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**Alexandra Kjuchukova\*** (sashka@mpim-bonn.mpg.de), sashka@mpim-bonn.mpg.de, and **Kent Orr**. *Extending knot group quotients over surfaces in  $B^4$ .*

Let  $G$  be a group which arises as a quotient of a knot group. A “G-knot”  $K \subset S^3$  is a knot equipped with a surjective homomorphism  $\rho : \pi_1(S^3 - K) \rightarrow G$ . When does a G-knot  $K$  bound a smooth G-surface  $F \subset B^4$  extending  $\rho$ ? We find a sharp obstruction,  $\Theta_G(K, \rho)$ , to the existence of such a surface  $F$ . When  $G$  is a dihedral group or a group of the form  $Z_n \rtimes Z := \langle u, t | t^n, utut^{-1} \rangle$ , the obstruction  $\Theta_G(K, \rho)$  admits a description in terms of the Seifert form of  $K$ . Joint with Kent Orr. (Received August 31, 2020)