

SECOND MOMENT OF TWISTED CUSP FORMS ALONG A COSET

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ABSTRACT. We prove a Lindelöf-on-average upper bound for the second moment of the L -function associated to a level 1 holomorphic cusp form, twisted along a coset of subgroup of the characters modulo $q^{2/3}$ (where $q = p^3$ for some prime p).

This result should be seen as a level-aspect analogue of Anton Good's (1982) result on upper bounds of the second moment of cusp forms in short intervals.