Study of correlation and autocorrelation of supercurrent and charge in stacked Josephson junctions

M Hamdipour¹², Y M Shukrinov¹ and M R Kolahchi²

1. BLTP, JINR, Dubna, Russia
2. Department of Physics, IASBS, Zanjan, Iran
E-mail: hamdipur@theor.jinr.ru

Abstract
Charge creation in superconductor layers affects current–voltage characteristics (CVC) of the Josephson junction array and creates a breakpoint region in CVC. This charge may oscillate in the form of longitudinal plasma wave, (LPW), or nonregularity. In this paper we intend to distinguish the region with LPW from the nonregular region.

Keywords: intrinsic Josephson junctions, Nano structures, HTSC, correlation function analysis

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