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P.G. Walsh* (gwalsh@mathstat.uottawa.ca), Dept. Math. U. Ottawa, 585 King Edward St., Ottawa, Ontario K1N 6N5, Canada. *Sharp bounds for the number of solutions to classes of systems of simultaneous Pell equations.* Preliminary report.

There have been striking new developments by Bennett and others on the problem of determining upper bounds for the number of solutions to systems of simultaneous Pell equations. This work has recently been furthered by Katayama and Levesque to families of a wider class. We will describe how the celebrated theorem of Bilu, Hanrot and Voutier on primitive divisors can be applied to prove sharp bounds for the number of solutions to these wide classes of systems of Pell equations. (Received August 04, 2006)