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Kerry M. Luse* (lusek@trinitydc.edu) and **Mark Kidwell** (mek@usna.edu). *The role of spinners in determining clock number.* Preliminary report.

The clock number of a knot defined by Y. Abe is determined by the height of the lattice of states between the clocked and counterclocked states of a knot universe as defined in Kauffman's Formal Knot Theory. Abe characterizes knots which have clock number, $p(K)$, equal to the crossing number, $C(K)$, of the knot.

Expanding on Abe's work, we focus on a specific type of vertex in a knot universe which we call "spinners." A spinner vertex is a vertex such that each of its four incident edges supports at least one clock move.

We conjecture that knots with exactly one spinner vertex have $p(K) = C(K) + 1$ and we give a particular characterization of knots of this type. Furthermore, we will show that minimizing the number of spinner vertices in a diagram does not necessarily minimize the clock number of the knot. (Received September 16, 2013)