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Ed Swartz* (ebs22@cornell.edu) and **Alexander Xue**. *Binary spherical quotients, the combinatorial Laplacian and Hamming weights of binary linear codes.*

Binary matroids are in one-to-one correspondence with linear quotients of spheres by elementary abelian 2-groups. The eigenvalues of the combinatorial laplacian on the quotient spaces determine the weight enumerator of the binary code associated to the dual matroid. (Received August 15, 2019)