Abstract Submitted
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Heavy Quarkonia on the Light Front[1] YANG LI, GUANGYAO CHEN, LEKHA ADHIKARI, Iowa State University, XINGBO ZHAO, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, PIETER MARIS, JAMES VARY, Iowa State University — We employ solutions for heavy quarkonium within a light-front basis function approach [1] to compare with experiment and predict additional observables. The Hamiltonian is based on the Light-Front Holographic QCD (phenomenological confinement) plus one-gluon exchange. Mass spectra agree well with experiment and we employ the wavefunctions to evaluate decay constants and form factors. We discuss our progress and plans for evaluating generalized parton distributions (GPDs) and cross sections for diffractive production. Our predictions for these observables as well as predictions of additional excited states can be tested at ongoing and future experimental facilities, e.g., LHC, sPHENIX and the EIC. [1] Y. Li, P. Maris, X. Zhao and J.P. Vary, arXiv: 1509.07212

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