1105-53-70 **D.H. Phong**, **Jian Song*** (jiansong@math.rutgers.edu), **Jacob Sturm** and **Xiaowei Wang**.
The Ricci flow on the sphere with marked points.

The Ricci flow on the 2-sphere with marked points is shown to converge in all three stable, semi-stable, and unstable cases. In the stable case, the flow was known to converge without any reparametrization, and a new proof of this fact is given. The semi-stable and unstable cases are new, and it is shown that the flow converges in the Gromov-Hausdorff topology to a limiting metric space which is also a 2-sphere, but with different marked points and hence a different complex structure. The limiting metric space carries a unique conical constant curvature metric in the semi-stable case, and a unique conical shrinking gradient Ricci soliton in the unstable case. (Received September 03, 2014)