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Chencong Bao, Camila Friedman-Gerlicz and Peter McGrath* (mcgrathp@lafayette.edu), Lafayette College, Math Dept, Easton, PA 18042, and Jessica Vega. Matroids, Geometry, Symmetry and the 4th Dimension.

We describe the automorphism group of a certain rank 4 matroid on 60 points that arises from the root system H4. There is a close connection to two dual regular 4-dimensional solids: the 120-cell and the 600-cell. (Received August 01, 2009)