

Abstract Submitted
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Search for a new element Z=117 among the $^{249}\text{Bk} + ^{48}\text{Ca}$ reaction products¹ K. RYKACZEWSKI, ORNL, YU OGANESSION, S. DMITRIEV, V. UTYONKOV ET AL, JINR Dubna, J. HAMILTON, A. RAMAYYA, Vanderbilt, R. HENDERSON, K. MOODY, D. SHAUGHNESSY, M. STOYER ET AL, LLNL, J. ROBERTO ET AL, ORNL, M. RYABININ ET AL, IAR Dmitrovgrad — Following irradiation of Am and Cm seed isotopes at the ORNL High Flux Isotope Reactor, the ^{249}Bk activity ($T_{1/2}=320$ d) has been separated at the ORNL Radiochemical Engineering Development Center [1] to be used as target material for a search for element Z=117 using an intense ^{48}Ca beam from the U-400 cyclotron at JINR Dubna. The targets will be made from Bk nitrate at the IAR Dmitrovgrad. The search for the A=294 and A=293 isotopes of the new element Z=117 and their decay products, see [2], is scheduled to begin at the Dubna Gas Filled Recoil Separator at JINR Flerov Laboratory of Nuclear Reactions in August 2009. Details of the ^{249}Bk separation and experiment will be reported. [1] C.Alexander, P.Bailey, J.Ezold, M.Ferren, C.Porter, F.Riley et al., HFIR/REDC campaign 74, 2009. [2] Yu. Oganessian, J.Phys.G 34, R164,2007.

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