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Craig Jackson* (chjackso@owu.edu), 90 S. Henry St, Delaware, OH 43015, and **Thomas Kerler**. *The Lawrence-Krammer-Bigelow Representations of the Braid Groups via Quantum \mathfrak{sl}_2 .*

We construct representations of the braid groups B_n on n strands on free $\mathbb{Z}[q^{\pm 1}, s^{\pm 1}]$ -modules $W_{n,l}$ using generic Verma modules for an integral version of the quantum enveloping algebra $U_q(\mathfrak{sl}_2)$. We prove that the $W_{n,2}$ are isomorphic to the faithful Lawrence-Krammer-Bigelow representations of B_n after appropriate identification of parameters of Laurent polynomial rings by constructing explicit integral bases and isomorphism. We also prove that the B_n -representations $W_{n,l}$ are irreducible over the fractional field $\mathbb{Q}(q, s)$. (Received January 04, 2010)