

DISTINGUISHING HERMITIAN CUSP FORMS OF DEGREE 2 BY A CERTAIN SUBSET OF ALL FOURIER COEFFICIENTS

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Abstract: We prove that Hermitian cusp forms of weight k for the Hermitian modular group of degree 2 are determined by their Fourier coefficients indexed by matrices whose determinants are essentially square-free. Moreover, we give a quantitative version of the above result. This is a consequence of the corresponding results for integral weight elliptic cusp forms, which are also treated in this paper.

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Key words: Hermitian modular forms, square free, Fourier coefficients, Hermitian Jacobi forms, Eichler–Zagier maps.