may be explained by the damping increase of electron standing waves with small radii of orbits (r_k) where imperfections are found between film crystallites[3]. For example, the condition of coordination between quantum levels of film grains textured in direction [210] is satisfied at point W of the Brillouin band. Assuming that it is these electrons in the vicinity of this point that are responsible for the observed effect, we shall obtain $Ew'_2 = 700 \pm 20$ meV. It is also possible to relate the effect with point X (direction [100]); however, in this case a worse agreement of the experiment and band structure calculations[4] is observed. Thus, large magnetic fields allow to select directions of considerably varying r_k.

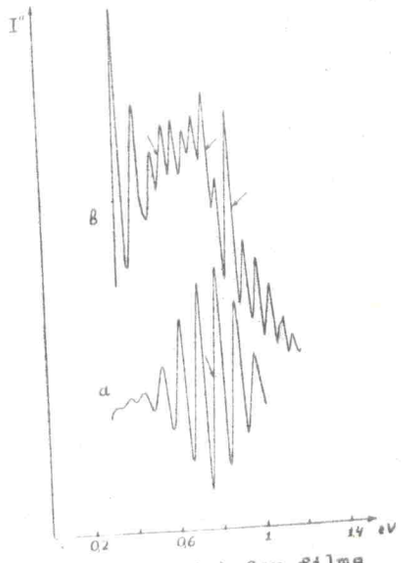

Fig. I.a) I''(U) for films textured in direction [111]
b) Interference I''(U) from film grains textured in directions [111], [110], [100].

Vivid oscillations have been also observed for alloys of the substitution type $Pb_{98}Tl_2Pb_{100-x}Bi_x$, $x \ll 5$. It has been noticed that as electron concentration grows, oscillations shift to big energies and vice versa. These experiments show that the damping of standing waves, in the main, is caused by scattering at the film boundaries. Therefore oscillations to be observed in alloys with a greater concentration of Bi and Tl are also possible. The experiments of this kind performed on the films textured in different crystallographic directions enable to obtain the electron energy value in alloys for a number of Brillouin band points, i.e. to acquire the information otherwise unobtainable.