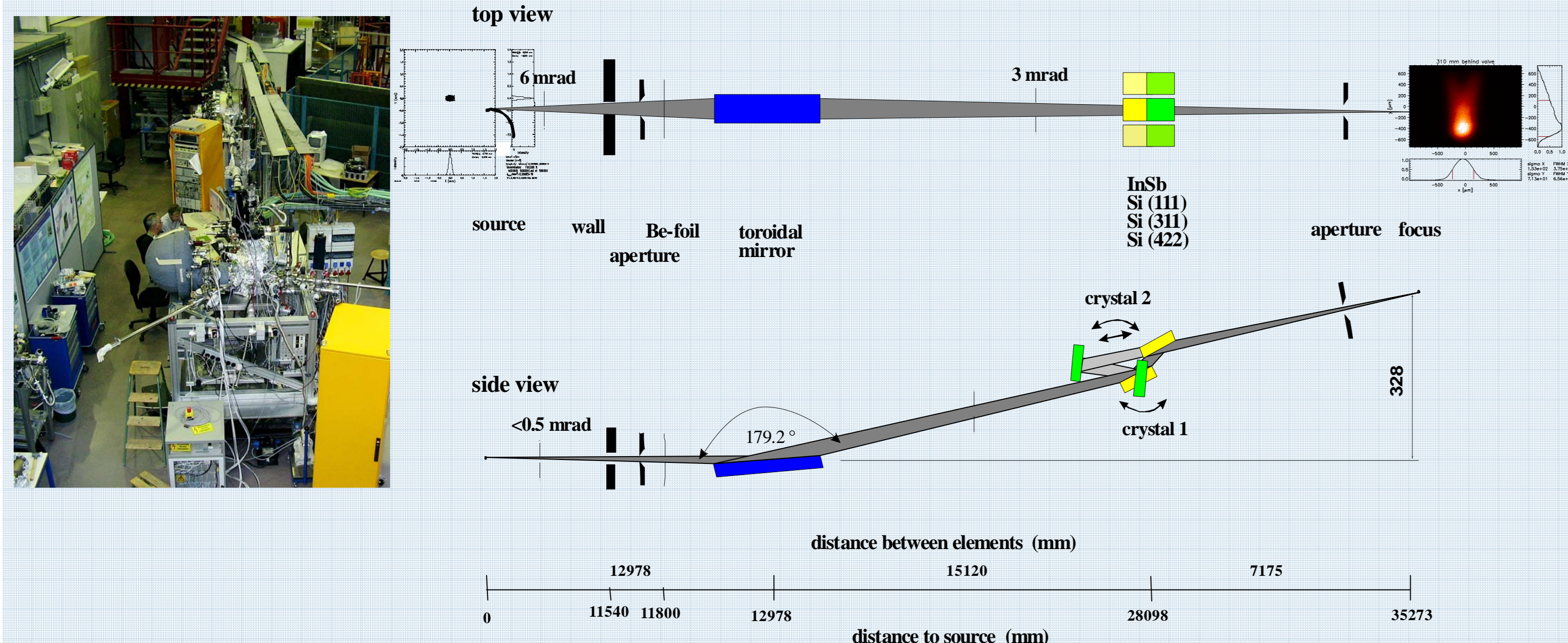


Bending Magnet Beamline

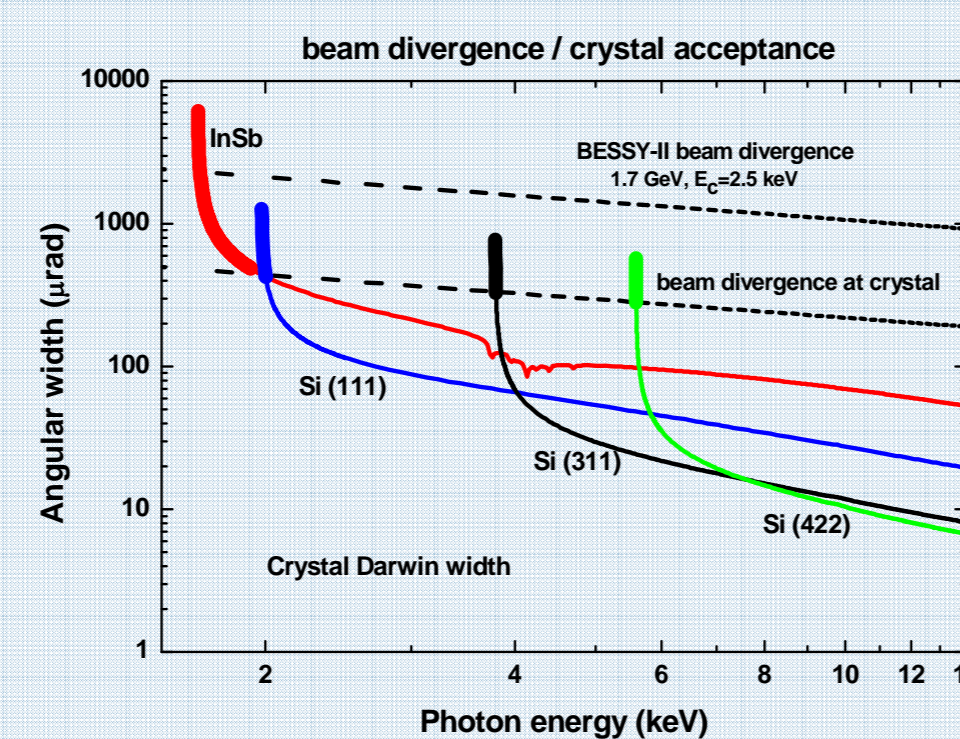


BESSY II Dipole 1.1 (1.7 GeV, $E_c=2.5$ keV)

- Beam size σ_x/σ_y : 65/40 μm
- Divergence σ_x/σ_y : 213 / 20 μrad
- Beamline acceptance: 6 x 0.5 mrad
- Max. Power: 45 Watt
- VIS/UV filter: 100 μm Beryllium, water cooled

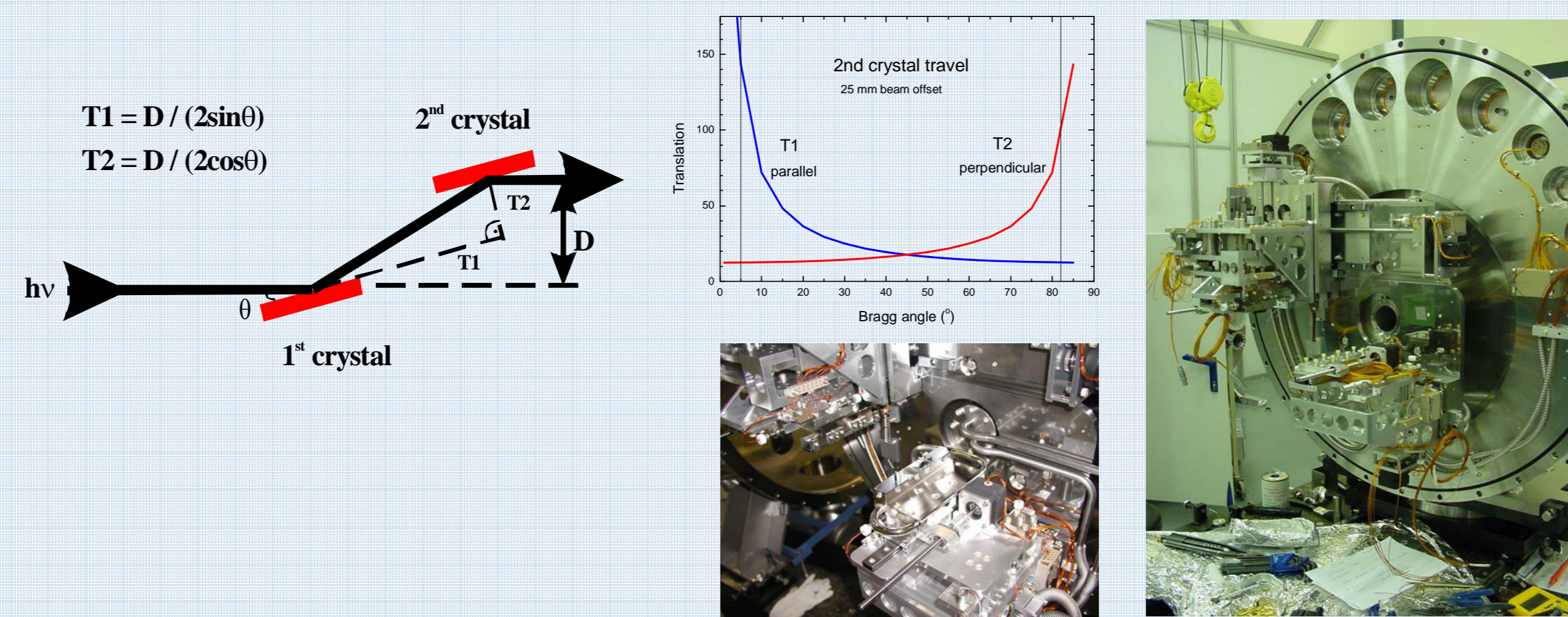
Focussing Optics

- Toroid Si/Pt (60 nm)
- $\theta=0.4^\circ$, 1:1.6 magnification
- 800 x 130 mm^2
- R: 2.35 km, ρ : 115 mm
- Slope errors: 5/1 arcsec RMS (sag./mer.)



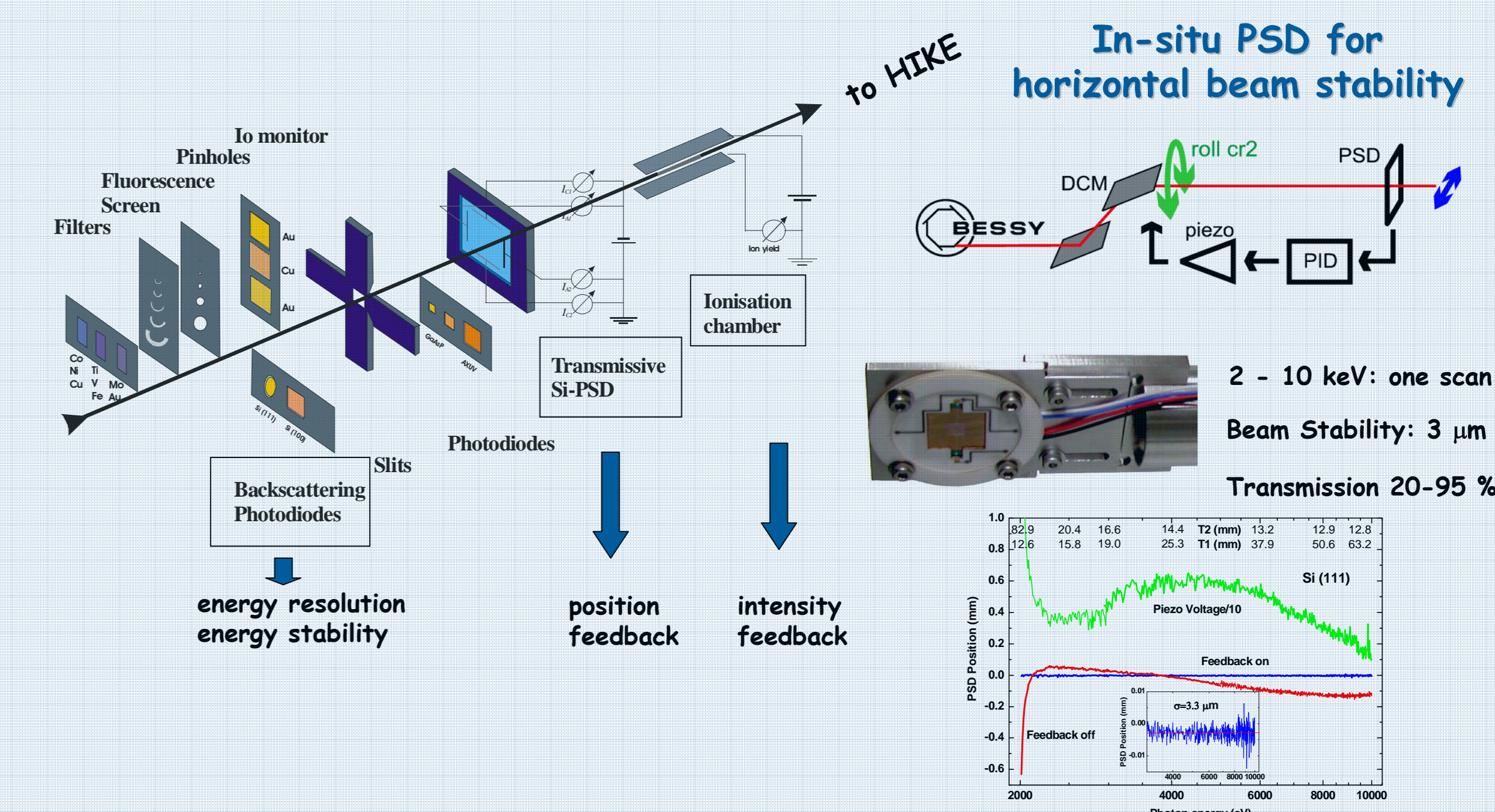
Crystal limited resolution
at low energies
(large Bragg angles)

Double Crystal Monochromator



- Bragg angular range: 5-82°
- Beam offset 25 mm
- Translational range T1/T2: 143/76 mm
- Energy range
(InSb (111) 2d=0.748 nm 1.670 -- 12 keV)
Si (111) 2d=0.627 nm 2.002 -- 12 keV
Si (311) 2d=0.328 nm 3.828 -- 12 keV
Si (422) 2d=0.222 nm 5.661 -- 12 keV
- In-Situ crystal exchange
- Water cooling of 1st crystal
- Heating option for 2nd crystal
- 5 UHV-motors for crystal positioning and change
- 3 Picomotors/Piezoactuators w. readout for pitch/roll
- Maximum Power on first crystal: 15 Watt at 300 mA

To Diagnostic Section

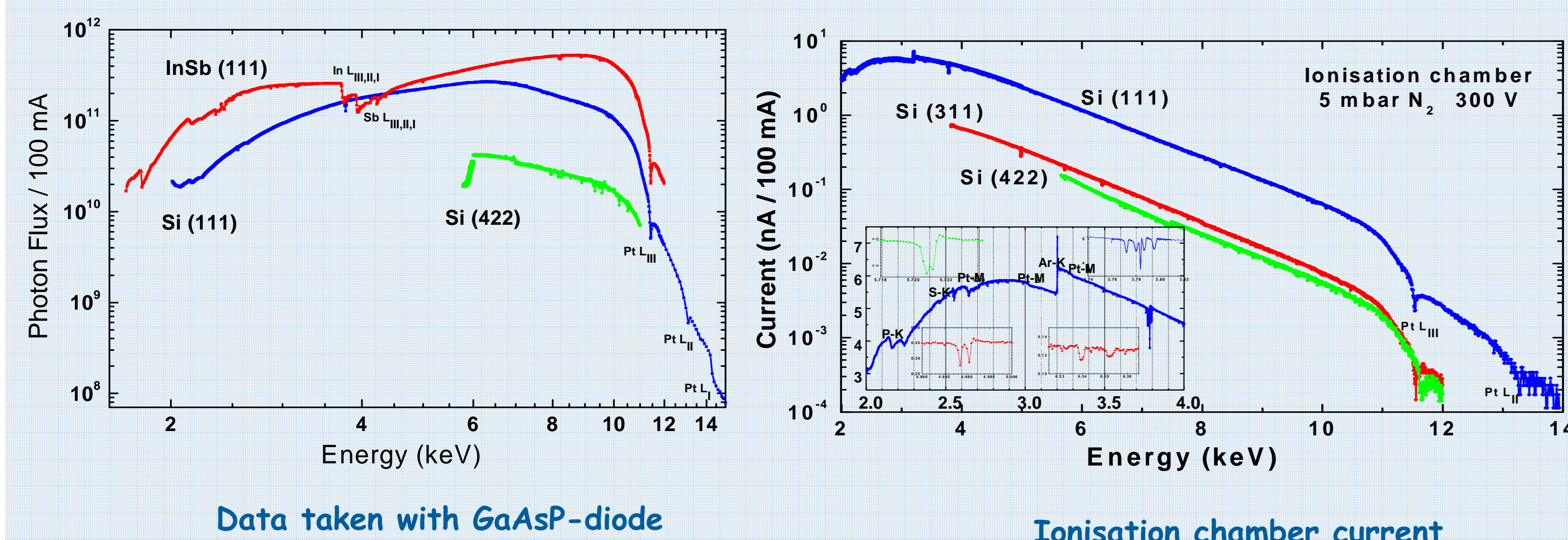


- N₂-Ionisation chamber f. MOSTAB intensity control/feedback
- Au-, Cu-mesh Io-monitors
- Au photocathode, GaAsP diodes, Si-AXUV 100 (2x2, 4x4, 10x10 mm^2)
- Si (111), (100) backscattering diodes f. resolution/calibration
- Slits hor., vert. 0-2 mm, pinholes 0.14 - 2.5 $\text{mm}^2 \phi$
- Filters (high orders, calibration): Al, Ti, V, Fe, Co, Ni, Cu, Mo, Ag
- Differential pumping stage (2.5 μm polyimid)

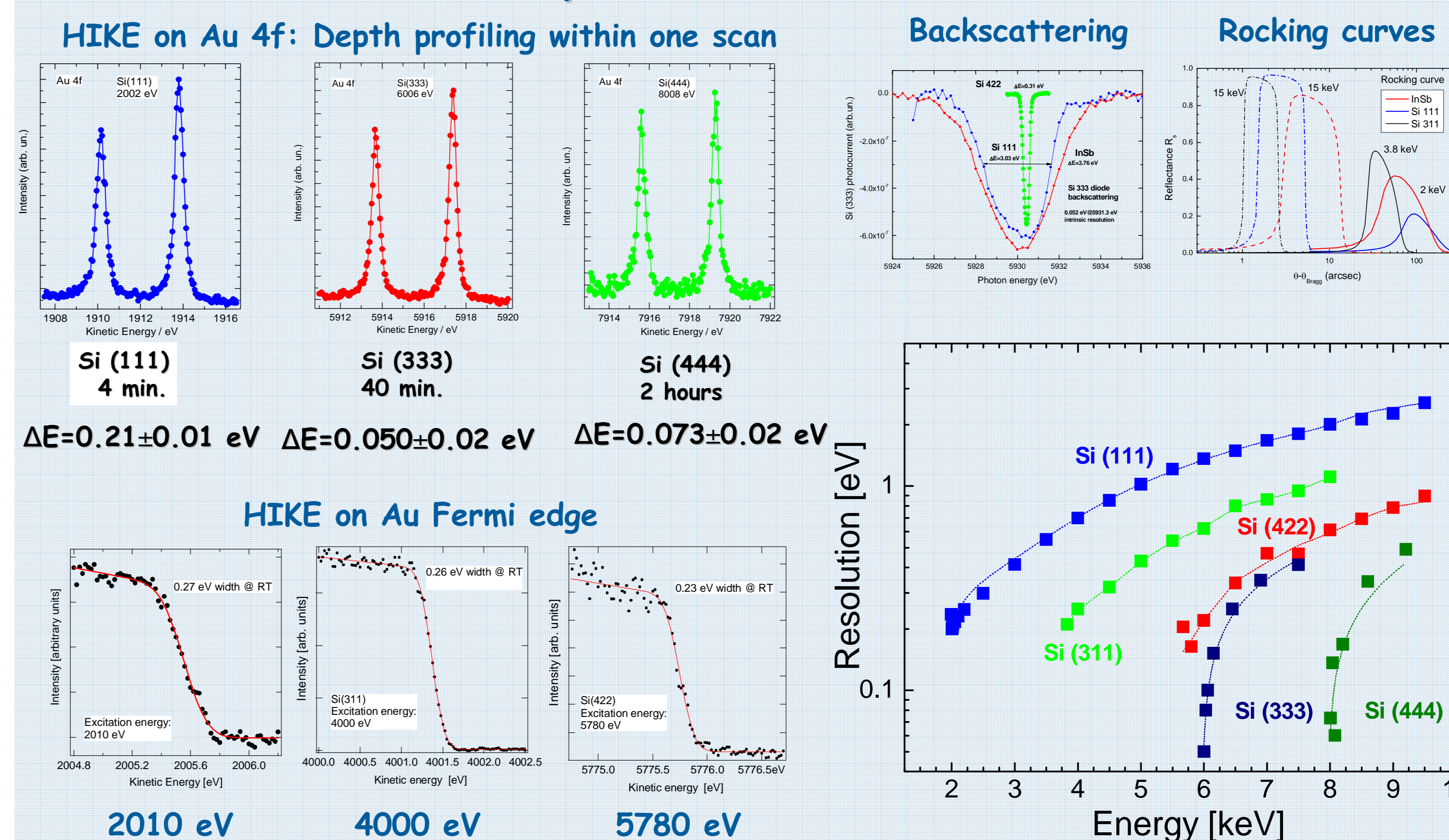
Experiments

HIKE/HAXPES
NEXAFS, XANES, EXAFS
Reflection, Diffraction, Scattering

Photon Flux



Spectral Resolution



Higher Orders

