

ABSTRACT ONLY**WI ASTEROSEISMOLOGY REVISITED:
UNIVERSAL RELATIONSHIPS THAT INCLUDE
SLOW STABLE HYBRID STARS**Ignacio F. Ranea-Sandoval^{1,2}, Mauro Mariani^{1,2},
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We show that, within the slow hadron-quark conversion regime where extended branches of hybrid stars (SSHS) appear, all universal relationships for wI-modes available in the literature do not hold (for details, see Ranea-Sandoval et al. 2022). Then, we show newly discovered universal relationships that include SSHS, and present potential astronomical applications of such relationships, showing that, if the frequency and damping time of the fundamental mode are measured, its mass, radius, and dimensionless tidal deformability can be inferred (for details, see Ranea-Sandoval et al. 2023). The errors of such estimates are smaller than a few per cent for the mass and the radius. For the dimensionless tidal deformability, the errors for compact objects with masses above 1.4 solar masses are typically less than 100%.

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