

Generation and Application of Coherent EUV and Soft X-ray Radiation

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We will discuss the nature of spatial and temporal coherence, partial coherence and full coherence. We will also discuss the nature of coherence when derived from uncorrelated radiators, as in spatially filtered undulator radiation, and from correlated radiators, as in lasers. We will examine these concepts in the context of self amplified spontaneous emission FELs, with and without a phase coherent seed. Finally, we will discuss applications of coherent radiation in the EUV and soft x-ray spectral regions.