

1096-VR-1865 **McKenzie R Lamb*** (lambm@ripon.edu), 642 Woodside Ave, Ripon, WI 54971. *Differentiability at Infinity: Wrapping Curves Around the Sphere*. Preliminary report.

Suppose a curve in the plane has two distinct "ends" that stretch off toward infinity in different directions. Under the inverse image of stereographic projection, the ends of the curve will approach the North Pole on the 2-sphere. How do they meet? In particular, if we fill in the point at the North Pole, we have a closed curve on the sphere. Under what conditions is this curve differentiable at the North Pole? We investigate this question in the case where the original curve in the plane is the graph of a function. (Received September 16, 2013)