1077-55-1678   **Henry Adams*** (`henrya@math.stanford.edu`), Mathematics, Building 380, 450 Serra Mall, Stanford, CA 94305. *Evasion Paths in Mobile Sensor Networks.* Preliminary report.

We say that an evasion path exists in a mobile sensor network if a continuously moving evader can avoid being detected by the sensors. In "Coordinate-free Coverage in Sensor Networks with Controlled Boundaries via Homology," Vin de Silva and Robert Ghrist use the local connectivity data of a mobile sensor network to determine, in some cases, that no evasion path exists. We consider examples that show the existence of an evasion path depends not only on the network's connectivity data but also on its embedding. We search for invariants of the embedding that provide sharper criteria for the existence of an evasion path. (Received September 20, 2011)