

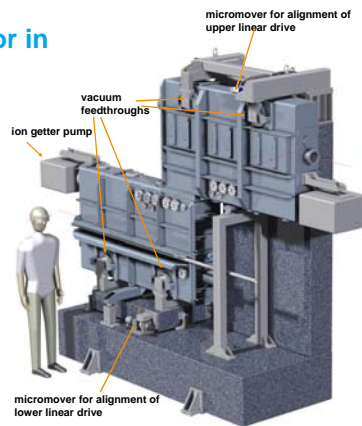
Large Monochromator Systems at PETRA III.

J. Horbach, M. Degenhardt, U. Hahn, J. Heuer, H. B. Peters, H. Schulte-Schrepping,
 DESY-Hamburg, FS-BT
 A. Donat, H. Lüdecke, DESY-Zeuthen, MECH1

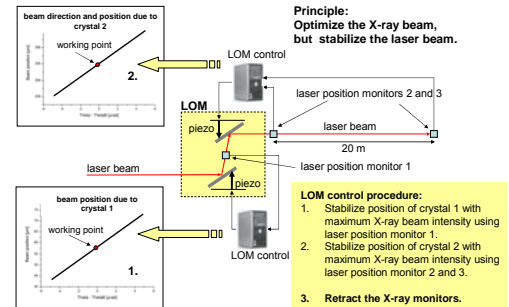


Large Offset Monochromator in operation at P08

- Selection of a small energy band out of the high heat load monochromator beam
- Vertical shift of the beam by 1.25 m
- Stabilization of the beam position at the experiment
- Energy range
 Si 311: 5.4 – 18.8 keV
 Si 511: 8.4 – 29.4 keV
- Precision of the beam position at the experiment (distance approx. 20 m): 10 μm in lateral and vertical direction
 → Angular accuracy of 0.5 μrad needed



Beam stabilisation concept shown generically for pitch piezo

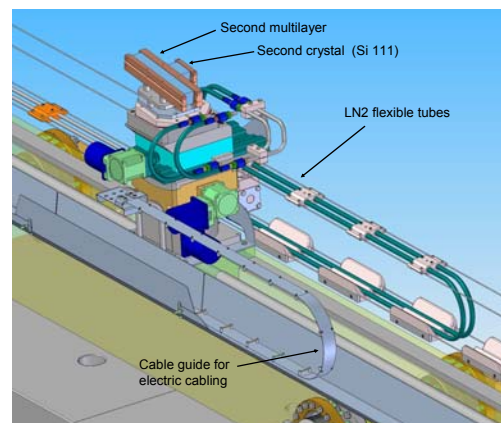


Large Offset Monochromator at P03 installation work in progress

- Displacement of the white beam by 0.49 m downwards
- Energy range 8 - 25keV
- Beam position stability of 1 μm required at the experimental station
- Liquid nitrogen cooling system for both crystals (Si 111) and multilayers



Long translation with LN2-cooled crystal and multilayer



Large Offset Monochromator at P06 manufacturing in progress at DESY-Zeuthen

- Displacement of the white beam by 21 mm downwards
- Liquid nitrogen cooling system for both multilayers
- Energy range 6 - 90keV

