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**Henrik Schlichtkrull\*** ([schlicht@math.ku.dk](mailto:schlicht@math.ku.dk)). *Real spherical spaces and their classification.*

A homogeneous space  $G/H$  of a real reductive Lie group  $G$  is called spherical if a minimal parabolic subgroup of  $G$  admits an open orbit on it. All symmetric spaces are spherical, but the property is shared also by other spaces. Classifications are known of complex spherical spaces and of real symmetric spaces, but up to now not of real spherical spaces. A classification for the case with  $G$  simple and  $H$  reductive, recently obtained in joint work with F. Knop, B. Krötz and T. Pecher, will be presented. (Received September 19, 2016)