1037-57-253   **Jeffrey Boerner*** (`jboerner@math.uiowa.edu`), 14 MacLean Hall, Iowa City, IA 52245. *An extension of Khovanov homology for links embedded in I-bundles.*

M. Asaeda, J. Przytycki and A. Sikora developed an extension of Khovanov homology for links embedded in I-bundles. By borrowing ideas from D. Bar-Natan's work with tangles and cobordisms a new homology theory is introduced when the I-bundle is over an orientable surface. The new theory uses marked surfaces to generate the chain groups as opposed to decorated diagrams. This theory is a generalization of M. Asaeda, J. Przytycki and A. Sikora's theory in the sense that their theory is equivalent to a quotient of the new theory. (Received February 04, 2008)