1048-14-165   **Christine Berkesch*** (`cberkesc@math.purdue.edu`), Department of Mathematics, Purdue University, 150 North University Street, West Lafayette, IN 47907. *The rank of a hypergeometric system.*

The holonomic rank of the A-hypergeometric system $H_A(\beta)$ is at least the simplicial volume of $A \subset \mathbb{Z}^d$, with equality for generic parameters $\beta \in \mathbb{C}^d$. The exceptional parameters are given by a subspace arrangement $\mathcal{E}_A$ in $\mathbb{C}^d$. We introduce another arrangement whose combinatorics determine the rank of $H_A(\beta)$ for any β and use it to induce a stratification of $\mathcal{E}_A$ that refines the one given by the holonomic rank of $H_A(\beta)$. (Received February 05, 2009)

1