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Orbiting pairs of walking droplets[1] EMMANUEL SIEFERT, JOHN W.M. BUSH, MIT, ANAND OZA, Courant Institute, NYU — Droplets may self-propel on the surface of a vibrating fluid bath, pushed forward by their own Faraday pilot-wave field. We present the results of a combined experimental and theoretical investigation of the interaction of pairs of such droplets. Particular attention is given to characterizing the system's dependence on the vibrational forcing of the bath and the impact parameter of the walking droplets. Observed criteria for the capture and stability of orbital pairs are rationalized by accompanying theoretical developments.

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