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"Characterizations of almost square properties in Lipschitz-free spaces"

In 2016 Abrahamsen, Langemets and Lima introduced almost square properties in Banach spaces. We will study their metric characterizations in Lipschitz-free spaces. We will prove, that a Lipschitz-free space is locally almost square if and only if the underlying metric space is length, thus in Lipschitz-free spaces it coincides with other diameter 2 properties. In addition, we construct a Lipschitz-free space that is locally almost square, but not weakly almost square; this is the first example of such a Banach space. Lastly, we will show that a Lipschitz-free space can not have the symmetric strong diameter 2 property and therefore can not be almost square.