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Michael D. Plummer*, Department of Mathematics, Vanderbilt University, Nashville, TN 37240, **Art Finbow**, Halifax, Canada, and **Bert Hartnell**, Halifax, Canada. *Well-covered Pentagonalizations*. Preliminary report.

A graph G is *well-covered* if every maximal independent set of vertices in G is maximum. Well-covered plane triangulations and quadrangulations have been previously characterized by the authors. In this talk, we investigate the one remaining class of planar face-regular well-covered graphs: the well-covered pentagonalizations (\mathcal{WCP}). Using a known result of Finbow, Hartnell and Nowakowski, we obtain a polynomial recognition algorithm for the girth 5 subclass of \mathcal{WCP} . We then show that every graph in \mathcal{WCP} contains at least two disjoint pairs of adjacent vertices of degree 2 and provide infinitely many examples to show that this result is best possible. Finally, we show that every connected plane graph is an induced subgraph of some member of \mathcal{WCP} .

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