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Department of Mathematics, 14 MacLean Hall, Iowa City, IA 52246. *Difference Divisible Sets in Hurwitz Quaternions*. Preliminary report.

A set  $A$  in a ring is said to be *difference-divisible* if every subset of  $A$  (of cardinality at least 2) has a difference which divides every other difference in that subset. We report on the problem of describing up to equivalence all such sets in the Hurwitz Quaternions. The classification begins with the unit-connected sets, that is, the difference-divisible sets in which every two elements are connected by some sequence of unit differences. We give a description of the unit-connected sets, and discuss the general classification of difference-divisible sets in the Hurwitz Quaternions. (Received September 25, 2018)