

# Energy concentration for 2-dimensional radially symmetric equivariant harmonic map heat flows

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We give a description of singularity formation in terms of energy quanta for 2-dimensional radially symmetric equivariant harmonic map heat flows. Adapting Struwe's energy method we first establish a finite bubble tree result with a discrete multiple of energy quanta disappearing in the singularity. We then use intersection-comparison arguments to show that the bubble tree consists of a single bubble only and that there is a well defined scale  $R_{\text{BHK}}(t) \downarrow 0$  in which the solution converges to the standard harmonic map.