

# STUDY OF FAST NEUTRON SCATTERING MECHANISMS FOR $^{59}\text{Co}$ NUCLEI

**I. O. Korzh, M. T. Sklyar, T. I. Yakovenko**

Comparison and analysis of experimental data on neutron interaction cross-sections for  $^{59}\text{Co}$  nuclei were made in the energy range (0.3 - 22) MeV. The applicability of the optical-statistical approach and excited core model for the description of experimental total, elastic and inelastic neutron scattering cross-sections was studied. Results of the adequate description of the experimental data set were used to study the contributions of the direct mechanism and mechanism of scattering through a compound nucleus to the elastic and inelastic scattering of neutron by  $^{59}\text{Co}$  nuclei in neutron energy range are under investigation.