

# STANLEY CONJECTURE IN SMALL EMBEDDING DIMENSION

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## ABSTRACT

We show that Stanley's conjecture holds for a polynomial ring over a field in four variables. In the case of polynomial ring in five variables, we prove that the monomial ideals with all associated primes of height two, are Stanley ideals.

*Key words* : Monomial Ideals, Prime Filtrations, Pretty Clean Filtrations, Stanley Ideals.

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