

A BOUNDEDNESS THEOREM ON HIGHER DIMENSIONAL HILL EQUATIONS

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Abstract. We present in this note some sufficient conditions on boundedness of solutions to higher dimensional Hill equations.

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REFERENCES

- [1] R. BELLMAN, *Stability of differential equations*, McGraw–Hill, New York, 1953.
- [2] J. M. BOWNS, *Stability implication on the asymptotic behavior of second order differential equations*, Proc. Amer. Math. Soc. **39** (1973), 169–172.
- [3] S. GOLLOR, D. HULIN AND J. LAFONTAINE, *Riemannian Geometry*, Springer-Verlag, Berlin Heidelberg, 1987.
- [4] J. K. HALE, *Ordinary differential equations*, Wiley-interscience, New York, 1969.
- [5] M. PETTINI AND R. VALDETTARO, *On the Riemannian description of chaotic instability in Hamiltonian dynamics*, Chaos **4** (1995), 646–652.