

1011-34-160

Anton Zettl* (zettl@math.niu.edu), Mathematics Dept., Northern Illinois University, DeKalb, IL 60115, and **Qingkai Kong** and **Hongyou Wu**. *Limits of Sturm-Liouville Eigenvalues When the Domain Shrinks to a Point*. Preliminary report.

For regular self-adjoint Sturm-Liouville Problems with positive leading coefficient and positive weight function, all eigenvalues go to plus infinity when the domain shrinks to a point, except possibly the lowest one. It may go to plus infinity, minus infinity, have a finite limit or no limit. (Received August 24, 2005)