1131-53-365 **Anusha Mangala Krishnan*** (`anushakr@sas.upenn`), Dept of Mathematics, David Rittenhouse Labs, 209 South 33rd Street, PHILADELPHIA, PA 19104-6395. *Cohomogeneity one Ricci flow and non negative curvature.*

We show that S^4, $\mathbb{C}P^2$, $S^2 \times S^2$ and $\mathbb{C}P^2 \# - \mathbb{C}P^2$ admit metrics of nonnegative sectional curvature which immediately lose this property under the Ricci flow. Although this was previously known for compact manifolds of dimension > 5 and for non-compact manifolds, these are the first compact 4-dimensional examples showing such behaviour, and show some limitations of the Ricci flow above dimension 3 (where non negative sectional curvature is preserved). Our approach involves studying the Ricci flow on manifolds admitting an isometric cohomogeneity one group action. This talk is based on joint work with Renato Bettiol. (Received July 18, 2017)