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 $\beta$ -delayed  $\gamma$ -ray spectroscopy of <sup>196</sup>Hg and its description within the extended supersymmetry C. BERNARDS, Yale University, USA / University of Cologne, Germany, T. AHMED, University of Richmond, USA, T. AHN, Yale University, USA, C. DENG, University of Richmond, USA, M. ELVERS, Yale University, USA / University of Cologne, Germany, A. HEINZ, Yale University, USA, S. HEINZE, University of Cologne, Germany, G. ILIE, Yale University, USA, E. JIANG, University of Richmond, USA, J. JOLIE, University of Cologne, Germany, R. LEE, University of Richmond, USA, D. SAFRAN, Yale University, USA / TU Darmstadt & GSI, Germany, N. SHENKOV, University of Richmond, USA, T. THOMAS, University of Cologne, Germany, V. WERNER, Yale University, USA — The concept of nuclear structure SUSY has been observed and investigated in the Au-Pt mass region. It allows the simultaneous description of different nuclei forming so-called supermultiplets. All members of a supermultiplet are distinguished by a constant number of IBFM  $\nu$ - and  $\pi$ -bosons and -fermions. The most popular example is the 'magic square' consisting of <sup>194,195</sup>Pt and <sup>195,196</sup>Au. Recently, efforts were made to investigate the expansion of the Au-Pt supermultiplets by a fifth member: the neighboring even-even Hg isotopes. For the square around <sup>194</sup>Pt, this corresponds the 2-fermion-5-boson supermultiplet member  $^{196}$ Hg. We report on a  $\gamma\gamma$ angular-correlation experiment to complete the data on low-spin states in <sup>196</sup>Hg. It was performed at WSNL of Yale University using a 28-MeV proton beam activating an enriched <sup>198</sup>HgS target. The  $\gamma$ -rays following the decay of the  $\beta$ -unstable <sup>196</sup>Tl were observed off-beam with the YRAST-Ball Clover array. We present our results and discuss the description of <sup>196</sup>Hg within the extended supersymmetry model.

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