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Wade Bloomquist (wade-bloomquist@uiowa.edu) and **Charles Frohman***
(charles-frohman@uiowa.edu). *An adapted product to sum formula for the Kauffman Bracket
skein module of a punctured torus.*

Let $\Sigma_{g,k}$ denote the compact oriented surface of genus g with k boundary components. The inclusion map $\Sigma_{1,1} \rightarrow \Sigma_{1,0}$ induces a homomorphism of the Kauffman bracket skein algebras $K(\Sigma_{1,1}) \rightarrow K(\Sigma_{1,0})$ whose kernel is a principle ideal generated by a skein η which is the sum of a link parallel to the boundary and $[2]$ times the empty skein. The mapping splits, so every skein in $K(\Sigma_{1,1})$ can be written $\alpha + \epsilon$ where $\alpha \in K(\Sigma_{1,0})$ and ϵ is the the kernel of the inclusion. We use this decomposition to give a product to sum formula for skeins in $K(\Sigma_{1,1})$ extending the product to sum formula of Frohman and Gelca for $K(\Sigma_{1,0})$. (Received August 12, 2013)