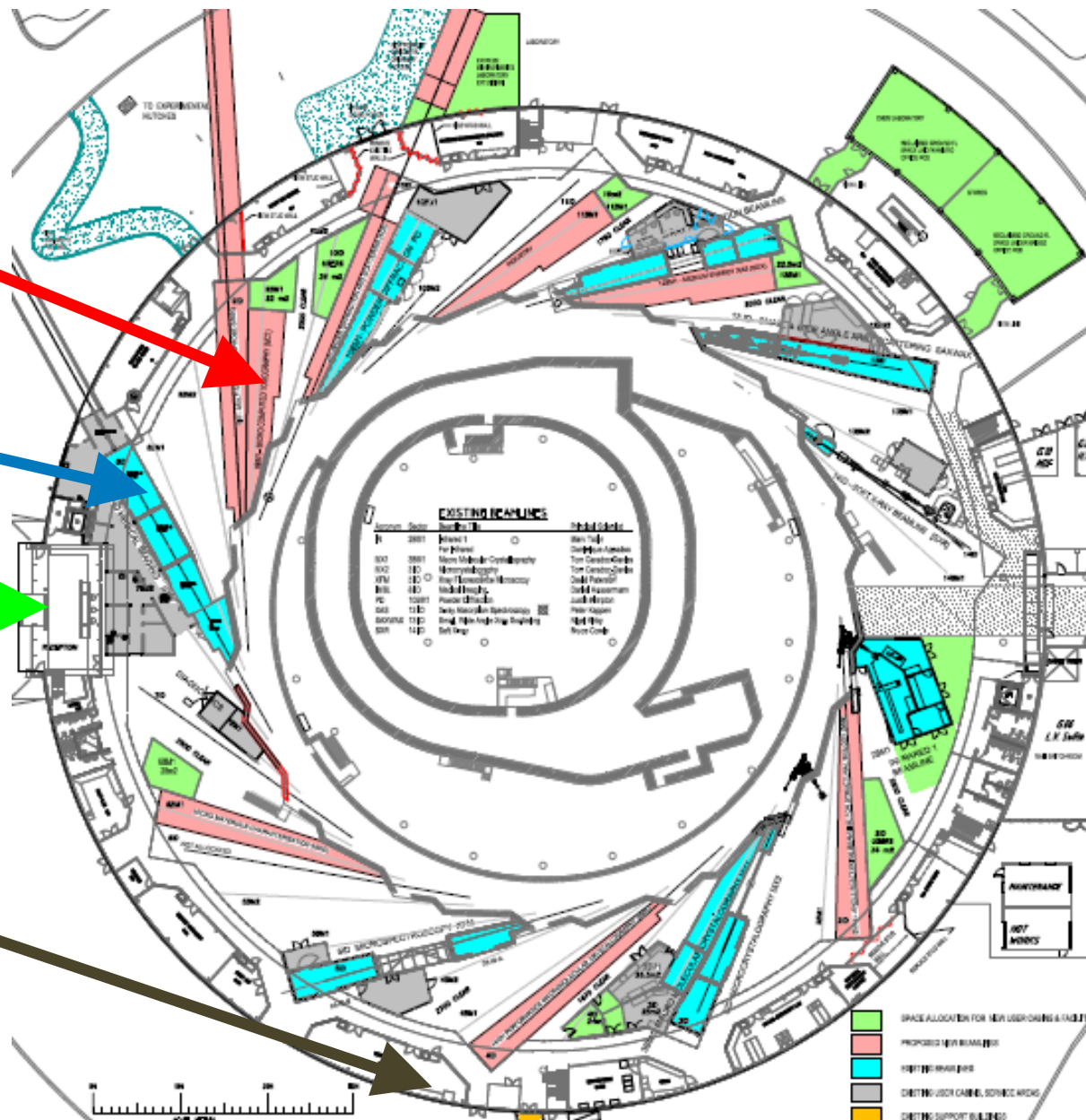
**CT@IMBL workshop**  
**28th May 2018**

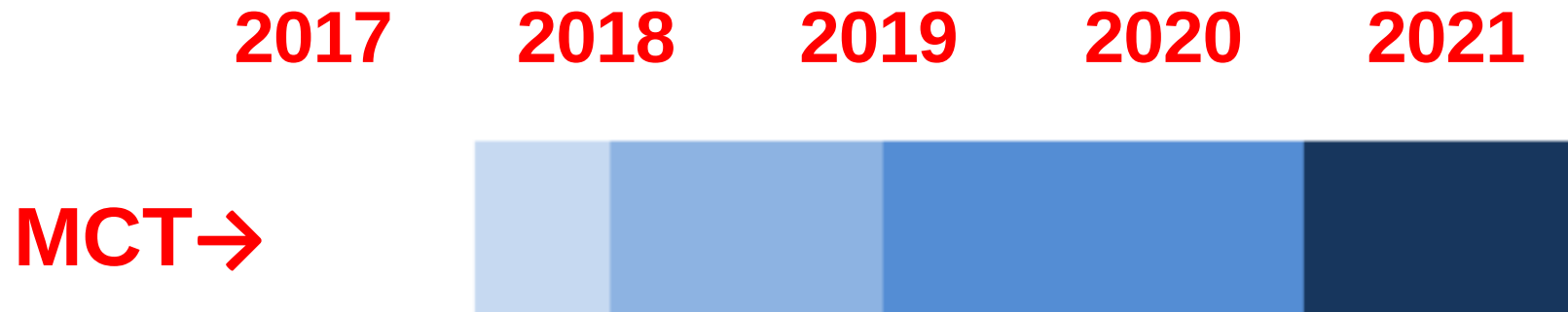
# Where?



Australian Government

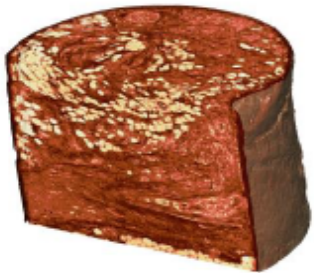
# Ansto





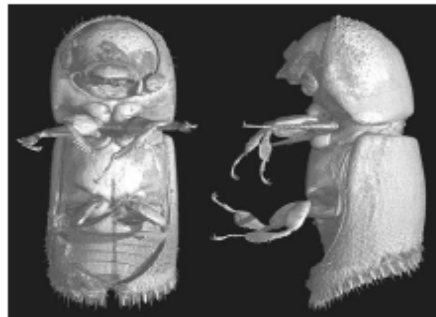
- Will strongly complement IMBL, allowing 3-D structures to be studied down to 0.7  $\mu\text{m}$  resolution
- Sub-second imaging in high-speed mode
- Bending Magnet: 8-40 keV
- 2 Endstations: Parallel Beam & High-resolution Focussing modes for imaging/ MCT  
Grating-based Phase Contrast MCT
- Strong & engaged user community based on past IMBL demand

## *Biological and Health Science*



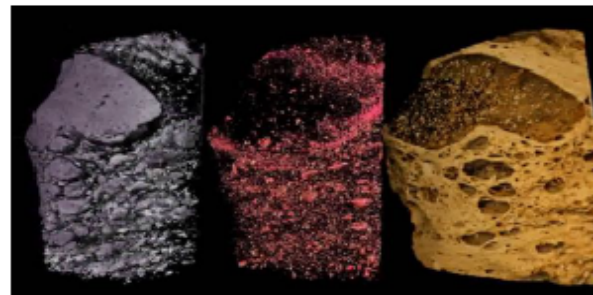
*Biomedical micro-CT,  
'virtual histology'*

## *Palaeontology*



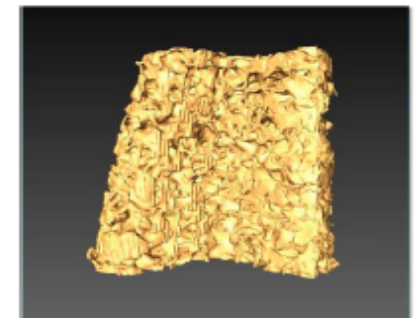
*Micro-fossils, Amber  
Encapsulated Objects*

## *Earth Sciences*



*Vulcanology,  
Mineral Processing*

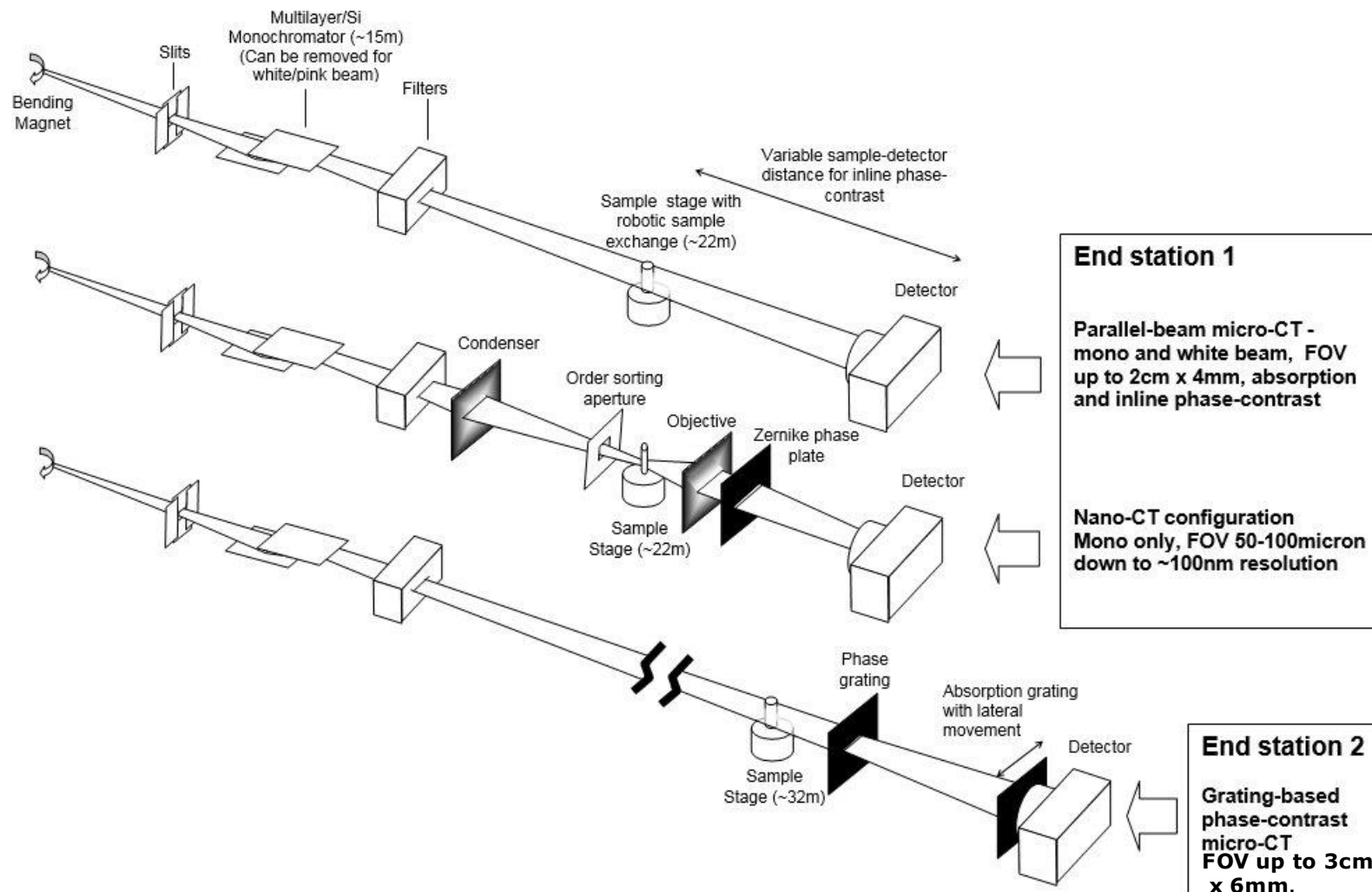
## *Materials Science*



*Soft-matter,  
biomedical materials,  
additive manufacturing*

To design and build a world-class Micro-Computed Tomography (MCT) beamline capable of:

- Non-destructive, 3D sample characterisation with sub-micron spatial resolution
- High-throughput/ high-speed sample mode
- Innovative phase-contrast modality to improve sample information content
- Using non-ambient sample environments
- Robotics for automatic sample exchange
- Supporting state-of-the-art IT infrastructure for data processing, reconstruction, visualisation and analysis



Two end stations not running simultaneously