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Bouncing trimer[1] STEPHANE DORBOLO, FNRS, NICOLAS VANDEWALLE, University of Liege, GRASP TEAM — Trimers are composed of three stainless steel beads (1 cm of diameter) forming a solid equilateral triangle (2.5 cm of side). They are placed on a plate of an electromagnetic shaker. The system is shaken vertically. According to the acceleration, the trimer may spin, jump once every two periods or even every threee periods. Between these stable regimes, the system is chaotic. By measuring the time delay between two successive shocks (bead-plate), a mapping of the different regimes has been constructed. The spinning, 2-period and 3-period orbits occurs for the same acceleration whatever the frequency. However, the spin speed has been measured with respect of the frequency.

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