

Abstract Submitted  
for the DAMOP16 Meeting of  
The American Physical Society

**Radiation Damages in Aluminum Alloy SAV-1 under Neutron Irradiation** UMAR SALIKHBAEV, FARKHAD AKHMEDZHANOV, SHERALI ALIKULOV, SAPAR BAYTELESOV, AZIZBEK BOLTABAEV, Tashkent Institute of Nuclear Physics — The aim of this work was to study the effect of neutron irradiation on the kinetics of radiation damages in the SAV-1 alloy, which belongs to the group of aluminum alloys of the ternary system Al-Mg-Si. For fast-neutron irradiation by different doses up to fluence  $10^{19} \text{ cm}^{-2}$  the SAV-1 samples were placed in one of the vertical channels of the research WWR type reactor (Tashkent). The temperature dependence of the electrical resistance of the alloy samples was investigated in the range 290 - 490 K by the four-compensation method with an error about 0.1%. The experimental results were shown that at all the temperatures the dependence of the SAV-1 alloy resistivity on neutron fluence was nonlinear. With increasing neutron fluence the deviation from linearity and the growth rate of resistivity with temperature becomes more appreciable. The observed dependences are explained by means of martensitic transformations and the radiation damages in the studied alloy under neutron irradiation. The mechanisms of radiation modification of the SAV-1 alloy structure are discussed.

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Date submitted: 01 Mar 2016

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