1102-05-118 **Eric S. Egge*** (eegge@carleton.edu), Department of Mathematics and Statistics, Carleton College, Northfield, MN 55057. *Catalan Combinatorics of Borel Ideals and Generalizations.* Preliminary report.

A *Borel ideal* in $\mathbb{C}[x_1, \ldots, x_n]$ is an ideal which is closed under the natural action of the upper triangular matrices in $M_n(\mathbb{C})$. Motivated by their study of these ideals, Francisco, Mermin, and Schweig have recently introduced an algebraic transformation on number triangles which models the transformation carrying numbers of minimal generators of a Borel ideal to its Betti numbers. In this context the triangle of ballot numbers (which is sometimes called Catalan's triangle) occurs for the Borel ideal generated by the monomial $x_1 \cdots x_n$, and when Francisco, Mermin, and Schweig apply their transformation to this triangle they obtain a new number triangle, which they call *Borel's triangle*. Francisco, Mermin, and Schweig have given combinatorial interpretations of the entries of Borel's triangle in terms of binary trees, triangulations of an $n+2$-gon, and parenthesizations. I will discuss a variety of additional combinatorial interpretations of the entries of Borel's triangle, along with several generalizations. (Received July 25, 2014)