

1145-VS-1637      **Lisa Kaylor\*** (lkaylor@wesleyan.edu). *Quaternary Lattices of Discriminant  $4p$* .

Let  $L$  be a quaternary even positive definite integral lattice and  $p$  a prime. It was shown by Hsia and Hung that the degree two theta series of the classes of  $L$  with nontrivial root system are linearly independent when  $dL = p$  and  $p \equiv 1 \pmod{4}$ . We consider the situation  $p > 13$  and  $dL = 4p$  where  $p \equiv 3 \pmod{4}$ . There are two genera of lattices in this case, which are considered separately. We show that the degree two theta series of the indecomposable classes with nontrivial orthogonal group within each genus are linearly independent. (Received September 25, 2018)