PETRA IV Scientific Instrumentation Proposal ID-XXX

Title

Speaker of Proposal

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Co-Proposers

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Abstract

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Required X-ray beam and experiment specifications

X-ray beam specifications

Photon energy and/or range (keV)	e.g. 13 keV, ...
Energy resolution at required photon energy ($\Delta E/E$)	e.g. 1.3 x 10^-6 at 13 keV, ...
Spot size on sample (h x v) and/or range (nm)	e.g. 10 x 10 nm², ...
Divergence of the beam (h x v) and/or range (mrad)	e.g. 0.2 mrad, ...
Depth of focus and/or range (μm)	e.g. 1 µm, ...
Required flux on sample (ph/s)	e.g. 10^16 at 13 keV, ...
Required coherent flux on sample (ph/s)	e.g. > 10^15 at 13 keV, ...
Photon polarization	Any, Linear, Circular, ...
PETRA IV operation mode (Brightness or Timing)	Brightness
Other required properties (free text)	I also need, ...

Experiment Specification (Details in proposal)

Experimental method/technique	XRD, XPCS, ARPES, SAXS, GISAXS, ...
Photon energy scannable	Yes
- (if yes) Scan type	On-the-fly
- (if yes) Scan speed (μm/s, degree/s)	e.g. 0.1 keV/s, ...

Sample scannable	Yes
- (if yes) Scan type	On-the-fly
- (if yes) Scan range (μm / degree)	e.g. 1-2 µm, 0.1-3°, ...
- (if yes) Scan speed (μm/s, degree/s)	e.g. 0.2 µm/s, 0.01°/s, ...
Sample Environment (Temperature/Pressure/B-Field)	e.g. 10K, 20GPa, 2 T
Sample size/dim (h x v x l)	e.g. 100 nm x 100 nm x 1000 nm
Sample weight	e.g. 0.36 g
Temperature Stability at the sample (K)	e.g. 10 K, not critical, ...
Explicit detectors / Detector specification (free text)	e.g. Andor, Eiger, Percival, 2 kHz, 10Mpx, ..
Technical equipment (free text)	e.g. Pump-probe Laser, Magnet, CFDs, …
Computing and IT (free text)	e.g. Expected amount of data/day !!, real-time data analysis of detector required !!, data analysis tools, ...
Explicit type and/or demands of experiment	e.g. high throughput, high complexity, high-spatial resolution, high-q resolution, high-time resolution, high-energy resolution, high degree of coherence,
Science and Technology Drivers (CDR)	Life and Health
Research Category	e.g. Applied Science, Condensed Matter, ...
Other required specification (free text)	I also need, ...
Required On-site Infrastructure	
Required Laboratory (Bio S2/Clean room)	e.g. Biology Laboratory S2, ...
NanoLab	e.g. SEM, XPS, AFM, ...
Other on-site infrastructure (free text)	I also need, ...