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Ineffective sets and region crossing change. Preliminary report.

A region crossing change (RCC) is an operation performed on a link diagram in which one reverses all crossings incident to a specific region of the diagram. This operation partitions the set of all diagrams with a fixed underlying projection into RCC equivalence classes. Recent work counts the number of classes for knot and link diagrams in the plane and checkerboard colorable diagrams on surfaces. An ineffective set of regions of a diagram has the property that performing RCCs on all regions in that set changes no crossings of the diagram. Ineffective sets are a key tool in the literature investigating RCC. In this talk, we explore ineffective sets for plane diagrams giving an easy method for finding all ineffective sets for any diagram. (Received September 24, 2018)