## MEDSI2025 - 13th International Conference on Mechanical Engineering Design of Synchrotron Radiation Equipment and Instrumentation



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## Reconfiguration of the ASTRA beamline and its adaptation for Raman spectroscopy measurements

Tuesday 16 September 2025 17:00 (1 hour)

We present the reconfiguration of the ASTRA beamline (Absorption Spectroscopy beamline for Tender energy Range and Above) and its adaptation for combined X-ray absorption and Raman spectroscopy measurements. A new modular support system was designed and constructed to allow rapid and flexible reconfiguration of the end station, facilitating a broad range of experimental setups. Each vacuum chamber was equipped with an individual precision alignment system, while a central support rail mounted on the optical table ensured high positional accuracy relative to the synchrotron beam. A key part of the beamline modification was the design and construction of a new vacuum chamber with a port, allowing the Raman microscope head to reduce the distance to the sample. This solution enabled simultaneous measurement of the sample using both X-ray absorption spectroscopy and Raman spectroscopy.

Footnotes

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