



RADIAL STABILITY OF SPHERICAL BOSONIC STARS AND CRITICAL POINTS

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We study radial perturbations of spherically symmetric spin-0 and spin-1 bosonic stars, computing numerically the squared frequency of the fundamental mode. We find that not all critical points – where the Arnowitt–Deser–Misner mass attains an extremum – correspond to zero modes. Thus, radial stability does not always change at such critical points. The results are in agreement with the so-called critical point method.