

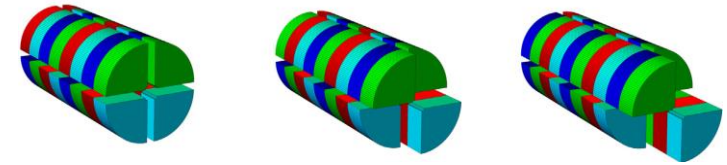
PAUL SCHERRER INSTITUT



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# Apple X Undulators for Porthos

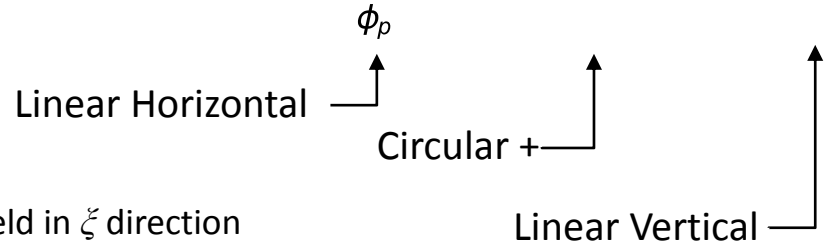
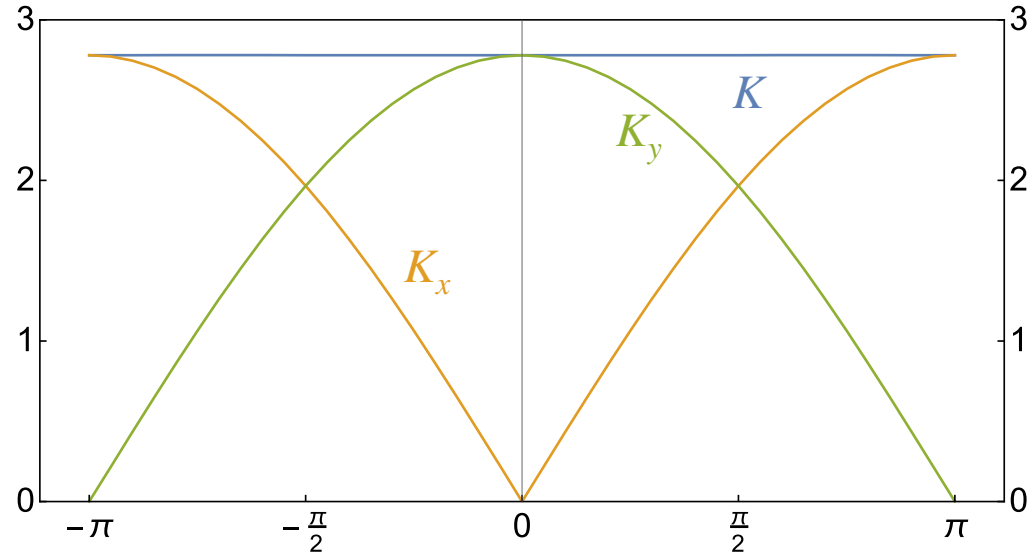
Porthos Working group – 21.01.2021



$$\lambda = \frac{\lambda_u}{2\gamma^2} \left( 1 + \frac{K^2}{2} \right)$$

$$K^2 = K_x^2 + K_y^2$$

$$K_\xi = \frac{e\lambda_u B_\xi}{2\pi m c}$$

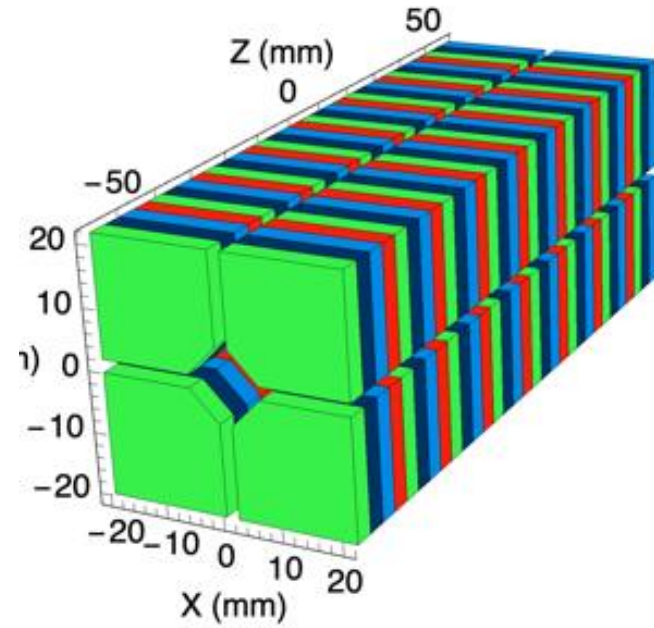
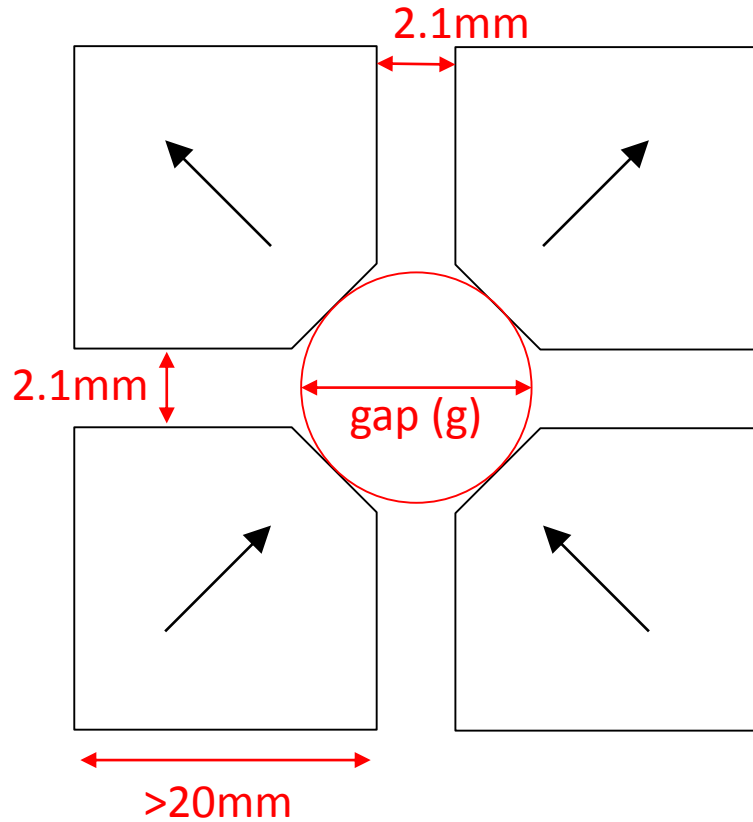


$\lambda_u$  is the period length

$B_\xi$  is the amplitude of the first harmonic of the magnetic field in  $\xi$  direction

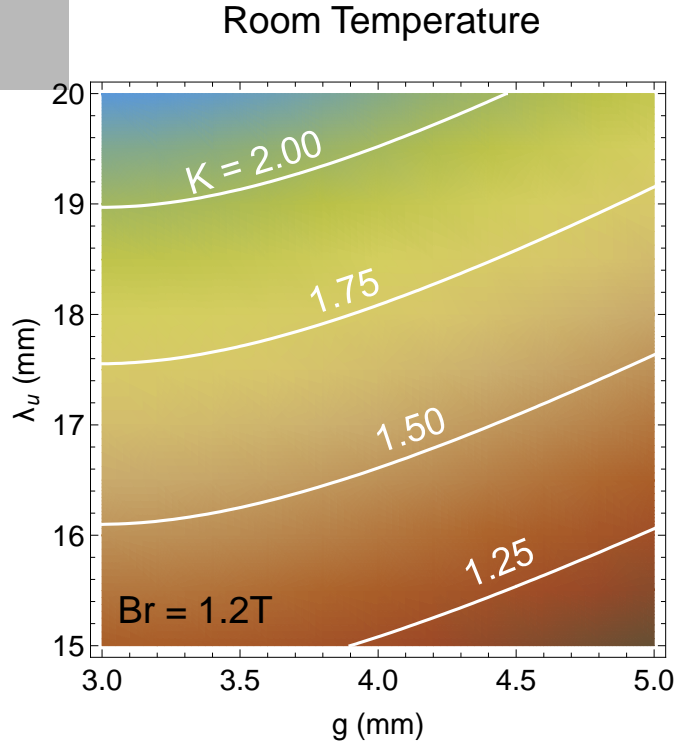
$\phi_p$  is the normalised longitudinal shift between two diagonal magnetic rows

# Apple X Cross Section

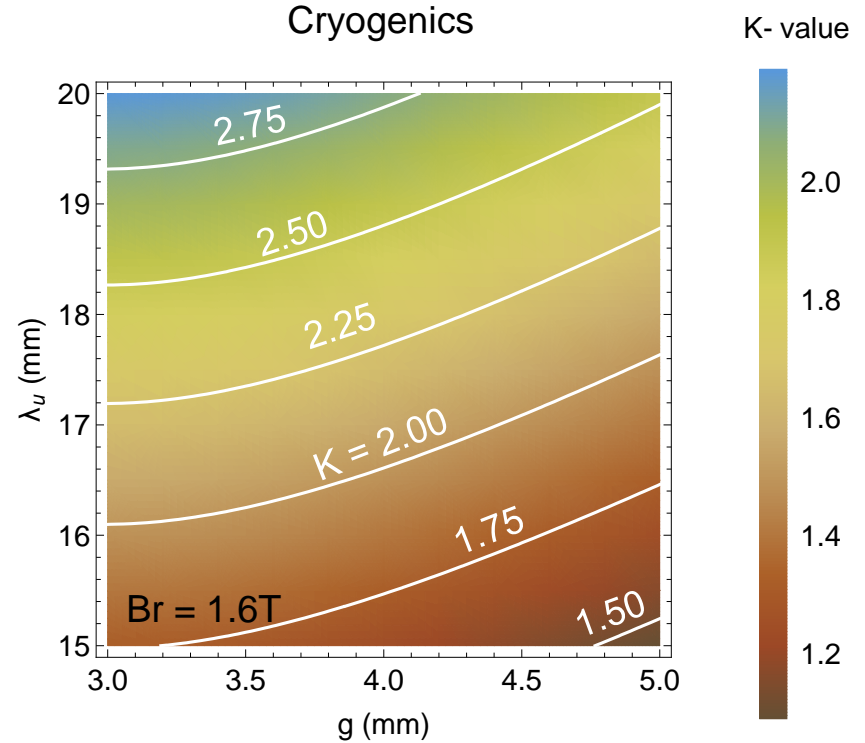


# Apple X Undulators

The  $K$  is *quasi*-independent of  $\phi_p$  - polarisation



K- value



K- value

