Table 1. BESSY II source characteristics of the dipole section DIP 1.1

Electron energy [GeV]	1.7
Magnetic field [T]	1.3
Bending radius [m]	4.35
Power (0.3 A, 2.33*0.5 mrad^2) [W]	20
Critical energy [keV]	2.5
Source horizontal size (σ_x) [mm]	0.096
Source vertical size (σ_y) [mm]	0.047
Source hor. divergence (σ'_x) [µrad]	300
Source vert. divergence (σ'_y) [µrad]	20

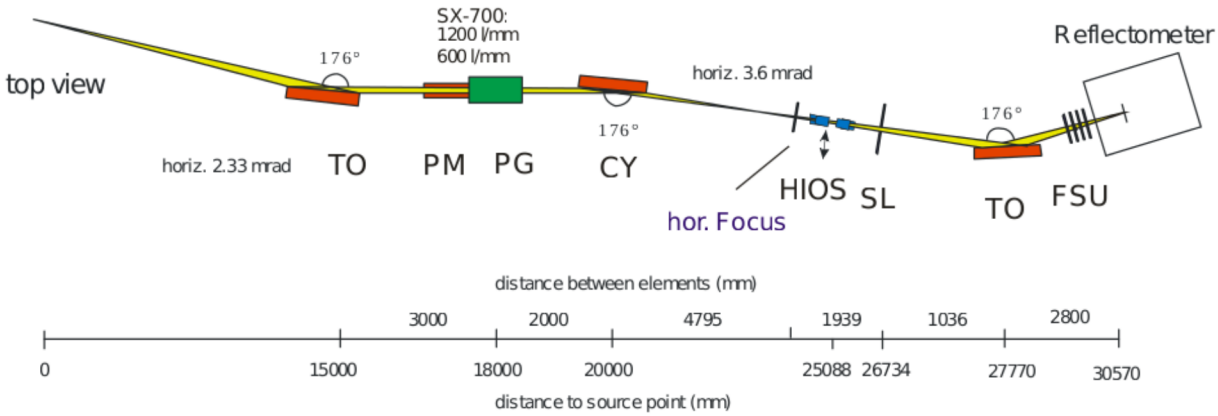

Figure 1. Optical layout of the Optics Beamline as seen from top.

The beamline can also be operated with off-plane radiation from the BESSY-II bending magnet. Thus the polarization can be changed from horizontal linear polarization (S1 = +1) to elliptical polarization with a selectable degree of circular polarization (S3 <= +/-0.8) [35]. This is done by an azimuthal rotation of the premirror M1 accompanied by an equal but opposite change of incidence angle of the monochromator mirror M2. Thus the incidence angle on the grating is unaffected by this operation and no energy shift is encountered during change of polarization.

Table 2. Parameters of the focusing mirrors of the beamline

Optical element	M1	M3	M4
Shape	toroidal	cylindrical	toroidal
Total surface size (L x W) [mm]	1000*60	1000*60	350*30
Material	Au(40 nm)/Si	Au(40 nm)/Si	Au(40 nm)/Si
Long radius R [mm]	339578	194000	82725
Short radius ρ[mm]	1040.3	470.3	52.8
Angle of incidence [deg.]	2°	2°	2°
Source distance (h/v) [mm]	15000	- / ∞	2975 / 1036