

OSC Updates

- Variations in undulator period and K value to keep same wavelength

Helical Undulator

	Peak Field (V/m)	Energy Transfer (meV)
4 0.45 m periods K = 3.55	43 (SRW) 46 (LW)	156 (SRW) 152 (LW)
6 0.3 m periods K = 4.41	50 (SRW) 52 (LW)	212 (SRW) 212 (LW)
8 0.225 m periods K = 5.12	54 (SRW) 56 (LW)	254 (SRW) 266 (LW)

(telescope, square lens, 16mm/side,
1 GeV, 800 nm wavelength)

Planar Undulator

	Peak Field (V/m)	Energy Transfer (meV)
6 0.3 m periods K = 6.23	57 (SRW) 56 (SRW)	126 (SRW) 114 (LW)
8 0.225 m periods K = 7.24	63 (SRW) 60 (LW)	150 (SRW) 141 (LW)

(telescope, square lens, 16mm/side,
1 GeV, 800 nm wavelength)

Conclusions

- Helical undulators give more energy transfer than planar ones
- More, shorter periods give more energy transfer than fewer long ones