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$\beta-$delayed γ-ray spectroscopy of 196Hg C. BERNARDS, M. ELVERS, D. RADECK, IKP Cologne, Germany and WNSL, Yale University, USA, J. JOLIE, T. THOMAS, K.O. ZELL, IKP Cologne, Germany, T. AHN, A. HEINZ, G. ILLIE, D. SAVRAN, V. WERNER, WNSL, Yale University, USA, T. AHMED, C. DENG, E. JIANG, R. LEE, N. SHENKOV, University of Richmond — Recent experimental results on the nucleus 196Hg – especially newly determined level spins and multipole mixing ratios of γ transitions between low-energy states – show a good agreement with supersymmetrical predictions, describing 196Hg as the two-fermion, five-boson member of the supermultiplet around 194Pt. To complete the data of a previous 194Pt(α,2n) experiment, and to search for further low-lying low-spin states that might not be populated by that reaction, we chose to perform a new experiment on 196Hg. This time we approached 196Hg via β decay. We used a 35 MeV proton beam at the Wright Nuclear Structure Laboratory to induce the reaction 198Hg(p,3n)196Tl. Our target consisted of highly enriched 198HgS. One β decay branch populates preferably the low-spin states we are interested in. The 196Hg γ transitions were detected with the highly efficient YRAST Ball γ spectrometer. We present first preliminary results and discuss the description of the even-even mercury isotopes in the context of the nuclear structure supersymmetry. Supported by DFG grants Jo391/2-3, Jo391/3-2, and by U.S. DOE grant DE-FG02-91ER40609.

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