Dual focii for the OMEGA 60 facility

Peter Norreys

Rutherford Appleton Laboratory

Blackett Laboratory, Imperial College London

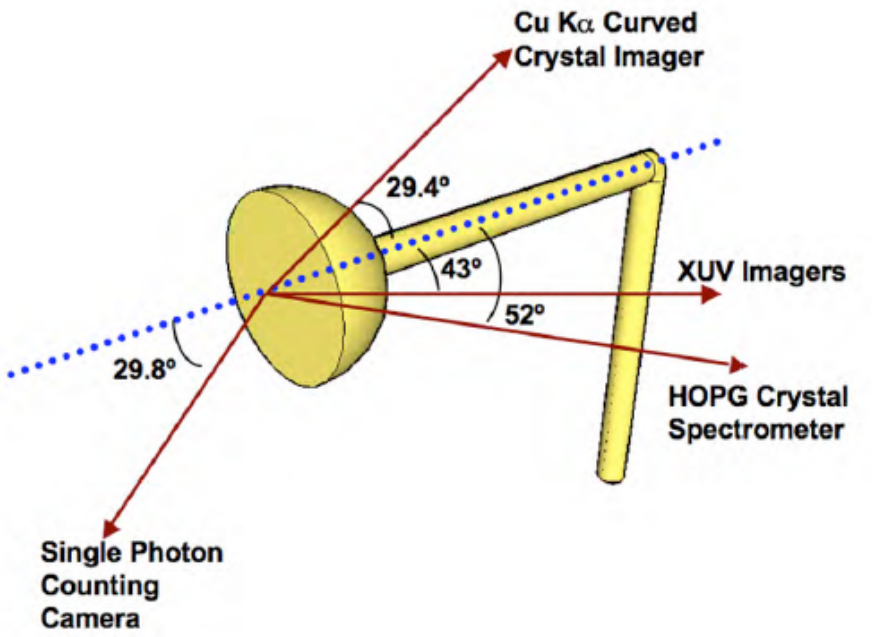
Need for orthogonal beams

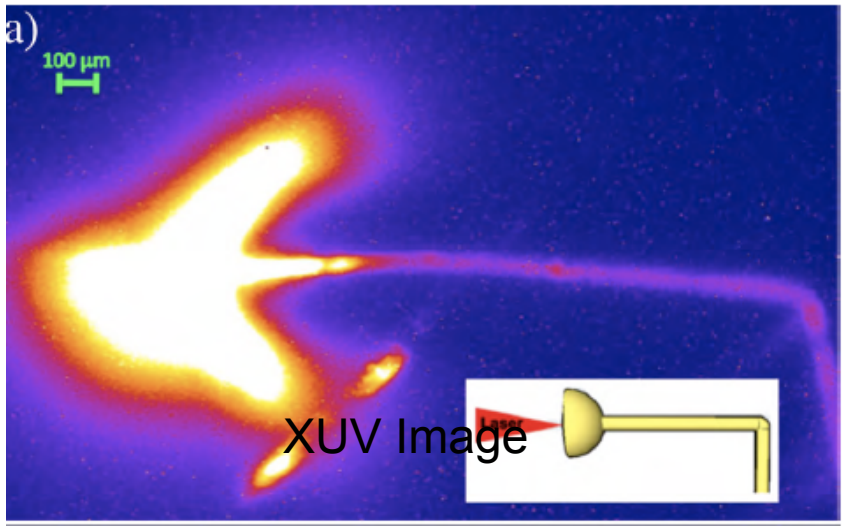
- Channel formation / solition generation (Michigan)
- Proton radiography – shock propagation (Rochester/ MIT)
- Compton radiography for simulataneous rho-R / heating measurements
- Magnetic field reconnection physics (Michigan)
- Filamentation instability probing (MIT)

.....Many more users could utilise this capability

Surface transport in wire-targets

- 0.5% of the fast electrons are confined to surface by self-generated electric and magnetic fields

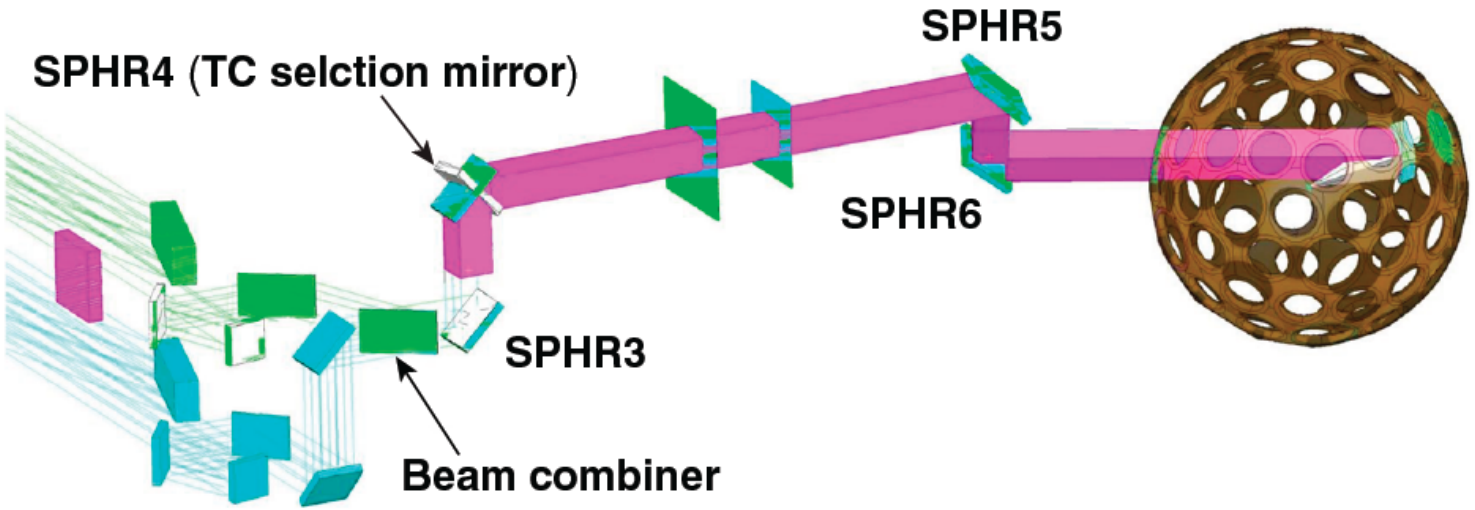




Source: Tammy Ma (PhD Thesis, UCSD 2010)

- Utilise this remarkable phenomena to guide fast electrons from one of the two focii into different directions for pump-probe experiments

Dual focus on OMEGA requires the beam combiner to be installed in the grating compressor chamber



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OLUG Dual Beam Proposal

- OLUG Executive Committee welcomes LLE's proposal for dual beam provision on OMEGA.

•We would like to see surface transport in wire targets developed into a robust platform for providing different view angles for pump-probe experiments for the user community with collaborating academics.

- It requires management commitment to underpin design effort, shots on "proof-of-concept" experiments on smaller facilities and on OMEGA itself.