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Dynamical and relativistic effects in experimental and theoretical studies for inner-shell photoionization of sodium[1] D. CUBAYNES, J.-M BIZAU, S. DIEHL, F.J. WUILLEUMIER, University paris-Sud, Orsay, France, H.-L. ZHOU, S.T. MANSON, Georgia State University, A. HIBBERT, Queen's University of Belfast, N. BERRAH, S. CANTON, Western Michigan University, J.D. BOZEK, Lawrence Berkeley laboratory, E.T. KENNEDY, Dublin City University, Dublin, Ireland, L. VOKY, Observatoire de Paris, France, X.-Y. HAN, Tsinghua University, Beijing, China — High-resolution measurements for inner-shell photoionization of Na ground state over a 40-120 eV photon energy are presented along with the results of a semi-relativistic Breit-Pauli R-matrix calculation. The comparisons show excellent agreement generally, that gives a demonstration that the calculation includes the important relativistic and correlation effects. Relativistic effects are significant primarily in the neighborhood of narrow resonances. The importance of "balancing" the correlation included in initial and final state wave functions is emphasized.

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