1135-05-1470 **Gregg Musiker*** (musiker@math.umn.edu), Minneapolis, MN 55455, and **Tom Roby** (tom.roby@uconn.edu), Storrs, CT 06269. *A path formula for birational rowmotion on the product of two chains.* Preliminary report.

We give a formula in terms of families of non-intersecting lattice paths for iterated actions of the birational rowmotion map on a product of two chains. Birational rowmotion is an action on the space of assignments of rational functions to the elements of a poset. It is lifted from the well-studied *rowmotion* map on order ideals (equivariantly on antichains) of a partially ordered set P, which when iterated on special posets has unexpectedly nice properties in terms of periodicity, cyclic sieving, and homomesy (constant averages for each orbit). Grinberg and Roby showed that birational rowmotion exhibits the same periodicity as ordinary rowmotion on the product of two chains via an indirect argument, but our formula sheds additional insight on the underlying dynamics.

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