Jonathan Cohen* (jonathan.s.cohen-1@ou.edu). Local Newforms for Odd Unitary Groups. Preliminary report.

We construct a sequence $K_n$ of compact open subgroups inside an odd, unramified unitary group $G$ over a $p$-adic field. We then study the spaces of $K_n$-fixed vectors in irreducible representations of $G$, focusing on generic representations. In particular, we show that any generic representation contains a $K_n$-fixed vector for sufficiently large $n$. Our setup is analogous to the classical theory of newforms for $GL_n$, which was more recently developed by Tsai for split odd orthogonal groups. In the case of $G = U(2, 1)$, our results were previously proven by Miyauchi. (Received August 19, 2018)