LONG-RANGE EFFECT IN CONDENSED MATTER AND ITS REVEALING IN IMPLANTED WITH HIGH ENERGY LIGHT IONS SILICON

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Experimental and theoretical results of long-range effects in condensed materials after energy influence were analyzed. The experimental results for silicon monocrystals irradiated by high energy hydrogen and helium ions are presented. The effect of radiation was found in the region far beyond the ion stopping range ("long-range effect") which cannot be explained in the frame work of the ion implantation theory. Assumption was made concerning the soliton′s mechanism of the propagation of the radiation effect.
Keywords: silicon, ions, radiation, long-range effect.