1012-05-124   **Ning Jia** (`njia@math.umn.edu`) and **Ezra Miller*** (`ezra@math.umn.edu`). *Duality of pipe dreams and antidiagonals.* Preliminary report.

Associated to every permutation $w \in S_n$ is its set of reduced pipe dreams (rc-graphs), each of which is a subset of the $n \times n$ grid. Also associated to w is a certain determinantal ideal; the generating minors have antidiagonal terms that can also be considered as subsets of the $n \times n$ grid. It is crucial for the geometry of Schubert polynomials that these two collections of subsets of the grid are dual, in a precise sense. We present here a new, direct, elementary combinatorial proof of this duality. (Received September 15, 2005)