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*Hyperplane arrangements and Hessenberg varieties*

It is well-known by Borel that the cohomology ring of the flag variety is isomorphic to the coinvariant algebra of the Weyl group. On the other hand, K. Saito's proof for the freeness of the Weyl arrangement enables us to re-construct the coinvariant algebra in terms of logarithmic vector fields, without Weyl groups. We generalize this result to a presentation of the cohomology ring of Hessenberg varieties in terms of the logarithmic vector fields of ideal arrangements, which are known to be free. Moreover, we give several consequences of this presentation.