

VAN HOVE OVERLAP FUNCTION AND ELASTIC
DIFFRACTION SCATTERING OF HADRONS
AT HIGH ENERGIES

E.I. Ismatov, Kh.A. Kuterbekov¹, B.O. Sarsenbaev²

Aktobe University “Dunie”
(34, A. Moldagulov Ave., Aktobe 030000, Kazakhstan),
¹Institute of Nuclear Physics,
National Nuclear Center of the Republic of Kazakhstan
(1, Ibragimov Str., Almaty 050032, Kazakhstan),
²Zhubanov Aktobe State University
(263, Brothers Zhubanov Str., Aktobe 030000,
Kazakhstan)

S u m m a r y

Elastic diffraction scattering of hadrons at high transferred momenta has been studied making use of the overlap function. The unitarity condition for the amplitude of elastic diffraction scattering with a modified overlap function has been solved. A comparison between theoretical and experimental differential cross-sections for pp- and π^\pm p-scattering at various energies has been made.