1035-53-1399 **Jaejeong Lee*** (zlee@math.ucdavis.edu). *Fundamental domains of properly convex real projective structures.* Preliminary report.

We show that every properly convex real projective structure admits a convex polyhedral fundamental domain. The idea is to consider the corresponding affine sphere and the halfspaces bounded by its tangent planes at orbits. The boundary of the intersection of all such halfspaces form a polyhedral envelope of the affine sphere, which naturally gives rise to the tessellation by the desired fundamental domain. It turns out that this fundamental domain is a Dirichlet domain with respect to some half-linear pairing defined on the associated cone. (Received September 19, 2007)