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Federico Castillo and **Jose Alejandro Samper***, 1365 Memorial Drive, Ungar 505, Coral Gables, FL 33146. *Finiteness theorems for matroid complexes with prescribed homotopy type.*

It is well known that the independence complex of any matroid without coloops is homotopy equivalent to a wedge of $k > 0$ equidimensional spheres. We prove that if the dimension and the number of spheres is fixed, then only finitely many such independence complexes exist. This counterintuitive property leads to new structural questions such as upper and lower bound theorems/conjectures for matroids based on the two parameters mentioned. (Received September 11, 2018)