Abstract Submitted for the APR17 Meeting of The American Physical Society

Higher Rank ABJM Wilson Loops from Matrix Models¹ JONATHAN COOKMEYER, Haverford College, 370 Lancaster Avenue, Haverford PA, 19041, USA, JAMES LIU, LEOPOLDO ZAYAS, Michigan Center for Theoretical Physics, Randall Laboratory of Physics, The University of Michigan, Ann Arbor, MI 48109, USA — We compute the expectation values of 1/6 supersymmetric Wilson Loops in ABJM theory in higher rank representations. Using standard matrix model techniques, we calculate the expectation value in the rank m fully symmetric and fully antisymmetric representation where m is scaled with N. To leading order, we find agreement with the classical action of D6 and D2 branes in $AdS_4 \times CP^3$ respectively. Further, we compute the first subleading order term, which, on the AdS side, makes a prediction for the one-loop effective action of the corresponding D6 and D2 branes.

¹Supported by the National Science Foundation under Grant No. PHY 1559988 and the US Department of Energy under Grant No. DE-SC0007859

> Jonathan Cookmeyer Haverford College, 370 Lancaster Avenue, Haverford PA, 19041, USA

Date submitted: 30 Sep 2016

Electronic form version 1.4