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**Title:** The  $K(\pi, 1)$  problem for the affine Artin group of type  $\tilde{B}_n$  and its cohomology.

We prove that the complement of the affine complex arrangement of type  $\tilde{B}_n$  is a  $K(\pi, 1)$  space. Hence we compute the cohomology of the affine artin group of type  $\tilde{B}_n$  with coefficients over the module  $\mathbb{Q}[q^{\pm 1}, t^{\pm 1}]$  where the first  $n$ -standard generators act by  $(-q)$  multiplication and the last generator acts by  $(-t)$ -multiplication. Such representation generalizes the analog 1-parameter representation that corresponds to considering the structure of bundle over the complement of the discriminant hypersurface and the monodromy action of the associated Milnor fibre. As a corollary we derive the cohomology of the affine artin group of type  $\tilde{B}_n$  with trivial coefficients.

This is a joint work with Davide Moroni and Mario Salvetti