Quandle cocycle invariant of a certain T^2-link

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Abstract. We consider a surface link which is presented by a simple branched covering over the standard torus, which we call a torus-covering link. A torus-covering T^2-link is determined from two commutative classical m-braids, which we call basis m-braids, and we denote by $\mathcal{S}_m(a, b)$ the torus-covering T^2-link with basis m-braids a and b. In this talk we present the quandle cocycle invariant of $\mathcal{S}_m(b, \Delta^{2n})$, by using the quandle cocycle invariants of the closure of b, where Δ is a half twist of a bundle of m parallel strands.