# PECULIARITIES OF FISSION OF ACTINIDE NUCLEI FORMED IN REACTIONS WITH LIGHT PARTICLES

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The analysis of total fission cross-sections for interaction of α-particles with nuclei $^{232}$Th, $^{235}$U, $^{236}$U and $^{238}$U in the energy range up to 140 MeV is carried out. The energy dependence of critical value of angular momentum leading to a fissioning system formation for interaction of α- particles with uranium nuclei in a given energy range is obtained. The new approach for description of fission fragment mass distributions of actinide nuclei with accounting of influence of a total angular momentum is offered. The experimental fission fragment mass distributions of nuclei $^{236}$U, $^{239}$Pu and $^{240}$Pu formed in reactions with neutrons, γ-quantum, α-particles and spontaneous fission in an excitation energy range up to 30 МэВ are considered within the framework of present approach. The parameters dependence of fragment mass distributions on excitation energy and transferred angular momentum of a fissioning nucleus is obtained.