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Sang-hyun Kim* (shkim@kaist.edu) and **Sang-il Oum** (sangil@kaist.edu). *Hyperbolic surface subgroups of one-ended doubles of a free groups.*

By a double of a free group, we mean the graph of groups where there are two isomorphic free vertex groups and a cyclic edge group amalgamated via the same map. We prove that a one-ended double of a free group contains a hyperbolic surface group if the rank of the free group is two or if each generator of the free group appears the same number of times in the amalgamating word. (Received January 19, 2011)