

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-11-1307 **Anna Rokicki*** (arokicki@wesleyan.edu), 255 Dunham St, Southington, CT 06489. *Finiteness theorems for positive definite regular and almost regular hermitian forms.* Preliminary report.

Let h be a positive definite binary integer-valued hermitian form over an imaginary quadratic field, and let $E(h)$ denote the set of integers that are represented by the genus of h but not by h itself. We call h regular if $E(h) = \emptyset$, and almost regular if $E(h)$ is finite. It is shown, up to equivalence, that for a fixed $N \geq 0$ there are only finitely many h for which $|E(h)| \leq N$. It is also shown that there are only 13 imaginary quadratic fields which support those h that are regular and normal, and I will give a complete table of all, up to equivalence, decomposable binary regular forms.

If time permits we will also discuss the generalization of the above finiteness result to n -regular and almost n -regular hermitian forms for $n \geq 1$. (Received October 04, 2004)