Parabolic bifurcations
of area-preserving Hénon maps

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ABSTRACT

Real one parameter family of volume preserving complex Hénon maps is studied. Cycle of neutral periodic points bifurcates from a parabolic fixed point. In the area preserving real Hénon maps, pair of a cycle of saddle type and a cycle of center type appears from a parabolic fixed point. Neutral periodic cycles are observed as so-called "islands" between KAM circles around a neutral fixed points. In this note, the appearance of pair of periodic orbits of center type and saddle type is proved for period 5 cases.