1077-05-2284 Wenliang Tang* (wtang1@mix.wvu.edu), Department of Mathematics, West Virginia University, Morgantown, WV 26505, Erling Wei, Department of Mathematics, Renmin University of China, Beijing, Beijing 100872, and Cunquan Zhang (cqzhang@math.wvu.edu), Department of Mathematics, West Virginia University, Morgantown, WV 26505. Strong Circuit Double Cover Conjecture in Special Cubic Graphs. Preliminary report.

Let G be a bridgeless cubic graph and C is any given circuit in G. It was conjectured by Seymour that we can find a family \mathcal{F} of circuits containing C such that every edge of G is covered exactly by two members of \mathcal{F} . This is the well-known Strong Circuit Double Cover Conjecture, a stronger version of the famous Circuit Double Cover Conjecture.

It was proved by Herbert Fleischnera and Roland Häggkvistb that the SCDC conjecture is true if $G \setminus V(C)$ has a Hamilton path $P = v_1 \cdots v_t$ such that v_1 is adjacent to some vertex of C. The conjecture remains open if v_1 is not adjacent to any vertex of C. In this paper we verify the conjecture if v_1 is not adjacent to any vertex of C and P is of order at most 23. (Received September 22, 2011)