XOP: a graphical user interface for spectral calculations and x-ray optical utilities

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A graphical user interface, using the Interactive Data Language (IDL) widget toolkit, for calculation of spectral properties of synchrotron radiation sources and for interaction of x-rays with optical elements has been developed. The interface runs on three different computer architectures under the Unix operating system — the Sun-OS, the HP-UX, and the DEC Unix operating systems.

The point and click interface is used as a driver program for a variety of codes from different sources written in different computer languages. The execution of codes for calculating synchrotron radiation from undulators and wigglers is described. The computation of optical properties of materials and x-ray diffraction profiles from crystals in different geometries are also discussed. The interface largely simplifies the use of these codes and may be used without prior knowledge of how to run a particular program.

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