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Leo S. Digiosia* (digiosia@rice.edu), 3012 Jarrard St, Houston, TX 77005. *Cylindrical contact homology of links of simple singularities.*

We compute the cylindrical contact homology of the links of the simple singularities. These manifolds are contactomorphic to S^3/G for finite subgroups $G \subset \mathrm{SU}(2)$. We perturb the degenerate contact form on S^3/G with a Morse function, invariant under the corresponding $H \subset \mathrm{SO}(3)$ action on S^2 , to achieve nondegeneracy up to an action threshold. The cylindrical contact homology is recovered by taking a direct limit of the action filtered homology groups. The ranks of this homology are given in terms of $|\mathrm{Conj}(G)|$, demonstrating a form of the McKay correspondence. (Received September 01, 2021)