

Abstract Submitted  
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**Recent Super Heavy Element Experiments at GSI-SHIP**<sup>1</sup> M. STOYER, LLNL, S. HOFMANN, S. HEINZ, R. MANN, J. MAURER, J. KHUYAGBAATAR, D. ACKERMANN, GSI, S. ANTALIC, Comenius University, W. BARTH, H.G. BURKHARD, V.F. COMAS, L. DAHL, GSI, K. EBERHARDT, Johannes Gutenberg-University, R. HENDERSON, LLNL, J.A. HEREDIA, F.P. HESSBERGER, GSI, J. KENNEALLY, LLNL, B. KINDLER, I. KOJOUHAROV, GSI, J.V. KRATZ, Johannes Gutenberg-University, R. LANG, GSI, M. LEINO, University of Jyväskylä, B. LOMMEL, GSI, K. MOODY, LLNL, G. MUNZENBERG<sup>2</sup>, GSI — The synthesis of element 116 (Lv) in fusion-evaporation reactions of a <sup>48</sup>Ca beam with <sup>248</sup>Cm targets was studied at the velocity filter SHIP of GSI in Darmstadt. At excitation energies of the compound nuclei of 40.9 MeV, four decay chains were measured, which were assigned to the isotope <sup>292</sup>Lv, and one chain, which was assigned to <sup>293</sup>Lv. Measured cross-sections of (3.4+2.7 –1.6) pb and (0.9+2.1–0.7) pb, respectively, and decay data of the chains agree with data measured previously at the Flerov Laboratory of Nuclear Reactions in Dubna. We measured the velocity spectra of the 116 isotopes and transfer products which reveal the reaction type underlying the synthesis of the nuclei. The experience gained in this experiment will serve as a basis for future experiments to study still heavier elements at the velocity filter SHIP. Searches for element 120 in fusion-evaporation reactions of a <sup>54</sup>Cr beam with <sup>248</sup>Cm targets were studied later at SHIP and progress in the analysis will be discussed.

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