Extended Atomic Physics in FISASIM.[1] TIN DO, University of California, San Diego, W. W. HEIDBRINK, University of California, Irvine, L. STAGNER, General Atomics — FIDASIM is a code that models signals produced by charge-exchange reactions between neutrals and ions (both fast and thermal) in magnetically confined plasmas. With the ion distribution function as input, the current version of the code predicts the efflux to a neutral particle analyzer diagnostic and the photon radiance of Balmer-alpha light to a fast-ion D-alpha or charge-exchange recombination diagnostic. Three extensions to FIDASIM are reported. First, the code now predicts the radiance from Lyman-alpha transitions. Second, Zeeman splitting is included. Third, Stokes parameters are an optional output.

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