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*Maximum degree in graphs of diameter 2.* (In English)

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It is well known that there are at most four Moore graphs of diameter 2, i.e., graphs of diameter 2, maximum degree  $d$ , and  $d^2 + 1$  vertices. The purpose of this paper is to prove that with the exception of  $C_4$ , there are no graphs of diameter 2, of maximum degree  $d$ , and with  $d^2$  vertices.

Classification:

05C35 Extremal problems (graph theory)

05C38 Paths and cycles

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Moore graphs; diameter; maximum degree