1023-37-116 **Brian C. Lins*** (bclins@math.rutgers.edu), Dept. of Mathematics, 110 Frelinghuysen Rd., Piscataway, NJ. *A Denjoy-Wolff Theorem for Hilbert Metric Nonexpansive Maps on Polyhedral Domains.*

For a polyhedral domain $\Sigma \subset \mathbb{R}^n$, and a Hilbert metric nonexpansive map $T : \Sigma \to \Sigma$ which does not have a fixed point in $\Sigma$, we prove that the omega limit set $\omega(x; T)$ of any point $x \in \Sigma$ is contained in a convex subset of the boundary $\partial\Sigma$. We also identify a class of order-preserving homogeneous of degree one maps on the interior of the standard cone $\mathbb{R}^n_+$ which demonstrate that there are Hilbert metric nonexpansive maps on an open simplex with omega limit sets that can contain any convex subset of the boundary. (Received September 25, 2006)