(101) plane and [010] .

$$l = \cos\tfrac{\pi}{4}\left[\cos\theta - \sin\theta \sin\phi\right]$$

$$m = \sin\theta \cos\phi$$

$$n = \cos\tfrac{\pi}{4}\left[\cos\theta + \sin\theta \sin\phi\right]$$

Graphs G, H, and I display the variation of the elastic constants of silver in the neighborhood of a [111] pole. θ is the angle between the direction of propagation and [111] , and ϕ is the angle between the projection of the direction of propagation on the (111) plane and $[\bar{1}\bar{1}2]$.

$$l = \frac{\cos\theta}{\sqrt{3}} - \frac{\sin\theta \cos\phi}{\sqrt{6}} + \frac{\sin\theta \sin\phi}{\sqrt{2}}$$

$$m = \frac{\cos\theta}{\sqrt{3}} - \frac{\sin\theta \cos\phi}{\sqrt{6}} - \frac{\sin\theta \sin\phi}{\sqrt{2}}$$

$$n = \frac{\cos\theta}{\sqrt{3}} + \frac{2\sin\theta \cos\phi}{\sqrt{6}}$$

The numerical values from which the graphs were plotted were obtained with a Burroughs '220' computer. The programing of the problem was coded so the values of C_{11} , C' , and C may easily be changed and the process repeated with minimum effort for cubic materials other than silver.