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**Scott Crass\***, Math Dept, CSULB, Long Beach, CA 90840-1001. *A family of critically finite maps with symmetry.*

The symmetric group  $S_n$  acts as a reflection group on the complex projective space  $\mathbf{CP}^{n-2}$  (for  $n \geq 3$ ). Associated with each of the  $\frac{n(n-1)}{2}$  transpositions in  $S_n$  is an involution on  $\mathbf{CP}^{n-2}$  that pointwise fixes a hyperplane—the mirrors of the action. For each such action, there is a unique  $S_n$ -symmetric holomorphic map of degree  $n + 1$  whose critical set is precisely the collection of hyperplanes. Since the map preserves each reflecting hyperplane, the members of this family are critically-finite in a very strong sense. Considerations of symmetry and critical-finiteness produce global dynamical results in one and two dimensions: each map's Fatou set consists of a special finite set of superattracting points whose basins are dense. Obtaining analogous results in higher dimension remains conjectural. (Received December 26, 2006)