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## INVESTIGATIONS OF THE SPACE PARITY VIOLATION AND INTERFERENCE EFFECTS IN THE FRAGMENT ANGULAR DISTRIBUTIONS OF $^{233}\text{U}$ , $^{235}\text{U}$ , AND $^{239}\text{Pu}$ FISSION BY RESONANCE NEUTRONS

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Investigations of the space parity nonconserving (PNC) asymmetry of  $^{233}\text{U}$ ,  $^{235}\text{U}$ , and  $^{239}\text{Pu}$  fission fragment emission and parity conserving (PC) interference effects of left-right and forward-backward asymmetries were carried out on the neutron beams of the reactor IBR-30 over the range of neutron energies from 0.02 eV to about 100 eV. All experimental results obtained have been found to be in a good mutual accordance within the frames of modern theoretical conceptions about the mechanisms of PNC and PC effects forming in fission process induced by slow neutrons. In case of the P-even interference effects of asymmetry the evident mutual well-marked irregularities in their neutron energy dependencies up to about 100 eV were observed. It is connected with the interference of s, p-resonances at fission compound stage according to modern theory. As a remarkable result of the PNC effect measurements the resonance behavior of the PNC asymmetry coefficients in the low neutron energy region ( $E_n < 2$  eV) was observed. Unfortunately, the statistical accuracy of the PNC effect measurements is not enough for observation of these resonance effect in other cases of more high energies. Results of simultaneous analysis of all three asymmetry effects for all three nuclei are presented. The satisfactory combined description of the experimental points is received. As a result of theoretical evaluation of these data main parameters and the estimates of nuclear matrix elements of the weak interaction for some p-resonances in the low energy range were extracted.