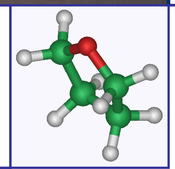
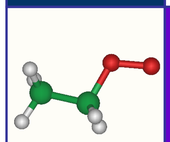
PAUL SCHERRER INSTITUT

PSI

SWISS LIGHT SOURCE

SLS





VUV

A Beamline for Vacuum Ultraviolet Radiation

Melanie Johnson, Thomas Gerber

Layout:

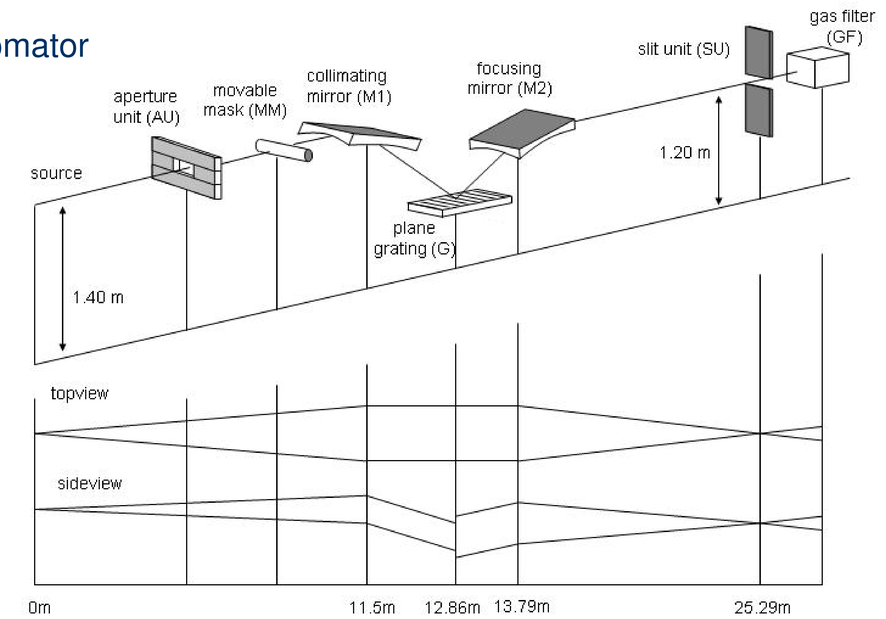
bendmagnet beamline, plane grating monochromator (constant deviation) in collimated beam, grazing incidence optics

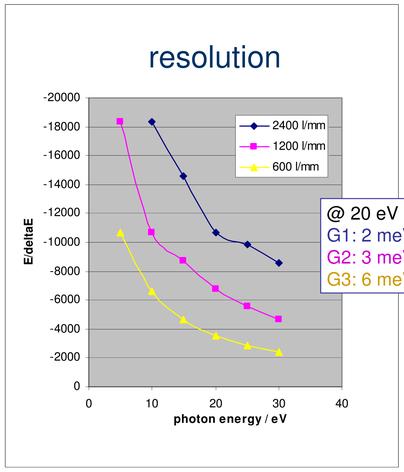
Advantages:

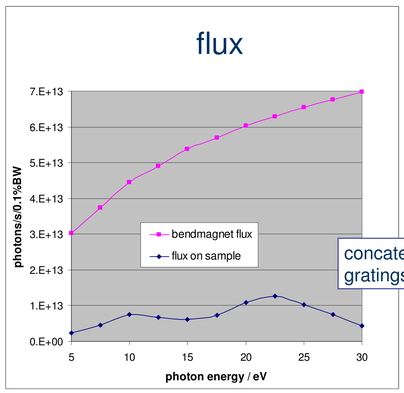
- no astigmatism (by grating)
- grating rotation = only movement
- high VUV reflectivity

Specifications:

- energy range 5 - 30 eV
- energy resolution $\Delta E/E \approx 10^{-4}$
- flux on sample $5 \cdot 10^{11}$ photons/s/10^{-4} BW
- spotsize at sample ca. 1 mm



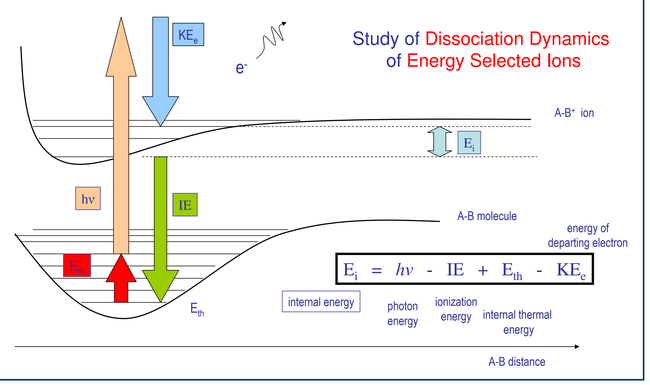




PEPICO

Photoelectron-Photoion-Coincidence

We study fragments of molecules which are important to combustion chemistry (i.e. peroxyl-radicals) with PEPICO.



End Station:

- molecular beam apparatus
- mass spectrometry
- photoion-photoelectron-coincidence spectroscopy (PEPICO)
- translational mass spectrometry
- laser photolysis
- fs pump-probe spectroscopy

Milestones:

- test of endstation - early 2006
- commissioning - August 2006
- user operation - 2007

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