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Micah W. Chrisman* (mchrisma@monmouth.edu). *Prime Decomposition and Non-Commutativity in the Monoid of Long Virtual Knots.*

It is well-known that the monoid of long virtual knots is not commutative. This contrasts with the case of classical long knots, where $A\#B \simeq B\#A$ for all A, B . In the present paper, we present a new proof that two inequivalent non-classical prime long virtual knots never commute. The original result is due to Manturov. We prove that if A, B, C, D are prime non-classical long virtual knots such that $A\#B$ is non-classical and $A\#B \simeq C\#D$, then $A \simeq C$ and $B \simeq D$. The paper is available at: [arXiv:1311.5748\[math.GT\]](https://arxiv.org/abs/1311.5748). (Received August 09, 2014)