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26506-6310. *The second circuit conjecture and cycle double cover conjecture.* Preliminary report.

It was asked by Seymour that, for every cubic, bridgeless graph  $G$  and every circuit  $C$  of  $G$ , whether or not  $G$  contains a circuit  $C'$  distinct from  $C$  with  $V(C) \subseteq V(C')$  (The Second Circuit Problem).

This problem, if true, implies the famous cycle double cover conjecture. Although a counterexample was discovered by Fleischner (1994), the Second Circuit Problem remains as a valid approach to a CDC conjecture.

In this talk, we will survey some old and recent results, and propose some modifications of this problem and possible approaches to CDC conjecture (Received September 08, 2009)