1128-55-38 **Hongwei Wang*** (hongwei.wang@ttu.edu), Hongwei Wang, 1612 Ave Y, apt 116B, Lubbock, TX 79401, and **Razvan Gelca**. *Find the action of Kauffman bracket skein algebra on the skein module of the 3-twist knot complement.* Preliminary report.

Kauffman bracket skein module of a 3-manifold was introduced by Jozef H. Przytycki. My research is focused on the action of Kauffman bracket skein algebra on the skein module of the 3-twist knot complement. This is a continued work of Razvan and Nagsado's work [R.Gelca and F.Nagasato,Knot theory and its application].We consider the manifold $M = S^3 \backslash K$, where K is a 3-twist knot. We know [Bullock and Lo faro, The Kauffman bracket skein module of a twist knot exterior] $K_t(S^3 \backslash K)$ is free $C[t, t^{-1}]$-module with basis $x^k y^j$, k is arbitrary interger and j is 0,1,2,3, where $C[t, t^{-1}]$ is the ring of Laurent polynomials .We use the basis with chebyshev polynomials of second kind $S_n(x)$.Take the map $\pi : K_t(\pi^2 \times I) \to K_t(S^3 \backslash K)$.For a pair of integers (p, q), we denote by $(p, q)_T$ the element of the Kauffman bracket skein module of the 3-twist knot complement.Take the case where $gcd(p, q) = 1$. This is the curve whose homology class in the base $(longitude, meridian)$ is (p, q).We considered curve $(1, -2)$ and $(1, -3)$ firstly. Eventually, we expect to find the action on knot complement with an arbitrary curve using the basis with chebyshev polynomials of second kind. (Received February 01, 2017)