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**Nero Budur\*** (nbudur@nd.edu), University of Notre Dame, Department of Mathematics, 255 Hurley Hall, Notre Dame, IN 46556. *Complements and higher resonance varieties of hyperplane arrangements*. Preliminary report.

Using vector bundles techniques, we study higher resonance varieties of an indecomposable hyperplane arrangement. We prove inequalities on their codimension and on the Betti numbers of the complement. Equivalently these are inequalities on the coefficients of the chromatic, or characteristic, polynomials. (Received February 13, 2011)