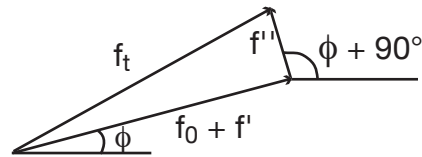This is what a vector diagram looks like with anomalous scattering, for a reflection of phase φ:

This turns out to have consequences for the diffraction pattern, if we consider a crystal in which only a few of the atoms (usually, only the heavy ones) exhibit anomalous scattering.

Friedel pairs are similar reflections that are taken on opposite sides of a crystal. Normally their intensities are exactly equal (as we will show on the next page); it is this equivalence that introduces a center of symmetry into all diffraction patterns, whether the crystals have a center of symmetry or not.