1156-20-159 **Thomas Tucker*** (ttucker@colgate.edu), 406 Williston Rd, Box 163, Sagamore Beach, MA 02562, and **Marie Carvacho**, **Jennifer Paulhus** and **Aaron Wootton**. *Finite groups acting with almost all signatures.* Preliminary report.

A finite group $G$ acts preserving orientation on a Riemann surface with signature $(g; m_1, \dots m_k)$, if there is a set of generators $a_1, b_1, \dots a_g, b_g \in G$ and $c_1, \dots c_k \in G$, where $c_j$ has order $m_j$, such that $\Pi_{i=1}^g [a_i, b_i] \Pi_j c_j = id_G$. We say $G$ acts with *almost all signatures* (AAS) if, when we restrict $m_j \in \mathcal{O}(G)$ (the orders of elements of $G$), there is an action of $G$ for all but finitely many such signatures. We have shown that $G$ is AAS if and only $G$ is generated by elements of order $m$ and $[G, G]$ contains an element of order $m$, for all $m \in \mathcal{O}(G)$. It follows that all simple groups are AAS and that every AAS group is either perfect or a $p$-group for some prime $p$. There are AAS groups that are not simple or $p$-groups, and the direct sum of $n$ copies of an AAS group is AAS. In this talk, we consider similar concepts for orientation-reversing actions or actions on non-orientable surfaces (NEC group quotients). Since most such actions require $|G|$ to be even, the only possibilities are 2-groups and perfect groups. (Received January 25, 2020)