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# A generalization of mod-p bounds for s-distance sets to a ring of integers

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Abstract

Blokhuis (1983) showed a certain upper bound on the cardinality of a Euclidean finite set if there are only s distinct integral distances modulo prime p between distinct points in the set. The upper bound is the same as that for usual Euclidean s-distance sets. In this talk, we prove a generalization of this upper bound to the ring of integers of any algebraic number field and its prime ideals.