is the normalized interaction far from the singularity, p_0 and m characterize the spectrum in this region. From eq. (23) it follows that Δ_1 decreases rapidly with p and reaches eventually a value corresponding to the spectrum without the singularity. On the other hand it is always finite, until Δ_0 is finite.

What concerns the singular region, it is not connected with external regions, and Δ_0 as well as T_c are defined from the equation (20). As we mentioned before, it gives the $2\Delta_0/T_c$ ratio not very far from the BCS value. It follows that the E-L model, considered as a weak interaction theory, cannot describe quantitatively all the properties of the HTSC. Nevertheless it can be useful for understanding the origin of various unusual phenomena in these substances.

The results of the most recent experimental determination [17] of this function is presented at Fig. 8.

Fig. 8. The latest ARPES data on the angular dependence of the superconducting energy gap in $Bi_2Sr_2CaCu_2O_{8+\delta}$

Apart from the smallest gap region (in sec. 7 we will show how this disagreement can be cured), it fits qualitatively to the predictions of the theory described here and definitely disagrees with the "d-wave" and "isotropic s-wave" concepts.

5. ISOTOPE EFFECT [18]

The isotope effect is usually described by the power α in the presumed dependence

$$T_c \propto M^{-\alpha}\ , \tag{25}$$