Tangency-saddle singularities of planar bimodal linear systems

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We continue the study of the bifurcations and the structural stability of planar bimodal linear dynamical systems (that is, systems consisting of two linear dynamics acting on each side of a straight line, assuming continuity along the separating line). Here we determine the tangency-saddle singularities in the saddle/spiral case, the only where they can appear.

Fig. 3. Appearance of a tangency-saddle orbit: $T = -1, D = -1, \gamma = T_0 = 0.743, \Delta = 5, b = 1$