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Jacob Anthony White* (jawhite@msri.org), Mathematical Sciences Research Institute, 17 Gauss Way, Berkeley, CA 94707, **Helene Barcelo** (hbarcelo@msri.org), Mathematical Sciences Research Institute, 17 Gauss Way, Berkeley, CA 94707, and **Christopher Severs** (csevers@msri.org), Mathematical Sciences Research Institute, 17 Gauss Way, Berkeley, CA 94707. *Homology of the k -Parabolic Arrangement and Discrete Morse Theory.*

The k -parabolic arrangement, introduced by the authors, is a generalization of the well known k -equal arrangement of type A and B . We construct a cell complex with the same homotopy type as the complement. Then we use discrete Morse theory to create a minimal cell complex for the complement. We obtain a combinatorial description of the Betti numbers, generalizing the work of Björner and Welker for the k -equal arrangement. (Received September 07, 2010)