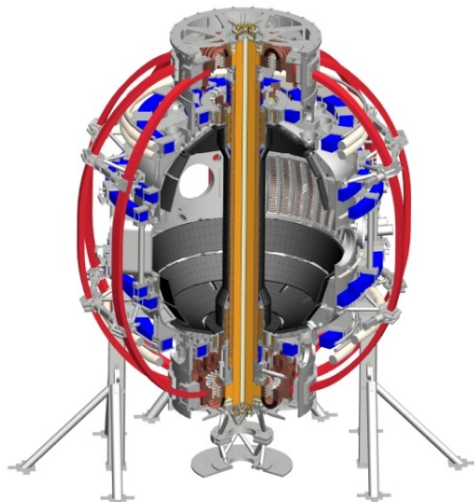


Materials Analysis Particle Probe (MAPP) Commissioning

Coll of Wm & Mary
 Columbia U
 CompX
 General Atomics
 FIU
 INL
 Johns Hopkins U
 LANL
 LLNL
 Lodestar
 MIT
 Lehigh U
 Nova Photonics
 ORNL
 PPPL
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Jean Paul Allain,
*Felipe Bedoya, Robert Kaita, Robert Ellis, Matt Lucia, Charles
 Skinner*

NSTX-U Research Forum
PPPL
February 24-27, 2015



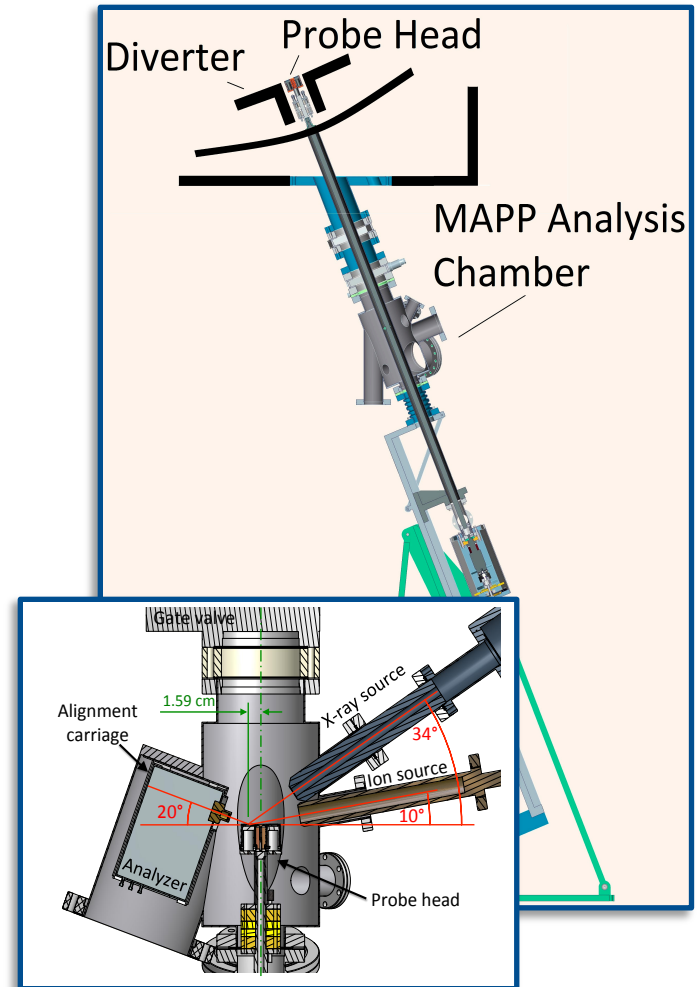
Culham Sci Ctr
 York U
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 ASIPP
 CIEMAT
 FOM Inst DIFFER
 ENEA, Frascati
 CEA, Cadarache
 IPP, Jülich
 IPP, Garching
 ASCR, Czech Rep

Motivation

- Ensure proper functioning of diagnostic capabilities in MAPP

- Three major phases:

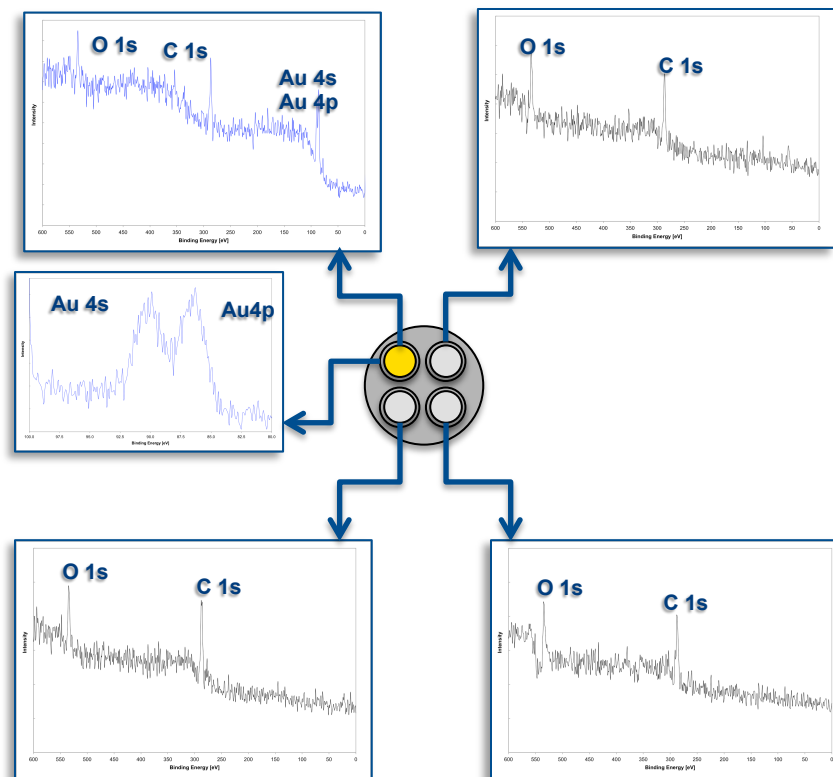
- **Instrumentation power up**
 - Virtual instruments check
 - Vacuum systems check
 - Safety interlocks check
- **MAPP probe insertion and retraction**
 - Proper alignment
 - Interference free insertion and retraction
- **MAPP surface analysis operation**
 - Calibration
 - Virtual instruments sync



Expected outcome

- Standard sequence in MAPP:

- X ray gun on/off
- Analyzer on
- XPS data collection
- Sputter cleaning of samples
- Repeat XPS data acquisition



- Set temperature to heaters
- Acquire RGA data

- If steps above are properly executed, commissioning has been successful